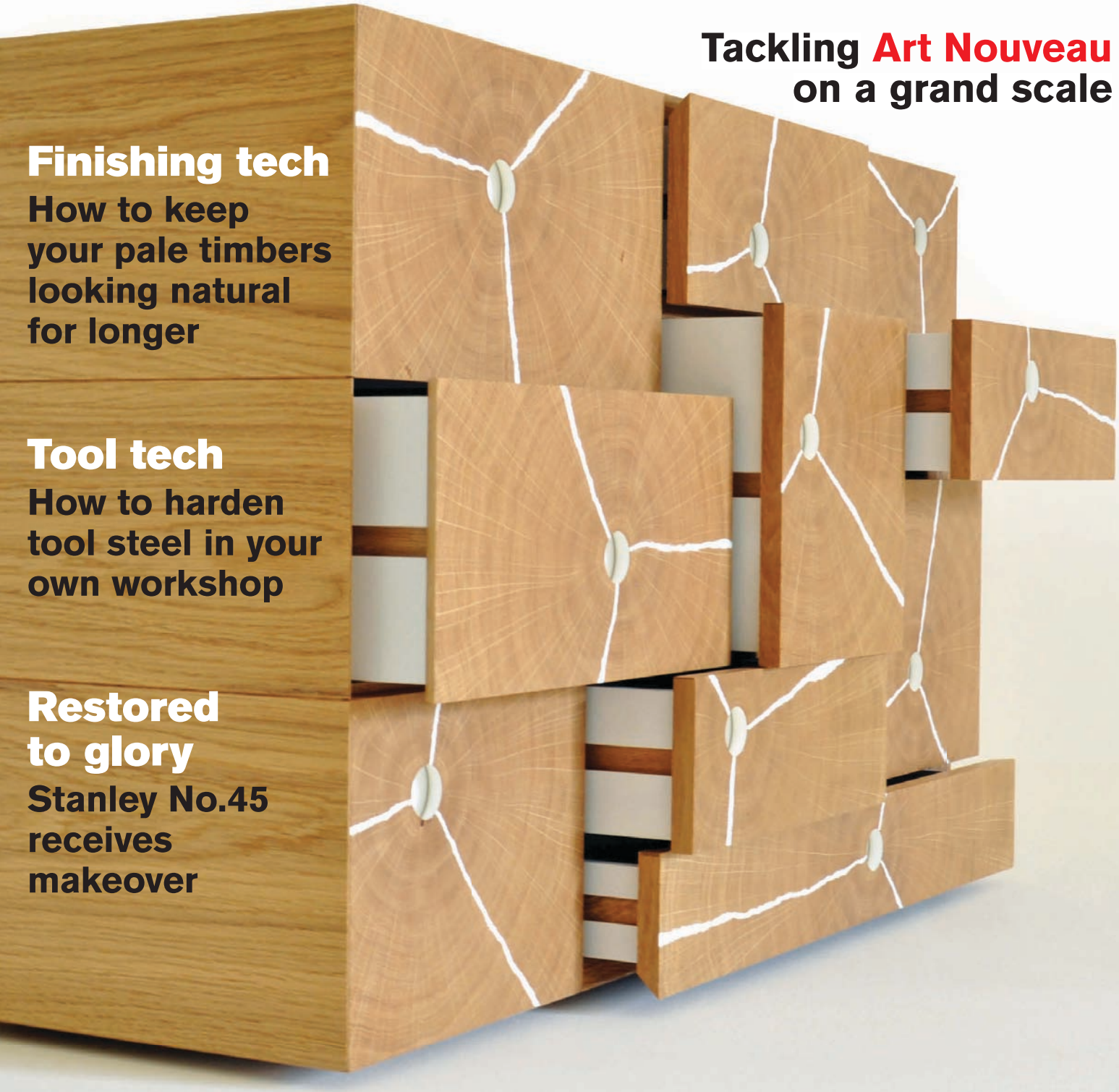
Furniture & cabinetmaking

DESIGN • INSPIRATION • PROJECTS • TECHNIQUES • TESTS • NEWS • EXCELLENCE

Top drawer

Takes Somerset Guild's highest award



Tackling Art Nouveau on a grand scale

Finishing tech
How to keep your pale timbers looking natural for longer

Tool tech
How to harden tool steel in your own workshop

Restored to glory
Stanley No.45 receives makeover

Unit 2, Sovereign Business Park, Joplin Court, Crownhill, MK8 0JP MILTON KEYNES
Tel: 01908 635 000, info@ukfelder.co.uk, www.ukhammer.co.uk

C3 31 STARTER SET

C3 31 Comfort **COMBINATION MACHINE + STARTER-SET**

- 4.0 HP (3.0 kW) motor
- Format sliding table 2000 mm
- 1100 mm outrigger table
- Precision mitre index system
- 1300 mm crosscut fence for outrigger table
- Planer fence tilts from 90° to 45°
- Surface planer table length 1400 mm
- Planing width 310 mm
- Remarkably user friendly
- Allows rapid retooling

~~6.718,05~~

5.390,^{00}

Save up to 1.328,05 £ excl. VAT

AF 12 dust extraction extractor

with dust bag quick change system

Universal saw blade

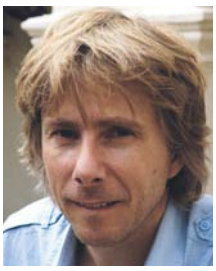
Ø 315 mm, Z 48

+

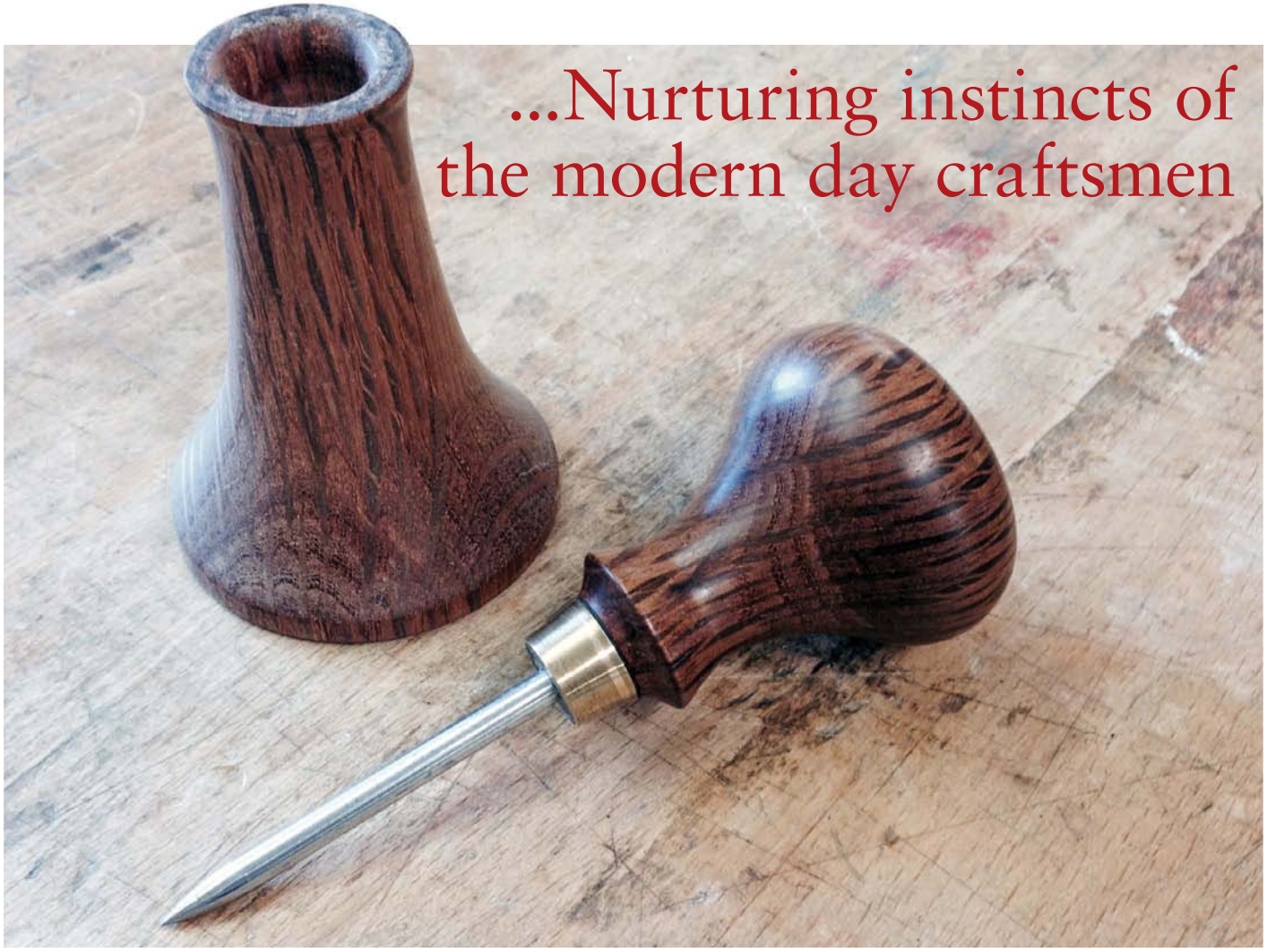
Cutterhead set

Universal cutter head
(steel made)

+



Welcome to...



PHOTOGRAPH COURTESY OF ALAN LACER

Not one of Alan Lacer's but something I spotted on a recent visit to Tom Kealy's workshop

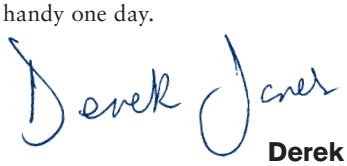
For the last couple of years the summer months have been the busiest of the year: trying to be in more than one place at a time isn't easy but I'll give most things a try. June and July are liberally punctuated by a series of end of year exhibitions, shows and competitions, all of which make for a good day out if you can get to one. Events such as these take a lot of organising and you generally find that most organisers trade financial return for something bigger – much, much bigger. These events are a direct link in the transmission of material culture between craftsmen, apprentices and anyone with an interest in the built environment. Our feature on page 56 is a report from The Somerset Guild of Craftsmen's young Apprentice of the Year competition and our finishing tech this month is by Danny Maddock from 'robinson house studio'. Both articles are testament to the nurturing instincts of the modern day craftsman. Long gone are old guild ways that on one hand succeeded in preserving the master's income while simultaneously strangling the life out of the craft with the other. Knowledge, skill and experience are just as hard to access today as they have ever been despite the amount of free to download advice out there.

Real workshops

Our main project this month comes from the commercial workshop of Dennis Zongker; a typical setup where time is money. It's in this environment that you will find the furniture maker at his most creative and industrious. There's little time for sentiment or romantic notions of woodworking in a bygone age. Art Nouveau isn't to everyone's taste but soak this one up and you'll get close to understanding how a real workshop functions.

Results-based craftsman

Our featured artist this month is Australian maker Anton Gerner, who is also the real deal. I met up with him earlier this year at the Wallace Collection in London. He describes himself as a 'results-based craftsman', a term I've never heard before that's loaded with realistic expectations and outcomes. If you're thinking about setting up a 'shop, then this one's for you. We've got a great little project for you on page 53 from woodturner Alan Lacer. Tool-making is at the heart of furniture making and if you learn to make the tools you need to get by yourself, then everything else will come in handy one day.



Derek Jones
derekj@thegmcgroup.com

Furniture &cabinetmaking

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

DEPUTY EDITOR Tegan Foley
Email: teganf@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

CIRCULATION MANAGER Tony Loveridge

MARKETING Anne Guillot

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

PRINTED IN THE UK
Stephens and George Print Group

DISTRIBUTION Seymour Distribution Ltd
Tel: 020 7429 4000

Furniture & Cabinetmaking magazine (ISSN 1365-4292) is published every four weeks by Guild of Master Craftsman Publications Ltd

SUBSCRIPTION RATES (includes p&p)

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

US subscribers visit www.lightningpublications.com for subscription rates in USD $.

Cheques made payable to GMC Publications Ltd
Current subscribers will automatically receive a renewal notice (excludes direct debit subscribers).

Post your order to: The Subscription Department, GMC Publications Ltd, 166 High Street, Lewes, East Sussex BN7 1XU Tel +44 (0)1273 488005, Fax +44 (0)1273 402866 Email: pubs@thegmcgroup.com
Website: www.thegmcgroup.com

Problems finding F&C? Call Tony Loveridge, our Circulation Manager, on 01273 477374 or email him at tonyl@thegmcgroup.com Alternatively, save up to 20% on the cover price by subscribing. Visit www.thegmcgroup.com/publications

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

Contents

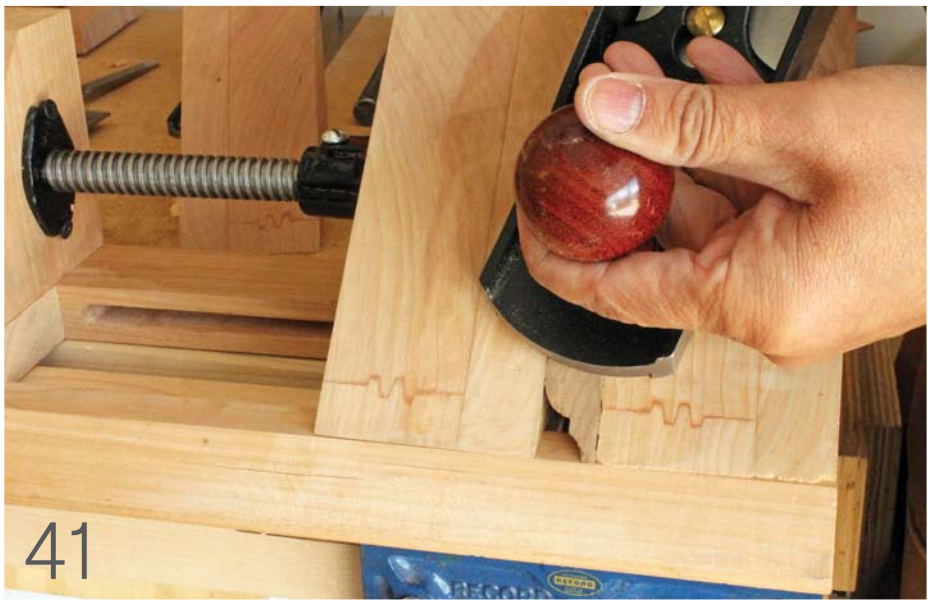
Issue 236 October2015

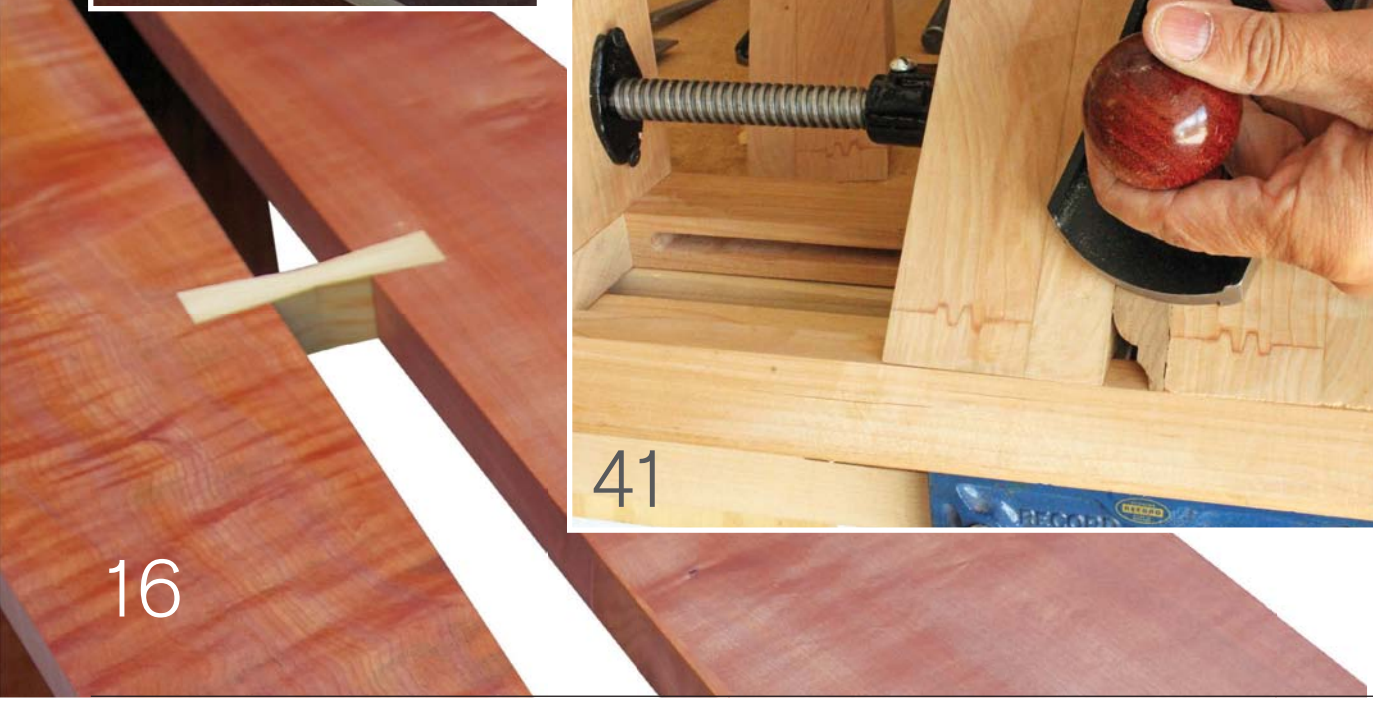
Charles Byron's winning 'Log Stack Cabinet' – see page 56.
Front cover image by Steve Hooper

Design & Inspiration

Projects & Techniques

Your *F&C*

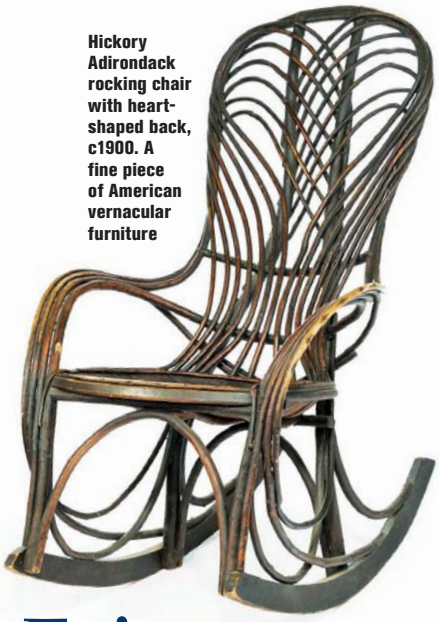




Contribute to these pages by telling us about matters of interest to furniture makers. Call Derek Jones on 01273 402 843 or email derekj@thegmcgroup.com. Please accompany information with relevant, hi-res images wherever it is possible

News&Events

Italian – possibly Sicilian – gilded sofa carved with mythical sea creature arms, neo-classical columns on the legs and oak leaf garlands on the frieze



Hickory Adirondack rocking chair with heart-shaped back, c1900. A fine piece of American vernacular furniture

PHOTOGRAPHS COURTESY OF PIPPA ROBERTS PR

The Decorative Antiques & Textiles Fair

This Autumn, from 29 September–4 October, 'The Battersea Fair' will mark its 30th birthday. At this event, trade and private buyers can expect to find a user-friendly, relaxed environment, with 145 dealers displaying painted, decorative and fine antique furniture; rare and unconventional objects; collectors' items and elegant 20th-century design dating from the 17th century to 1980. You can expect to find art of every period at this event, from antiquity to contemporary.

What sets Battersea apart from all other Fairs is the creative displays put on by exhibitors and the sense of excitement that comes from never quite knowing what might be found around each corner. The unexpected is part of the Fair's DNA.

The event remains a major hunting ground for top-flight antiques and art dealers, and a key buying event for interior designers from the UK and around the world. Happy exhibitors make a cheerful experience for all concerned and visitors love attending. The anticipation around each event helps explain 30 successful years of The Decorative Antiques & Textiles Fairs, and the organisers look forward to welcoming in the fourth decade this autumn. For more information, see www.decorativefair.com

Furniture maker follows in steps of ancestor at Blair Castle

A furniture maker has been following in the footsteps of his ancestors by creating beautifully unique furniture, which is now on display at Blair Castle. Colin Sandeman was invited to the castle to see the work of his great-great-great grandfather, George Sandeman, who produced furniture for the castle's Derby Dressing Room in the late 18th century, and to present the castle with a newly crafted chair to feature alongside his ancestor's creations.

In 1758, John Murray, who later became the 3rd Duke of Atholl, commissioned George Sandeman to make the Derby Dressing Room's furniture. George crafted the room's broom wood bureau first and then made the tables in the 1770s. Colin, also a talented furniture maker, has created a chair also made out of broom wood following methods used by George over 250 years ago.

Colin spent 243 hours lovingly creating the new chair for the Castle with the front legs and dowels between the legs made of solid broom, veneer on the front and back of the seat and the back made from hundreds of smaller broom pieces. Colin's chair now resides in its new home at the castle next to George's handiwork representing a family legacy and dedication to quality craftsmanship that has lasted for centuries. To find out more about Blair Castle and the furniture on display, see www.blair-castle.co.uk.

Colin Sandeman and the chair he made for Blair Castle

PHOTOGRAPH COURTESY OF VOLPA PR

Yandles' Autumn Woodworking Show

Yandles of Martock will be holding their popular Autumn Woodworking Show from 4–5 September, 2015. Taking place in the historic sawmill, this event attracts around 6,000 visitors from the UK and Europe and gives members of the public and professional woodworkers a chance to see what is going on in the woodworking world with free entry and parking.

There will be around 50 manufacturers attending the event, including well-known names such as Record Power, Charnwood, Robert Sorby and Triton, plus many others. See all their latest equipment and take advantage of special show offers.

In terms of demonstrators, the line-up includes woodturners Phil Irons, Simon Hope, Andy Rounthwaite and Andy Coates. If you're a woodcarver, then you can also expect to see Andrew Hibberd demonstrating, part sponsored by GMC Publications, who will be providing a wide variety of woodworking books.

The Hobby shop will once again be offering mini taster sessions, from wet needle felting to Dorset button making and hobby demonstrations will be taking place during the day. Also, don't miss the 303 Gallery, which offers a wonderful array of work from local craftspeople. For more information, see www.yandles.co.uk.

PHOTOGRAPH COURTESY OF WWW.YANDLES.CO.UK

Expect to see a wide range of demonstrations and trade stands at this popular event

Draisci Studio makes new Cathedra and Cross for Leicester Cathedral

The reordering of Leicester Cathedral by vHH architects to create a place of honour for the reinterment of the remains of Richard III has provided the opportunity for the commission of a new Cathedra and a new Cross.

Rather than a permanent 'throne of power', the new Cathedra design is lightweight and mobile, reflecting a contemporary vision for the role of a Bishop in the 21st century, as dynamic principal pastor.

Its folded geometry, while adding to the eclectic richness of Leicester Cathedral, is timeless and universal, in reference to the roots of the historic Church as well as to its future.

An open structure of wooden legs supports the seat, making it appear as suspended: dignity and status are addressed in the design with rigour, but without being imposing, shaping the 'seat' of a Bishop who is part of the community and not separated from his people.

A Cross, fixed to one of the pillars facing the new altar, complements and enhances the design of the Cathedra marking its stationary position in the Church, when not moving.

Reassuringly firm and generously open, the folds that define the form of these two symbolic objects are, at the same time, structural and ornamental.

Francesco Draisci and Rosalba Napolitano worked on the design and production of these pieces and Benchmark worked on the design and making of the piece. For more information, see www.draisci.com.

PHOTOGRAPH COURTESY OF CARLO DRAISCI

The new Cathedra for Leicester Cathedral, which was made by Francesco Draisci and Rosalba Napolitano and Benchmark

TIMBER TRADE NEWS

The great spruce bark beetle

PHOTOGRAPH COURTESY OF WIKIPEDIA COMMONS

***Dendroctonus micans* on Norway spruce**

This insect, whose latin name is *Dendroctonus micans*, was accidentally introduced to the UK, probably from the continent, and was first detected in 1982 in Shropshire, though it was subsequently shown to have been present since 1972. It is a serious pest of spruce species and occasionally Scots pine *(Pinus sylvestris)*. The small adult beetles bore into live bark of healthy trees and create brood chambers, where the females lay up to a hundred eggs. The larvae feed on the living bark and then pupate. The pupae turn into adults, which bore their way to the surface of the tree and then fly away to mate and breed during the warmer parts of the year. The life cycle can take between one and two years to complete. The damage caused to the bark by the feeding larvae causes copious resin exudation, and the crown above the damage dies. Chemical control is not recommended and would in any case probably be uneconomic. A natural predator, the beetle *(Rhizophagus grandis)*, has been successfully introduced from Europe and woodpeckers also often eat the broods. There are certain restrictions on the movement of timber from affected areas. Damage is primarily to bark and timber quality is probably little affected.

Chris Prior

PHOTOGRAPH COURTESY OF WWW.FORESTRYIMAGES.ORG

The great spruce bark beetle

PHOTOGRAPH COURTESY OF WWW.AMERICANHARDWOOD.ORG

The ceiling sculpture in the Tsi Ming Buddhist Temple, Auckland

Peaceful precision

Joinery specialists, Jones and Sandford, recently made this stunning ceiling sculpture in the Tsi Ming Buddhist Temple, Auckland. The structure is made from 14 American hard maple (*Acer saccharum*) panels and was made offsite and brought to the temple for erection and assembly.

Architects, Archoffice had specified American hard maple for the dome, which was supplied by timber specialists, Timspec. The timber for the structure was very strong and stable but bent well to the shape required without exerting too much pressure: "The prefabricated sections were large and quite awkward," comments Roger Jones, "and as the roof was already on the structure, we couldn't crane them in. We put up scaffolding and moved them one panel at a time."

While bolted to the perimeter of the building, the structure is held in place by the pressure created between each of the 14 panels. The result is extraordinarily beautiful. Jones and Sandford said they relished the challenge to design a structure of this size and complexity and their focus, precision and vision certainly paid off. For more information, see www.jsnp.co.nz.

designjunction 2015

Taking place from 24–27 September, the fifth edition of the critically-acclaimed designjunction is set to raise the bar this year by taking over two new central London venues: The College, formerly home to Central Saint Martins and the striking event space Victoria House B1, both located on Southampton Row.

At The College, designjunction will showcase more than 100 leading international cutting-edge contemporary design brands, as well as many product launches. Resonating with the building's illustrious design history, designjunction will take over five floors of the spectacular Lethaby building as well as other stunning spaces within the campus.

Across the road, Victoria House B1 will house more than 50 design-led pop-up shops, nearly doubling the show's retail offering. It will be the premier destination for all the latest home accessories, luxury leather goods, statement jewellery, limited-edition art prints, unusual stationery and much more. Expect to encounter live workshops and flash-factories, one-off collaborations, hundreds of new product launches, inspiring installations and great food.

This year's event promises to deliver an unrivalled experience, making it central London's leading destination for contemporary design and the most important global meeting point during the London Design Festival. See www.thedesignjunction.co.uk.

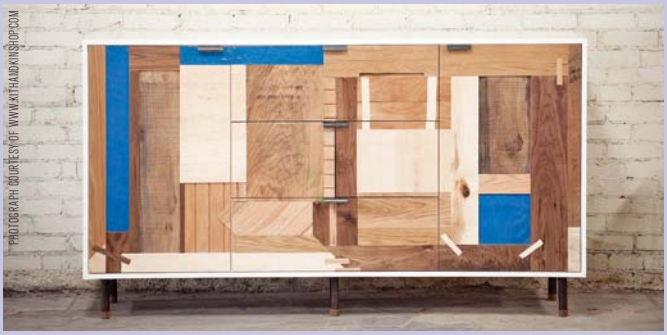
PHOTOGRAPH COURTESY OF WWW.THEDESIGNJUNCTION.CO.UK

Expect to see a wide range of inspiring installations at this year's designjunction

Furniture made with a patchwork of reclaimed wood

This patchwork cabinet was designed by Amarillo, Texas-based furniture makers Kith&Kin, using recycled wood. Created using a white lacquered shell, interspersed with a series of drawers and door fronts made with a patchwork of walnut (*Juglans spp.*), white oak (*Quercus alba*), mahogany (*Khaya ivorensis*) and reclaimed hardwoods, the console also features raw steel pulls made by the designers themselves.

Kith&Kin have a penchant for reclaimed woods, which can be seen in a number of their other pieces. Described as 'simple but effective ornamentation', it's clear to see this piece has been skilfully made with great attention to detail and materials. See more of their work here: www.kithandkinshop.com.



PHOTOGRAPH COURTESY OF WWW.KITHANDKINSHOP.COM

Kith&Kin's patchwork cabinet is made from reclaimed materials

Frank Lloyd Wright Card Table

Sam Anderson has recently completed a stunning card table, which was a private commission from a client who has a passion for all things Frank Lloyd Wright.

The table is constructed from solid English oak *(Quercus spp.)* with multiple in-house coloured veneers. The main veneer used for the top was tamo ash (*Fraxinus lanuginosa*). The piece has a concertina style action, where the rear of the table opens out forming two hinged side panels that repeat the front and back panels. The curvature to the top allows for the players to be more surrounded by the table, as such, allowing for more integration into the game itself.

See Sam's website – see www.samandersonfinefurniture.co.uk – to find out more and to see his new 'Spectrum' collection.

PHOTOGRAPH COURTESY OF SAM ANDERSON

Sam's Frank Lloyd Wright Card Table

Events

PHOTOGRAPH COURTESY OF WWW.EUROPEANWOODWORKINGSHOW.EU

Carpenter Simon Jones will be appearing at this year's European Woodworking Show

European Woodworking Show 2015

This event makes a welcome return this year and once again, will be held at the historic Cressing Temple Barns in Essex. Although primarily a hand tool event, you can expect to see a wide variety of woodworking demonstrations backed by trade stands. There is also a range of competitions to enter and judge, masterclasses and timed demonstrations to attend, story telling for the youngsters, things to try and things to buy. Put this event in your diaries now!

When: 12–13 September, 2015
Where: Cressing Temple Barns, Witham Road, Braintree, Essex CM77 8PD
Web: www.europeanwoodworkingshow.eu

PHOTOGRAPH COURTESY OF THE BENLEY BLOG

Steve Jones' wagon of curiosities at Bentley Woodfair

Bentley Woodfair

Come and celebrate 20 years of Woodfair this September, in Halland, East Sussex. Woodfair is a celebration of woodlands, forestry, timber, trees, woodcrafts and much more. The whole site holds two fields of stands, exhibits and displays and a woodland full of demonstrations and activities. Bentley Woodfair started in 1996 and continues to support local rural businesses and crafts while educating and entertaining families. You can expect to see a variety of demonstrations of machinery, tree climbing, children's activities, lots of local food, a beer tent and a really great atmosphere. An event not to be missed!

When: 18–20 September, 2015
Where: Bentley, Halland, East Sussex BN8 5AF
Web: www.bentley.org.uk/woodfair

PHOTOGRAPH COURTESY OF WWW.CHARLIEWHINNEY.COM

Charlie Whinney will be exhibiting at this year's London Design Festival

The London Design Festival

Taking place throughout September and first staged in 2003, the London Design Festival is one of the world's most important annual design events. The festival programme is made up of over 350 events and exhibitions staged by hundreds of Partner organisations across the design spectrum and from around the world.

When: 19–27 September, 2015
Where: Various locations throughout London
Web: www.londondesignfestival.com

Record Power summer & autumn shows

During the next few months, Record Power will be appearing at various dealers' premises across the UK and Ireland to answer your questions and demonstrate products from their extensive range. At many of the events, exclusive show deals will also be available on the day.

When: 2–3 October, 2015
Where: WH Raitt, Main Street, Stranorlar, Co.Donegal, Republic Of Ireland
Web: www.whraitt.ie

When: 9–11, October, 2015
Where: 'The' Tool Show 2015, Kempton Park Racecourse, Staines Road East, Sunbury on Thames, Middlesex TW16 5AQ
Web: www.thetoolshow.com

When: 24 October, 2015
Where: Snainton Woodworking Supplies, The Poplars, Barker Lane, Snainton, Scarborough, North Yorkshire YO13 9BG
Web: www.snaintonwoodworking.com

W16

W16 is the national show for the joinery and furniture industries and one of the UK's largest trade exhibitions. It provides the opportunity to see running woodwork machinery together with components and materials all under one roof, showcasing the latest products and developments in the woodworking industry.

When: 2–5 October, 2015
Where: The NEC, Birmingham, West Midlands B40 1NT
Web: www.wexhibition.co.uk

The Cranborne Chase Wood Fair

A variety of exhibitors and demonstrators from the world of wood will be displaying their products and skills at the Wood Fair. Visitors will be able to learn why wood is an efficient and renewable source of fuel and admire the traditional skills of a wide range of craftsmen and artists.

When: 3–4 October, 2015
Where: Breamore House, near Fordingbridge, Hampshire SP6 2DF
Web: www.woodfair.org.uk

PHOTOGRAPH COURTESY OF WWW.FLICKR.COM

Carving an eagle at a previous Cranborne Chase Wood Fair

The Surrey Hills Wood Fair

This event includes a variety of activities for all ages, including coppice crafts and wood products, trade stands, local produce, horse and wagon rides, demonstrations and a number of children's activities. You can also enjoy free parking.

When: 3–4 October, 2015
Where: Birtley House Estate, Bramley, near Guildford, Surrey GU5 0LB
Web: www.surreyhills.org

PHOTOGRAPH COURTESY OF ARTSYBEEPER.WORDPRESS.COM

A scene from last year's Surrey Hills Wood Fair

FangFest – Festival of the Practical Arts

This event is a celebration of traditional crafts and there will be a host of new attractions and interesting things for you to see and do in 2015. Expect to see demonstrations of traditional rocking horse carving, as well as demonstrations of bowl making with a pole-lathe and chainsaw carving, plus much more.

When: 6–7 September, 2015
Where: Fangfoss, near York YO41 5QH
Web: www.rockinghorse.co.uk

F&C UK

An open invitation for furniture makers to let us know what you're up to...

■ CHIPPENDALE INTERNATIONAL SCHOOL OF FURNITURE

Furniture fit for a parliament

Six graduating furniture design students from the Chippendale International School of Furniture have had their signature pieces exhibited at the Scottish parliament.

The school, near Edinburgh, has been teaching furniture design, restoration and making for 30 years and each year attracts students from around the world for intensive 30-week courses. This year's intake included students from Canada, the USA, Norway, Italy and the UK. Here we have a look at a few of the entries.

'Perfect Balance' console table – Hugo Gray

It's a piece of bespoke furniture that owes much to Einstein's general theory of relativity, in which gravity is described as a consequence of the curvature of space-time. It was designed by Hugo Gray from London, who is able to sit at the end of the unsupported table's oak (*Quercus spp.*) arm. The table, made from spalted beech (*Fagus spp.*) and oak, was designed to this precise calculation to determine the weight that the table has to carry, and therefore what counter-weights the table needs in its short arm and base.

'Sturgeon cabinet' – Tom Foottit

Tom Foottit from Essex made his Sturgeon cabinet as a tribute to Scotland's First Minister, Nicola Sturgeon. Tom's cabinet is made from Scottish olive ash (*Olea europea*), Caledonian pine *(Pinus sylvestris)*, aromatic cedar (*Juniperus virginiana*), white ash (*Fraxinus americana*), rippled sycamore (*Acer pseudoplatanus*) and ebony (*Diospyros spp.*).

'Steamer trunk' – Isaac Thompson

Isaac Thompson from Orange County, California created a steamer trunk to bring back the glamour of long distance travel. His trunk has an oak carcass with veneers of sycamore, mahogany (*Khaya ivorensis*) and rosewood (*Dalbergia retusa*). It also contains a backgammon board complete with all the chips to while away the hours.

PHOTOGRAPH COURTESY OF THE CHIPPENDALE INTERNATIONAL SCHOOL OF FURNITURE

Hugo Gray and his 'Perfect Balance' console table

Enquiries and commissions

All the former students are now setting up their own UK businesses, with the exception of Isaac, three from incubation space at the school, which provides facilities for alumni to make the transition from student to professional woodworker, but without the considerable expense of buying all the hugely expensive equipment.

For more information, see www.chippendaleschool.com.

■ BUCKS NEW UNIVERSITY

Buckinghamshire New University students enjoy success at prestigious national awards

PHOTOGRAPH COURTESY OF DAVE MARRIOTT

Jacob Underwood with his 'Fiero Stacking Chair'

Talented students at Buckinghamshire New University have won five awards at the industry-leading New Designers exhibition in London and two were shortlisted for its most prestigious prize of New Designer of the Year.

The exhibition, which showcases a range of work by up-and-coming art and design figures, marked its 30th anniversary this year.

BA (Hons) Furniture students Jacob Underwood, Juwon Seo, Stephen Robert Mclean, Wesley Cripps, and Chantal Fauchard-Newman were award winners.

At New Designers Part 2, Jacob won the New Designers BCFA Award with the British Contract Furnishing Association for his Fiero Stacking Chair, a live brief from furniture company Ercol suitable for production in the Ercol factory.

Jacob's prize is a four-week internship with the design studio FR One in the city of Antwerp, Belgium.

Juwon Seo won the New Designers John Lewis Award for Design & Innovation – Part 2 – for her piece, the work nest, a home office desk – a house-shaped beech (*Fagus sylvatica*) wooden frame with soft furnishing.

She wins £1,000 and the opportunity to visit John Lewis at its HQ. Juwon was also shortlisted for the title of BDC New Designer of the Year.

Stephen Robert Mclean, Wesley Cripps and Chantal Fauchard-Newman were among just 10 winners in the competition, 'John Lewis Loves'.

Frazer Mackenzie, the new Head of School for Art & Design at Bucks New University, said: "The awards top off what has been another great year for our students and a real testament to all the hard work of both the course teams and the students they teach."

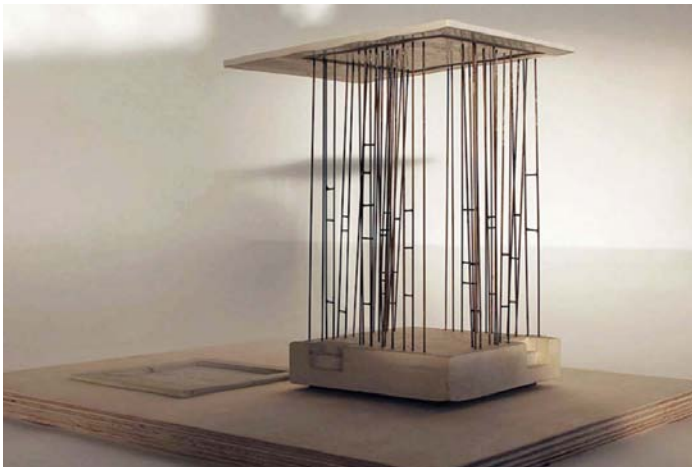
For more information, see www.bucks.ac.uk.

■ THE LONDON COLLEGE OF FURNITURE

The Cass Summer Show Part 2

PHOTOGRAPH COURTESY OF WWW.EDITORIALATLARGE.COM

Contemporary upholsterer Jude Dennis constructing a chair as part of the 'Stackers' series in the Vivienne Westwood showroom



PHOTOGRAPH COURTESY OF THE LONDON COLLEGE OF FURNITURE

A piece from 'The Primitive Hut' competition

For its second instalment this year 'The Cass Summer Show Part 2' recently showcased work from the Architecture, Interiors, Furniture, Jewellery & Silversmithing, Product Design, Fashion Design and Textile courses.

The exhibition opened on 26 June with a packed private view and the annual Architecture Awards. The Cass Bank Gallery was overtaken by incredible baroque structures created by Architecture students and alongside these structures Cass Technician Jude Dennis displayed her 'Stackers' series of chairs – see above. The chairs were in varying states of make and earlier this year she toured them to Milan as part of the Salone Internazionale del Mobile.

The rest of central house became a rabbit warren of creativity; work from the architecture, interior design, fashion design, product design, jewellery and furniture students flooded the building.

The work by furniture students created a miniature showroom at the university. A mixture of chairs, tables, lights, cabinets, stools, shelves and screens made from various types of wood, resin and plastic were a shining example of the quality coming out of The London College of Furniture in 2015.

For more information, see www.londonmet.ac.uk.

■ GATESHEAD COLLEGE

Apprenticeships carve business success for Funky Chunky Furniture

South Shields-based furniture manufacturer, Funky Chunky Furniture, is backing apprenticeships after building a successful business through employing apprentices from Gateshead College.

Kevin Johnston set up Funky Chunky Furniture's workshop in the town's Wapping Street two years ago and now employs two apprentices to help manage growing demand for his handcrafted furniture.

The company has taken on Kieran Potts, 17, who is combining on the job training at Funky Chunky Furniture with studying for an NVQ Level 2 in Warehousing and Storage at Gateshead College.

Once an apprentice himself at South Tyneside Council, Kevin recognised the need for highly skilled tradespeople who were also equipped with the right training to hit the ground running in a business environment.

Kevin said: "Funky Chunky Furniture's success relies solely on the high quality craftsmanship of our products – it's a challenge to find people that have both the hands-on know-how as well as the commercial awareness, initiative and self-motivation that's so important to the success of a small business. Both of my employees have gone through apprenticeships at Gateshead College and I've been very impressed with the quality of learning provision. The college has given me all the support I need to recruit the right people with the right kind of work ethic."

Having been an apprentice himself, Kevin can appreciate how valuable it is to begin to learn sector specific skills from day one while developing specialist knowledge that will be applied every day. He highly recommends the apprenticeship scheme and recommends other businesses to consider taking on an apprentice to share skills and knowledge with the next generation. For more information, see www.gateshead.ac.uk and www.funky-chunky-furniture.co.uk.

PHOTOGRAPH COURTESY OF WWW.GATESHEAD.AC.UK

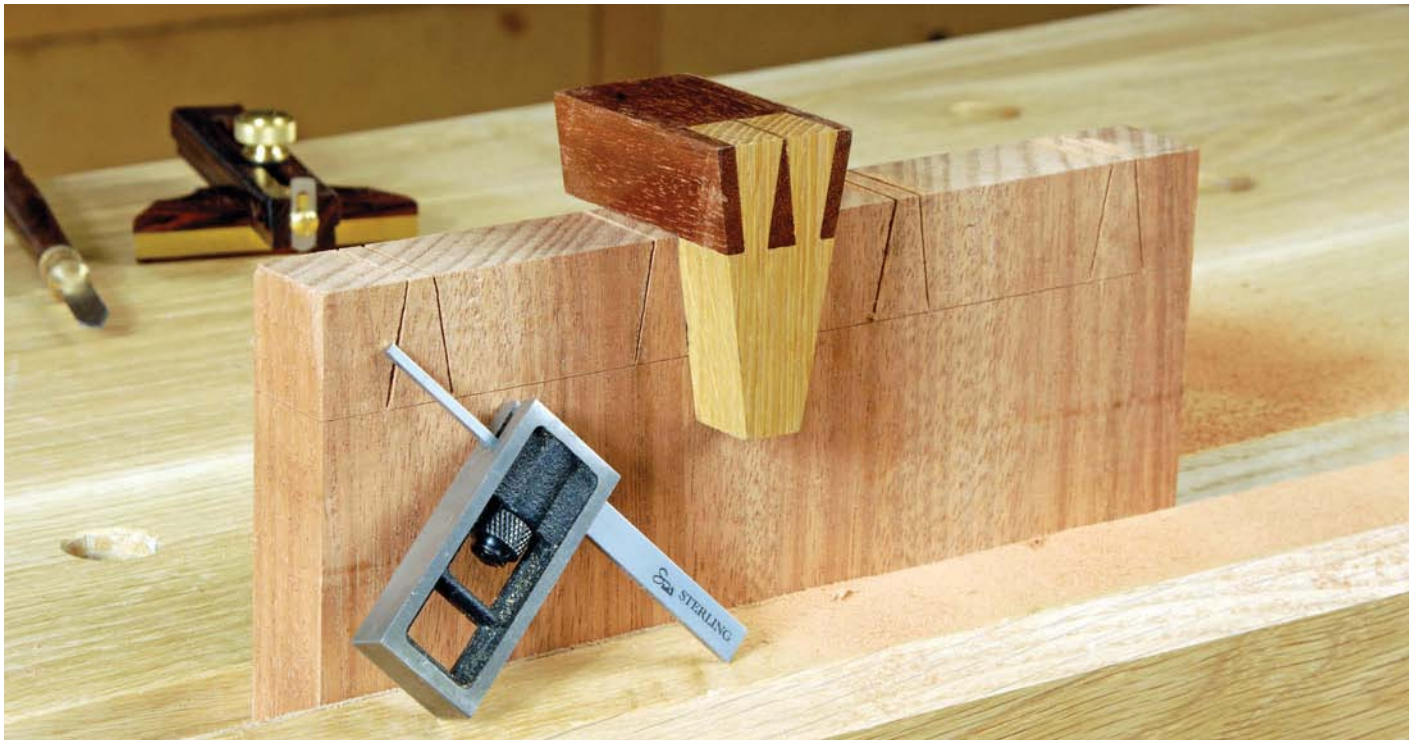
Kevin Johnston of Funky Chunky Furniture and his two apprentices from Gateshead College

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

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



PHOTOGRAPH BY GMC/DEREK JONES

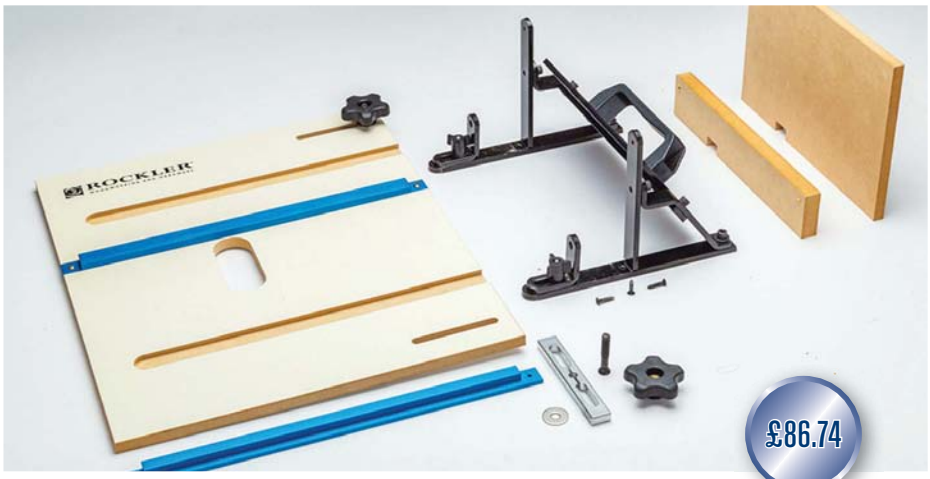
Remember campaign furniture? As some of you will know, the style has seen a resurgence since the publication of *Campaign Furniture* by Lost Art Press in 2014. When you've worked through the Arts & Crafts and Shaker back catalogues, campaign furniture is the next logical step. Full of rectilinear joinery, hand tool work and traditional methods of construction, the style has much to offer the hand-built furniture maker. And when it comes to sourcing the hardware, you may be pleasantly surprised as well. Lee Valley has gone into production with a nifty three-way fastener to build an authentic three-legged stool. All you need is some mahogany *(Khaya ivorensis)* or teak *(Tectona grandis)*, some leather and you're sorted. It'll mean having a go at turning some legs but don't let that put you off.

The best time to put a tool through its paces is in a real live situation and I managed to get my hands on a Sterling Tool Works Double Square just in time for a dovetail carcass assembly. The mini test overleaf tells the story. Before that, though, here's a round-up of what's new this month.

Axminster 1700 workbench

This workbench features a bench top of laminated, kiln-dried beech *(Fagus spp.)*, which is lacquered on both top and underside for maximum protection. Beech is a particularly good choice and a laminated construction results in a stable and rigid worktop that will remain flat.

The bench top is 30mm-thick with a 90mm deep apron. The large working surface is 1,550 × 500mm overall and including the vices, the bench measures 1,700 × 650mm. Both the front and end vices have a double row of bench dog holes extending the width and length of the worktop, which allows you to hold workpieces with a wide variation in size or shape – four bench dogs are included. The 360mm long vices have steel guide bars either side of a strong central screw and the maximum opening is 130mm. The under frame is solid beech and dog holes in the legs allow you to clamp items vertically. A full length shelf in the base offers storage for larger tools or materials. This bench is supplied flat packed with full instructions for assembly. Please note that this price is valid until 31 December, 2015.



XL Router Table Box Joint Jig

Rockler Woodworking and Hardware's new box joint jig constructs 12mm and 20mm box joints on the router table, which is a step up in size from the original. The jig allows do-it-yourselfers to use stock timber to make large projects, such as toy boxes, clothing chests and storage trunks with consistently machined finger joints, which are both precisely constructed and decorative in appearance.

Making large box joints requires a stable jig that can be tightly secured to the router table, this new box joint jig meets both of those needs. The jig features a steel sled, which holds the workpiece between two sacrificial boards and an MDF base that is secured to the router table with two metal bars that are tightened down in the mitre track with five-star knobs. A large handle on the rear of the jig sled allows the user to easily control the feed rate of the stock.

Makita expands Brushless motor range

Makita continues to extend the range of 18V Lithium-ion powered cordless tools that feature the innovative Brushless motor design, which substantially enhances the performance and longevity of the tool. It reduces friction within the motor and thereby releases greater power from the engine. The reduction in motor friction consequently extends the runtime available from the battery and is also responsible for generating less heat.

The new Makita DFS452 LXT screwdriver generates a maximum of 490W and will run up to 4,000rpm. The 6mm hex push-drive shank will comfortably drive home a 5mm drywall screw or a 6mm self-drilling screw. Weighing a comfortable 1.7kg, and with ergonomic soft grip handle, this screwdriver has a silent clutch, variable speed trigger, one-touch locator and useful lock-on button and reverse switch option. Delivered in a type 2 Makpac connector case with two 18V 4.0Ah Li-ion batteries and DC18RC fast charger, the DFS452 also features a battery fuel gauge, on-off job light and handy belt clip as standard.

The Makita Brushless motor is also featured in two new cordless angle grinders: the DGA455, which runs a 115mm diameter grinding wheel, and the DGA505, which will power a 125mm grinding wheel. Both grinders run up to 8,000rpm and have a paddle switch control for operator safety and an automatic speed control to deliver the ideal cutting speed to load conditions for optimum performance.

The new Makita DHS680 165mm cordless circular saw also benefits from the attributes of the Brushless motor which, with a 4.0Ah 18V Li-ion battery, produces 680W of motor power that will run the 165mm blade up to 5,000rpm without load. This saw also features the Automatic Speed Control, which matches the cutting speed ideally to the load condition for optimum cutting performance. Also included in this high specification tool is the soft-start function normally found in mains machines: electric safety brake, electronic current limiter, twin LED job light and battery fuel gauge. ➤

MINI TEST: Sterling Tool Works' Double Square

First of all, if it says Sterling Tool Works on the box, then you know you're going to be pleased with the quality of the tool. If you haven't checked out their dovetail markers by now, then you should. As a lightweight and versatile engineer's square, this is up there with the best with an accuracy of 0.001in. For general woodworking of course, that's overkill. For high-end joinery and layout, it offers peace of mind. The graduations on the rule are a mixture of metric and imperial – 1mm, 5mm, 32nds and 64ths. Swap this component out for the dovetailing ruler and you can transfer a level of accuracy to the walls of mortises and other fancy joints that would otherwise be hard, if not impossible, to achieve. It's a small enough tool to sit in your apron pocket if you wear one and light enough to forget all about it, until you need to check some joinery of course. The dovetailing ruler can be used in other makes of square if you just want to buy that piece on its own – old and new Starrett, Goddell Pratt and Browne & Sharp, for example. All in all, a very useful and versatile addition to your layout tools.

Bosch's 'Wireless Charging System'

Loss of productivity through flat power tool batteries could be a thing of the past, thanks to new thinking from Bosch Professional Power tools.

With its 'Wireless Charging System', Bosch has become the first supplier in the world to harness the advantages of inductive energy transfer to keep cordless tools power-ready. In essence, this new approach is similar in principle to that of a contactless toothbrush charging station.

Aimed initially at professionals operating in fixed locations, the idea is that whenever the tool is not being used it should be placed on the charging unit in the user's workstation. Tools can be left on the charger indefinitely or placed there for just a few minutes at a time between jobs.

While the system's main benefit is that jobs are never interrupted or delayed by lack of charge or, worse still, the search for a charged-up replacement battery, the profitability advantage doesn't end there. Savings are made on battery costs, as only one is needed for the tool. The expense of repairing or replacing equipment damaged by water and dust is also avoided, as there are no vulnerable electrical contact points.

For the system's UK launch, Bosch has developed two products: the GAL 1830 W Professional battery charger and the GBA 18 V 2.0 Ah MW-B Professional 18V Lithium-ion battery. The compact charging kit comes with a mounting frame for convenient attachment to benches or shelves, which serves as a flexible but secure holder for the charger, battery and tool.

The 'smart' system detects the battery state and selects the optimum charging mode so there is no risk of overcharging. CoolPack technology improves heat dissipation and extends the battery's lifetime. Further flexibility results from the Wireless Charging System's compatibility with all 18V Bosch power tools, including drill/drivers, multi-cutters, rotary hammers, impact drivers and combis.

Lee Valley Campaign Stool hardware

Included in this kit is a sturdy and elegant three-way pivot for building a folding stool, such as the one in Chris Schwarz's *Campaign Furniture*. Developed for use with 32mm diameter legs, the hardware installs at the midpoint of the legs, letting them pivot to form a tripod or fold for compact carrying and storage.

The kit includes a central brass hub, plus three stainless-steel bolts, each with a set of shaped brass washers. To prevent the bolts from loosening in use, flat nylon washers are included to reduce friction between the outer washer and bolt. The hub is 25mm in diameter and 32mm thick. Fully assembled, the hardware is just over 100mm in diameter. Made in Canada.

MINI TEST: Japanese F-type auger bits

Typically any hole bored with an auger bit is not a pretty sight. In most cases, these bits are designed to hack through timber, hard or soft, quickly and without fuss, which is great until you need something with a little finesse. Drilling nice clean holes in your brand-new bench top for holdfasts is a good example.

Step forward then the Japanese F-type auger bits, a brand-new development from Star M Corporation in Japan. No longer will you have to clamp a waste board to the backside of the workpiece or come at the hole from both sides to avoid spectacular breakout. Maybe I should get out a bit more or maybe I'm just easily pleased. Either way, I think you're going to need a few of these in your toolkit. The hex shank means you can drive them with a cordless if you need to or load them into a pillar drill. The centre spike makes them easy to position into a pilot hole or bradawl mark.

The lead point is followed by a conical section that reams out the hole to full diameter so, unlike a normal auger, you can carefully run a larger diameter bit through an existing hole to enlarge it. Definitely worth looking at and available in a variety of sizes from Workshop Heaven.

AirGlaz from Romag

Specialist glass processing company Romag has introduced a new toughened laminated glass range incorporating the highest levels of transparency and durability on the market.

The company's new AirGlaz product combines special anti-reflective properties with maximum strength for bespoke showcase applications where absolute visual clarity and high levels of protection are priority considerations.

The new range has been created using low iron float glass that incorporates the most advanced magnetron sputter coating, which is then strengthened and toughened using advanced thermal treatment processes. This creates a tough, scratch resistant surface with unique optical properties that allow light transmission of 97% and reflection of less than 1%. This compares to normal architectural float glass that typically has a light transmission of 90% and a reflection of 8%. In addition, the carefully tailored anti-reflective coating utilised in AirGlaz has been specially designed so that any reflection caught in the 1% factor appears in a dark blue rather than the pink area of the spectrum, helping to remove unwanted glare and prevent distortion.

AirGlaz can be supplied as single or double sided non-reflective units and can also be combined with protective interlayers to create a bonded laminate suitable for a wide range of specialist safety and security glazing applications. Available in a range of thicknesses, with multiple size and laminate combinations.

Record Power DML320 cast-iron electronic variable speed lathe

Record Power has introduced an exciting new lathe to their comprehensive range of woodturning machinery – the DML320 cast-iron electronic variable speed lathe. This machine packs a real punch, with a powerful 1hp motor, 305mm swing over the bed and an impressive 510mm between centres. The spindle thread is the popular M33 × 3.5 and the tailstock is No.2 Morse taper, with a wide range of accessories available to fit.

The solid cast-iron bed, tailstock and headstock offer superb stability, even when turning items at the limits of the lathe's considerable capacities. Most impressive of all is the high-quality electronic variable speed function, giving smooth and responsive speed change at the turn of a dial, with a highly accurate digital speed readout. The DML320 is also capable of reverse turning.

Priced extremely competitively the DML320 offers some fantastic features, giving you the chance to own a high-quality variable speed lathe at an unbeatable price. In addition, the DML320, as with all Record Power's machinery, comes with an industry-leading five-year guarantee. F&C

Contacts

AirGlaz from Romag
Contact: Romag
Tel: 01207 500 000
Web: www.romag.co.uk

Axminster 1700 workbench
Contact: Axminster Tools & Machinery
Tel: 03332 406 406
Web: www.axminster.co.uk

Bosch's 'Wireless Charging System'
Contact: Bosch Professional Power tools
Tel: 03447 360 109
Web: www.bosch-professional.com

Japanese F-type auger bits
***Contact:** Workshop Heaven*
Tel: 01295 678 941
Web: www.workshopheaven.com

Lee Valley Campaign Stool hardware
Contact: Lee Valley
Tel: (001) 613 596 0350
Web: www.leevalley.com

Makita expands Brushless motor range
Contact: Makita
Tel: 01908 211 678
Web: www.makitauk.com

Record Power DML320 cast-iron electronic variable speed lathe
Contact: Record Power
Tel: 01246 571 020
Web: www.recordpower.co.uk

Sterling Tool Works' Double Square
Contact: Classic Hand Tools
Tel: 01473 784 983
Web: www.classichandtools.com

XL Router Table Box Joint Jig
Contact: Rockler Woodworking and Hardware
Tel: (001) 800 279 4441
Web: www.rockler.com

TOMACO

THE TOOL MARKETING COMPANY

DISTRIBUTORS OF QUALITY PRODUCTS

SHARP EDGE

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

narex®

Quality range of woodworking hand tools made in Europe.

COLT® PROFESSIONAL TOOLS

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

MORAKNIV®

Range of knives for trade and carving. Swedish quality, swedish steel. Made exclusively in Mora Sweden.

VETO PRO PAC® TOOL BAGS THAT WORK

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

CMT ORANGE TOOLS™

Router cutters, spindle moulding cutters and saw blades from Italy.

FOR YOUR NEAREST STOCKIST VISIT

www.tomaco.co.uk

JET

STAND BEHIND YOUR WORK

★★★★½

4.5 star review

"Great build quality for an extractor of this price range. The suction is fantastic and when cutting up lots of MDF, I am no longer covered in fine dust."

DC-1100A Extractor

- Industrial quality motor, 1620 m³/hr airflow @ 150mm
- Unique "Vortex" cone waste separation design keeps the filter cleaner
- Choice of 1 x 150mm or 2 x 100mm inlets, easily fits most machines
- Wheeled base for mobility around the workshop
- Supplied with a 30 micron filter bag and 5 collection bags
- 200L waste sack size

FEATURING VORTEX CONE™ TECHNOLOGY

Without the Vortex Cone
Filter gets clogged reducing performance and requiring frequent maintenance

With the Vortex Cone
Filter stays cleaner preserving performance and requiring little maintenance

Particle separation technology that prevents up to 98% of particles from entering the upper bag

£349.00
Normally **£364.96**
Code **210045**

Comes with **FREE 2.5m Hose** worth £47.95 (200777)

BriMarc TOOLS & MACHINERY *Find your nearest Jet stockist at* ***brimarc.com***

Prices include VAT and are valid until 30th September 2015 or while stocks last. Participating Jet stockists only.

PHOTOGRAPH BY STEVE PAM

PHOTOGRAPHS BY ANTON GERNER UNLESS OTHERWISE STATED

In the workshop with Anton Gerner

This month, we find out more about Australian designer Anton Gerner and his bespoke contemporary furniture

Anton was first introduced to woodwork at Preshil school in Melbourne; he found this the most interesting subject at school and spent more time doing woodwork than perhaps he should have! This sparked his interest in furniture making: "My interest in furniture design was a natural progression from making small objects out of wood at school. I enjoy not only the design process but also the actual crafting of an object." He went on to complete a course at the Melbourne School of Woodcraft in 1989 and then worked for several furniture makers. He spent many hours reading books and magazines on woodwork and design, and learnt by making mistakes as he went along.

As he learnt and began to find his own style, he also began working for himself: "Starting my own business was not planned. It happened because there was simply nowhere in Melbourne doing the sort of work that interested me. At first, I completed basic commissions for family and friends; however, a clientele gradually developed who appreciated my work. I exhibited extensively to show what I could do, and as the business increased, I built up my collection of tools and machinery, which enabled me to become more efficient and complete a wider range of designs and projects. Eventually, after working as a sole trader for many years, I incorporated and, as Anton Gerner Furniture Pty Ltd, I employ a small team of skilled craftspeople." His small but highly efficient workshop/showroom is housed in a former dairy in Melbourne, which still has the original tiled floor and walls.

Design ethos

Many of his ideas take a long period of time to develop, and he maintains a large database of designs that he plans to complete. He often sketches his ideas on paper as the first step in a design, as he explains: "Some designs develop easily on paper, while others need full-size prototypes before being made. I have a photographic memory for my ideas and designs and draw on them as needed."

PHOTOGRAPH BY STEVE PAM

Sideboard in red gum and Huon pine

Deco cabinet in burl myrtle, Macassar ebony and bronze

Burr elm cabinet

Anton's approach to a design depends on whether the piece is a commission from a client or for an exhibition: "If I am making a piece for a client, then I spend considerable time gaining an exact understanding of their requirements. This, along with a general direction we discuss, informs the design." This type of work involves certain constraints that he has to work around. "Clients often have a particular style in mind, a certain type of wood, and at an unrealistic price. It is my job to work within these constraints and come up with a design that suits their requirements. Sometimes this is very easy, but other times it is not always possible and a compromise must be reached." With years of experience, he now works through these constraints to design a piece that both the client and he are happy with.

The starting point is different for non-commissioned work, as Anton tells us: "If I am making a piece for an exhibition or for my showroom, where I am the client, I normally start with an idea that I have been thinking about for some time. This can be based on a theme I have been working on, just an idea or even a special piece of timber I might have. I often design more complex pieces for exhibition, when time and cost is not such a consideration," he explains.

Whatever the piece, the quality of the work is the most important thing in Anton's eyes. "I am obsessed with quality. No piece leaves the workshop until I am happy with it, even if that means running late. I monitor daily the work completed by my assistants and constantly discuss the quality we produce. It is the quality of our furniture that sets us apart."

In terms of techniques, Anton describes himself as a bit of a maverick: "I don't play by the rules when it comes to making furniture. I use whatever technique I like that I believe achieves the best result in terms of quality. I use a lot of traditional joinery, often in a contemporary way, but also many modern construction methods. I'm a results based craftsman, rather than a traditionalist. I strive ➤

to produce the best work I can, using both machines and hand tools," he tells us.

Timber choice

Anton uses a huge range of timbers from around the world, both solid and veneer. "The choice of which timber to use for a project depends on a number of factors, such as the client's budget or availability in the required size and desired colour or grain. I like to combine different timbers in contrasting colour and grain, and I have a personal preference for darker timbers, such as walnut *(Juglans spp.)*, blackwood *(Acacia melanoxylon)* and ebony *(Diospyros spp.)*.

Favourite pieces

Although he doesn't own many of his pieces, Anton has kept a chest of drawers that he made several years ago. "This '9 Drawer Chest' is special to me, because I used three-way mitre joints in the corners and it was the first time I perfected them."

Design influences and inspirations

Anton finds inspiration from designs in everyday life. "I notice architectural details and any beautifully crafted product, from cars to dinner plates – if they are made well and look good, they interest me. I am not inspired by any one particular designer; however, I am very fond of all things Art Deco and I call a number of my designs 'Contemporary Art Deco'." He also reads design magazines from Europe and the US to keep aware of the latest trends.

Exhibitions and awards

Over the years he has exhibited extensively and has also won a number of awards, including Best Production Piece in the 2010 Maximise competition, Best Cabinet Work at the Victorian Woodworkers Association Annual Exhibition on several occasions and the Natural Feature in Furniture Award, one of the most prestigious awards for furniture design in Australia. He exhibits less now that his business is established, but he is currently working on a solo exhibition.

Future projects

Due to the varied nature of his work, Anton told us it is hard to predict what sort of pieces he will make in the future: "I work on such a large range of projects that it's hard to tell. I can be working on a large 18-seat dining table one week and then a really small bedside table the next. I am, however, trying to specialise in cabinets and chests of drawers." We look forward to seeing the results!

Split console in Tasmanian myrtle and Huon pine

Dining table in American walnut

Coffee table in fiddleback eucalyptus and Southern blue gum

PHOTOGRAPH BY STEVE PAM

Oval coffee table in Macassar ebony

Maker's maker

I find I am inspired by many different designers and makers, rather than a single person. I have always taken interest in the work of others, not only in furniture, but also other crafts and architecture. I am particularly inspired by the Art Deco period, especially the work of Ruhlmann and the lacquer genius Jean Dunand. Their pieces form some of the basis for my contemporary deco designs, along with inspiration from Art Deco architecture.

I also greatly admire the work of a number of furniture makers around the world. The late Sam Maloof, who was the master in sculptural chairs, which are just perfect in both form and craftsmanship. Australian designer Khai Liew who creates contemporary pieces that draw on inspiration from Asian furniture. Currently I am closely following the work of Matthias Pliessnig, who is based in Brooklyn and makes amazing steam-bent sculptural benches.

In contemporary architecture I love the work of Snøhetta. Their Opera House in Oslo, Norway, is outstanding. ARM Architecture and Lyons Architecture in Australia continue to inspire me with their unique buildings.

Recently I have found Instagram to be the greatest source for my inspiration. There are just so many people on there who are producing really great work. From furniture to ceramics, glass, leatherwork and architecture, it's all there. So good to be able to see such a wide range of inspirational work every day. It's also great to be able to communicate with so many inspirational designers and makers via Instagram. F&C

PHOTOGRAPH COURTESY OF SOTHEBY'S

Black and white polychrome lacquered cabinet with birds-eye maple interior, by Jean Dunand and Jean Goulden

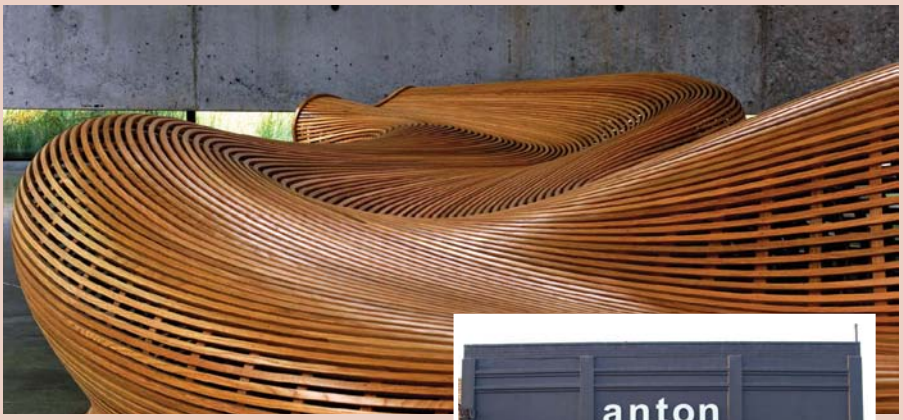
PHOTOGRAPH COURTESY OF SNOHETTA.COM

Interior of Tverrfjellhytta, Norwegian Wild Reindeer Pavilion, designed by Snøhetta

PHOTOGRAPH COURTESY OF THE V&A

Lotus dressing table by Jacques-Emile Ruhlmann, oak and mahogany with amaranth and andaman padouk veneer

PHOTOGRAPH COURTESY OF KARIMATRENDZ.WORDPRESS.COM



'Amada Bench', by Matthias Pliessnig

Anton's showroom and workshop in Melbourne

Contact details

Email: anton@antongerner.com.au
Web: www.antongerner.com.au
Instagram: @antongerner

Now in its 6th Year!

EUROPEAN WOODWORKING SHOW

WOODWORKING IN ACTION

12th and 13th September 2015

Cressing Temple Barns, near Braintree, Essex CM77 8PD

The European Woodworking Show is an amazing showcase of craftsmen and women from around the world. Set in the beautiful grounds of Cressing Temple Barns in Essex.

The European Woodworking Show, now in its sixth year, will have over 100 exhibitors representing a diverse range of woodworking disciplines. A demonstrator led show supported by quality tool makers.

tel: **01473 785946**

email: **info@ews2015.com**

www.ews2015.com

NEW STORE WAKEFIELD OPENS NOVEMBER

Machine Mart®

NOW 66 SUPERSTORES NATIONWIDE

WHERE QUALITY COSTS LESS

Clarke 4" BELT/ 6" DISC SANDER

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

CS4-6D £84.99 EX.VAT £101.99 INC.VAT

Clarke 6" BELT/ 9" DISC SANDER

- Includes stand
- 1 Hp/ 230v/ 1ph motor

CS6-9C £209.00 EX.VAT £250.80 INC.VAT

NEW 4" BELT/ 8" DISC SANDER

- Includes two tables
- 550w 230v motor.

CS4-8 £139.98 EX.VAT £167.98 INC.VAT

Clarke TABLE SAWS

CLK3 LEG STAND KIT FOR CTS10D - £29.99 INC VAT. LEG STAND KIT FOR CTS11 - £27.59 INC VAT

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

CTS10D

INCLUDES LEFT & RIGHT TABLE EXTENSION

*Moulded base

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

Clarke RANDOM ORBITAL SANDER

CROS1 £29.98 EX.VAT £35.98 INC.VAT

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

INC 5 DISCS

Clarke CONTRACTOR BELT SANDERS

Clarke / Makita

- Ideal for surface removal, sanding and finishing

ABRASIVE SANDING BELTS IN STOCK

BS1 FROM ONLY £29.98 EX.VAT £35.98 INC.VAT

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

Clarke BANDSAWS

NEW RANGE

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 4 TPI wood cutting blade, rip fence, mitre guide and push stick

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

CBS300 ONLY £349.98 EX.VAT £419.98 INC.VAT

CBS350 ONLY £449.00 EX.VAT £538.80 INC.VAT

Clarke TABLE SAW WITH EXTENSION TABLES (250mm)

CTS14

- Ideal for cross cutting, ripping, angle and mitre cutting
- Easy release /locking mechanism for table extensions
- 0-45° tilting blade
- Cutting depth: 72mm at 90° / 65mm at 45°
- 230V/50Hz, Motor: 1800W, No load speed: 4700rpm

£119.98 EX.VAT £143.98 INC.VAT

Shown with optional leg kit CLK5 £22.99 exc.VAT £27.59 inc.VAT

Clarke 1" BELT & 5" DISC SANDER

- Inc. 2 tilt/lock tables and mitre gauge
- 300w motor

CBS1-5 £64.99 EX.VAT £77.99 INC.VAT

Clarke SHEET SANDERS

CON300

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

*110V in stock

MODEL	SHEET SIZE	MOTOR	EXC.VAT	INC.VAT
COS200	190X90mm	150W	£13.99	£16.79
CON300	230X115mm	330W	£32.99	£39.59
Makita B0455*	112X102mm	200W	£54.99	£65.99

Clarke DISC SANDER (305MM)

- Powerful, bench mounted disc sander
- 900W
- No load disc speed: 1490rpm
- 305mm Disc Diameter (1 x 60 grit sanding disc included)
- Dimensions (LWH): 440x437x386mm
- Weight: 28kg

£119.98 EX.VAT £143.98 INC.VAT

CDS300B

Clarke STAPLE/ NAIL GUNS

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

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

LITHIUM-ION CONSN118LI

SPARE NAILS / STAPLES IN STOCK

ELECTRIC AND CORDLESS MODELS IN STOCK

MODEL	TYPE	STAPLE GAUGE	NAIL GAUGE	EXC. VAT	INC. VAT
CESNG1	Electric	22	18	£19.98	£23.98
CCT48	Cordless 4.8v Ni-MH	22	18	£29.98	£35.98
CESNG2	Electric	18	18	£39.98	£47.98
CONSN18Li	Cordless 18v Lithium-Ion	18	18	£109.98	£131.98

Clarke STATIC PHASE CONVERTERS

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

PC60

PRICE CUT NOW FROM £209.00 EX.VAT £250.80 INC.VAT WAS £382.80 inc.VAT

ROTARY PHASE CONVERTERS ALSO AVAILABLE

CONVERT 230V 1PH TO 400V 3PH

‡ was £274.80 inc.VAT
# was £322.80 inc.VAT
† was £382.80 inc.VAT

MODEL	MAX. MOTOR HP	FUSE	EXC.VAT	INC.VAT
PC20‡	2HP	10amps	£209.00	£250.80
PC40#	3.5HP	20amps	£249.00	£298.80
PC60 †	5.5HP	32amps	£299.00	£358.80

Clarke CIRCULAR SAWS

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

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

CON185

*Includes laser guide

MODEL	MOTOR	MAX CUT 90/45 (mm)	EXC.VAT	INC.VAT
Clarke CCS185B	1200W	65/44	£34.99	£41.99
Clarke CON185*#	1600W	60/40	£56.99	£68.39
Clarke CCS2	1300W	60/45	£59.98	£71.98

was £71.98 inc.VAT

VAC KING WET & DRY VACUUM CLEANERS

- A range of compact, high performance wet & dry vacuum cleaners for use around the home, workshop, garage etc.

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

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

* SS = Stainless Steel

Clarke QUALITY CAST IRON STOVES

20 GREAT STYLES IN STOCK

LARGE & XL MODELS IN STOCK

FLUES, COWLS & ACCESSORIES IN STOCK

6.9kW

POT BELLY

11.8kW

£89.98 EX.VAT £107.98 INC.VAT

BARREL

£209.00 EX.VAT £250.80 INC.VAT

BUCKINGHAM 6kW

£249.00 EX.VAT £298.80 INC.VAT

Clarke ELECTRIC POWER FILE

CPF13

- Variable belt speed
- Tilting head

*Black & Decker

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

MODEL	MOTOR	EXC.VAT	INC.VAT
CPF13	400W/230V	£44.99	£53.99
KA900E*	350W/230V	£49.98	£59.98

Clarke POWER PLANERS

BLACK & DECKER

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

- 82mm cutting width

CEP1

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

Clarke MULTI FUNCTION TOOL WITH ACCESSORY KIT

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

£36.99 EX.VAT £44.39 INC.VAT

CMFT250

Clarke BOLTLESS SHELVING BENCHES

- Simple fast assembly in minutes using only a hammer

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

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

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

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

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

ALSO EXTRA WIDE INDUSTRIAL UNITS AVAILABLE

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

Clarke PLANERS & THICKNESSERS

CPT800

- Ideal for DIY & Hobby use
- Dual purpose, for both finishing & sizing of timber (CP-6 planer only)

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

MODEL	MOTOR	MAX THICK. CAPACITY	EXC. VAT	INC. VAT
CPT600	1250W	120mm	£169.98	£203.98
CPT800	1250W	120mm	£199.98	£239.98
CPT1000 NEW	1500W	120mm	£269.98	£323.98

Clarke OSCILLATING BOBBIN SANDER

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

- Dust collection port
- Inc. 5 sanding sleeves/ bobbins
- 330mm table height

COBS1

FROM ONLY £119.98 EX.VAT £143.98 INC.VAT

NEW

FOR OVER 15,000 PRODUCTS INCLUDING NEW Xtra WOODWORKING MACHINES
visit machinemart.co.uk

NEW 500 PAGE CATALOGUE
Over 1100 PRICE CUTS & NEW PRODUCTS

GET YOUR FREE COPY NOW!
- IN-STORE
- ONLINE
- PHONE

0844 880 1265

Clarke MORTISING MACHINE CBM1B
£149.98 EXC.VAT £179.98 INC.VAT

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

"It is fast and accurate with a good solid feel...Excellent value for money, I'm really pleased with it." See www.machinemart.co.uk

CHISELS AVAILABLE FROM £6.99 EX VAT £8.39 INC VAT

Clarke WOODWORKING VICES
FROM ONLY £13.49 EXC.VAT £16.19 INC.VAT

Record WV7

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

Clarke 10" SLIDING MITRE SAW
- For fast, accurate cross, bevel & mitre cutting in most hard & soft woods
- 1800w motor
- Laser guide

£129.98 EXC.VAT £155.98 INC.VAT

CMS10S2

MITRE SAWS
Einhell · Makita

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

TH-SM 2534

- Quality Range of Mitre saws and blades available

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
Fury 3	210/25.4	60/220mm	£119.98	£143.98
Einhell TH-SM2534	250/30	75/340mm	£159.98	£191.98
Makita LS1040	260/30	95/130mm	£199.98	£239.98

Clarke DUST EXTRACTOR/ CHIP COLLECTORS
£129.98 EXC.VAT £155.98 INC.VAT

METABO ALSO AVAILABLE

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

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

Clarke · BOSCH Power Tools · Clarke CONTRACTOR CORDLESS DRILL/ DRIVERS
CON18Li · PSR18

powered by Li-Ion

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

* was £77.99 inc.VAT

MODEL	VOLTS	BATTS	EXC. VAT	INC.VAT
CCD180	18V	1	£36.99	£44.39
CDD240	24V	1	£39.98	£47.98
Bosch PSR18	18V	1	£54.99	£65.99
CON18Ni*	18V	2 x Ni-Cd	£59.98	£71.98
CON18Li	18V	2 x Li-Ion	£84.99	£101.99

airmaster TURBO AIR COMPRESSORS
FROM ONLY £79.98 EXC.VAT £95.98 INC.VAT

8/250

HUGE RANGE OF AIR TOOLS IN STOCK

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

MODEL	MOTOR	CFM	TANK	EXC.VAT	INC.VAT
Tiger 8/250	2Hp	7.5	24ltr	£79.98	£95.98
Tiger 7/250	2 Hp	7	24ltr	£89.98	£107.98
Tiger 11/250	2.5Hp	9.5	24ltr	£119.98	£143.98
Tiger 8/510	2Hp	7.5	50ltr	£129.98	£155.98
Tiger 11/510	2.5Hp	9.5	50ltr	£149.98	£179.98
Tiger 16/510	3 Hp	14.5	50ltr	£219.98	£263.98
Tiger 16/1010	3 Hp	14.5	100ltr	£269.98	£323.98

Clarke MITRE SAW STAND
CFMSS1

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

£64.99 EXC.VAT £77.99 INC.VAT

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

Clarke ROTARY TOOL KIT
CRT40

£29.98 EX.VAT £35.98 INC.VAT

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

Clarke 5PCE FORSTNER BIT SET
- Contains 15, 20, 25, 30 & 35mm bits • Titanium nitride coated for improved cutting finish

£9.98 EX.VAT £11.98 INC.VAT

CHT365

Clarke PORTABLE THICKNESSER
- Max thickness capacity 130mm
- Planing depths adjustable from 0-2.5mm
- Powerful 1250w motor
- 8000rpm no-load speed

£189.98 EX.VAT £227.98 INC.VAT

CPT250

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

PRICE CUT £49.98 EX.VAT £59.98 INC.VAT WAS £65.99 inc.VAT

CDTJ12

Router not included

Clarke 6" BENCH GRINDER WITH SANDING BELT
- For sanding/shaping wood, plastic & metal

£49.98 EX.VAT £59.98 INC.VAT

CBG6SB

- Supplied with coarse grinding wheel & sanding belt

Clarke BENCH GRINDERS & STANDS
- Stands come complete with bolt mountings and feet anchor holes

6" & 8" AVAILABLE WITH LIGHT

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

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

CBG8W features 8" whetstone & 6"drystone.
With sanding belt

MODEL	DUTY	WHEEL DIA.	EXC.VAT	INC.VAT
CBG6RP	DIY	150mm	£29.98	£35.98
CBG6RZ	PRO	150mm	£39.98	£47.98
CBG6RSC	HD	150mm	£49.98	£59.98
CBG6SB#	PRO	150mm	£49.98	£59.98
CBG6RWC	HD	150mm	£54.99	£65.99
CBG8W (wet)	HD	150/200mm	£55.99	£67.19

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

CHB1500

£129.98 EX.VAT £155.98 INC.VAT

Clarke · BOSCH Power Tools JIGSAWS
FROM ONLY £12.99 EXC.VAT £15.59 INC.VAT

*DIY #Professional

‡ was £59.98 inc.VAT

CJS380

MODEL	POWER (W)	DEPTH OF CUT (WOOD/STEEL)	EXC. VAT	INC VAT
Clarke CJS380*	420W	55/6mm	£12.99	£15.59
Clarke CON750#	750W	80/10mm	£24.99	£29.99
Bosch PST700E*‡	500W	70/4mm	£44.99	£53.99
B & D KSTR8K-GB#	600W	85/5mm	£66.99	£80.39

Clarke SCROLL SAWS
FROM ONLY £69.98 EXC.VAT £83.98 INC.VAT

- 120w, 230v motor • 50mm max cut thickness
- 400-1,700rpm variable speed • Air-blower removes dust from cutting area

CSS16V

MODEL	MOTOR	SPEED RPM	EXC. VAT	INC. VAT
CSS400B	85w	1450	£69.98	£83.98
CSS16V	120w	400-1700	£79.98	£95.98
CSS400C*	90w	550-1600	£99.98	£119.98

* Includes flexible drive kit for grinding/polishing/sanding

Clarke CONTRACTOR CR2 ROUTER
£109.98 EX.VAT £131.98 INC.VAT

- Powerful heavy duty machine ideal for trade use
- Variable speed control from 7,400-21, 600 rpm • 2100w motor • 0-60mm plunge depth.

INCLUDES 15 PIECE SET WORTH OVER £20

Clarke ENGINEER'S DRILL PRESS
- Tables tilt 0-45° left & right
- Depth gauge
- Chuck guards

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

MODEL	WATTS/ SPEEDS	EXC. VAT	INC. VAT
CDP5EB	350/5	£59.98	£71.98
CDP101B	245/5	£79.98	£95.98
CDP151B	300/5	£109.98	£131.98
CDP10B	370/12	£169.98	£203.98
CDP301B	510/12	£199.98	£239.98
CDP451F	510/16	£239.98	£287.98
CDP501F	980/12	£429.00	£514.80

B=Bench mounted
F=Floor standing

Clarke 13" MINI WOOD LATHE
£134.99 EX.VAT £161.99 INC.VAT

CWL325V

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

BISCUIT JOINTER
- 860W Motor
- 11000rpm Operating Speed
- 14mm Cutting Depth

£49.98 EXC.VAT £59.98 INC.VAT

BJ900

Clarke · BOSCH ROUTERS
CR1C

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

ACCESSORIES IN STOCK

*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

Clarke ROUTER TABLE
CRT-1

Router not included

BEST SELLERS

£59.98 EX.VAT £71.98 INC.VAT

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

VISIT YOUR LOCAL SUPERSTORE
OPEN MON-FRI 8.30-6.00, SAT 8.30-5.30, SUN 10.00-4.00

*NEW STORE

BARNSLEY Pontefract Rd, Barnsley, S71 1EZ	01226 732297
B'HAM GREAT BARR 4 Birmingham Rd.	0121 358 7977
B'HAM HAY MILLS 1152 Coventry Rd, Hay Mills	0121 7713433
BOLTON 1 Thynne St. BL3 6BD	01204 365799
BRADFORD 105-107 Manningham Lane. BD1 3BN	01274 390962
BRIGHTON 123 Lewes Rd, BN2 3QB	01273 915999
BRISTOL 1-3 Church Rd, Lawrence Hill. BS5 9JJ	0117 935 1060
BURTON UPON TRENT 12a Lichfield St. DE14 3QZ	01283 564 708
CAMBRIDGE 181-183 Histon Road, Cambridge. CB4 3HL	01223 322675
CARDIFF 44-46 City Rd. CF24 3DN	029 2046 5424
CARLISLE 85 London Rd. CA1 2LG	01228 591666
CHELTENHAM 84 Fairview Road. GL52 2EH	01242 514 402
CHESTER 43-45 St. James Street. CH1 3EY	01244 311258
COLCHESTER 4 North Station Rd. CO1 1RE	01206 762831
COVENTRY Bishop St. CV1 1HT	024 7622 4227
CROYDON 423-427 Brighton Rd, Sth Croydon	020 8763 0640
DARLINGTON 214 Northgate. DL1 1RB	01325 380 841
DEAL (KENT) 182-186 High St. CT14 6BQ	01304 373 434
DERBY Derwent St. DE1 2ED	01332 290 931
DONCASTER Wheatley Hall Road	01302 245 999
DUNDEE 24-26 Trades Lane. DD1 3ET	01382 225 140
EDINBURGH 163-171 Piersfield Terrace	0131 659 5919
EXETER 16 Trusham Rd. EX2 8QG	01392 256 744
GATESHEAD 50 Lobley Hill Rd. NE8 4YJ	0191 493 2520
GLASGOW 280 Gt Western Rd. G4 9EJ	0141 332 9231
GLOUCESTER 221A Barton St. GL1 4HY	01452 417 948
GRIMSBY ELLIS WAY, DN32 9BD	01472 354435
HULL 8-10 Holderness Rd. HU9 1EG	01482 223161
ILFORD 746-748 Eastern Ave. IG2 7HU	0208 518 4286
IPSWICH Unit 1 Ipswich Trade Centre, Commercial Road	01473 221253
LEEDS 227-229 Kirkstall Rd. LS4 2AS	0113 231 0400
LEICESTER 69 Melton Rd. LE4 6PN	0116 261 0688
LINCOLN Unit 5. The Pelham Centre. LN5 8HG	01522 543 036
LIVERPOOL 80-88 London Rd. L3 5NF	0151 709 4484
LONDON CATFORD 289/291 Southend Lane SE6 3RS	0208 695 5684
LONDON 6 Kendal Parade, Edmonton N18	020 8803 0861
LONDON 503-507 Lea Bridge Rd. Leyton, E10	020 8558 8284
LONDON 100 The Highway, Docklands	020 7488 2129
LUTON Unit 1, 326 Dunstable Rd, Luton LU4 8JS	01582 728 063
MAIDSTONE 57 Upper Stone St. ME15 6HE	01622 769 572
MANCHESTER ALTRINCHAM 71 Manchester Rd. Altrincham	0161 9412 666
MANCHESTER CENTRAL* 209 Bury New Road M8 8DU	0161 241 1851
MANCHESTER OPENSHAW Unit 5, Tower Mill, Ashton Old Rd	0161 223 8376
MANSFIELD 169 Chesterfield Rd. South	01623 622160
MIDDLESBROUGH Mandale Triangle, Thornaby	01642 677881
NORWICH 282a Heigham St. NR2 4LZ	01603 766402
NOTTINGHAM 211 Lower Parliament St.	0115 956 1811
PETERBOROUGH 417 Lincoln Rd. Millfield	01733 311770
PLYMOUTH 58-64 Embankment Rd. PL4 9HY	01752 254050
POOLE 137-139 Bournemouth Rd. Parkstone	01202 717913
PORTSMOUTH 277-283 Copnor Rd. Copnor	023 9265 4777
PRESTON 53 Blackpool Rd. PR2 6BU	01772 703263
SHEFFIELD 453 London Rd. Heeley. S2 4HJ	0114 258 0831
SIDCUP 13 Blackfen Parade, Blackfen Rd	0208 3042069
SOUTHAMPTON 516-518 Portswood Rd.	023 8055 7788
SOUTHEND 1139-1141 London Rd. Leigh on Sea	01702 483 742
STOKE-ON-TRENT 382-396 Waterloo Rd. Hanley	01782 287321
SUNDERLAND 13-15 Ryhope Rd. Grangetown	0191 510 8773
SWANSEA 7 Samlet Rd. Llansamlet. SA7 9AG	01792 792969
SWINDON 21 Victoria Rd. SN1 3AW	01793 491717
TWICKENHAM 83-85 Heath Rd.TW1 4AW	020 8892 9117
WAKEFIELD 114 Northgate. **WF1 3LG**	01924 664 956
WARRINGTON Unit 3, Hawley's Trade Pk.	01925 630 937
WIGAN 2 Harrison Street, WN5 9AU	01942 323 785
WOLVERHAMPTON Parkfield Rd. Bilston	01902 494186
WORCESTER 48a Upper Tything. WR1 1JZ	01905 723451

OPEN 7 DAYS
4 EASY WAYS TO BUY...

- IN-STORE 66 SUPERSTORES
- ONLINE www.machinemart.co.uk
- MAIL ORDER 0115 956 5555
- CLICK & COLLECT

23883RH

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

Art Nouveau coffee table base – part 1

In part 1 of this series of articles, Dennis Zongker makes the base for his Art Nouveau table

PHOTOGRAPHS BY DENNIS ZONGKER

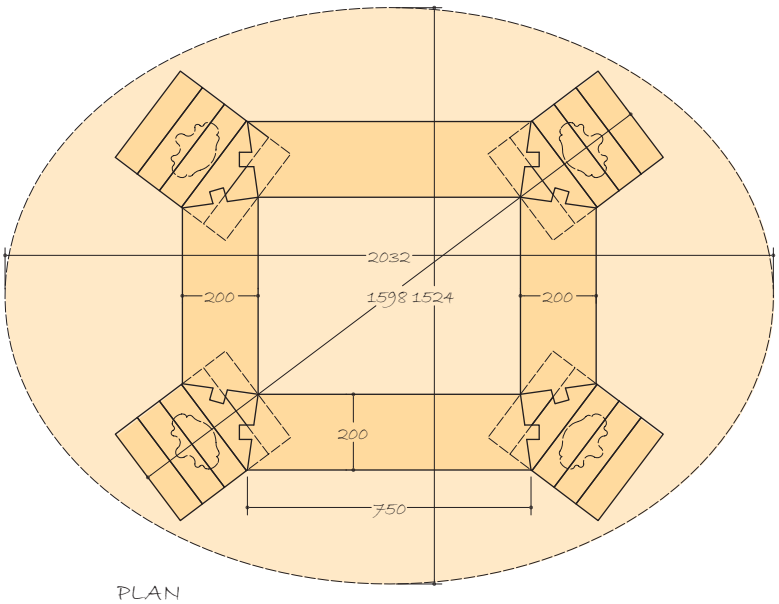
The Art Nouveau period

Art Nouveau was considered the beginning of the modern style of furniture making. It began around 1890 and hit its peak in France around 1910. It was the first original style, which took inspiration from its surroundings, not history.

Wood was twisted into bizarre shapes and was based on nature, not only in decorative design but in the structure of the entire piece or room. It has the look of rising and falling lines of tree or plant vines twisted and spread across the furniture piece. The chairs and tables seem as if they were moulded in a taffy-like substance. Straight lines are erased wherever possible, flowing into one another to maintain as much of a continuous line as possible

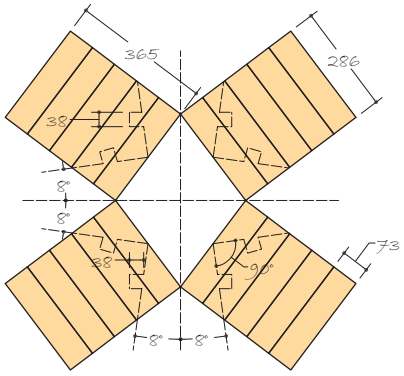
This coffee table is 560mm tall × 1,525mm wide × 2,030mm long. It is large enough to seat eight people with Maloof-style rocking chairs around it. For gluing up such a large base system with four legs and four runners, I needed a hardwood where I could buy a large stock without knots or voids. I purchased 300 board foot of 75mm solid African mahogany (*Khaya ivorensis*). This is also a great wood for staining dark colours, which I needed to achieve to match the decor in the room.

The coffee table was designed and made for a customer with a large cigar room. He wanted the base to resemble the natural form of trees with the top marquetry to reflect the beauty of oak (*Quercus spp.*) trees shining off a lake. When designing this coffee table, the Art Nouveau style was a perfect fit to the customer's request. Back when Art Nouveau was at its zenith there were many designer-makers with their own style. One of my personal favourites is Eugene Vallin. My goal for this design was to be original with my own personal style.

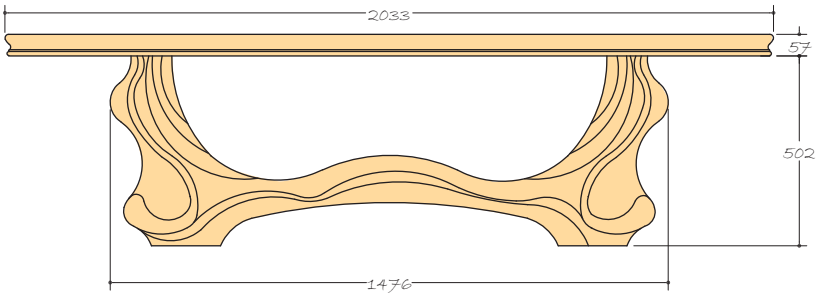


PLAN

Scale 1 to 20

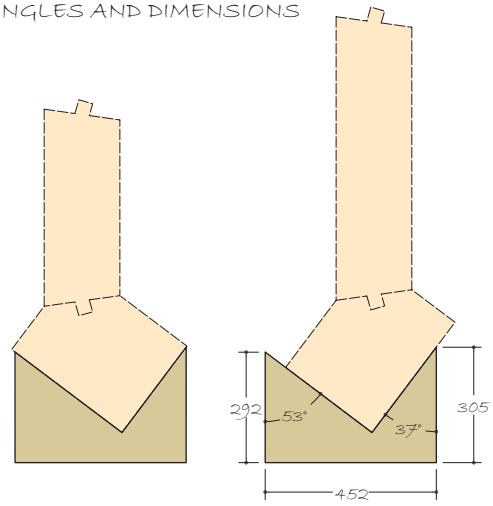


PLAN SHOWING LEG ANGLES AND DIMENSIONS

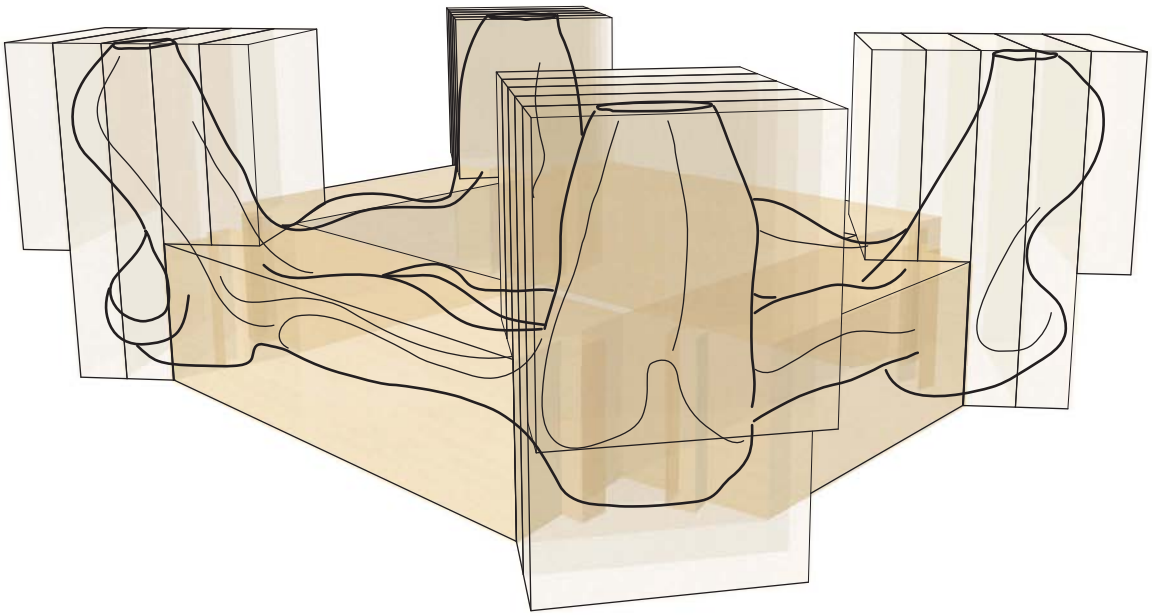


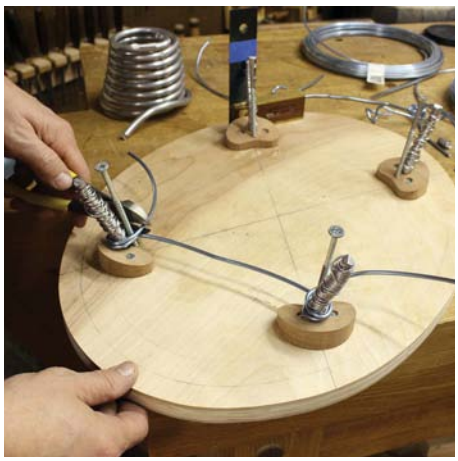
SIDE ELEVATION

Scale 1 to 20

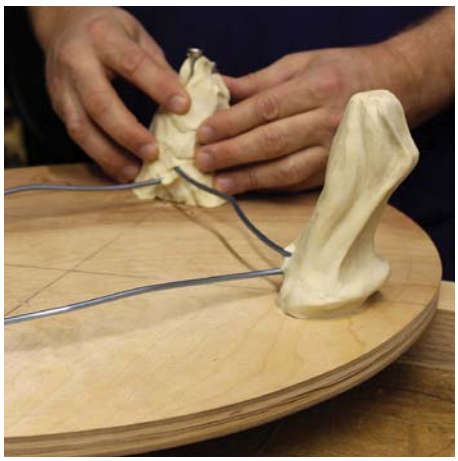


DRILL PRESS JIG LAYOUT





1 One of the elliptical shapes that resembles the top of the table



2 Using oil clay to determine the shape and design of the legs

3 The completed clay model

Clay model

To get started with the design, I used oil clay to mould a ¼ scale model of the table base. I cut out two elliptical shapes measuring 380 × 510mm long out of plywood: one for mounting the armatures and clay and one to resemble the top. This helps me determine how close the legs need to be to the top edge of the table.

By using oil clay, you don't have to worry about the clay ever drying up and can also be reused on your next project. This will give you as much time as you need to find the shape you are looking for. Sometimes this design stage can take a few days, depending on your vision, transforming the correct shaped around armatures. The finished clay model of the table base can now help to figure out the glue ups and where to locate the best place for mortise and tenon joints for connecting the legs to the runners.

4 Sanding the blocks for the legs with a sanding block

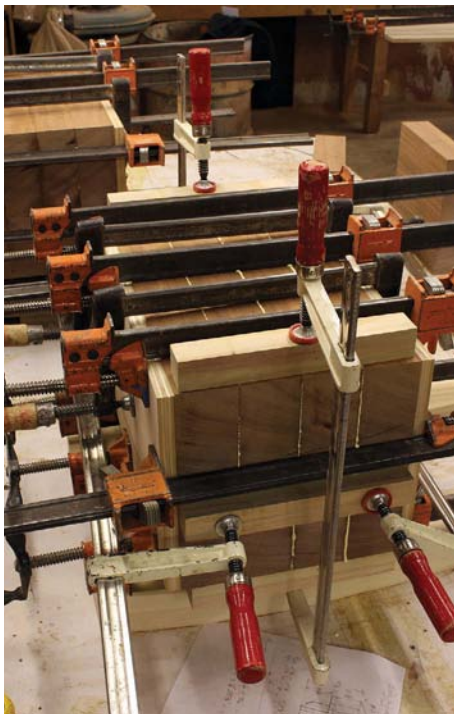
5 Rolling glue onto the surfaces

Preparing the legs

The first step is to cut the 75mm African mahogany to width on the tablesaw, then to length on the mitre saw. To glue up one leg, I needed four pieces at 73mm-thick × 300mm wide × 500mm tall and one smaller piece at 305mm tall for the top front legs.

When cutting the hardwood, for gluing up the legs, it is best to have all the grain running in the same direction so that when you are carving through the layers the grain matches up and to also get a smooth clean cut. Before I glue up the legs, I sand with 80 grit block; this is to make sure the blocks are flat and it also helps the glue penetrate into the wood pores for a better glue bond.

Before rolling the glue onto both surfaces, that get glued and clamped together, I make sure to use an air nozzle to blow off any dust then wipe the faces clean with a rag.



6 Clamping up the leg blocks

Clamping the legs

For clamping the legs together, I cut six clamping blocks at 38 × 38mm square × 292mm long. These blocks are clamped to the sides and ends of the leg block along with two plywood cauls to protect the faces of the legs. Once all the clamps are tight to the 38mm square blocks, this will keep everything square, then I clamp and tighten with bar clamps the leg faces tight together. Once the glue dries, I then add and glue on the smaller 305mm top face of the leg.

Next, I glue up the runner's two long blocks at 200mm deep × 209mm wide × 915mm long and two short blocks at 200mm deep × 209mm wide × 635mm long.

Cleats

Before you can cut in the mortise and tenons, which connect the runners to the legs, first cut in a 45° angle on both lower back sides of all four legs. For cutting in those large cuts, I use a handsaw with a triple cutting teeth blade, which cuts faster and is very accurate.

Next, cut some birch hardwood at 20mm thick × 38mm wide to be used as cleats, which will be pin nailed to the legs. First, draw in the sections that need to be cut out, then cut to length. Also, cut the cleats on the two side cleats at an 8° on the long edge with a tablesaw. Next, I pin nail a frame around one 45° corner. These cleats are used as a following guide for the handsaw blade to follow.

Starting at the bottom of the leg and cutting the long edge of the corner, I then cut into the side of the leg following the cleats. The corner block should just pop right out once both cuts are complete. Then repeat and cut out the opposite side and the last three legs.

7 Cutting a 45° angle on both lower back sides of all four legs

8 Drilling into the side of each leg using a 38mm diameter Forstner bit

9 Cleaning out and flattening the bottom of the mortise

10 Laying out the base system to mark where each end and face will be located

11 Cutting out each tenon into the ends of the runners

Mortises & tenons

Next you will need to make a jig for the drill press. Placing each leg into the jig will make the mortise parallel to the runners. The size of the mortise is 38 × 38 × 209mm long. Use a 38mm diameter Forstner bit locked into the drill press. Set the jig on a platform and drill into each side of the leg 38mm deep. After each cut, move the jig approximately 25mm straight forwards and repeat cutting out each mortise. To finish squaring out the mortise pin nail 20mm-thick cleats to the edges of the mortise; this will help guide and keep your chisel flat. Use a mallet and tap your chisel straight to the bottom. The last thing is to clean out and flatten the bottom of the mortise by using your chisel upside down.

Before you can cut in the tenons you must lay out the base system with all four legs and runners, then mark each end and face to indicate where they will be assembled.

Cutting out the tenons is just about the same as the angle cut before the mortises. First, draw out the exact size and centred location of the tenon, then pin nail the cleats to the end of the runners. To allow better control of the cutting, clamp the runners up to a sturdy bench or stand. Using a handsaw, cut out each tenon into the ends of the runners.

12 Using bar clamps screwed to areas where wood will be ground away

13 Once I have one leg looking good, then I transfer to the next leg and runner

14 Using a marker pen to go over all the pencil lines drawn on the base system

Dry-fit

Next, dry fit all the legs and runners together. If you need to size the tenons to fit the mortise, use a small block plane or flat wood rasp. Once you have the whole base dry fitted and clamped together, make sure all the joints fit nicely so that you don't have any problems when gluing. Since this is a large base system, it is best to glue up two legs and a runner at a time upside down. To get a good tight glue bond, I use blocks screwed to areas where I will be grinding away wood and use heavy-duty bar clamps.

After the base is completely dry, I flip it back over and place the clay model on top of one corner. Then, using a scale, I measure and draw where the lines go. The clay model is at a ¼ scale so I just multiply by four to get the correct size on the base, then I make paper templates. Once I have one leg looking good, then I transfer to the next leg and runner.

Once I have all my pencil lines drawn on, I use a black Sharpie pen to go over the lines so that the cut lines are easier to see.

Grinding

Before I start grinding away the hardwood, I put up a clear plastic tarp on all four sides of me to make a 4.5sq.m. room. Also, I wear heavy-duty work gloves and a full body suit. Then, for my breathing, I use a finish respirator for protection against the sawdust – health and safety is a very important consideration here.

The next step is to place four tall, heavy-duty metal rubbish bins under each leg and a large wooden block on top of the bins, so that the grinder won't hit them. This allows me to grind in a completely comfortable position, which is less stressful on my back.

Using a hand-held grinder with a chainsaw blade, my first cuts are depth cuts up to the lines. This helps guide me to where I need to go but also removes a lot of waste hardwood along the way. The next step is to keep grinding away, using a grinding wheel which has coarse teeth made out of durable tungsten carbide. Here, I am always keeping my hands in a safe position and pressing into the hardwood and slowly moving up and down or side to side grinding up to the cut lines. Using this method allows me to remove a lot of wood at a fairly fast pace.

Focusing on one leg at a time, I will repeat these same steps to remove the back side of the leg. With the way I had the base set up, I was able to stand in the centre of the table base to carry out the grinding.

For grinding the bottom of the coffee table base, I flip the table over, with the help of three others. I start by grinding the bottom of the legs to reach the radius shape that I had on the clay model. Next, I move on to the bottom of the runners using the chainsaw blade to add depth cuts and to remove the waste wood.

I then switch back to the coarse grinding wheel to remove the bulk of the wood. I apply medium pressure with a slight angle, moving back and forth. I always try to keep my body and hand placement at a safe distance at all times. After the bottom is rough ground, it's time to flip the base back over, right side up. Again, using a black Sharpie pen, I redraw the lines back onto the base – this time the lines are closer to the true shape of the base. At this stage, you can either use the paper templates or use the scale model to draw free-hand, which I find works well because of the natural non-uniform shapes.

15 Using a grinding wheel with durable tungsten carbide with my hands in a safe position

16 Grinding one leg at a time to remove the back side of the leg

17 Grinding the bottom of the legs to reach the radius shape

18 Adding depth cuts to the bottom of the runners

19 Using the coarse grinding wheel to remove the bulk of the wood

20 Redrawing the lines back onto the base so they are closer to the true shape

Carving in details

By using the grinding wheel, I am able to start carving in details. I use the black lines on the top, sides and face of the legs to blend the shapes together. This is the best time to start being artistic and creative because there is no wrong or right way and it doesn't have to be perfect. This is one of the greatest aspects of the Art Nouveau style as it is a natural form. As long as the legs look similar in shape, it is not supposed to be a perfect mirror image. Continue rounding the outside edges of the corner of the legs and blending the different shapes together.

After the outside shape of the runner and legs are carved, draw in the next set of lines to where the deeper cuts of the free-form will blend together with the legs and runners. To get the twisted, turning, wave-looking shape to the legs and runners, use the side of the grinding wheel to cut as deep as you can into the hardwood. This may take a few passes so just take your time and always keep your hands and body in a safe position.

Once you have cut the twist and waves into the wood, start to blend the high and low areas together. You can do this by riding the face/edge of the grinding wheel onto the higher lines until they meet together with the wave cuts. Once the shape looks like it is flowing together and most of the waste wood has been removed, I change the coarse wheel to the medium grinding wheel. Next, I start blending all the twists, waves and turnings together and smooth out the entire base.

After the majority of the heavy grinding is completed, I keep smoothing out the curves and twists together by using a smaller grinder with a medium 50mm diameter grinding wheel. This makes it easier to smooth the wood in the concave sections of the legs and lower areas.

For scraping off the grinding wheel cuts, I use a gooseneck scraper. This method is a real time saver when it comes to sanding. It is perfect for this project because of all the radius and twisting wood.

The last step before staining and finishing is to hand-sand the entire base system using 80 grit abrasive, then move to the 150 grit. This lower grit will leave the African mahogany very smooth and will also open up the wood pores better, which will make it easier for the toner and stain to penetrate into the mahogany and will allow you to achieve a darker colour.

21 Carving in details to mimic the Art Nouveau style

22 Draw in the next set of lines to where the deeper cuts will blend with the legs and runners

23 Using the side of the grinding wheel to cut into the hardwood

24 Smoothing out the curves and twists using a smaller grinder with a medium 50mm diameter grinding wheel

25 Hand-sanding the entire base system

Next month...

In part 2, Dennis will be staining the table base and applying marquetry and lacquer techniques to the table top F&C

scott+sargeant

the machinery experts

special offers from CMT®

Adjustable Groover Set 4-15

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 Shear Rebate Cutter Block

CMT part no:694.100.30
These cutter heads have been designed for rebating from the top or the bottom. The hard aluminium alloy body is dynamically balanced for smooth high quality finish and has a high resistance to tensile and yield stress.
Special Offer is for 30mm bore only

CMT Variable Angle Cutter Head

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 693 Euro Limiter Cutter

CMT part no:693.100.31
CMT 100 mm Euro Limitor Cutter Head is supplied in a plastic carry case with one set of straight knives and limitors. A choice of over 150 profiles are kept in stock for immediate despatch,
Special Offer is for 30mm bore only

CMT Combi Rebate & Limiter

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 694.008 Glue Joint Head

CMT part no:694.008.30
The professional CMT finger joint cutter heads allow for making the most incredibly strong side-to-side joints on all wood types works in stock upto 47mm in thickness.
Special Offer is for 30mm bore only

CMT 694.013 Raised Panel

CMT part no:694.013.30
We offer the traditional approach to panel construction with these CMT raised panel cutter heads. Make classic raised panels on furniture, interior and cabinet doors on solid wood and wooden boards, and achieve three different profiles by adjusting the cutting depth.
Special Offer is for 30mm bore only

CMT Spiral Planing Block HD

CMT part no:694.019.30
These new cutter heads have been designed for planing and jointing on soft or hard wood and wooden boards on spindle moulder machines. Ideal for routing our curved elements by using a bearing guide (sold separately) and a template.
Special Offer is for 30mm bore only

CMT 694.014 1 Piece Rail & Stile

CMT part no:694.014.30
These are unique products made by combining two cutter heads, ideal for making furniture doors and drawers. By adjusting the height of the head it is possible to cut two perfectly fitting profiles with no waste of time or efforts to move the fence or to replace the tool. *Special Offer is for 30mm bore only*

scosarg.com
Order Online

Blatchford Rd, Horsham
Sussex RH13 5QR
sales@scosarg.co.uk
T 01 403 273000

PHOTOGRAPHS BY DANIEL GRAHAM

Stanley No.45 restoration

Daniel Graham explains how he brought an unloved plane back to a usable state

Before I found myself stumbling into the practice of hand tool woodworking, I always admired the tools made in what seemed like a time long ago. A time when the tools were a final work in and of themselves. A time where a tool-maker was a craftsman, artist and designer. I am not just referring to an ornate Stanley No.42 or highly crafted infill planes, but also the handmade rough hammer my great-grandfather made out of necessity. I grew up in a family where things were fixed rather than replaced. My students are always taken aback when I tell them that taking things apart to see how they work and ultimately how to fix them was part of normal life around my house. And they definitely didn't understand when I took apart my mobile phone to fix the home button that was broken. We are in a culture that has embraced the disposable and the replaceable, but I am so glad that there are people out there on the other end of the swing that are finding value in the historic and investing in its repair.

Rescuing a No.45

For me there is something about the Stanley No.45 that is undeniably alluring. I don't know if that's because it harks back to a cultural shift into multipurpose objects, or if it is based on its iconography. For me, it was a sense of rescue that made me purchase this plane – there was something about it that called out to me. I remember saying: "I could clean you up and make you happy, would that be something you are interested in?" So the project began, but after handling it, I realised that this No.45 was sold under the pretence that it was to be collected or used as a piece of decor. That was not OK with me; this tool was going to be used.

ABOVE: The restored plane in action
BELOW: The old plane prior to its restoration

The break down

It took no time at all to get the plane broken down into all of its parts and to remove the handles. However, it took a long time and a couple of drill bits to get the pin out that sets in the iron below the advancement wheel. This was one part of the tool that was not designed to come off. After fighting at awkward angles with every tool except my teeth, I gave in and drilled it out knowing I would have to make a new one. After all the parts were set out on a 'story board' – really just a large piece of paper with each part traced and labelled – the cleaning began. Some parts of course needed more attention than others. The sliding posts only needed some sanding and a quick polish to be as good as new. The nuts, washers and screws were all cleaned, polished and set aside for now. Some pieces had flaking nickel and I had to get some parts back to bare metal knowing I was going to plate them. I sand blasted each part to remove the previous plating and years of grime. I then went about sanding and polishing up each smooth surface. When plating one metal onto another, the smoother the metal underneath results in a shinier and more pristine surface in the final finish. After the initial sand blasting I didn't touch the nooks, crannies and filigree details. They did not require a high polish, and on the contrary, could be of use as contrast to the shiny portions of the plane.

All parts disassembled and organised on the storyboard

Original condition of nickel plating

Parts sanded and ready for degreasing

The fight to remove the iron advancement pin and broken drill bit

The nickel plating process

I was visiting my grandfather while I was in high school, after my sister broke the front lens of my car's headlights by rear-ending someone. As my father and I were talking about finding a junkyard in the area and how much a new light would cost, my grandfather was walking behind us with a pocket knife and a big plastic jug. He cut a long strip out of the feed jug and before my father and I could say anything, he slid it in to the space where the lens was and screwed it in with a drill. He looked back at my father and I and said: "Now what's wrong with that?" Sometimes you can over-research or over-think a process or project. You could buy expensive kits or make it up on your own. The nickel plating process for me was quite a bit like my grandfather putting a screw in the side of my Plymouth Voyager. I used the chemistry but nothing fancy. I thought I would rather spend my time experimenting than spend a lot of money. That being said, there are a lot of great suppliers and kits out there to do all of this. The chemistry supplies I used were purchased through a company called Caswell Plating. Packages of all you will need are available and come with specific instructions.

Now, most plating is achieved through electroplating. You attach the positive side of an electrical current to your part and the negative side of the current to a piece of the sacrificial metal you are using to plate.

The current strips the sacrificial metal of its ions and deposits them onto your part through hydrolysis. With the negative charge on the metal and the parts being in a solution that contains metal salt, the two metals are attracted to each other. Standard electroplating is a great way of plating things in other metals and has been done since 1805 but one of the problems with this process is that the area of the part facing the sacrificial metal gets heavier plating than the back side. So one must constantly rotate the piece to get even plating. In addition, this form of plating requires extra equipment including a power supply. Therefore, I went the route of something called electroless plating. Electroless plating is how they plate the inside and outside of firearms at the same time. This method is not dependent on the geometry of the part nor does it need electricity. The plating is accomplished by the use of chemistry and the application of heat.

It is recommended to use a professional degreasing agent and to use a pre-etch solution... I ignored this. My background is originally in printmaking, specifically lithography and relief, and I have spent my fair share of time degreasing and etching plates for fine artists. So I used a method I knew and was comfortable with. While wearing Nitrile gloves I degreased all of my parts by scrubbing them in water and Comet making sure that a single clean sheet of water would move from edge to edge of each part. The gloves are important because if even the oil from a fingerprint is on a part, it will compromise the plating in that area.

The chemical bath I used consisted of the

The Electroless Nickel Plating chemistry

Parts degreased and ready for the nickel bath

The fume balls in the active bath

must be brought to 91°C and kept at this temperature. One of the more curious parts of this process was the use of fume balls. They are little hollow plastic balls that assist in controlling heat loss, evaporation and help maintain a more even bath temperature. Once the correct temperature is obtained the parts are immediately submerged in the bath. I learned the 'immediate' part of this the hard way. Let's just say rusting can happen quickly if you clean and degrease something and then get distracted. The parts stay in the bath for 15-60 minutes. The time in the bath determines the thickness of your nickel plating. For a tool that would see quite a bit of friction, I put it in for as long as I could. The first piece I did was the iron advancement wheel. I checked on it often and stirred the bath around a bit every 10 minutes. This was my time interval for checking on the temperature of the bath and to make sure everything was working right. Even after 10 minutes you could pull it out and see it shine! The only complication of this process is found in managing the bath. You must keep replenishing the nickel as it is used or else the bath will 'crash' and will be rendered unusable. This replenishing is done by calculating the square inches you are plating and adding a nickel solution throughout its time in the active bath. The goal is to end with the same amount of nickel in the bath as when you began. After the part has spent its necessary time in the bath it's removed and washed with distilled water to take off any excess chemistry. Once the parts are dry, they can be assembled and used. Coming from fields that always had drying time at the end of everything, whether it be printmaking or woodworking, that part made me a little nervous. I let the parts sit overnight because, to me, that felt better.

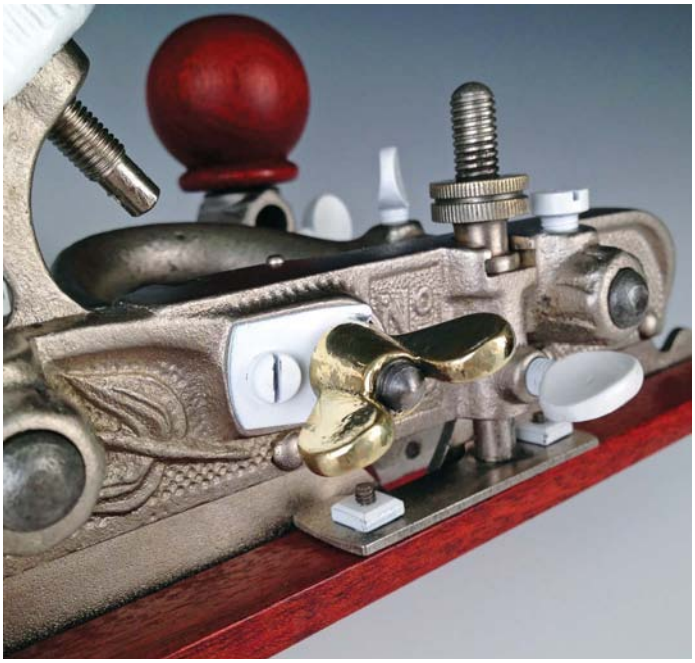
The iron advancement after 10 minutes in the nickel bath

Part of the main body after an hour in the bath

Colour and form

As an artist my training has dealt quite a bit with the principles of design and colour. Tool resurrection is no different. Decisions need to be made based on aesthetics, history and your overall vision for what this tool could become. For example, when making the new tote and knob, I first thought I would use rosewood (*Dalbergia spp.*) or cocobolo (*Dalbergia retusa*) or something of a darker tone. At the time, I was making some small chamfer planes with bloodwood (*Pterocarpus angolensis*) soles and thought that the bloodwood's colour and density would make for a striking handle. Once the colour and tone of the wood was resolved, I knew I had to add the white as accents because the tone of red needed something more than silver to make it successful. So white it was. My main surprise, and one of my favourite parts, is the brass wing nut the previous owner had on the plane. It was covered in so much grime that I assumed it was steel or zinc. I could have replaced it but I thought it brought a nice detail and some lineage to the tool.

The process of fitting the new handle



Detail of the assembled plane with brass wing nut

Form and function

All that was left after disassembly, blasting, cleaning and plating was reassembly, fitting the tote and making a new fence. Due to the 'professional' level story board, the plane and all of its parts came back together with ease. I was able to use the previous owner's fence as a reference in making a new one out of bloodwood. Fitting the new tote was harder than I thought it would be but after some delicate chisel work it fitted like a glove.

I am not sure what the original owner would think of this renewed version of his Stanley No.45 but I hope they would be excited and maybe somewhat surprised by its new life. No longer an object to be used for decoration but now a usable tool, retelling its history without fear of adding new chapters. F&C

Laying out the stock for a new fence and depth guide

The process of fitting the new handle

The final restoration

Supplier details

Caswell Inc *– for electroplating and anodising kits, plating kits, gas tank sealer, metal polishing and buffing supplies*
Web: *www.caswellplating.com; www.caswelleurope.co.uk*

CELEBRATING 25 YEARS OF WOODTURNING MAGAZINE

Buy the October issue for only £4.50 and get issue 1 for free!

Cover subject to change.
On sale: 10 September

To celebrate 25 years of *Woodturning* magazine, over the next few issues the leading names in the industry will be giving away items from their product ranges. This month, BriMarc Tools & Machinery give away one of their NOVA Comet lathes and a host of other accessories to one lucky reader.

DON'T MISS OUT ON THIS MONTH'S GIVEWAY WORTH £680!

Or why not enjoy our special subscription offer - 12 issues for only £35* - less than £3 an issue! Simply go to www.thegmcgroup.com and use code A4899 at checkout.

*Rate for UK subscribers. Overseas subscribers to receive a similar discount. Offer valid until 15 October 2015.

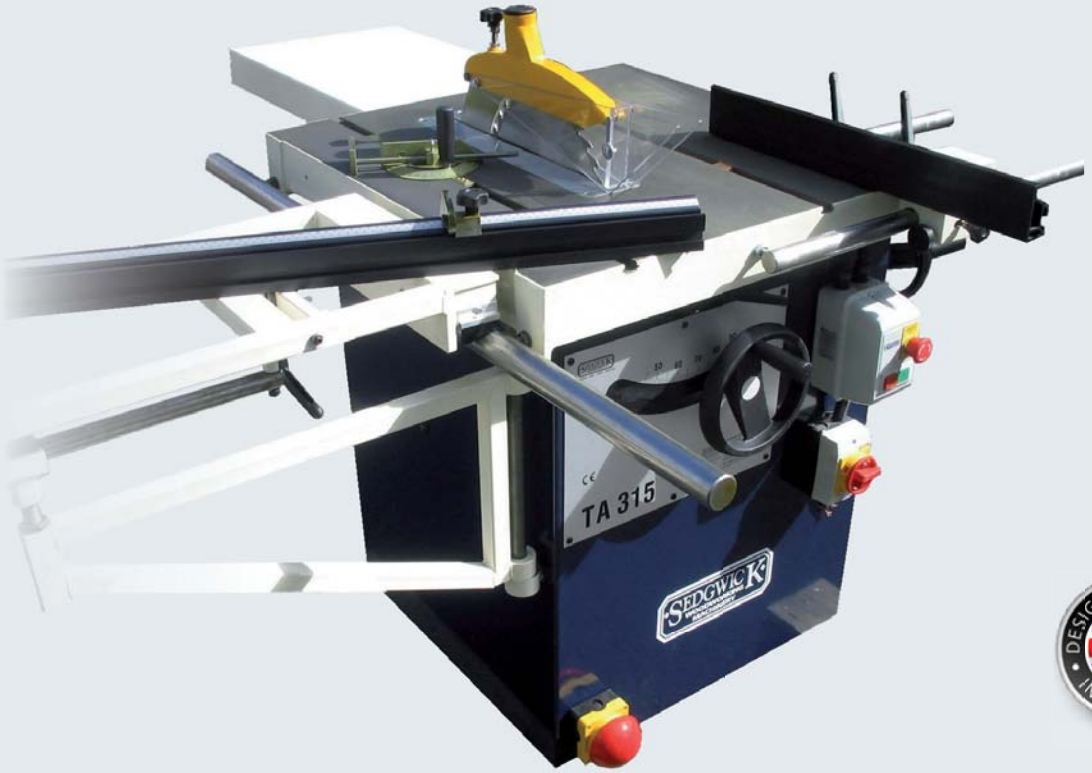
Don't miss out, join our Woodturning community of turning enthusiasts in over 60 countries worldwide! www.woodworkersinstitute.co.uk

TA315 TILT ARBOR SAWBENCH

The backbone of any joinery workshop, a sawbench should be powerful, accurate, reliable and simple and safe to operate. The Sedgwick TA315 is designed with this in mind, and offers outstanding value for money. Its strength is in its construction, precision engineering and our insistence on using only the best quality components.

FEATURES INCLUDE:

- Aluminium Riving Knife Mounted Sawguard with Clear Polycarbonate Hinged Visors
- Cast iron table incorporating ¾″ TEE slots either side of the saw blade
- 6″ Protractor Scale with length stop
- High efficiency IE2 industrial rated Electro-magnetic Braked Motor
- Fabricated rear table extension



For further details of this & our complete range of woodworking machinery please visit www.sedgwick-machinery.co.uk, or contact us at:

M. Sedgwick & Co. Limited, Stanningley Field Close, Leeds LS13 4QG

E: sedgwickmachinery@btinternet.com Tel. 0113 257 0637 Fax. 0113 239 3412

Forsa 3.0 Series Professional Panel Sizing Saw

Designed in Germany - Manufactured in Germany - Proven in Germany

A new panel sizing saw specifically designed for the smaller workshop! The new Scheppach Forsa 3.0 offers 1.6m panel cutting capacity with the advantage of a full 87mm depth of cut for solid timbers. Like all Scheppach Precisa and Forsa sawbenches the Forsa 3.0 is bristling with German technology from head to toe. Designed specifically for those who where floor space and budget are foremost in their considerations. Micro scale with settings to within 1/10th mm on the rip fence included. Available in either single or three phase electrics.

FREE!
250mm TCT sawblade 80T for boards, laminates & MDF
Save £99.00 Ex VAT

Simply State Order Online preferred supplier

SCHEPPACH 4 YEAR WARRANTY
Terms and Conditions apply

Deutsche Qualitätsprodukte seit 1927

Forsa 3.0
1.6m Precision Panel Sizing Saw
Professional Series

Forsa 4.0 + 4.1*
1.6/2.1m Precision Panel sizing saw
Professional Series

Forsa 8.0*
2.6m Precision Panel Sizing Saw
Professional Series

Forsa 9.0*
3.2m Precision Panel Sizing Saw
Professional Series

Also available. Precisa Series of Classic circular sawbenches with optional pre scoring function.

* **All prices below include Pro STC & TWE**. Substantial price reductions available if standard solo outrigger table required. All prices ex works. Carriage **extra.** Forsa 4.0 / 4.1 - tail lift required. Forsa 8.0 / 9.0 - fork lift truck required. P3 models inc extra support table & clamp

Model	Product Group Series	Specification Includes (as per quoted price)	Mc HP / Scorer / Volts	Depth of cut & length of stroke	Price Exc VAT - Plus Carriage	Price Inc VAT - Plus Carriage
Forsa 3.0	Professional	Inc Professional STC + TWE	5.2 / - / 415v	87 mm x 1.6 m	£2,166.67	£2,600.00
Forsa 4.0 - P2	Professional	Inc Professional STC + TWE + TLE + Scorer	6.5 / 1.0 / 415v	107 mm x 1.6 m	£2,995.00	£3,594.00
Forsa 4.1 - P2	Professional	Inc Professional STC + TWE + TLE + Scorer	6.5 / 1.0 / 415v	107 mm x 2.1 m	£3500.00	£4,200.00
Forsa 8.0 - P3	Professional	Inc Professional STC + TWE + TLE + Scorer	6.5 / 1.0 / 415v	107 mm x 2.6 m	£4650.00	£5,580.00
Forsa 9.0 - P3	Professional	Inc Professional STC + TWE + TLE + Scorer	6.5 / 1.0 / 415v	107 mm x 3.2 m	£4,800.00	£5,760.00

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

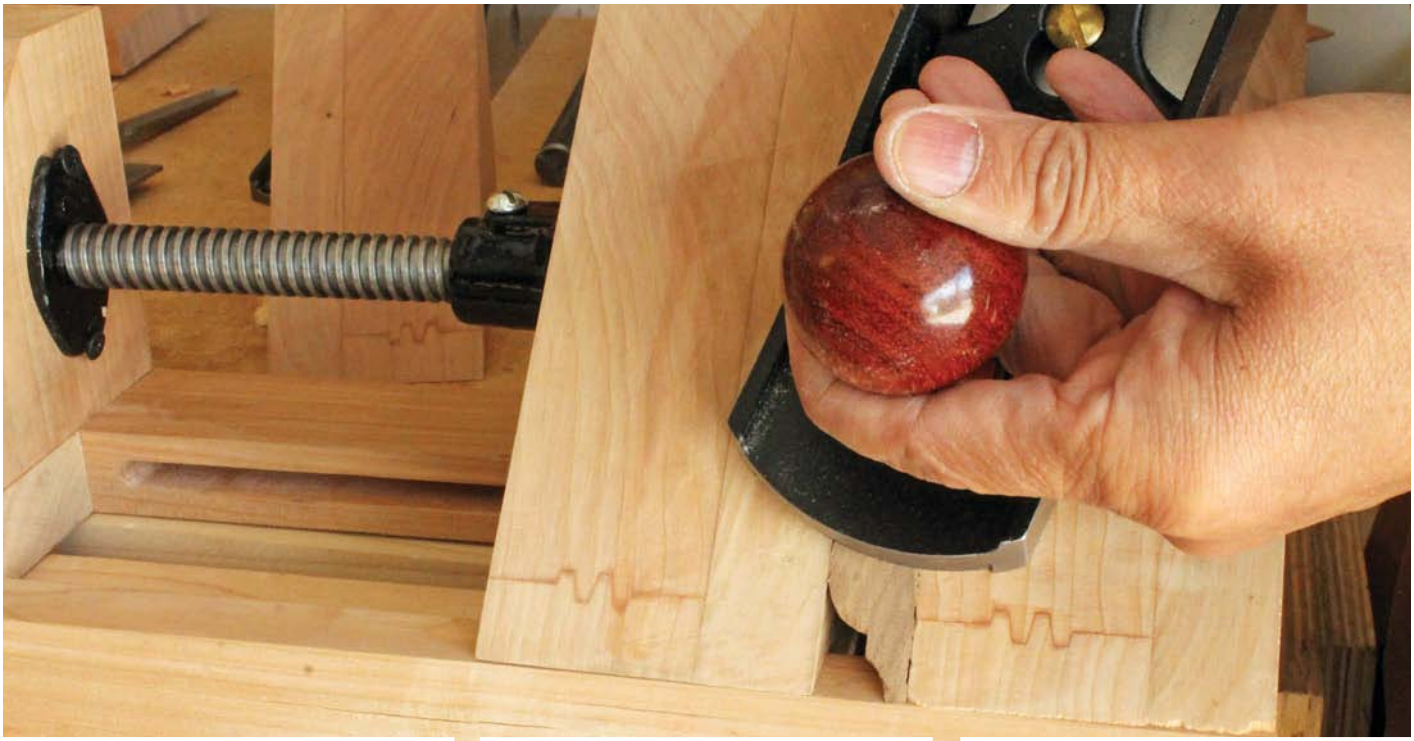
NMA AGENCIES LTD
www.nmatools.co.uk
Birds Royd Lane, Brighouse, West Yorkshire, HD6 1LQ
Phone: 01484 400 488
sales@nmauk.com

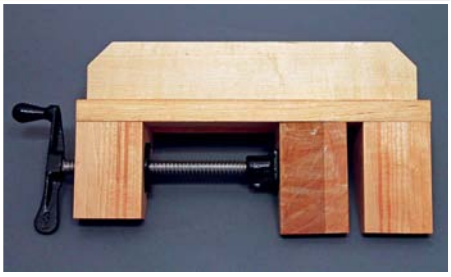
FREE 160 page Catalogue. Available on request.

A mitre shooting block for precision work

Charles Mak shows how he made a mitre jack without the trouble of wood tapping and threading

PHOTOGRAPHS BY CHARLES MAK





Like many woodworkers, I use jigs and fixtures along with hand tools to improve accuracy, repeatability and efficiency For example, in *F&C* 205, I described various workholding appliances used in my workshop, and in *F&C* 226, I introduced the split bench hook. In this issue, I will cover a precision fixture for trimming ends at an angle – the mitre shooting block.

The mitre shooting block is not to be confused with the more common mitre shooting board. It has two working faces: one at 45° and the other at 90°. You can fine-tune mitres with the bevel jaws or use the right angle side to square a surface. In the sidebar, you will find information on how to use this precision device. Let me show you step-by-step how you can make this valuable jig as well as some of the shop tricks that I used.

Mitre shooting block in use

Trimming a surface cramped in a mitre jack is not much different from making a delicate shaving cut. These tips will help a beginner use the jig with confidence.

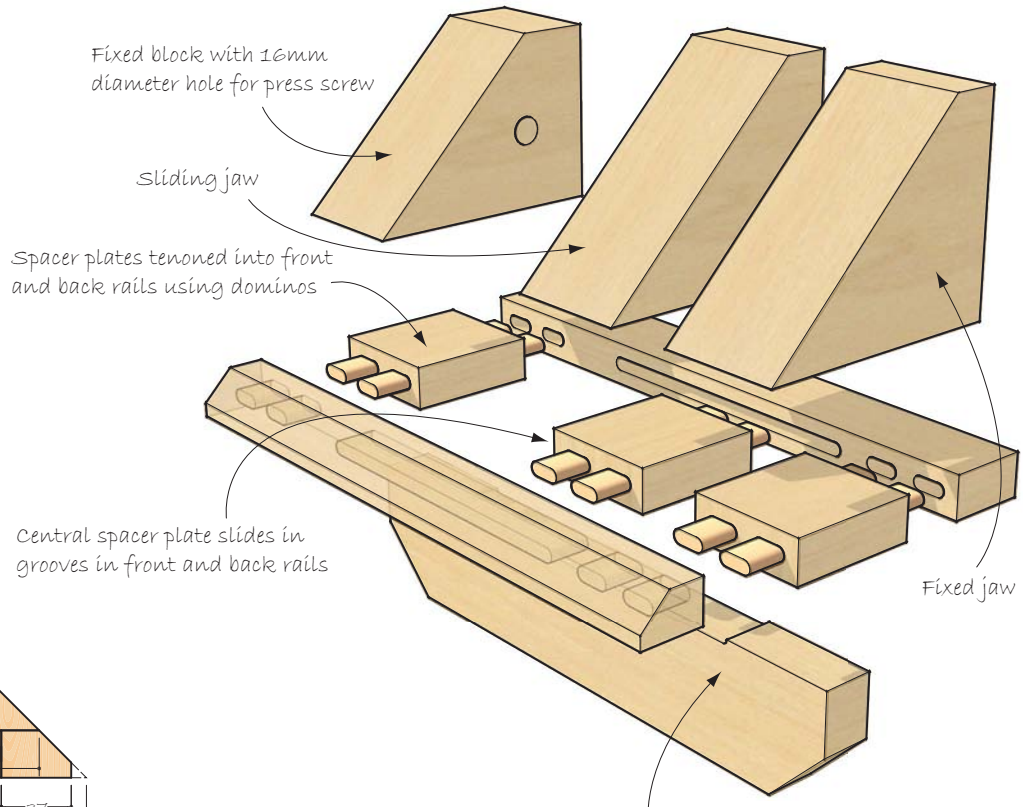
Cramp a scrap between two boards and scribble some pencil marks across the surfaces to practise the glide-to-shave technique

- *As always, handle end grain work with a low-angle, bevel up plane and a sharp, sharp blade set for very light cuts*
- *Hold the plane askew to shave the workpiece in slicing cuts*
- *As you are about to exit the stock, glide the plane off the surface like an aeroplane taking off – the same technique used for avoiding, say, a difficult grain spot*
- *Alternatively, you can glue a piece of thin cardboard or heavy paper to the bevelled faces to protect the jaws. Damp the paper before gluing it with diluted yellow glue to prevent wrinkles*
- *Work the plane or chisel into the face of the end-grain to avoid the corners splitting out*
- *To trim an angle other than 45° or 90°, place a wedge to line up the surface as well as support the workpiece*

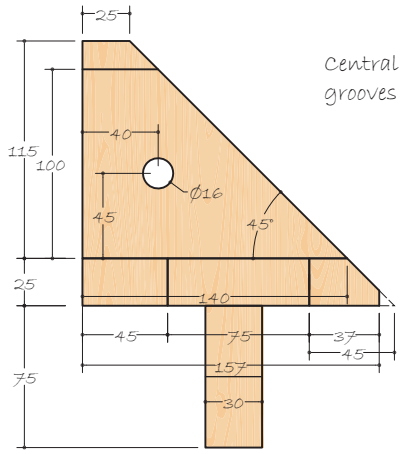
The mitre shooting block

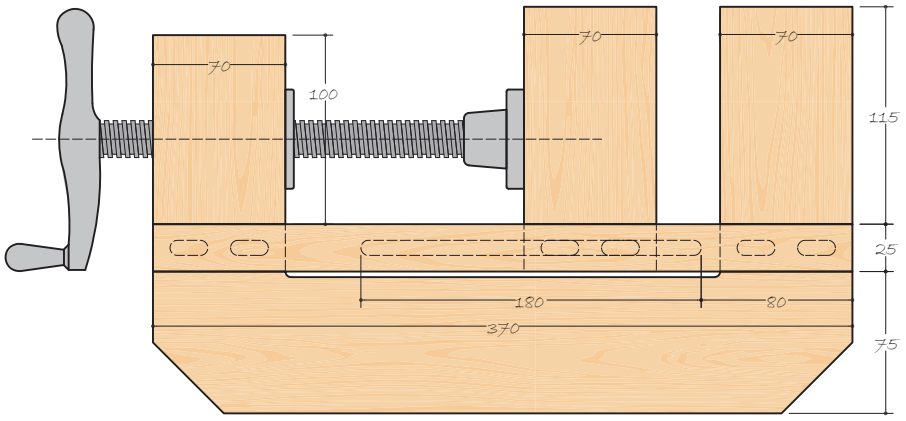
As the name implies, the mitre shooting block consists of bevelled blocks. The blocks are mounted on a base, one as an anchor block and two others – one fixed and one adjustable as the ramp jaws. Old-fashioned mitre jacks use a wooden screw and threaded stock to move the sliding jaw. To avoid the complications of wood tapping and threading, I use a 230mm press screw instead, which is the clever idea of English furniture designer, Toby Winteringham.

The fixture construction is not complicated but requires precision and fine-tuning to make it an accurate appliance. Before you begin, make sure you have an accurate combination square to check right and 45° angles.



END ELEVATION
Scale: 1 to 4





FRONT ELEVATION
Scale: 1 to 4

Starting with the base

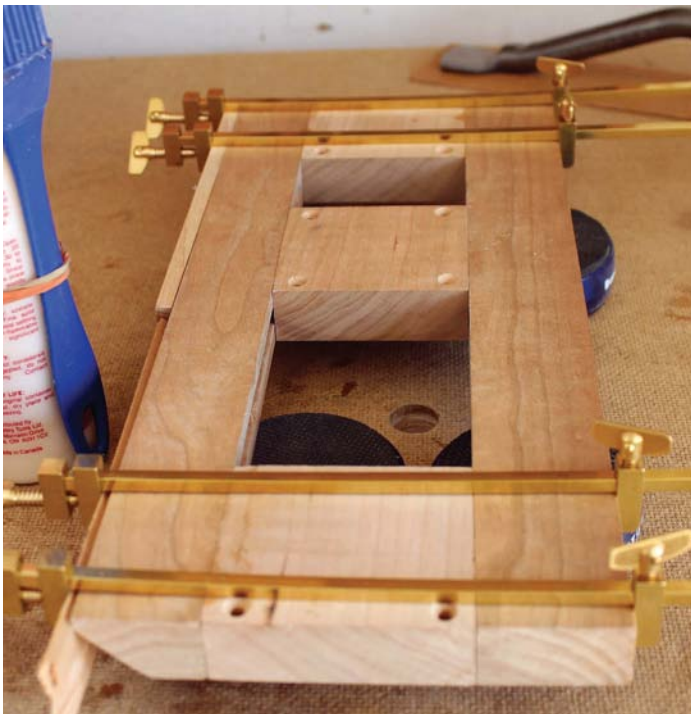
The base is made of the front and back rails, which are grooved, three tenoned spacer plates and a cleat. The outer spacer plates are fixed to the rails while the middle one slides up and down the slots. You can cut the slots, mortises and tenons in the usual way, using a tablesaw or router. I turned to my Domino joiner for this simple M&T task. After marking all the pieces, I cut out the mortises and slots, which were just overlapping mortises. With all tenons glued in place, I carefully sanded down the tenons on the sliding spacer plate for a nice fit in the slots.

Next, I drilled and countersunk the screw holes on each spacer plate and cut a 45° bevel on the front rail. To prevent the cleat from binding the sliding spacer plate, I shaved a hair off the middle section of the cleat like aiming for a spring joint. After dry-fitting, I went ahead with the glue-up and let it cure.

I started with oversized spacer plates and after mortising, cut them to final size

Sand or plane down the tenons on the sliding spacer plate for a snug fit

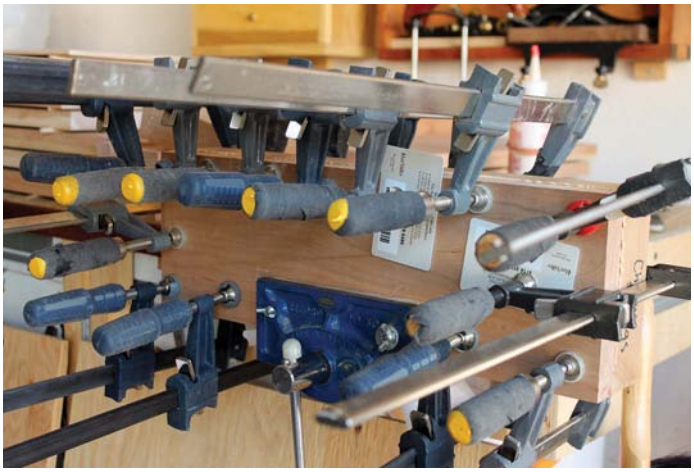
I orientated the bevel face up with an offcut so I could plane off the saw marks on the bevel



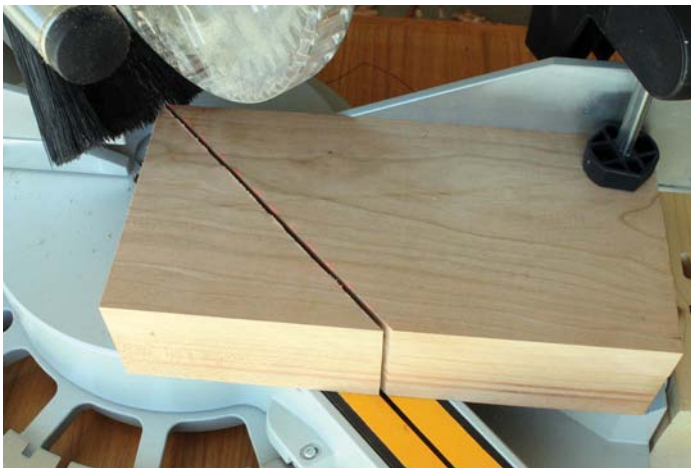
To avoid overclamping, I used a set of brass bar clamps for its medium pressure

Cutting the ramp blocks

I laminated some cherry (*Prunus serotina*) blanks to make a block overlength – about 600mm long – and trued it square. The extra length let me work with long rather than short blocks safely and allowed me to cut four – not three – ramp blocks. The fourth ramp block, as you will see, will serve a vital function beyond being a spare. I cut out all the ramp blocks at 45° to size with the mitre saw.



Laminated stock is cheaper and more stable than one big block of hardwood

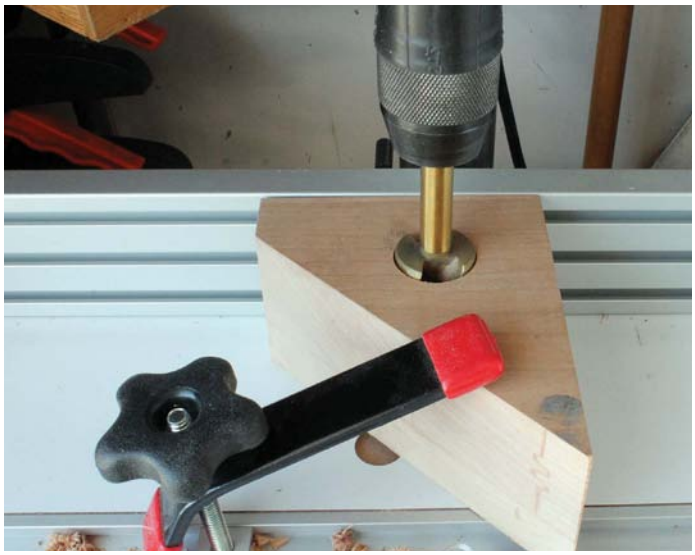


An oversized blank allowed me to cramp and cut the last block safely

Drilling the fixed block

To prevent the jaws from racking when cramping narrow workpieces, I marked the holes for the threaded shaft and screw collar slightly offcentre, nearer to the spacer plate. The holes must be drilled true to the block and so I checked my drill press for squareness first. In woodworking, inaccuracy often compounds upon itself with each subsequent cut if the machine is not properly tuned. Fixing avoidable machine errors after a cut is made is the worst way of using our skills and time in the workshop. I, therefore, harbour the habit of checking and adjusting a machine for accuracy before making any critical precision cuts. I cramped the block on the drill press and drilled the larger blind hole to depth with a Forstner bit. Then I changed the bit to a brad-point drill bit and flipped the stock over to finish the through hole on the opposite face.

Finally, I dry-fit the hardware to iron out any issues with its installation, such as fine-tuning the through hole until it was a snug fit for the threaded shaft. I prefer a snug fit to a loose hole for the shaft.



Drill the larger clearance hole for the screw collar first while the centre point is there

I wrapped abrasive around a dowel to smooth the shaft hole for a snug fit

Mounting all the blocks

To allow for final adjustments and alignments, the fixed block and fixed jaw are attached to the base first and then the sliding jaw. I did a dry-fitting with cramps to get a feel of the assembly and to identify any issues with the blocks. For the assembly, I gathered the tools needed which included cramps, a combination square, a screwdriver – or cordless drill – a small tapping hammer, a countersink, and screws. I do not use any glue, which allows me to make future adjustments, if needed, or to replace any damaged blocks.

Using a combination square, I aligned the fixed block square with the base and cramped it down on the spacer plate. I predrilled and screwed down the fixed block. I then repeated the same procedure to attach the fixed jaw to the spacer plate on the other end. Lastly, after cramping the sliding jaw flush on the bevel face to the fixed jaw, I attached the sliding jaw to the spacer plate with screws. I slid the jaw back and forth to check for the fit. If you take your time to attach the blocks, especially the jaw blocks, precisely, you will spend much less time on the final fine-tuning step. Put this jig together with care and the final build will allow you to cut any mitre or square joint perfectly.

With the fixed block cramped loosely in place, I gently tapped the block to set it square to the base before tightening the cramp

Align and cramp the jaw blocks together before screwing the sliding jaw to the space plate

Installing the press screw

You can buy a press screw of the desired length. For the usual work, such as moulding and stile/rail stocks, I choose a 230mm press screw. With this size of a press screw, I can cramp a stock as wide as 115mm in the jig. Examine the press screw before you install it as once installed, screw holes are left on the sliding jaw and those holes may not fit a replacement screw press, if needed. The press screw I bought had no screw holes on the swivel head.

I removed the hump on the bottom of the swivel head and drilled four corner holes on the head. I installed the press screw, checking that the sliding jaw did not bind in its travel when the handle was cranked. The trick was to locate the swivel head on the sliding jaw that allows the threaded rod to run true, preventing any binding. You can use double-face tape instead of screws to attach the swivel head until you work out the location.

I filed the bottom of the swivel head flat and then drilled a small screw hole on each corner

After installing the screw collar, I added the swivel head and attached it to the sliding jaw

Making the final adjustments

The final step was to double check that the bevel faces on the jaw blocks were flush and precisely at 45°, and that the back faces were flat, flush and square. Remember the extra ramp block cut previously? I used it to support the mitre jack as I worked to plane everything flush and square. After making a few test cuts, I was satisfied that my new shop fixture met my high standards and proudly endorsed it with my signature. When you make one of these jigs, you will appreciate the importance of precision and accuracy in woodworking as well as the value of precision tools in your work.

I rested the back side on the spare ramp block as I planed the bevel faces flush

The spare ramp block was used to support the jig when I worked on truing the jaws flush and square

For shop jigs like this, I like to sign them with a branding iron to add that personal touch

Finishing the jig

If you plan to apply an oil finish on the mitre jack, then leave the finish out of the slots. In general, I do not apply any finish on my shop jigs that have moving parts. Because this example is made of cherry, I decided to add age to the jig by leaving it on the deck for some sun tanning. Before bringing it to my workshop – which was to be its final home – I carefully sprayed some rust-preventive lubricant on the rod. And you're done – time to get perfect mitres cut! F&C

Supplier details

- ***Press screw – 13F13.01 Lee Valley Tools***
  Web: *www.leevalley.com*
- ***Press screw – #42721 Rockler Woodworking & Hardware***
  Web: *www.rockler.com*

References

- *Hayward, Charles,* Tools for Woodwork, *1955. Pp. 166-167.*
- *Orr, Doug, Mitre Jack, Lee Valley Tools Woodworking Newsletter. Vol. 5, issue 5, May 2011. As retrieved from www.leevalley.com/us/newsletters/Woodworking/5/5/collection.htm*

Our correspondent...

Playing the shell game: guitar inlay

PHOTOGRAPHS BY KIERAN BINNIE

Kieran Binnie explains how to make shell inlay

When it comes to handmade guitars, conversation inevitably turns to what inlay has been used for decoration, and most guitar builders are familiar with inlaying mother of pearl and abalone shell. This decoration does not have to be the preserve of the luthier, however, and shell inlay can work just as well for furniture builders. I recently cut the headstock inlay for a parlour guitar and here I will discuss how I approached this work. You can read more fully about the rest of the build process on my blog: www.overthewireless.wordpress.com.

Designing and making the inlay

The first task with any inlay is to select an appropriate design. I find that line drawings work best, as they give a clear indication of where the cuts need to be made, and ensure that the design is not overly dependant on engraving. I make multiple copies of the final design, and mark on the master copy the materials that will be used for each element of the work. For this guitar I chose a rose design, the stem of which is 1.5mm square sterling silver wire, the leaves are mother-of-pearl and the petals are both green and red abalone, all set into an ebony (*Diospyros spp.*) headstock veneer on a steamed pear (*Pyrus communis*) neck.

Shell blanks vary in thickness, so before I start cutting, I check the thickness of each piece with callipers, and any pieces that are too thick are brought down to thickness by sanding with 80 grit paper. It is important to thickness from the back of the shell, so that the show face isn't worn through.

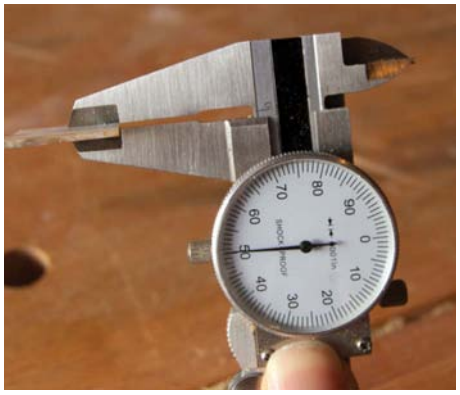
Gluing the shell

With the shell thicknessed, I glue sections of the design onto the shell using contact adhesive – this is why multiple copies of the design are necessary. Correct orientation of the shell is critical to a design translating well to inlay, and I always seek to arrange the design so that different elements catch the light from different angles. If the whole design catches the light at the same point, then it will look stunning from that position, but dull from every other perspective. If light catches different elements of the shell as you move around the design, then it will look good from every angle.

Cut each piece of shell using a jeweller's saw – I use a Knew Concepts piercing saw and No.2 blades – cutting right on the line. To support the shell during cutting, I use a 75mm wide piece of southern yellow pine (*Pinus taeda*) into which a 'V' shape has been cut. The saw blade moves within the 'V', while the shell remains supported on two sides, which keeps it from snapping.

Cutting and refining

Those with ninja-level sawing abilities will be able to inlay shell straight off the saw. For the rest of us, a set of needle files is essential to refine shapes. I use the same birdsmouth support when filing the shell, and this helps keep the filed edges of the shell at 90° to the show face.



Checking the shell for consistent thickness

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 luthier Kieran Binnie, who has written on various topics so far, including the benefit of lutherie techniques for furniture makers, the importance of parallel skills, community in woodworking as well as showing us how to make a handy gluing jig for lutherie. Here, he stays on that subject and discusses inlay techniques

Refining the shape of the mother-of-pearl leaf with a needle file. Here you can also see the birdsmouth support I use for cutting the shell

Cutting the recesses for the shell using a fine cutter in a Dremel

Once the shell has been cut and refined, it is time to cut the recess. Glue another copy of the design to the workpiece, and define the edges of the recess with a No.10 scalpel blade, either by tracing the edge of the design, or around the shell pieces, depending on the design. This ensures that the shape of the recess remains crisp and no more material is removed than necessary.

Cutting the recesses

If the recess is large I use a Lie-Nielsen No. 271 router plane fitted with a 0.8mm cutter and the optional depth stop, which for this work is a necessity. Where a smaller design means that the plane blade would bruise the sides of the recess, I use a Dremel in a router stand and a 1.6mm down-cut spiral cutter. Whichever method you choose, it is key that the recess be uniform in depth, placing the top surface of each piece of shell at, or just under, the surface of the wood. This is so that when finish sanding, the thin show surface of the shell is not sanded through, and that finish does not collect in hollows and obscure the inlay design.

Wire is easier to bend before it is cut to length. Place the end of the wire stock in the recess and guide the wire into the channel, bending it to shape. Once bent, cut to length and file away any burrs.

Test fitting

Gluing fragile shell can be a little fraught, so I prefer to use a 24-hour epoxy with a working time of at least 90 minutes. Epoxy can be dyed to match the surrounding wood, either using wood dust or filler dyes. Ensure a good coverage of epoxy on the sides and floor of the recess, and then place the pieces in. On designs with a number of pieces in a single cavity, fit the interlocking pieces first, followed by any free floating pieces.

Conclusion

Hopefully this article has shown how a relatively simply design, along with some well chosen materials, can add eye-catching decoration to a workpiece, using readily available tools. Nor is the shell difficult to obtain: Small Wonder Music – www.smallwonder-music.co.uk – supply a wide selection of shell types as well as excellent Dremel-sized router bits. *F&C*

Bending the silver stock and test fitting the shell in the recesses

This inlay design, for a 12-string guitar on cocobolo headstock veneer, benefitted from engraving to bring out the petal and hair detail

Simply striking

Anne Briggs Bohnett takes a look at mallets, including how to choose the right mallet for your hand and style of work

PHOTOGRAPHS BY ANNE BRIGGS BOHNETT

I cringe every time I see someone use a steel head hammer to hit the back of a chisel. A big fan of always having the right tool for the job, I like to encourage woodworkers to have at least three striking tools in their arsenal – four if they use wooden planes. First, you need a steel claw head hammer for driving and pulling nails. For heavy chisel work – chopping mortises, creating dadoes, etc. – and for assembling joinery, a carpenter's, sometimes called a joiner's, mallet is indispensable. For bench work – chopping dovetails, refining joints, etc. – a tapered cylindrical carver's mallet will allow for precisely aimed blows with proper force. And of course, if you use wooden planes, a plane hammer is also a great tool to have for adjusting the blade while protecting the wooden components of the plane.

Though many chisels today, especially those with hardened plastic handles and steel tipped backs, are designed to withstand the challenge of a steel headed hammer, it is simply not the right tool for the job. A steel hammer's face is likely to be very similar in size to the back of your chisel. Accurately aiming that small head at the back of your chisel will take your focus away from the tip of the chisel where it should be, to the back of the chisel trying to avoid a glancing blow that will result in bruised knuckles and an inaccurate cut. Joiner's and carpenter's mallets have a large face that give grace with regard to aiming your blows and a tapered head that caters to even contact across the head of the chisel. Wooden handled chisels will quickly mushroom, split and break if used in conjunction with a steel-headed hammer.

Use the right tool for the job

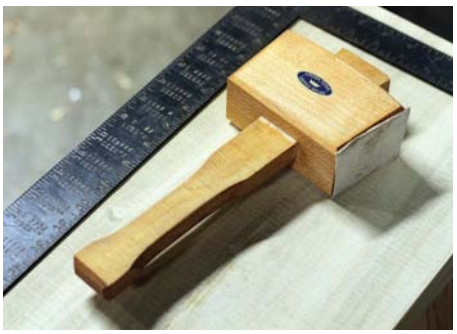
Steel-headed hammers damage chisels

Joiner's mallets

Joiner's mallets have been used for centuries to hit chisels and assemble joinery. They are generally made from a dense hardwood able to withstand the rigors of daily use. Joiner's mallets made from boxwood (*Buxus sempervirens*), lignum vitae (*Guaiacum officinale*) and exotic hardwoods are commonly found. As mentioned before, they feature a tapered head that gives the user even striking pressure across the head of the chisel without having to practise bodily contortion.

While I used to use my homemade tapered cylindrical wooden and rubber-headed carver's mallets for all joinery work, some recent advice from my friend Mike Siemsen of Siemsen's School of Woodworking, aka the Naked Woodworker, has had me reaching for my joiner's mallet far more often. He recommended any time I was using chisels with a round head that I use my flat-faced joiner's mallet, and the explanation was very simple: the greater the contact, the more efficient transfer of energy and the more accurate results. Said even more simply, round chisel plus round mallet allows the mallet to glance the surface of the chisel, knocking your cut out of square to the left or right with each blow that isn't perfectly centred – and that brings us back to the same problem we dealt with using steel hammers to strike chisel backs.

Because these mallets take a lot of abuse, it is very handy to be able to remove and replace the hammer head with ease. The head is attached simply by friction – the result of a tapered handle that fits into the mortise in the head – and can be removed by tapping the tip of the handle on a hard surface several times. It can be tightened by turning it on end and tapping again until it fits snugly.



A joiner's mallet

The mallet head is held on by friction

Using a joiner's mallet

Building a joiner's mallet is actually a fantastic learning exercise, so if you need some extra shop practice, I highly recommend making one of these. Paul Sellers has a very straightforward video series that covers the entire process, available free on his website and on www.youtube.com.

One modification I highly recommend is fixing a scrap of leather to one side of your joiner's mallet with hide glue. This has been a very helpful addition, especially when it comes to assembling joinery. It provides an extra layer of protection from denting and damaging the workpiece and gives a little extra 'grip' so my blows land exactly where I intend them.

Carver's mallets

Carver's mallets in antiquity were turned from a hardwood able to withstand lots of abuse. They were used to completion, then tossed in the fire pile and quick work was made of replacing them. As I mentioned above, I used my homemade hickory (*Carya spp.*) carver's mallet for just about every job in the shop. When I started using Japanese chisels, I bought an inexpensive 24 oz. rubber-coated mallet that has served me very well.

Where these tools really shine is when you want to get up close and personal with your work. They have short handles that allow for ultimate control and minimal fatigue.

Making your own carver's mallet from wood is an easy 1-2 hour maximum project on the lathe. It doesn't have to be perfect or pretty, but if you don't already have one, make one and give it a try at your own bench. The only important principles are that it needs to be made of timber harder than what you're hitting, the handle needs to be thick enough that your fingers won't touch your palm when grasping it, and that the head is turned at a slight taper to allow for maximum contact with the chisel back when regularly swinging your arm.

Examples of carver's mallets

Using a carver's mallet

Community Tool Chest

As fate would have it, at the Lie-Nielsen event in Seattle this past spring, my Community Tool Chest booth was right next to Dave Jeske's Blue Spruce Toolworks setup. Dave and I got to chatting and we found we had plenty to talk about. He is so passionate about the tools he makes, and rightly so – each one is a work of art. I went home from the show having purchased a custom fishtail chisel and he later sent along one of his impregnated maple (*Acer saccharum*) mallets for the Community Tool Chest as well. Having now used it a fair amount, I can honestly say that it is the finest mallet I've ever used. It stands up to all kinds of abuse, and doesn't even have a scratch on it. It is perfectly weighted and absolutely gorgeous to behold. These are the kinds of tools I am really excited to place in the hands of woodworkers, beginners to experts, so they can experience a truly quality tool. Using the finest tools doesn't guarantee you'll produce the finest work, but I believe they inspire greatness. Beauty begets beauty.

While at Woodworking In America in September 2014, I met Randall Webber. We had a fun chat that has now extended to a few phone calls, texts and Instagram messages over this past year. He is a very dedicated and hardworking woodworker and has recently begun experimenting with resin impregnation as well. He recently sent along one of his impregnated maple mallets for the CTC and it has already seen a lot of use. The resin impregnation toughens the wood to a surprising strength. This hammer has been put through some rigorous paces and while it is certainly not as pretty as it was when I received it, a plain old maple mallet would have been pounded to shreds by now.

In a league of its own

Stronger than wood

Maximise each blow

When using your mallet and chisel to chop away waste, positioning your workpiece directly over one of the legs of your bench – or between two legs for larger pieces – will maximise the force of each blow with the mallet. Chopping in the middle of your bench allows for movement, the absorption of some of the force of your blow as the bench yields to the strike – miniscule as this movement may be, it takes away from efficiency and accuracy. I have found that chopping over the legs of my bench, rather than in the centre, shaves valuable minutes and fatigue from the process. F&C

Maximise each blow

References

Contact: *Siemsen's School of Woodworking*
Web: *www.schoolofwood.com*

Contact: *Paul Sellers*
Web: *www.paulsellers.com*

Contact: *Blue Spruce Toolworks*
Web: *www.bluesprucetoolworks.com*

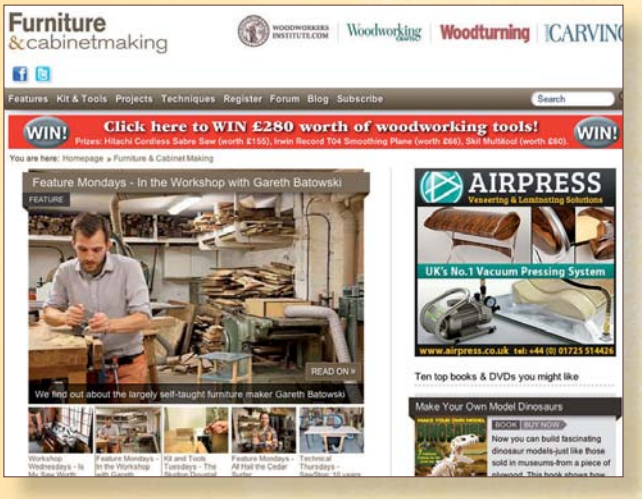
Contact: *Lie-Nielsen Toolworks*
Web: *www.lie-nielsen.com*

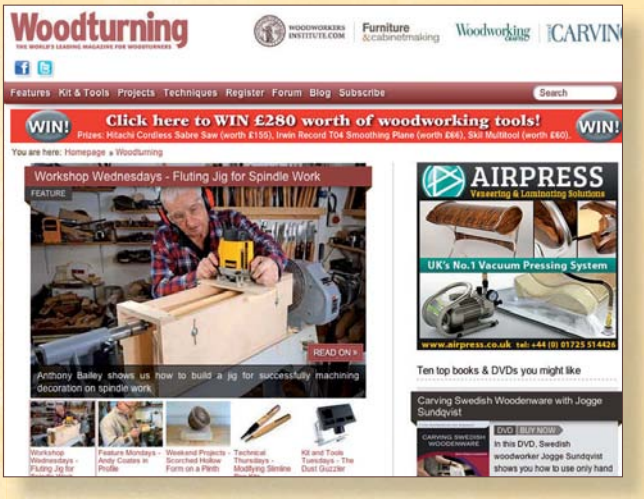
woodworkersinstitute.com

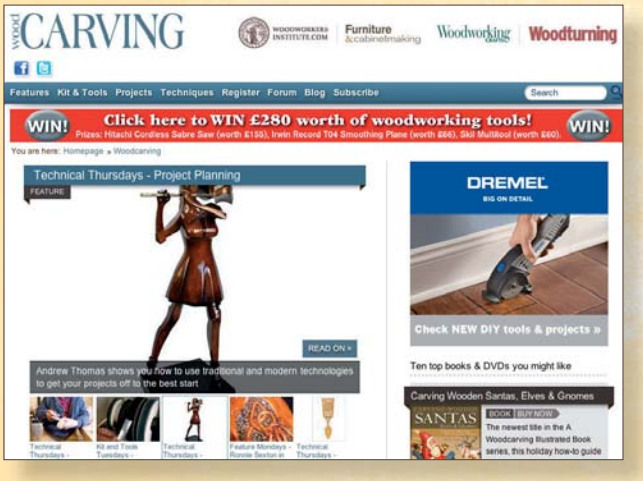
The UK's No. 1 source of information from the world of woodworking

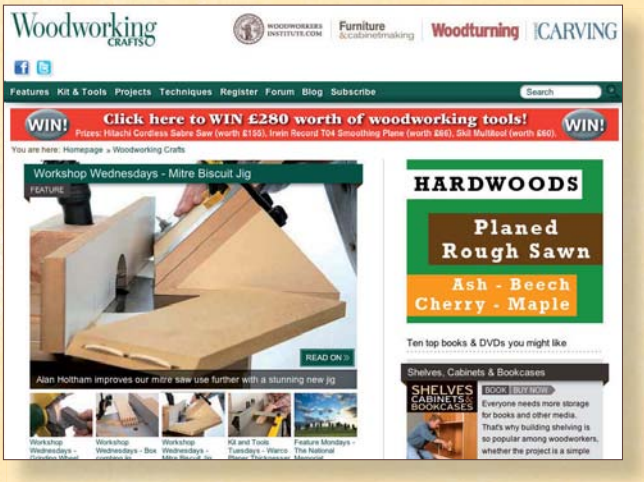
Furniture &cabinetmaking | **Woodworking Crafts** | **Woodturning** | **Wood CARVING**

Europe's largest woodworking website offering expertise and a vibrant community









• Latest news • Projects • Reviews • Techniques
• Competitions • Blogs • Forums • Giveaways

WOODWORKERS INSTITUTE.COM

Join us for inspiration and discussion, with people who have a passion for working with wood!

PHOTOGRAPHS COURTESY OF ALAN LACER

Heirloom awl – An exercise in basic toolmaking

In this excerpt from his new book, Alan Lacer shows you how to make your own version of this age-old workshop

Metal and wood are the basic ingredients in most woodworking tools. As woodworkers, we're familiar with working wood, but what about metal? Actually, the level of metalworking required to make some woodworking tools is pretty basic. If you've never made your own tools, then give this project a try. There's something enormously satisfying about using a tool you made yourself.

I chose the scratch awl for this article because it's an everyday tool that's easy to make. This project will teach you the basic principles of heat-treating steel and turning a wood handle with a metal ferrule. This awl will be the first milestone on your custom toolmaking journey.

Note: this project involves metal grinding and working with an open flame, so be sure to follow these basic safety guidelines:

- Thoroughly clean the work area of all wood shavings and dust before using the torch or grinding the steel
- Keep a fire extinguisher on hand for emergencies
- If possible, do the heat-treating outside
- Wear eye protection for all grinding operations
- Never use motor oil for the heat-treating process.

Tools required

- *Fire extinguisher*
- *3mm, 5mm or 6mm diameter drill rod in oil hardening steel*
- *Propane or MAP gas torch*
- *1,000ml of olive oil*
- *Locking pliers*
- *200 or 255mm mill file*
- *Electric drill*
- *255mm grinding disc on 20mm plywood or MDF*
- *50 × 50 × 100mm piece of dry hardwood*
- *Copper plumbing coupling, brass or copper pipe, brass nut, or brass compression nut for the ferrule material*
- *Metal can with a lid*
- *Lathe tools: spindle roughing gouge, detail gouge, parting tool and optional skew chisel*
- *Scroll chuck*
- *Abrasives – usually 100, 150, 180 and 220 grit*
- *Jacobs style chuck for your lathe's tailstock*
- *A drill bit that's 0.4mm larger than the drill rod*
- *Epoxy*
- *Optional: Tempilstik in 450-50° range*

Turn the handle

Pick any strong hardwood for the handle: cherry (*Prunus serotina*), hard maple *(Acer campestre)*, oak (*Quercus spp.*), walnut (*Juglans spp.*), hickory (*Carya spp.*), ash (*Fraxinus excelsior*), rosewood (*Dalbergia retusa*), gonçalo alves (*Astronium graveolens*), purpleheart (*Peltogyne spp.*), etc. Now, aren't you glad you saved all those little pieces of really cool wood? Determine the desired diameter and length of the handle and be sure to allow for the length of the ferrule.

Mount the wood into the scroll chuck and create a cylinder with the spindle roughing gouge. With the parting tool, cut a small cylinder on the end to fit the metal ferrule. Take care to achieve a tight fit. The ferrule stock can be a copper coupling – 6-12mm depending on the look you desire – brass nuts, brass or copper pipe. If you're using a brass nut, simply thread it onto the wood.

Shape the handle with the detail gouge or skew chisel. The possibilities are endless and depend on the handle style, the size of your hands and whether the tool is meant for delicate or heavy service. I seldom make any two the same. Take the opportunity to add your own fine detailing to distinguish your awl from production versions. When satisfied with the shape, finish sand to 220 grit.

You can then shape the ferrule with the gouge. Use a Jacobs chuck to drill a 65mm – minimum – deep hole for the steel shaft.

Part the handle off the chuck and hand -sand the end. You can leave the handle unfinished or use a drying oil.

1 Round the handle blank and fit the ferrule on the end. You can use different materials for a ferrule; this one is a solid brass nut with a tapered end section

2 Rough in the basic shape of the handle with the detailing gouge. The shape and size of the handle is up to you

3 Turn away the flats of the nut and shape the ferrule with a detailing gouge. Cutting brass and copper on the lathe is similar to cutting wood. However, take light cuts

4 Drill the hole to accept the steel drill rod. Use bits 0.4mm larger in diameter than the drill rod to allow room for the epoxy

Make the steel shaft

Drill rod is too soft to use as a tool. On the other hand, soft steel is easy to work so we'll leave it that way for now and tackle the hardening later.

Cut the drill rod with a hacksaw to the desired length of the awl shaft. I normally use 75mm or 150mm lengths. Choose a length and diameter that fits the desired look of the awl.

To shape the point on the business end of the shaft, first chuck it in a drill. Then, run the drill as you hold the shaft against a spinning lathe-mounted grinding disc. Run the lathe at low to medium speed – 400-800rpm. Don't try put a delicate point on the steel at this stage; it will just get burned off in the heat-treating process. And don't worry if you 'blue' the steel at this juncture as overheating is only a concern once the steel is heat-treated.

Get the torch and can of olive oil ready. With the shank held in a pair of locking pliers, fire-up the torch and apply heat to the steel. Twirl the rod as if you were slow cooking a marshmallow. Try for an even, bright cherry-red colour from the middle to the point, then quickly dunk the hot steel into the olive oil and agitate rapidly for about 30 seconds. Note: never use motor oil for this as it gives off toxic fumes and can even ignite. Use a mill file to test the shank tip hardness. If the steel does not pass the file test, reheat and quench again. You can then hand-sand the shaft to achieve a clean bright surface.

5 Make the awl's steel shaft from a piece of drill rod. Cut it to length using a hacksaw

The second phase of heat-treating is called tempering; this is where the degree of final hardness is established. Tempering involves reheating the hardened area to a specific temperature, then quenching it immediately in water. The higher the temperature, the softer the shaft will be. As the end user, you are free to determine the degree of hardness you want in your tool. You may want an awl that is very hard and can scratch deep lines in hard wood. The downside is a very hard shaft will have a brittle point that's prone to breaking. At the other extreme you can temper the shaft so the point won't break but it may bend so easily that the awl becomes useless. I suggest making a couple of awls, each tempered to different temperatures to see what best fits your needs.

The tempered 'sweet spot' for my awls is a temperature around 450°–500°. There are three ways to achieve this:

A: Heat the steel slowly with a torch well back of the hardened area. When the hardened area turns a gold or bronze colour, quench immediately in water to stop the process.

B: Use a temperature-indicating substance such as Tempilstik. Choose a Tempilstik that fits your desired heat range. Rub the

area around the point with the wax-like stick. Then, heat the shaft as described in option A. When the steel reaches the desired temperature, the Tempilstik will smoke and liquefy. At this point, quickly quench the shaft in water.

C: The easiest, but slowest method is to bake the steel in a conventional oven for about 30 minutes at 450°. Be sure to preheat the oven and place the steel on a baking sheet. Elevate the steel with rolled up pieces of aluminium foil so it will heat evenly. Remove the steel from the oven and let it cool. There's no need to quench a shaft that's been cooked in an oven.

6 Shape a tapered point on the shaft using a drill and a lathe-mounted abrasive disc. With the drill running, grind the point on the near lower quadrant of the spinning disc. Wear eye protection!

7 Harden the shaft by heating the pointed half to an even cherry red colour. Hold the shaft in a pair of locking pliers

8 When the steel is evenly bright red from the point to the middle, quickly quench and stir it in a can of olive oil

9 Test the hardness of the shaft by running it along a file. The hardened part should skate off the file, not bite in

10 Sand the steel to a bright, clean surface with 220 grit abrasive. Wash it with soap and water to remove oil residue first

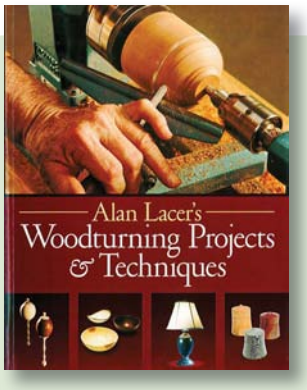
11 Temper the shaft with a torch held just below the heat-treated area. Keep the flame there and rotate the shaft until the hardened area is a uniform dark gold or bronze colour, then quickly quench it in water

Wood + steel = awl done

If you need a sharper point on the awl, place it back in the drill and lightly shape the tapered area on the disc mounted on the lathe – use a finer grit for this, such as 150 or finer. Do this slowly, as bluing the point may make the tool too soft for your purposes.

Mount the steel in the handle. I put a small amount of epoxy down in the hole, and then push the handle down over the steel with the point in a scrap piece of wood. Use the awl for a while; you may find you want one harder or one more flexible – you decide based on your tempering temperatures. F&C

12 Set the shaft in the handle using a bit of slow set epoxy. Put the epoxy in the hole with a toothpick. Rotate the shaft a bit as you push it in to evenly distribute the epoxy



Alan Lacer's Woodturning Projects & Techniques

This excerpt is taken from Alan Lacer's book Alan Lacer's Woodturning Projects & Techniques. *To purchase a copy for yourself, see details below:*
ISBN: *9781440340956*
Price: *$26.99 (£17.40) – plus P&P*
Contact: *Popular Woodworking Books*
Web: *www.shopwoodworking.com*
To find out more about Alan's work, see his website: www.woodturninglearn.net

PHOTOGRAPHS BY STEVE HOOPER

Charles Byron of Williams and Cleal Furniture Design school's winning 'Log Stack Cabinet'

Somerset Guild of Craftsmen

Derek Jones, along with Tom Kealy, was one of the judges for the Somerset Guild of Craftsmen Furniture Prize 2015 – he shares his highlights and tells us about the winner

I get asked to judge a lot of competitions each year and it's a hugely rewarding and often humbling experience when I'm able to do it. Three is about my limit as they generally fall around the same time of year, so they coincide with the end of the academic year.

Competitions are really a mild celebration of triumph over adversity and allow us to get closer to the maker or artist. I have tremendous respect for anyone who offers their work up for scrutiny by a panel of judges; trial by jury may be the fairest way to reach a decision but it's often the public vote that will have the final word over the judges.

The Somerset Guild of Craftsmen's annual competition is one such event. The Guild currently have their headquarters and gallery based in Somerton, the ancient capital of Wessex and has a County-wide membership of over 160.

The competition is open to colleges and furniture making schools in the local area, namely Bridgwater College, Bristol College and Williams & Cleal. It was a pleasure and honour to team up with Tom Kealy to judge the competition this year. I've got to say I felt like a bit of an imposter travelling across three counties and, therefore, three Guild neighbourhoods – including my own in East Sussex – to get there. Those sort of distances give plenty of time to ponder and, naturally, I'm wondering if each Guild could/would be tempted to run a series of regional competitions culminating in a 'best of' show held on neutral territory.

The Somerset Guild is one of the oldest Craft Guilds in the country and has been promoting excellence in design and craftsmanship for 80 years. All their makers are skilled, dedicated craftsmen who have undergone a stringent selection process before becoming accepted as exhibiting members. At the time of writing, the Somerset Guild has plans to expand its catchment area beyond the Somerset boundary. It's an ambitious plan and not without some obvious logistical nightmares. Making the trip twice, one to deliver and one to collect, to display work is less tempting the further the distance. Ask anyone who's exhibited at the Celebration of Craftsmanship in Cheltenham or the Millinery Works, London. Both are great venues and typically feature some of the best bespoke made pieces in any given year.

Top marks

The winner on this occasion was Charles Byron with his take on a Japanese medicine cabinet in the style of a log stack. Take a closer look and you should agree that both parts of the brief have been fulfilled.

Derek Jones and Tom Kealy meet Charles Byron, the worthy winner of The Furniture Prize

A mid-century style sideboard in walnut by Joby Martin of Bridgwater College. The sideboard has three drawers and 'hunter green' formica sliding doors

In terms of surprises this piece just keeps on giving. The finish was impeccable, the craftsmanship faultless and the attention to detail thorough. Good cabinetwork should be a given for a winning piece but what did it for me was the plain white lacquered drawer boxes. Not a bubble, a run or a ripple just clean, clean, clean all over. Gallery standard. The piece began with a desire to highlight the beauty of end grain, drawing inspiration from both a traditional Chinese medicine cabinet and a simple log stack. Charles utilised a unique end grain oak (*Quercus spp.*) veneer to create the illusion of each closed drawer being a single piece of timber. White resin fills the fractures in the veneers on the drawer fronts. The run of the grain transmits to the back of the carcass, aligning the crown with where it would appear in a log stack if the drawers were faces of a single block of wood. The handles were dictated by the veneer.

On display Charles' 'Log Stack Cabinet' was the first piece you see as you enter the gallery space. It was the last piece Tom and I looked at. The decision was unanimous; best in show.

A selection of some of the other great pieces entered into the competition

What makes a winner?

Judges are looking for a degree of excellence in as many criteria as are suited to the range of work on display; my default being 'gallery standard' and by that I mean, would I be prepared to pay the asking price if it were on display in a gallery? It's a benchmark standard that takes into consideration things like composition, craftsmanship, finish and concept. None of these qualities I feel are subjective and can be assessed fairly and squarely against the rest of the competition. Personally, I like surprises. Diving into drawer cavities to see the guts of a chest is a good place to start. Climbing around the back and underneath is another. Sometimes what you're looking for is the best in the room and not necessarily the best you've ever seen, although that sometimes happens. Christine Meyer Eglestone and Ian Cresswell spring to mind. F&C

Byron & Gómez

Winner of the Somerset Guild of Craftsmen judge's choice and popular choice award 2015 was Byron & Gómez, a partnership committed to producing furniture of the highest quality. Trained in traditional craftsmanship at the Williams & Cleal Furniture School, the company acquired a flare for contemporary design and innovative pieces that do not compromise on function

Web: www.byronandgomez.co.uk

Unit by Ian Cresswell (Guild Mark 396) has end panels with a design based on a photograph of Le Corbusier's Unite d'habitation building in Marseilles. The pattern is based around the Golden Section

This sideboard from Designer Makers Furniture was made by Chris Tribe and Christine Meyer-Eaglestone

Contact details

Email: courthouse@somersetguild.co.uk
Web: www.somersetguild.co.uk

mafell

NEW cordless drills

A10M • A18M - Drill Drivers
ASB18M - Combi Drill with Hammer Action

A lot of punch in a small package – the clever functions make the new Mafell cordless drills versatile all- purpose machines for the internal finishing trade and other applications. Premium battery technology enables you to drill and drive for extremely long periods without interruption. A10M and A18M are Drill Drivers, whereas the ASB18M is a Combi Drill with Hammer Action.

A range of accessories available to maximize the drilling capabilities

Quick-release system for changing bits, chucks and heads in seconds

Battery charge indicator permanently displays its charge.

Outstanding torque range for a wide array of applications

Call NMA or visit our website to find your nearest Mafell stockist.

NMA AGENCIES LTD

NMATOOLS.CO.UK

Email: info@nmauk.com Tel: 01484 400488

Birds Royd Lane
Brighouse
West Yorkshire
HD6 1LQ

NEXT MONTH in

Furniture &cabinetmaking

ISSUE 237
ON SALE
1 OCTOBER

Japanning restoration tech

Imitation is the sincerest form of flattery

Picture this
Art Nouveau marquetry

Project
Wharton Esherick-style stool

Construction tech
Sprung joints and gang cutting

In the workshop with…
Graham Haydon

PHOTOGRAPH COURTESY OF THOMAS COULBORN & SONS


hand tools and wood chisels specialist
Ashley Iles - Henry Taylor - Robert Sorby - Joseph Marples
Veritas - Clifton - Thomas Flinn - Titebond - Ice Bear...
All items in stock, ready for dispatch..
*unless marked otherwise
all prices inclusive of VAT
Tool Nut .co.uk
OVER 25 DIFFERENT CHISELS
OVER 90 DIFFERENT CARVING TOOLS
OVER 25 DIFFERENT REPLACEMENT BLADES
Henry Taylor Chisel Set
for only £120.00
Natural Leather Chisel Rolls
from only £17.50
scrapers
sharpening stones and tools
measuring and marking
Order online today at
www.toolnut.co.uk
or call to order on 01424 224269
saws
punches
saw horses
Order online today at www.toolnut.co.uk

The first five hand planes

PHOTOGRAPHS BY GARY ROGOWSKI

Trying to refine your hand plane collection? If so, look no further than Gary Rogowski's suggestions for five essential planes that will give you the best results

Acquiring hand tools, like any pursuit, can be hobby or addiction. My title says the first five hand planes because if you are like me, once you start buying them, you won't be able to stop. Of this I am certain. There is no turning back when there are so many types and sizes to choose from. Are you a wooden body sort? Do you prefer an infill plane with the mass of a battleship behind each stroke? Or are you a Stanley aficionado? Is the No.3, the No.5½, or the No.7 the one plane that sends a chill up your spine?

Here is what you need to know about them if you're just starting out. Hand planes come in four basic categories: bench planes, block planes, joinery planes and others. I can't be more specific than that because there are so many others.

Bench planes

Bench planes all have some type of bed for the plane iron to rest upon. This may be wood in a wooden hand plane, a Japanese-style plane or a transitional plane. It may be cast-iron, like in most of the Stanleys and Miller Falls hand planes. The newer versions of these planes, the Lie-Nielsens and Veritas planes, come with a cast bronze or ductile iron frog. Generally, the bed angle is at 45° although you can get higher angled frogs for trickier grain. The higher your cutting angle, the more quickly the shaving will curl, thus reducing tear-out.

These frogs are screwed into the plane but are movable. In this way, you can adjust the mouth opening by moving the iron and frog assembly back or forth, changing what size shaving you can fit through the mouth. The plane iron on a bench plane is always set bevel side down and there is a cap iron or chipbreaker above the iron to hold it flat and to curl or break the chip of course. The iron is ground at an angle somewhere between 25° and 30° but the cutting angle remains at the bedding angle of 45°. That is the angle the plane will always cut at.

Stanley Bed Rock No.4 bench plane

Bench planes come in different widths and lengths from a No.1, which is a toy – I still could not resist getting one – up to a No.8. A No.8 is a jointer style bench plane and for safety's sake, one should always calculate stopping distance when you put one into use. It's a beast. It is quite heavy and very long so you can true up long edges or faces. Each numbered or sized hand plane is used for a different job, but the best consideration is to determine how long a plane is needed for the job at hand and how strong your arms are that day.

Bench plane disassembled: lever cap, chipbreaker and iron, frog and plane body

Bench plane varieties

Bench plane options

Get a No.4 and a No.5 bench plane and outfit them both with 3mm-thick irons and a hefty flat chipbreaker. Use one for daily use and have the other set up for your special cuts – those final smoothing cuts. Don't let it come into contact with dried glue or a piece of plywood. It is for pristine cuts only. The other one you can use for everything else. The varieties can also be to your liking. Smaller hands may like a No.3 and a No4, or a No.4 and a No.6. There are a number of options with all the many sizes available, but I don't think I can count that high

No.4 and No.5 bench planes

Block planes

Block planes are not all smaller than bench planes. The essential difference is that block planes have their irons set bevel side up with no chipbreaker on top of them. A standard block plane is bedded at a 20° angle. There is no actual frog but the iron rests on the body or a plate of some sort. With the bedding angle at 20° and the grind angle on the blade of 25°, you get your cutting angle of 45°, which is the same as a bench plane. This means that in some ways, these tools are interchangeable. You can use a bench plane on end grain just as you can use a block plane on long grain. The low angle jack plane made by Lie-Nielsen is patterned after the Stanley No.62 and is a beautiful plane to use when trimming a framed door as it slices through long grain and end grain with ease. You can also change the cutting angle of your low angle planes by changing the grind angle on your blades. This way, you can use them on more difficult woods or woods with swirling grain.

Standard angle block plane

Low angle Lie-Nielsen jack plane

The No.102 low angle Lie-Nielsen block plane

A block plane is one of the essential hand planes. If you only buy one new tool ever, then buy the No.102 low angle Lie-Nielsen block plane – it will be the best money you will ever spend on a tool. I am not biased, but I had a Stanley No.103 from my father that I used for years. It was hard to adjust, it wouldn't hold an edge, didn't like to plane end grain, but my father gave it to me so I used it for years, then I bought the No.102. I put the Stanley on the shelf, highest up, place of honour and rarely use it now except for chamfering edges. I prefer to use my No.102 now, almost daily. The surface I can get with this hand plane is astonishing, plus it fits the hand beautifully. It can be used to chamfer edges, but it can also clean up mitres, true box corners, smooth faces and edges and it fits in a pocket or your apron. It's a beauty. I would set up a concession stand and sell these block planes if I could, that's how much I like mine

The No.102 low angle Lie-Nielsen block plane

Joinery planes

Joinery planes are surprisingly numerous and perhaps a bit difficult to understand. Why so many? Well, because there are so many things you can do with them depending upon your aversion to router noise. The router plane has two handles and a cutter placed roughly in the centre of the tool for cleaning up the bottoms of all sorts of joints. The rest of the group have one or both edges of their irons line up with one or both sides of the plane bodies. These include bullnose, rabbet and shoulder planes, followed by skew block planes, low angle rabbeting block planes, side rabbets and router planes. This means you can use one to trim a joint, run a rabbet along an edge or widen one already cut, trim a panel's surface at an angle, or clean up a hinge mortise. They are not just surprisingly useful in a heavily machined shop, they are essential for good work. A good joinery hand plane can tweak the fit of a tenon better than any tool out there. Removing a thousandth or two just in the right spot can make all the difference between a good fit and one requiring epoxy to glue it together.

Joinery planes: bullnose, rabbet, bronze shoulder plane and router plane

The Clifton Shoulder plane

My choice here, if you want precision, is to go British. The Clifton Shoulder plane that I own is based on the Preston design. It is hands down one of the best hand planes I own. I use it only for joinery but it's always there, ready to go almost right out of the box. Very little tuning is required for it to start cutting beautifully. It trims end grain shoulders or the long grain cheeks of tenons with ease. Mine is a bit narrow but I see past its limitations and love it for what it is: a great hand plane that always produces superlative results

The No.410 Clifton shoulder plane

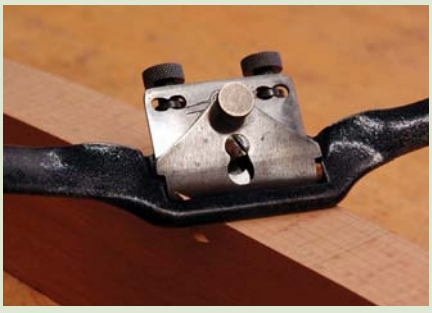
Other hand planes

Other hand planes are a grab bag of tools. From the inimitable spokeshave to the redoubtable compass plane, there are some crazy varieties of shapes holding plane irons for us to use. I find that the scrub plane is a fantastic tool but I use mine once every six or nine months. On the other hand, the scraper plane I use once a year, preferring my card scraper to the time spent setting up a scraper plane properly. But the spokeshave is a wonder. Throw out your round-bottomed one as a useless waste of cast steel. Get a flat-bottomed shave and enjoy the variety of jobs it can do for you almost every week in the workshop. Its short sole lets you manoeuvre around curves, trim edges, shape those shapely table legs and shape all the templates one could ever want. It is the most adaptable plane you can put in your hands and I never find it tedious to put on a good chamfer with one. The older Stanleys are good tools, but Lie-Nielsen has a Brian Boggs designed spokeshave that is like a Porsche to handle. It's a bit spendy and it takes some getting used to, but it has a very thick iron and a superb bedding surface to keep the blade from chattering in a cut.

The spokeshave in use on a curved piece

The Stanley No.151 spokeshave

The simplest choice is to find a used Stanley No.151 and outfit it with a Hock iron. The tiniest bit of thickness helps both in the sharpening and the stiffness of the blade. The older Stanleys don't have all that paint on them obscuring the bedding surface like the newer spokeshaves do out of the box. They might still need some truing but that's easily done. This spokeshave is easy to adjust and with a sharp iron is a revelation in cutting curved work F&C



Stanley No.151 spokeshave

Add a touch of ORANGE to your Systainer collection

Reduced vibration : More powerful : Less operating noise.
The FEIN MultiMaster Systainer Edition - for a limited time only

The all new MultiMaster 350Q has been designed and engineered by FEIN with more than 45 years of experience and know-how.

With 35% more power, 50% less operating noise and the vibration reduced by a staggering 70%.

The new FMM 350Q is truly the best in class and from April, for a limited time only, is available in the popular systainer case with 41 accessories. Check your local FEIN stockists for details.

www.multimaster.info

Technical Features	MultiMaster (FMM 350Q)
Input (W)	350
Oscillations (rpm)	10,000-19,500
Weight according to EPTA (kg)	1,4
Sanding Pad Width (mm)	80
Tool Holder	QuickIN
Amplitude (Degrees)	2 x 1,7

MADE IN GERMANY

3 YEAR FEIN PLUS WARRANTY
INC. LI-ION BATTERIES

Also available in the FEIN Systainer:

FEIN SuperCut Wood Edition

Technical Features	SuperCut 2.0 (FSC2.0Q)	Cordless SuperCut (AFSC)
Power Input (w)	400	-
Power Output (w)	220	-
Voltage (v)	-	18
Battery Capacity (Ah)	-	4Ah
Oscillations (rpm)	11,000 - 18,500	11,000 - 18,500
Amplitude (degree)	4.0	3.4
Cable with Plug (m)	5	-
Gear Box Head Height (mm)	80	80
Weight (kg)	1.45	2.0 (with battery)
Tool Holder	QuickIN	QuickIN

FEIN. Unverwüstliche Elektrowerkzeuge.

www.fein-uk.co.uk FEIN.UnitedKingdom FEIN_UK

Supplier details

Osmo finishes
Contact: *Osmo UK*
Web: *www.osmouk.com*

A and B bleach
Mylands
Web: *www.mylands.co.uk*

PHOTOGRAPHS BY DANNY MADDOCK

Whiter than white

Carrying on from his ebonising article in issue 234, Danny Maddock discusses techniques for bleaching wood

Wood is an incredibly versatile and fascinating material to work with, and after looking at ways to turn it black a couple of months ago, this month I am taking things to the other end of the spectrum – bleaching. So why would you want to turn timber white? The multitude of colours that wood provides is one of the things that catches our eye when it comes to wood and entices us when it comes to picking out our timber. At 'robinson house studio', we believe that choice of materials is paramount to a piece of furniture and having an arsenal of techniques and knowledge to manipulate your materials is invaluable. We encourage this ethos with our students at the studio. A white piece of furniture can make a statement just as using exotic hardwoods can, if used in the right way.

Preparation

As with any form of staining wood, the timber must be prepared by raising the grain. This process involves introducing moisture to the wood again and again and sanding in between until the wood fibres have been properly 'cut back'. As we know all too well, timber loves water and will absorb as much as it possibly can at any opportunity. Whether you are staining, bleaching or ebonising, you are introducing water to your work in some form or another. Raising the grain and cutting back will avoid heavy sanding after you have applied your finish, sanding that will most likely undo the hard work you have put in to achieve the colour you require. I like to sand the timber to 240 or 320 grit, then spray liberally with water.

Sand to 240 or 320 grit

You can use a heat gun or hairdryer to speed up the drying process, after which you need to sand again to your last grit and repeat the process four or five times.

If you happen to be restoring a piece of furniture, then preparation may take a little longer. You will need to remove the finish, whether it be varnish, wax or oil. Wax or oil will usually surrender to a vigorous sanding but varnishes can be tough. You can buy varnish removers from most hardware shops and they all do a decent job. After that, sanding is key – ensure you sand evenly, keeping the wood flat with no patches.

Spray with water to raise the wood fibres

Use a heat gun or hairdryer to speed up drying time

A and B bleach

With ebonising, there are various different ways to achieve your desired finish, but bleaching offers less scope. Much fitted furniture you may have seen is painted white, either by spraying or by hand. While this may be necessary to the client and the brief, this method obviously gives no indication as to the wood that lies beneath it. Bleaching allows you to achieve a neutral white colour while honouring the natural beauty of the wood grain.

At 'robinson house studio' we use A and B bleach, which is widely known as an industry standard in bleaching. The 'A' part is sodium hydroxide and the 'B' part is hydrogen peroxide. Without going into scientific detail, the two combine together to make sodium hydroperoxide, which is a very aggressive compound so please be sure to wear gloves when handling the chemicals!

Before beginning my testing, I always prepare properly – after all, preparation is the key to success. As you can see in the photos, I have taped down a strong plastic sheet to avoid spilling any chemicals onto Marc's workbench. I separate the 'A' and 'B' parts into different containers with different brushes and label them accordingly. I also like to keep a cup of water on hand to wash the 'B' brush; the wood needs to be flooded with bleach, so I will never put the 'B' brush back in the container without rinsing it first as the 'A' bleach already on the wood can contaminate the 'B' part. Ensure you have enough dry rags for wiping excess bleach. I use one rag for 'A', one rag for 'B' and one for drying the 'B' brush after the water – water won't contaminate the bleach but after a few coats, it will dilute it and will alter the results of your testing. One more thing I will strongly stress at this point is the use of PPE. Gloves, a face mask with an organic filter, and goggles are all essential. Even though you may think it unlikely, there is always a small chance you could flick bleach into your eye.

After thorough preparation, we are now ready to apply the bleach. I have gone for oak *(Quercus spp.)* in this case, mainly because I like the look of it once it has been bleached but it does lend itself well to the process. Apply part 'A' liberally with a brush, leave it for five minutes but do not let it dry. If your timber is dry, then it will absorb more in certain areas so be sure to keep applying the bleach if this occurs. Five minutes is only a guide but I always set an alarm as it is so easy to get distracted by another job that needs doing! If you are working with oak, don't be alarmed by the colour the 'A' part will create. It will go dark, and while I'm not entirely sure why, I can only assume something in the chemical is reacting to the high tannin content in the oak.

After five minutes, you can then apply the 'B' part. I like to wipe off the excess 'A' bleach with a rag but only so I know I get an even covering of 'B'. Again, apply the bleach liberally and leave for five minutes. Once the five minutes is up, you can dry the timber with the aforementioned heat gun or hairdryer, and as you do this, you will see the wood turn white before your eyes. In my research, I have found that after four or five coats I don't notice much of a difference, but as always, you will need to experiment for yourself and come up with a method that works best for you. Once you are satisfied with your results, you will need to neutralise the chemicals by applying acetic acid or white vinegar.

A and B bleach – as you can see here, containers and brushes are labelled accordingly

Apply the bleach liberally with a brush

Oak will go darker than other timbers when you apply the bleach

Finishing

Unfortunately, the process of bleaching timber doesn't end there. Without a finish the colour won't last and you will be digging out your old copy of *F&C* to remember how to do it all over again. The bleach is easy to sand through, hence the importance of raising the grain before you begin, and doesn't penetrate the grain too deeply. At 'robinson house studio', a popular finish is Osmo oil.

Osmo have some fantastic products on the market and we use them in much of the work produced at the studio. Some of their options include satin matt, gloss, UV resistant, exterior oil, floor oil and worktop oil to name but a few. All are easy to apply and after four or five coats, give a great finish. For my research, I was testing two products in particular of theirs: Osmo White and Osmo Raw. These two finishes are part of Osmo's 'tints' range within which you can find various colours and shades to suit most requirements.

Osmo White does exactly what it says on the tin, it is an oil with a white tint. Don't, however, let the name put you off using it for any application other than in conjunction with bleaching, as it can create some interesting effects. I've found that when used with open-grained timbers, it can retain the natural colour of the wood while accentuating the grain with a hint of white.

Osmo Raw is somewhat more subtle; it is intended as a 'transparent' finish. Most oils will darken any timber and bring out the richness of the grain, but that is not always the most desired finish by the maker. Should you want something that preserves the natural colour of the wood rather than an exaggerated tone, then Osmo Raw could fulfil your needs.

Osmo's instructions for using their oil states that you should apply a thin layer, rub it into the wood and leave to dry for nine hours. This does work and will give a nice finish but during my apprenticeship, I was taught otherwise by Marc. His technique is to flood the timber with Osmo, applying a thick layer with a rag and leaving it to dry for 20-30 minutes, depending on the temperature. After this time, the oil will have become tacky but will have soaked fully into the grain. Once you have reached this stage, use the same rag with a tad more oil to 'loosen' the first coat. Once the oil has been 'loosened' or 'reactivated', use a completely dry rag to buff off. You may need to work on small areas or the oil will become tacky again. If you neglect the 'loosening' stage, then your rag will stick to the oil and leave fluff on the wood. Ensure to use the dry rag vigorously to achieve a nice, even finish, and change the rag regularly as it must be dry.

One downside of this technique is that it uses a lot of oil that does not come cheaply, but I tend to use it for the first couple of coats to ensure it penetrates the grain and then apply thinly for the remaining coats.

Wipe off excess with a rag

Colour comparison to a piece of oak from the same board

Testing the finishes – remember to label samples

Offcuts found around the workshop, from left to right: maple, sapele, cherry and walnut

Osmo raw and Osmo white oil finish samples on bleached and natural oak. I also put a strip of Osmo satin matt in the middle to compare

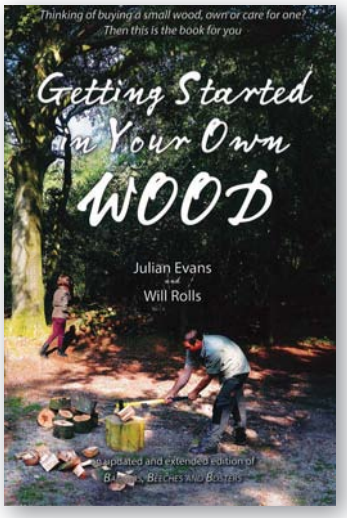
Conclusion

Experimenting and finding techniques that work for you is all part of the fun of making furniture. What we discover and teach at the studio is never gospel, merely a guide. As I mentioned earlier, wood is a versatile material that will behave in whatever way it sees fit and we must adapt our techniques to it. My piece of oak may react differently to yours and so sampling should be done on a spare piece from the same batch you intend to use on the real thing. I will leave you with an important but simple piece of advice – always label your samples! F&C

Workshop library

Briony Darnley reviews *Getting Started In Your Own Wood*, the Editor looks at *Learn about… Woodwork* and *The Secret Mitre Dovetail* and our Website of the Month is Aidan McEvoy: Fine Furniture

BOOKS



Getting Started In Your Own Wood

by Julian Evans & Will Rolls

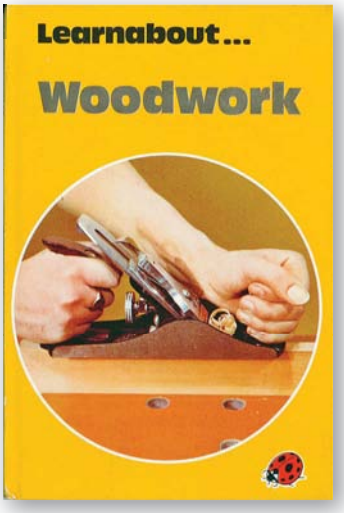
Julian Evans and Will Rolls have updated and extended their *Badgers, Beeches and Blisters*, into their new book *Getting Started In Your Own Wood*. The book is aimed towards those who are interested in buying a small piece of woodland – an ever increasingly popular subject – or who already own or care for a patch of woodland.

This is very much a text-based book from experts Julian and Will, with only a number of illustrations inside. The authors have released this book with a commitment to the care and stewardship of woodland resources. The book provides practical advice and guidance on owning woodland and for those who are coming into woodland management for the first time.

In terms of book revision, each chapter has been newly updated and there are now two extra chapters, added by Will Rolls. These extra chapters look at firewood and tree pests and diseases. *Getting Started In Your Own Wood* also addresses the following: first steps: planting and caring for trees; crafts, products and firewood; enriching wildlife and natural regeneration; coppicing, pollarding, pruning and thinning; and finally, advice and where to get help.

Although not completely focused on woodworking, this is a great book to read if you have a fundamental interest in wood and want to know more about caring for wood and woodland.

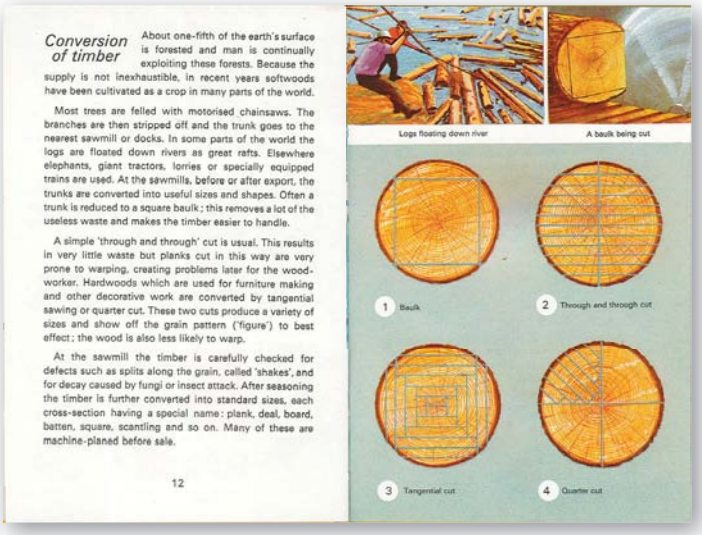
Published by Permanent Publications
ISBN: 9781856232128
168 pages £12.95



Learn about… Woodwork

by Brian Larkman

This little book caught me by surprise when course leader at Warwickshire College, Jamie Ward, pressed it into my hand last month. We're all familiar with the Ladybird series of educational books: kids in roll-neck knitted jumpers, walking around NASA and pointing at the sky. Well, this 1973 classic has its fair share of dated home-knit but everything else reads like a bang up-to-date issue of any good woodworking journal. In just 52 editorial pages and measuring in at a pocket-sized 120 × 175mm, it covers all the major points. The history of wood, conversion of timber, saws and sawing and speciality planes, it's all in there in an easy to follow style; words on the left pictures on the right.


Conversion of timber

About one-fifth of the earth's surface is forested and man is continually exploiting these forests. Because the supply is not inexhaustible, in recent years softwoods have been cultivated as a crop in many parts of the world.

Most trees are felled with motorised chainsaws. The branches are then stripped off and the trunk goes to the nearest sawmill or docks. In some parts of the world the logs are floated down rivers as great rafts. Elsewhere elephants, giant tractors, lorries or specially equipped trains are used. At the sawmills, before or after export, the trunks are converted into useful sizes and shapes. Often a trunk is reduced to a square baulk; this removes a lot of the useless waste and makes the timber easier to handle.

A simple 'through and through' cut is usual. This results in very little waste but planks cut in this way are very prone to warping, creating problems later for the wood-worker. Hardwoods which are used for furniture making and other decorative work are converted by tangential sawing or quarter cut. These two cuts produce a variety of sizes and show off the grain pattern ('figure') to best effect; the wood is also less likely to warp.

At the sawmill the timber is carefully checked for defects such as splits along the grain, called 'shakes', and for decay caused by fungi or insect attack. After seasoning the timber is further converted into standard sizes, each cross-section having a special name: plank, deal, board, batten, square, scantling and so on. Many of these are machine-planed before sale.

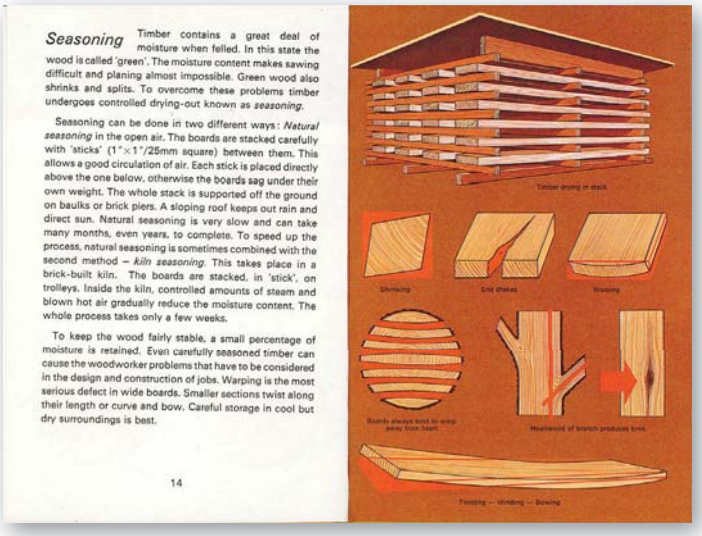
12

Logs floating down river
A baulk being cut
1 Baulk
2 Through and through cut
3 Tangential cut
4 Quarter cut

A chapter looking at the conversion of timber

So, who was this book aimed at? Well presumably 12-year-old boys in roll-neck jumpers with an interest in making things with hand tools. Seriously, if you're just starting out or know someone who is, then get yourself down to your local second hand book shop or if you prefer, an online auction, ignore the millions of lousy and quite often suspect 'how-to' YouTube videos and start a book collection. The information contained in this Ladybird book is as relevant now as it's ever been. Who knows where it will lead; other titles in the Crafts & Hobbies series include *Stamp Collecting*, *Indoor Gardening* and *Handwriting*.

Published by Ladybird Books Ltd
ISBN: 0721403387
52 pages £6.99


Seasoning

Timber contains a great deal of moisture when felled. In this state the wood is called 'green'. The moisture content makes sawing difficult and planing almost impossible. Green wood also shrinks and splits. To overcome these problems timber undergoes controlled drying-out known as *seasoning*.

Seasoning can be done in two different ways: *Natural seasoning* in the open air. The boards are stacked carefully with 'sticks' (1"×1"/25mm square) between them. This allows a good circulation of air. Each stick is placed directly above the one below, otherwise the boards sag under their own weight. The whole stack is supported off the ground on baulks or brick piers. A sloping roof keeps out rain and direct sun. Natural seasoning is very slow and can take many months, even years, to complete. To speed up the process, natural seasoning is sometimes combined with the second method – *kiln seasoning*. This takes place in a brick-built kiln. The boards are stacked, in 'stick', on trolleys. Inside the kiln, controlled amounts of steam and blown hot air gradually reduce the moisture content. The whole process takes only a few weeks.

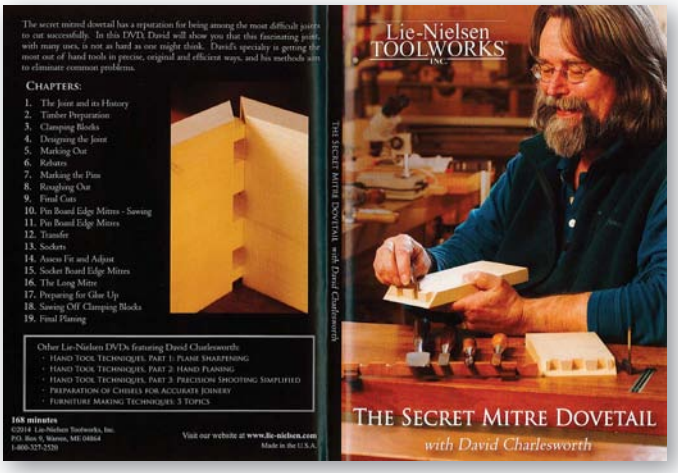
To keep the wood fairly stable, a small percentage of moisture is retained. Even carefully seasoned timber can cause the woodworker problems that have to be considered in the design and construction of jobs. Warping is the most serious defect in wide boards. Smaller sections twist along their length or curve and bow. Careful storage in cool but dry surroundings is best.

14

Timber drying in stack
Shrinking
End shakes
Warping
Boards always twist to warp away from heart
Heartwood of branch produces knot
Twisting — Winding — Bowing

Seasoning is covered in good detail

DVDs



The Secret Mitre Dovetail
with David Charlesworth

Over 19 short chapters David explains every tiny detail of this joint leaving virtually no stone unturned. Actually, make that just no stone unturned. The film starts with a discussion about the design of the joint and how it might be adapted to cater for integrated mouldings. Our attention is also drawn to consider the size of the chisels we might have at our disposal to complete the task. There's a brief chapter on the marking gauges required to generate reliable layout lines. It's interesting to see that David prefers to fine-tune what we might regard as unrefined gauges to work in a way that suits his style. Working at close quarter can get a little tiring for the viewer, but the film has plenty of breaks, pans and close-ups to get you as close to the action as possible without going cross-eyed.

Where appropriate, David has introduced some moving graphics to illustrate the finer points of some of the layouts. Part of David's technique centres around the use of jigs and there are some real treasures demonstrated here. My favourite was a little wooden jig for transferring mitre lines. A larger version of this featured later in the DVD used with card and paper shims for accurate chiselling. A similar technique was used to make micro adjustments to his router plane.

I really enjoy following David's methodical approach to problem solving. Every step of a given sequence is broken down, assessed and fine-tuned so that there is very little room for error. Even if you think you know your way around a dovetail, the likelihood is that Mr Charlesworth's insight into hand tool methodology will help you improve your technique. When we reach the end of the film David has advice for carrying out dry assembly and disassembly that should avoid you damaging any of your hard work. It's also good to hear the odd reference to Hoadley and Wearing. Lie-Neilsen films are always well shot. This one is no different and unlike some films, they have paid attention to the unpleasant audio levels often experienced in the workshop. This DVD is precision woodworking at its best and if you like to access your tuition on the silver screen, you won't be disappointed.

Lie-Nielsen Toolworks Productions, 2014
168 minutes £29.95

Website of the month

Aidan McEvoy: Fine Furniture

Aidan McEvoy's website is the perfect place to go for clean cut and individual furniture. The woodworkers' professional homepage shows off a small number of his pieces through slideshow and gives just a small description of the man behind the furniture. Aidan's bespoke furniture is handmade in Farnham, Surrey and serves customers throughout the UK and he welcomes requests from international customers.

There is great, high quality photography on every page and brilliant detail of Aidan's work, for those interested in buying or for those who are simply looking for some inspiration for their own work.

From the homepage, website visitors can choose from; about page, bespoke furniture, editions, shop, courses, cabinetmaking, and Aidan's blog. On his 'Bespoke Furniture' page, Aidan currently has a bespoke sideboard, Coronation table, elm *(Ulmus procera)* dining table and a keepsake box – a great range of pieces! At the bottom of this drop-down menu there is also a page on the 'commissioning process'.

This maker also produces special editions – currently, a trial day keepsake box, an espresso cup, an Aeastas side table and an Aestas jewllery box. Unfortunately, at the time of writing the 'shop' was under construction.

Overall, a very professional website with a great amount of courses offered for all types of woodworking.

Details
Contact: Aidan McEvoy
Web: www.amfinefurniture.co.uk

SPECIAL SUBSCRIPTION OFFER FOR USA READERS

SUBSCRIBE FOR 12 ISSUES

For less than $75*

SAVE UP TO 38%!

CALL 866-699-6779 (toll-free) OR visit: lightningpublications.com

Lightning PUBLICATIONS LLC

*** 1 year (12 issues) was ~~$106.43~~ NOW $74.50 2 years (24 issues) was ~~$212.86~~ NOW $132.25!**

£158,500

UNDER THE HAMMER:

An important pair of George III carved mahogany open armchairs

We look at this pair of fantastic armchairs from Bonhams' recent 'Britain – defining the interior' auction

PHOTOGRAPH COURTESY OF BONHAMS

Lot 169, an important pair of George III carved mahogany open armchairs attributed to William and John Gordon

These fantastic chairs, attributed to William and John Gordon, feature rectangular serpentine padded backs, padded arms and shaped seats upholstered in cream damask. The downswept scrolling arm supports are carved with fish scales, above fish scale and paternae carved cabriole legs, trailing with bellflowers, mounted on acanthus carved feet – one is labelled to the underside 'Lady Holford', 'A.DOO?...' and 'Unit of No. 14 to 16'.

The Ditton Park Suite

The Ditton Park suite originally comprised of 24 armchairs and a pair of sofas, which were supplied to George, fourth Earl of Cardigan (d.1790) for Ditton Park, Buckinghamshire. The Ditton Park suite has become, alongside the related suite of eight side chairs made by John Gordon for the second Duke of Atholl at Blair Castle, Perthshire in 1756, among the most individual and highly recognisable groups of 18th-century seat furniture, with their fish-scale pattern carving, each being conceived in the French 'picturesque' manner.

John Gordon

The attribution to John Gordon rests on the clear comparison with the suite of very closely related documented furniture, supplied to the second Duke of Atholl at Blair Castle, 1756–57, where the bill in the Blair Castle Archives records 'eight mahogany chairs carved frames in fish scales with a French foot and carved leaf on the toe, six mahogany three footed stools with a French scroll toe, two pillar and claw tables and six library stools...£49 12s 6d'.

It has been suggested that Gordon was related to the early 18th-century Edinburgh cabinetmakers of that name, although is first definitively recorded working in Swallow Street, London in 1740s. In the late 1740s, Gordon used a chair supported by Apollo's sacred griffin for his shop sign when trading as Landall & Gordon. It seems that Gordon was also in partnership with his relative William Gordon who in turn was one of the respondents to Thomas Chippendale's 1753 advertisement for subscribers for 'a new household furniture in the Gothic, Chinese and modern taste'. The firm's other commissions included furnishings for Audley End, Essex and Croome Court, Warwickshire.

Later history of the suite

By the early 1920s, part of the suite – two settees and eight armchairs – had been purchased by Mallett & Sons of Bath and subsequently was acquired by Arthur S. Vernay, Inc., New York and was sold at Parke-Bernet Galleries, New York in The Walter P. Chrysler, Jr. sale from 6–7 May, 1960. Other armchairs from the suite are now widely dispersed. The lots offered here were acquired by Dr. Jules C Stein (1896–1981), co-founder of Music Corporation of America (MCA). F&C

MORE BITS MORE IMPACT

INSERT BITS

BIT HOLDERS

EXTENSIONS

POWER BITS

DOUBLE-ENDED POWER BITS

ANGLED DRILL DRIVE

MAGNETIC SCREW COLLAR

DOUBLE-ENDED BITS

DOUBLE-ENDED VERSATILITY

THE NEW IRWIN IMPACT PERFORMANCE SERIES™ BITS.
DO MORE WITH YOUR DRIVER THAN EVER BEFORE.

With single and double-ended bits, extension accessories, and a broad range of tips and lengths, the Impact Performance Series is the most versatile on the market and has what it takes to get any job done. We even used it to make this ad.

irwin.co.uk

IRWIN® TOOLS

PT107 10" x 7" Heavy Duty Planer Thicknesser

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.

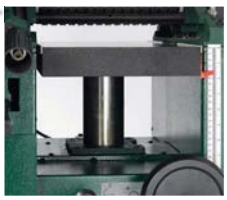
Only

£999.99

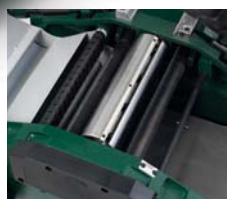
Save £100

off Spring / Summer Catalogue price

5 YEAR GUARANTEE



Central Column
The thicknessing table is supported by a sturdy central column for superior stability and easy rise and fall adjustment.



Cutter Block
The three knife cutterblock ensures an excellent finish.

Sturdy Fence System
The fence can tilt up to 45° and is supported by a strong mounting system.

What They Say...

"The PT107 is extremely well built, with heavy cast iron tables polished to a fine finish.

This machine feels more like a proper industrial model in use. The sheer weight minimises any vibration."

★★★★★

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

Price valid until 28.02.2016. E&OE.

See the value the **PT107 offers** for yourself at the following stockists:

ENGLAND

Aldermaston Tool Company Youngs Ind Est, Paices Hill, Aldermaston, Berkshire, RG7 4PW **0118 981 1470**

Grahams Machinery Deva House, Knutsford Way, Chester, Cheshire, CH1 4NX **01244 376 764**

Westcountry Machinery 4 wood Beacon Kilns, High Street Village, St Austell, Cornwall, PL26 7SR **01726 828 388**

Jaymac (Derby) Ltd 852 London Road, Derby, Derbyshire, DE24 8WA **01332 755 799**

Toolite Co Unit 3/2 The Mews Brook Street, Mitcheldean, Gloucestershire, GL17 0SL **01594 544521**

Tewkesbury Saw Co Ltd Newtown Trading Estate, Tewkesbury, Gloucestershire, GL20 8JG **01684 293 092**

John Davis Woodturning The Old Stables, Chilbolton Down Farm, Stockbridge, Hampshire, SO20 6BU **01264 811 070**

D.B. Keighley Machinery Ltd Vickers Place, Stanningley, Yorkshire, LS28 6LZ **01132 574 736**

J Carr & Son Ltd 9-10 Horncastle Road, Boston Lincolnshire, PE21 9BN **01205 351 555**

D&M Tools 73-81 Heath Road, Twickenham, Middlesex, TW1 4AW **0208 892 3813**

Norfolk Saw Services Dog Lane, Horsford, Norwich, Norfolk, NR10 3DH **01603 898 695**

Snainton Woodworking Supplies Barker Lane, Snainton, Scarborough, North Yorkshire, YO13 9BG **01723 859 545**

Oxon Fastenings Systems Academic House, Oakfield Ind Est, Stanton Harcourt Rd, Eynsham Oxfordshire, OX29 4AJ **01865 884 022**

Yandle & Sons Ltd Hurst Works, Martock, Somerset, TA12 6JU **01935 822 207**

Kraftkabin 248-254 London Road, Stoke on Trent, Staffordshire, ST4 5RH **01782 416 102**

DJ Evans (Bury) Ltd St Botolphs Lane, Bury St Edmunds, Suffolk, IP33 2AU **01284 754 132**

Elmers Hardware Ipswich 59-61 Edmonton Road, Kesgrave, Ipswich, Suffolk, IP5 1EQ **01473 623 381**

Scott and Sargeant Woodworking Machinery Ltd 1 Blatchford Rd, Horsham, West Sussex, RH13 5QR **01403 273000**

RS Paskin & Co Ltd Oldington Trading Estate, Stourport Road, Kidderminster, Worcestershire, DY11 7QP **01562 829 722**

WALES

Data Powertools Ltd 427 Cowbridge Rd West, Cardiff, CF5 5TF **0292 0595 710**

SCOTLAND

MacGregor Industrial Supplies 15-17 Henderson Road, Longman Industrial Estate, Inverness, Inverness-shire, IV1 1SN **01463 717 999**
Further branches available throughout the highlands. Please contact for more details.

Brodies Timber The Old Sawmill, Inver, Dunkeld, Perthshire, PH8 0JR **01350 727 723**

IRELAND

WH Raitt & Son Ltd Main Street, Stranorlar, County Donegal **00353 74 913 1028**

Joe McKenna Ltd 54-56 Parnell Street Limerick, County Limerick **00353 61 413 888**

JJ Ronayne Ltd Dublin Road,Thurles County Tipperary **00353 5042 1033**

RECORD POWER
ESTABLISHED 1909®

Over 100 years
Experience • Knowledge
Support • Expertise

RECORD POWER ESTABLISHED 1909
STARTRITE CORONET
BURGESS CamVac

Incorporating some of the most famous brands in woodworking, Record Power have been manufacturing fine tools & machinery for over 100 years. Built to last we provide support for thousands of machines well over 50 years old, which are still in daily use. Testimony to the sound engineering principles and service support that comes with a Record Power product.

www.recordpower.co.uk Tel: 01246 571 020