

Furniture & cabinetmaking

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

Music maestro

In the workshop
with Jeff Miller

The Unplugged Woodshop

Make Tom Fidgen's
Sawyer's bench

Sharpening tech

Do you know a grit
grade from a micron?

Machine tech

Cut hinged finger joints
on your router table

Show report

F&C go backstage
at Woodworking
in America



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A3 41 A



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F 3

Spindle moulder

Saw Spindle Moulders



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D3

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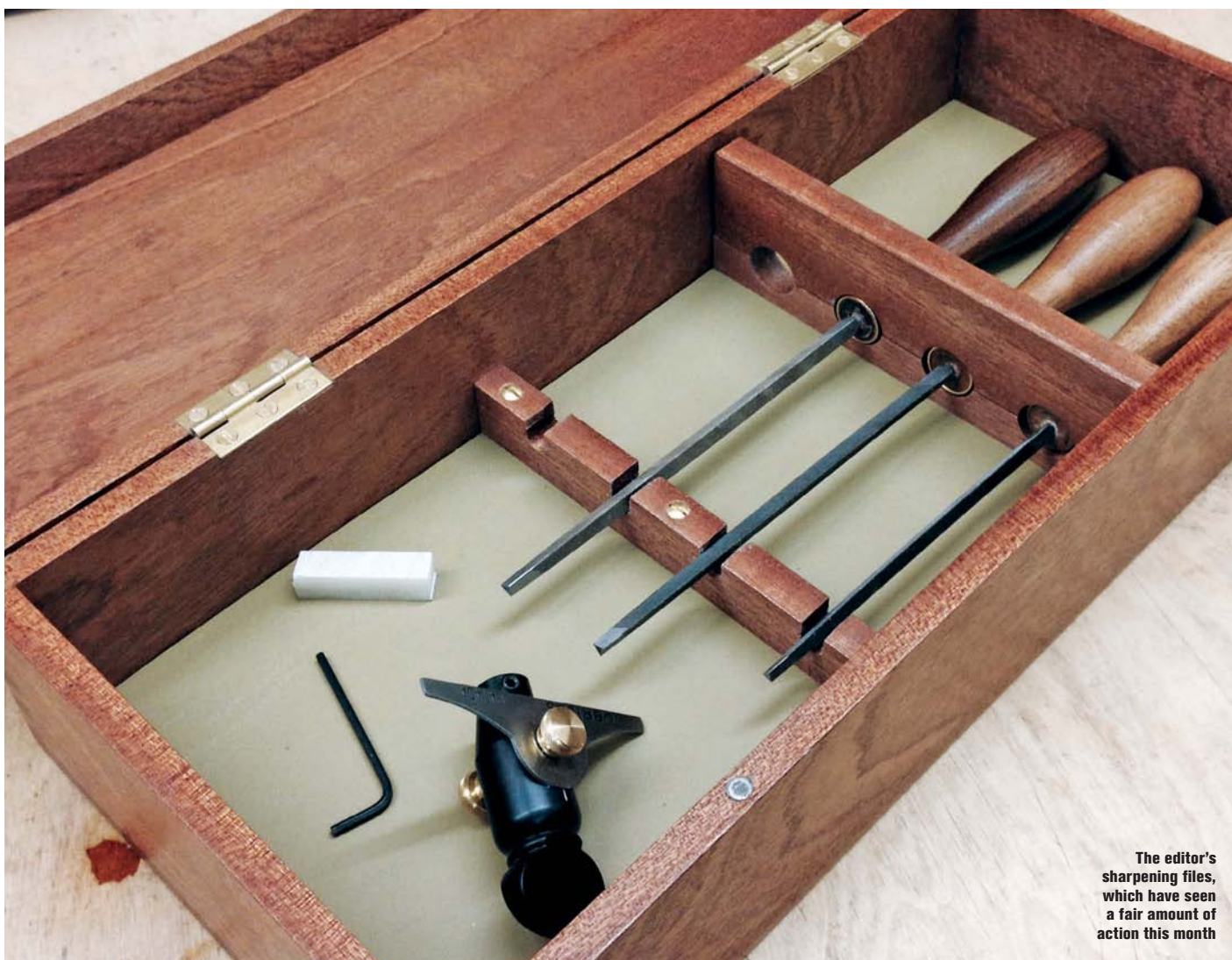
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Welcome to...

Art, craft & natural rhythm



The editor's sharpening files, which have seen a fair amount of action this month

PHOTOGRAPH BY GUY/DEREK JONES

The 'arts', for want of a better description, can all be neatly termed as crafts in their own right. If I'm honest, I'm actually quite comfortable with this tag and don't find anything particularly offensive or awkward with either term. On the surface, we might logically assume that art leans more towards our aesthetic senses while craft values exude a more tangible quality. Whatever your take on things, there's no denying that to engage productively in either activity requires a natural dexterity that comes from within, which in turn presumably comes from a familiarity with a given process. Two people in the last week have described this to me as a natural rhythm: the swoosh of the plane, the raspy scratch of a sharp saw or the repetitive cycle of a tapping mallet. In my case, this month it's been sharpening files across spring steel. These are obvious cameo parts that make up the

background symphony of the workshop but just as the accomplished musician makes sweet music, the craftsman's output is no less productive.

Virtuoso craftsmen

The important thing to notice here is that the maestros in this pit are way ahead of the game and thinking of the next 12 bars while the ones in their head are still playing out. Think of it as a 147 break in snooker where you're lining up the next shot before you sink the one that's in front of you. I do neither of these consistently by the way.

We've two articles this month from two virtuoso craftsmen that epitomise the relationship between art, craft and the relentless rhythm of productive output. Jeff Miller is one of those craftsmen who I put in the category of maker's maker. Not only does he talk the talk, but he can also crank it up to 11 at the

bench and make what he does appear effortless. The other is Tom Fidgen who shared with us his selection of hand saws last month and has come back to build his sawyer's bench. If you've ever watched yourself on video playback and thought 'who is that dart throwing chimp on the rampage in a balloon factory?' you'll know what I mean. We don't all have grace and poise in the workshop but, like dad dancing, it's all in the mind. After all, the human body is the most important motive power we have so it makes sense to learn how to use it to best effect.

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Furniture & cabinetmaking

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**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.**

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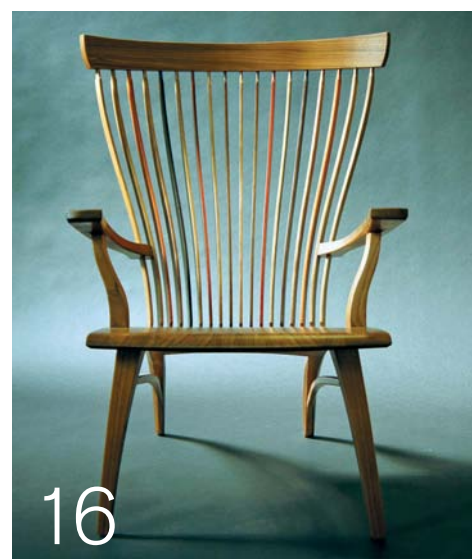
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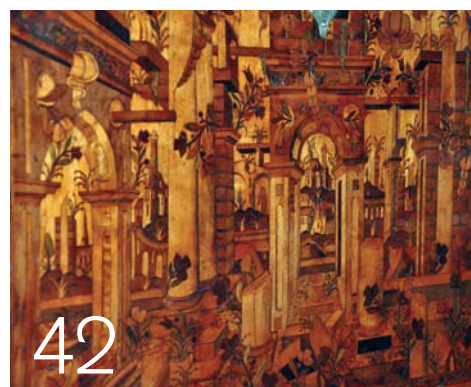
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Don't forget there are plenty more articles and discussions to be found on the Woodworkers Institute website –
www.woodworkersinstitute.com

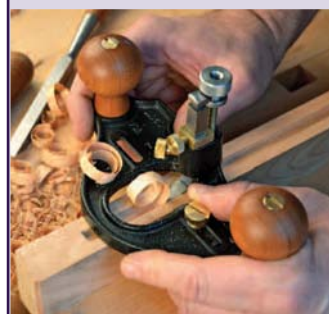


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Contribute to these pages by telling us about matters of interest to furniture makers. Call Tegan Foley on 01273 402 839 or email teganf@thegmcgroup.com. Please accompany information with relevant, hi-res images wherever it is possible

News & Events

Tool company sponsors Young Furniture Makers exhibition

The Furniture Makers' Company recently hosted their annual Young Furniture Makers exhibition, sponsored by Corporate Member Axminster Tools & Machinery. There were exhibits from students at all levels, from FDA to BA to MA, and from the numerous colleges and universities the Furniture Makers' Company supports, including Birmingham City University, Bucks New University, Burnley College, De Montfort University, Edward Barnsley Workshop, Leeds College of Art and Design, London Met, Plymouth University, Rycotewood and Warwickshire College.

Awards were made for a number of industry partnerships, where companies such as Burbidge, Ercol, Hands, Gordon Russell, Crofts & Assinder, Willis & Gambier and KI Europe worked with university students on specific projects.

Alex Stewart picked up the award of Young Furniture Maker of the Year for his contribution to the development of the group and the growth of its membership throughout the year. Joseph Kennedy, who has just completed his MA in Design, Maker and Materials at Plymouth University, won an all expenses paid trip to the Blum factory in Austria for having the best exhibit



Alan Styles presenting the Young Furniture Maker of the Year award to Alex Stewart

Joseph Kennedy with his winning 'Stem' table

of the show – the 'Stem' table. The excitement and clamour surrounding the event illustrates that there is a thriving industry wanting to actively engage with young talent, helping to maintain skills and build a robust workforce for the future.

The Master of the Furniture Makers' Company, Paul von der Heyde, said: "One of our key objectives is to nurture our Young Furniture Makers group, providing them with useful, relevant support and encouragement so that they remain within the furnishing industry and become the leaders of tomorrow. "It's heartening to see so many young people presenting their work with

such enthusiasm and commitment. It is our unique network of members and supporting companies that enables us to provide invaluable opportunities like these."

Alan Styles, Sales Director of sponsoring company Axminster Tools & Machinery said: "We have strong links with education and student development. We are proud to support the Young Furniture Makers and the furnishing industry to ensure there is continuity of these skills, which are the lifeblood and future of furniture design and manufacture in the UK."

For more information, see www.furnituremkrs.co.uk.

PER/USE presents timeless design at the Interieur Biennale

In a world dominated by mass production and consumption, an object becomes all the more desirable when it is made with craftsmanship and love. With natural materials and artisanal design, the Belgian-based design company PER/USE has introduced a design collection that stands out by authenticity and purity of form. On 25 August, 2014 the Henry van de Velde Label was awarded to Frederik Delbart's 'Siblings', a lamp design for PER/USE that uses LED technology.

PER/USE is based in Marke – Kortrijk, Belgium – in a region that has a long history of fine furniture design and production. The new design brand has its roots in the

legendary De Coene Kunstwerkstede, an internationally renowned furniture maker founded in 1887. PER/USE's first collection, launched in Milan in April, is already present in all Belgian leading design shops and is making its way in the US and Canada.

The young and growing collection of PER/USE, initially curated by designer Lucie Koldova, is defined around craftsmanship and soul. A well-designed object communicates class by its character. It is made with craft, withstands time and respects nature by preferring honest materials such as glass, wood and cork. State-of-the-art technology and craftsmanship transforms these

materials in sculptural objects with a sensuality that lasts.

For more information, see www.peruse.be.



'Félix' chair by Frédéric Richard



TIMBER TRADE NEWS
**Rhododendron
ponticum***Rhododendron ponticum* bush

This dense evergreen shrub with attractive purple flowers is closely related to heather. It is native to southern Europe and was present in the UK before the last ice age, but was re-introduced in 1763. It has spread widely and is regarded as an invasive weed, loved by the public for its flowers but detested by foresters because it blocks access, competes for nutrients in established trees and outcompetes young ones. The timber is of little interest to woodworkers, though the root wood is attractive when turned. The plant's importance lies in the fact that foresters have to spend a lot of money trying to control it. Very few animals eat it, although vine weevils will nibble the leaves, but it is attacked by two serious diseases, *Phytophthora ramorum*, which blights the leaves, and several *Phytophthora spp.*, which attack the roots. A fungal disease called bud blast has a minor controlling effect by reducing seed production. The main control method is cutting followed by stump treatment with herbicide to prevent regrowth. Biological control by the introduction of specific natural enemies from its native home would be possible, but is likely to encounter resistance from horticulturalists worried about the threat to native rhododendrons.

Chris Prior

*R. ponticum* flowerCloseup of *R. ponticum*

PHOTOGRAPH BY JUREN WILLIAMS

ALTO Design's new 'DELTA' street furniture collection

ALTO Design creates the new Équiparc DELTA street furniture collection

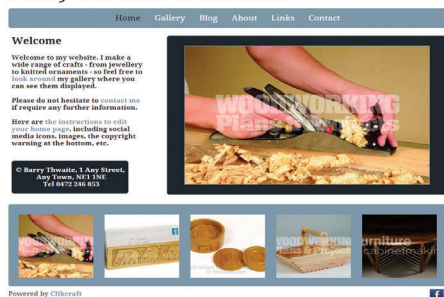
Équiparc recently commissioned ALTO Design to create its new 'DELTA' street furniture collection. This addition to the Quebec-based manufacturer's range of products impresses with the simplicity of its lines, which evoke both robustness and sophistication. This project was Alto Design's first foray into urban

furniture and the industrial design team wanted to develop a signature for the new collection that was refined yet masculine. Conceived as urban objects, the 'DELTA' collection includes two benches, a table, two waste receptacles, two planters and a bike rack. To find out more, see www.alto-design.com.

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CLIKCRAFT – a website for
craftspeople for only £50 per year

Barry Thwaite Craftsman



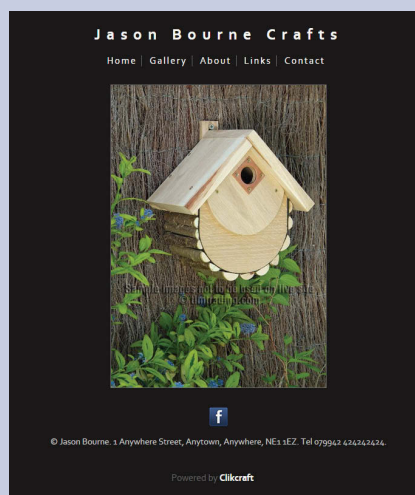
Clikcraft is a new service targeted at any craftsman who wants a website without the cost and hassle of setting one up. The service combines an easy-to-use admin system with a wide choice of stylish templates designed especially for craftspeople. Minimal expertise is required, so users can create and edit their own website quickly, easily and very cost-effectively.

You are invited to visit www.clikcraft.com and sign up for a free 14 day trial. You can then download the 'Easy Start User Guide', select a template and start to build your website.

Website highlights

You can update or change your website whenever you want, taking as many pages as you want, with a variety of formats, including a blog, contact form, about page, events diary, etc. The website is created for those who may not be too technical and is, therefore, easy to navigate. The system has already been used

by over 15,000 artists and photographers. Tim Hunt, of Clikcraft.com said this of the site: "Having had tremendous success in the photography and artists markets, we recognised that the UK crafts market offered us a real opportunity. Not only is it a booming activity, but there is great synergy with our portfolio templates, so we decided to offer a similar service to craftspeople. "The key challenge was to come up with really effective e-commerce templates that are easy to update and use. We hope we've managed to achieve this. For only £50 per year, craftspeople can have their own online shop and be trading within a matter of days, even hours!" To find out more, see www.clikcraft.com.



Kebony makes the Global Cleantech 100 for fourth time

Kebony's sustainable alternative to tropical hardwood and toxic treated wood has been listed a fourth time in the Global Cleantech 100. The list recognises the 100 most promising, innovative and sustainable companies in areas such as energy efficiency, biofuels and biochemical and renewable energy. The complete list was revealed on 6 October, 2104 at the Global Cleantech 100 Summit in Washington, DC.

Kebony was selected from a total of 5,995 companies from across 60 countries for its low-maintenance, high performance technology that champions new possibilities for wood as a construction material while protecting our tropical forests and environment. These 60 companies were weighted and scored to create a shortlist of 327 companies. Shortlisted nominees were reviewed by Cleantech Group's Expert Panel, resulting in a finalised list of 100 companies spanning 17 countries.

Founded in 2009, the Global Cleantech 100 recognises companies that will enable us to advance and develop without inflicting further damage on our environment. This is the fourth time that Kebony has received this prestigious accolade, a testament to the company's ongoing effort to provide a solution to the depletion of tropical hardwood, which is reaching critical



Trondheim Home, Norway

levels, and the ever-growing corporate and consumer demand for high-performance and low-maintenance wood materials. For more information, see www.kebony.com.

New app solves problem of identifying young trees and shrubs

A new app-based field guide from the Forestry Commission has been launched to help identify almost 100 tree and shrub seedlings under one year old that are commonly found in British woods and forests.

Ecologists, woodland managers, foresters, surveyors and conservationists often want to identify young trees and shrubs that have established themselves naturally to help them plan for the future and decide what to keep and what to remove. However, plants under one

year old are notoriously difficult to identify even for those with long experience working in the field.

Selecting naturally established seedlings has always been a part of traditional native woodland management and is becoming more common as continuous cover forestry (CCF) expands. CCF does not use clear-felling and replanting. Knowing what is growing where sooner rather than later helps people take decisions on the spot rather than waiting until plants have matured a little.

The app includes high-resolution images of leaves and other seedling features that can be used for identification. Instead of flipping through a field guide it uses dynamic filtering to allow users to identify seedlings based upon a number of key characteristics including leaf shapes and stem hairs. It supports species searches and includes listings by common and scientific names. The field guide app has been developed by the Forestry Commission from content supplied by Forest Research. It costs £1.49 and is available from iTunes Store and Google Play. For more information, see www.forestry.gov.uk.



Tailored woodworking courses



Yuri Karpov and Simon Salter

Golden Hands has just launched a 12-month woodworking course, which has been specifically tailored for Simon Salter. This course was designed to introduce basic woodworking techniques and help the student to learn the professional use of hand tools, to learn about wood in depth and to be able to apply his creativity using this unique material.

Apart from the hours practising woodworking hand tool techniques at Golden Hands workshop near Dalkeith, Midlothian, a number of visits have been planned during the course period. These visits combine trips to important furniture collections and professional workshops around the country.

Other personalised woodworking courses are also available on demand in the following techniques: marquetry, traditional water gilding, woodcarving and furniture restoration and conservation.

The man behind Golden Hands is *F&C* author Yuri Karpov, who started his career as an antique furniture conservator and restorer back in 1996. He completed his six-year apprenticeship in one of Moscow's renowned private restoration workshops and then went to the UK to learn more about restoration and furniture making art. His work can be found in museums and various private collections around the world. For more information, see www.golden-hands.org.

Events



PHOTOGRAPH COURTESY OF THE EDITOR AT LARGE

Interior Lifestyle Tokyo celebrates Japanese design

IFFT/Interior Lifestyle Living

This is one of the best trade fairs for high-quality furniture and home textiles as well as tableware, gift items, interior materials and equipment. This event in Tokyo will be attended by buyers from all over Japan and Asia looking for new products and innovative ideas.

When: 26–28 November, 2014

Where: Tokyo Big Sight, 3-11-1 Ariake, Koto-ku, Tokyo 135-0063, Japan

Web: www.interior-lifestyle.com/en/top.php



PHOTOGRAPH COURTESY OF WWW.ANDREUWORLD.COM

Andreu World America's stand at last year's IDEX Canada event in Toronto

Cockpit Arts Christmas Open Studios

The Cockpit Arts Christmas Open Studios offer the perfect opportunities to buy original Christmas gifts from 170 designer-makers, including furniture designers such as Boggis-Rolfe Design, iwoodcreate and Hunkydory Furniture. There will also be a chance to win some bespoke Christmas decorations. The shopping events will take place over two weekends in Holborn and Deptford. The entry fee is £5 for both venues or £3 for Deptford only, entry is free for children under 15. Entry will be free to all at Deptford on Friday 5 December.

When: 28–30 November, 2014 (Holborn) & 5–7 December, 2014 (Deptford)

Where: Cockpit Arts Holborn, Cockpit Yard, Northington Street, London WC1N 2NP. Cockpit Arts Deptford, 18–22 Creekside, London SE8 3DZ

Web: www.cockpitarts.com



PHOTOGRAPH COURTESY OF WWW.PRIVEXCOLLECT.COM

A booth at the 2013 Design Miami event

IIDEXCanada

This event is Canada's National Design and Architecture Exposition & Conference. The event brings together the multidisciplinary design and architecture communities for a sourcing, networking and education event that celebrates creativity and best practices. This year's event will be held concurrently with Construct International, PM Expo, HomeBuilder & Renovator Expo and Concrete Canada. The show has more than 1,600 exhibits and 350 seminars and demonstrations, delivering the very latest in products, technologies, best practices and applications.

When: 3–4 December, 2014

Where: Metro Toronto Convention Centre, 255 Front Street West Toronto, Ontario M5V 2W6, Canada

Web: www.iidexcanada.com/2014

Design Miami

Design Miami has become the premier venue for collecting, exhibiting, discussing and creating collectible design. As well as being a marketplace for design, the show offers the world's top galleries space to present museum-quality exhibitions of 20th and 21st-century furniture, lighting and objets d'art. There will also be panel discussions and lectures with leading designers, architects and artists. Design Miami is the global forum for design.

When: 3–7 December, 2014

Where: Miami Beach Convention Center, Meridian Avenue & 19th Street, Miami, USA
Web: www.designmiami.com



PHOTOGRAPH COURTESY OF WWW.ESPITMEUBLE.COM

Akante's booth from last year's Esprit Meuble exhibition

Esprit Meuble

Esprit Meuble provides a meeting space for international furniture professionals to discuss the future of the business. This year's show will see the launch of the FabLab, a place for attendees to test 3D printing and discuss the potential of this new technology for furniture making.

When: 6–9 December, 2014

Where: Hall 7/level 3, Porte de Versailles, Paris, France

Web: www.espritmeuble.com

Bethnal Green's Affordable Vintage Fair – Christmas Special

Bethnal Green's Affordable Vintage Fair returns with its standout, award winning selection of hand-picked stalls packed with affordable vintage fashion, furniture, accessories and homewares. For this Christmas Special, the York Hall will be decked out with the best vintage for the festive season. A great place to pick up a vintage furniture gem.

When: 14 December, 2014

Where: York Hall, 5 Old Ford Road, Bethnal Green, London, E2 9PJ
Web: www.judysvintagefair.co.uk

BUCKS NEW UNIVERSITY

Postgraduate conservation degree at Bucks, tailor-made for the world of work

Bucks New University has undertaken furniture conservation work and private commissions for over 20 years, working with prestigious clients such as The Royal Collection, the Courtauld Institute of Art, National Trust and Courtauld Institute of Art Lord Rothschild Foundation.

Private collectors and custodians from the heritage sector have supported Bucks New University students by providing impressive, and often priceless, projects for them to work on. They have also offered locations for 'live projects' where the students work on live restoration and conservation projects on site.

The University's students benefit greatly from its close links with the sector and gain experience of real commercial contexts of design while at the same time developing their own expertise and vision.

Recent projects undertaken by the Department of Furniture at Bucks New University include the restoration of a 1937-38 Isokon moulded birch plywood lounge chair owned by Isokon Plus; conservation of a George II Console table from Wilton House owned by the Earl of Pembroke; cleaning of a gilt frame surrounding a painting by Sir Joshua Reynolds from The Courtauld Institute of Art and a pair of Italian tables from the Wallace Collection.



PHOTOGRAPH COURTESY OF BUCKS NEW UNIVERSITY

The University's MA in Conservation of Furniture and Decorative Arts has been specifically developed to give students conservation experience in a genuine working environment. The University also runs a range of short courses in furniture restoration, upholstery and woodcarving. Students on the University's furniture courses have come from a wide variety of backgrounds, including fine art, furniture, ceramics, architecture and crafts. For more information, see www.bucks.ac.uk.

Shelley Stannard, who completed an MA Furniture: Conservation, Restoration & Decorative Arts, with a 1937-38 Isokon moulded birch plywood lounge chair owned by Isokon Plus, which she restored as part of her qualification

New lease of life for historic shepherd's hut

A historic part of the countryside is being brought back to life by the Chippendale International School of Furniture. The humble shepherd's hut was once a common sight across much of the British countryside, allowing farmers to watch over their flocks by night, particularly during the lambing season.

The project by the furniture school, which has completed its first shepherd's hut, complete with wood-burning stove, also aims to give it a 21st century makeover.

The traditional hut was a small one-room structure with cast-iron wheels and, internally, contained a bed for the shepherd, some basic amenities, such as a stove, and feedstuffs and medicines for the animals.

The first recorded shepherd's hut dates back to the 16th century and they were a common rural fixture in the 18th and 19th centuries. During World War II they were sometimes used as Home

Guard outposts or as accommodation for prisoners-of-war working on farms. However, by the 1950s, very few remained.

The Chippendale school, which takes furniture design students from across the world, believes that there are new markets for the shepherd's hut – everything from home offices and spare bedrooms, with indoor toilet and shower facilities, to outdoor gyms, storage sheds or workshops.

With the shepherd's hut being of limited size and with wheels, it more resembles a caravan than a fixed structure, and not normally subject to planning regulations. Anselm Fraser, principal of the Chippendale School, said: "Our intensive courses teach students traditional woodworking skills, as well as practical business skills to turn their craftsmanship into commercial success.

"But we also want our students to realise that excellence in woodworking can be put to use in different ways – for example, boatbuilding or, in this case, bringing an almost-forgotten part



PHOTOGRAPH COURTESY OF TONY MARSH

of the past back to life." The school, which is now taking commissions for bespoke shepherd's huts, also believes that history could turn full circle, with NFU Mutual in 2012 estimating that 69,000 farm animals were stolen at a cost to farmers of some £6 million. "While we want to reinvent the shepherd's hut for the 21st century, it may still have a role to play in keeping farmers' livestock safe at night," said Anselm Fraser. For more information, see www.chippendaleschool.com.

Anselm Fraser, principal of the school and the new shepherd's hut, which has been brought into the 21st century by the Chippendale School. Here you can also see Anselm Fraser wearing another one of his creations – a wooden kilt!

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

Committed craftspeople wanted for historic building training programme



Fellows at the Natural Building Centre

A country-wide conservation tour offering committed craftspeople hands-on experience in the repair of historic buildings – that's what successful applicants can look forward to as a SPAB (The Society for the Protection of Ancient Buildings) 2015 William Morris Craft Fellowship. Up to four successful candidates will travel together across the country to learn more about traditional building crafts from masters of the trades. This is a unique, life-changing opportunity and the only scheme of its kind.

SPAB is looking for craftspeople with a passion for old buildings and conservative repair. Applicants must have completed their apprenticeship and demonstrate a high level of competence.

The Fellowship is an advanced training programme, devised to encourage and nurture craftspeople at the beginning of their careers, who are employed in any trade relating to the repair of historic buildings. The programme is now more relevant than ever given the lack of skilled people needed to care for Britain's historic buildings and structures. The six-month practical training is divided into three blocks of two months, enabling the Fellows to return to their employment between each block. During the first two blocks they travel as a group, making daily site visits, studying repair projects and meeting professionals, contractors and craftsmen. The final block is devoted to the individual needs and interests of each Fellow in consultation with their employers.

Since 1986 SPAB has organised and administered the Fellowship to promote and develop the specialised skills required for the repair and maintenance of historic buildings and to promote understanding of the importance of conservative repair. Former Fellows have included carpenters, masons, thatchers, plasterers, leadworkers and glaziers.

There are no course fees as training and administration costs are borne by SPAB as part of the award. Fellows also receive a bursary in the region of £5,800 towards basic travel and living expenses. The packed 2015 programme will run from 16 March to mid December. SPAB is inviting applications now for the 2015 William Morris Craft Fellowship. For further information or to obtain an application form, see www.spab.org.uk/education-training/fellowship.

London College of Furniture turns 50

The London College of Furniture is celebrating 50 years in style with an exhibition all about its history. College staff decided to conduct a countrywide search for items to feature in the collection, which opens on Thursday 27 November at London Met's Parker Gallery.

Dr John Cross, senior lecturer at The Cass, has been travelling up and down the country collecting ephemera from both alumni and former staff members. This has included a trip all the way up to Dundee to collect an old London College of Furniture sign, as well as trips to various other UK locations.

It wasn't just furniture the team was looking for – but items which capture student life at the College over the past 50 years. Similarly, the College is renowned for courses in

a range of areas including musical instrument making, interiors, furnishing, textiles, toy making and basketry.

The London College of Furniture – itself a renamed Shoreditch Technical Institute – was open from 1964 to 1992, before it became part of London Guildhall then London Metropolitan University.

The exhibition will also be a goodbye of sorts as the college will be moving from its current site – but it's not going far.

Dr Cross said: "We're moving to a site opposite Calcutta House. Which in the Shoreditch Technical College days was an overflow for the courses in men's and ladies' garments on Castle Street, they knocked that down and then built what's there now –



The old College, recently modernised inside, is currently used by the London College of Furniture



London College of Furniture joinery course; students making a cabinet

so we're sort of going back to where we came from."

The exhibition opens on Thursday 27 November at Parker Gallery, Commercial Road, near Aldgate East tube station. For more information, see www.thecass.com/london-college-of-furniture.

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 GARY DEREK JONES

If you haven't already published your Christmas wish list, then let me just say you're cutting it a bit fine. I'm just saying, that's all. As always we've got your interests at heart and I'd hate to think of you smiling through gritted teeth on the big day with another Christmas jumper on your lap while a tool-shaped gap on the workshop wall goes unfilled. You know, there's still enough time to drop a few hints and just in case you're stuck for inspiration, here's a little list of things that you can circle, tick or underline and leave the page open for all to see. At the end of the day, you're doing everyone a favour.

I've got used to having all of the tools featured here in the workshop this year and though it's not meant as an endorsement, I think you'd find each and every one useful, and for the most part, they won't break the bank. It's a pity we can't say the same for the raw material they're designed to work.

Timber prices are at an all time high with many exotics being just too expensive to even consider. There's good reason for this of course but it doesn't make for an easy

transition away from the timbers we love to those that we may have regarded as run of the mill in the past. I'll wager that in years to come, we'll be more focused on selecting timber for its inherent physical quality and not its appearance. Quartersawn native species will be in demand and perhaps even a return to using cheaper species and disguising them as something else will be a valuable skill. Do you know what? You've just given me an idea. So while I go away and work this up into an article, you can put your list together.

Magnetic-mount LED work light

This handy work light has a 460mm flexible steel gooseneck that can be positioned as needed, while a strong 30mm diameter rare-earth magnet in the movable base holds it securely to machine tops or other metal surfaces. The light remains in position even if the neck is extended far to one side. The powerful Cree LED mounted in a telescoping housing allows the beam to be focused from a wide angle to a narrow spot.





Walke Moore Tools drawer-slip cramps

Based on the design from *The Essential Woodworker* by Robert Wearing, these small wooden clamps from Walke Moore Tools are sold in pairs and are precision made from quartersawn maple or cherry with stainless steel hardware. Tightening the wing nut to varying degrees provides a wide range of clamping forces, unlike spring clamps. The square sides allow the clamp to be used in any orientation similar to the wooden screw clamps many woodworkers are accustomed to. For best results, keep the jaws as parallel as possible.



David Barron aluminium squares

To use these squares to their best advantage, having sharpened and honed your favourite knife to a fine point and flat back, draw the back of the bevel gently across the finest stone you have to create the slightest of back bevels. That's all you need to do to protect both the square and the knife edge. The squares are machined from a single billet of anodised aluminium and feature a slight indent in the corner where the stock meets the blade; this avoids a misreading against a bit of burred timber. They also feature a rebated inside wall to the stock so the tool can be laid flat on the workpiece at the edge without falling.

Valfor Tools 2-Axis Depth Gauge

Designed by Valfor Tools, the 2-Axis Depth Gauge is a beautifully finished measuring gauge, which is primarily aimed at router table usage. It can also be used with the tablesaw where it can record blade height. With a drill press, it can be used to precisely measure the distance between the drill bit and fence. This tool can also be used horizontally, i.e. laid flat on the table surface.

Saddle-Tail

The Saddle-Tail is Sterling Tool Works' first project and product. This layout tool incorporates two commonly used tools – a dovetail marker and a saddle square – into one premium tool.

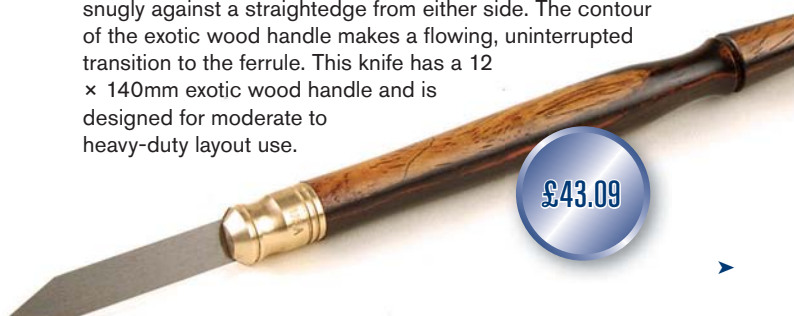
The Saddle-Tail was inspired by a layout tool from Christopher Schwarz' personal tool kit, which was designed and made by Christian Groves of Melbourne, Australia. The founder of Sterling Tool Works, Chris Kuehn, used this tool during a class he attended, instructed by Chris. Chris expressed an interest to bring a similar design to more hand tool artisans with some improvements and was encouraged to do so. This premier layout tool has a number of great features.



Czeck Edge Super Kadet II marking knife

Czeck Edge has taken the outstanding performance of the Kadet II marking knife and raised it to a totally new and contemporary level with the addition of a solid tungsten carbide blade, which allows for great accuracy and also imparts rigidity to the blade that flexes only slightly in use.

The dual edge bevels permit right- and left-hand use and the back of the blade is flat, which allows the point to register snugly against a straightedge from either side. The contour of the exotic wood handle makes a flowing, uninterrupted transition to the ferrule. This knife has a 12 × 140mm exotic wood handle and is designed for moderate to heavy-duty layout use.





Bester Imanishi waterstones

Available from Axminster Tools & Machinery, these waterstones have almost become the standard with Japanese professional woodworkers. The stone has a moderately strong vitrified bond that allows abrasive particles to release and maintain a fast cutting rate while resisting wear. These stones behave similarly to a natural stone – the feedback tells you how fast it is cutting. Tests have shown they abrade O1, A2 and M2 steels at a rapid rate and remain flat just as long as slower cutting stones with stronger bonds.



Veritas Saw File Holder

Not only does this guide provide a secondary grip for your saw file, it also helps you control the angle of the file as you sharpen, using the eye's natural ability to judge parallel and level. It has a rotating collar for setting a positive- or negative-rake angle up to 30° and a 75mm-wide protractor to set the fleam – or bevel – angle up to 45° left or right. Because the angle guide doesn't limit the movement of the file, you learn to control it manually, gaining the experience needed for freehand sharpening.

The protractor is marked in 5° increments and the collar has a Vernier scale marked in 1° increments. A rubber O-ring inside the collar provides light resistance to the Vernier scale to make precision setting straightforward. The tool has an anodised aluminium body, a stainless-steel protractor and brass thumbscrews for locking the rake and fleam angles.



Bacho saw sharpening files

As Matthew Platt of Workshop Heaven says: "Sharpening saws is no more difficult to master than sharpening chisels; it's just different." Selecting the correct file for the job is the first step and their wide range of saw sharpening files from Bacho are just what you need for the job. All of the ones listed on the website are given with the range of pitches – number of teeth per inch – they are appropriate for. The minimum size is 5-7tpi and the maximum size is 15tpi. These files will wear out eventually, so Matthew recommends keeping your newest file for 'best', i.e. only using it for the finishing pass and then gradually relegate them over time.

Knew Concepts coping saw

This 165mm coping saw features lever tension and 360° rotation indexing blade-hooks. The blade is tensioned by a cam-lever and pulls so taut that the blade 'sings' when plucked. Chris Schwarz commented that this saw is more like sawing with an unbendable wire than a floppy steel hotdog, which is what is typical of most saws. It allows you to make turns that are tighter than ever before.

The solid steel indexing blade-hooks lock in eight 45° positions for a full 360° rotation and the hooks are spring loaded to prevent inadvertent rotation. It weighs only 227g and is machined from 6061-T6 aluminium. Saws come with a Pegas 18tpi woodworking blade already installed and ready to use. If you choose, you can also purchase saw blades by the dozen.



MINI TEST: Wood River No.62 low angle bevel-up smoothing plane

We alluded to the arrival of this latest development from Wood River a short while back. The steady flow of budget-priced tools made in China shows no sign of letting up and when they are as good as this, it's hardly surprising. The No.62 is a classic design with a 12° bed and 50mm wide blade and features in the Lie-Nielsen Toolworks and Veritas catalogues. Second to the No.4 or No.5 it's probably the next most popular of the bench planes. A jointer and a smoother in one tool that will help you conquer the odd patch of awkward grain or dive across it at right angles to hog waste away quickly. The Wood River version has the basic features of the more expensive rivals, such as adjustable mouth and a good thick blade. The bubinga (*Guibourtia demeusei*) handles are undoubtedly a nice touch even if the front tote is a bit on the small side. The casting on this one is generous

and well finished, which is what you need. The bling on the tool comes by way of a pressed brass lever beneath the front tote to set the mouth opening. It's not classy engineering by any stretch but neither is the price. We could go on all day making comparisons but ultimately this stripped back version handles extremely well and it's a great way to up your game without blowing the budget.



Rockler 3-in-1 bar gauge

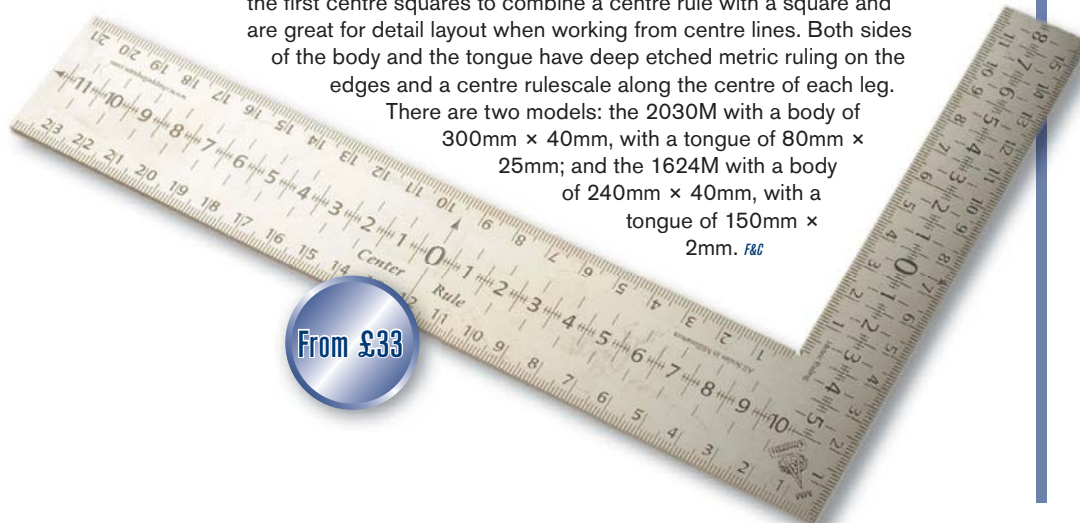
Sometimes the oldest, most basic tools can turn out to be the most efficient ones. Rockler's 3-in-1 bar gauge, a refinement of a time-honoured cabinetmaker's tool, is certainly one of them. It doesn't quibble over metric or imperial measurements, or even any measurements at all. It simply tells you if your frame, drawer or case is square, or whether the part will fit. It includes three sets of interchangeable tips that let you check diagonals for square, transfer measurements and even scribe circles. Use commonly available 10mm dowel stock to obtain whatever length you need for your most typical projects. This tool features flat tips, which are perfect for transferring dimensions, a durable aluminium body and large knurled knobs for easy adjustments.



Chappell metric centre square

Made of 13 gauge stainless steel with deep etched rulings, these are the first centre squares to combine a centre rule with a square and are great for detail layout when working from centre lines. Both sides of the body and the tongue have deep etched metric ruling on the edges and a centre rulescale along the centre of each leg.

There are two models: the 2030M with a body of 300mm x 40mm, with a tongue of 80mm x 25mm; and the 1624M with a body of 240mm x 40mm, with a tongue of 150mm x 2mm. F&C



Contacts

Bacho saw sharpening files

Contact: Workshop Heaven

Tel: 01295 678 941

Web: www.workshopheaven.com

Bester Imanishi waterstones

Contact: Axminster Tools

& Machinery

Tel: 03332 406 406

Web: www.axminster.co.uk

Chappell metric centre square

Contact: Classic Hand Tools

Tel: 01473 784 983

Web: www.classichandtools.com

Czeck Edge Super Kadet II marking knife

Contact: Czeck Edge Hand Tools

Email: bobzajicek1@gmail.com

Web: www.czeckedge.com

David Barron aluminium squares

Contact: David Barron

Tel: 023 8076 9644

Web: www.davidbarronfurniture.co.uk

Knew Concepts coping saw

Contact: Knew Concepts

Tel: (001) 831 234 4652

Web: www.knewconcepts.com

Magnetic-mount LED work light

Contact: Lee Valley Tools

Tel: (001) 800 871 8158

Web: www.leevalley.com

Rockler 3-in-1 bar gauge

Contact: Rockler Woodworking and Hardware

Tel: (001) 800 279 4441

Web: www.rockler.com

Saddle-Tail

Contact: Sterling Tool Works

Email: chris@sterlingtoolworks.com

Web: www.sterlingtoolworks.com

Valfor Tools' 2-Axis Depth Gauge

Contact: Valfor Tools

Web: www.valfortools.com

Veritas Saw File Holder

Contact: Lee Valley Tools

Tel: (001) 800 871 8158

Web: www.leevalley.com

Walke Moore Tools drawer-slip cramps

Contact: Walke-Moore Tools

Email: aaron@walkemooretools.com

Web: www.walkemooretools.com

Wood River No.62 low angle bevel up smoothing plane

Contact: Woodworkers Workshop

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A close-up, high-angle photograph of a man with dark hair and glasses, wearing a green button-down shirt. He is focused on his work, using a metal chisel to carve a piece of light-colored wood. His hands are steady and skilled. The background is dark and out of focus, showing hints of a workshop environment with various tools and wood pieces.

In the workshop with Jeff Miller

**We meet Chicago-based
furniture maker Jeff Miller**

A furniture designer, teacher, author of woodworking books and articles, craftsman, dad and formerly a classical musician, we're lucky Jeff Miller still found the time to talk to us about his furniture-making career. Based in Chicago, USA, Jeff's work has been displayed in galleries and shows nationwide, winning himself numerous awards, with his furniture on show in the Decorative Arts Collection of the Chicago History Museum.



'Cantata' chairs, shown in mahogany, with wood or upholstered seat, 990mm high × 510mm wide × 535mm deep

Starting furniture making

Originally, Jeff trained as a classical musician, playing in an orchestra for a while and a small chamber music group, but having been drawn to the world of woodworking long before he started in music, he found he couldn't stay away.

While in college, Jeff took some time off to build musical instruments which he loved, also making some pieces of furniture for himself in the background. "I was fascinated by the almost magical transformations from a mere piece of wood into something that could be so expressive," Jeff tells us. Although he thoroughly enjoyed the furniture-making process and experience, his career in music took over for a little while. However, Jeff continued to build furniture pieces when he could. During this period Jeff was still making furniture for himself, but also moved on to making pieces for his friends and a few years into his professional music-making career, he managed to find himself enough time between jobs to make furniture professionally. Jeff reflects on that time in his life, when he began to question the future of his career in music, telling us: "I'm not sure why I felt that way; I had little woodworking training, only a modicum of talent and not a lot of experience, but furniture making seemed possible and exciting at the time, so I dove into furniture making." Upon turning to being a professional furniture maker, Jeff was fortunate enough to have a steady supply of

work and kept pushing his skills and designs as far as he could, which is what he continues to enjoy doing to this day.

Transferring skills

Although changing from a music career to furniture making, which most might not see a connection between, Jeff believes that music provided a unique training of sorts, in both his craftsmanship and in his approach to design. "I have always felt that the importance of technique in music needs to be at the service of a broader musical expression and I approach my woodworking in the same way. I also take a very similar approach to visual line, as I did to musical line: both need to not just flow smoothly, but also move somewhere and express something," Jeff explains.

There are many other lessons Jeff learned in music that he has applied to his work with wood. "In music, your instrument is just a tool of expression and you practice with the goal of effortless technique, that actually gets out of the way of the music. And one learns how to use one's body effectively to improve one's technique as well. All of this has been a major factor in my development."

Workshop

Jeff's workshop in the north side of Chicago is not just some garage or back garden shed, it has a little more character than most. Having been in his current workshop



Jeff's workshop in Chicago

for almost 22 years now, Jeff has made it his own, but 100 years ago it was a brick post office. In the 1930s the building was decommissioned as a post office and was converted into an eight-lane bowling alley. The bowling alley floor remains in place and in the back room, Jeff tells us the aiming marks and setup spots for the bowling pins can still be seen.

Jeff's workshop has a separate showroom connected at the front of the building, filled with many of his chairs and other pieces. In the 22 years of being in his shop, Jeff tells us: "I have worked hard to improve my workspace, ➤

➤ building seven custom workbenches, a great tool storage cabinet and a variety of other tool and jig storage units throughout the shop. It is – at least to me – pleasingly cluttered with patterns, jigs and the history of over 30 years of making furniture.” The benches are essential for the classes Jeff teaches in his workshop, but also constantly in use with Jeff’s own work. Each bench provides different types of workholding and some are just favoured places to work.

“I have quite a bit of equipment for what is basically a one person – plus a part-time assistant – shop,” Jeff explains. These include: seven workbenches, three tablesaws, two bandsaws – including a 915mm cast-iron ‘beast of a saw’, two jointers, two lathes, a planer, a stroke sander, shaper, Multi-Router – a joinery tool – and various other tools.

Work ethos

Function and form appear to be primary concerns when Jeff designs a chair, as he is always particularly concerned with comfort. Jeff tells us he believes we have been so conditioned by bad chairs that most of us are completely unaware of what a comfortable chair should be. He says: “It feels like I’ve been on a journey that leads to better and better comfort, while at the same time revealing more and more interesting chair forms and designs.”

Jeff also believes that traditional furniture – which he admits he does not have much interest in building – has tremendous cultural meaning for us. “I do find traditional forms where I can change the specific language of the piece to be very effective. The pieces retain some of the resonance of the cultural meaning found in traditional furniture, while appearing distinctly un-traditional,” he explains.

Jeff feels fortunate that most of the time, his most recent and major designs become his favourite and thinks this is true right now, with his ‘Toccata’ chair. “I’m very pleased with the way this turned out – even though I started out with a very different idea for the piece,” Jeff tells us. Jeff has also started working on a rocking chair version of the

‘Toccata’ and, although it isn’t quite finished yet, he is very excited about where it is going.

When asked about a favourite piece to make, Jeff tells us he finds it hard to pick one specific piece, but at the moment, he is thoroughly enjoying making his most recent chairs as he finds them challenging and satisfying to build. Jeff also enjoys – ‘in small doses’, he adds – going back to a design he first came up with about 27 years ago, for a bed. Jeff’s ‘Windsor’ bed has a laminated headboard and footboard. “I’ve done so many of these over the years that it’s as close as I get to being able to build something without much stress or extra effort. Intermixed with some really challenging work on my newer designs, I find it refreshing to go back to an old friend,” Jeff explains.

Inspiration

Jeff was very much inspired by Shaker furniture when he was starting making, drawn as well to craftsman furniture, saying: “I’m sure that this was both a question of aesthetics and one of capabilities. I could actually make much of this furniture.” Jeff’s work has retained the cleanliness of both of these styles, but as he developed his own sense of design, he has continued to explore curves and a sense of dynamic tension or movement in the pieces. Jeff also finds that the human body provides inspiration.

Inspiration can come from anything for Jeff: “I spend a lot of time observing my surroundings and am always looking for ideas in what I see.” This might include nature, architecture, other designed products and the human form. It can also include more random things as well. A more immediate source of inspiration for Jeff is through his intrigue with cutoffs and odd shapes generated in the workshop.

More than a few design ideas have started with these bits of scrap.

“I am not particularly good at sketching, but



‘Toccata’ chair



‘Stained Glass’ chair, shown in cherry and walnut, with black resin inlays. Graceful around a table; exquisite when used as an accent chair, 1,120mm high x 510mm wide x 535mm deep

PHOTOGRAPH BY STUART BUCK



PHOTOGRAPH BY TANYA TUCKER

‘MB Rocker’, shown in walnut. Jeff’s new rocking chair is a masterful blending of extraordinary comfort, graceful line and refined technique, 940mm high x 635mm wide x 1,065mm deep

‘Timpani’ table, shown in mahogany veneer and ebonised mahogany solid. A flexible side table, or an alternative to a coffee table when used in a grouping, 430mm high x 460mm dia.





PHOTOGRAPH BY TANYA TUCKA

'988 Chair', with 988 stainless steel screws adjusted to create a comfortable seating surface and back



PHOTOGRAPH BY TANYA TUCKA

I can draw well enough to explore ideas through my sketches and to start to sift through different ideas," Jeff tells us. Most of Jeff's design work takes place in full-sized drawings, prototypes and quickly-assembled mock-ups. In these, Jeff can work out the flow of a line, the relationship between parts, as well as the myriad issues that arise in 3D curved pieces. Joinery is likewise worked out in prototypes.

Jeff's designs evolve through various iterations. Sometimes these iterations are quick and dirty prototypes – screwed together with scrap lumber, or even cardboard – but there is usually at least one version that is accurately built in inexpensive wood. This allows Jeff to see all of the different challenges in a realistic version, instead of pretending problems aren't there because the prototype isn't complete enough to reveal a particular issue.

► Awards

Throughout his career Jeff has won numerous awards, including: Distinguished Furniture Design Award at the Chicago Athenaeum Museum 1995 for his Arch Table; Stanley Award for Best How-To Book in 1997 for his *Chairmaking and Design* guide and the Stanley Award for Best How-To Video in 1997, for the companion *Chairmaking Techniques* DVD; and MuseumCollection – Chicago History Museum for his 'Spider Handkerchief' Table.

Furniture making workshops

As well as being a full-time furniture maker, somehow, Jeff still finds the time to pass on his skills and knowledge to others. Jeff offers a wide range of hands-on classes in the craft of making furniture and he purposefully keeps classes small in size – a maximum of six to eight students – to ensure that each student is getting the input they need in order to further their skills and hone certain areas. Jeff explains that each of the workshops are designed to accommodate a wide range of skill levels, from novices to professionals, or indeed, anyone looking to refine their craft or explore a new area of

furniture making. "The workshops range from a single weekend afternoon to a full 40-hour week. I concentrate on teaching good fundamentals and then building from there. If you start by getting the fundamentals right, everything else both makes more sense, and will be easier to master," Jeff comments. In July 2015, he makes his UK teaching debut under the umbrella of New English Workshop at a week-long course hosted by Bridgwater College in Somerset. The class will build a stool designed specifically for New English Workshop using only hand tools. Private lessons are also available, back in Chicago, where you can work with Jeff one-on-one to cover a topic or project of your choice. In terms of the breadth of topics covered, Jeff teaches everything from hand tools to

dovetails, to creating mortise and tenon joinery by hand – plus everything in between!

The future

"I am first and foremost a chairmaker," Jeff tells us, and he will continue to explore what makes a great chair. Jeff has started to look at some older chair styles for inspiration, but his primary focus remains on exploring various ways to make supremely comfortable and visually exciting wooden chairs.

Jeff has been teaching and writing more and more these days and, although that does mean he is making less furniture overall, he has been able to spend significantly more time working on his designs. "I'm enjoying the freedom to work on these designs as much as I feel is necessary to bring them to where I want them to be." **F&C**

Maker's maker

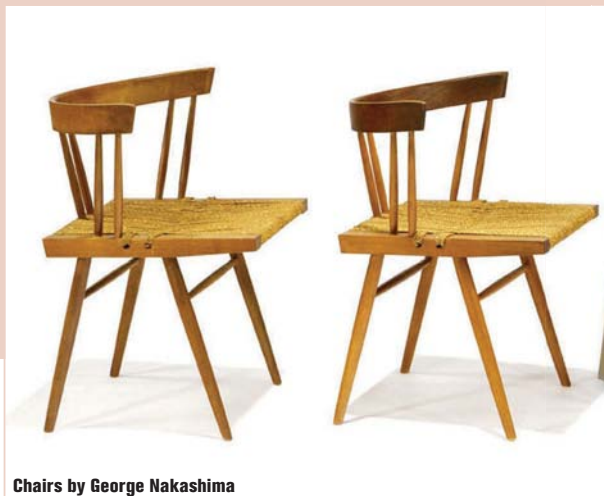
I never studied formally with anyone, but the phrase 'self-taught' seems wrong as well. I had many influences and many more inspirations. I, as are many of the woodworkers of my generation, am deeply indebted to three very tremendously influential woodworkers: Sam Maloof, George Nakashima and James Krenov. This seems almost so obvious as to be trivial. It seems like we were all inspired by these three legendary woodworkers, but as I was starting out, Krenov's writings and work had the biggest impact on me and on my approach to my work.

I rapidly discovered that I had no real interest in copying any of Krenov's work and I also realised as I did more and more of my own work, that much about his highly individual approach to his work did not apply to what I was doing. But still, the sensitivity to his materials, the meticulous approach to detail, line and even feel in a piece of furniture all spoke quietly, yet firmly, to me and I found myself focusing on these things as well.

My work looks nothing like Krenov's work and my working methods are dissimilar as well, but I do find myself inspired to my core by his work and goaded on to do ever better things by his writings.



Sam Maloof in his workshop



Chairs by George Nakashima



The stool that Jeff will be building as part of next year's NEW course

Contact details

Email: jeff@furnituremaking.com

Web: www.furnituremaking.com

Web: www.newenglishworkshop.co.uk

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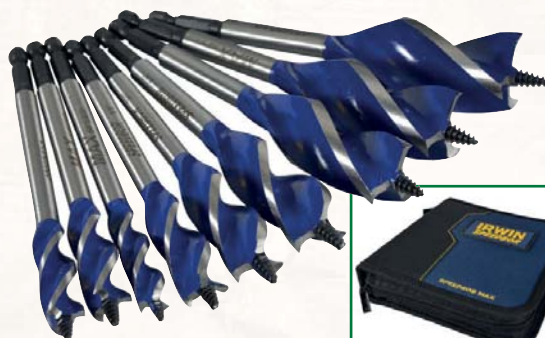


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Sawyer's bench

In this excerpt from his book, Tom Fidgen shows you how to make a sawyer's bench



PHOTOGRAPHS COURTESY OF THE TANTON PRESS

CUTTING LIST

Legs: 90° side	2	1¾ × 2½ × 20¼in
Legs: 100° side	2	1¾ × 2½ × 20½in
Stretchers	2	1¾ × 1¾ × 30in
Top boards	2	1 × 6 × 35in
Aprons	2	¾ × 3 × 13in
Cleats	2	¾ × 1 × 9½in
Fence	1	¾ × 1 × 24¾in

The first step we take in any woodworking project regardless of the design or construction style is rough dimensioning material and there is nowhere better suited for carrying out this task than on a dedicated saw bench.

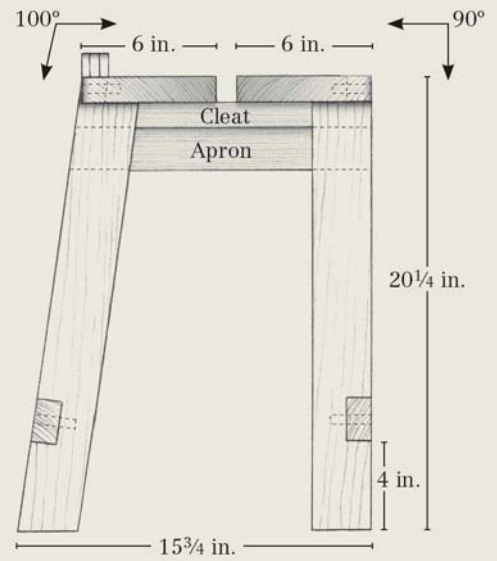
Working wood with hand tools demands we invest a fair amount of time pushing and pulling a handsaw, so I think we owe it to ourselves to take a closer look at our sawing setup and make this affair as enjoyable and efficient as possible. The hours spent breaking down furniture components and assembling our cut lists will be much more satisfying.

The design shown here is based on a

traditional saw bench shown in Bernard E. Jones' classic book *The Practical Woodworker*, with a few alterations. The first and most obvious was making one side of the bench square to the top. This modification makes rip-cutting much more effective without the worry of sawing into a splayed leg. If you ever decide to use a splayed-leg design, you'd better build two benches and do your rip-cutting with the board spanning between them. Having one side square is a great reference while ripping wood. Eyeing down the side will help train your eye and keep your saw cut square and true. The second improvement was adding

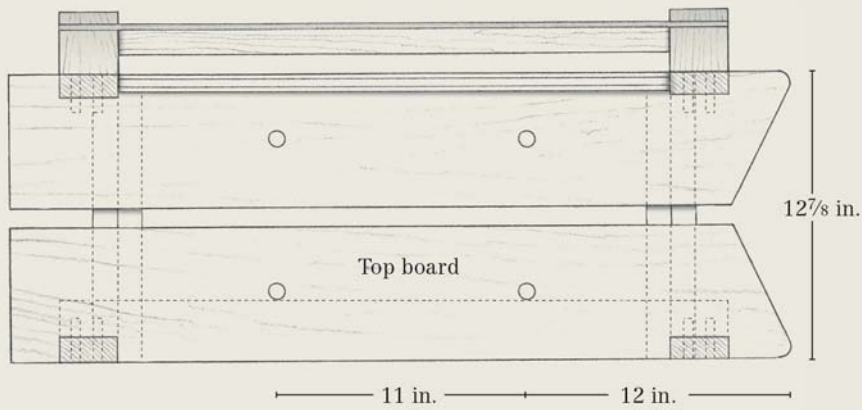
a removable fence, which makes cross-cutting more efficient without having to sacrifice your knees trying to hold stock in place when sawing.

My version of this traditional design has a benchtop made of two parallel boards, creating a ripping notch for added support when ripping narrow stock. The bird's mouth along with an array of 20mm holes in the top as well as in the legs makes this a versatile appliance suited to many other workshop applications. The joinery is pretty straightforward, making this a great weekend project and a perfect place to begin our unplugged journey. ►

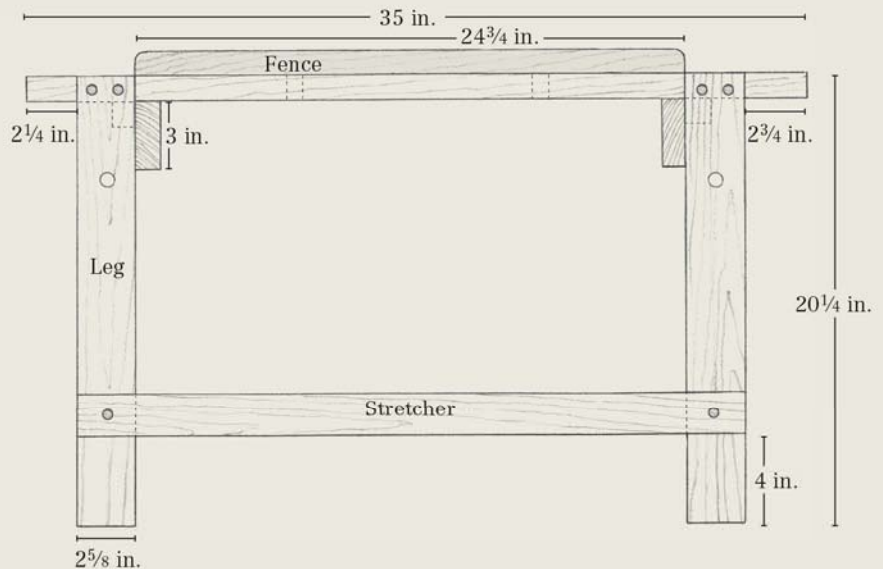


END VIEW

TOP VIEW



SIDE VIEW



Selecting materials

All of the workshop appliance projects can be made from whatever suitable material you have on hand in your shop. Take a look through your offcut pile before buying any wood and use whatever is straight and stable. Keep in mind that hardwood will withstand much more abuse, but softwoods like eastern fir or southern pine (*Pinus sylvestris*) will do in a pinch.

I had some cherry (*Prunus serotina*) left over from a past project and decided to use it for my bench. I made this same design a little over a year ago using local white ash (*Fraxinus excelsior*). Both species worked well. The ash bench weighed 30lb, while this cherry version is 20.2lb. Here in southern Ontario, ash is about half the price of cherry.



1 These cherry planks are ready for dimensioning

Legs and stretchers



2 The first two saw cuts establish the width of the lap joint



3 Make a series of cross-cuts and remove the waste with a chisel



4 Use a router plane to fine-tune the depth

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5 Set the marking gauge using the top board as reference for the lap-joint depth

Study the drawing and the cutting list and cut all of the components to size. Flatten and square them to begin laying out the joinery.

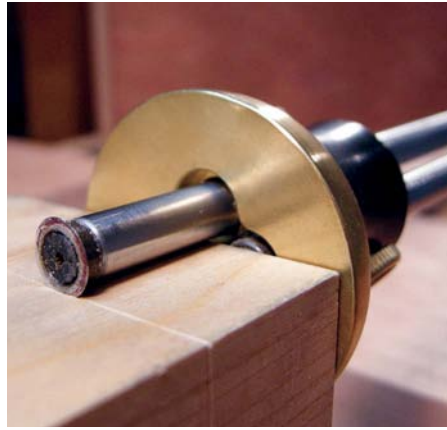
Begin with each side assembly, made up of two legs and a cross stretcher. This is a simple lap joint that when properly executed will be strong enough for a generation of use and abuse. Lay the legs flat on your workbench and place the stretcher on top where it'll be joined 100mm up from the bottom. Scribe each side of the stretcher with a knife line and remove it. There is no measuring involved. If the stretcher is slightly wider at one end, no problem; the scribe lines should make for a perfect fit. The depth of the lap joint is half of the overall thickness of each component. I use a knife line to score crisp, deep lines around the waste areas, which will help reduce any wood tearing down beyond the marks.



8 Set a sliding bevel gauge for the top and bottom of the splayed legs



9 Dry-fit the legs and stretchers



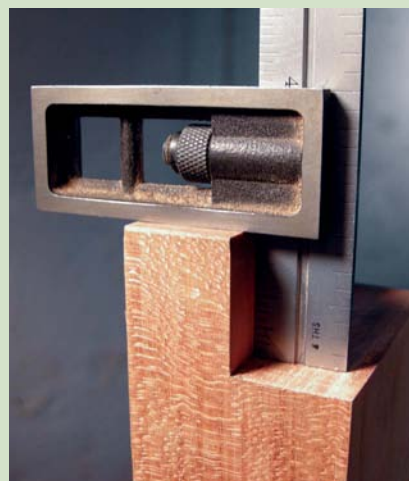
6 Transfer the line to the top of the legs

Once you have the bulk of the waste removed, a router plane is great for fine-tuning the joinery. My large router plane spans the gap and rests on each side of the joint. Once I set the cutting iron, I can be sure all of the joinery will be flat and a consistent depth.

Follow this procedure for the four legs and two side stretchers and then turn your attention to the top of the legs. To mark the depth of the lap joint in the top of each leg, set a marking gauge using the top board as reference. Again, no measuring is required. The thickness of the top board will be exactly the depth needed for the joint. With your marking gauge set, go ahead and scribe the depth on the legs. The width is half of the leg thickness and should also be marked at this stage. Saw the notches in the top of the legs and check your joinery.

Joinery check

Whenever you make a saw cut in any woodworking project, follow it up with a quick joinery check. Use a reliable square and make sure everything looks good. It sounds strange but I see it all the time: people saw a joint and never bother to check to see if it's square. Do this for all of your joinery. Dovetails, tenons, and, yes, even a simple lap joint. It's a good habit to get into.



Use a reliable square and make sure everything looks good



7 Saw the square notches in the top of the legs and clean up the joinery with a sharp chisel

The two splayed legs are handled in the same way as the straight ones, except that the top and bottom cuts are 10° off of 90°. Before you lay out the joinery, cross-cut the legs to the desired angle. This will give you a reference face for laying out the angled lap joints. Set your sliding bevel gauge to the proper angle and scribe the lines. To saw the angled cut I position the leg in my shoulder vice at the same angle as the splay. This allows me to saw straight down even though the cut is actually being made at the appropriate angle. Cross-cut to remove the waste and clean everything up with a sharp chisel. With the lap joints complete in the legs and stretchers, do a quick dry-fit to see if everything is on track. A block plane breaks the edges as I work and helps prevent chipping or blowout as I dry-fit the components.

Notching the bench top

Once all the legs are notched, transfer the widths and depths of each leg over to the benchtop boards. You shouldn't have to measure each individual leg – simply lay them in place with the stretchers dry-fit and scribe them for a perfect fit. Make sure to label the four legs and two side stretchers so you'll know which ones go where when it's time to assemble.

I follow the same procedure as when removing the waste in the top boards: scribe the area with a knife line, saw the two sides, make a series of saw cuts across the width and then chop out the waste.

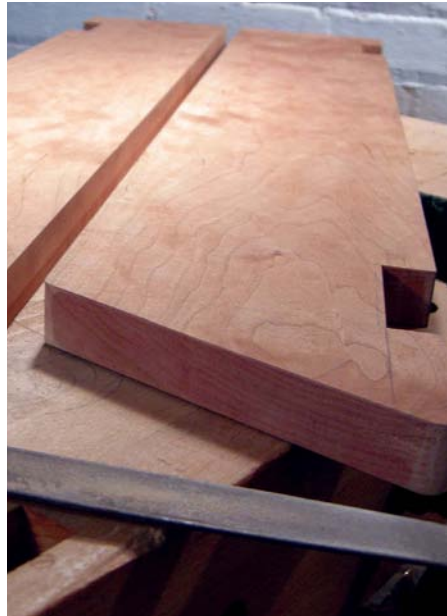
Once you have the eight lap joints complete and you've checked them all for a dry-fit, you're pretty much ready to start thinking about assembling. Go around each piece and break the edges with a block plane. You can chamfer all of the components if you like, but I put only a slight bevel on mine.

Now's also the time to saw the bird's mouth, which is cut to approximately 65°. With the top angle established, you're left with two sharp outside corners; round them over with a saw, a chisel and a little rasp and file work.

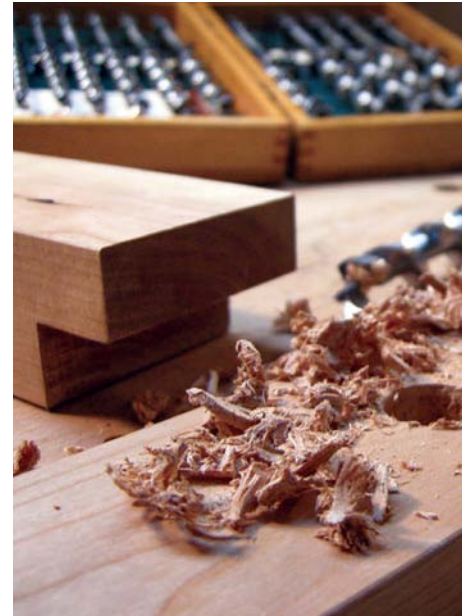
Bore any 20mm holes you may want to add for holdfasts or surface clamps and drill for the dowel holes that will hold the removable fence. It's easier to do this now before everything is assembled.



10 A series of cross-cuts within the width of the notch will make chopping the waste much easier



11 You can then saw the bird's mouth and round over the outside corners



12 Drill any holes before assembly is complete

Rounding the corner

Leaving sharp edges and corners on furniture and workshop appliances is not a good idea. To round over a corner, first establish the curve using a divider or simply trace something in your shop with a suitable radius. Here, I used my marking gauge and traced the profile with a pencil.

Next, remove the bulk of the material with a crosscut saw. This can be done by eye. Further refine the curve with a series of paring cuts, carefully chopping down with a sharp chisel. A bench hook will save your benchtop from chisel scars, and it's always a good idea to work over a leg of your workbench for added support. Follow with a bit more fairing with a rasp and finish off with a file and you're done. The following photos show the sequence for carrying out this procedure in the easiest way.



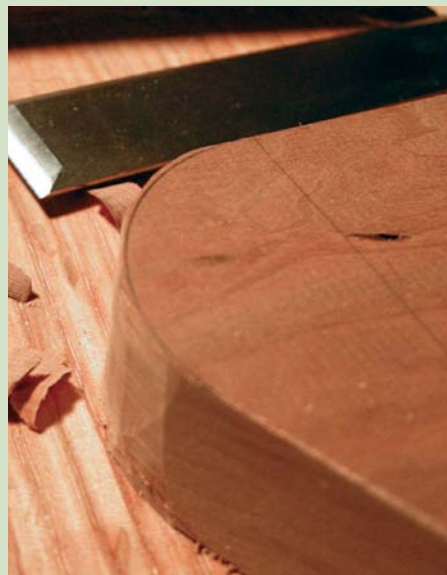
1 Establish the curve



2 Cross-cut to remove the bulk of the waste



3 A paring chisel further refines the curve



4 Almost there...



5 A rasp and file finish it off

Working with subassemblies

Glue-ups in the workshop can be a real nightmare. The best way to avoid catastrophe is by subassembling project components: don't try to glue an entire piece at once; break it down into subassemblies and save yourself the stress.

Begin with the sides and glue up the legs and stretchers. I used liquid hide glue, so I let these pieces set overnight. Next, glue up the apron and leg cleats. Mark the widths

of the legs in from the ends of the aprons to show where the cleats attach. The tops of the cleats and aprons should be flush. The cleats will make the assembly a little easier as they give something to reference to when assembling the bench top to the legs. Once the glue has set up, remove the clamps and plane the two components flush.

The components are now ready for final assembly. I drive wooden dowels through all

of the lap joints as extra insurance that they'll stay put through the years. You can make your own or use shop-bought dowels like the Miller dowels. The dedicated bit that comes with the Miller dowel system works well in my vintage brace and makes quick work of the holes; just drive the dowels home with a bit of glue. When the glue is dry, trim the ends with a flush-cutting saw and plane them flush to finish.



13 Drive wooden dowels through the lap joints for added insurance



14 Assemble the legs and stretchers first; clamp and leave to cure overnight



15 Once the glue is dry, you can plane the aprons and cleats flush

Working with dowel centres

Dowel centres are essential tools when you work with dowels. They take the guesswork and measuring out of finding the exact location of the holes. They're especially convenient when used for a component that needs to be removable, as for the fence for the saw bench. Start

by placing the fence on the top outside edge of the splayed side of the bench and trace its location. Remove the fence and drill four 6mm holes in the bench top.

Insert the dowel centres in the holes and gently line up the fence in its final position. Push down on the fence and you're left

with the exact location showing where the holes in the fence need to be drilled. Drill the holes in the bottom of the fence and glue in the dowels. When the glue sets, trim the dowels to length and lightly chamfer the ends for ease of assembly and removal.



Drill the holes for the removable fence



Dowel centres leave small dimples in the bottom of the fence to show where holes should be drilled



Glue the dowels in the bottom of the fence

Assembling the bench



16 The apron and leg cleat attached



17 Drill and countersink the apron and attach it to the inside of the legs with three No.8 x 38mm wood screws



18 Scratch a decorative bead on the fence for a nice personal touch

With the joinery pegged, lay the top boards face down on your benchtop and attach the leg assemblies. The aprons and leg cleats come in handy to square things up, while providing a clamping surface as I drive in some stainless steel screws to hold everything together. I don't glue the apron

and cleat assembly to the legs in case I want to disassemble the bench at a later date.

At this point, the sawyer's bench is complete. You could add a bottom shelf if you'd like, but I leave that space open so it doesn't interfere with sawing through the ripping notch. One last detail

I should mention is the decorative bead I scratched into the fence. This is completely unnecessary but gives a personalised touch to the finished piece, so you don't have to add this on yours. Even a workshop appliance can be made to look good and is all I needed to call this project complete. *F&C*



19 Two dowels through each leg's top joint



20 The 20mm holes in the straight side of the bench legs are ideal for surface clamps



21 Splayed side of the bench with fence and bird's mouth detail



THE UNPLUGGED WOODSHOP

This excerpt is taken from Tom Fidgen's book *The Unplugged Woodshop*. To purchase a copy for yourself, see details below.

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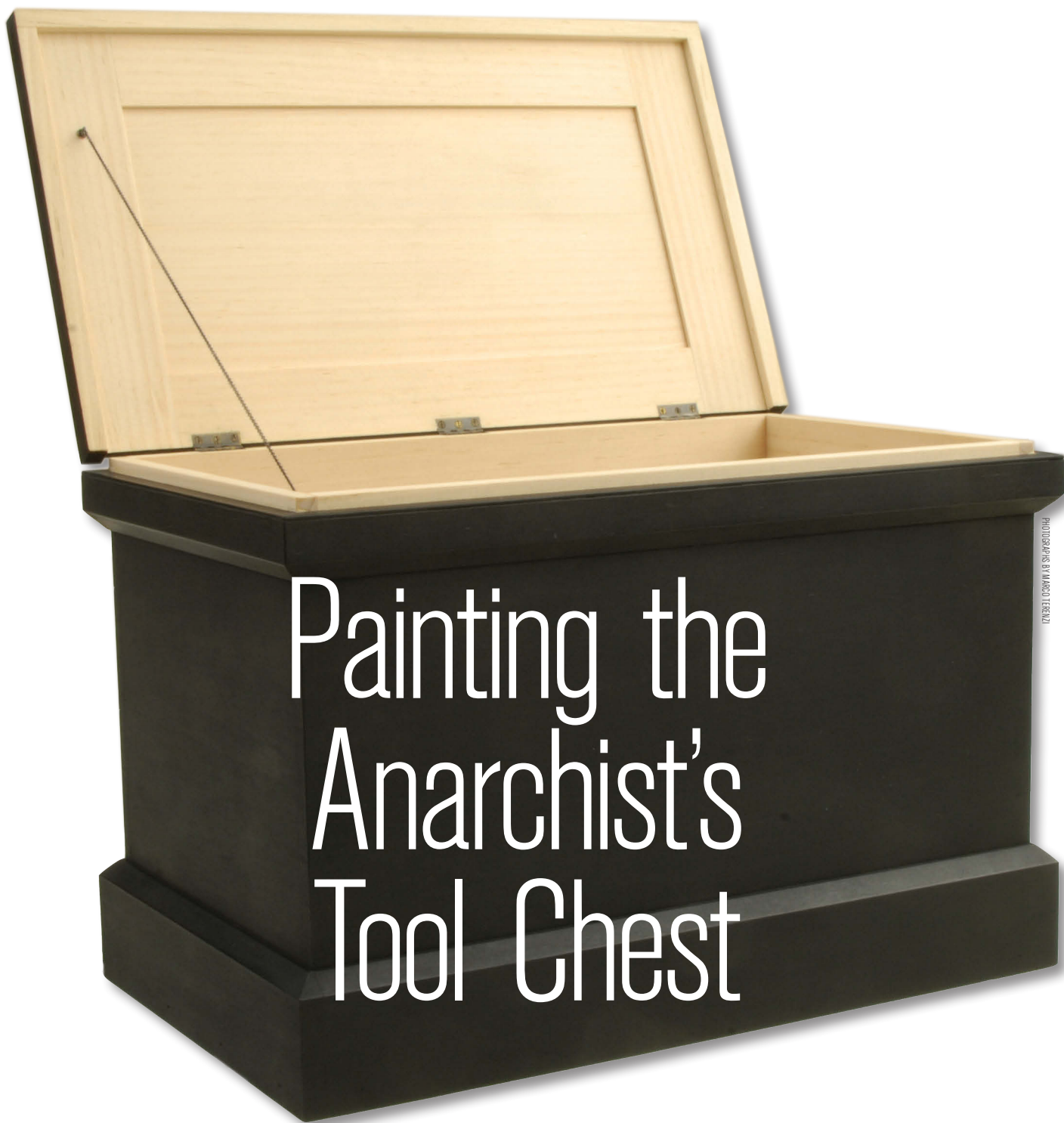
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Painting the Anarchist's Tool Chest

PHOTOGRAPH BY MARCO TEREZI



In the final part of this series, Marco Terenzi adds the finishing touches to his miniature version of the Anarchist's Tool Chest

The final phase of the ATC build was the most exciting, but at the same time very stressful. A lot of time had been invested in the piece thus far, and the final step could make or break the whole project – it had to be painted. There is a lot to think about when painting a delicate miniature like this. A lot of samples had to be done with many different processes to make sure the right choice was made in the end. Since the inside of the chest was to be left completely unfinished, it was critical that no paint bleed

through the wood or masked-off areas. The sample pieces are critical. They tell you how well the masking tape performs, how much the wood soaks up the pigments and how many coats of paint are required. I made samples of every different masking tape situation, mimicking the various parts of the chest.

Milk paint

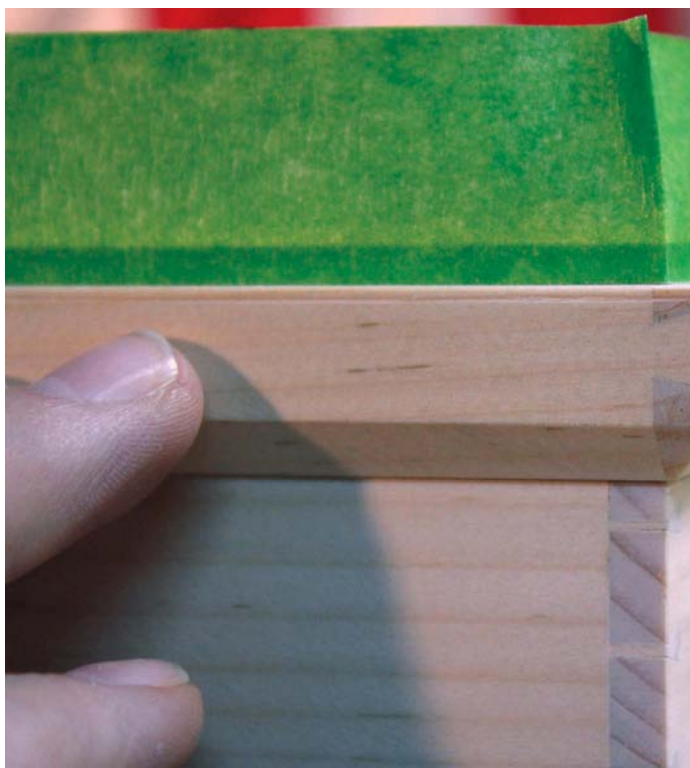
I used Old Fashioned Milk Paint Company's 'Pitch Black' and 'Salem Red' paints. I chose

milk paint for a number of reasons. First, it is period correct for a tool chest of this type. Second, as the paint is formulated of earth pigments and lime, it leaves a sort of chalky surface that burnishes over time, creating a desired patina. Finally, milk paint pigments are relatively large in comparison to enamel or latex so there was less chance of the paint being wicked through the wood to the inside.

I mixed the paint at the ratio recommended by the supplier. The paint was poured through a paint filter to remove any chunks or large



The inside of the chest is left bare so mask it off to avoid dust contamination and any accidental flicks of paint



Be sure to brush away any dust from fine details, such as beads



You're going to need to work on all faces so place the project on a plinth; this will avoid having to handle it

grit. This step is important because the milk paint sometimes has clumps of clay or pigment that may not look right on a miniature.

I used a 16mm-wide synthetic bristle brush; I chose to use a small brush to make the paint strokes look more authentic if they were to be noticeable. I found synthetic brushes stay much more stiff with the milk paint, whereas the natural bristles become a wet mop.

A warning about using milk paint: it may not look good at the beginning. The nature

of the paint causes it to soak in quickly, it does not spread out very well. This causes the surface to look splotchy after the first or second coat. However, once the finish starts to build, this goes away.

The chest was painted with one coat of red, followed by three coats of black. The coat of red underneath creates a beautiful finish when the black begins to wear away with time. After the first coat of red dried, the surface was lightly smoothed out with a grey Scotch-Brite pad and the dust was

removed with a lint-free towel before the three coats of black were painted on top of the red.

After the chest had fully dried for 24 hours, it was lightly burnished with a grey Scotch-Brite pad. This smoothed out the finish, making it very uniform.

Oil finish

The final step to the ATC finish was a thin coat of boiled linseed oil to give the chalky milk paint a satin sheen. In my opinion, the

◀ linseed oil was critical to achieving the right look. The masking tape was not taken off until after the oil was applied.

I used a mix of boiled linseed oil and mineral spirits, two parts oil to one part spirits. I applied the thinned oil very lightly using the corner of a lint-free wiping cloth, rubbing the oil into the surface, then quickly wiping it with a dry part of the cloth. I did not want the oil to soak through the soft pine, so careful attention had to be paid as to how much oil was going down. After 24 hours, the masking tape was peeled very carefully away, revealing the crisp lines. Once the finish had a few days to fully dry, the hardware could be installed.

Other finishing options for miniatures

Choosing the right finish for miniature work is critical. Any finish that builds heavily on the surface is out of the picture – the finish should be in the wood, not on top.

Oils, such as linseed or tung, work great because they leave no build-up on the surface. They can be applied easily using a wiping cloth, and require very little work after application. Oil does wick into the wood deeply. In most miniature projects, the wood may become completely saturated. This can be problematic if an opposing side is desired unfinished. For the most part, an oil finish is the easiest, least stressful finishing option for miniature work. I like to thin oils 1:1 with mineral spirits.

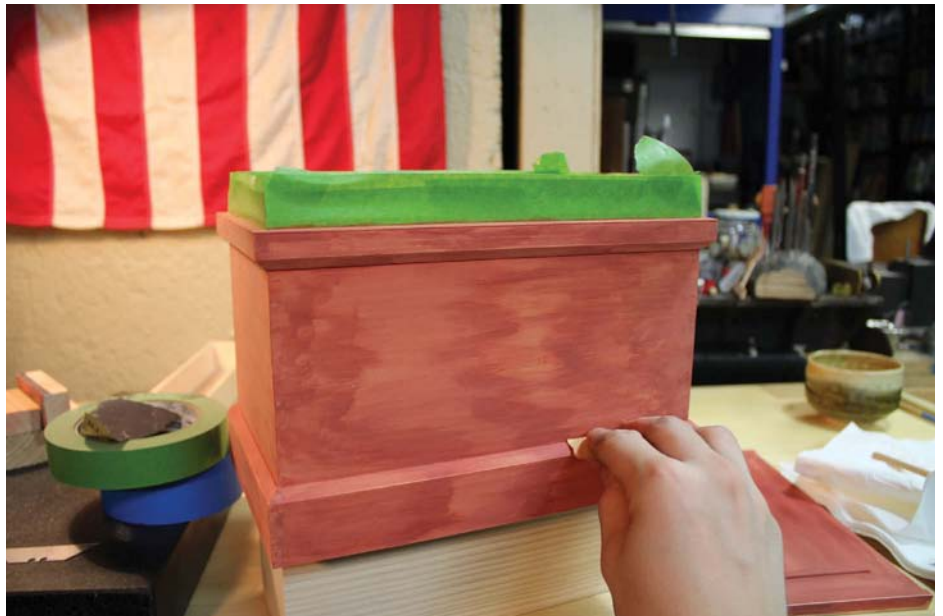
Shellac on miniatures

In my opinion, a shellac finish top coated with wax is superior to the other options. The shellac has to be thinned with alcohol until it is almost clear, with a light hint of amber. To test its mix, take a piece of scrap wood and wipe some shellac on. When it dries, there should be a very faint indication of where it was wiped. The key is to build up very thin layers of finish in the wood without letting it build on the surface. Sometimes it takes up to 20 wiped-on coats to achieve a good finish. The main advantage to the thin finish is on pieces that have many parts and nooks. If an area is missed on one coat, it can be touched up on the next with no indication that it was ever missed.

Thin shellac also works great before a complex piece is glued up. A thin coating of shellac will prevent glue from soaking into unwanted areas in the event of squeeze out. The glue will chip right off. It is important to avoid getting the shellac on the mating surfaces of the joint.

To turn down the shine on a shellac finish, it can be lightly burnished with a Scotch-Brite pad. A coat of paste wax helps protect the finish, as well as leaving a nice satin sheen.

I like to use Renaissance Wax for miniature projects such as this one. It dries instantly to a clear hard surface and can be easily buffed out to various levels of sheen. *F&C*



Use small pieces of abrasive for best control and accuracy on small areas



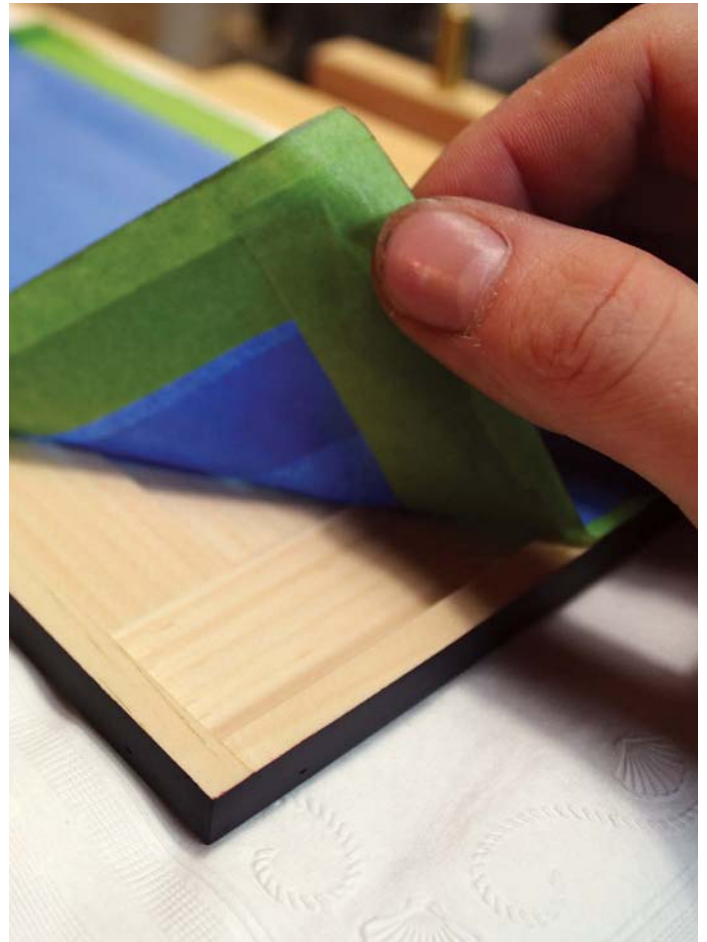
A small brush and short strokes will achieve a realistic finish to the paint surface



Keep sharp edges and corners crisp and don't load up any fine details with paint



Abrasive pads are gentle on sharp edges and less likely to break through the paint layers and expose the bare timber



If your masking has been effective, then there won't be a trace of finish



A succession of thin coats will allow any construction details to show through the finish

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Demystifying the numbers – choosing a system



In the last issue, Brian Green discussed the essentials of sharpening efficiently. This month, he continues by looking at stone grading and the meaning of all those confusing numbers

This month, I want to do two things: demystify what the grit numbers mean as well as make some suggestions about assembling a practical kit of sharpening equipment. Let's deal with the grits first because that is the question I was asked to address when editor Derek Jones and I first talked about these articles.

Part 1: particle size

Christopher Schwarz recently expressed the opinion that: "Buying sharpening stuff would be easier if manufacturers used microns to describe the particle size of the abrasive in each product." He was correct. In fact, I would argue that it's become essential, but what exactly was he talking about?

How abrasives work

Let's start by looking at how abrasives work. Abrasives for sharpening are made of particles of some hard and durable substance typically, but not always, bonded to a substrate of some kind. An example of a loose abrasive would be silicon carbide lapping compound or diamond paste. Sandpaper and waterstones are bonded abrasives. To be abrasive, the material doing the abrading has to be harder than the material being abraded. Abrasion works by making

scratches on the surface in order to achieve uniformity. We describe that uniformity in terms of smoothness – the absence of roughness, that is to say the removal of roughness – and, eventually, shininess.

Abrasives produce a characteristic scratch pattern as they remove material. An abrasive particle cannot make a surface smoother than the scratch pattern created by that particle. The scratch pattern cannot be smaller – finer – than the size of the particle that created it. One is a function of the other. Therefore, if you want to know how sharp a given abrasive will make your tool, it is helpful to know how big the abrasive particle is.

Characteristics of abrasives

How smooth a surface becomes is a function of the size of the abrasive particle so for accuracy it's important to look at particle size in microns, rather than nominal grit size.

The durability of the abrasive particle, particularly its tendency to either stay sharp or become worn, affects the speed of the abrasive action. Tough abrasives cut quickly and can better cope with harder steels.

Waterstones have an additional characteristic, namely the strength of the bond. Stones with strong bonds release particles

slowly and wear slowly. Those with weaker bonds release particles more quickly and, consequently, wear more quickly. Stones which cut aggressively because of the nature of the particles, but release particles rapidly because of the nature of the bond, may not wear as significantly as others because their work is completed with fewer strokes.

Lee Valley Tools carried out extensive research into how these issues affect the performance and the user experience. You can read more about it here: www.leevalley.com/en/shopping/TechInfo.aspx?p=67186

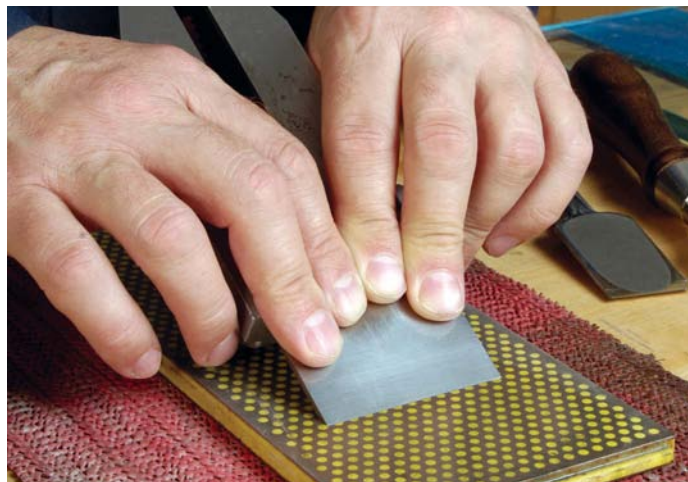
Microns

The normal terminology we use for denoting grades of sharpening media is grit size. A stone is only nominally named a 1,000, 4,000 stone, etc. Grit size refers to grain size and can be very subjective it seems. The common language that works best is the more objective metric terminology of microns. One micron = one-millionth of a metre. The symbol is 'µ'. A typical human hair is approximately 40µ.

When converted to microns, it becomes apparent that particle size can vary greatly between brands. Recent testing reveals that not all 1,000 grit stones – or 4000, or 8,000 – are the same.

More on particle size

Andrew Strome of Lee Valley Tools described it this way: "It's reasonable to assume that different waterstone brands with the same nominal grade of grit have identical particle sizes, but this isn't necessarily the case. For any waterstone at a given grit, there's a distribution of particles in varying sizes. The current Japanese Industrial Standard (JIS) R6001-87 specifies maximum particle size, average particle size, and particle distribution, but it may come as a surprise to learn that there is no specification above 8,000x. Furthermore, some brands conform more closely to an earlier standard. When comparing waterstones, it's useful to have the particle size in microns, since this is the only measurement system that is both reliable and universally understood. However, particle size is only one element that contributes to the qualities of a stone and it cannot be separated from others, such as the durability of the abrasive or bond strength."



Perforated diamond plates are great for wide blades. Beware when using anything narrower than 6mm, as it is easy to dig into the base material and lift the plate

Why is this now important?

So why are we now paying more attention to the way the size of the particle is described – in microns vs its nominal descriptor? It used to be easy to buy a set of waterstones; often a single brand was available and the choices were coarse, medium, fine – perhaps a couple of combinations. It was much the same with oilstones.

We now have more innovation, more choice and more information. Innovation has created many more options in the steels that tools are made from. In turn, this has led abrasive manufacturers to experiment with new ways to abrade, polish and sharpen those steels. We know more about what we previously took for granted. Marketing uses all of this to position product and sell us on comparative advantage. For consumers, the changes and the choices are real and significant.

It is apparent that choosing waterstones has become more technical than it used to be. Not only are there many choices of stones but premium tools are now offered in a choice of metals. The various brands of stones abrade the different metals with different levels of efficiency. It is becoming increasingly important to match the stones to the types of metal you will be sharpening and the volume of sharpening you will be doing. This is, of course, exactly what Japanese craftsmen have been doing for generations.



The finer micro films can rupture easily if you apply pressure on both the forward and back stroke

What to look for

As an illustration, a comparison of fine waterstones indicates these anomalies in our previous assumptions:

- Norton 8,000 stone is rated 3μ
- King 8,000 is 2.5μ
- Sigma 10,000 is 1.5μ
- Imanishi 8,000 is 1.2μ

When purchasing waterstones, look to see if particle size is stated in microns. These are how I would describe the ranges typically available:

▪ Fine	4,000 up	3μ+
▪ Medium	2-4,000	6-7μ
▪ Coarse	700-1,200	11-35μ
▪ Very coarse	200-240	65-102μ

Many stones will fit in these broad categories, although there is some overlap. The challenge is to choose a set appropriate for the steel you are sharpening, which suits your needs as to speed and price and which will accommodate your anticipated needs going forward.

Conclusions

Here are my opinions and thoughts based on the brands with which I have had some experience.

- An investment in waterstones represents a compromise between cutting speed, durability, surface finish and cost. The choice should be driven primarily by performance expectations, the amount of sharpening that is done and the types of steels that one expects to be sharpening.
- Upgrading from King? Then buy Bester rather than Norton.
- Already have a Norton 8,000 but want more? Then buy a Bester 8,000.
- Dabbling in new steels? Norton will work; Bester performs better for a comparable price, whereas Sigma offers premium performance and a premium price.
- Buying for a student? Then buy Bester
- If you are a student on a budget using O1 or older steel, then buy King.
- Satisfied with O1 steel and don't sharpen

much anyway? Go for King or Norton

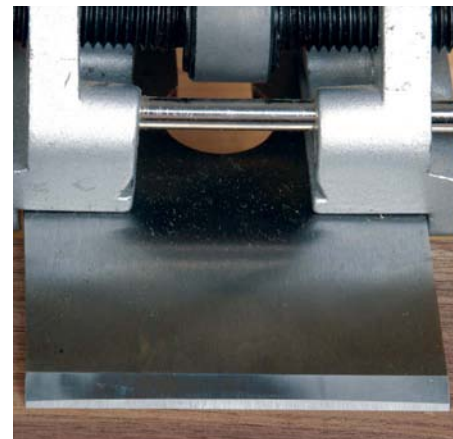
- Occasional sharpener using mostly old steel but wanting the best price? Then buy King.
- Want maximum sharpening speed? Then buy Sigma Select.
- Stones producing a finer finish are available but the returns start to diminish for the money spent.

Part 2: choosing a system

I have deliberately chosen to speak of waterstones because that is what I use, but let's broaden things out.

There are many sharpening systems or methodologies and they all work, all have their quirks, their good points and bad points. Some work decidedly better than others. Here are my thoughts on the most common sharpening media/systems:

- Oilstones – slow and not readily available.
- Oilstones in combination with diamond paste – extends the range of sharpening ability and works for those who already have a set of oilstones and who want to keep their lubricants consistent.
- Diamond plates – now available from 120×/120μ to 8,000×/3μ. Contrary to received wisdom, they will not last forever. Service life remains an open question but no lapping is required, they are very convenient for travellers and for use in a cold climate.



A deviation in thickness for a secondary bevel could indicate a worn stone

- Waterstones – both aluminium oxide – King, Norton – and ceramic alumina – Bester, Sigma, Shapton. They are flexible, have the widest range of ‘personalities’, are fast but require care.
- Sandpaper on glass – very easy and inexpensive for beginners but expensive in the long term.
- Silicon carbide (SiC), chromium oxide Cr2O3 or the new diamond micro-abrasive sheets – expensive but very portable. The finest diamond sheet available is an amazing 0.1µ, which is suitable for the most demanding situations requiring the very best edge.
- Horizontal wet grinders (Makita) – slow, no heat, no dust, no sparks but not as versatile as the Tormek.
- Vertical wet grinders (Tormek) – slow, no heat, no dust, no sparks. Versatile but expensive.
- Horizontal dry grinders (Veritas) – accurate and precise but slow and moderately expensive.
- Traditional grinders with cool wheels, preferably slow speed – very useful but they have only one option for handling the grinding chores. For most people, a coarse diamond plate will be more user friendly and less intimidating. If you have other metal working needs, it is handy to have.
- Belt sanders – the Viel 25mm sander-grinder is my personal favourite if I only had one grinder. It handles knives and curves, isn’t expensive and also doubles up as a small sander.

A good sharpening system should be...

- Effective in producing the keenest possible edge – as defined by you, not me.
- Fast and convenient – slow and inconvenient turns people away from sharpening. An initial system for a beginner should be simple, ideally set up in a permanent, accessible spot
- Consistent and repeatable – I believe it’s important to get good results first; fast can come later.

Recommendations

Basic kit for a student or carpenter

- 250/1,000× – very coarse/coarse – combination waterstone, which presents an economical starting point
- Check combo packages from retailers
- Vice style honing guide is inexpensive
- Lapping system consisting of plate glass and 120× drywall screen
- Spray bottle
- Tray with router mat
- Plastic bucket for stone pond

Options

- Add medium waterstone
- Diamond plate for lapping

Intermediate kit for an advanced student or beginner cabinetmaker

- As above
- Upgrade honing guide to Veritas Mk II or Kell
- Add medium waterstone – 6-7µ
- 25mm sander grinder or slow speed grinder with 150mm cool wheels
- Proper grinder toolrest – Veritas

Options

- Add fine waterstone – 3µ or better
- Camber roller for Mk II honing guide

Advanced – for the advanced amateur or professional cabinetmaker/furniture maker

- As above with fine waterstone – 3µ or better
- Honing compound and strop

Options

- Veritas Mk II or Tormek power sharpening system for increased safety/productivity
- Consider diamond stone for lapping and miscellaneous grinding
- Consider diamond film or paste for superfine edges for special applications

Jig or no jig

Honing guides are especially useful for beginners or those who sharpen infrequently. While very consistent they are also very slow.



Once ground and flat, an edge that can do this is less than 60 seconds away

However, many very advanced woodworkers still prefer to use a honing guide for the consistency offered.

Advanced hand tool users will benefit from the speed and convenience of freehand honing if they are both committed and sharpen frequently – daily or several times a week. For beginners, freehand honing has a steeper learning curve. Many tools will not fit in any honing guide – router plane cutters – so freehand techniques are necessary anyway.

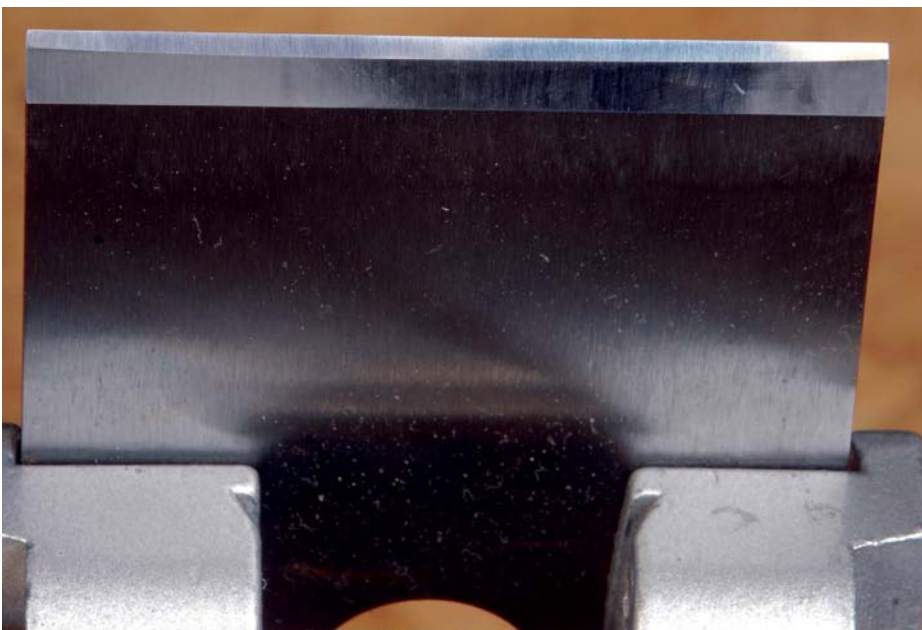
Conclusion

The focus should be on solid principles and methodologies rather than gimmicks and gadgets. It isn’t possible to avoid the reality that sharpening requires skill, knowledge and time.

The often repeated rule of thumb for learning how to sharpen well is to choose from one of the various ‘systems’ – based on recommendations, preferences, expense, etc. – and stay with it long enough to be good at it and to master its nuances. Bouncing about from one method to another is usually frustrating and expensive. Consistency is important to good sharpening. Do your own research and be careful of tool dealer’s advertising. *F&C*

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Newsletter, Vol. 5, Issue 4, March, 2011



There's no need to polish a primary bevel if you intend to add a secondary one

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The perfectly preserved 16th-century Wrangelschrank cabinet is inlaid with pearwood, pinewood, rosewood, beech and sycamore

Wrangelschranks cabinet

Geoffrey Laycock visits the historic Loseley House, which is home to a perfectly preserved 16th-century Wrangelschrank cabinet



PHOTOGRAPH COURTESY OF WIMBORNA COMMONS

For anyone with an interest in furniture and its history, Loseley House is a treasure trove

It is estimated there are around 25 surviving pieces of Wrangelschrank furniture in existence and most you will never have the opportunity to see outside of the four pieces held by the Victoria & Albert Museum in London. That such an outstanding piece as the cabinet at Loseley

House is on public view should be taken advantage of, taking time to also enjoy the multitude of other treasures found in the rooms of this living home, as it has been for over 500 years. Nothing about the rooms or furniture at Loseley is staged: every table, chair and cabinet originally here are working pieces of furniture.

In the Great Hall can be found carved wood panels originally from Nonesuch Palace, carvings by Grinling Gibbons and the Coronation Chair of George IV. The drawing room ceiling was commissioned for a visit by James I, the fireplace carved from a single monumental block of chalk to a design by Holbein and cushions on the maid of honour chairs reputed to have been worked by Queen Elizabeth I. Upstairs you can see a hand-carved bed and pelmet in Sir More's room depicting a boar hunt in full cry. The house can only be viewed by guided tour, which lasts about 50 minutes and provides an informative and often amusing insight into the history of many items.

Wrangelschrank furniture

Wrangelschrank furniture is not so named because of a designer or maker but from history as a type. It is said that inlaid cabinets of the highest quality were taken as spoils of the Thirty Years' War by the Swedish Count Carl Gustav Wrangel. Those highly decorative cabinets from southern Germany feature exquisite inlay, carvings and marquetry over typically simple box shapes often forming what must have been highly prized writing desks. How they have found their way to their current owners will mostly remain a mystery.

The details of how and when the cabinet at Loseley House came into residence are not known but it has enjoyed careful ownership



The magnificent cabinet, shown here with its front open to display the stunning interior drawers



The inner door, showing the inlaid panel and hinge



A close-up view of one of the wonderfully decorated interior drawers



Close-up view of the hinge detailing

for much of its life as evidenced by its remarkable condition. The overall state of the base cabinet has hardly changed over its long life, showing very few obvious signs of repair; the various woods and staining of the complex inlay and marquetry hint strongly at their original vibrant colours and are almost totally intact. Probably constructed in the late 16th century – the experts can't decide on whether it is early or late 16th century – it is inlaid overall in pearwood (*Pyrus communis*), rosewood (*Dalbergia retusa*), sycamore (*Acer pseudoplatanus*), ash (*Fraxinus excelsior*) and other woods to produce views of a ruined city. The two end panels at first appear identical but closer examination shows there is no repetition of design; each panel stands alone as a complex scene with too much detail to take in from one viewing. All have complex flower designs added to the background scene and each panel is framed by a carved planted border. There are engraved brass corner mounts.

Those views are carried over to the drawers and two pairs of cupboards hidden inside by the fall-flap writing surface supported by two pull-out rails. Here you also see the detail given over to hinges and door catches with gilded engraving applied to various styles of carved motif. On the outer side panels are brass carrying handles added at a later date and it stands on a 19th- or early 20th-century walnut (*Juglans spp.*) stand of George III style.

Visiting Loseley House

Both the house and grounds open from May – the house closes at the end of August and the grounds close at the end of September. Both are closed on Fridays and Saturdays. Opening times for the house are from 1-5pm with the grounds open from 11am-5pm. In addition to the house, there are walled gardens to explore within the extensive grounds and a tea room. Also, why not pay a visit to Surrey Timbers Ltd, who are located on the estate and open all year round. *F&C*



Detail and hinge of one of the larger inner drawers

Contact details

Email: enquiries@loseleypark.co.uk
Web: www.loseleypark.co.uk



Our correspondent...



Woodworking in the Netherlands

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 the man behind the recently formed company Valfor Tools, Sjoerd van Valkenburg. After an international business career, Sjoerd returned full-time to his passion for woodworking. In between his own woodworking projects, including restoring antique furniture, he now concentrates on the creation of exciting and beautiful new tools. His aim is to develop tools that offer significant new possibilities for discerning woodworkers and that contribute to more precision, time saving and user-friendly work.

Sjoerd with Pierre Baptist, right, and Jaap Bosma, left

MD of Valfor Tools Sjoerd van Valkenburg tells us more about the Dutch woodworking market

Sooner or later anyone involved in serious woodworking in the Low Countries will come across its two cornerstones: the Baptist woodworking store and the internet forum, appropriately called woodworking.nl.

To find out more about the state of the market we spoke with Pierre Baptist, owner of the store that carries his name and Jaap Bosma, administrator of the forum.

Aladdin's cave of woodworking

Baptist woodworking is situated in Arnhem and is definitely a *passage obligé* for woodworkers. Walking into the store, you would be forgiven for thinking that you find yourself in one of those magnificent American woodworking stores, such is the display of beautiful tools and shop accessories, sourced from the US, the UK, Germany and elsewhere. Most well-known brand names are represented.

The store is located not far from the German border and, for most customers, this means an excellent excuse for a day trip to this Aladdin's cave of woodworking, although they do also offer an online mail order service. The Baptist woodworking store was an appropriate and inspiring place to talk about woodworking in the Netherlands.



Pierre Baptist, left, and Jaap Bosma, right, continuing their discussion in the store



The interior of the Baptist Woodworking store

Woodworking.nl

In the absence of any meaningful statistics it's not easy to get an idea of the actual size of the market. The relatively small Dutch language environment prevents domestic woodworking magazines from being a viable option so no national subscription data can be used to judge the market's depth. However, the internet plays a big role and the woodworking.nl blog is a very lively hub of information exchange between enthusiasts. Members showcase their work, tell their own stories or simply launch questions on which other members will comment – sometimes with 'straight from the hip' remarks – but most of the time comments are helpful and to-the-point.

The highly skilled and the beginning enthusiast happily mix and the subject matter is endlessly varied. It's interesting to note as well that in the Netherlands, cabinetmaking as a profession is not subjected to any licence, certification or diploma. Contrary to the prevailing legislation in surrounding countries, anybody can establish a furniture making or restoration business.

Jaap Bosma, blog administrator and avid woodworker, has just returned from an expatriation stint in Thailand – happily administering the blog from Bangkok. He exercises a gentle but firm hand on the forum's quality and the behaviour of its members. There is a wealth of information for pretty much every aspect of woodworking and members readily pitch in to offer solutions to other users.

Woodworking without borders

The centuries' old tradition of the Dutch to look beyond their country's borders is evident in all

aspects of Dutch life, as it is in woodworking. The English language is no obstacle for the Dutch: the forum's members regularly refer to foreign – mostly English speaking – woodworking publications, videos, websites and discuss any tool buying experience in other countries.

A case in point is the huge interest currently devoted to making a – yes! – Dutch tool chest, undoubtedly inspired by Christopher Schwarz' writings on the subject. Browsing through the hundreds of members' forum contributions, it becomes evident that the Dutch apply their natural inquisitiveness, their quest to try new things also to their woodworking. New approaches, new techniques are often attempted, sometimes with dubious results, but often successfully... But most importantly, there is a wealth of enthusiasm to try new avenues, use hitherto untried tools or the same tools in a new way and just make things with wood.

Wood, that, inevitably in this small country is imported and therefore expensive. Fortunately there are excellent wood retailers, who are extremely knowledgeable and will go out of their way to help and advise customers.

One thing that is definitely in short supply in the Netherlands is space, but small houses or lack of proper workshop space seem to be no obstacle for serious enthusiasts here! We know of a very accomplished woodworker making the most beautiful objects in a tiny cave-like cellar under his living room, only accessible through a trap door – through which have been hoisted down substantial stationary machines!

Maybe because of living in such tight quarters, there is a growing interest in hand

tools. The Baptist woodworking store is proof of that trend, judging by the wide choice of chisels, handsaws and other beauties that any woodworker will appreciate.

Baptist has wisely made the choice to split the hand and power tools sections into separate shops. The latter is just across the road and this arrangement creates a very special, dedicated atmosphere in each location.

As everywhere, the common interest in woodworking seems to bring people together. Baptist's store manager Alex Hemme plays a pivotal role here. Not only with advice based on his in-depth knowledge of just about every aspect of woodworking, but also by connecting fellow woodworkers to stimulate direct exchanges of ideas and expertise.

Pierre Baptist said: "After some lean years, woodworking in the Netherlands definitely looks to be in a healthy growth phase."

The future of Dutch woodworking

The Dutch economy is performing relatively well and as professional people spend more and more time in front of a computer screen, they find that making something with their hands is actually a very satisfying occupation of spare time. Jaap Bosma, the blog's administrator – himself an IT professional – confirms that a lot of the blog's members have computer-related day jobs, for whom woodworking seems a good way to relax.

Summing up, Dutch woodworking is definitely characterised by its cheerful enthusiasm and sense of innovation.

As in every aspect of life here in the Netherlands, a sharp sense of individuality happily mixes with the notion of belonging to the same community. So it is with woodworking here. *F&C*



Store manager Alex Hemme



Titus Baptist, Pierre's son, in the store

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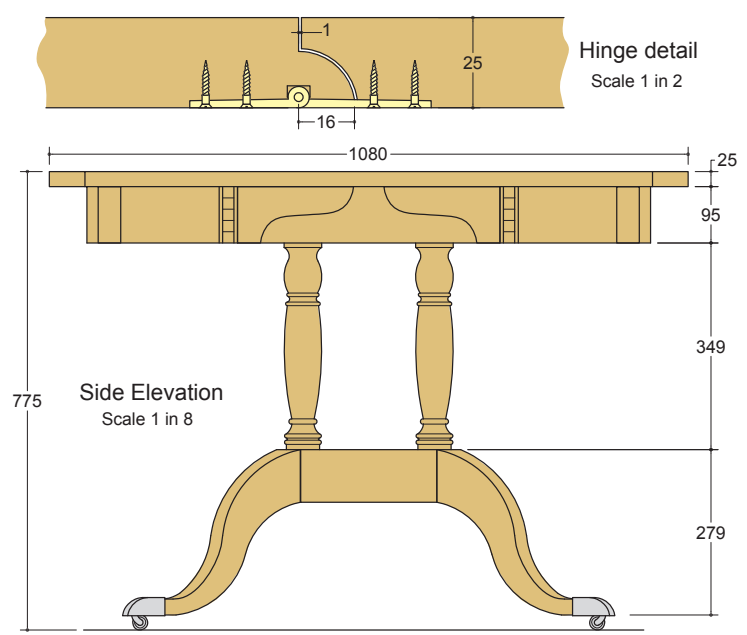
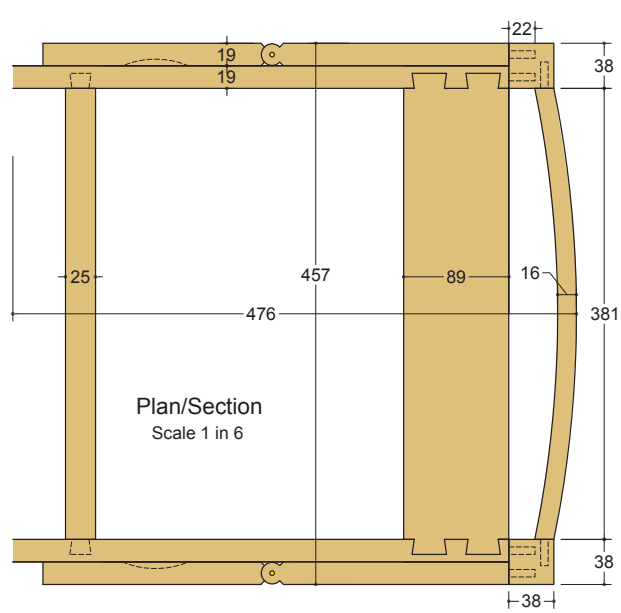
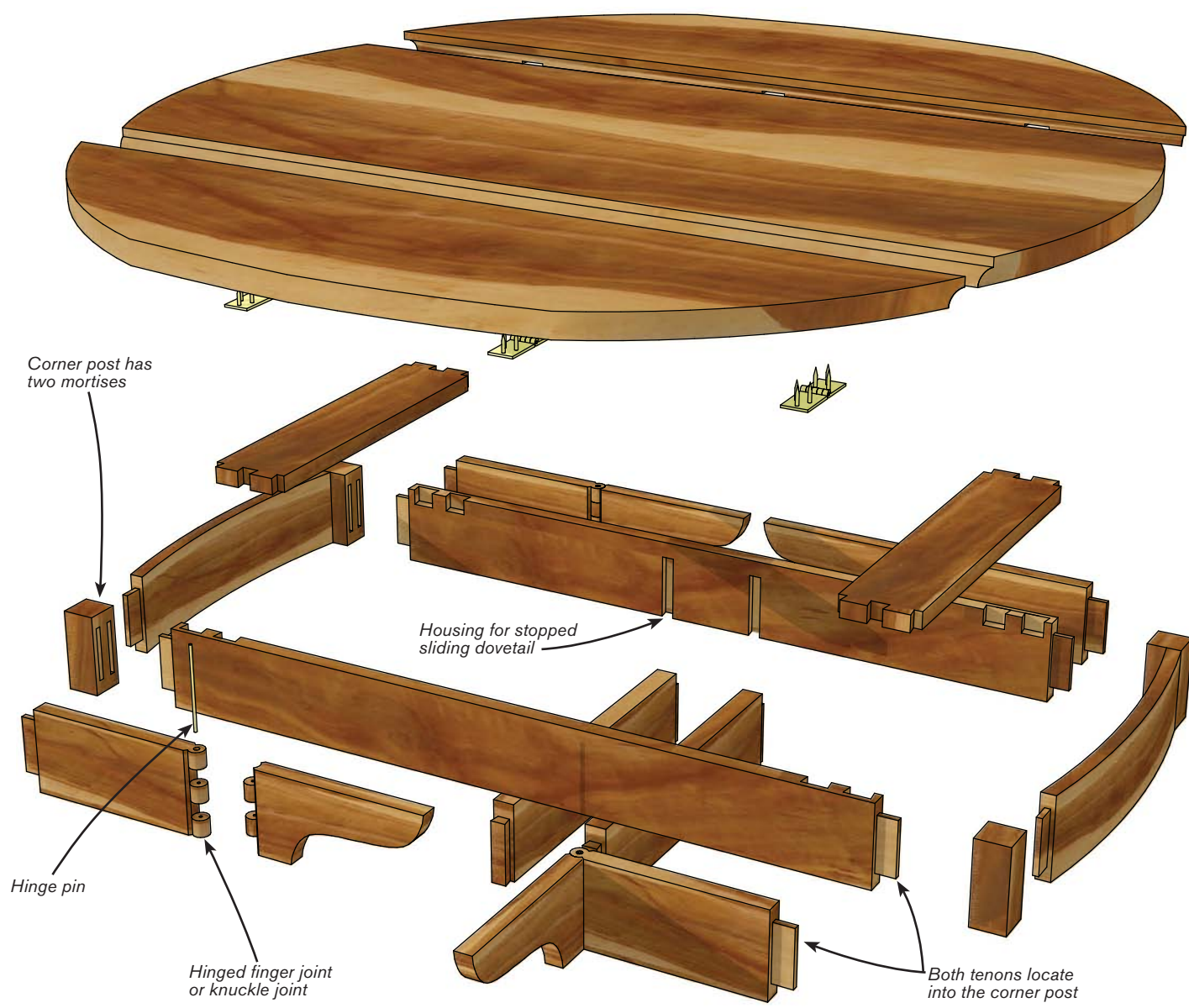
Duncan Phyfe-inspired drop-leaf table

Austin Heitzman shows us how he went about building a rather challenging Duncan Phyfe-inspired drop-leaf table in apple and walnut



This Duncan Phyfe-inspired drop-leaf table was a complicated build. I was looking for something to really push my skills and perhaps even develop some new ones. Between veneering the base, turning the four columns and aligning the toecaps and castors, there is far more involved in this piece than can be adequately covered in any one article. I therefore would like to focus on the part of the build that captivated me most: the table's apple (*Malus sylvestris*) drop-leaf top and the solid wood movements that make it work. These articulated appendages lift the piece out of the realm of passive furniture allowing for a degree of interaction and versatility not always enjoyed in furniture. ►

► In detail



Start with a tree



1 It is not often you see an apple tree towering over the surrounding foliage

This table started as the largest apple tree I have ever laid eyes on, a full 965mm at the base. Out of the blue I received a phone call from a friend – she had just taken down her backyard apple tree and she wondered if I wanted it. Based on the description, I was interested, but once I actually saw the tree, I was in love. The main trunk was far too large to move so it had to be milled in place with an



2 Using an Alaska mill to slab up the base. Note that the trunk is so wide the first cut is being made while standing up

Alaska mill, which is simply a chainsaw on rollers. The two smaller sub-trunks, still over 405mm each, but movable, were taken to a bandsaw mill. The large kerf of the Alaska mill doesn't make it as economical as the bandsaw mill but there are some situations, such as this one, where it is an indispensable tool. When milling my own timber, I tend to cut it on the thick side



3 The three of us were able to move the two sub-trunks out of the yard and into a trailer using a dolly, rollers and brute force. The table top was made from this material

so I will be able to get the widest board possible, regardless of how much the wood might move during the drying process. Apple can move a lot during the drying process so for my finished 25mm table top, I cut the boards around 40mm. I allowed the wood to air-dry for a few months before taking it to a kiln to have the moisture content brought down to 7%. Now I was ready to start.

Top down

The large size of the boards, along with apple's tight grain and dramatic colour, made them ideal for a table top. After spending some time pondering the boards, I began to see how the top would come together. A slight curve in two of the boards would become the central design feature of the top; the live edge would nearly, yet not quite, continue the circumference of a round table top. Once I had progressed this far with my design, I felt confident enough to cut the boards about 150mm over my intended length for the table top. This allowed me to more accurately determine how they would all fit together. The two boards that form the table top are one book-matched pair and the two boards that make up the drop-leaves are another pair, each from a different sub-trunk. In this arrangement, the heartwood progressively bulges out to match the curve of the top. To ensure I got the 25mm thickness I needed for the top, I cut the boards down closer to their final dimensions before milling them. Once the boards were surfaced, I glued up the centre two boards, cut them to width and then jointed the straight edge of the flaps so everything met up seamlessly. Wait until after the rule joint is cut before you cut the circumference of the table top, as once the joinery is cut, the drop-leaves will nest 16mm into the top, throwing off any curve established beforehand. For the curve of the table top, I used the same form I used to make the bent lamination for the skirt. I cut off most of the waste on a bandsaw and then used a flush trim bit to clean everything up.



4 With the raw lumber cut to rough length, the top begins to emerge



6 The rough cut boards are now ready for milling



5 Using a circular saw to cut away the waste so I can achieve my 25mm thickness for the top



7 Milled and jointed, the top is now ready for the joinery

Rule the rule joint

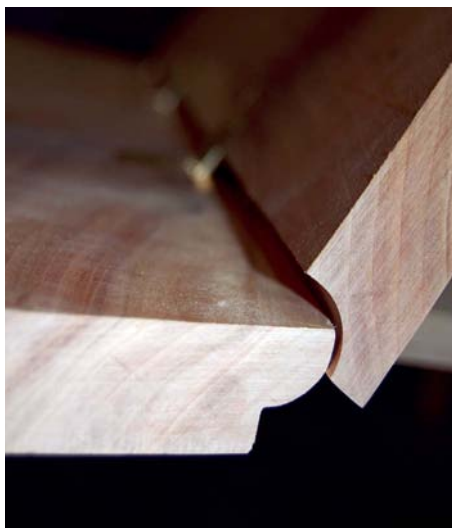
I wanted a table that was well adapted to the smaller spaces of urban living. I found the traditional drop-leaf design, which is easily transformable without the encumbrance of additional leaves, was perfectly suited to this setting. The rule joint remains the best way of mating the drop-leaves to a table. The main advantage of the rule joint, as opposed to a butt joint, is that it allows the space between the top and the drop-leaves to appear finished in both the up and down position. The joint also protects the hinges from debris and relieves stress on the hinges when the leaves are in the up position. A rule joint consists of a cove that glides over the top of a matching radius. This motion is controlled by special elongated hinges that are embedded into the bottom of the table top with the centre of the hinge pin at the centre of the rule joint radius. With some test pieces and careful attention to your maths, the joint goes together fairly easily, but it is best approached methodically.

Drop-leaf hinges are made especially long on one side to accommodate the gap caused by the cove on the drop leaf. When laid flat, the hinge pin sits proud of

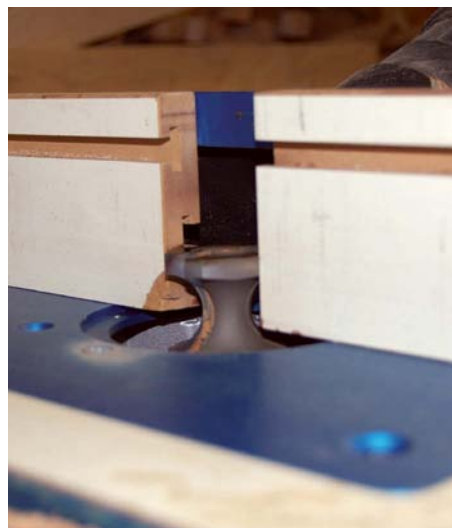
the hinge and it is this distance that will determine where to locate the centre of the radius. In my case, the centre of the hinge pin was 3mm above the base. A matching roundover and cove bit are used for the joinery. For the table top, I used a bullnose radius bit with a radius of 16mm. After compensating for the hinge pin, it would leave a 6mm fillet. With the centre of the radius 3mm above the router table, I set the fence to get the full 16mm radius, but no more. If the bit is proud of the fence, like with a jointer, you will get snipe at the end of the piece. I perfected my setup with several scrap bits, milled to the same thickness as the top, before diving in with the real thing. I saved the successful scrap pieces to match up to the cove later. The bullnose bit is advantageous here as it will establish the return radius on the bottom 3mm of the top. If this is not addressed, it will interfere with the movement of the joint. I then switched to the cove bit and again set the centre of its radius 3mm above the table top and used the fence to stop the cut 16mm into the material. I started a little shy and used my test pieces to work up to

the precise measurement. When the radius is nested in the cove, the top should be perfectly flush.

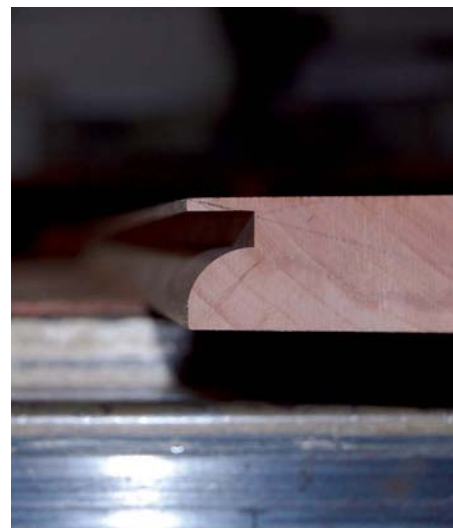
I then set out to embed the hinges into the bottom of the table top and drop-leaves. I carefully marked the three hinges for each leaf and used several spacers to ensure there was a consistent 0.7mm gap between the top and the drop-leaves. I used the actual hinge as a marking guide and traced its perimeter with a marking knife. I then darkened these lines with a pencil. Using a plunge router and a spiral bit with the depth stop set to the exact thickness of the hinge, I cleared away most of the waste freehand. I then squared everything up with a chisel. To ensure the pins of all three hinges were perfectly aligned and parallel to the edge of the top, I used a long straight piece of plywood and a guidebushing to cut the slots for each hinge pin. When completed, the bottom of the hinge should be flush with the bottom of the table and the centre of the hinge pin should be embedded exactly 3mm into the table. Once all the hinges were in place, I took some time to test everything out and enjoy the fruits of my labour.



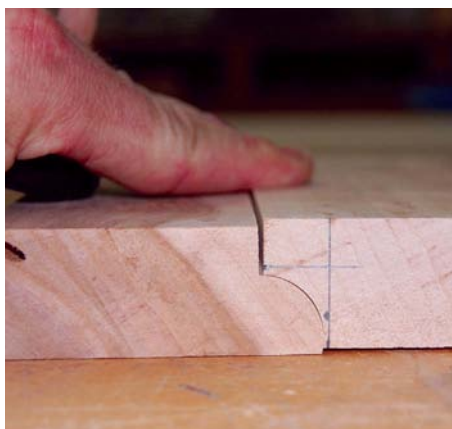
8 The anatomy of a rule joint, with a cove gracefully gliding over a radius



9 The bullnose roundover bit used to cut the radius in the table top. Note how the centre of the radius is slightly above the router table top



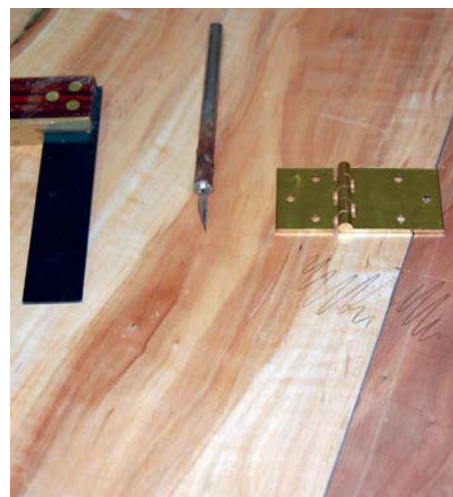
10 The radius cut into the table top. The remaining wood above the fillet can be removed with a hand saw or plunge saw on a guide rail



11 I used test pieces to perfect the setup for cutting the cove – notice how the top is not yet flush. The dimensions of the cove are first marked in pencil and then I worked up to the line gradually, checking after each pass



12 The top with the rule joints cut



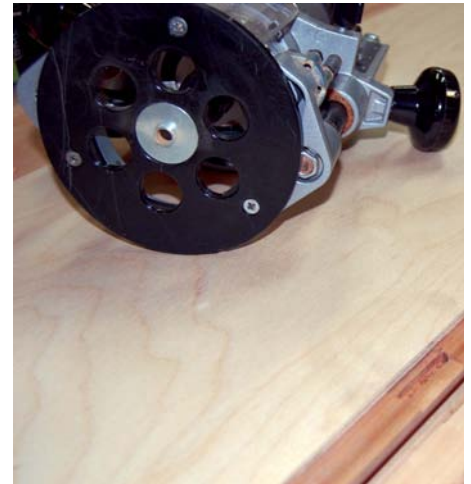
13 Laying out the location of the hinges. Note how the hinge pin sits proud of the flat base of the hinge



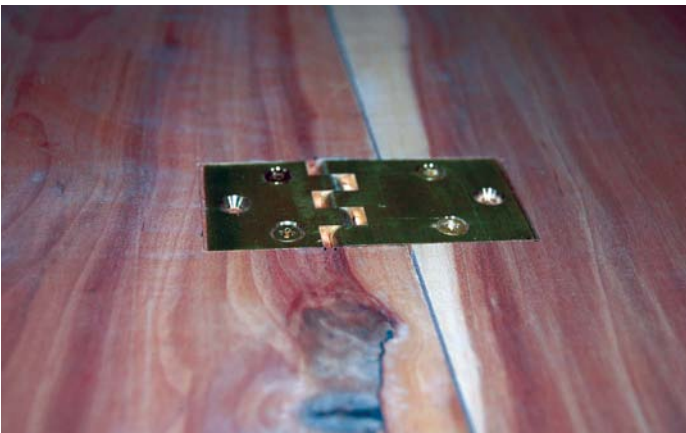
14 I used the actual hinge to set the depth of the router bit before cutting out the recess for the hinge



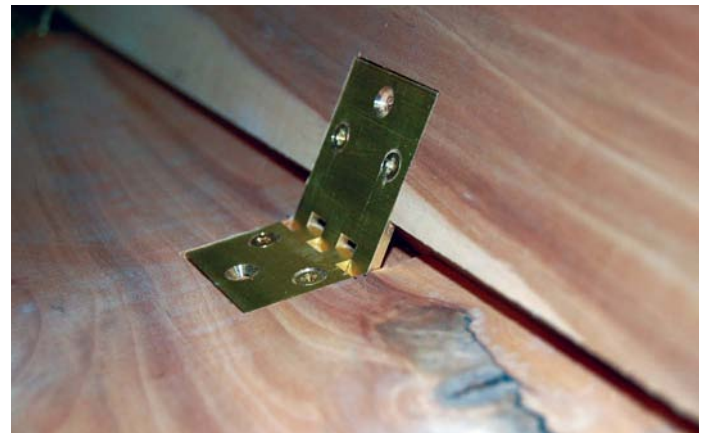
15 I used the router freehand to rough out most of the waste before squaring up the sides and corners with a chisel



16 Using a straight piece of plywood and a guidebushing to cut the recess for all three hinge pins



17 The drop-leaf hinge mounted flush to the base of the table top



18 Drop-leaf up, showing the need for the elongated part of the drop-leaf hinge

Knuckle sandwich

When the drop-leaves are up, they are held in place by four 230mm brackets that pivot out from the table skirt, a knuckle joint hinged with a steel pin is used to accomplish this task. I designed the table skirt with an unbroken inner section that holds everything together and an outer section that includes the drop-leaf support brackets. To highlight the movement involved, I make the inner section out of chinquapin

(*Quercus muehlenbergii*) and the outer section, including the bent laminated ends and brackets, out of the darker English walnut (*Juglans spp.*). Both the inner and outer sections of the skirt are held together with mortise and tenons. I made the skirt 100mm wide to facilitate dividing it later into five 20mm sections for the knuckle joint. Each bracket consists of two parts: one that mortises into the skirt and the other that

pivots to support the drop leaf. I cut both sets of brackets for each side from a single board so the grain would be consistent all the way across. I cut each piece 20mm longer than my finished measurement to compensate for the overlap once the knuckle joints were cut. I was sure to mark everything clearly so I would not confuse the parts later.

Using the router table and a roundover bit, I put a radius on both sides of the end



19 Here is the material for the sides. On top and to the right is the English walnut for the brackets; on the bottom is the chinquapin for contrast



20 The brackets after passing through the roundover and V-groove bit. Next, I used a chisel to round over one side of the V-groove to match the radius on the other side



21 The double mortise and tenon joinery for the skirt. Note how the bracket parts are all numbered and have arrows for orientation

of the bracket that would get the knuckle joint and the outside edge of the piece that anchors to the skirt. I then made a circle using a V-groove bit centred 20mm from the fence and chisels. Rounding over the edges like this allows the bracket to pivot freely once the knuckle joint is cut. Doing this router work before cutting the knuckle joint prevents any chip out between the knuckles.

It was now time to cut the knuckle joints. Like the rule joint, it is imperative that you have several scrap pieces to test out your setup. A great technique for making these components is demonstrated on page 55 of this issue as a follow on from the finger joints explained last month.

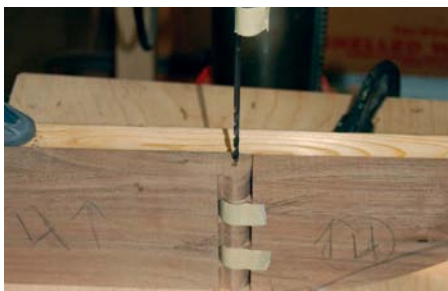
With my finger joints cut, I needed to drill a hole to accept a steel rod that would serve as the hinge pin. I established the exact centre of the knuckles and set up a fence on the drill press to consistently drill out this point on all four flaps. I then placed two layers of masking tape around one



23 Once the knuckle joints are cut and drilled, the part that attaches to the skirt is glued in place



25 The finished table showing the drop-leaf in the up position supported by the brackets



22 Using an elongated drill bit to drill the hole for the hinge pin. The tape on the knuckle joint establishes the spacing between the two parts; the tape on the drill bit is my depth stop

set of knuckles to give me the appropriate clearance for the joint to operate smoothly. I drilled both pieces together in two stages, first using a regular drill bit – mine was 3mm to match the steel pin I was using – and then followed that with an elongated drill bit. The first hole keeps the elongated bit from drifting offcentre. I stopped the hole halfway through the bottom knuckle so the pin does not fall through. I enlarged the top 6mm of the hole so I could pull the pin out later with pliers, should it ever need repairs.

As with all moveable parts, it is important that you test fit and check the operation before finishing. I finished all the movable parts separately and then assembled them afterwards. A little bit of furniture wax ensures the smooth operation of each joint. There is a certain satisfaction that comes from taking a tree all the way through to furniture, made all the sweeter by the effortless movement of the drop leaves and support brackets. *F&C*

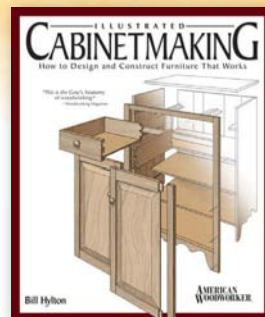


24 Notice the enlarged bore at the top of the knuckle joint to assist pulling out the hinge pin later should the brackets ever need repairs



26 The drop-leaves in the down position showing off the finished look of the rule joint

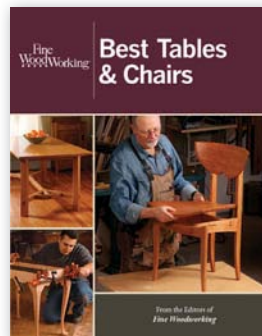
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Router table joinery



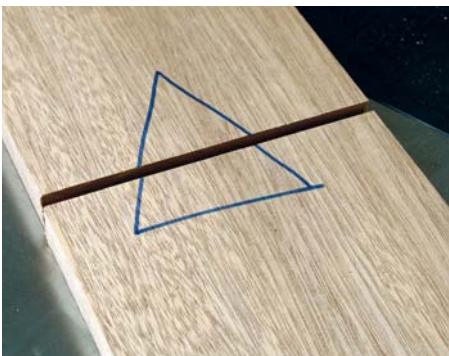
PHOTOGRAPHS BY GAVIN DEERE JONES

The phrase 'two nations divided by a common language' is widely attributed to one of the 20th century's greatest thinkers, George Bernard Shaw. I don't know for certain that he wasn't a woodworker, but if he was, I kind of hope that he might have gone on to reference our different approach to workshop etiquette. I had intended to

hang up my PPE last month after discussing how to machine the finger joint on a router table, but then something happened and here we are again. If you've just read Austin Heitzman's article in this issue about building his drop-leaf table, you'll notice a distinct lack of information regarding the creation of the knuckle joints used to hinge the supports

for the leaves when the table is opened up. There's a reason for that. Our colonial cousins favour the use of a dado set on an unguarded tablesaw for this operation, which, if you weren't aware is a red card offence in the UK. So, we decided to come up with our own method that utilises the main parts of the finger jointing jig.

Right way up



Select timber for both parts of the hinge from the same length of stock



Radius one corner edge on each piece



Use the dimensions of the cutter to determine the size of the locating pin and space

At this point, you may want to refer back to the previous two issues in this series to construct your sliding fence and build a faceplate to suit the scale of this joint. In short, the principle is much the same: the diameter of the cutter is used to gauge the component parts of the joint in width and spacing. Whereas before, we could overset the height of the cutter in

the table to give fingers that required a little levelling off afterwards, the knuckle joint needs to be an exact fit in every plane, width, spacing and height.

If you're going to make these in pairs or multiples thereof, I'd advise you to mark your material so that the parts stay together. I don't recommend you do it

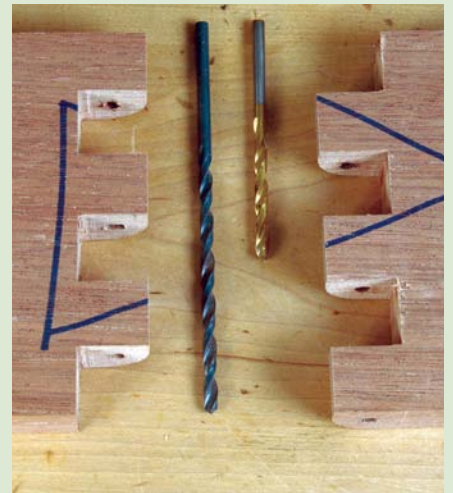
with an indelible marker pen by the way – that's just my way of making sure what I say is what you see. Note we're using the continental marks mentioned by John Lloyd in *F&C 225*. Along two edges machine a quadrant profile with a radius equal to half the width of the material. Remove any fluffy bits or flat sections. ➤

Hinge pin material

If you've done your maths correctly and machined everything accurately, then the hinge pin doesn't really come under any stress in this joint. However, things can go awry if the pin isn't reliably straight and of a constant thickness. Pins made from 150mm nails and the like are neither straight or uniformly sized to be of use, so hunt down some good grade brass rod if you can. I sourced this from our local hobby store and chose a gauge that corresponds with the drills in my collection. 3.97mm is as good as 4mm for this operation but do experiment with different drills to get the best fit.



Select good straight rods to suit your drills



Long series drill bits can wander offcentre so use them after drilling from both sides first

Make the pass

I can't give you exact sizes for your knuckle as this will be determined by the size of cutter and span of the hinge. Needless to say, a small knuckle means more of them and possibly more friction between the moving parts. This may or may not equate to better alignment, but after studying these joints on period pieces, the general rule of thumb seems to suggest that the knuckle is roughly the same size as the thickness of the material. If this can be directly proportioned to the width of the hinge, so much the

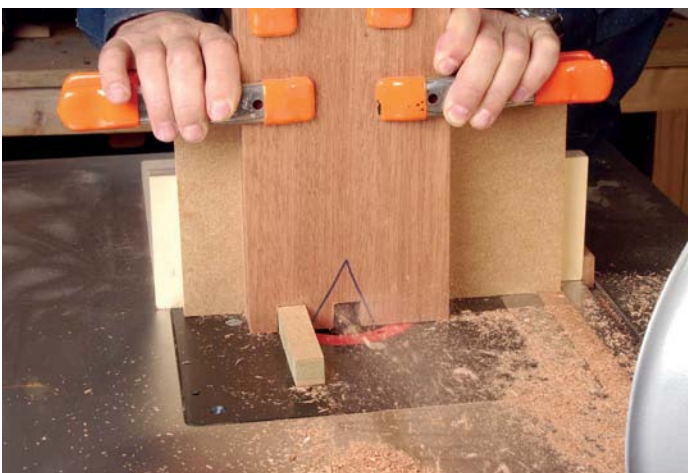
better. In this process you will need to allow for an extra knuckle's width across the board as this will be removed from both halves of the hinge later. If you just accept that the first and last pin are sacrificial then you will have plenty of material in the middle to play with. To cut down on the number of passes, you can gang cut the hinges in pairs. Clamp them together for the duration if you can, or use screws or double-sided tape. A couple of trial passes should tell you where to place your extraction. You will need it.



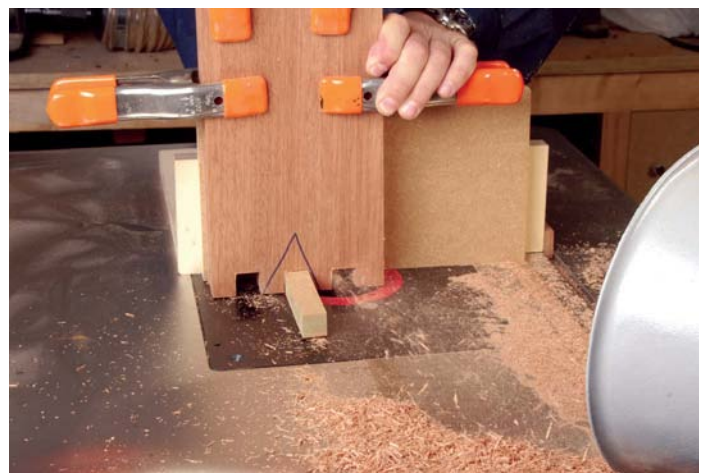
Gang cut the components in matched pairs



The first pass is made with the hinge parts tight up against the pin



Hook the first knuckle over the pin for the second pass



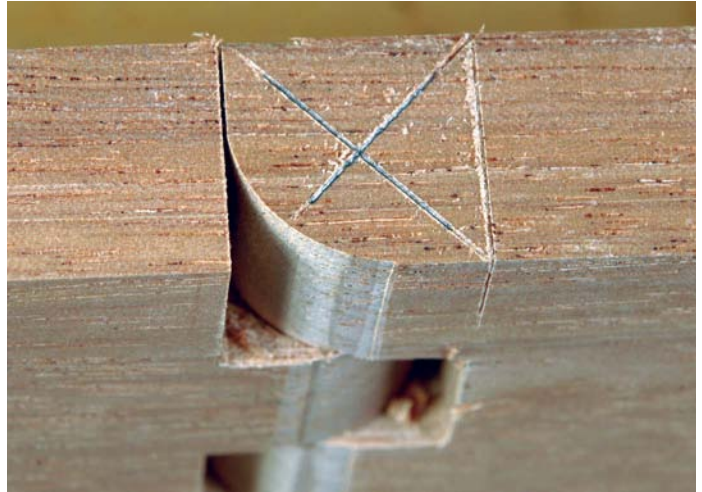
Repeat for the rest of the knuckles

Boring

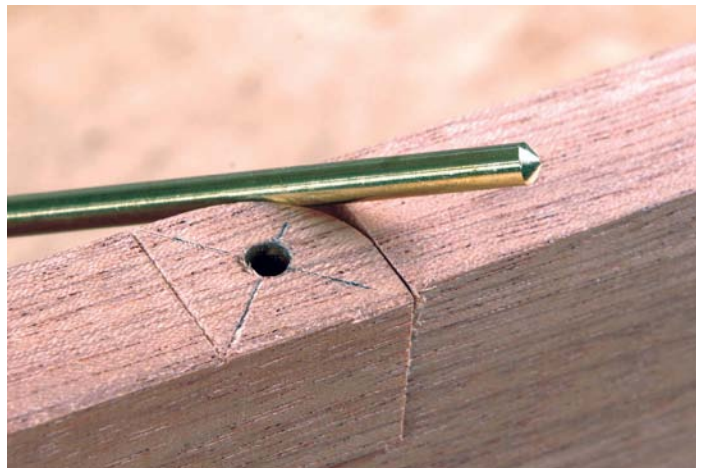
You could attempt to drill holes for the hinge pin by hand but I wouldn't recommend it unless you have a good spotter on standby. Actually, make that a team of world class spotters.

A pillar drill is going to be your best bet, as long as you're happy that the machine is set up to drill accurately. In theory, long series drill bits seem like the obvious choice but if your drill is even slightly out, the problem will be accentuated. You can carry out a few checks to rule this out quite easily. For example, by running the drill in the chuck. If the tip looks like it's oscillating rather than spinning smoothly, then you might want to reconsider. If you're using an old bit, then it could just be that it's slightly bent. If it's a brand-new one, then the machine needs some looking at and we'll cover this important aspect of workshop maintenance in a future issue. If in doubt, drill from both sides with a shorter drill bit.

Whichever method you decide to use, clamp both parts of the hinge together against a tall fence and drill both parts at the same time. The centre for the hole is the centre of the square that defines the knuckle and coincidentally, just happens to be the centre of the arc that forms the radiused edge.



Mark out the centre for the hinge pin



Round over the end of the pin to ease its passage through the hinge



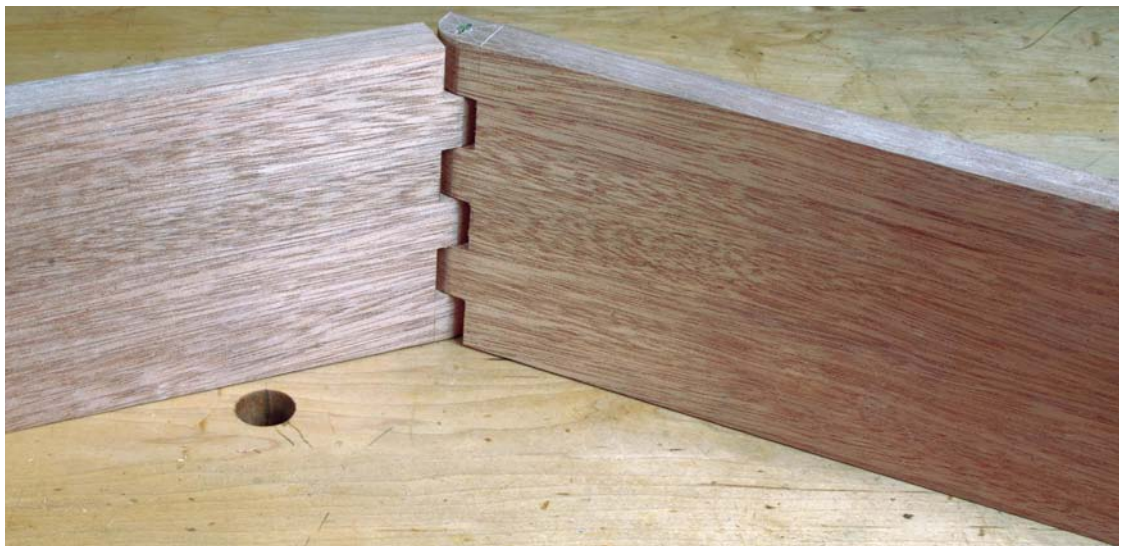
Check your drill for accuracy and drill both parts of the hinge at the same time

After cutting the required length of pin – slightly longer than you need – you can then round over the end that will pass through the holes. It's likely this will be a tight fit and you may find that slightly chamfering the top of each through hole will help to guide the pin on its way. Wiping some wax on the pin will also help.

Placing any stress on a tight fitting hinge at this moment can easily split the knuckles so don't force anything. Instead, dismantle the components and select a drill bit fractionally larger than the one used first time round and run it through one set of the hinge pin holes. Do the top half first and try the fit, then the bottom half.

No return

In operation, this knuckle joint is only ever required to hinge in one direction and probably no more than 90°, so there is no need to radius both edges of the ends or complete the profile into the rest of the hinge. What's more, neither do you have to relieve the internal faces of the knuckle for it to work; the square edges act as a built-in stop. If you'd like to see what I did to prevent the pin from falling through the holes, see my blog at www.woodworkersinstitute.com. *F&C*



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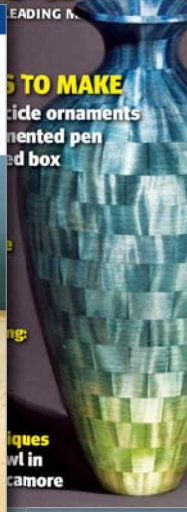
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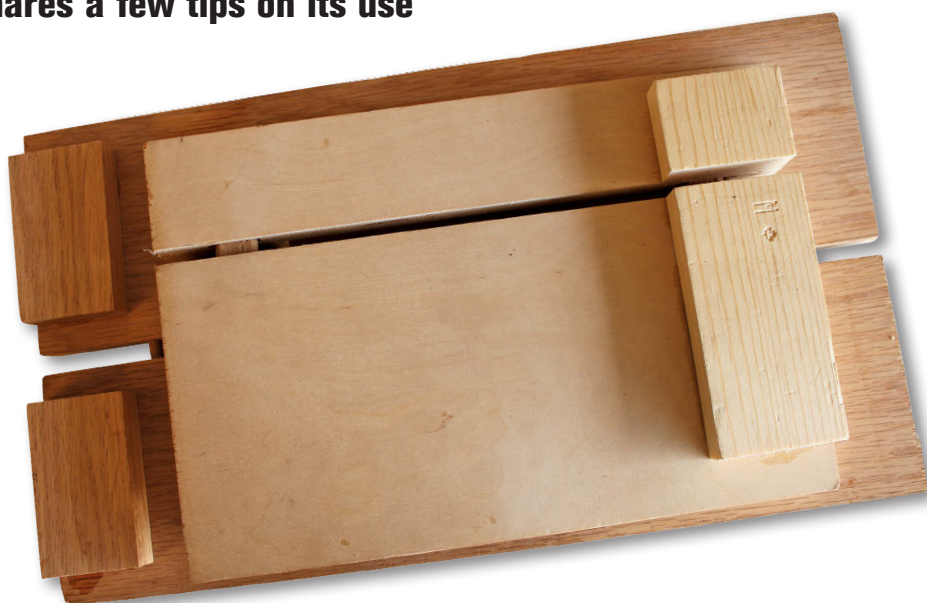


Split bench hook

Charles Mak gives the ever useful bench hook a simple but clever modification and shares a few tips on its use

The first bench jig I made was a bench hook – but as a power tool user at that time, I hardly used it. On a few occasions, I did find it handier than a vice to cut some rods to length with a hacksaw. As my skills and tools grew to include hand tools, I have embraced it as my third hand, for not just sawing, but also some hand planing and chiselling tasks. However, when working with long stock, I had to find a spacer to support the other end.

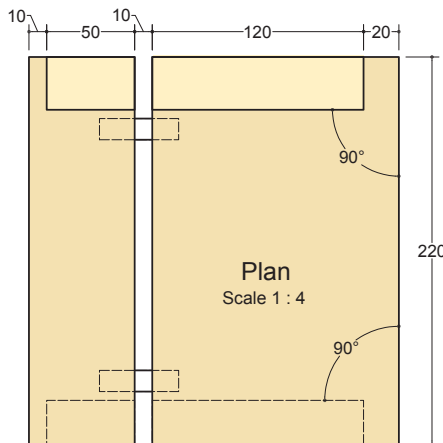
To address this similar problem, Roy Underhill, host of TV's *The Woodwright's Shop*, uses an old style of bench hook, which is actually two narrow cutoff hooks. A good solution, but I wonder which would be quicker to find in my cluttered shop: a spacer or one of the likely misplaced cutoff hooks if I had actually made a pair. Instead, I came up with the idea of a split bench hook that has both the hook and spacer together.



The split bench hook

My split bench hook has four components: the stop or fence, the base, the hook and the arm, which offers support for long stock. Instead of a bench hook in one piece, it is a two-piece set held together by dowels or tenons, consisting of a bench hook and an arm – an identical but narrower bench hook.

You can spice up the bench hook with other features you feel are desirable such as having a 45° slot in the stop, gluing abrasive to the stop/hook to keep the stock from moving, or even adding a toggle cramp on the stop for extra grip. For regular tasks, use the split bench hook in one piece like the traditional bench hook. When you need to support a long stock, pull out the arm. It's that simple.



When separated, the hook and arm handle long stock very well

Making a split bench hook

I prefer plywood boards when making jigs as they are stable, with no concern regarding grain direction and wood movement. The stop and hook are glued or screwed to the base, perpendicular to the edges of the base. As you glue and cramp the stop down to the base, it tends to slide. A nice trick to prevent that is to sprinkle a few coarse grains of salt or sand – from a coarse abrasive, for example – on the base's glue surface before you cramp.

The simplest way to make a split bench

hook is to make one bench hook, slightly oversize in width, and then rip it into two by hand or on the tablesaw. I then used a dowelling jig to drill holes on the sides of the base and arm for the dowels. Glue one end of the dowel into the base and slightly size down the rest of the dowel with sandpaper. Domino tenons will work equally well, but to allow side-to-side flexibility, set the mortise width dial to the middle position to cut slightly wider mortise slots.



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Make sure the dowels or tenons don't fit into the holes or mortise slots too tightly

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Tips on using the bench hook

Sawing straight is a trouble spot for some woodworkers. The pencil line on the stock and the top edge of the stop provide a continuous and longer line that will help align and guide the cross cutting. For beginners, placing a mirror behind the stop will help them check against their technique. Your posture is also important: standing with the leg on the off-hand side forward may help you move your arm in a straight back and forth motion. I have also put together some suggestions – see sidebar opposite – that my students found helpful when they learned how to use a backsaw.

The traditional bench hook is designed for use with Western saws. To use a Japanese-style saw, which cuts on the pull strokes, turn the bench hook around so the hook registers against the far edge of the workbench. To cut pieces, such as dowels, to identical lengths, I secure a clamp to the fence as a stop block. Finally, when one side of the bench hook wears out, simply flip the bench hook over and use the opposite side.



The pencil line on the stock and the stop's edge together give a longer line to align the starting cuts



Flip the bench hook over and use the hook for sawing in pull strokes



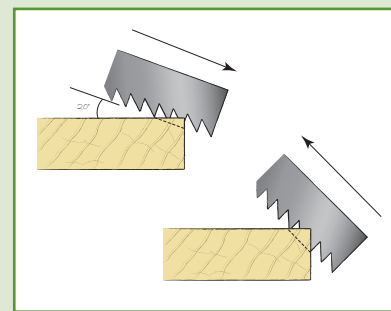
My wooden cam clamp makes a handy stop block when I cut a batch of identical dowels

Tips on controlling a backsaw

1. Holding a saw tightly and exerting a downward force to the saw is the most common reason for hard starting. The weight of a fine saw allows the saw to cut under its own weight. So, hold the saw as if you were holding the hand of a baby and push the saw forward, applying no downward force on the saw.

2. If you still force the saw down too much out of habit, try consciously lifting about one third of the weight of the saw off the stock for the first few cuts and you'll see instant improvements.

3. Lastly, try beginning the cut with a lower angle of the saw, say at about 20°, or with a few backward strokes at the far side of the pencil line. Reducing the cutting angle means less bite, as can be seen in the drawing here. Then, gradually level out the saw and cut with the full length of the blade.



More than the sawing hook



My off-hand holds the stock against the stop as well as pressing the plane down on the cheek



A scrap board raises the thin stock above the bench hook's stop

A bench hook has many other uses. I use it, for example, as a platform for chopping and paring tasks as seen in my previous article on chiselling techniques – see *F&C* 213. The stop on the bench hook can also act as a planing stop for both long grain or cross grain work, such as trimming the

tenon shoulder or cheek. For thin pieces, I raise the base by adding a scrap to the base to reduce the height of the stop. Some woodworkers flip their traditional bench hooks upside down and use them as a small shooting board to shoot ends. Finally, I have seen a bench hook used with the base

covered with a plastic sheet as a make-shift waterstone holder.

For 'experienced' woodworkers like me who have their share of senior moments, this split bench hook will help keep their lists of misplaced or lost workshop tools a little shorter. *F&C*

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blade length	4470 mm
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Shipping	230x860x2080mm

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3 x 2.0 hp class 1 motors

Technical specification:

PLANER:

Max planing capacity:	300 x 220mm
Length of tables:	1500mm
Cutter Block Dia :	70mm
Fence angle tilt:	90° 45°
No of knives:	3 300x20x3
Max Stock removal	4 mm
Feed rate:	7 m/min

CIRCULAR SAW:

Blade tilt:	0° - 45°
Blade diameter:	250mm
Scoring Blade	90 mm
Max blade height 90°:	80mm
Sliding carriage:	1250 x 315 mm

SPINDLE MOULDER:

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Shaft Dia	30 mm
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Max dia of tool	160mm

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Technical Specification:

Fan diameter	300mm
Inlet diameter	125
Inlet holes	2 x 100mm
Air capacity	1490cfm
Bag diameter	500mm
Packing size	920x580x580cm
Motor power	2hp
voltage	240v

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Technical Specification:

Motor power	2hp
Belt dimensions	2473 x 152mm
Belt speed	1033m/min
Main table dimensions	905 x 305mm
Auxiliary table dimensions	290 x 259mm
Platen tilting	0 - 90 degrees



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The IRWIN Marples circular saw blades are top quality, with laser-cut blade bodies and micro grain carbide teeth for a long working life. The blades are PTFE coated with aluminium flakes added to help dissipate heat. The range is extensive and the lucky winners will be able to choose the correct blade size and type to fit their own saw!



How to enter

Send your details on a postcard with the title 'IRWIN chisel set & circular saw blade giveaway' to *F&C* reader giveaway, 86 High Street, Lewes, East Sussex BN7 1XN. The closing date for the competition is 31 Dec, 2014

The competition is open to UK residents only. Only completed entries received by the closing date will be eligible. No entries received after that date will be considered. No cash alternatives will be offered. The judges' decision is final and no correspondence can be entered into. The winner will be expected to be in possession of *Furniture & Cabinetmaking* magazine. One entry per household. Employees of GMC Publications, their associated companies and families are not eligible to enter. By entering the competition, winners agree to their names being used in future marketing by GMC Publications, unless you mark your entry otherwise.

Woodworking In America 2014

Anne Briggs Bohnett goes backstage at WIA14



As I walked into the Benton Convention Center in Winston Salem, NC for Woodworking In America 2014, I was met by the smell of fresh sawdust and the low rumble of conversations around me paired with the tinkling of hammers, the 'shoop-shoop-shoop' of plane shavings being taken, and the high pitched hum of a few power tools. I was immediately met by Megan Fitzpatrick, Editor of *Popular Woodworking* magazine and she gave me a hug. As a girl in woodworking, Megan is the embodiment of my dreams. She has gained a skill and success matched by few of either gender. Starstruck, I think I muttered something about cats and how she was my idol. I'm choosing to pretend that we had a very engaging conversation about woodwork and that I didn't look like a total idiot!

A social event

Her hugs were followed by those of 'friends' I'd met on the social media website Instagram. We all greeted each other as old friends would, even though this was the first time we'd ever actually met in person. After introductions, I decided to do a walkthrough of the marketplace. By 6pm, when the doors

were to close, I'd only made it to six of the 55 vendor stalls. Everywhere I turned, there was a new friend to be made, a new tip or trick to be learned and memories were made during those three days that will last a lifetime. Never have I come across a group of such genuinely amazing people.

The grand unveiling

Day two started with a bustle of activity as people attended classes, shopped in the marketplace, made new friends and ogled all the pretty tools. The Lee Valley booth had a curious looking bench with boxes labelled 'Top Secret' and 'Project X' chained to its top. A countdown till high noon on Saturday piqued the curiosity of everyone. Megan Fitzpatrick and a few other high profile woodworkers had alluded to a big reveal to come from Lee Valley during WIA, so when 11.30am on Saturday rolled around, a crowd began to form around and anticipation of the announcement added a palpable tension to the air.

After much anticipation, Robin Lee, president of Lee Valley Tools, stepped up to the bench, unlocked the chains and opened the first box. Inside, was the



PHOTOGRAPHS BY ANNE BRIGGS BOHNETT

Anne with Ron Hock and Linda Rosengarten from Hock Tools

culmination of three years of intensive work and development, resulting in their new line of completely customisable bench planes.

Robin called the new line 'the Build-A-Bear' of tools. The new line of Veritas custom bench planes will be available in sizes 4, 4½, 5, 5½, and 7. From surface prep to jointing, these planes will be able to handle any planing task. The planes feature a Norris style adjuster, an adjustable toe and holes in the plane body casting to which a fence can be mounted. Knobs and toes are also available in various sizes and widths, so the user can select their favourite handle preference. Standard



Chris Kuehn and Todd Nebel from Sterling Tool Works



There were plenty of shavings to be seen



Lee Valley and Veritas' top secret display

frog angles of 40, 45, and 55° should cover most applications, but – and here's where they really shine – frogs can also be custom ordered at any angle between 40 and 65° in .5° increments. Blades can be ordered in either O1 or PMV steel.

I had the chance to spend about 45 minutes using each of the different planes and was very impressed. I spend the majority of my time using vintage tools, so the engineering and precision of Veritas tools is always a nice surprise. One aspect that stood out to me was the weight of the planes themselves. Upon first glance, they appeared much lighter

than they actually were. A nice, thick, rounded chunk of steel behind the frog is both visually appealing and greatly adds to the heft of the plane, making it easier to control, capable of entering and leaving a cut with less tear-out, and yet, not so heavy as to tire the user out after hours of use. All in all, this is a very slick idea and a great new line of planes. The launch went very well with the crowd.

The man behind Veritas Tools

What followed was my most memorable experience at WIA. A little nervous about talking to another woodworking 'celebrity',

I approached Robin Lee to ask him a few questions with regard to this article. As we said hello, my nerves were instantly calmed. He was so approachable, so genuine and kind. Having purchased many Veritas tools, I have, on multiple occasions personally experienced their amazing customer service. Meeting Mr. Lee, I began to understand why they have such a quality customer service.

Robin Lee cares deeply about his product and customers. Not once in our conversation did I hear anything about a 'bottom line'. Instead I repeatedly heard his desire to provide heirloom quality tools at affordable



There was a superb selection of hand tools to see and buy



Robin Lee and the brand new range of customisable planes

prices. In an increasingly digital age, so many people work all day at a computer and never get to see the physical results of their labour. His desire is to get working tools into the hands of everyone with an imagination so they have a chance to feel the incredible sense of accomplishment that accompanies producing physical goods with one's own two hands.

Our conversation wandered away from the customisable planes to travel in China and other places, how I got my start in woodworking and our mutual desire to encourage and inspire the younger generations to put down their digital devices and pick up a tool or two, to create, even if for just a few hours a week. I walked away from the conversation feeling so excited and inspired and I knew I had made an incredible new friend. I would never have expected the president of such a huge, influential company to be so genuine and down-to-earth. I hope everyone reading this article gets a chance to meet him someday.

A great line-up

Other convention worthy mentions were the drawing for the Fred West Commemorative Tool Chest – a beautifully made tote by Andrew Gore filled with hand tools and media donated by 16 individuals/organisations – and the *Popular Woodworking* Jet bandsaw giveaway. Congratulations are in order to Carl C. Hein, who walked away with the Tool Chest, which, with its contents, was valued at over \$5,000 and to Todd Nebel, whose truck looked pretty stylish driving away with that 430mm bandsaw in the back.

In addition to the giveaways, off campus meet ups and Marketplace fun, WIA14 offered a stellar lineup of speakers, bragging such names as Roy Underhill, the PBS hand tool woodworking star, Frank Klausz, Graham Blackburn, Don Williams, and Peter Galbert. While I wasn't able to attend any of the classes, I had the chance to meet Roy Underhill, who is responsible for much of my hand tool woodworking knowledge. My impressions in our brief meeting were that he is just as jovial, personable and fun



The Fred West Commemorative Tool Chest

to be around as he seems on screen and that he's much taller than I expected!

WIA 2015

As the convention drew to a close and we all packed up to leave, we knew none of us were saying goodbye, we were saying "see you later" to new friends from a life changing experience few of us will soon forget.

For those that love the solidarity of woodworking, who cherish the unique independence and self-sufficiency being a lone woodworker gives you, and who want to celebrate their accomplishments privately, carry on. For those who want to be part of a rich community, where knowledge is shared freely, where you can laugh with new and old friends, nerd out over tools, techniques and woodworking celebrity, where one can find the tools and encouragement needed to build their own masterpieces, please join us at WIA 2015. Woodworking, for me, will never again be a solitary craft. *F&C*



Marco Terenzi and an impressive plane



Just some of the Vesper tools on show



Jason Thigpen of Texas Heritage Woodworks



Hand tools aplenty – such a refreshing sight

Details

The dates of next year's event are yet to be finalised but we will bring you more details when they are made available to us.

Contact: Woodworking in America

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Chris Vesper, of Vesper Tools, Australia

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25 DECEMBER

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Wicked Boxcar

We meet Toby Hardman and Nishma Yadave of London-based Wicked Boxcar



PHOTOGRAPHS BY NISHMA YADAVE

Toby Hardman and Nishma Yadave are the husband and wife team working under the name Wicked Boxcar. The couple opened up a small woodworking shop in the foothills of the Rockies, USA around four years ago. In the summer of 2013, however, they moved back home and continue to run their business in London. The workshop, just outside London, is where Toby and Nishma design, create and sell their pieces, the world over. Wicked Boxcar believe that furniture must tell a story, from its conception, to the sourcing of materials, to the homegrown crafting.

F&C: What are you working on at the moment?

WB: We're juggling around 10 projects at the moment – of these, we're particularly passionate about a 2m bookmatched elm (*Ulmus procera*) slab; felled in Northumberland – the timber is truly stunning. The other projects are almost exclusively made from reclaimed boxcar flooring. The beauty of working with reclaimed timber is that you never know what character and patina you'll unearth when the top layer of the onion is removed.

F&C: What's the tool you can't do without?

WB: The sander is the one tool that all others pivot around. It's a 10 tonne wide belt sander that sits in the centre of the 'shop and helps us out when our arms are aching!

F&C: What's the last piece of equipment you bought?

WB: We just invested in a loose tenon mortiser – what a beauty! It was the Festool Domino XL.

F&C: Classic piece – nominate a classic piece of furniture from any period – bespoke, mass produced, studio furniture and tell us why it's so special.

WB: For us, it has to be the hairpin leg. Designed by the Austrian Henry Class in 1942, it was born out of the need to create functional components from limited resources – all the rage around the time of World War II.

F&C: Why did you become furniture makers?

WB: We've always been drawn towards design, interiors and business. In terms of Wicked Boxcar, the craft essentially found us and has been growing organically over the last four years. Many moons ago,

Toby came across some reclaimed oak (*Quercus spp.*) flooring and decided to build a table for our new home in Boulder, Colorado. We decided to sell it online and it was snapped up in days, so we built a new one and things just picked up from there.

F&C: What inspires you?

WB: Building stuff! From the very beginning we've loved the creative process and making ideas a reality. It's addictive... everyone should give it a go!

F&C: If your furniture were music, what kind of music would it be?

WB: Soul. Understated cool, meets heartfelt beats.

F&C: What do you admire in the craft at the moment?

WB: Hobbyists picking up tools and being inspired by personal projects. Everyone should get involved... there is something deeply satisfying about creating something beautiful.

F&C: Who has been your greatest mentor/role model?



Coffee table in reclaimed maple with striking blue inlay



Oak desk made from reclaimed cargo train oak with industrial steel legs



Oak entry table in reclaimed charred oak

WB: Being a husband and wife team, we've developed and learnt together along the way. It's not a combination that would suit everyone, but it certainly works for us.

F&C: What comes first, design or technique?

WB: Design always. Once you have the idea, you can hone the technique!

F&C: Are we too obsessed with outdated modes of work?

WB: Not on our watch! We've developed a 21st-century approach to carpentry, which combines speed with effectiveness. We haven't been heavily influenced by old school technique – our industrial approach to design dictates a new method of construction altogether.

F&C: How or where do you exhibit your work?

WB: Our presence is entirely online; we don't physically exhibit our work at a showroom or retail outlet. We encourage all our customers to visit our workshop; however, given the time constraints of modern life, the majority are confident to purchase online. Given that we combine

the manufacturing and retail process, our overheads are reduced and this saving can then be passed directly onto our customers.

F&C: How comfortable are you with working to someone else's design?

WB: Perfectly comfortable. For us it is about respect. Respect those around you and be creative yourself. No idea is unique – all design comes from something before it – there is no ownership. In this environment, it is only respect for others that ensures we all grow together.

F&C: What's your creative process like?

WB: We are constantly designing in the workshop – in physical form. That's not to say we don't sketch things up, but we feel that until it is real it is not understood. So many times we've had a fantastic idea that we've scrapped as soon as it's built.

F&C: Do you consider yourselves artists or craftspeople?

WB: Put simply, we love to design and make things. I'm guessing this would make us craftspeople? Or perhaps a combination of the two...

F&C: What's the practical process you undergo when moving through the stages of a project?

WB: Design – select timber – repair – cut – repair – glue – repair – sand – spray – assemble – photograph – package – ship.

F&C: Do you think furniture making is in danger of disappearing?

WB: Entirely the opposite. We began the business in the US and found a groundswell of feeling rising against mass production/laminate/China imported furniture. That movement is coming to Europe... crafting has a bright future and we're confident it's here to stay.

F&C: What advice would you give to someone starting out?

WB: Tap into the true beauty of what it is you create and respect the individuals that believe in you – and buy! If your price is right, then you will be successful.

F&C: What irritates you about the industry?

WB: Workshop owners placing too much emphasis on profit and not enough on their duty to pass the craft onto youngsters, while paying them an honest wage. *F&C*

Contact:

Email: info@wickedboxcar.com

Web: www.wickedboxcar.com

Workshop library

Barrie Hope reviews *Furniture for the Future* and the classic *Swedish Carving Techniques*. Our website of the month is Tom Fidgen's *An Unplugged Life*

BOOKS



This book is an unashamed exposition of ecological rectitude. The last section is devoted to furniture with a close eye on sustainability and the use of recycled materials. Over half the book is devoted to coverage of the author's beliefs about ecology and his exploration of how to solve the world's environmental problems. The coverage is

extensive and thorough, his theme and question being 'why is humanity taking the path to oblivion?'

He follows with a review of 17 designers and makers who have ecology as a major motivation in their work. Eco-designer Max McMurdo, for instance with his handmade shopping-trolley chairs and bathtub sofas or Ptolemy Elrington, billed as 'possibly the best hubcap artist in the world'. Closer to home, Sebastian Cox, an English designer-maker specialises in chairs traditionally made from coppiced hazel (*Carya spp.*) sticks, a process which preserves the living tree. His products are sold by the prestigious Liberty store in London's Regent Street.

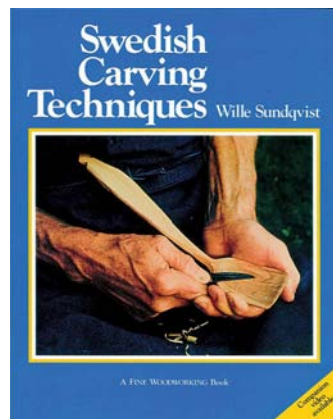
Tristan's survey of materials and design includes a useful description of eco-furniture

options and the benefits of natural, renewable materials including strawboard, hemp board, recycled plastic and glass. His page on wood is eye-opening with statements like 'approximately 80% of timber from the Brazilian Amazon is logged illegally', and 'the lack of governance and law enforcement means that murder, violence, slavery and the illegal occupancy of public land are widespread in the Amazon'. This is uncomfortable, perhaps too much information for the furniture and cabinetmaker.

The book ends with examples of furniture designed and made by the author from eco-friendly materials at his company Custom Carpentry. These include a home-office constructed from non-formaldehyde-glued 'Flexi-Straw' and the 'Milo' table, which is made from recycled timber offcuts.

Altogether this is a thought-provoking, insightful exhaustively researched, fascinating book and a 'must read' for anyone who is interested in carpentry, sustainability and adopting an eco-friendly lifestyle. Definitely worth a read.

Published by Tristan Titeux
175 pages £25
ISBN: 9780992750909



This book has apparently been the 'bible' of Swedish woodcarving in the English language for a long time. First published in 1990, it went out of print and the advertised second-hand price reached hundreds of pounds before the publishers were persuaded to reprint it. A slim volume with slightly murky photographs, typical of their time, it nevertheless contains a wealth of useful material.

Examining the 'contents' page one is impressed with the range and diversity of information. Tools including knives, axes, hatches and adzes are described, together with specialist instruction on other carving tools, how to make handles, edge protection and safety procedures. The equipment section is complete with sharpening, grinding



In his book, Tristan talks to various sustainability conscious designer-makers

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Website of the month

An Unplugged Life



We're going to use this as just a preliminary review of Tom Fidgen's brand-new membership site, as at the time of writing this, it had literally just launched. We were lucky enough to

get the opportunity to try the website for a month, get a feel for what it was all about, and experience things for ourselves. So what follows here is really an overview of what you can expect to see and get from the website. Tom explains that 'An Unplugged Life' is designed to inspire you to get offline, slow down and work smarter with your hands and heart. He goes on to tell us that this concept has been growing for the past few years and he decided it was high time to make it a reality. In his words: "Every week, I receive dozens of emails from people around the planet, asking specific questions about my creative process, woodworking techniques, custom furniture options and ideas, as well as my personal opinions about specific hand tools and manufacturers."

Tom's blog welcomes tens of thousands of visitors each and every month, from 146 countries worldwide. Members of the site will not only learn how Tom does the work he does, but more importantly, he will teach you why; this is what makes an unplugged life unique.

In terms of becoming a member, just some of the things you'll learn include the fundamental skills of hand tools; from the essentials to the setups, practice techniques and then master them; the truth about sharpening – from the angles to the jigs and all of the folklore, theory and snake oil that goes along with them; wood selection, where to get it, what to look for, how to buy it and how to dry it and how to dimension rough lumber and how to finish it so it lasts for generations.

You will also get access to exclusive weekly episodes as well as projects and plans, detailed instruction and cutting lists. You will also get PDF downloads and diagrams, which are only available via the website.

Full details of the membership packages available can be found on the website, but they start from just \$20 (£12.53) for a month's access. Have a look for yourself and join the ever-growing community.



Details
Web: www.anunpluggedlife.com



Carving spoons and ladles is shown in great detail



Sharpening techniques for carving tools are also covered

and honing techniques.

In terms of actual carving projects, each one is used to illustrate a particular tool or technique. Axe and adze work is used to produce a dough bowl and consists of roughing out the blank, shaping the inside, roughing the outside and finally smoothing the bowl. The initial design work of the bowl is covered in detail and there are some impressive photographs of work with the adze, particularly one in which the tool is swung over a low bench between the legs of a man in shorts.

A delightful range of butter paddles are illustrated, making which are recommended as a good way of learning the basic

grips and techniques of carving. These include power strokes and the chest-lever grip for working away from yourself. Several different techniques for carving towards yourself are described such as the simple pull stroke, the reinforced pull grip, the draw grip and so on. The instructions for these different grips are painstakingly and impressively described and illustrated.

It is not difficult to understand why this book has become such a 'must-have' for the carver in the Swedish tradition and it is thoroughly recommended.

Published by Fine Woodworking
144 pages \$24.95 (£15.52)
ISBN: 9781627106733



Each of the spreads is well illustrated. Here the author is making a dough bowl

Furniture & cabinetmaking

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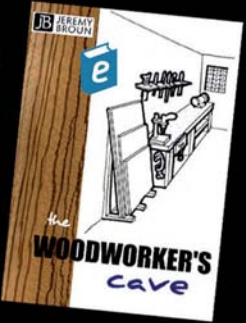
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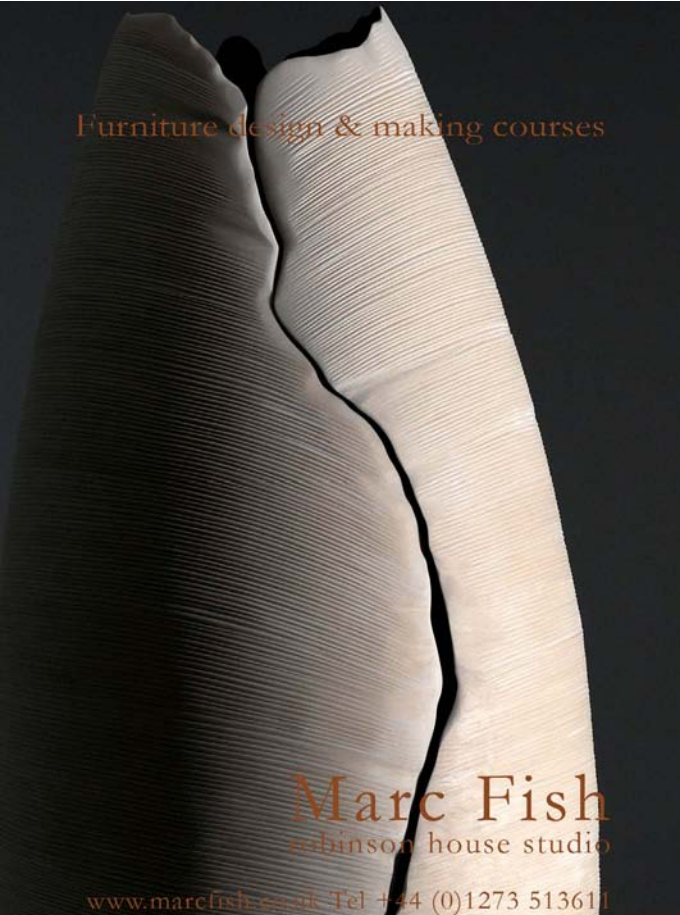
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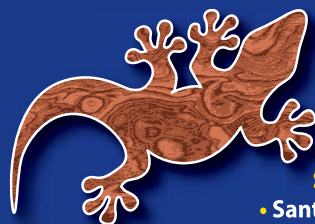
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UNDER THE HAMMER:

Late 16th-century Augsburg marquetry cabinet

Earlier this year, this stunning south German late 16th-century ash, elm and fruitwood Augsburg marquetry cabinet went under the hammer at Bonhams, London

This example of a late 16th-century Augsburg marquetry cabinet went under the hammer earlier this year as part of Bonhams' New Bond Street's Fine European Furniture, Sculpture & Works of Art sale. It sold for an impressive £13,750 and features a hinged top above a compartment, which comprises two small drawers to each side. The fall front opens on to an interior with five dummy drawers to the top, above which are a further six drawers and above those a pair of doors flanked to each side by a further door and a small drawer. The piece is inlaid overall with architectural ruins, birds and foliage and the front features a medallion depicting a cherub and a dog. The cabinet is on a stand and has baluster-shaped turned legs and bun feet. The piece measures 930mm wide × 450mm deep × 1,315mm high. The overall height of the cabinet alone is 590mm. For more information on this and similar pieces, see www.bonhams.co.uk. *F&C*



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Detail of the cabinet showing marquetry

The marquetry is also present on the cabinet's interior



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