Furniture &cabinetmaking

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

Masters in the making

Behind the scenes at Williams & Cleal

Tight mouths
Over-rated or misunderstood?

David Barron's tips for creating **Decorative Dovetails**

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TLC for scrapers

It's all Greek to me
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Jenny Bower
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Create perfect countersinks every time

Panel Saws

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K3 winner comfort

Planer-thicknessers/Planers/Thickn

A3 41

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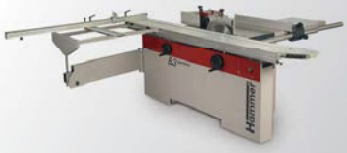
Saw Spindle Moulder



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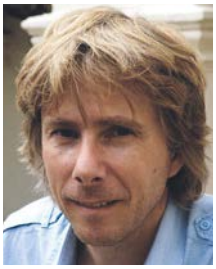

Welcome to...

... my inspiration

Now you might think that I select the content for the magazine each month with a single goal in mind; keeping the customers satisfied. If anyone upstairs is listening, of course that's always a prime consideration, but it's not the only way to ensure we cover all the bases as best we can and as often as we can. You see there's a recurring theme that runs through every issue and it goes something like – if I'm interested then there's a fair chance somebody else will be as well. The good news is I've got the attention span of a gnat, which is as much a curse as a blessing, but the very good news is; whatever… we haven't got time for that now because I want you to hop on over to page 28 and an article on a subject that we don't cover that often in *F&C*.

This one's a treat and it's on me. If you get bogged down trying to remember how to tell the difference between a *cyma recta* and a *cyma reversa*, then our introduction to carving architectural mouldings will not disappoint. And neither will our project from David Barron this month, Decorative Dovetails. David has a knack for making complex tasks look easy and that's always a good sign when you're looking for good tips – find his article on page 20. Continuing with the decoration theme I returned to a familiar project this month in order to get my houndstooth dovetails up to scratch in preparation for a class at the Dictum workshops in Munich in May. Structurally I'm not sure they are an advantage, but they do have the appearance of being a technical challenge and therefore potentially a sign of good craftsmanship.

Our roaming reporter this month is Kieran Binnie, who we dispatched (virtually) to Michigan to interview Jenny Bower. Jenny's self-imposed raison d'etre is to emboss everyday plain and simple objects with a flourish, referring to it as unnecessary embellishment. Is there any other kind you ask? I do hope not.

One last word, whatever you do don't skip the back page interview with Robert Ingham. As the Principal at Parnham for more than 20 years he has coached some of the most successful designer-makers of our time, who are now inspiring a new generation of craftsmen. I've been your guide for the last five minutes now it's up to you to go and explore knowing that I can, with the utmost certainty, say that this month I have been inspired, informed and entertained to within an inch of the edge of my squeaky office chair. And if you're not similarly affected please write in so I can have you removed from the Christmas card list.

Perfecting dovetails

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Furniture &cabinetmaking

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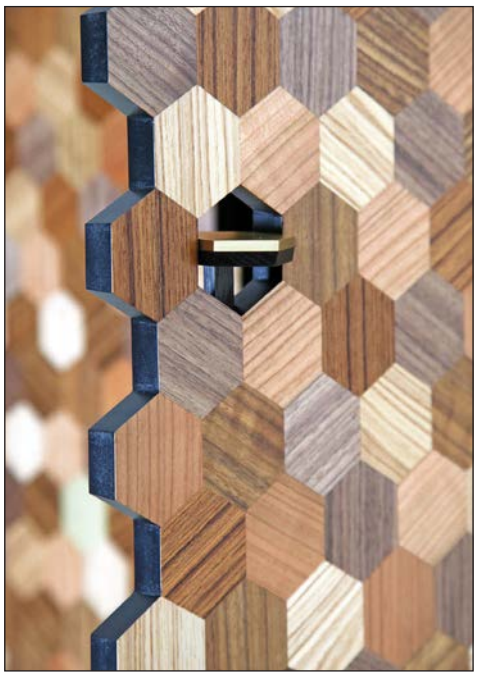

Hexagonal Drinks Cabinet by Damian Robinson – see page 36
Front cover image courtesy of Williams & Cleal Furniture School

Your *F&C*

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

Design & Inspiration

Projects & Techniques

News & Events

Contribute to these pages by telling us about matters of interest to furniture makers. Call Derek Jones on 01273 402 843 or email derekj@thegmcgroup.com

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

The Furniture Awards 2017

THE FURNITURE AWARDS

The Furniture Awards took place at the January Furniture Show

PHOTOGRAPHS COURTESY OF FURNITURE NEWS

Varzzy Stories by Evanyrouse was Highly Commended in the Dining Category

The Furniture Awards 2017 were presented at this year's January Furniture Show. Developed by *Furniture News* magazine in partnership with the show's organisers, The Furniture Awards offer the show's exhibitors the opportunity to put the best of their new products before a panel of expert judges from the world of furniture retail and design.

The awards are co-ordinated and chaired by Paul Farley, editor of *Furniture News*, and the 2017 judging panel comprised: Malcolm Walker, director of buying for Furniture Village; Diana Celella, award-winning interior designer and president elect of SBID; Rob Scarlett, furniture designer; and Royce Clark, MD of Grampian Furnishers.

This year's winners, chosen from a highly competitive shortlist, included: concept me by Nolte Möbel (Bedroom Category), Dartmoor, Cottonsafe Natural Mattress (Highly Commended in Bedroom Category), Brunel by Bentley Designs (Dining Category), Varzzy Stories by Evanyrouse (Highly Commended in Dining Category), Gatsby sofa by Tetrad (Living Category), BB easy chair by Asiades HK (Highly Commended in Living Category) and New Jersey Print by Flair Rugs (Decor Category).

Contact: Furniture News & The January Furniture Show
Web: www.furniturenews.net & www.januaryfurnitureshow.com

The Furniture Makers' Company launches new Apprentice Award

The Furniture Makers' Company, the furnishing industry's charity, is calling for entries for a new award that will recognise the efforts and career progression of apprentices working in the furnishing industry.

The Apprentice Award is open to anyone studying and working towards a retail, manufacture or service apprenticeship at a UK furnishing company. Companies are invited to nominate apprentices working within their business who have made exceptional progress and demonstrated a commitment to pursuing a career in the furnishing industry.

The judges of the new award will be Tony Smart, Master of The Furniture Makers' Company 2017–18; Paul von der Heyde, chairman of the Manufacturing Guild Mark; Karen Clarridge, HR manager at Whitemeadow; Julie Dix, training and development manager at Silentnight Brands; and Caroline Gascoigne, learning and development manager at DFS.

The deadline for applications is 19 May 2017. Apprentices that are shortlisted will be invited, with a representative from their company, to make a brief presentation to the judges during a judging day at Furniture Makers' Hall in London in June. The winner will be presented with the award at the Company's annual Royal Charter Dinner on 26 October 2017.

Contact: The Furniture Makers' Company
Web: www.furnituremakers.org.uk

Shared wood workshop opens near Bristol

Are you looking for a shared space to work, create and share with like-minded creative people? Then North Corner Makers might be the place for you. This brand-new woodwork shop situated just north of Bristol is available for you to work with other highly skilled creatives, woodworkers, fine furniture makers, cabinet makers and designer-makers.

The 2000 sq ft workshop is equipped with a brand-new Felder tablesaw, Felder planer thicknesser, Felder spindle moulder and a Felder bandsaw. Bench space is available for three full-time makers at £500 per month, to be part of the main workshop with seven-day access. Bench space can also be hired by the day or week. North Corner Makers will help develop and advertise the makers within the space by holding regular exhibitions and open days. The workshop will also be used to host classes on machine safety, box making, spoon carving and more.

North Corner Makers has been set up by husband and wife team Jim and Jo Sharples. "We hope that NCM is an ideal place for people to start up their business, and indeed a perfect place for established makers to trade from because it is well kitted out and a modern, safe and clean environment in which to work."

Contact: North Corner Makers
Web: www.northcornermakers.co.uk

PHOTOGRAPHS COURTESY OF NORTH CORNER MAKERS

North Corner Makers has been set up by furniture makers Jo and Jim Sharples. Space at the machine shop is available to hire full time or by the day or week

FIRA and FRQG publishes new standards for children's furniture

The Furniture Industry Research Association (FIRA) in conjunction with the Furniture Retail Quality Group (FRQG) has published four new standards relating to children's furniture.

The four revised documents relate to children's domestic furniture's general safety requirements; and children's seating, tables and storage's requirements for strength, stability and durability. Updates to the general safety document, seating and tables documents mostly centre around updates to standard references. In light of recent safety reports the changes to the document for storage furniture enhances the requirements for wall attachment devices and warnings relating to ensuring storage items are attached to the building.

The standards, which are free to FIRA members, are available from www.fira.co.uk/publications/guides. Non-members can purchase copies from the TRADA bookshop at bookshop.trada.co.uk

Contact: FIRA
Web: www.fira.co.uk

£2.8 million fine for furniture parts cartel

Two firms that make furniture parts have agreed to pay fines totalling £2.8 million for illegal cartel activity, after a Competition and Markets Authority (CMA) investigation.

The companies, which supply drawer parts to well-known furniture manufacturers such as Silentnight, have admitted that they broke competition law by agreeing not to compete on price and sharing out which customers they would supply – reducing customer choice and giving the appearance of competition where there was none.

Thomas Armstrong (Timber) Ltd and Hoffman Thornwood Ltd have agreed to pay the fines after admitting market sharing, co-ordinating prices, bid-rigging and exchanging commercially sensitive information.

Another manufacturer, BHK (UK) Ltd confessed its involvement in cartel activity shortly after the start of the investigation and will not be fined, provided it continues to co-operate with the CMA, and complies with the other conditions of the CMA's leniency policy.

Contact: CMA
Web: www.gov.uk/government/organisations/competition-and-markets-authority

INSPIRED exhibition returns in May

This May will see the much-anticipated return of INSPIRED – the luxury contemporary silverware and furniture selling showcase at the Goldsmiths Centre during London Craft Week.

This exhibition brings together some of the UK's finest and up-and-coming silversmiths and furniture makers in one unique curated platform. Furniture makers attending the show include John Makepeace, Toby Winteringham, Matthew Burt, Halstock, Sarah Kay and Edward Wilde, who is working on a collaboration with silversmith Karen Wallace especially for the show.

All of the furniture designers exhibiting hold The Furniture Makers' Company's coveted Bespoke Guild Mark – the foremost award for excellence in design, materials, craftsmanship and function for pieces made as single items or a limited run of up to 12.

Contact: The Furniture Makers' Company
Web: www.furnituremakers.org.uk

PHOTOGRAPH COURTESY OF THE FURNITURE MAKERS COMPANY

Angled desk by Matthew Burt

Events

Information correct at time of publication, check websites before planning your visit

The Midlands Woodworking and Power Tool Show

EVENT OF THE MONTH

The Midlands Woodworking and Power Tool Show, which takes place at the Newark Showground, is now in its fourth year and is certain to be a very enjoyable day out with 50 companies exhibiting and over 20 demonstrators showcasing woodturning, carving, chair making, marquetry and more.

When: 24–25 March 2017
Where: Newark Showground, Lincoln Rd, Winthorpe, Newark NG24 2NY
Web: www.nelton.co.uk

PHOTOGRAPH COURTESY OF THE MIDLANDS WOODWORKING AND POWER TOOL SHOW

Woodworker April Wilkerson will be demonstrating at the Midlands Show

PHOTOGRAPH BY IWAN BAAN, COURTESY OF THE BARBICAN

House NA, Tokyo, Japan by Sou Fujimoto Architects

The Japanese House: Architecture and Life after 1945

This is the first major UK exhibition to focus on Japanese domestic architecture from the end of World War II to the present day, a field which has produced some of the most influential and extraordinary examples of modern and contemporary design. The Japanese House presents some of the most exciting architectural projects of the last 70 years, many of which have never before been exhibited in the UK. As well as architectural projects, the exhibition incorporates cinema, photography and art in order to cast new light on the role of the house in Japanese culture.

When: 23 March–25 June 2017
Where: Barbican Art Gallery, Barbican Centre, Silk St, London EC2Y 8DS
Web: www.barbican.org.uk

PHOTOGRAPH COURTESY OF THE IDEAL HOME SHOW

The Ideal Home Show will feature three life-size show homes

The Ideal Home Show

The Ideal Home Show is returning to London's Olympia with a fresh face, new interactive features and four brand-new live theatres. The UK's biggest home exhibition will feature a huge range of diverse stands spread across a host of sections, including; Interiors, Home Improvements, the Gadget Lab, and the new Style section.

When: 24 March–9 April 2017
Where: Olympia, Hammersmith Rd, London W14 8UX
Web: www.idealhomeshow.co.uk

Salone del Mobile

Now into its 56th edition, the Salone del Mobile is a global platform for top-quality furniture design. Over 2000 exhibitors will be displaying their latest products in three sections: Classic, Design and xLux, the latter dedicated to timeless luxury reworked with a contemporary touch.

When: 4–9 April 2017
Where: Milan Fairgrounds, Strada Statale 33 Sempione, 28, 20017 Rho MI, Italy
Web: www.salonemilano.it/en

Yandles Woodworking Show

Always a highlight on the woodworking events calendar, the Yandles spring show brings together a vast array of demonstrators and manufacturers. Visitors can take advantage of exclusive show deals and discounts on timber, as well as attending free masterclasses and demonstrations.

When: 7–8 April 2017
Where: Yandle & Son Ltd, Hurst Works, Hurst, Martock, Somerset TA12 6JU
Web: www.yandles.co.uk

PHOTOGRAPH COURTESY OF YANDLES

Enjoy woodworking demonstrations and free expert advice at the Yandles Show

Courses

If the only time you get to hang out in the workshop is at the weekend, then why not join the Editor on one of his short and sweet classes this year? Each class is project based, which means you'll be taking more than just a head full of tips and tricks back home with you. Using just hand tools you'll be able to make an exquisite marking gauge, a cunning little Japanese-style tool box, a six-board chest or brush up on your finishing skills with an introduction to French polishing. All courses are held at Robinson House Studios in Newhaven, East Sussex.

Contact derek@lowfatroubo.co.uk for more information.

Build a Japanese style tool box – 1–2 April
French polishing – 29–30 April
Moxon vice – 15–18 May
Build a six-board chest – 17–18 June
Make a traditional pencil/marking gauge – 1–2 July
French polishing – 21–22 October
Build a Japanese-style tool box – 25–26 November
Build a six-board chest – 2–3 December

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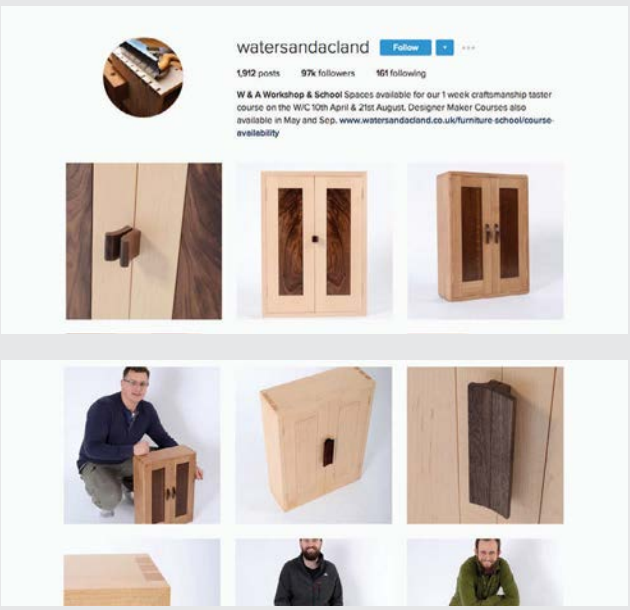
Social media dashboard

We bring you a round-up of the best from the online world plus the latest projects that have caught our eye

In this section of the magazine we bring together the best furniture and woodworking related content from social media. Here we'll recommend who to follow, where to comment and which online communities to join. We'll also feature readers' letters, comments from the Woodworkers Institute forum and pictures of readers' work. If you'd like to see your furniture on these pages, email derekj@thegmcgroup.com

Instagram: Waters and Acland Workshop & School

Waters and Acland use their Instagram account to celebrate their students' work. There are lots of close-up detail shots of finished pieces, as well as work-in-progress photos from the workshop. An excellent place to find some creative inspiration.
Address: @watersandacland

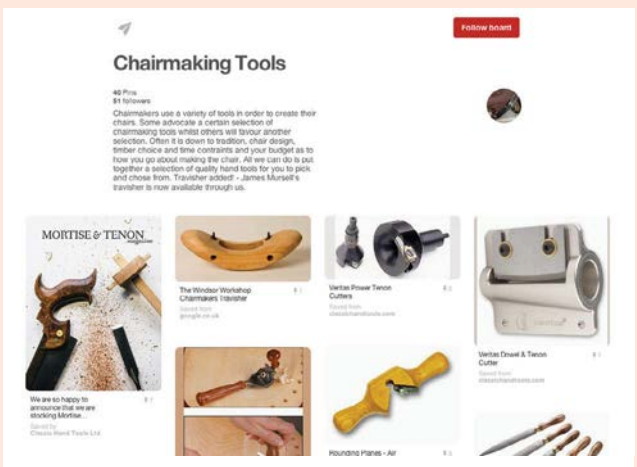


Facebook: Byron and Gómez

This new partnership between Charles Byron and María del Mar Gómez is one to keep an eye on. Their Facebook page is regularly updated with the latest projects from their busy workshop. For more about the company, see page 38.
Address: www.facebook.com/byronandgomez

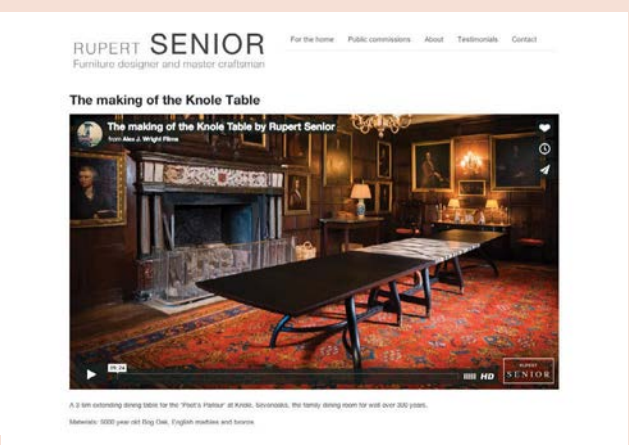
Pinterest: Classic Hand Tools Ltd

This Pinterest account gives you an easy way to keep up to date with the latest tools, kits and books available from Classic Hand Tools. There are several boards covering different sections of woodworking making it easy to find what you need.
Address: uk.pinterest.com/chtools



Video: The making of the Knole Table

This short video documents the construction of the Knole Table, an extending dining table made for the Poet's Parlour in Knole House in Sevenoaks, Kent. Bespoke furniture maker Rupert Senior was commissioned to make the table from a piece of 5000-year-old bog oak. The 10-minute video can be found on Rupert's website and contains fascinating details about the project.
Address: www.rupertsenior.co.uk



Twitter: Wallpaper*

Wallpaper* magazine is 'the global authority on design' and its Twitter feed is packed with the latest trends in interiors, fashion and product design. An essential follow if you want to keep your finger on the pulse.
Address: @wallpapermag

From the forum

The Woodworkers Institute forum is a great place to discuss furniture making and show off your latest projects. To join in the conversation, visit www.woodworkersinstitute.com and click on the forum button.

Cabinet

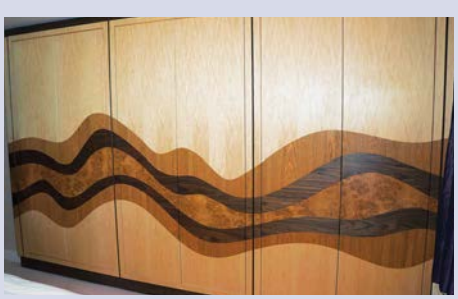
This cabinet was made by forum user Bernard58. He says, "The curved sides of this cabinet are made from 15mm-thick steam-bent boards of cherry. I have textured the top and sides by routing parallel grooves into them, an idea I got from one of John Lee's projects. The end result provides a somewhat 'retro' effect, not unlike the design of some of the vintage radios from the 1940s and 50s that I used to collect. The drawer sides are maple and the drawer bottoms are cedar.

"The drawer fronts and door panels are made by applying 'black-and-white ebony' veneer to 18mm plywood panels, using Titebond for cold press veneering. The veneer is applied using a homemade vacuum press. The edges of the plywood are lined with strips of wenge. Drawer pulls, door knobs and legs are also wenge.

"The veneer had a few holes in it due to knots. Rather then trying to hide those, I chose to accentuate them by filling them up and applying gold leaf."

Projects we love

Here we highlight the latest furniture and woodworking projects from around the world that we think deserve to be shared with our readers. If you're a member of a collective or a student group and would like to see your work here, then submit a story to: **derekj@thegmcgroup.com**



Dovetailors

Dovetailors have created a new bedroom interior using their signature wave design. "[Our clients] took inspiration from our wave design bespoke kitchens, and wanted a wave motif to run through their new bedroom theme. Our brief was to create a wraparound design stretching across their bedroom furniture configuration. We also needed to provide a wardrobe interior combination, which would be both cost-effective and highly practical.

"The suite comprises a set of fitted wardrobes, two chest of drawers and two bedside cabinets. The set of wardrobes has a mix of hangers, drawers and shelves. To help with focusing on the wave design the drawers are set onto concealed runners and the doors have concealed hinges. The wave motif wraps around each item of bedroom furniture. It is constructed in thick cut constructional veneer in maple, burr oak, oak and walnut in different thicknesses in order to reinforce the 3D effect. The whole suite is finished in natural oil that is strong, resistant and easy to maintain. We built the entire bedroom in our workshop in Farsley, Leeds and put it together on site."
Address: dovetailors.co.uk

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Unnecessary embellishment – the engraving of Jenny Bower

Kieran Binnie meets hand engraver Jenny Bower

One the many benefits of the online maker community is that it has placed woodwork within a wide context of handcrafts, and forged a community comprised of craftspeople from across a broad range of disciplines. One such rising star of the craft community is Jenny Bower, a Michigan-based engraver who is notable for her intricate and naturalistic hand engraving to locks and woodwork tools – a process she refers to as 'unnecessary embellishment'.

PHOTOGRAPHS BY JENNY BOWER

An unusual canvas

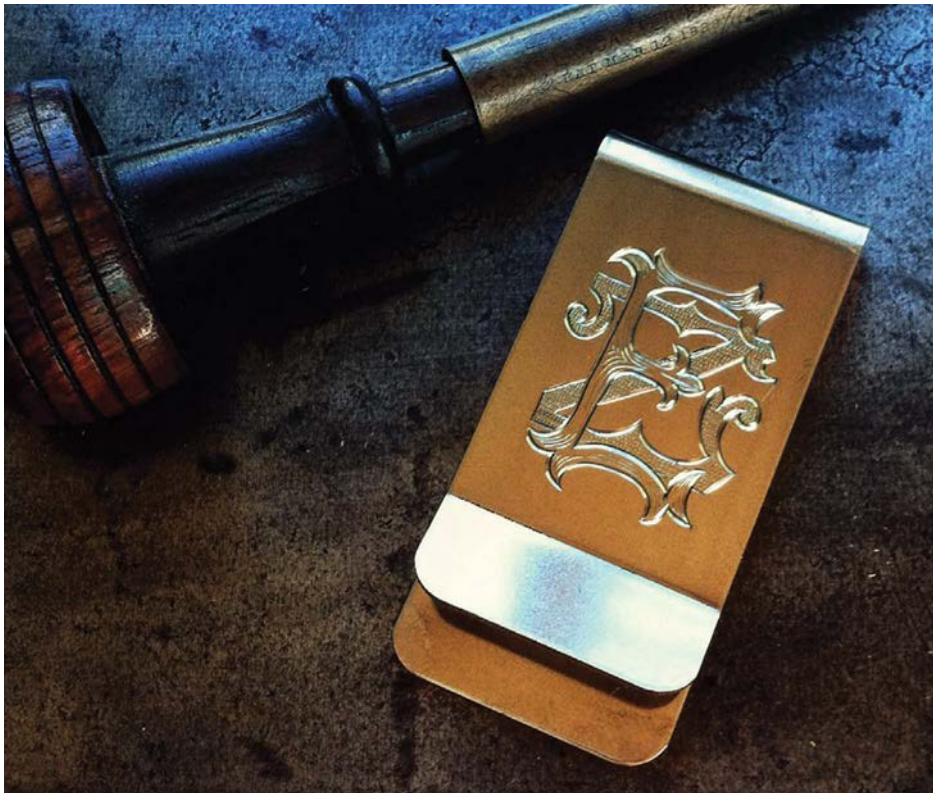
A keen artist from an early age, when asked how she first started engraving Jenny explains that, "I actually started to admire hand engraving before I even knew what it was. My mother had a very old locket that was ornately hand engraved. I used to play with it and she eventually gave it to me. It is one of my most treasured possessions." But as Jenny explains, she didn't understand the engraving process until she was an adult. "My husband met a local man who specialised in hand engraving watches and firearms. He took me to his studio. I was very intrigued with his work and wanted to learn how to do it. He couldn't take me on as a student but gave me a few pointers to get started. I ordered the tooling and began to practise on my own. It has been a trial and error way of learning for me. I am still learning."

One of the most striking elements of Jenny's work is how she covers functional woodwork tools and padlocks with very natural images such as leaf and floral designs, work that is typified by elegant

curves. The result of this strong aesthetic is a very distinctive body of work which is instantly recognisable. "Most engravers work on guns, watches, knives or jewellery," Jenny tells me, but while she admires the engraving on those types of objects, she wanted to do something different. "I love old hand tools. I am drawn to them. They have so much character to them. Once I became an engraver, I started to see the metal on old tools as a blank canvas. Locks have always seemed romantic to me. I imagine people locking up their secret treasures with them. However, most locks aren't very pretty, they are just functional. I wanted to make them beautiful. I started referring to my work using the hashtag #UnnecessaryEmbellishment on Instagram. What I do to tools and locks isn't at all necessary but it adds a uniqueness to them. Sometimes it brings a forgotten tool back to the forefront. It makes an ordinary tool into something special. It makes an everyday item a keepsake."

Community is … inspiration

The question of inspiration is an important one for all craftspeople, regardless of discipline. Jenny draws her inspiration from



Engraved money clip

both the natural world and material culture, including "nature, architecture, advertising fonts, hand-painted signs, carvings. It might sound odd but I try to stay away from looking at the work of other engravers. I don't want to be influenced by it or feel like I need to follow a certain path with engraving." But aside from these visual and cultural prompts, what seems to really inspire Jenny is the wider community of makers. As she explains, "I find myself to be more inspired by creative people in general. I find that passion for craft is contagious. I have many friends who create in completely different capacities than I do. Some of the people who have most inspired me are woodworkers, metal casters, metal fabricators, tool makers, people in the custom automotive industry, woodturners, a whole host of different people. When I am around people who are excited about their craft, I get even more excited about my own. What is wonderful is that as a result there have been opportunities for our crafts to merge into collaborative projects."

The inspiration Jenny has drawn from the woodworking community has been

Large vintage tape measures provide a significant canvas for unnecessary embellishment

mutual, and woodworkers now represent a significant element of Jenny's growing following and customer base. She attributes this to "the mutual affection for hand tools" shared by woodworkers, and her "engraving work on tools", all of which is done by hand. This mutual admiration has led to collaborations with other makers, and Jenny has engraved maker's mark medallions for the Plate 11 Workbench Co, and saw nuts for Florip Tool Works, not to mention individual commissions engraving hand planes, spokeshaves, callipers, chisels, rulers and tape measures. "My work is very personal to me," Jenny observes, "I put myself into the design, I think about the person I am creating the engraving for. It means a lot to me to know that my work is being treasured."

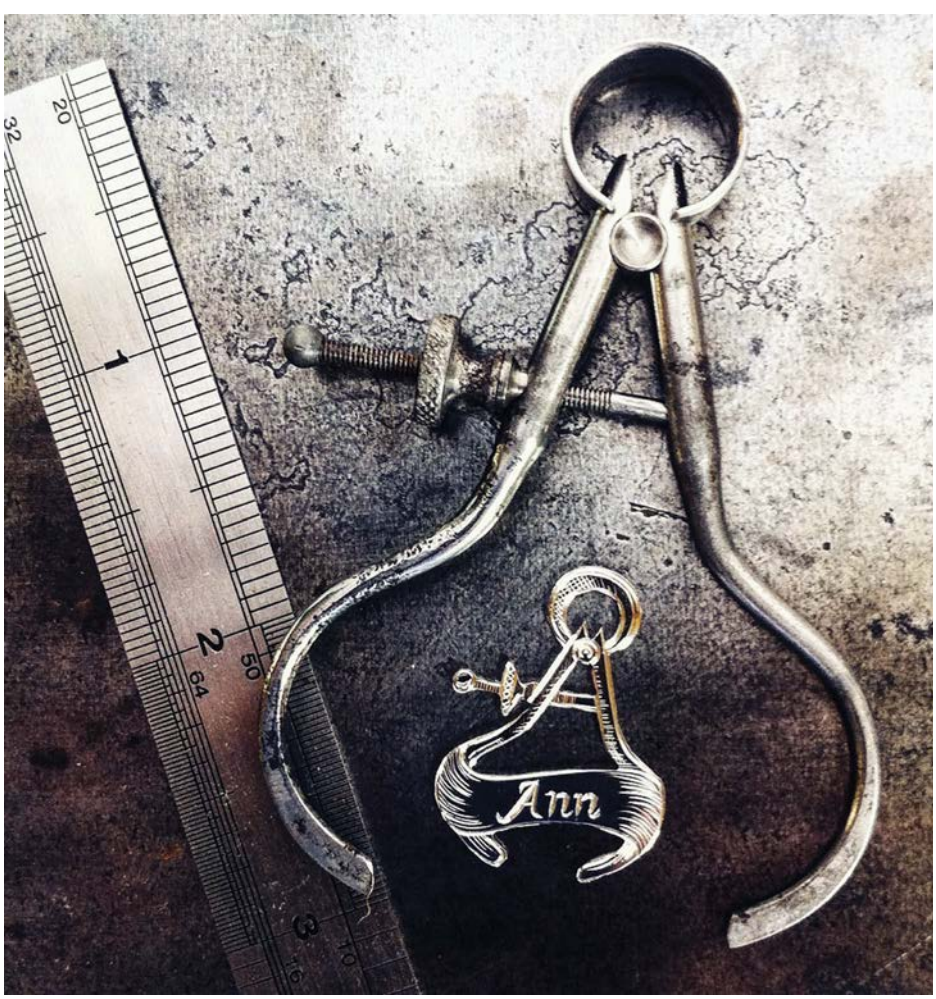
"The woodworking community on Instagram has been incredible," Jenny enthuses. "I follow many woodworkers on social media and I find them to be a hard working group who are willing to encourage others and who are passionate about preserving traditional handcraft skills. I have a deep respect for people who work with their hands and create things with attention to detail, creating things that are built to last."

When asked what her dream commission would be, Jenny returns again to the importance of community and collaboration. "My dream commissions have been to work with people who I admire and respect," she says. "In all honesty, making things for my friends in the community of craftsmen and makers brings me the most fulfilment." One particular collaboration, she explains, will be of special personal significance: she has always longed to engrave one of her husband's handcrafted clocks. "He makes each component of his clocks by hand. He makes the screws, he machines the gears and then hand cuts all of the spokes and the plates. It takes months. I have engraved some components of his clocks, but he wants me to engrave very elaborate designs onto some of his future creations. I am looking forward to that. I know he crafts each piece with precision and care and I am honoured to be able to collaborate with him."

Don't fear imperfection

Looking at the elegance and ingenuity of Jenny's work it is easy to imagine that each flowing curve and detail is engraved onto the workpiece with complete ease. However, Jenny has been very candid about how a fear of not achieving the standards she set for herself almost stopped her engraving before she started. Writing a guest column for the 'Perfect in 1,000 Words' series on the Daily Skep woodwork blog (thedailyskep.com) last summer allowed Jenny to confront her fear of creating imperfect work head on. As she explains, "Perfectionism has been a struggle for me since I was very small," and that following writing for the Daily Skep "I realised [that struggling with perfectionism] is a common bond that many craftsmen share. We strive to do our best and sometimes that can propel us forward into amazing things and

Engraving on the brass wear strip of a marking gauge



Calliper engraving

Ring engraved with floral design

Engraved padlocks are a touchstone of Jenny's work

'Craftsmanship' – engraved bronze plane (left) and plumb bob (right)

sometimes it can be a weight around our ankles that holds us back out of a fear of failure. Since I wrote the piece, I've become much more daring at trying new things."

Looking to the future

It is late December 2016 when I interview Jenny, and so naturally conversation turns to the future, and what 2017 has in store. "I have some collaborations coming with other craftsmen that I am very excited about," Jenny explains, and it goes without saying that, "I'm looking forward to finding new and unusual things to unnecessarily embellish".

The new year is also an opportunity to try new skills, and to continue to challenge her ideas around perfection, and so Jenny is planning to enrol on a local blacksmithing course. "A couple of years ago I wouldn't have even admitted out loud that I wanted to test blacksmithing waters," she remarks, "and I have no expectations of being stellar, I have no goals of being a blacksmith. However, I have an appetite for learning more about handcraft and other forms of metal work."

Returning to one of the most powerful themes of our discussion, Jenny tells me how she is looking forward to attending the Handworks convention in Amana, Iowa, and meeting some of the people in the woodworking community whom she has never met in person but already considers to be friends. "We have bounced ideas off of each other through texts and emails, worked together on projects across the miles and we have each other's creations on our respective workbenches. It will feel like a reunion and I cannot wait to shake their hands, thank them for their inspiration and talk with them about their upcoming projects. I think it will also spark more ideas, more collaborations."

To see more of Jenny's work, visit: www.jbowerengraving.com

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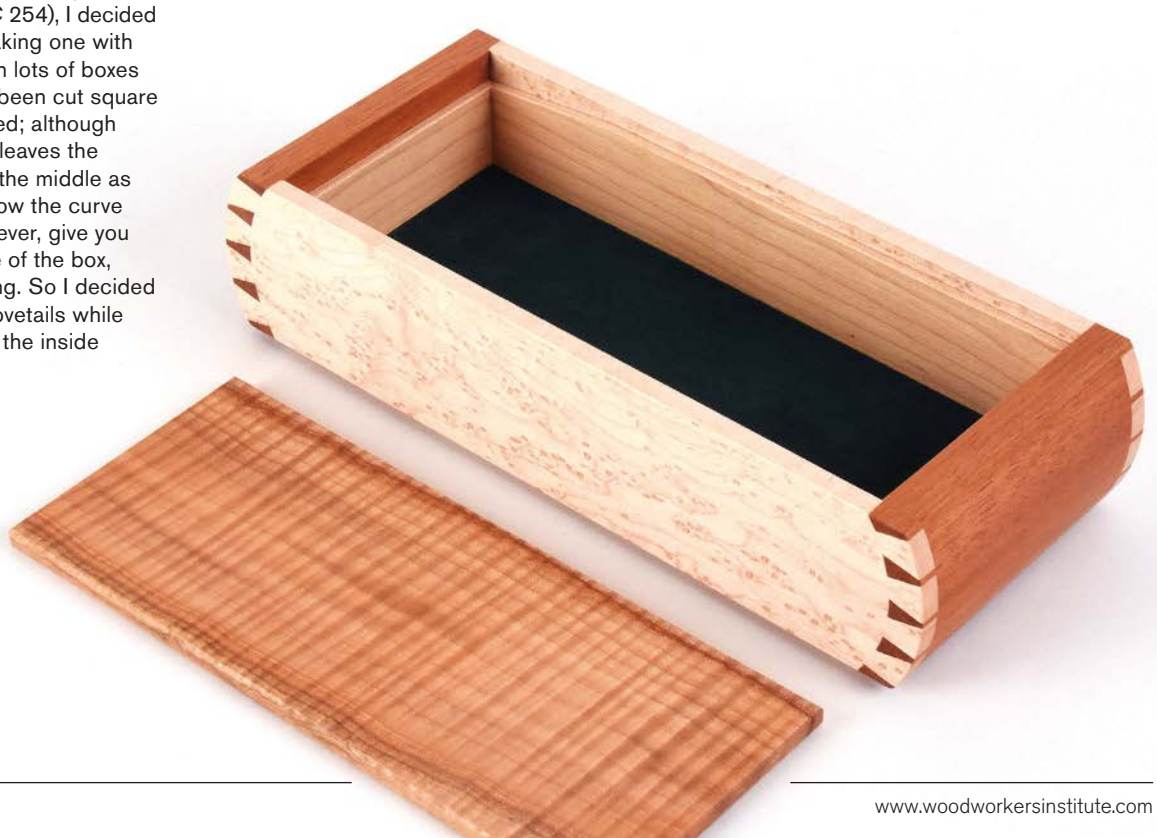
Curved dovetail box

David Barron makes a lined box with curved ends

PHOTOGRAPH BY GMC PUBLICATIONS/DEREK JONES

Having made a box with angled dovetails (see *F&C* 254), I decided to have a go at making one with curved dovetails. I've seen lots of boxes where the dovetails have been cut square and then the sides rounded; although this is a simple method it leaves the dovetails much thicker at the middle as the baseline does not follow the curve of the sides. It does, however, give you square sides to the inside of the box, which is desirable for lining. So I decided to go for evenly curved dovetails while retaining square sides on the inside of the box.



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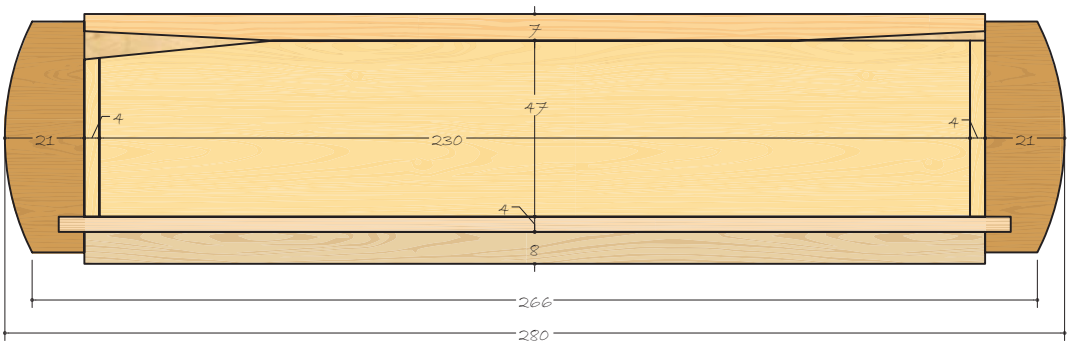
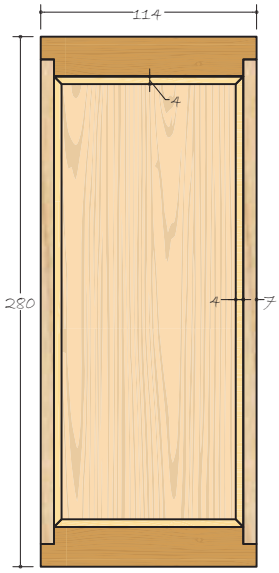
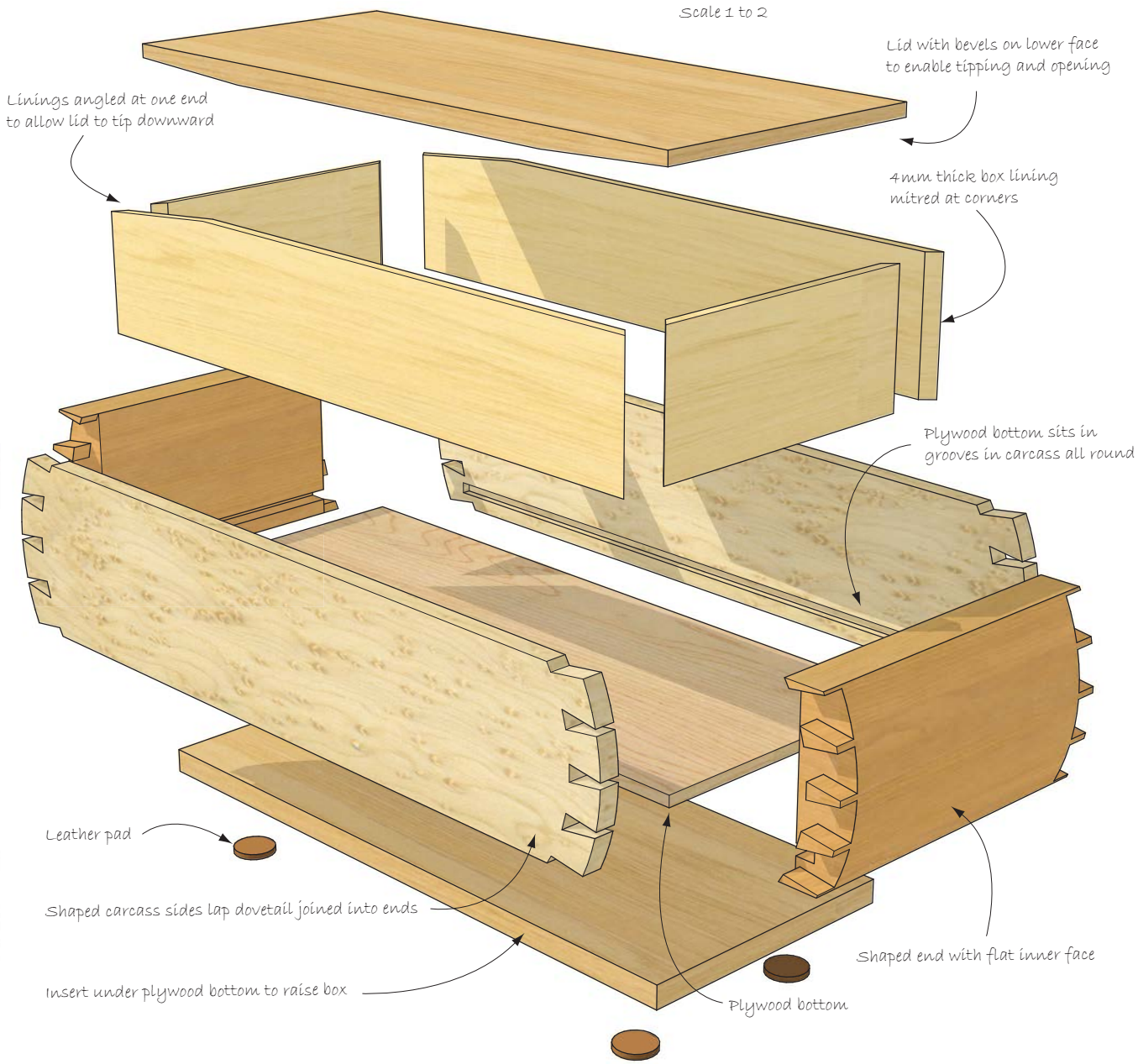


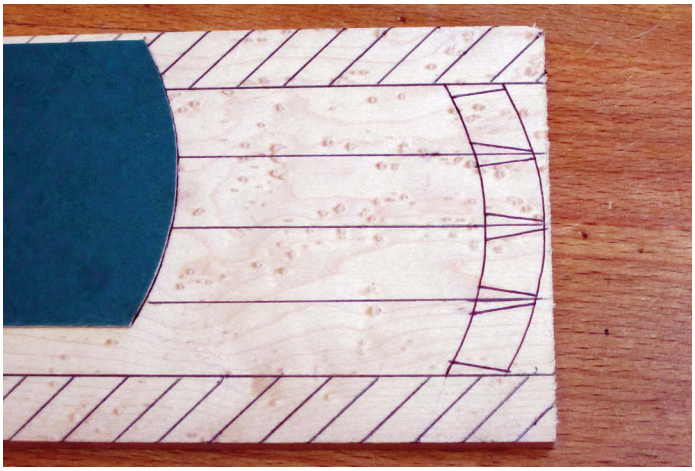
LONG SECTION
Scale 1 to 2



PLAN SECTION
Scale 1 to 4

SIDE ELEVATION
Scale 1 to 2





Marking the tail boards

At this stage it's best to mark everything clearly out on both ends of each tail board. I used one edge to run parallel lines to mark out the centre points of the tails as well as the waste areas on the top and bottom, indicated by the diagonal lines. A cardboard template was used to mark the curves, making sure that each of the pieces was marked the same distance in from the ends, ensuring square corners in the finished box. The dovetail spacing needs to be even to look good and this was easily achieved by making sure the parallel lines were evenly spaced. Having a pin in the middle of a set of dovetails is always my favoured option and this is even more visually important when used on a curve. While the board end is still square, a normal dovetail template can be used to mark out the tails in the space between the two curved lines.

The tail board marked up showing the waste areas

Adapting the cutting gauge

The first thing I needed to do was adapt my cutting gauge to cope with marking along a curved edge. This was done by reversing the head and filing a curve to the face that is greater than the curve I intended to use. This meant that there would be two points in contact with the curve as the marking was done. I have kept the gap between these two deliberately small (13mm) to keep material waste to a minimum (this will be explained later). Wheel marking gauges are not suitable for adapting and the best blade is one which comes to a point rather than the thumbnail profile of the gauge I used.

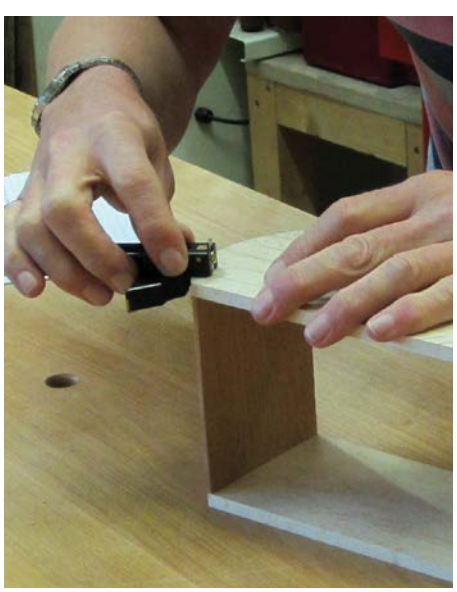
When using the adapted gauge it loses contact with one of the two points before reaching the edge of the board. So for this box with a finished height of 62mm, I cut all sides to 92mm to provide support for the gauge. The wider the gap between the two points on your gauge the more material you will need to add to your finished height. Although a little wasteful, this was the best of the various options I came up with.

My adapted cutting gauge to handle curves

Shaping the curve

Shaping the curve is easily done on a disc sander but I wanted to make sure that the corners to be joined were a perfect match for each other. So I assembled the box with double-sided tape using an accurately cut spacer block to make sure it was perfectly square. In this assembled state the curve can be cut on the bandsaw and refined on the disc sander, but you must make sure the table is perfectly square to the disc. Convex curves are easy to get smooth on a disc sander, especially if you use a finer abrasive. I used a 240 grit, which, although slower, was a lot more controllable and left a fine finish. The curved baselines can now be carefully marked on the tail board before disassembling the parts with a tail vice or spreader clamps. Please remember to mark all the parts before taking apart or this will result in lots of head scratching afterwards – trust me, I know! I applied my coloured dots at the beginning but had forgotten that they would be removed from the pin board as the curves were cut.

Sanding the convex curves on a disc sander



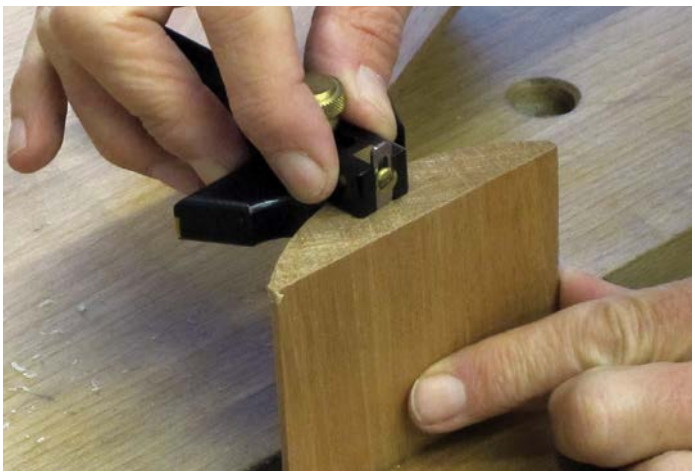
Marking out the baseline on the tail board

Assembling the box using double-sided tape and an accurate spacer block

Marking and cutting the dovetails

With the gauge on the same setting, the depth of the dovetail can also be marked on the end grain of the pin boards. I realised that the pin on the gauge had the bevel facing the wrong way for this cut but changing it round would have lost the setting, so I just made a lighter cut, knowing this would be planed out later anyway. It's always a good idea to retain the setting on the gauge until the end of the job, so I used another gauge, set to the thickness of the tail board, for the final marks across the face grain of the curve.

Now it was time to cut the tails. I angled the boards to 1:6 so that the cuts on each side of the dovetails were made vertically, which I find helps with accuracy. The waste was removed with a fretsaw and then chiselled down to the base line. Although this line is curved, it is only 6mm wide so I just used a straight chisel to make the final cut. I removed the waste on the bandsaw from both the tail and pin boards and planed them smooth on the shooting board.



Marking out the end grain of the pins

Cutting the tails

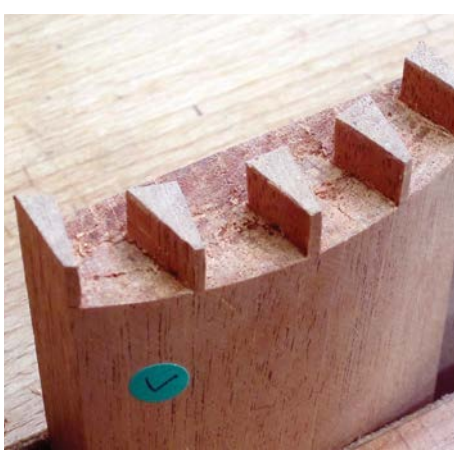
Marking the pins using my alignment board

Marking and cutting the pins

With the tails finished, the pins could be marked. The flat inside surface meant I could use my alignment board which kept things square and matched up the bottom edges of both boards. Once the pins were marked, they were cut all the way across and down to the gauge line. The fretsaw was used to remove the majority of the waste and I made sure I cut well into the back of the pin (which is in the waste) making removal back to the gauge line easier and less likely to split. This is very similar to removing the waste from the smaller pins of houndstooth dovetails (see 'Houndstooth Dovetails' video on YouTube: www.youtube.com/user/DavidBarronFurniture).

The finished tail boards

Saw cuts made on the pin board

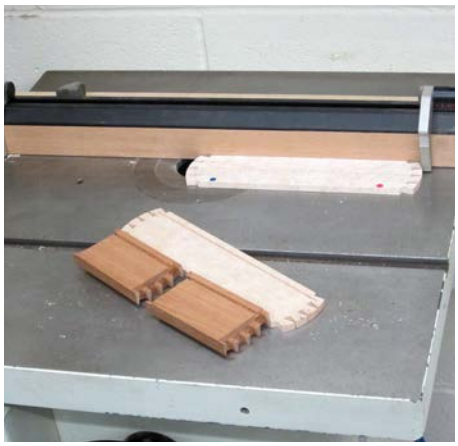


The finished pin board

Routing the grooves

The groove for the 4mm ply base was then cut on the router table using the same bottom edge, as on the alignment board, against the fence to ensure the grooves lined up perfectly. The top of the inside surfaces were smoothed and finished and the box was glued up, making sure all was square.

The ends were rounded smooth on the disc sander with 240 grit and the sides were cleaned up with a sharp plane and sanded to a fine finish. The second base was stuck to the plywood one, adding weight as well as giving a lift to the box. Homemade leather bumpers were also added.



Cutting the grooves on the router table

Cleaning up the sides including removing all trace of the base lines

The lining being shot on a mitre shooting board

Additional base stuck in place

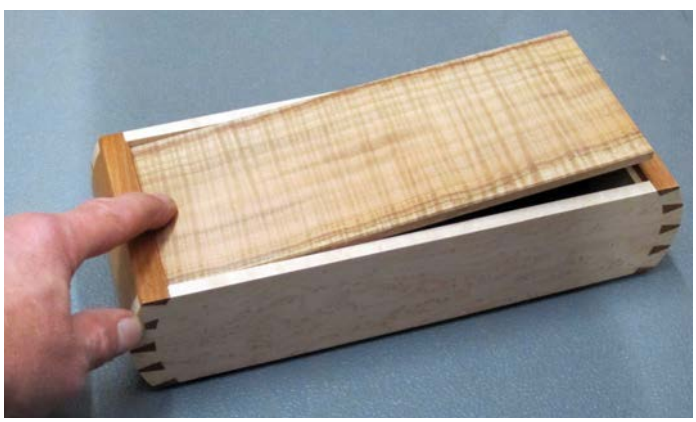
Homemade leather bumpers being made

Finishing touches

The base inside was lined with padded pig suede and the mitred linings were planed on the shooting board to a tight fit. As I had chosen a highly figured piece of amboyna (*Pterocarpus* spp.) for the lid I decided to make it a tilt top rather than add a handle. This was simply achieved by lowering one end of the lining and angling the two sides to match. The lid can be tilted down with a finger and removed with the same hand.

The whole box was sanded carefully down to 320 grit followed by four coats of melamine laquer. After allowing an hour to harden this was cut back with 400 grit Abranet followed by 600, 1000 and 2000 grit Abralon pads to leave a silky matt sheen. F&C

The angled lining in place



The action of the tilt top lid

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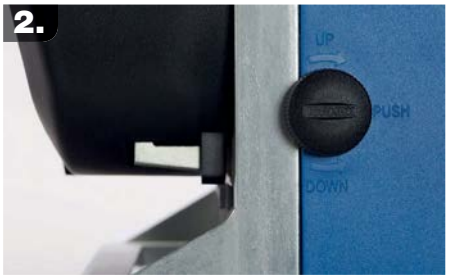

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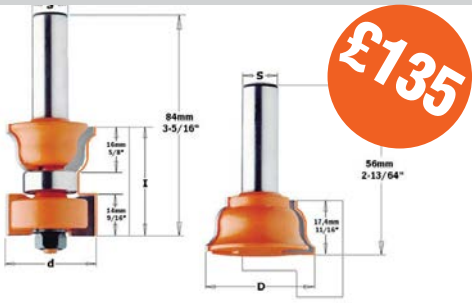

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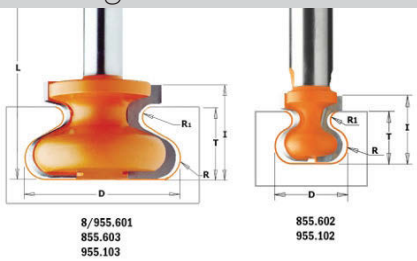

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Fig 1: Door architrave with Doric pilasters, full entablature and open pediment. Gunston Hall (1759), Lorton, Virginia

Decorative mouldings

In an extract from *Carving Architectural Detail in Wood*, Frederick Wilbur explains how to carve classical mouldings

The most common architectural decoration is the moulding which, plain or fancy, is used for a variety of reasons: to create shadows, and therefore depth; to divide surfaces visually, creating balance or pleasing proportion; or to create a finished delineation to a corner, joint or edge. There are functional uses as well: covering or weatherproofing joints, hanging pictures (as well as framing them), protecting plaster walls, and so forth. Mouldings, for our purposes, are strips of wood (or edges of wider pieces) which have a distinctive shape or, more properly, profile; and it is this profiled part which is carved. Most of the plain profiles can be embellished with decoration; it is the repetition of design units which makes them effective in breaking up the inherent linear quality of mouldings. Figs 1–5 show some characteristic examples.

The plain profile can be fabricated or 'run' by a computerised moulding machine, stationary shaper, portable router, hand plane or scratch stock. The architectural millwork firm specialising in custom work will use machinery to produce the profiles needed; they may use standard cutters or have someone on staff to grind the desired profiles. The shop without such equipment can use a combination of saws, hand-held routers and hand planes to fabricate the necessary shapes, particularly in the case of the smaller and more standard profiles. Large coves can be made on the tablesaw. Large rounds can be shaped with an ordinary bench plane. The small facets left from the plane can be smoothed by the use of a curved scraper, or with sandpaper;

Fig 2: A cornice at Jefferson's University of Virginia, Charlottesville, showing (from top) modillion blocks and rosettes, egg and dart, and dentils

Fig 3: Scrolled pediment on an overmantel at Drayton Hall (1742), Charleston, South Carolina; the mouldings are egg and dart and simple waterleaf

TOP PHOTOGRAPH COURTESY OF COLONIAL WILLIAMSBURG FOUNDATIONS

PHOTOGRAPH COURTESY OF DRAYTON HALL, A NATIONAL TRUST HISTORIC SITE/PHOTOGRAPH BY FREDERICK WILBUR

Fig 4: Detail of a mantel by the author, showing Ionic pilaster with waterleaf abacus, and ovolo backband

PHOTOGRAPH COURTESY OF BRITISH MUSEUM, BY FREDERICK WILBUR

Fig 5: A fragment from the cornice of the Erechtheion in the British Museum, showing (from top) leaf and dart, egg and dart (each with bead and reel beneath) and anthemion

if the round is to be carved, many of the facets may be eliminated anyway. The tablesaw can be used to cut away excess material or to define the extent of a profile before moulding plane or scratch stock is used.

There are many varieties of router bit available through numerous tool distributors, but their use may represent a compromise, especially when an existing profile is to be duplicated. It is possible to modify high-speed steel bits, but most moulding bits are carbide-tipped and harder to alter.

Before the Industrial Revolution, mouldings were made exclusively by hand plane and scratch stock. Each plane produced a specific profile, so the joiner required a chestful of them if he intended to undertake fine woodworking. There were planes for beads, coves, ogee profiles, ovolos, reeding, tongue-and-groove joints and so forth. Some planes combined several profiles, such as cove, fillet, and ovolo, or bead and ovolo. The descriptive terms used by the practical joiner or carpenter for these profiles are not necessarily those used by the architectural historian: for example, round planes make cavettos, beading planes make astragals, while the common or Roman ogee, the Grecian ogee and the reverse ogee planes all make different varieties of cyma profile.

There have been dozens of different profiles and combinations throughout history, but most classical ones can be assigned to a few families based on simple geometry (Fig 6). Most, in fact, are segments of a circle (or ellipse) or combinations of arcs in conjunction with flats or fillets. These families are: the half-round or astragal (more generically called the bead), with its big brother the torus; the convex quarter-round or quarter-ellipse, called the ovolo; the cavetto or cove, which is a concave quarter-circle or quarter-ellipse, with its sister the scotia, which contains two different arcs; and lastly the combination of two opposite arcs (one concave and one convex), the cyma or ogee. It must also be mentioned that many designs can be incised or cut into a narrow flat band: these include the wave, the Greek key, the guilloche, chip-carved designs, and many more. This article discusses the astragal, the ovolo and their cousins, as well as flat mouldings.

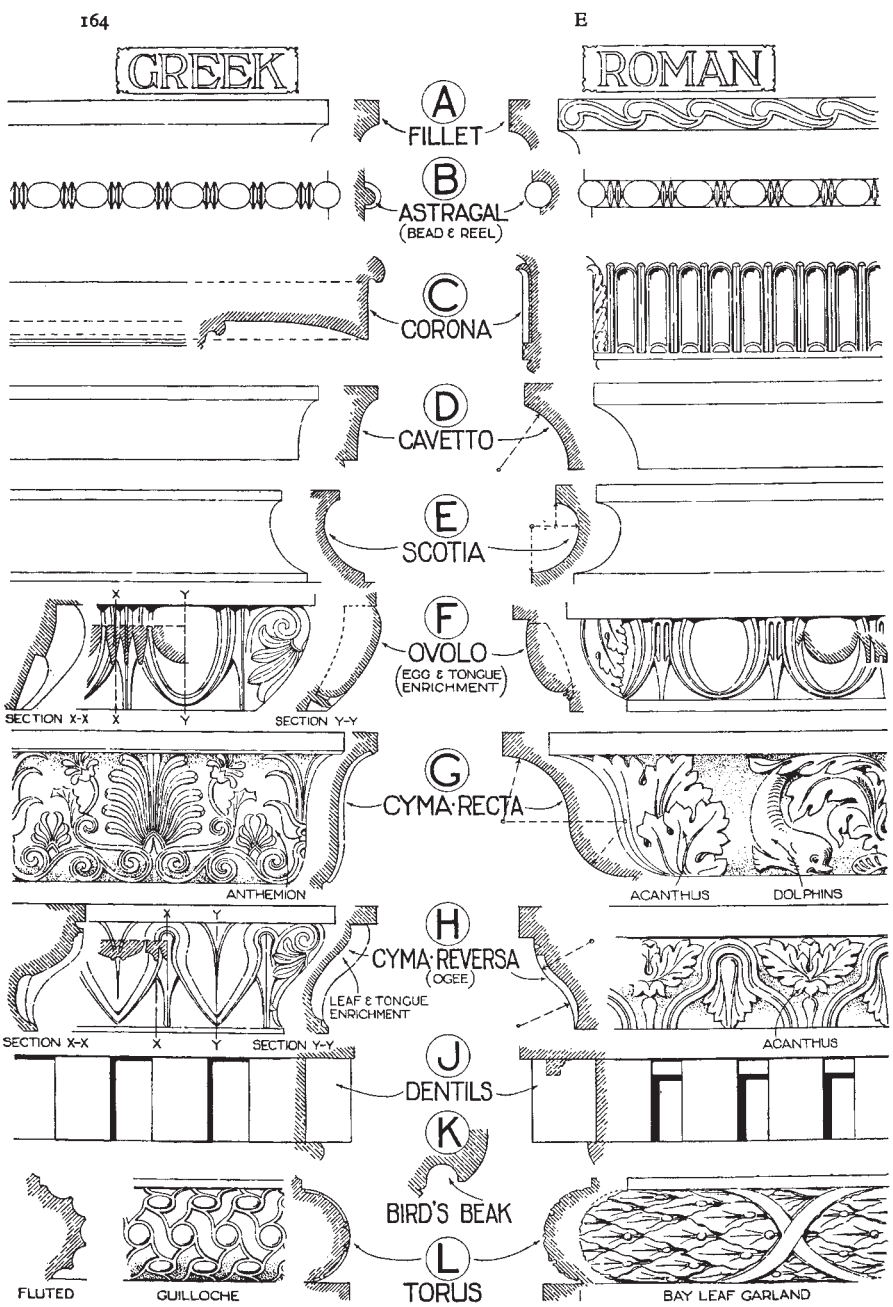

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Fig 6: Drawing of moulding profiles comparing Greek and Roman treatments, from Sir Banister Fletcher, *A History of Architecture on the Comparative Method*

Fig 7: Egg and dart moulding, showing the use of leaves to mask the mitre joint

Fig 8: An example of the author's work, showing how an abbreviated version of a foliage design may be used for a short return section or 'dog-leg' in a crossetted frame

Layout

The carver, then, is working on a seemingly tricky piece of material with curves and/or sharp edges in profile as well as a running pattern along its length. It will become obvious in this chapter that there is a correlation between the profile and the type of decoration which can be cut into it, and that the profile often dictates the tools used.

Mouldings, by their very function, have to change directions around a room or piece of furniture, and the joint or corner is usually a mitre, regardless of how the moulding is applied. In quality work, whether door casing, mantel or cornice, the most prominent elevation is laid out symmetrically. That is, the centreline falls between two of the main decorative units so they are equal in number on either side of the centreline; though at times a main unit is bisected by the centreline. Some designs – spiraled ribbons and gadrooning, for instance – have an orientation to right or left, so they originate from the centreline and proceed in opposite directions towards the ends or corners. So it is from the centreline that the basic increments of the pattern are laid out.

The point at which the mitre cuts through the design determines whether adjustments are required in order to fit a whole unit in before the joint. Most patterns can be broken in two places: either at the midpoint of a design unit, so that the unit itself 'turns' the corner, or between units. (Some mouldings have several alternating units, affording a wider choice of break-points.) Many patterns can be 'stretched' if necessary over several repeats so that the mitre joint falls in one of these two places. Not all designs divide neatly at the mitres, the egg and dart (an ovolo profile) being the primary example of one that does not – a half or a third of an egg meeting a half-dart would look ridiculous.

The Greeks realised the awkwardness of this situation and either left the corner unornamented or 'covered' the design with a leaf, one half of the leaf falling on either side of the joint. The latter solution has been adopted almost without exception ever since. The idea is that the concealing leaf tricks the eye into assuming that the underlying design is continuous, regardless of how the pattern actually would work out if the leaf were not there. Fig 7 shows a typical example.

Short lengths of moulding, as in 'dog-legs' on door casings or returns on cornices, if too short for a full unit, are sometimes treated with simplified or abbreviated renditions of the design (Fig 8). One moulding which is not amenable to this treatment is the egg and dart.

In order to have a nice-looking joint, the moulding should be mitred and fitted dry before laying out the carving. The mitred pieces should be labelled in sequence so that the carving at the joints can be aligned accurately and appear as though carved in situ. Some short pieces could actually be glued together prior to carving. Rarely would the situation arise that a moulding is actually carved in place, however.

While laying out the design, remember that a flat drawing in elevation does not account for the actual curvature of the material; the design may need to be stretched in its apparent height to accommodate this three-dimensionality. This may, in turn, distort the proportions so much that the design along the length requires adjustments as well. Correction is made in the selection of the tools to be used.

You may have to redraw the repeating unit several times to make it look comfortable on the profile. After these necessary adjustments, use dividers to transfer the repeating unit to the remaining pieces of moulding. Check measurements frequently, as a fractional variation tends to be cumulative and will 'creep'. Once a satisfactory layout has been achieved on one piece, it is prudent to lay out all pieces before work begins.

Three layout aids

Marking frame

If there are multiple pieces of the same length, a simple marking frame can be made to mark increments simultaneously on all pieces (Fig 9). The lengths of moulding should not be unmanageably long: door-panel moulding is a good occasion to use this device. The frame consists of two strips of wood fastened to adjacent edges of a rectangular piece of plywood so as to form a right angle. If the profiled moulding pieces are placed together against one fence and the ends pushed until they touch the adjacent fence, the centrelines on all pieces should match. A framing or try square can then be moved along the first fence to mark across all pieces at once.

Marking wheel

Another aid to laying out unit increments is the marking wheel (Fig 10). This is simply a wheel with sharp points around its circumference, mounted in a handle. It is essentially a modification of the pounce wheel or scrivener's wheel used to space lines on parchment, or the seamstress's marking wheel. (These obviously have a limited range, even if modified by removing some of the teeth.) This gadget works best on smaller mouldings such as bead and billet, waterleaf, and small egg and dart. Determine the required

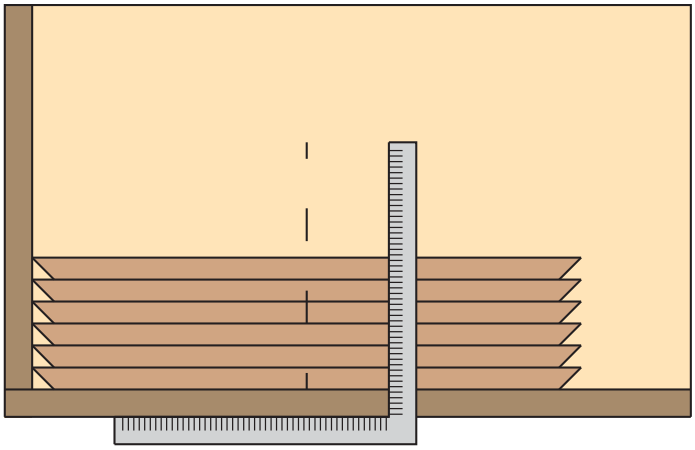

Fig 9: The marking frame: a simple jig for marking out mouldings of uniform length

Fig 10: The marking wheel in use

increments by carving a sample piece. The measurements between design units or half-units will determine the circumference of the wheel or disc. It is easy to divide the disc accurately into eight parts using 45° divisions, especially if the stock is dressed square to begin with. For example, if the increment desired is 16mm between leaves, beads, etc., multiply by 8 to obtain the required circumference, which in this case is 128mm. Then divide this number by π (pi – approximately 3.14) to find the diameter necessary (remember: C = πd, where C is the circumference and d the diameter). Half this diameter gives the radius needed to draw the circle on the disc.

Choose the bolt which will be used as the axle of the marking wheel, and drill a hole the same size through the centre point of the disc blank. Cut out the circle with a bandsaw or coping saw, allowing plenty of room on the outside. Put the bolt through the hole and use a nut to tighten the disc to the bolt. The bolt is then mounted in a Jacobs chuck on the lathe, and the disc is turned down until the circumference line is just shaved off. With a flexible plastic ruler or seamstress's cloth measuring tape, check to see that the divisions are equal and accurate. The disc should then be turned about 1mm smaller, to allow for the length of the points which are inserted next.

With a try square, carry the division lines onto the edge of the disc. Use a sharply pointed awl to mark each division in the middle of the edge. Hammer brads into these points, as straight in line with the division marks as possible, and with a wire cutter snip the nails off close to the disc. The raised peak created by the snippers is usually enough to mark the wood, but if preferred the points can be filed. In fact, a little adjustment can be made if necessary by filing the brad on one side only. Note that if the brads project too far the intended increment will be increased.

The handle is then made from 19mm square stock and turned on the lathe. Leave a sufficient length of square at one end for cutting a slot on the tablesaw to house the disc. On the tablesaw, cut a slot somewhat longer than the disc radius, to accommodate different-sized discs. Drill a hole near the end of the slot with the same bit that was used to drill the disc. Rub a little paraffin wax on the wheel and mount it in the handle, then test it on a scrap piece of wood. If half of the original increment is required (8mm in our case), run the wheel down the moulding in the usual way and then begin again, setting one point halfway between the previous marks.

Gauge block

One additional tool often useful in marking lines along the run of a moulding is the gauge block (Fig 11). It is advantageous to have such lines when you need to locate a similar feature on each unit; a good example is the 'eyes' of acanthus leaves. The gauge is a flat piece of stock of 13mm or so thickness, with a fence attached at 90° to it. (Most mouldings have a 90° back or fillet which the gauge block can run against.) In the face of the stock drill holes of suitable size to hold hexagonal lead pencils snugly. The critical point is to locate these holes where they will mark the desired features. They should be measured directly from the moulding which has been partially laid out or, better still, from the carved sample. With the fence against the back of the moulding and the top face riding the moulding, push the pencils through the appropriate holes until they touch the moulding. Using the fence to guide the gauge, you can then move the pencils the length of the moulding.

An old marking gauge with a hole drilled in it for a pencil can also be used, but the advantage of the gauge described above is that several pencils can be used to mark several lines simultaneously; it can also be used in tight situations where the arm of the marking gauge might be in the way. Related trades may have various tools or aids which can be adapted to woodworking. The popularity of quilt-making has spawned a number of them, particularly plastic layout grids and squares.

Creating patterns for layout

Some designs, such as bead and billet or egg and dart, are simple enough to warrant only the barest laying out. More complex designs, such as acanthus leaves, will require a more sophisticated layout and a pattern. Because

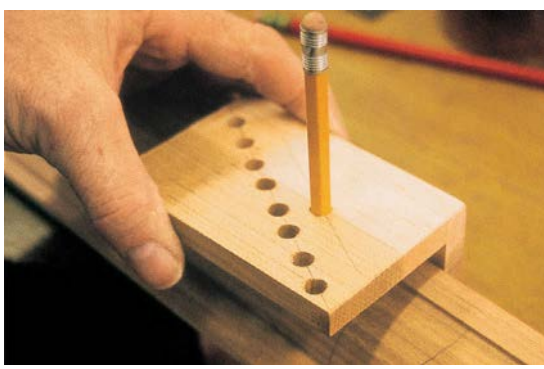

Fig 11: The gauge block in use. The multiple holes allow more than one pencil to be used at a time if necessary

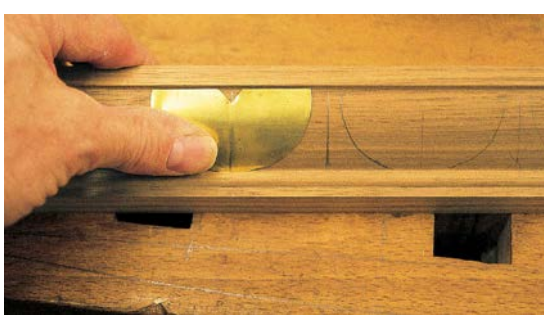

Fig 12: Setting out egg and dart with the aid of a metal pattern. The pattern butts against the fillet at the top of the moulding and the astragal at the bottom; the central notch is aligned with the penciled increment lines

a concave or convex surface is to be marked, the material chosen for the pattern needs to be flexible, but able to retain the integrity of the profile. For sustained use, a thin metal such as aluminium roof flashing or sheet brass will serve well. Making the metal stencil can be time-consuming and tricky at best, but the time saved in layout will offset any frustration in making a good stencil. One long side of the metal should be referenced to one edge of the profile by butting it up against a flat on the profile itself (Fig 12) or on the bench top. A 90° flange formed on one edge of the pattern can also serve to reference it against the edge of the profile.

For larger profiles without an obstructing fillet, sheet rubber of sufficient hardness and thickness (gasket rubber) can be used. A board which has a saw kerf along its length

serves as a base. The moulding to be marked is fixed to the board with its face at the edge of the groove. The rubber stencil is moved along this groove and pressed onto the profile. The groove prevents the rubber from shifting.

Making a metal template

Transfer the design to the metal, or tape a paper pattern to the metal. There are two methods of actually cutting the stencil: the metal blank can be kept flat on a scrap board for cutting and then bent afterwards to conform to the profile, or it can be bent on a scrap piece of moulding and retained there for cutting. In either case, the actual tools to be used in carving the moulding are used to make the pattern. Take time to visualise how the stencil will be used: are you marking the areas to be left or those to be carved away? Do you need to leave connectors between cutouts? Make sure the metal is referenced correctly, and proceed to match the curvature of the gouges to the basic elements of the pattern, cutting through with a tap of the mallet. You will need to resharpen the tools, but if the volume of moulding is sufficient, the time spent is well worth it. In making any stencil, the intention is to lay out the main cuts quickly, not necessarily marking every detail, but keeping the work crisp and tidy. A pencil is then used to transfer the pattern to the moulding at each pre-measured unit. Check the layout carefully, as from here on the carving is done by eye.

Carving mouldings

Because mouldings are repeating and symmetrical patterns, the carver can produce large quantities efficiently. The usual method is to work the entire length with the same cut, then reverse the cut and work back to the beginning. The cure for the inherent boredom of such a procedure is to acquire a rhythm, and with it some degree of accuracy.

One aid to achieving this desired efficiency is to practise first on an extra length of the profile, so that the selection of tools and the sequence of cuts can be determined beforehand. Most mouldings are in shallow relief, and the technique of 'stab and relieve' is the general rule, keeping surface modeling to a minimum; in a sense, the profile of the moulding itself provides the surface modelling. When replicating an existing design, the sweep of the tool must be matched to the shape of the design. Producing mouldings is not so much a question of accuracy as consistency. Accuracy begins with layout and selection of tools, while consistency begins with experience in execution. Practically speaking, variations will occur and, unless these are grossly asymmetrical, the eye will be hard-pressed to detect them once the moulding is installed. This, of course, is the more true the further the moulding is from the viewer. When working hardwood mouldings, a mallet may be needed to set in. This should not be too heavy, as too much of a strike would 'pop out' delicate pieces. Putting down and picking up the mallet for every placement of the tool is inefficient. This problem can be solved by turning your own mallet on the lathe, giving it a thin handle so that it can be held while the same hand is moving the gouge to the next repeat. A tough hardwood such as beech (*Fagus* spp.) or dogwood (*Cornus florida*) works well. The mallet head only need be 54–57mm in diameter, with a handle of 22mm diameter at its narrowest. The overall length is 235mm. Depending upon the wood, it will weigh 230–280g; the weight is not as important as the length of handle (Fig 13).

Fig 13: A mallet suitable for setting in mouldings (see text for suggested dimensions)

Holding the profiled material

As with all work to be carved, the moulding needs to be held solidly on the bench, and although the usual metal bench dogs or clamps serve well for most projects, we must be careful not to dub the sharp long points of mitred pieces. There are several ways to hold mitred profiles: wooden bench dogs can be modified, or special jigs made.

Using scrap hardwood, make two bench dogs with wider than usual heads (Fig 14). They do not need to have spring tensioners, but should fit snugly into the dog holes in the bench. Their protruding 'chins' rest on the bench top. In the middle of the face of each dog, place a small screw, leaving 6mm of the shank exposed. Remove the screw heads with a hacksaw and then grind or file the shanks to points. With a chisel, carefully pare the corners of the face backward from the screw so that the cheeks form an acute angle. With the dogs placed in the appropriate holes, the vice is then closed so that the points grab the mitred ends of the moulding; the resulting marks will be hidden when the mitre is assembled. This method works well for medium-sized mouldings. The drawback is that only one length of moulding can be done at a time (or two, on a bench with a double row of dog holes).

When a number of pieces of the same length are to be carved (as with moulding for door panels), a jig can be made to hold the mitred pieces. A length of hardwood is used as a supporting fence upon which cleats are mounted to hold the ends of the moulding. Depending upon the length of the moulding and the available area of bench top, several lengths may be mounted on one jig (Fig 15). The ends of the short cleats are cut at 45°. Drill screw holes in the cleats, then mount one of them to the end of the fence. Place a pre-mitred piece of moulding snugly into the 45° space. Locate a second cleat at the other end, overlapping the mitred end slightly so that it holds it tightly. This second cleat can be made double-ended (as in the photo)

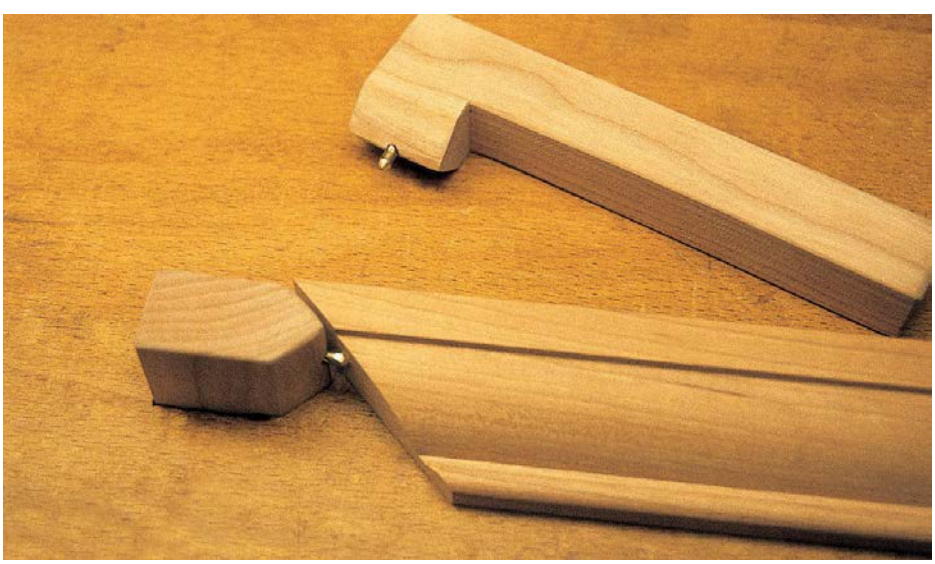

Fig 14: Bench dogs for holding pieces with mitred ends

to accept a second piece of moulding in line with the first. This fence or jig is then clamped to the bench top. The cleats can be remounted for different lengths of moulding.

Another method is to screw through a waste board and into the back of the moulding, then clamp the waste board to the bench. This works well for small mouldings and those which are carved right to the edge, such as spiral designs on astragals. The waste board protects the bench top from errant gouge marks.

It is not very practical to glue long lengths of moulding to a backing board. This often recommended method should be avoided, since it adds time to the job in clean-up, and with fragile carvings there is always the danger of breaking pieces when trying to extricate the carving from the paper. Most architectural pieces can be held by vice, clamp or screw, or wedged in routed recesses or between fences. Never nail a moulding directly to the bench top, as the moulding might split in its securing or removing, to say nothing of scarring the bench top for life.

Fig 15: The jig for holding multiple pieces with mitred ends

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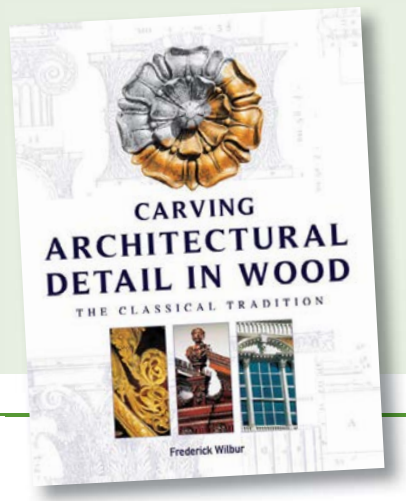

Designs for flat surfaces

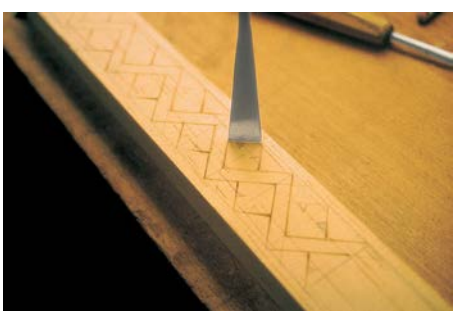

Fig 16: Setting in simple surface decoration; the fishtail chisel is angled to produce cuts which slope back from the surface

There are many embellishments that can be achieved with a minimum number of tools, and which do not require a moulded profile to be effective. They are carved directly into a flat surface and, though not mouldings by definition, they may serve the same purpose. They are used for narrow pieces sandwiched in among other mouldings, and are not to be confused with the frieze. They can consist of isolated designs or of a continuous repeat. Evenly spaced flutes, zigzag designs, incised lines, overlapping circles resembling coins or scales, are all examples of this technique (Figs 16 and 17). The simplest such decorations are chip-carved designs. The term 'simple' is not meant pejoratively, though we tend to think of these as vernacular motifs; accuracy in layout is essential just because these shapes are simple.

The flute

Flutes can be carved using a single gouge, which is first stabbed straight in to make a stop-cut and then used to form the groove or flute which meets it. However, the acute corners created by this method are sometimes hard to clean out. For this reason the stopped flutes shown in Fig 18 tend to be preferred, but these require two tools: a firmer chisel modified to a round point, and a semicircular gouge. Flutes are commonly used on the cove mouldings of picture frames, mantels and architraves, and can be grouped between rosettes to create the triglyphs of an ersatz Doric frieze. These sorts of designs are found on vernacular furniture and buildings everywhere, but often these techniques are incorporated into more complex elements, and it should be obvious that the few examples cited here only hint at the possibilities. F&C

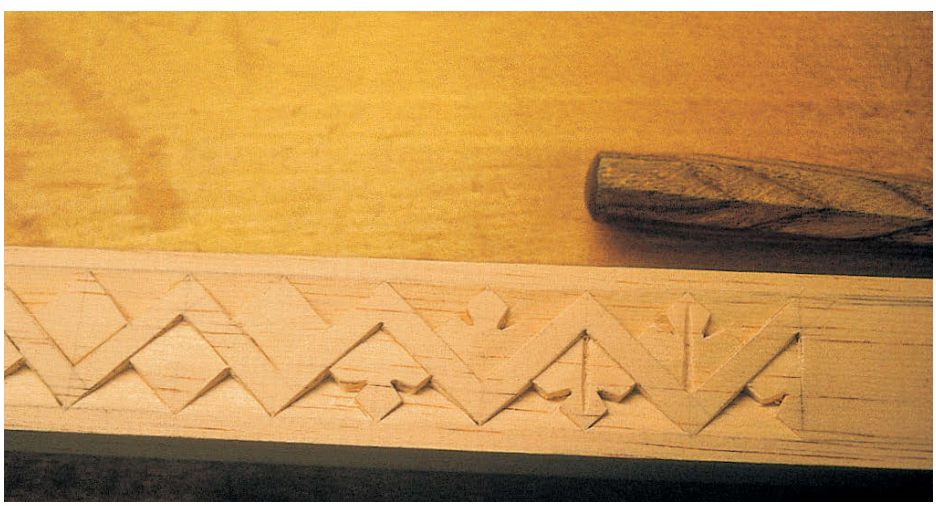

Fig 17: Subsequent stages in carving the same design. The result is very like traditional chip carving

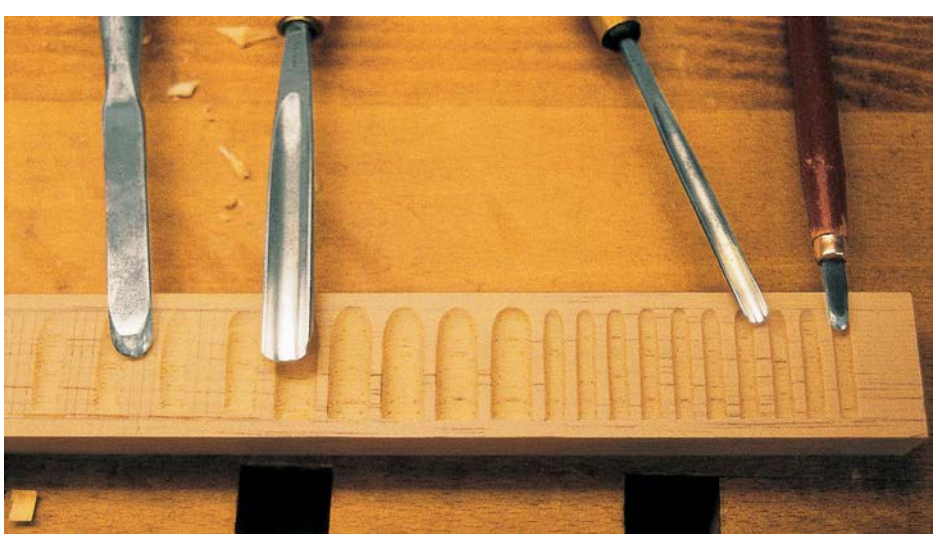

Fig 18: Two sizes of flutes in a flat surface, with the tools used to cut them: a round-ended chisel and a semicircular gouge

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Student work from Williams & Cleal Furniture School

Jane Cleal introduces us to the latest work from the school and the students explain the inspiration behind their projects

Williams & Cleal are now entering their tenth year as a furniture school. Having already clocked up over 25 years of commercial experience within the industry, we feel that now is an excellent time for our students to learn. There are so many more exciting opportunities for creative makers, in terms of materials, technologies and progression.

I myself initially apprenticed under Alan Peters OBE, as a designer/maker. Alan was part of the craft revival movement and apprenticed under Edward Barnsley. I can remember when I was training he gave me some great advice, which I now pass onto our students: don't feel you have to be the great creative artist/maker overnight, learn your craft thoroughly, use simple designs and work with them until your expertise matures. Do the simple well, and then move on. With strong foundations and passion, you can realise your ambitions.

Lead workshop tutor, James, guides students to achieve this in practice. James worked for internationally renowned designer John Makepeace OBE, producing a number of his award-winning pieces of iconic furniture. After running his own business, James helped establish the courses as part of Williams & Cleal. The school teaching team has also now grown to six, covering all aspects of furniture including everything from CAD and business skills to photography.

We are rigorous and challenging in our approach to teaching and we expect great things from our students. Encouraging them to understand and establish their own individual creative ideals is the first step for them to build in confidence and ability. Wedded to this is the consummate level of making skills that are achieved by our students learning under James.

Like Alan Peters OBE, I am also a strong believer that design and making should transcend personalities, styles and fashion and become a product of its age, timeless in the lasting appreciation that it generates. It should become a work of art without that being the aim of the creator.

To learn more about the school, visit: williamsandcleal.co.uk

Jane Cleal

Alistair Buchan

"The Jurassic Coast Coffee Table was designed specifically for a seaside house in Lyme Regis, a town famous for its fossil hunting beaches. The result is a coffee table in the shape of an ammonite where each segment of the shell is a different layer of the table. Made entirely from English oak (*Quercus robur*), I wanted to use a locally sourced timber that is also great to sandblast to give a weathered or driftwood-like appearance. The patinated bronze fins, as well as giving support, were added to contrast the solid oak and give the impression that they too are weathered and could wash up on a beach as salvage metal alongside the driftwood oak. This project was an exercise in designing a piece that really captures its surroundings, not only the room and the house it will go in, but also the local community and environment as well."

Alistair Buchan

PHOTOGRAPHS COURTESY OF WILLIAMS & CLEAL FURNITURE SCHOOL

Jurassic Coast Coffee Table made in English oak by Alistair Buchan

Jessica Fairley

Glacier Cabinet made in fumed oak veneer with mirrored steel facets by Jessica Fairley

"Inspired by a love of the mountains, I wanted to create a piece that would bring nature into the home in a functional but elegant format. The Glacier Cabinet is made of fumed oak veneer and individually cut mirrored steel facets. The biggest challenge of this ambitious project was to stagger each of the 28 glacial facets into a natural seeming arrangement. Guided by the Fibonacci sequence and many trials, the underlying MDF structure provided the inert anchor to affix the steel to. Light refracts off the icy facets giving a sense that there is more to it than meets the eye."

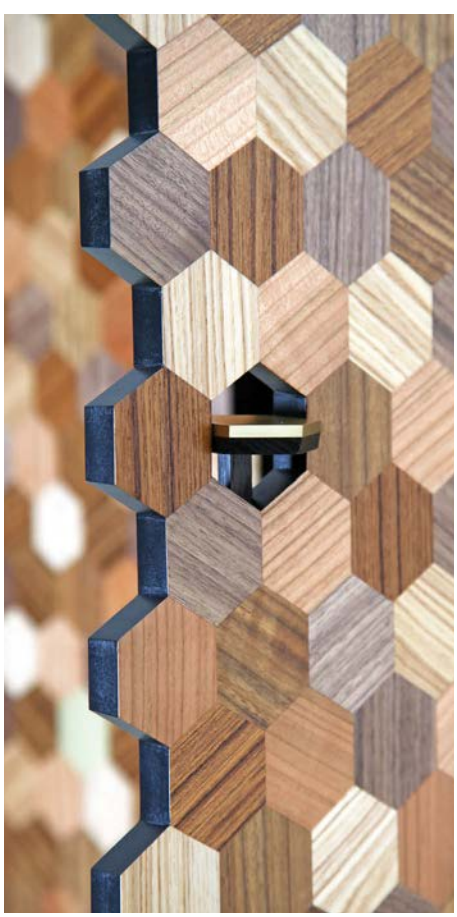
Jessica Fairley

Damian Robinson

"I come from a building and carpentry background. My father owns an architectural salvage business in Somerset and as a youngster I'd make things out of the discarded oddments I found at his yard. At the age of 30 while living and working in Guernsey, I decided to pursue my hobby further. I visited Williams & Cleal and was attracted by the vision and craftsmanship displayed by their students and, importantly for me, the functionality of their pieces. I moved back to Somerset with my family and started a 40-week furniture-making course in September 2015.

"For my final piece at the school I wanted to test myself; I designed a drinks cabinet with doors composed of 352 hand-cut veneer hexagons and a brass pivoting hexagonal handle detail sitting seamlessly among the dense hextille of the wood. The theme is continued with hexagonal legs cut from solid bog oak. The cabinet and drawer interiors are mirrored. I intended the piece to be luxuriant, streamlined and slick."

Damian Robinson



Hexagonal Drinks Cabinet made in solid bog oak and veneer by Damian Robinson

Tom Moy

"I have worked for over 10 years in Industrial Design, working on behalf of multinational clients developing both products and packaging. I have always been interested in the transition from design to manufacture and have had aspirations to design and produce furniture under my own brand rather than for clients. I undertook a bespoke course at Williams & Cleal to better my understanding of the fundamentals of handmade woodworking techniques. The team were able to curate a course content that allowed me to maximise my learning and utilise the great workshop facilities.

"As an Industrial Designer I am fascinated with form and the combination of contemporary materials. The Stowey No1 table is the first piece in my collection and is designed to be efficiently batch produced. It gave me the opportunity to experiment with the lamination process and learn how to create jigs to ensure consistency when replicating the piece. The flowing forms of tree branches inspired the intersection of the leg and laminated curve, with their alignment providing an interesting manufacture problem. The combination of oiled oak and sprayed matt white lacquer, mimics a contemporary Nordic design language, which has often influenced the products I design and will continue to impact the next pieces in my Stowey range."

Tom Moy

Stowey No1 side table in oak by Tom Moy

Charles Byron's Log Stack Cabinet

Charles Byron's Log Stack Cabinet was featured in *F&C* 236 as the winner of the Somerset Guild of Craftsmen award in 2015. The piece was awarded a bespoke Guild Mark by The Furniture Makers Company, and was shortlisted for the 2016 Wood Awards. A student at Williams & Cleal at the time, Charles drew inspiration from both a traditional Chinese medicine cabinet and a simple log stack utilising a unique end-grain oak veneer to create the illusion of each closed drawer being a single piece of timber. Charles has since set up a business with María del Mar Gómez, Byron and Gómez, which operates out of the Williams & Cleal incubation workshop.

For more information visit:
www.byronandgomez.co.uk

Log Stack Cabinet made from end grain oak veneer and white resin

Tom Jarrold

"Having had an introduction to furniture and its design at university, I had a passion to explore it further with a more hands-on approach. Through meticulous practical teaching and design theory lessons, Williams & Cleal provided an exceptional facility for me to grow my skill set. Traditional furniture-making techniques are initially used, and students are then given the freedom to explore and stretch their uses to create their individual projects.

"The walnut and burr sweet chestnut (*Castanea sativa*) drinks cabinet was my first project, and it was key to get it proportionally accurate for a tall, slender piece. Its tactile scroll-like handles gave me the chance to utilise the laminating process, and call upon the wealth of experience from the tutors at W&C. My console table is made from Macassar ebony (*Diospyros celebica*) and shows a traditional 'starburst' veneer pattern on top. The scalloped underside of the table was challenging, but was achieved using techniques similar to those used in making an aircraft wing. These two exciting projects with design hurdles to overcome put my newfound cabinetmaking skills to good use throughout an excellent year on the course."

Tom Jarrold

Macassar ebony console table by Tom Jarrold

Walnut and burr sweet chestnut drinks cabinet

Ruth Bowers

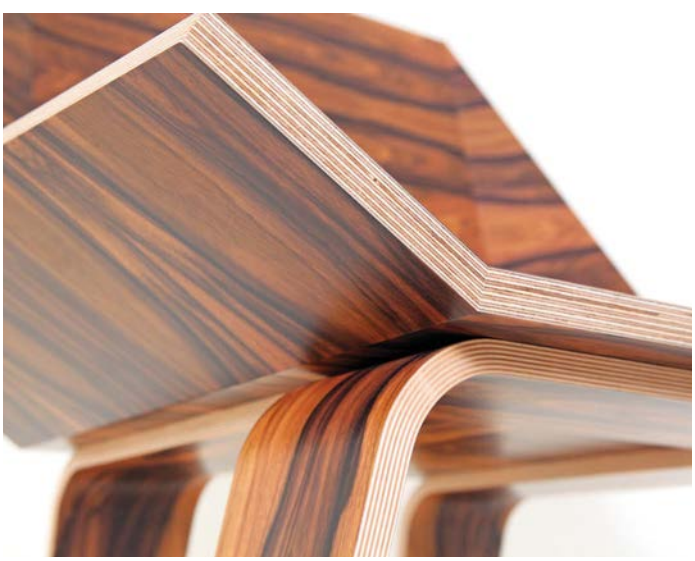
"After searching for apprenticeships for over two years with no luck, I began to look for adult courses with the hope of starting a career in furniture. Williams & Cleal provided the perfect basis for me as they not only gave me a great start in making, but also learning how to design.

"Both pieces I made are inspired by 1950s and 60s retro furniture. For me it was when furniture started to change from functional to art. The hexagonal chair was inspired by the Eames lounge chair, but with my own spin. I wanted to mix the use of curved and straight lines to produce a new and different design. Chairs were one of the main reasons I wanted to pursue a career in furniture making, after starting a small collection of them myself. The hexagonal chair was an exciting project that produced quite a few challenges, mainly due to making the angles work together. The chair was constructed with birch (*Betula pendula*) plywood and rosewood (*Dalbergia* spp.) veneer, using metal rods to support the angles. The legs were created in a jig using birch veneer, doubled up to replicate the look of plywood, and rosewood veneer.

"My brief for the media unit was very personal as it was created for my own home. It was constructed with a teak (*Tectona grandis*) substitute veneer called Amazakoue. I first thought of using teak but I had heard of issues that the oiliness of teak causes. My favourite features of this piece are the wicker door in the middle using locally grown Somerset wicker, and the running grain from left to right over the piece. I took a risk in only allowing myself 3mm excess to cut the mitre, encouraged mainly by Justin at the workshop. But I'm glad I was encouraged as the risk certainly paid off. It adds the special fine furniture touch."

Ruth Bowers

Media unit made in Amazakoue by Ruth Bowers



Hexagonal Chair in birch ply and rosewood veneer by Ruth Bowers

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Gone with the wind

Charles Mak demonstrates a simple technique to help you achieve maximum yield from the most stubborn boards with just a couple of sticks and a hand plane

Even if you use machines to prepare rough timber – as I usually do – knowing how to dress stock by hand can be very useful. When a deformed board or assembly (like a door or carcase) is too big or too small for a machine, your hand skills are what you can count on.

In preparing a rough board, the first task is to dress one side flat in length, flat in width and out of wind. Among the various deformities, twist is usually the most challenging to deal with, and that's why the general advice is to avoid buying twisted boards. Another strategy for twisted boards is to rough size them closer to their final widths and lengths before you flatten them as some of the defects – cup, bow or twist – are removed in the sizing process.

Although any twisted board can be flattened, before you start, you should check to ensure it will yield the desired thickness after the twist is removed. In the sidebar, you can find out how to do that.

PHOTOGRAPHS BY CHARLES MAK, UNLESS OTHERWISE STATED

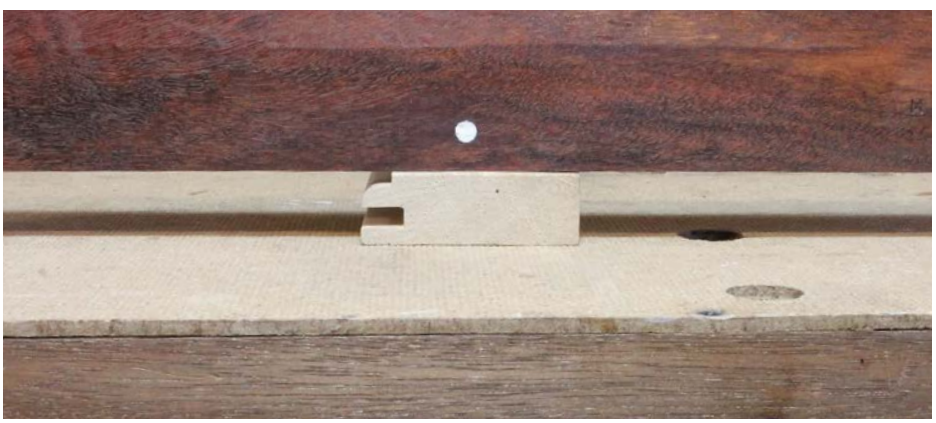
After being flattened, a twisted board can become too thin for your particular project

Spotting twist

To test for twist, you can press on the diagonal corners of a board on a flat surface to see if or how much it rocks. However, to accurately pin point the high spots, you need a pair of winding sticks. Winding sticks make a narrow board appear wider and make the twist easier to see. I have made several pairs of winding sticks and generally use a pair that is about at least 30cm longer than the width of the workpiece.

To use the winding sticks, first place a stick across each end of the board, at right angles to the length of the board and parallel to one another. Sight down so the winding sticks align at one end. Look across the other end of the front stick to see how the edges line up. If the other ends misalign, the board is twisted. Mark the diagonal pair of high corners on the board. Then, reposition one of the sticks and repeat the sighting to check the entire board.

For a long workpiece, some woodworkers use three winding sticks. After removing the high corners at the ends, they run a third stick back and forth between the two end sticks to look for other high spots in the middle.



Centre the winding sticks on the board and sight at about an arm's length away from one of the sticks

Salvage twisted boards

The gap on the wedge shows how much material is to be removed at the diagonal high corners

To get an idea of how thin a twisted board will become after it is flattened, follow these steps that American furniture maker Ric Hanisch uses:

1. Place a winding stick at each end of the board
2. Shim up one of the sticks until both sticks are parallel
3. The vertical distance made by the shim at the edge of the board is the amount of twist
4. The twisted board, when flattened, will lose its thickness by the twist on both faces.

Mark the first high corner and then the diagonal corner which is also a high spot

Keeping one of the sticks constant, run the second stick back and forth to find other high areas

Holding the work

To knock down the high spots, hold the workpiece down firmly so it does not rock. For smaller boards, I go with the vice, but for long or wide pieces, I select a face where the board will rock the least and secure it on the bench. A word of caution however, it's easy to introduce a false reading when securing the workpiece between a tail vise and bench dog as long or thin boards can easily distort under pressure from both ends.

For a board too big for the vice, I cramp it to a bench with shims placed underneath the high corners

Choosing the plane

For a small workpiece or mildly twisted surface, you can flatten it with just a smoother or jack from start to finish. However, if a lot of material is to be removed, a scrub plane is a better choice at the start. You can also hog off bulk waste with a toothed blade or a cambered blade set in the wide throat of a smoother and finish the job with a jack plane.

PHOTOGRAPH BY ROBERT LEE

You can retrofit a smoother with a cambered blade to use it as a scrub plane

Removing the twist

Flattening a deformed board of any size is all about removing the high areas; the trick is to know how – with as little trial and error as possible. I start by knocking off the high corners with a hefty cut to form two small flat spots. Take care to remove equal amounts from the opposite corners if you want to salvage as thick a board as it can be.

As the high corners come down, I lighten up on the cuts and make two types of strokes: diagonal and across the board, trying to extend the flats towards the centre. When the board gets relatively flat across, I reset the plane for a shallow cut and plane with the grain for the final strokes. Finally, confirm the surface is out of wind with the winding sticks.

Practise this technique on mildly twisted boards first to develop a sense of where and how much to plane, while building your confidence. The hand-planed face is now the reference surface for thicknessing the reverse side. Do you now face plane the reverse face (and every other board that comes into your shop) also by hand, or with a machine? It is a question that only someone who has the hand skills gets to ponder about! F&C

Plane down the two high diagonal spots and check the work often to avoid taking too much material from one spot

Enlarge the flats by making alternating diagonal cross strokes and inward from the edge to avoid break-out

In finish-planing, loosen up the grip and make the final, long strokes with the grain

Sighting a dark edge against a light background allows easier reading

Charles Mak is a woodworking author, tipster and teacher. He takes advantage of both power and hand tools in his projects.
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Lie-Nielsen honing guide

Geoffrey Laycock puts this long-awaited honing guide to the test

It must be almost three years since I went to a demonstration on sharpening by Lie-Nielsen's Deneb Puchalski and talked to him about the rumoured new honing guide, which finally appeared in the UK in 2016. Based on the old Eclipse 36 design – if you can find one, grab it! – the limitations of that old design have been removed and its uses expanded significantly, albeit at an eye-watering price.

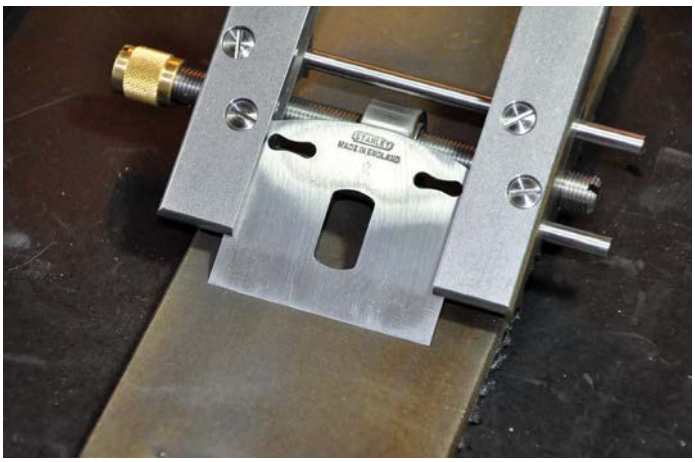
Made from stainless steel with brass knurled thumbscrew and bronze bearing, the guide oozes quality. It comes with a standard set of jaws described as 'fits most of our blades', with other jaw designs available. Unfortunately, those alternate jaws are described as 'designed for our blades and chisels, not other makers' so rather than try out the guide on some of my LN tools I sharpened several commonly found non-Lie-Nielsen examples.

Testing the honing guide

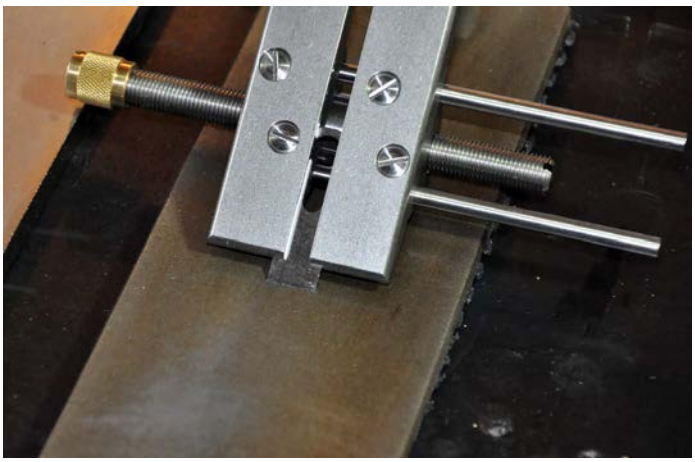
The alternate jaws include a long version for shorter blades; I started with this one and an original Stanley 151 spokeshave blade. All jaws fit both sides of the guide body so the long jaws can be arranged with the knurled thumbscrew whichever side you prefer for ease of use. Instructions include the necessary projection for a range of bevel angles so having chosen 30°, 29mm projection, I was set and off we went with a diamond wetstone with lapping fluid. The blade was easy to set in the jaws and finger tightening was all that was needed to hold it during coarse then fine honing. The single roller does allow a camber to be put on an edge easily if you wish, otherwise a little care applying pressure results in a straight honed edge. Very quickly I had a blade that resulted in a small bald patch on the back of my hand, so I was happy with that test. I did hope I might be able to sharpen my miniature Veritas shoulder plane blade using these jaws but the recesses are too wide – I suspect adding a piece of appropriately sized silver steel rod as an additional clamp may make this possible. I did use them for a Veritas inset plane blade though, which is only 12mm wide and 39mm long.

Stanley 151 spokeshave

The first blade I used to try out the new honing guide was from a Stanley 151 spokeshave. These tend to get a bad press but usually from users who have never teased the best performance from them. I have around eight spokeshaves in total and they all work nicely but there is a little effort required first and that starts with having a sharp blade. No problem with the Lie-Nielsen guide using the long jaws. Consider the shave to be like a bench plane and the first thing to do is ensure the blade can seat nicely in the body. Then turn your attention to the underside of the cap, just as you would a chipbreaker and ensure it is flat, square and contacting the blade fully and along its leading edge. On the upper front edge of the cap, grind back to provide clearance for shavings and then remove material from the two side lugs so the cap sits further into the body and nearer the blade edge. Finally, I flatten the sole so I know I have a suitable surface to work with.



Standard spokeshave blade held securely in long jaws



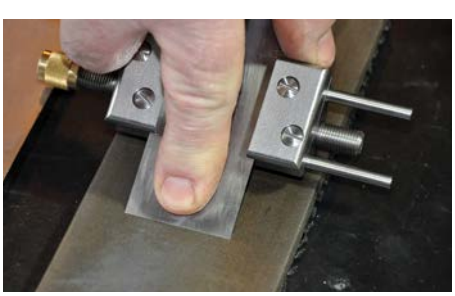
A Veritas blade only 39mm long

Changing jaws involves two screws in each and a good bit of design is they are captive in their respective jaw so no dropping and hunting around the floor for an errant one. Two dowels in each jaw ensure accurate location and no movement. What is not so clever is that after seven years' development Lie-Nielsen were unable to use a screw the same size as any of their planes so if you already have a few of their lovely purpose-made screwdrivers – there is now a number 9 in the series. That does seem to be a way to make yet another sale and cost the user a further £21 if you wish to minimise screw slot damage. Unfair comment? Possibly. I've tried a number of screwdrivers with a blade the correct width, including hex bits, and all but one were too thick so it seems the two options are: buy their screwdriver or search for the ideal screwdriver yourself. In fact, the screws do not need to be tightened hard so damage should be unlikely.

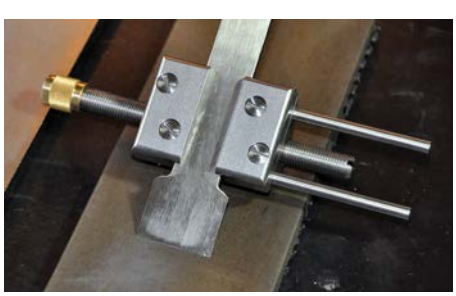
25mm-wide Marples mortise chisel in the mortise jaws

Switching to the mortise chisel jaws, I tried a LN 6mm chisel and, unsurprisingly, it held it perfectly so I switched to my 25mm 40-year-plus old Marples. These jaws have a deep inner face with a lip to act as a register for the chisel and once again it was held firmly with finger tightening only. With these jaws, projection is different and 5° is added to the bevel you want to give the measurement, in this case 22mm.

I finally changed to the standard jaws which fit most plane blades and bevel edge chisels, although the narrowest will require purchase of 'chisel jaws' which can hold 3 and 4.5mm chisels and I found my 6mm old Marples was not held properly and could not be honed. A 38mm Stanley heavy-duty was up next and this was held securely. I had already tried the long jaws to hone a 30° bevel on a Clifton 3110 shoulder plane blade and wondered how I could introduce a steeper 35° so tried the standard jaws which actually did both bevel angles with no difficulty. Going back to the 6mm bevel edge Marples, I tried this in the mortise jaws and they worked perfectly – lateral thinking to the rescue. F&C



This one-finger technique is how I avoid uneven bevels on narrower blades although at 38mm wide this would normally require a two-fingered grip



The Clifton shoulder plane blade fits in the long jaws or the standard jaws for a steeper bevel angle

F&C verdict

Overall this guide is a joy to use but thought must be given to the best holding method for the edge being sharpened. Using it with waterstones is not a problem but I would take care to keep the fine threaded screw clean and lubricate the bronze bearing after use. Further sets of jaws are available for 18° and 30° left and right skew blades and if you need every option plus the screwdriver you are investing a staggering total of about £330. It would be nice to have a box available to store this precious cargo in but the guide comes in a plastic tube and the jaws in paper envelopes. The combination tested here cost around £167, rather more than the £10 or less for an Eclipse replica but with much greater versatility.

For

- Beautifully made and high precision
- A standard design with extended uses and versatility
- Changing jaws is quicker than expected
- Standard jaw easily holds a No. 8 jointer blade

Against

- The cost
- The specialised jaws do mean more purchases are likely to allow full use
- That screwdriver!

Price as tested:
Honing guide with standard jaws: £104.96
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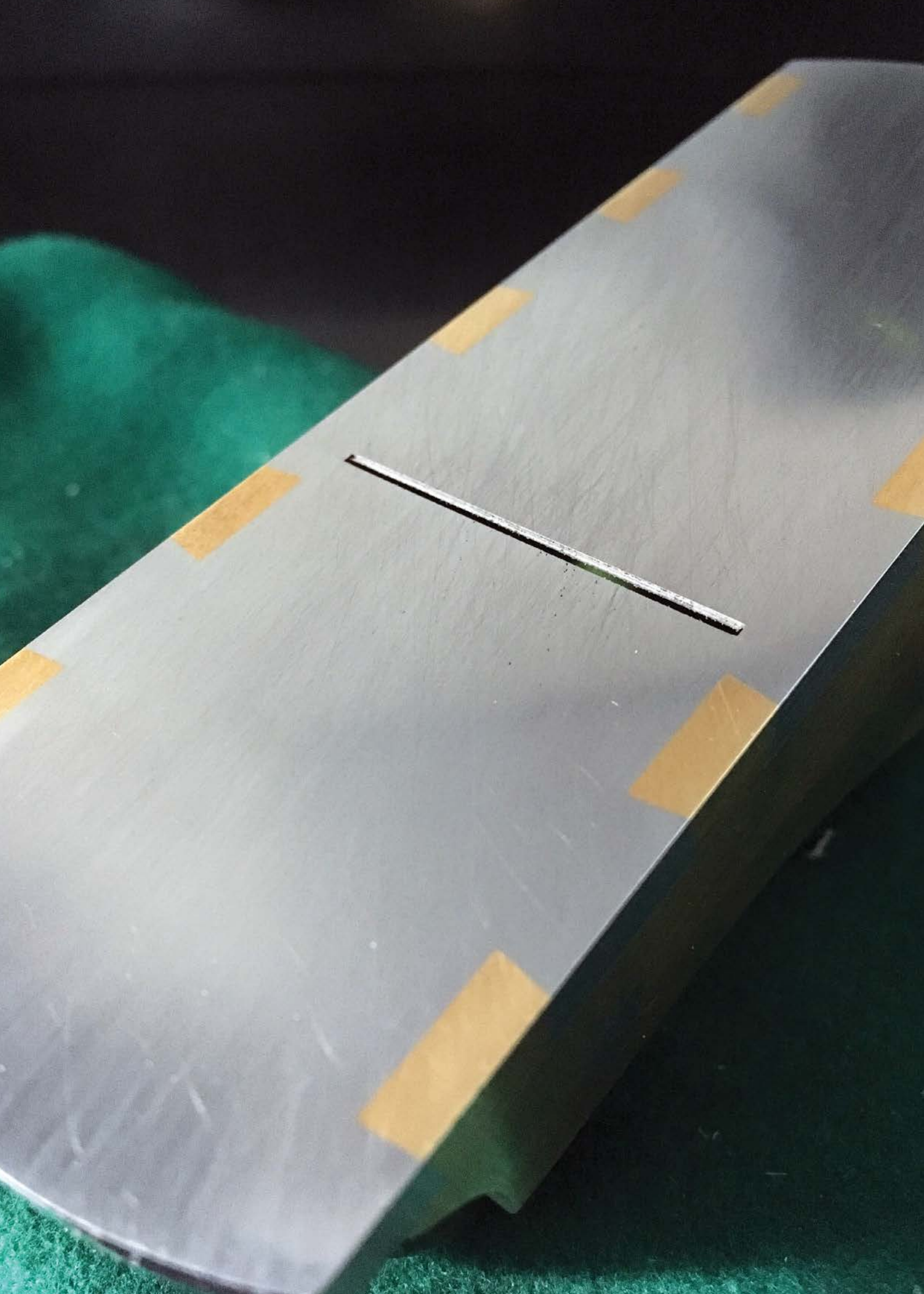


Lip service

Derek Jones looks at the received wisdom surrounding tight mouths and whether it might be just a result of Chinese whispers

A little bit of knowledge, they say, is a dangerous thing but compared to having a lot of knowledge based on hearsay and conjecture, it's possibly less damaging in the long run. With a craft as old and as well documented as ours it's not often you come across an opinion that flies in the face of convention. Over time anecdotal evidence can easily morph into wisdom and in so doing deter us from thinking any more about solving a particular problem. Much of what we accept as gospel has been handed down by generations of practitioners, and with that transfer of knowledge comes the inevitable, and I'm sure mostly unintentional, slant on things or complete spin.

Part of the problem I'm sure, is relating information to the here and now and the often very personal set of circumstances in which we find ourselves. In my opinion, repeat, my opinion, the most helpful 'how to' texts come with the caveat that there is generally more than one way to skin a tree and make a piece of furniture. And while some folk insist on absolutes to get them through the day, experience has taught me that in reality they are of limited use. I've also learned to embrace the subtle nuances of doctrine to expand my portfolio of useful techniques.

Open wide

What's your understanding of a tight mouth? 1mm, half a mil or less or one that barely allows the light of day to pass through? Whatever it is I bet at some point you've considered it to be somewhere between advantageous and critical. What if I said it was neither and that edge and angle were more important and you could probably do the majority of your planing with a mouth resembling a permanent yawn? Which brings me neatly and rather tenuously onto the next most important factor for effective planing: the bed.

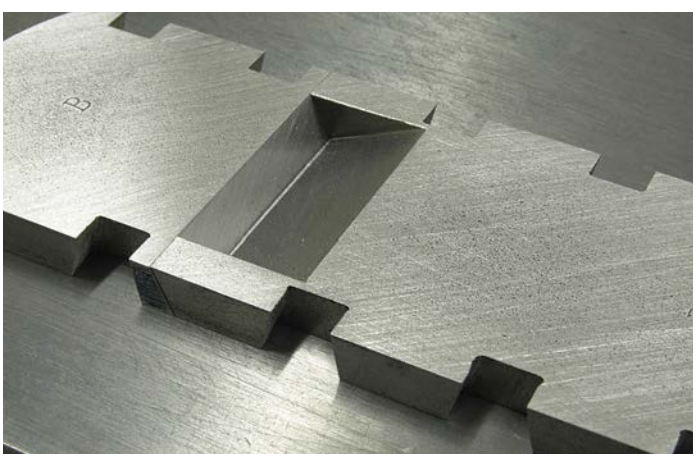
The best way to appreciate the relevance of all three criteria (edge, angle and bed) is to go and grab the nearest sharp paring chisel you can lay your hands one and use it as it is intended. Notice that there are only a couple of features missing that would otherwise turn your paring chisel into a plane, or are they? The frog, or bed in this instance, is disguised as the flat workpiece with the thumb on your non-dominant hand behaving exactly like a lever cap or wedge. And the mouth? Well obviously there isn't one but miraculously you can still produce a very fine shaving.

I know what you're thinking, how can that be possible? Angle, edge and bed, that's, how and maybe a deft hand. I don't want to dwell too much on the physics of either right now because what's more important is to understand that if a tight mouth wasn't the reason for the fine shaving then obviously something or a combination of things were and maybe they should be the focus of our obsession.

Badge of honour

I've quizzed a few plane makers about this and all agreed that there is a tendency to over emphasise the importance of tight mouths and many so-called improvements to mass-produced planes. The more sceptical among us might suspect a level of convenient misinformation to gain the upper hand and some serious bragging rights. Karl Holtey, for example, said that most of his metal bodied fixed mouth planes would perform just as effectively with a mouth opening twice or more than that expected by the customer but a tight mouth is very much regarded as a sign of quality, even if it does limit the planes use. A valid point indeed considering the difficulty (and therefore expense) of making a very fine fixed mouth BU plane; features that understandably effect perceived value.

> "What if I said… you could probably do the majority of your planing with a mouth resembling a permanent yawn?"



PHOTOGRAPHS BY DEREK JONES/GMC PUBLICATIONS

All things considered

The business end of the most basic hand plane is a complex matrix of surface angles designed to cope with an equally complex and variable set of circumstances. The dynamics of a metal bevel-up blade vs those on a double iron woodie vary considerably and it's here that I think the lines of communication may have become blurred. Plane maker Oliver Sparks is at home building either type of plane and enjoys challenging the wisdom of the old masters in his quest to produce planes that surpass conventional expectations in both appearance and performance.

"In my experience if one wants to stop tearout it's either a single high angle (55°)/ tight mouth approach, or a wider mouth with a finely set cap iron. The single iron/ tight mouth works faultlessly providing the set mouth is not much larger than the thickest shaving that will pass through it" he said.

"These two factors work very well together – some of my best smoothers are high angle woodies with a mouth so tight the light barely passes through them" he added.

He also mentioned that the drawback of having a 55° pitch is that it's noticeably harder to push than one pitched at 45° and will therefore tire the user quicker. Incidentally, pushing harder can also lead to a more erratic planing style bordering on frantic. "It also generates more heat near the cutting edge, though I'm not sure what (if any) effect this has on performance, as it will never reach 175° which is about the lowest point for tempering an O1 iron. "

For the 'absolutes' I mentioned earlier he had some more bad news: "If the mouth is opened up a little one must take lighter cuts on the same piece of wood to avoid bad tearout, but the high angle on its own is a big improvement over standard pitch (45°) and still viable on many woods, just not proper nasty stuff like burr yew." To summarise that point, if the angle is high enough the mouth can be quite wide – think bevel-up low angle jack. A typical bevel up jack has a bed angle of 15° so to achieve a high angle you'd need to be grinding a primary bevel on your blade somewhere around 40° to constitute a high angle. However, a secondary bevel of more than a couple of degrees might well render the plane a monster to use. Note a low angle bevel up plane is bedded at 12.5°.

Scraper zone pitfalls

There's a definite correlation between steep angles and wide mouths. The steeper the angle, the wider the mouth can be but anything above 55° will be extremely hard to push, bevel up or down and puts you into scraper territory where a mouth is no longer a consideration. HNT Gordon produce specialist planes with a steep pitch and with HSS irons to cope with the more truculent exotic timbers native to Australia.

Cap iron conundrum

When it comes to cap irons and tight mouths, Oliver doesn't believe it's strictly necessary to have both on the same plane. "My main workhorse around the shop is an LN No.5 with an A2 iron. I set the mouth years go at around 1mm and that is pretty much where it's stayed. I don't use it like a true jack, I grind the iron with only a hint of camber because for the most part I will be working very small stock pieces with a close set cap iron. I have plenty of woodies should the need arise for a 'true' jack." The only time he would want it wider would be to take big cuts with a more pronounced cambered iron where the easily adjustable bedrock frog comes in handy.

Oliver's tip to avoid tearout on a fixed mouthed plane with a cap iron is to set it ludicrously close to the edge, maybe 0.1 or 0.2 mm. "This works very well, and if the iron is bedded nice and firmly it will handle 90% of difficult stock no matter what the mouth is saying." This is why the cap iron was born, and continues to be used to this day. "I think all the old conjecture about it originally only being there to stiffen/bulk up the thin iron is nonsense and has been disproved many times over. It does stiffen up the iron assembly, but that is not its primary objective. " he added.

There are consequences, however, of setting the cap iron close to the edge as it will increase friction and requires more force to push the plane.

Richard Arnold has the mouth on his Norris panel plane set very fine and although it's a double iron plane, he finds taking a full width shaving with the cap iron very close to the edge too much effort. To counter this he sets the cap iron further back than normal (for example 0.6mm instead of 0.2mm) and lets the tight mouth do the rest giving him the best of both worlds; a plane that is easier to push while still controlling tearout.

Top tip

It sounds obvious but for best results when using a two-piece iron it is imperative that you prepare the cap iron (chip breaker) with as much attention to detail as your blade. An hour in front of David Charlesworth's recent DVD *Plane Sharpening* will set you and your planes up for premium results for life.

Though funnily enough he finds the best performing plane in the workshop with regards to handling tearout is one of Oliver's Slipper planes, which is bevel up at 19° with a super fine mouth.

Adjustable mouths

Planes that present the best case for having an adjustable mouth are the ones that require the least amount of grunt to get them going with the most obvious example being the block plane, low angle or regular.

"Chamfers are a good example", says Oliver. "What's the first thing you do when chamfering, before you even touch the wood? Set the iron for a heavy cut. If it only had a set fine mouth, you could only take fine shavings and that would take forever, so you open up the mouth, crank the blade right out and remove the bulk quickly without the mouth jamming up. When you are getting close to the layout lines, retract the iron and close up the mouth for a more predictable/reliable cut."

To conclude

If at the start of this article you were a little confused about the merits of tight mouths and why they are held in such high regard, I hope we've managed to dispel a few myths and present a stronger case for considering the importance of the other factors surrounding the set up of your planes. For the 'absolutes' there's no silver bullet for this particular problem and neither should there be. After all every piece of timber is unique and making it shine like the diamond it is, is all part of the challenge. F&C

PHOTOGRAPHS BY JIM HOOKER

The cabinetmakers' flexible friend

Jim Hooker takes a fresh look at sharpening the humble scraper and suggests a way to keep them in tip top condition

In the UK we call them cabinet scrapers; in the US they are card scrapers. Of course, their use is not confined to cabinets and they don't have much to do with cards, so I'll stick to plain 'scrapers'. Whatever you call them, they are one of the most useful, versatile and simple tools in the furniture maker's armoury and on a price-to-usefulness ratio I can't think of anything else that comes close. Find yourself a worn-out western or Japanese sawplate and you can even make your own with little or no compromise on quality.

However, an effective scraper needs a sharp and continuous hook along its working edge. This is something that many woodworkers struggle to achieve using the traditional method involving a mill file and a hardened cylindrical steel burnishing tool, sometimes known as a ticketer. A worn-out or failed hook will produce only dust rather than the shavings produced by a well-prepared scraper. When I first started making furniture I attended a course with professional cabinetmaker and inspirational teacher, Bernard Allen, at West Dean College, where I learnt a somewhat different and highly effective technique for creating the perfect scraping hook. Nearly 20 years on, I'm still attending Bernard's courses and using the scraper preparation method he invented out of necessity when his burnisher went AWOL. I'll call it the Allen method. It isn't fundamentally different from other methods but differs in some important details and the tools used. What's more, it's cheap, reliable and easily mastered.

Not quite dust but the scraper edge was definitely past its best

PHOTOGRAPHS BY JIM HOOKER

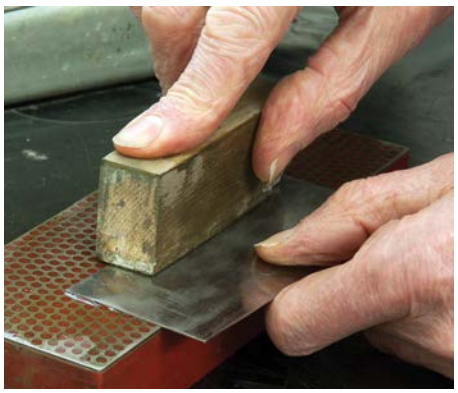
The basics

Before exploring the Allen method it's worth having a look at the basics of scraper preparation. Fundamentally, a scraper is an edge tool like any other. It depends on having two finely worked faces meeting at a consistent angle. Just as with a chisel or plane iron, the finer the meeting surfaces – back and bevel or, in the case of a scraper, face and edge – the sharper the resulting edge will be. For this reason, the Allen method does not involve the use of a file. A file won't work on a chisel because the steel is harder than that of a scraper, but even if it would work you wouldn't use anything so coarse on a chisel because you would then need to get rid of the deep grooves it would leave in the surface, so why use a file on a scraper? The tools used in the initial stages of the Allen method are exactly the same as those used for sharpening any other edge tool – water, oil or diamond stones, abrasive film – whatever you normally use.

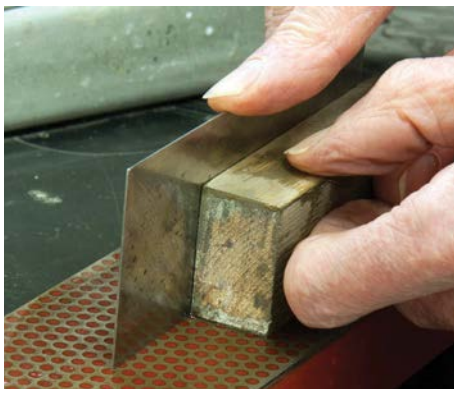
The Allen method

Stage 1

The first step is to remove all trace of the old hook or, in the case of a new scraper, machining marks, from the area of the face adjacent to the edge, with the scraper placed flat on the stone. It's up to you how fine you go with this step – I often stop with a worn fine (red) DMT diamond stone or, if I'm feeling particularly fastidious, I may finish with a 6000 or 8000 grit waterstone. The flexibility of scrapers makes it difficult and time-consuming to obtain an evenly fine finish along the whole length of a scraper face using finger pressure alone, but applying pressure to the scraper with a flat faced block of wood greatly speeds this process. Although it takes longer, it's worth preparing the faces on both sides of the scraper because it is entirely practical to have effective hooks on both sides of an edge, thereby doubling the time between sharpenings. The next step is to square the edge and remove any defects it may have. This is easily and quickly done using your block of wood to hold the scraper at 90° to the abrasive medium. Diamond stones are ideal for this; water or oil stones can also be used but be sure to continuously change the path of the scraper as you work its edge and use only light pressure so as to avoid creating deep grooves in the stone.



Applying pressure with a wooden block helps to achieve a flat, even face adjacent to the scraper's edge



A fine diamond stone is ideal for honing the edge, the wooden block helps maintain the edge at 90°

The perfect burnisher – a 50mm tungsten carbide blade used in spindle moulders and decorators' scrapers

Only the obtuse angle between the bevel and the front of the blade is used, so blunt the cutting edges for safety

The blade is held at a small angle to the edge and moved outwards over the length of the stroke. Firm pressure combined with this diagonal action draws the metal out from the edge

The next step again uses a different tool, in this case a 50mm-long tungsten carbide blade. It was originally developed as spindle moulder tooling but is now also widely used in decorator's scrapers of the Linbide type. These blades can be bought for as little as £2 or £3 – much cheaper than a good quality burnisher – and will last forever. Better still, if you know a professional decorator, scrounge a chipped or worn-out one which will be free and save you the trouble of blunting the sharp edges because you will have no use for these other than to cut yourself. The part of the blade used is the obtuse angled edge between the bevel and the top surface. This edge is pulled or pushed along the surface to be worked at an angle so that the stroke uses the whole or most of the length of the blade to pull the scraper metal in the required direction. If you run out of tool edge before completing the full length of the scraper, just restart where you left off. Moderate pressure is required – the aim is for a smooth fluid stroke, not a heavy stuttering one. Scrapers vary in hardness so the number of strokes may vary accordingly, but you should not need more than two or three for any part of the process and one may suffice.

Scraper preparation works by moving small amounts of metal adjacent to its square edge. This is often done by working just the edge itself to create a burr but, in the Allen method both the face and the edge are worked for reasons I will explain. The first surface to be worked is the face of the scraper adjacent to the edge that you have already polished. The object is to pull metal upwards parallel to the face so that it stands proud at the side of the narrow edge of the scraper. This modifies the square edge so that it resembles that shown, in exaggerated form, in figure 1 and should be easily detectable by passing a finger across the edge; if you can't feel it, it needs more work. Besides moving metal, this process work hardens the surface of what will be the underside of the hook by dislocating the crystalline structure of the steel. This won't happen if only the narrow edge is worked.

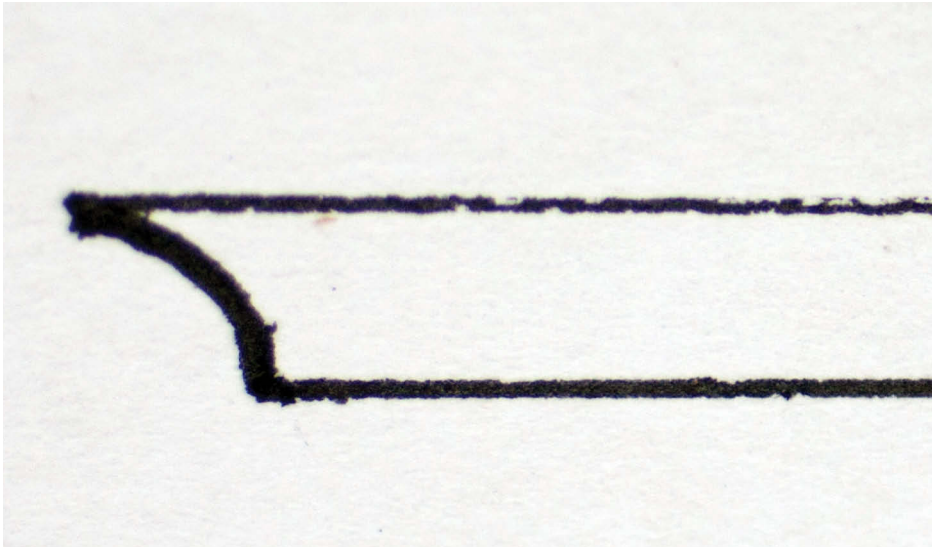
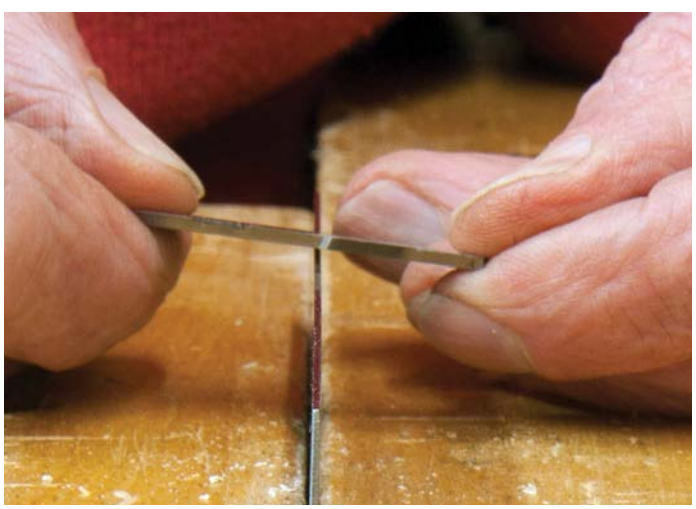


Figure 1: Exaggerated impression of the raised edge created by working the scraper's face

Stage 2

The second stage is to place the scraper in the vice and use the tool in a similar manner to draw the previously raised metal over and outwards so that it projects out from the edge at a little more than 90° to the face from which it was raised (figure 2). For this the tool needs to be angled a degree or two away from the worked face. Finally, the tool is used tilted at an angle of about 5° in the opposite direction to draw the raised steel down to form the hook (figure 3). The working of the edge in these last two stages work hardens the upper face of the hook for a longer lasting edge. Now turn your scraper over and repeat the process to give yourself a perfect hook on both sides of the edge. Job done.



Stage 2 turns the metal raised in stage 1 so that it projects at almost 90° to the face

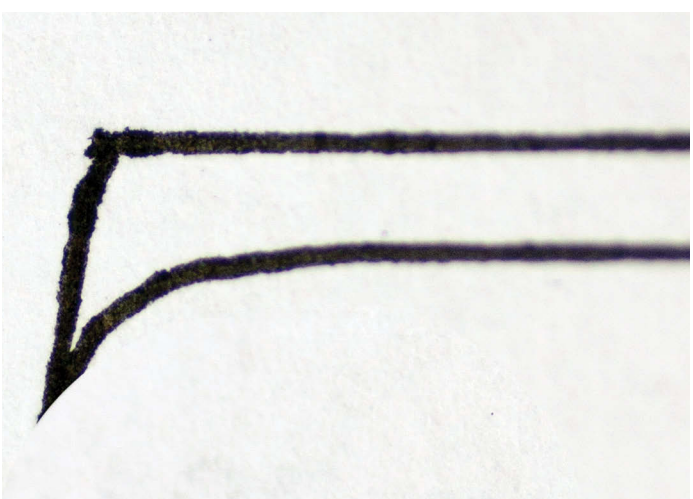


Figure 2: Exaggerated impression of raised metal turned outwards

Finally, tilting the tool at about 5° towards the worked face creates the finished hook

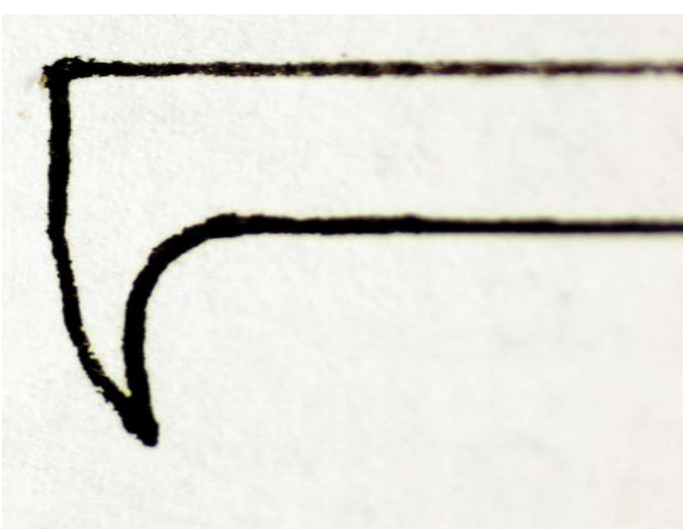


Figure 3: Exaggerated impression of the finished hook

Scraper variations

In addition to the standard rectangular scraper, commercially made shaped scrapers are available in various profiles. These are prepared in exactly the same way as a standard scraper. One of the commonest and most useful is circular with 'bites' of various radii out of its circumference. These are useful for scraping homemade dowels but, if you use them to scrape a rounded over edge on a board beware, it is all too easy to find the pointed end of a 'bite' making a deep groove in the work. To avoid this, it's worth taking a few minutes to remove these corners on a grinder but take care not to overheat the scraper which may prevent it from holding a sharp edge. Useful though commercial profiled scrapers can be, making your own to the exact profile required is easy enough. A standard rectangular scraper or other suitable steel is easily shaped with a hacksaw or jeweller's saw, files and grinder. For complex profiles a small grinding wheel or diamond burr in a Dremel type machine is perfect. When it comes to scraping external curves it is also worth remembering that while a standard scraper is about 1mm thick, they are also available in thicknesses down to 0.4mm. Thinner section scrapers are a lot more flexible and will easily bend to scrape more gently curved surfaces.

A workshop-made profiled scraper on the left with two commercial examples. Note that some of the transitions between curved and straight edges have been rounded to prevent them scoring the workpiece

A thin, flexible scraper can be a good alternative to a profiled one if the curve to be scraped is gentle

Storage

So, you now have a nice collection of scrapers with beautifully sharp hooks, but how do you store them? Scrapers look robust and unprepossessing; what's more, they don't have an obvious razor-sharp edge which could do serious damage to you or to other objects, so the temptation is to treat them rather casually and without the care such a useful tool deserves. For far too long I stored mine in a plastic bag and just assumed that the often blunt scraper that emerged from the bag must already have been extensively used. The penny eventually dropped and I realised that bumping scrapers together is a sure-fire recipe for blunting them. Scrapers are often supplied with plastic guards but these have a tendency to fall off and get lost, so a better long-term solution is needed.

I concluded that the best answer was a wooden storage box with spacers that would keep the scrapers apart and accommodate a variety of shapes and sizes. A look round my wood store revealed a short board of 9mm-thick American black walnut (*Juglans nigra*) left over from the creation of bandsawn veneers for another project. It's thin stuff like this that always seems too good to throw away but rarely gets used, so it was perfect for a scraper box. Of course, like most of us, I also have plenty of scraps of ply that would have been perfectly suitable, but I just can't resist the temptation to make workshop objects look nice, so walnut it was and, at just 175mm long, 70mm wide and 100mm tall, it doesn't take a lot of material.

Construction could hardly be simpler. The sides are rebated and glued together and the top and bottom panels sit flush, glued into rebates. I was tempted to use solid wood for the top and bottom panels and, at only 55mm wide, could probably have got away with the differential expansion of long grain sides and a cross grain panel, but decided not to risk it. The base, which would not be seen, was easy – a piece of 6mm ply – but for the top the temptation to beautify was too much to ignore – a lovely little scrap of heavily rippled sycamore (*Acer pseudoplatanus*) would contrast nicely with the walnut. A 2mm slice was bandsawn off this and glued to some 3mm birch ply and the basic ensemble was complete.

Not a good way to store your scrapers – bumping the hooks together soon blunts them

A scraper box doesn't need to be this posh – birch ply would be fine – but if you're tempted to beautify, then why not?

Safe storage for 10 scrapers

A simple rebated construction with glued-in top and bottom ply panels is perfectly adequate for a small box

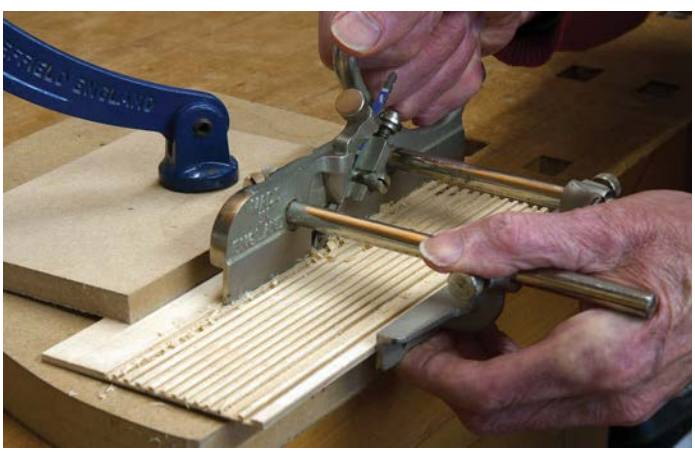
Fitting out the box

With the box glued up it was time to decide on the depth of the lid and separate it on the bandsaw – the deciding factor here is the width of the narrowest scraper to be accommodated, which must protrude enough above the spacers to be easily grasped and removed. The ply linings project above the top of the base so as to provide positive location for the lid. The front and back linings are 1.5mm birch ply and are glued in place. The end linings and spacers are 3mm birch ply and simply an unglued interference fit, so it would be an easy matter to re-purpose the box at a later date if required. This is all entirely straightforward apart from the end linings, which are grooved to take the spacers. To maximise the number of scrapers that can be accommodated the space between grooves is only 2mm – groove walls this thin are very easily broken away so this process demands care. The original plan had been to rout the grooves with a 3mm cutter in a plunge base-mounted Dremel, but my somewhat elderly but not ill-used Dremel proved to be incapable of producing a groove less than 4mm wide due to runout in the spindle or chuck, so it was back to hand tools. Fortunately my trusty old Record No 044 plough plane came to the rescue and the necessary grooving was satisfyingly completed by hand. With the 3mm ply spacers cut to size it all fits together very snugly and securely.

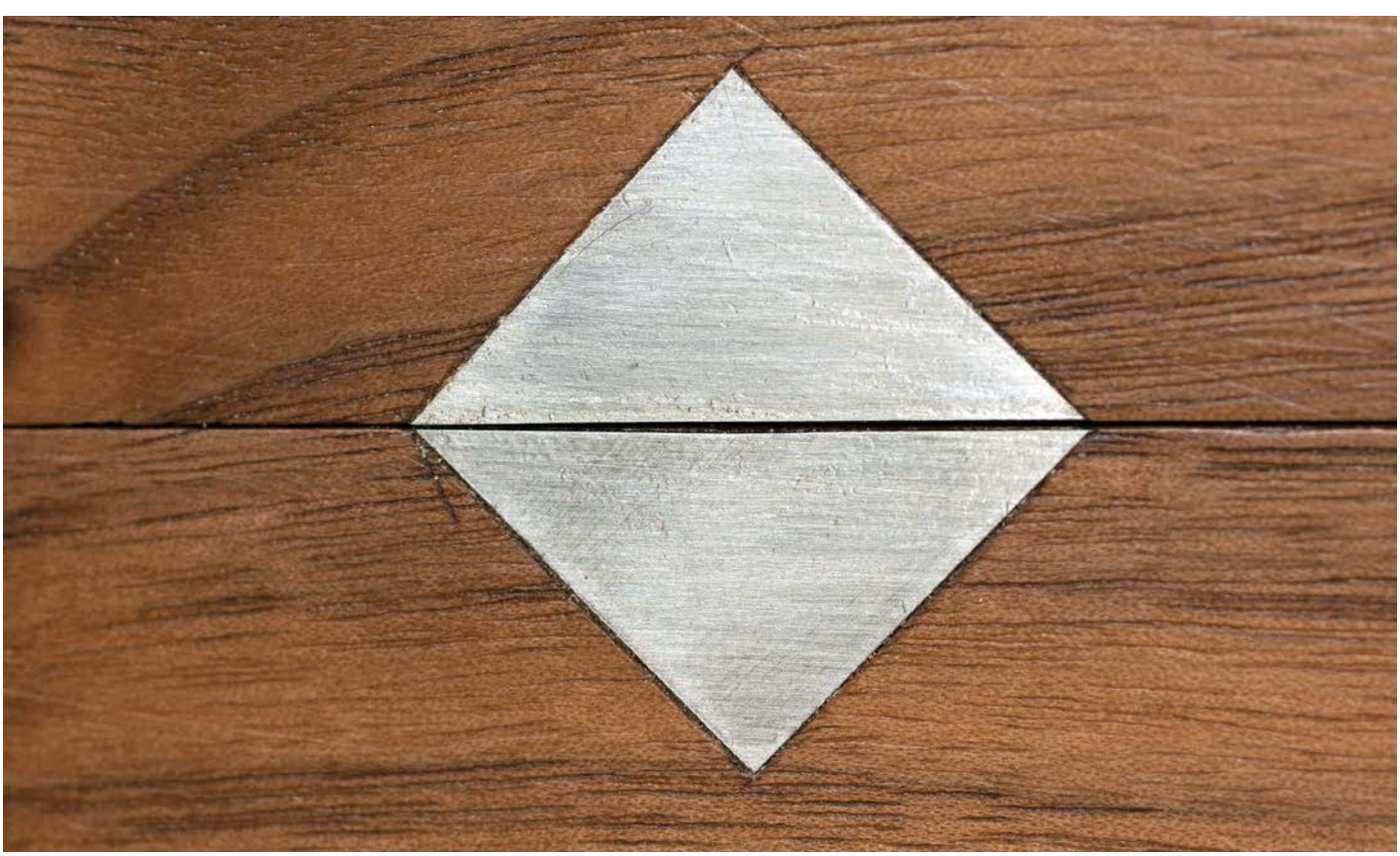
I'm pleased to say that the lid fits very nicely either way round but, call me a bit OCD if you like, I do like to see the grain matching when the lid is on, so a small inlay on the joint line of one side to make the correct orientation obvious seemed like a nice idea. Casting around for something to use it occurred to me that prepared scraper steel would be fitting and a nice contrast. After some careful marking out, that plunge base mounted Dremel really did come into its own for cutting the recesses, followed by just a little cleaning up with a chisel. A little superglue and the metal was snugly fitted. Finally, a few coats of shellac saw the whole ensemble finished.

Sharp scrapers safely housed in a posh box; what more could you ask for? As a fellow woodworker kindly observed, "Totally unrequired fabness, but why shouldn't a functional object for the workshop look good?" How could I disagree; what's more, I had fun making it and I find I reach for a scraper more often now that a nice sharp one is always so conveniently to hand. F&C

Thin ply liners project to provide location for the lid. Spacers are only 2mm apart to maximise capacity



A Record 044 plough plane proved ideal for cutting the closely grooved end linings – in a quietly satisfying way too



Inlaid scraper steel helps orientation of the lid and is a nice – if not strictly necessary – finishing touch

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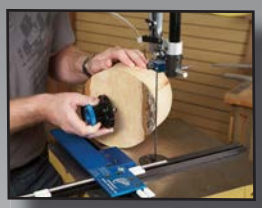

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Perfect countersinks

Workpiece with countersinks being drilled

Chris Yates looks at getting the perfect countersinks

There are several combi drill and countersink bits on the market, some with round shanks, and others with ¼in hex drive, often marketed as 'snappy'. They often come in sets for wood screws of gauges from No.4 to No.12, fitted with appropriately sized drill bits (usually 5⁄64in, to 9⁄64in in 1⁄64in increments). The drill bits are held in place by grub screws through the combi body and as well as enabling drill bits to be exchanged when they get blunt or damaged; it also enables the drilling depth to be set accurately when drilling blind pilot holes.

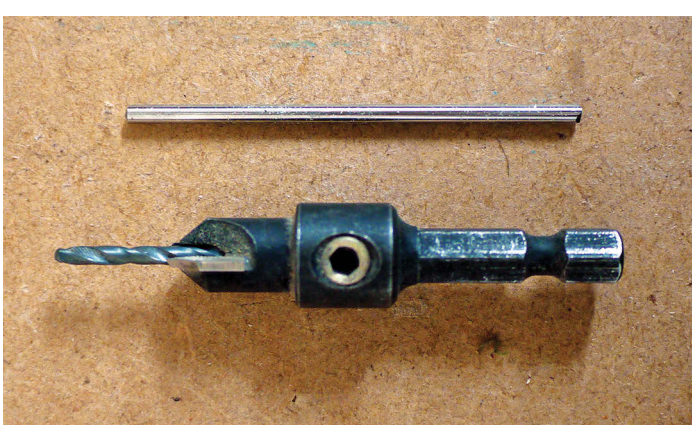
These combi bits all offer the prospect of drilling a clearance hole and countersink in a single operation, and can be quite a time saver if you need to drill lots of holes. As well as saving time, they also help to ensure that the countersink part of the bore is axially concentric with the pilot hole, something that is not easily achieved using separate countersink bits.

Refinements

A further refinement with some makes of these combi drills is that a collar can be fitted over the shank and retained in place with a further grub screw, to limit the depth of countersink. However, as with all such depth limiters, some scoring of the work surface may result.

My tip to overcome this scoring and to achieve perfect countersinks is to replace the twist drill in the countersink body with a drill blank. These are available from specialist drill suppliers and are inexpensive. An alternative, if you can't find drill blanks, is to simply reverse a twist drill, so that the shank, rather than the cutting end, protrudes. This requires that you sacrifice the productivity gain referred to above, and drill the pilot holes separately. Then lay the workpiece on top of a hard surface, such as an offcut of MDF, and set the depth of the drill blank to give the correct depth of countersink by letting it bottom-out on the MDF.

The result will be perfectly bored countersinks, all of exactly the same depth, with no marring of the workpiece surface. This technique works particularly well if the countersink holes are visible in the finished workpiece, as the diameter of the tops of the holes will also all be exactly the same. If the pilot holes are first drilled using any convenient jig, or on a pillar drill, then the finished product will be perfect and far superior to that achieved by other means! F&C



PHOTOGRAPHS BY DAVID YATES

Combi drill and replacement drill blank

Set of adapted combi drills mounted

About the author Chris Yates is a retired management consultant living in Great Malvern, England, where he has a well-equipped woodworking workshop. As well as making things, he also teaches routing courses at the Peter Sefton Furniture School, and has published a number of articles on routing and jig-making techniques.

Kit & tools

Having trouble sourcing the right tool for the job? Here's a selection of new and essential equipment for the workshop

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

Veritas Quick-release Wonder Dog

This version of the Veritas Wonder Dog has a fast-acting cam mechanism to speed adjustments. You just slide the head against the workpiece, then throw the lever to apply clamping force. Curved and irregular shapes can also be clamped; two screw holes in the brass dog head let you attach a custom face of any shape, giving you good control without marring your work. The low-profile head and clamp body are 16mm and 17mm respectively, so you can plane stock as thin as 20mm (or slightly less if you're careful) without fear of fouling the clamp. The 20mm diameter, 70mm long post lets you use it wherever you can drill a suitably sized hole, and is canted to keep the clamp head against the bench top under clamping force. The rod, post and cam lever are made of steel.

Axminster Trade Series ATDP13B Bench Pillar Drill

The ATDP13B is the smallest of Axminster's bench top Trade Series pillar drills. Although compact in size this robust machine has an abundance of features. The pillar drill is made from cast iron and machined steel, with a highly accurate quill and spindle assembly, running in NSK ball race bearings. Powered by a 550W induction motor, there are 12 belt speeds between 210–2580rpm. The Japanese-made belts are of the multi-vee type, chosen for maximum grip and the lowest level of vibration. The belt cover has a safety switch to prevent the drill being run with the cover open. Downfeed is via a one-piece cast-iron handle with soft rubber grips and there is an accurate drilling depth control. At the business end there's a quality 3–16mm keyless chuck with an electrically interlocked guard for safety that is easily adjustable for height. The switch system has a separate locking emergency stop switch, plus there is a switch for the integrated LED work light. Table height is controlled via a rack and pinion system; the whole table assembly can be swivelled away to allow the base to be used as a work support. If you've got the bench top space to spare there's little benefit in owning a floor standing machine.

David Charlesworth DVDs

Precision Planing and *Plane Sharpening* are updated versions of David Charlesworth's 2005 DVDs on hand planing and plane sharpening. *Plane Sharpening* includes new material on David's simple techniques for sharpening plane blades, preparing the front edge of chip-breakers and precise cambering. With two waterstones, a honing guide and a little practice, you can get razor-sharp results in minutes. In *Precision Planing*, David demonstrates his simple methods for planing all six faces of furniture-sized components, teaching you how to achieve straightness, squareness and precise thickness with a well-tuned, sharp hand plane. For a full review of the *Plane Sharpening* DVD, see what the Editor has to say in our Workshop Library on page 75.

Sjobergs Nordic Plus 1450 Bench

With its sturdy under frame of Scandinavian pine and a hard Nordic birch top, the Nordic bench is built to last a lifetime of normal use. A double row of 19mm dog holes runs from each of the four vice locations, allowing a variety of clamping options. The four vice mounting locations allow you to configure the bench for left- or right-handed use. Both vices can be mounted on the front for heavy-duty clamping or one at either end for clamping in two positions and maximum clamping distance. Four steel bench dogs are supplied with a plastic coating that helps protect edge tools. The bench dogs are reversible for thin workpieces. Nordic benches can be fitted with the accessory cupboard and drawer kit (0042) and the optional Holdfast (ST03), supplied as a pair, which can be located in any of the dog holes on the worktop or in the holes on the front legs of the bench. The worktop area measures 1340 x 500mm. The Nordic Plus 1450 bench is available as a bench only or complete with a storage module.

IRWIN Quick Grip Hold Down Jig

The IRWIN Quick Grip Hold Down Jig turns your Quick Grip one-handed bar clamp into a table clamp to securely hold your workpiece while sawing, cutting or performing other tasks. This accessory is compatible with all IRWIN heavy-duty and medium-duty one-handed bar clamps and can also be used with the previous generation Quick-Change XP one-handed bar clamps.

Infinity Cutting Tools Precision Setup Blocks

These Precision Setup Blocks take the guesswork out of setting router bit heights, fence locations and tablesaw blade. This set includes seven 100mm-long blocks in thicknesses of 1⁄16in, 3⁄32in, 1⁄8in, 3⁄16in, 1⁄4in, 1⁄2in and 3⁄4in providing a range of measurement from 1⁄16in through 1 31⁄32in. Also included is a precision-milled 1-2-3 block to provide additional capacity (1in, 2in or 3in) for tool setups. Thicknesses are accurate to +/-0.002in. The setup blocks are a full 4in long x 3⁄4in wide.The black anodised aluminium finish contrasts with the laser-etched inch scales along one edge and each end. The bright, easy-to-read scales turn each setup block into an effective 4in rule with 1⁄32in markings. The thickness of each block is etched into one face. The solid-aluminium 1-2-3 block is also anodised and laser-etched with inch scales (1⁄32in markings) along two edges. The Precision Setup Blocks come complete in a custom, foam-lined, latching case to keep the setup blocks clean and free of damage during storage or transport.

Product news

Makita continues to expand Brushless 18V power tool range

Makita are continuing to expand, refine and finesse their 18v Lithium-Ion powered power tool range. In the words of their marketing department, "The new machines are designed to improve and increase performance and delivery in power, speed and impact while constantly reducing overall size and weight," and presumably not before your very eyes!

Two new versions of the 18v LXT Brushless motor drill driver have been introduced: the body only DDF083Z, a direct drive model and the DDF484 which features a keyless chuck. Both models have two-speed, all metal drive systems, variable speed trigger, electric brake, LED job light and, I kid you not, a belt clip. The direct drive model, with ¼in hex drive, will run up to 1,700rpm in high mode and 500rpm in low mode; will generate 40Nm of tightening torque with 20 settings, plus drill mode, and weighs just 1.3kg with an overall body length of 124mm. The larger DDF484 will run up to 2000rpm in high mode and generates 54Nm max torque with 21 settings, plus drill mode, and weighs 1.8kg.

This new combi drill will punch a 13mm hole in masonry, and with all-metal gear train and aluminium gear housing is ideal for rugged site operations. It's available with two 5.0Ah Li-ion batteries and charger or as a body only model for users with existing of Makita batteries. All in all an excellent choice for the serious installation crew.

New footwear catalogue from SolidGear

The 2017 SolidGear catalogue is packed with the latest information about this market-leading safety footwear technology. With four very different types of products – TUFF, ATHLETIC, TREKKING and OCCUPATIONAL – there's a product to suit almost every footwear need you may have. The catalogue also includes lots of other information on all the important product features, such as Comfort and Safety, Fabrics and Linings, BOA System Technology, Caps and Plates, Water Repellency, Oil- and Heat-resistance.

AirPress Developments launch new silicone heater mats

With the new AirPress Heater Mats, pressing times can be reduced to a matter of minutes at a fraction of the cost of other heating systems. AirPress Heater Mats have been developed specifically for use with Vacuum Presses and can be used on vacuum bag press systems (with a polyurethane bag) as well as vacuum membrane presses. These modular mats are manufactured with an integral silicone foam insulating pad and are capped at a top temperature of 80°C. The Heater Mats are modular in two widths, 400mm and 600mm with four different lengths to accommodate a range of panel sizes.

Snickers advise 'what to wear on site' this spring and summer

You'll find all you need to know about the world's most innovative range of summer working clothes in Snickers' free 'What to Wear' magazine. Inside the magazine, there's plenty of information to help you choose the right working clothes to suit your trade – shirts, lightweight jackets and unique summer WorkTrousers. Whether it's in the RUFFWork, LITEWork, FLEXIWork or the ALLROUND workwear range, these are workclothes that deliver superb functionality, comfort, protection and are equipped for any task at hand. The magazine is available via the Snickers website (see details below).

AirPress Developments silicone heater mats
Contact: AirPress Developments
Web: www.airpress.co.uk

Axminster Trade Series ATDP13B Bench Pillar Drill
Contact: Axminster Tools & Machinery
Web: www.axminster.co.uk

David Charlesworth DVDs
Contact: David Charlesworth
Web: www.davidcharlesworth.co.uk

Infinity Cutting Tools Precision Setup Blocks
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IRWIN Quick Grip Hold Down Jig
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Makita Brushless 18V power tool range
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Web: www.makitauk.com

Sjobergs Nordic Plus 1450 Bench
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Web: www.brimarc.com

Snickers magazine
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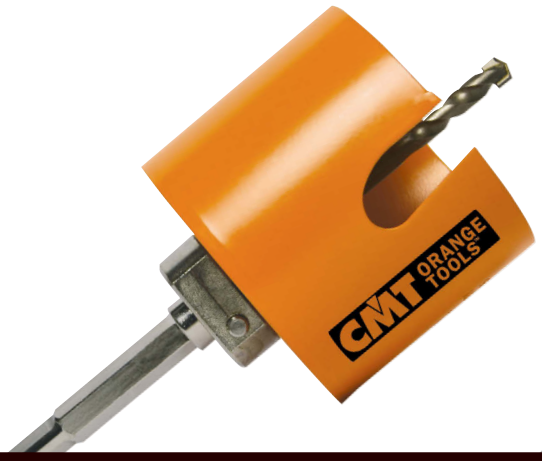
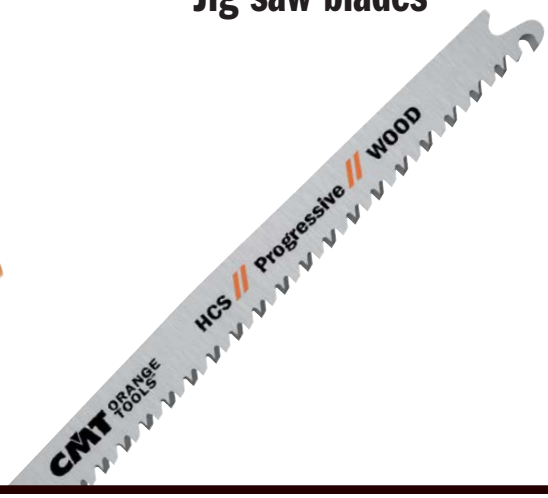


Jig saw blades



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TOP PHOTOGRAPH BY JAYNE LLOYD, COURTESY OF THE GEFFRYE MUSEUM

Out & about:
The Geffrye Museum of the Home

This month we visit a museum that preserves 400 years of domestic history

While most museums contain objects that once belonged to the rich and famous, The Geffrye Museum of the Home in Hoxton, East London is dedicated to the everday lives of ordinary people. Its rooms allow you to walk through time from the 17th to the 20th century, observing the changes in tastes, customs and pastimes.

History

The Geffrye Museum is housed in the former almshouses of the Ironmongers' Company; these were built in 1714 to provide homes for the elderly poor, following a bequest by Sir Robert Geffrye, a Master of the Ironmongers' Company and former Lord Mayor of London. In 1911, the almshouses were bought by the London County Council, and in 1914 they were converted into a museum. The Museum was originally dedicated to furniture because this was the main local industry at the time; its collection now also includes paintings and decorative artworks. The Museum was first organised as a series of period rooms in the 1930s and these have since been updated and expanded to include 20th-century living spaces.

PHOTOGRAPH BY JOHN HAMMOND, COURTESY OF THE GEFFRYE MUSEUM

Detail of a 1630 hall in a London house. In the 17th century, the hall was used as the main living space

What to see

The Museum's collection is arranged in 11 period rooms, each representing the homelife of the urban middle class. Each display focuses on the main living area of the house, illustrating how domestic life has changed over the centuries. The rooms are the result of meticulous research of household inventories, as well as contemporary paintings, prints and photographs. Wherever possible, the proportions of the rooms are based on existing London buildings.

The period rooms are arranged chronologically starting with a recreation of a 1630 hall, which is furnished with replica oak (*Quercus robur*) panelling along with original 17th-century oak furniture. The second room represents a parlour in 1695, where the oak panelling has been replaced with painted Baltic pine (*Pinus sylvestris*) and the furniture is lighter and more delicate.

The third and fourth rooms move into the 18th century with parlours from 1745 and 1790. The 1745 parlour includes mahogany (*Swietenia* spp.) tables, which would have been a relatively new timber in Britain at the time. A set of chairs in the 1790 room are based on designs by Thomas Chippendale.

The 19th century is represented by three drawing rooms from 1830, 1870 and 1890. This period saw the introduction of more upholstered furniture and a greater variety of furniture was now available. The 1890 room shows the influence of the Aesthetic Movement, with furnishings and decorations inspired by Japanese art.

The 1910 drawing room is decorated in the Arts and Crafts style and represents the move of the middle classes to the suburbs, while the 1935 living room recreates a modernist flat, where the furniture is minimal and designed to be unobtrusive. The 1965 living room has an open-plan layout, with stairs in a corner of the room. The decoration is more informal and includes Scandinavian-style furniture. The final room represents a loft apartment in 1998; it has an industrial aesthetic and is arranged in an open-plan layout, with furniture used to create different zones.

Where else to see... museums of domestic life

Dennis Severs' House, 18 Folgate Street
London, UK
www.dennisseversshouse.co.uk

Museum of Domestic Design & Architecture
London, UK
www.moda.mdx.ac.uk/home

Information for visiting

Address: 136 Kingsland Road, London E2 8EA
Website: www.geffrye-museum.org.uk
Opening: Open Tuesday–Sunday and Bank Holiday Mondays, closed Mondays (unless Bank Holiday), Good Friday, Christmas Eve, Christmas Day, Boxing Day and New Year's Day
Charges: Free admission to museum and gardens

Information correct at time of publication, check the Geffrye Museum website before making your visit

PHOTOGRAPH BY CHRIS RIDLEY. COURTESY OF THE GEFFRYE MUSEUM

LEFT: A drawing room in 1830. This room is based on a terraced house in Clapham

PHOTOGRAPH BY CHRIS RIDLEY. COURTESY OF THE GEFFRYE MUSEUM

A drawing room in 1910. This room is based on an Edwardian suburban house in Golders Green and is influenced by the Arts and Crafts movement

PHOTOGRAPH BY JAYNE LLOYD. COURTESY OF THE GEFFRYE MUSEUM

A living room in 1965. This room is closely based on houses built in Highgate in 1958

UNDER THE HAMMER:
Florentine cabinet

This month we look at a stunning lot from Bonhams' European Collections auction

This remarkable specimen cabinet on a stand features ebony (*Diospyros spp.*), pietra dura panels and marble. The architectural façade has nine drawers decorated with panels depicting alternatively a floral branch and a bird perched on a branch within ripple moulded frames, around a central cupboard door decorated with a twin-handled, floral-filled vase enclosing three ebony and stained tortoiseshell veneered drawers surmounted by a tenth drawer. The pietra dura panels date from the 18th century, while the cabinet was made in the late 19th century. The cabinet is 120cm wide x 30cm deep x 98cm high, and the stand is 126cm wide x 42cm deep x 80cm high.

£52,500

Florentine cabinet with pietra dura panels on a stand

PHOTOGRAPHS COURTESY OF BONHAMS

The Grand Ducal workshop

This type of cabinet, with its predominant use of ebony and pietre dura panels, originated in Florence from where these panels would have been imported. The panels were produced in the Grand Ducal workshop (originally named the Galleria dei Lavori), which was founded in 1588 by the Grand Duke Ferdinand I de Medici. Following the end of the Tuscan Duchy in 1859, the Grand Ducal workshops were used principally for restoration and many old hardstone panels were re-used and incorporated in new arrangements within contemporary furniture.

Pietra dura

The term 'pietra dura' comes from the Italian for 'hard stone', referring to the materials used to create these intricate, inlaid designs. The pietra dura technique dates back to antiquity but it enjoyed a revival during the Renaissance and was particularly popular in Florence.

The panels are alternately decorated with flowers and birds

The pietra dura panels were originally made in the Grand Ducal workshop in Florence

The central cupboard door is decorated with a lapis lazuli flower-filled urn

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Workshop library

We review David Charlesworth's *Plane Sharpening DVD* and *Carving Architectural Detail in Wood* by Frederick Wilbur

Plane Sharpening with David Charlesworth

by David Charlesworth

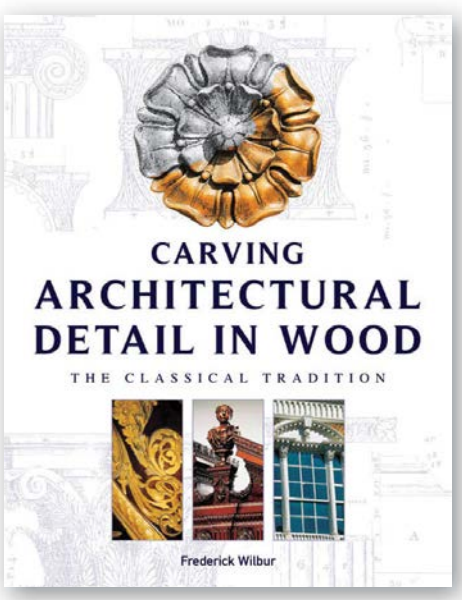
I suspect that more ink and pixels have been wasted on the subject of sharpening than any other aspect of woodworking, period. And that's not to say that some of it has not been extremely constructive and useful. However, there is one opinion that should be the benchmark for all good sharpening discussions; the indisputable master of common sense sharpening, David Charlesworth. Now I say common sense not because he makes it look easy or that any of it is particularly obvious, but because of the matter of fact way he goes about the business of solving one of the most fundamental aspects of woodworking with a minimum of fuss, i.e. breaking the subject down into manageable steps with clear and concise reasoning.

At a shade over two hours long this collection is an updated version of an earlier DVD produced by Lie-Nielsen in 2004. Nearly 13 years on you may ask what has changed so much to warrant a re-make and the answer is not that much beyond a significant improvement in production quality and the benefit of another 12 years' experience. There are 21 chapters in all that cover everything from understanding what sharpness is, to flattening a waterstone and high-speed grinding. Each section is filled with just the right amount of information to appreciate why a technique works before explaining how best to accomplish it.

Follow just a handful of these steps and there's no question you will improve your sharpening within a couple of hours. Follow them all and you will improve your woodworking for life. Out of a five star rating I'd give it 10.

Derek Jones

Published by Lie-Nielsen Toolworks
130 minutes £29.95



Carving Architectural Detail in Wood: The Classical Tradition

by Frederick Wilbur

If our extract on page 28 has whetted your appetite for carving, then the full book will be sure to satisfy your wish for knowledge. Frederick Wilbur has been a professional woodcarver for over 20 years, and in this volume, his first book, he brings together all his expertise to provide a thorough primer on classical ornaments and how to carve them.

The book begins with an overview of the elements and principles of classical design, explaining how to carve mouldings, volutes, rosettes and capitals. The carving process is illustrated with clear step-by-step photographs, as well as examples of antique furniture and architectural features. There are also projects to show how the various elements can be combined to make items such as mantelpieces and picture frames. *Carving Architectural Detail in Wood* is a useful addition to the workshop libraries of cabinetmakers and antique restorers, as well as carvers.

Published by GMC Publication
ISBN: 9781861081582
160 pages £16.99

NEXT MONTH in

Furniture &cabinetmaking

ISSUE 257
ON SALE 13 APR

PROJECT
Butcher's block table

PROFILE
Chris Vesper, a man made to measure

TOOL TECH
Is your plough plane earning its keep?

WORKSHOP TECH
Just another slippery slope or the perfect shooting board?

A FINE LINE
Stack marking for easier machine set-ups

NEW SERIES
Why should I give up my day job?

Advertisers Index

Shop talk:
Robert Ingham

Many of the most successful designer-maker craftsmen of the last 40 years can be traced back to a time when Robert Ingham was Principal at the world-renowned Parnham College for furniture making…

Is there a long line of designer-makers in the Ingham family?
My father was a very keen fret worker – a hobby that was popular in the 1930s. All my brothers were very good at sketching and drawing. When I left secondary school, designer-makers as a profession did not exist. I trained as a woodwork and metalwork teacher at Loughborough Training College. My brother George, who was a year and eight months younger than me, studied furniture design at Leeds College of Art and the Royal College of Art. He inspired me to get involved with design, which I went on to study at Leeds, and we were among the first designer-makers when we set up our business in 1973.

If you had to trade the workshop for an alternative career what might that have been?
I specialised in silversmithing in my final year at Loughborough and that would be my alternative choice.

Describe your best eureka moment.
I have a eureka moment with every piece I make. It is when the finish is applied and the grain and colour of the wood comes to life.

Do you have any period pieces of furniture at home?
I have a great deal of respect for designers like Thomas Chippendale, but I wish I could afford to buy a piece designed by Charles Rennie Macintosh.

Who do you think is making the antiques of the future?
All designer-makers today are making the antiques of the future. Like Chippendale, who died a pauper, it is a pity that we will not be around when our pieces fetch huge prices at Christie's in years to come.

Where does your drive to innovate come from?
While design plays a big part in my work, it's the way a piece is made that is the driving force for me. I have a respect for the skills of the past, but I enjoy the challenge of progressing, the practicality and tools involved in the process.

How do you decide which ideas make it into reality and which ones don't?
I don't like the phrase 'this is the right way'. This was the authoritarian attitude of my tutors at college. I prefer the phrase 'this is an appropriate way'. That opens up the chance to think and experiment and progress skills.

All about Robert

Greatest success to date
Meeting my wife Andrea who transformed my life and encouraged me to make the dressing table of which there is a photograph below.

Have you worked anywhere else in the world?
America, Australia and Ireland.

Who was your mentor as you developed as a designer and maker?
My woodwork teacher, Reg Henstock, and metalwork teacher, Geoff Hines, and my brother George as a designer.

Where else did you gain experience in furniture making/designing?
Parnham College.

Tell us a little bit about your home life.
I had the good fortune to design and build my workshop which is in our garden. As a result, my home life is spent in the workshop from 8.30am in the morning until 9pm in the evening, seven days a week, after which we play a game of Scrabble. My wife prefers to listen to early classical music so I am able to listen to Sir Cliff in the workshop!!

Do you have your own philosophy on why we are passionate about making things?
My philosophy is better described as an emotion which is based on my passion for making things that have a strong personal statement in their being. The only time that my mind is not involved in my work is when I am fishing.

What do you collect?
I have a huge collection of tools, many of which I have made myself but I also have a lot of fishing tackle.

How did Parnham manage to turn out such talented makers?
Self-motivation and the passion to develop high standards of skill and creativity.

Would you agree that the secret to Parnham's success was that it wasn't confined by a National Curriculum?
John Makepeace set up Parnham College because the attitude in design colleges at the time did not appreciate the value of making. 'This can be done by a technician' was the saying at the time. Design, craftsmanship and business management were the three objectives of our college and these were the driving force behind the evolution of our curriculum. The students were going to be self-employed when they graduated, so they did not need a national degree!

Suggest a museum that everyone should go to and why.
The V&A (London) has a large and inspirational collection of furniture and art with a huge cross section of design and craftsmanship.

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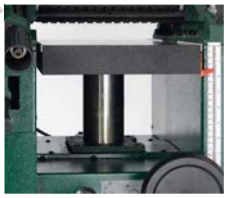

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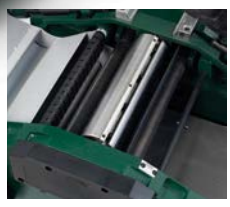

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What They Say...

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

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The Woodworker

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

DesmondW, Online Review

Price valid until 28.2.2017. E&OE.

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