Furniture &cabinetmaking

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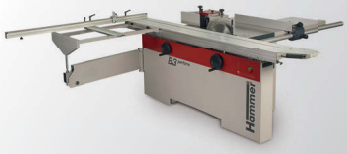

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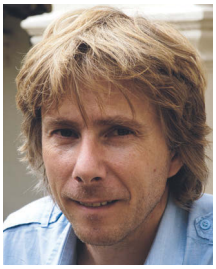

Welcome to...

... another round of whose picture is it anyway?

The Editor's Moxon vice building class at the Dictum workshops in Munich

There are a dozen or so things I want to talk to you about this month before highlighting some of the content in this issue but unfortunately we've only got room for two. The first is to do with quoted prices and the second is the price we pay for having free access to billions of images at the stroke of a key. Let's start though with a thank you note.

I was very happy to have a full house at the Dictum workshops in Munich last month to teach a Moxon vice building class. Three days seems like an age at first until you realise the complexity of directing the synchronised cutting, drilling and shaping of eight separate projects. But timing is everything and with the help of Dictum's workshop manager Peter Lanz, who is conveniently missing from the line-up above, everyone made it over the finish line with a complete Moxon vice incorporating houndstooth dovetails in under three days. Gut gemacht alle zusammen. Eine großartige leistung.

Don't blame me, I'm only the messenger

And so to the first of the house notes. It's not unusual for the prices quoted against products featured in the magazine to be different to the ones you're asked to pay at the checkout. A typical disclaimer for this unfortunate situation might be 'prices correct at the time of going to press', which hopefully doesn't require further explanation. However, what might help is a little background as to why. Blame it on Brexit if you like but the truth is the effects of a constantly evolving global market in raw materials and other resources mean that prices can change and change quickly for lots of reasons. I know from my conversations with suppliers that generally they hate price increases, they're bad for business but *in* business they are and that's where we want them to stay. The message this month then is simple, be patient with your supplier and accept that some things are beyond their control.

Your fair share

Scrolling through the various social media platforms is a great way to engage with fellow artisans, soaking up the likes and followers to grow a network of like-minded people. It's fast, convenient and easy to share tips and experiences. But if you believe in the maxim 'credit where it's due' you'll perhaps notice the proliferation of posts that do neither. At best it's sloppy and at its worse it's just plain deceitful and calls into question the motive of repeated transgressions. My advice, and it's as much about maintaining a shared moral duty for craftspeople to do right by each other than anything else, is if you don't know the artist, don't post the picture.

Moving swiftly on

The choice of cover image this month is partly due to a stream of corespondence from readers going all the way back to issue #1 and all in praise of our recent facelift. Imagery and image are synonymous with good taste and with the general consensus being that the magazine inspires as much as it informs I've selected an image that captures the essence of craftsmanship in every tiny detail.

It's my guess that most of us could cut the cost of our plane addiction in half if we made one simple change; a swap from bevel down to bevel up. And to convince you we've enlisted the help of Vic Tesolin, otherwise known as the Minimalist Woodworker to argue the case. Continuing with the tech theme, David Barron will be sharing a few more tips this month on producing decorative dovetails with his project to build an above average alignment board, while Rob Porcaro moves things up a notch in the second instalment of his three-part series about creating the perfect panel. Wrapping things up in our back page Q&A is Nancy Hiller, author of *Making Things Work* and quite possibly the sharpest tool in the collective 'shop right now. If variety is the spice of life, congratulations, you've just ordered a vindaloo.

Derek Jones
derekj@thegmcgroup.com

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Issue 260 August 2017

Your *F&C*

Design & Inspiration

The Oak Interior– see page 26
Image courtesy of Bonhams

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

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

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Projects & Techniques

Meet the contributors

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John began his publishing career at Cambridge University Press. He then served as head of publications and retailing at the National Portrait Gallery before setting up a small publishing house in Cambridge under his own name devoted primarily to highly illustrated books in the decorative arts. He is the publisher of David Russell's book *Antique Woodworking Tools*.
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David Barron
David is a fine contemporary furniture maker and the producer of a popular range of hand tools. He also regularly teaches woodworking courses at West Dean College, produces DVDs and uploads videos to his YouTube channel.
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Kieran Binnie

Kieran's passion for woodwork started at the end of law school when he enrolled at the Totnes School of Guitarmaking. His focus has since expanded to include furniture making as well as lutherie. Kieran writes a regular blog at www.overthewireless.com, and is currently researching and writing a book for Lost Art Press about Welsh Stick Chairmaker John Brown.
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Robert Gurney
Robert studied Furniture-making and Design at Rycotewood College, Oxon in the late 1980s. He now lives in Calgary, Alberta, Canada, where he is a draughtsperson. Even though he is a great aficionado of Japanese woodworking tools, his background in draughting keeps him tinkering with woodworking marking and layout.

Rob Porcaro

Rob designs and builds furniture, and writes in Medfield, Massachusetts. Woodworking for more than 35 years, he continues to pursue refinements in techniques, and find the quiet joy of making things. His expertise is well known and trusted in the field as a widely read writer. Rob's work has been exhibited in premier juried artisan shows, fine galleries and numerous publications.
Web: www.rpwoodwork.com

Vic Tesolin

After his honourable discharge from the Canadian Artillery, Vic studied furniture design and making at Rosewood Studio. He ran his own studio furniture business while working at Rosewood as a part-time instructor and craftsman in residence. He now serves as Woodworking Technical Advisor in the R&D department of Veritas Tools. Vic is also the author of *The Minimalist Woodworker*, which encourages new woodworkers to do more with less.
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Ramon Valdez

Ramon works full-time as a production manager in his brother's cabinet, countertop and fixtures shop in New Mexico. As well as making gallery quality furniture in his spare time, he has taught marquetry classes at his local college. Ramon is the man to go to for the best time-saving tips and ingenious short cuts.
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David Waite

David has been involved in scientific research for over 20 years prior to enrolling on a one-year designer/maker course at Waters and Acland. Over the coming months he will be writing a series of short articles for *F&C* capturing his observations and experiences to try and become a professional and setting up his own fine furniture making business.
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Dennis Zongker

Dennis has been a professional custom furniture maker for over 28 years and is co-owner of Zongkers Custom Furniture in Omaha, Nebraska. He teaches woodcarving and marquetry classes at Midwest Woodworkers.
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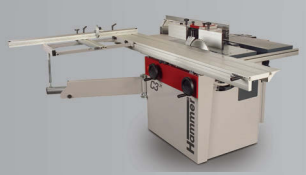

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In profile – Matt Bickford

Kieran Binnie meets the plane maker and author who's giving machine made mouldings a serious run for their money

When talking about moulding planes, there are a few modern makers who are impossible to ignore – Philip Edwards of Philly Planes, Larry Williams and Don McConnell of Old Street Tool, and of course Matthew Bickford. As well as being a leading maker of moulding planes, Matthew is known for his classes on using and making moulding planes, and perhaps even more so for his book *Mouldings in Practice* (Lost Art Press, 2012).

PHOTOGRAPHS COURTESY OF MATTHEW BICKFORD

Contact
For more information about Matthew Bickford, visit his website at: **msbickford.com**. He can be found on Instagram as: **@msbickford**

The attraction of infinity

After decades of being overlooked in favour of routers and spindle moulders, moulding planes are regaining popularity with woodworkers. Even so, they are unusual tools on which to base a career. When asked what sparked his passion for moulding planes Matthew explains that 'with a basic set of hollows and rounds I am able to make every moulding profile that I may want, so long as the profile is straight. The projects that I choose are neither dictated nor decorated with the selection of router bits I may own, regardless of size. I can produce any moulding with the tools in my shop; I'm 20 minutes to two hours away from completing 8 feet of any profile.'

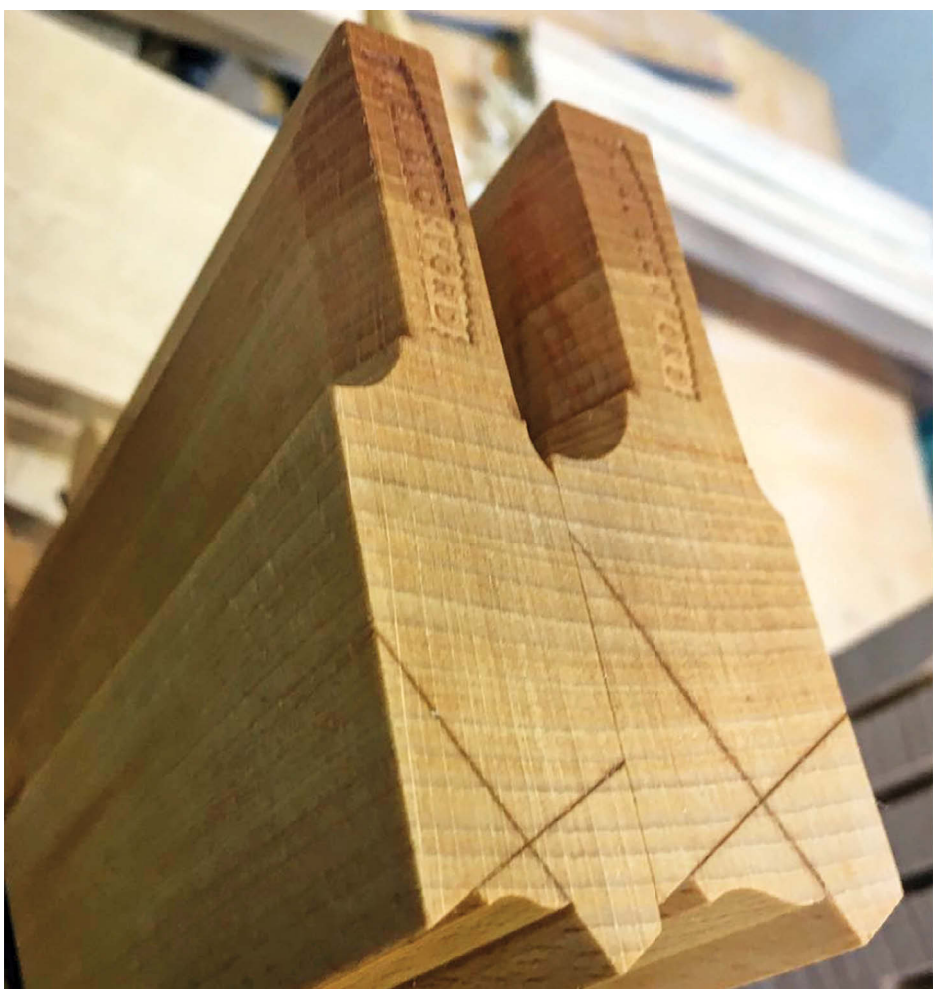
The versatility offered by moulding planes, Matthew suggests, is similar to that offered by a more conventional set of bench planes. 'These tools offer what machinery simply cannot', he explains, and just like a woodworker using bench planes can process stock of any size, 'the ability to manipulate simple moulding planes like hollows and rounds offers the same idea of infinity.' Not that mastering the use of moulding planes was an easy task, and Matthew recalls his first attempts to produce runs of moulding entirely by hand were not successful, despite the promised versatility he had read about. 'Larry [Williams] suggested that they could do anything. I then purchased an antique set and failed, failed and ultimately learned in my basement.'

Plane-making

A keen hobbyist woodworker, Matthew worked for nearly a decade in finance before making planes professionally. When asked how his love affair with moulding planes started, he explains that 'when I started making things out of wood I started copying grain direction, then proportions, curves and carving. I had settled on a series of router bits to decorate my edges that I considered my own.' This set of router bits, no matter how comprehensive, ultimately became a compromise that Matthew was unable to stand, as he would painstakingly reproduce period furniture down to the finest detail, and then make 'a sacrifice with the moulding that I regretted prior to making it, but I had settled upon my set [of router bits] and pushed forward'. As a result he went looking for other methods to decorate his period furniture reproductions, and ultimately came across antique moulding planes and the writing of Larry Williams. He promptly 'purchased an antique set of planes that, regardless of how long I spent with them, disappointed'.

Again, it was Larry Williams who provided the solution, this time in the form of the *Making Traditional Side Escapement Planes* DVD for Lie-Nielsen Toolworks, which spurred Matthew to try his hand at making moulding planes. To his surprise 'the first planes that I made for myself worked better than any antique that I tuned and also gave me the knowledge to tune any antique that I purchased'. He still had no intention of making planes for other people until Chuck Bender (previously of *Popular Woodworking* and 360 WoodWorking) traded him carving lessons in return for a set of hollows and rounds.

Matthew now runs a thriving business making 18th-century British reproduction moulding planes, which he considered to 'represent the point where all of the technology was in the tool but none of the machining process had yet been taken out. These tools, despite the fact that they are a piece of steel and two pieces of wood, represent a significant amount of technology.' But how does making the same type of planes remain interesting and challenging over the long term? For Matthew, it seems to be situating his work within a tradition of plane making, and also the end function of the planes, which keep him focused and satisfied. As he explains, 'I am still fascinated by the amount of technology included in these seemingly simple tools. The final product that I create will never change and I am satisfied by the small changes I make in an effort to streamline the process. Every plane that I make (and I have made thousands) I still consider the best that I have ever made. I am fascinated by what the planes can do, how the planes perform and the possibilities that these tools encourage.'



A pair of complex moulding planes with the makers layout lines left on the ends that direct the user to the correct angle of use

A pair of left and right handed snipes bill planes with box inserts

Not a one-trick pony

For Matthew, moulding planes have a number of significant advantages over mechanised methods of producing moulding. On a practical level, he finds that 'the sheared profile the plane creates does not need to be sanded' which 'removes the most tedious aspect' of making moulding with machines. 'By not needing to sand you also do not risk the likelihood of dulling the sharp corners or drastic inflections that profiled planes encourage.' He goes on to explain that 'today's router bits are manufacturers' interpretations of other interpretations of original mouldings, a progression of refined curves' and for him, this iterative process results in moulding profiles that have lost key features, and which are inferior to the original profiles they purport to reproduce. Where complex moulding planes are similar to router bits and shaper knives for Matthew is that they produce a single profile quite uniformly. In contrast, 'hollows and rounds offer the idea of infinity. Any moulding profile is a series of flats, convex and concave curves. A set of hollows and rounds produces a varying number of progressing radii. Using this progression together allows an endless amount: the larger the set [of planes], the closer to infinity' a maker can produce.

When it comes to taking a first step into hand planing mouldings, Matthew advises woodworkers to buy two pairs of hollows and rounds rather than complex moulding planes. 'Dedicated planes are fun to use but they are one-trick-ponies,' he says. In contrast, two pairs of hollows and rounds provide 'the ability to make scores of moulding profiles, the ability to make base mouldings that complement waist mouldings that complement cornices. With two pairs you will be able to do by far more than twice as much as you can do with one pair. Not only will you be able to make the same profiles in two different sizes, but you will also be able to mix and match the profiles. With one pair you can make 30+ different profiles. With two pairs you can make well over 100. With two pairs you will recognise the true versatility that these planes allow and encourage.'

Method in his moulding

Matthew's work is notable not just for the planes he makes, but also for the method he teaches for their use. A large part of *Mouldings in Practice* is dedicated to describing how to plan and cut mouldings using a series of rebates and platforms to steer the hollows and rounds. As Matthew observes, 'hollows and rounds have neither a fence nor a depth stop, and it is the lack of these two features that allow the versatility that these tools both provide and encourage.' However, these features can also make it difficult for inexperienced users to produce consistent moulding runs. Matthew's technique for using hollows and rounds requires only a little extra planning in order to lay out the various grooves needed for a moulding profile, with the benefit being an easy way to produce repeatable and consistent runs of moulding. He explains, 'in short the real key to successfully using these tools is to give the plane two points to register upon instead of just one. As an example, trying to hold a hollow upon a corner at a uniform angle and uniform point upon the plane's sole in order to create a convex profile is essentially impossible, but it is much easier than doing the same with a round to create a cove. Giving the plane two points to register upon instead of just one steers the plane, taking the place of the fence. It also gives a gauge for progress and replaces depth stop.'

Making runs of mouldings like these is straightforward using hollows and rounds and Matthew's technique for steering the planes

Ball and claw feet for a bed Matthew is currently making

A pair of Queen Anne-style chairs made by Matthew

Tea table made by Matthew

Rabbets cut in preparation for planing moulding profiles – this is the cornerstone of Matthew's moulding technique

All inspiration is relevant

Matthew's book, blog and Instagram feed are littered with countless images of moulding profiles he has produced with his planes. When asked where he gets the inspiration for these moulding profiles from, he attributes it to a penchant for 'recreating some things. My imagination with the "new" has not yet been set free because I am still fascinated with recreating the old. Most of the things that I have made have, to varying degrees, been recreations. I'm still in love with the idea that I can make what others already have.' This includes the furniture he makes, which tends to be reproductions of Queen Anne and Chippendale furniture. 'I tend to like carving,' he comments, 'the pieces that I make must have carving or I will not be interested. Once I am done with the carving I will not likely finish it. The mouldings and moulding planes are just a supplement. It's kind of silly to make a sacrifice in the piece's appearance in low light when spending so much time casting shadows with carving in full light.'

As a parting gift, he offers some sage advice for both furniture makers and aspiring tool makers: 'see what has been done, consider what has been done, try to make it. You may have no desire to put pad, trifold or ball and claw feet in your living room; you may not want turned, cabriole or ogee bracket feet; you may not want waist, base or crown moulding, but seeing and considering how each of these treatments have been included into others' work will give you an idea and an inspiration into your own work. Look at what has been done throughout the centuries and consider the conclusions of the past, even if you do not include it in your own work. A lot of inspiration is out there, and it is all relevant.' F&C

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Clarke CEP1	650W	2mm	£28.99	£34.79
Einhell TE-PL850	850W	3mm	£52.99	£63.59
B&D KW750K - GB	750W#	2mm	£57.99	£69.99

Clarke ELECTRIC POWER FILE

CPF13

- Variable belt speed
- Tilting head

*Black & Decker

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MODEL	MOTOR	BELT SIZE (mm)	EXC.VAT	INC.VAT
CPF13	400W/230V	13x457	£49.98	£59.98
KA900E*	350W/230V	13x455	£59.98	£71.98

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Makita

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CCD240	24V	1	£47.99	£57.59
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CON185*	1600W	60/40	£62.99	£75.59
CCS2	1300W	60/45	£59.98	£71.98

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CVAC20PR2	1400W	16/12ltr	£64.99	£77.99
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MODEL	PLANING WIDTH	MAX THICK. CAPACITY	EXC. VAT	INC. VAT
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CPT800	8"	120mm	£209.98	£251.98
CPT1000	10"	120mm	£289.00	£346.80

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MODEL	BLADE DIA/BORE (mm)	MAX CUT DEPTH/ CROSS	EXC.VAT	INC.VAT
CMS210 NEW	210/30	60/120	£59.98	£71.98
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Clarke CONTRACTOR BOSCH CON750 JIGSAWS

BEST SELLER

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*DIY #Professional

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

Clarke BENCH BANDSAW

NEW

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

£129.98 EXC VAT
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CBS190B

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

Clarke PROFESSIONAL BANDSAWS

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

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

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2 YEAR GUARANTEE

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Einhell TC-SM2131#	210/30		62/310mm	£129.98	£155.98
Einhell SM2534‡	250/30		75/340mm	£159.98	£191.98

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MODEL	DUTY	WHEEL DIA.	EXC.VAT	INC.VAT
CBG6RP	DIY	150mm	£32.99	£39.59
CBG6RZ	PRO	150mm	£42.99	£51.59
CBG6RSC	HD	150mm	£54.99	£65.99
CBG6SB#	PRO	150mm	£54.99	£65.99
CBG8RWC	HD	150mm	£59.98	£71.98
CBG8W* (wet)	HD	150/200mm	£56.99	£68.39

Clarke SCROLL SAWS

FROM ONLY £82.99 EXC VAT £99.59 INC VAT

CSS400C

BEST SELLER

- 50mm max cut thickness
- Air-blower removes dust from cutting area
- Table tilts 0-45°

MODEL	MOTOR	SPEED RPM	EXC. VAT	INC. VAT
CSS400B	85W	1450	£82.99	£99.59
CSS16VB	90W	550-1600	£94.99	£113.99
CSS400C	90W	550-1600	£114.99	£137.99

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*DIY

MODEL	MOTOR (W)	PLUNGE (mm)	EXC.VAT	INC.VAT
CR1C*	1200	0-50	£46.99	£56.39
Bosch POF1400ACE	1400	0-55	£86.99	£104.39
CR2	2100	0-60	£124.99	£149.99

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CDP102B	350 / 5	£79.98	£95.98
CDP152B	450 / 12	£139.98	£167.98
CDP202B	450 / 16	£185.00	£222.00
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MODEL	WATTS	EXC.VAT	INC.VAT
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The dark horse of bench planes

Vic Tesolin takes a detailed look at bevel-up bench planes in the shop

Often misunderstood and therefore frequently overlooked, bevel-up planes have a reputation for being a bit of a one-trick pony; a perception that couldn't be further from the truth. Bevel-ups are truly the most versatile of planes and can be used for a whole host of jobs at the bench. From the coarsest of dimensioning work to bringing parts to size 0.001in at a time, these workhorses can do it all and will soon become the go-to planes in your stable.

PHOTOGRAPHS BY VIC TESOLIN

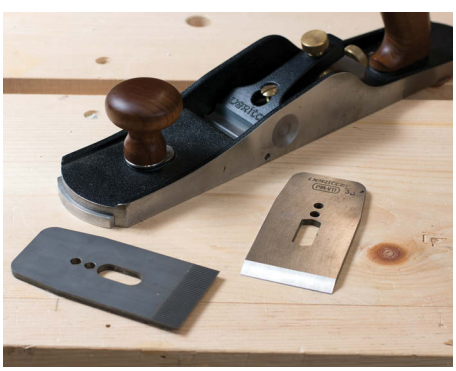
What's in a name?

It doesn't help that these planes have been bestowed with two different names, which obviously adds to the confusion. The first and least specific term 'low-angle' assumes a certain amount of knowledge regarding bed angles and refers to the relatively low angle of the bed that the blade rests on. Compared to a typical bevel-down plane which has a 45° bed (or frog), the bed of a low-angle plane at 12° is much lower, hence the name. The second term 'bevel-up' is a lot less confusing and is the term I use, and will continue to use for the remainder of this article. It refers to the orientation of the blade's bevel relative to the sole of the plane. 'Bevel-down' means the bevel is down and bevel up means the bevel is facing up.

There is no mistaking the difference between bevel-up and bevel-down beds

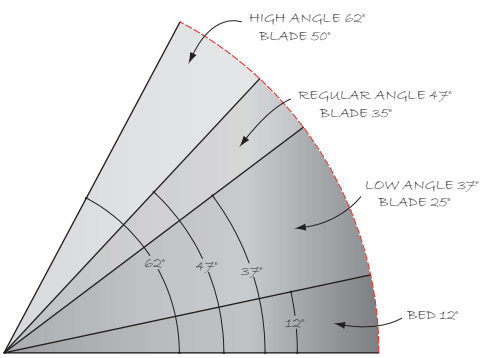
It's in the numbers

Before we get too far down this road, let's be honest, the wood you are planing doesn't know (or care) whether the blade is in a bevel-up or bevel-down orientation. However, what does make a difference is the angle of attack the blade has. The key feature that I like about these planes is by simply swapping out the blade you can achieve different effective cutting angles. Let's look at some simple maths here. If you install a blade that has been ground with say a 25° primary bevel onto the 12° bed, you will have a 37° effective cutting angle (attack). This is perfect for end-grain trimming, planing tame woods like pine (*Pinus* spp.) or wide figure that is typically seen on flame birch (*Betula pendula*). For more general planing tasks, I can replace the blade with one ground to around a 35° primary bevel to achieve a 47° effective cutting angle. This angle is perfect for straight-grained hardwoods such as black cherry (*Prunus serotina*), walnut (*Juglans* spp.) or oaks (*Quercus* spp.). When things start to get a bit wacky in the shop and you are faced with some wild grain like curly maple (*Acer* spp.) or figured rosewood (*Dalbergia* spp.), drop in a 50° (primary bevel) blade for an effective cutting angle of 62° and a fine cut to tame those beautiful boards. Keep in mind that the goal with all these angles is to work with as low an angle as possible without getting tear-out. The lower the angle the better the finish will be on the board. I like to apply the finish (shellac, oil, etc.) off the plane so the better the surface the happier I am.



Having multiple blades in your stable means you can handle almost any wood

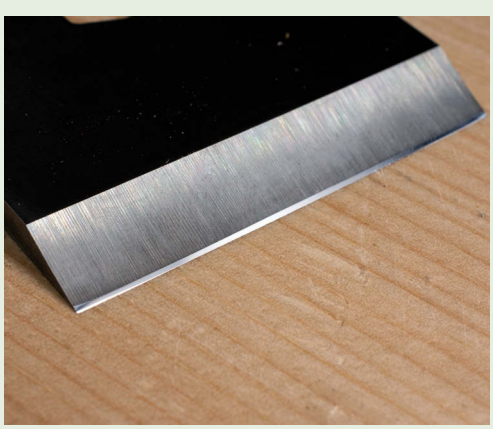
A well-honed and polished high-angle blade makes easy work of high figure



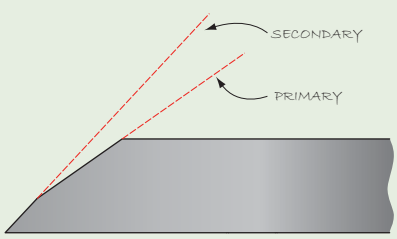
BLADE ANGLES

Primary and secondary bevels

The primary bevel refers to the angle initially ground onto a blade. The secondary bevel (sometimes referred to as the micro-bevel) is the bevel you hone and polish at the very tip of the blade. The sole purpose of the secondary bevel is to speed up the honing and polishing of a blade. Once the secondary bevel reaches the halfway point of the primary bevel then it's time to re-grind the primary. In my shop, all my primary angles are ground at about 23° on a wheel grinder then I apply the secondary bevel required for that blades task. For example, my bench chisels have a secondary bevel of 30° and my high angle smoothing blade has a 50° secondary bevel.



Don't waste time polishing the entire bevel



PRIMARY AND SECONDARY BEVEL

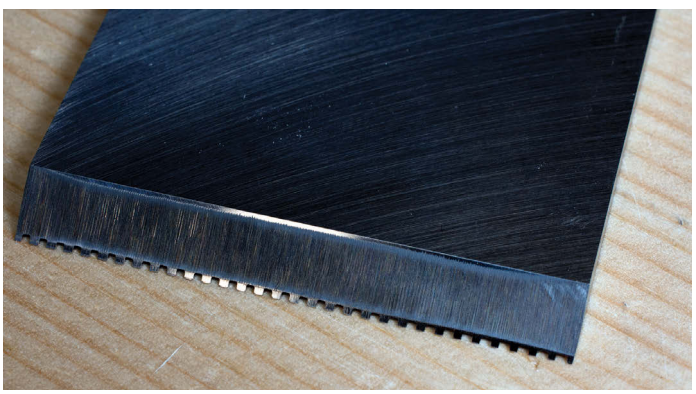
Task master

The most versatile size of bevel-up plane in my shop is the low-angle jack. The reason for this is that its size makes it a great multi-tasker – as the name suggests, it's a jack of all trades. I almost always recommend it as the first hand plane a woodworker should own and here's a few reasons why.

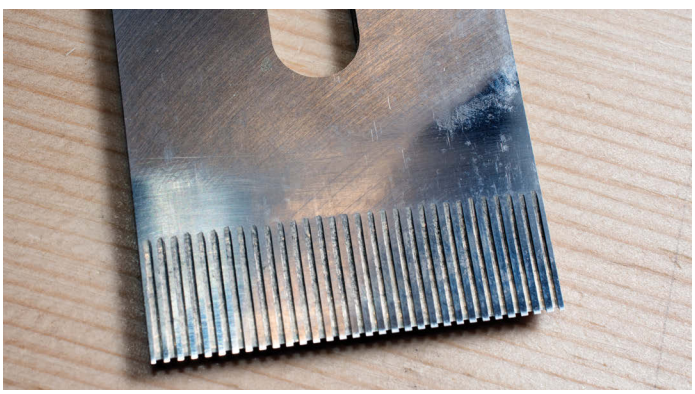
It's long enough to flatten boards

One of the first crucial tasks to preparing timber is to get one face flat. Power planers (jointers) can certainly do the trick but if you have a 16in-wide board and 6in-wide planer then you have a problem. The length of a jack can easily handle boards up to 20in wide. Another common issue that crops up when preparing timber is tear-out. It's not uncommon to have to remove a fair amount of material to get a board flat. This often means taking big bites with the plane so that you are not there all day. We know that taking big bites with a plane is a sure-fire way to get tear-out so what are your options? In this scenario a toothed blade is most certainly one.

This blade can be a real life-saver if you need to remove a lot of material and it works its magic in a couple of ways. The blade has individual teeth that act as mini planes when they go through the wood. Essentially you are cutting with only half of the blade, so the result is less effort required to take a heavy cut. If you have ever tried to push a regular blade set to take a 1/16in cut you understand exactly what I mean. No one enjoys prepping timber by hand. It's heavy, sweaty work and reducing the effort required gets you through the task faster so you can get onto the fun stuff.



It's much easier to take a heavy shaving when you are only engaging half of the blade's width



The small grooves cut into the blade are what gives the toothed blade its super powers

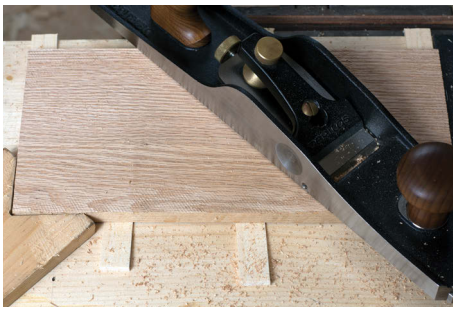
Small bites, big results

To get a board flat, secure it to the bench with the cup facing up. You will have to use some small wedges to prevent the board from rocking. Traverse the grain at around 45° in both directions to begin the flattening process. The plane will naturally ride the high spots and gradually bring them down. Don't worry about the surface quality at this point, as you are simply trying to get the board flat. Once the plane has touched all the points on the board, place the plane 90° to the grain and tilt it on to its edge – instant straightedge. Look for high spots, mark them with a pencil and remove them.

The other advantage a toothed blade gives you is the lack of tear-out in highly figured wood. In this case, the blade is taking multiple narrow shavings instead of one large wide one, which in nearly all cases causes the wood to tear-out. With the toothed blade installed contact with the grain is reduced allowing the wood to fracture more easily thus eliminating tear-out. Despite resembling your favourite corduroy slacks from the 1970s, the surface left behind will be flat. This is easily fixed, however, by replacing the toothed blade with a lightly cambered blade that is honed and polished to an appropriate angle for the wood you are working with. Just a few passes with a light cut will remove the toothing marks and yield a stunning surface that will dance before your eyes. In many cases I don't feel the need to reach for a smoother but will instead use the plane that's already in my hands. While the low-angle jack is long enough to flatten and joint boards, it isn't too long to act as a smoother. Closing up the mouth and backing off the iron to cut a fine, fully supported shaving is all you need to get a great surface ready for a finish.

Secure the board to your bench using stops or a vice of some type

Wedges are the simplest tools and are handy all over the shop. Here we are shimming the board to prevent rocking


Work the board with the plane at 45° to the grain


Did you know that you had a straightedge in your hand the whole time?

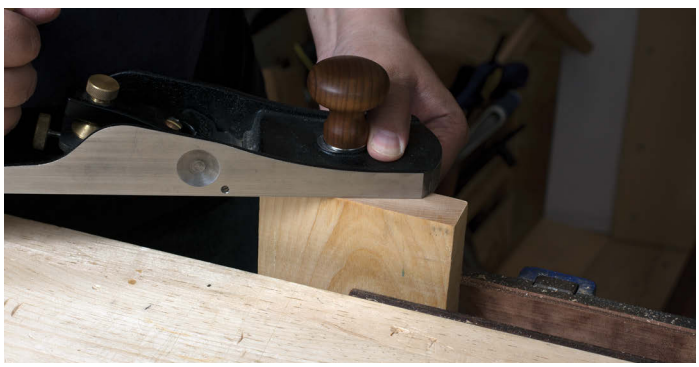

No tear-out here, just some narrow shavings


It's not pretty but it's flat


There is nothing quite as glorious as a hand planed surface

End-grain dominator

There aren't many machines available to the home woodworker that allow for trimming end-grain with the accuracy of a well-tuned bevel-up plane. Again, the low-angle jack is my plane of choice because it has the mass to power through what is well known as the toughest cut to make in woodworking. Trimming end grain is akin to cutting across a tightly packed group of drinking straws. The blade needs to be sharp and presented to the wood at the lowest angle possible to get good results. For boards thicker than 1in, you can secure them upright at your bench and work them freehand. Be mindful as you approach the end of the cut. The grain is not supported and needs to be backed up or you risk the dreaded spelch. For thinner boards, the use of a bench appliance like a shooting board is a must. The fence and table will hold the work square and plum while the plane works on its side to trim the end grain. This technique is perfect for trimming workpieces such as drawer fronts to get them to fit perfectly in the pocket.


A low-angle jack is easy to balance on edges wider than 1in


A shooting board is a must-have bench appliance

Don't spelch at the bench

Getting spelch on a board is about as disgusting as the name would indicate and you want to prevent it at all costs. Spelching happens when the end grain at the end of a cut is left unsupported and fractures away from the board. It makes a sickening sound and is usually followed by profanity. There are a couple of ways to prevent this from happening. If you are using a shooting board, the fence will provide the requisite support to prevent spelching. If you are working without a shooting board, simply clamp a board to the end of the cut to support the fibres. Sometimes with a sharp iron and a skewing cut you can get away with an unsupported end but be warned, spelching can rear its ugly head at any time so play it safe and back up that cut.


Matched only by the sound it makes, spelching is not something you want to see on your work


Clamping on a sacrificial piece will prevent a spelching disaster

Don't forget the other bevel ups

There are quite a few planes at the bench that have bevel-up blades. Most of these planes are designed to work end-grain or across the grain, which is what they were born to do.

Block plane

This small tool is a giant when handling end-grain or cross-grain work but also works well with the grain. I refer to this bevel-up plane as my 'eraser'; used anywhere that I need a bit off here or there. I use mine for cleaning up end-grain, removing an arris or even sharpening pencils to custom points for different types of marking. While not very useful for large work, the block plane excels at the little niggly bits.

Shoulder plane

Designed to trim up the end-grain of a shoulder commonly found on the tenon-half of the mortise and tenon, the shoulder plane sports a bevel-up blade that makes those end-grain cuts a breeze. Many folk use the shoulder plane to tune up the cheeks of the tenon as well, which if you haven't guessed yet, is all cross-grain work.

Router plane

I'm always amazed by the surface quality left behind by a router plane. With the grain or across, this tool delivers fine surfaces that are perfect for joinery or inlay work. Big or small tasks are a joy to do with this bevel-up plane. I would have to say that the router is one of my favourite hand planes.

Versatile and handy, a small block plane is a must in the hand tool stable

Even machine jockeys can appreciate the jointing tuning abilities of a good shoulder plane

'Give these planes a shot, you won't be disappointed'

Conclusion

It wasn't long into my woodworking journey that I discovered bevel-up planes and brought them into the fold. Apart from some wooden smoothers that I've made I would have to say that all my other bench planes are bevel-up. They are simple to sharpen, set-up and maintain, and are tremendously versatile. Simply adding a couple of extra blades lets you tackle anything from calming pine to eye-catching curly maple. Give these planes a shot, you won't be disappointed. F&C

This handmade router made by Derek Cohen in Australia is perfect for those flat-bottomed details in your work

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News&Events

Contribute to these pages by telling us about matters of interest to furniture makers. Call Derek Jones on 01 273 402 843 or email derekj@thegmcgroup.com

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

Record number of Design Guild Marks presented by Furniture Makers' Company

The Keyn Family of chairs was designed by forpeople for Herman Miller

BELOW: A record number of Design Guild Marks were presented at the 2017 ceremony

The Design Guild Mark has been presented to an unprecedented total of 34 recipients for 2017. The prestigious Design Guild Mark is awarded by The Furniture Makers' Company, the furnishing industry's charity, in order to drive excellence and raise the profile of British design and innovation. The award recognises the highest standards in the design of furniture in volume production by the finest designers working in Britain, or British designers working abroad. The Jonathan Hindle Prize, presented to the most outstanding design, was awarded to London-based design agency forpeople for the Keyn Family chairs made for Herman Miller.

Alexander Gifford, the Design Guild Mark chairman who led the judging panel, said: 'This year's Design Guild Mark saw another record number of applicants, reflecting the high quality of entries we had hoped for. Once again, the entries were equally diverse, from contract to retail, from residential to hospitality and workplace, as were the applicants themselves. Chairing the judging process for the third year was a great honour, and watching the great minds in our industry critique the great output of British design was a real pleasure.'

The full list of the 2017 Design Guild Marks can be found on The Furniture Makers' Company's website.

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

PHOTOGRAPHS COURTESY OF CHERRILL SCHEER & ASSOCIATES

Graduate designs minimal flat-pack chair

German furniture design graduate Tino Spelleken has designed an ingenious flat-pack chair that can be assembled without using tools, screws or adhesives. The Heureka chair was Tino's graduation project from Aachen University of Applied Sciences and is designed for use in living and dining areas.

Designed with ease of manufacture and transport in mind, the chair has grooves in its back and base so that the timber elements can slot into place on the metal frame. Its frames are made of two 8mm stainless steel wires. In combination with specially designed fixtures, mounted under the beech wood seat and on the back, the components form a robust and comfortable chair.

Heureka was shown at Milan Design Week, where it was one of the winners of the ein&zwanzig competition, which celebrates innovation in product and interior design among recent graduates.

Contact: Spelleken Design
Web: www.spelleken-design.de

PHOTOGRAPHS COURTESY OF EIN UND ZWANZIG

The Heureka chair can be assembled without tools, screws or adhesives

North Corner Makers launch woodwork club

North Corner Makers, the new woodwork shop based near Bristol, has recently started its own woodwork club. The Tuesday evening event is a drop-in club for makers/beginners who have a basic knowledge and understanding of hand tools and timber. It is suitable for people who have a project or a piece they wish to make but not the space or tools to do so. North Corner Makers provide bench space and access to various hand held woodworking tools and equipment. It will be expected that the individuals have a basic understanding of how to move their project/piece forward, but the members of North Corner Makers will be there to offer advice and knowledge to assist.

The first session is free, it's £15 a session after that or £50 for four consecutive sessions. Email jo@jimsharplesfurniture or call 07786848802 for more information.

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

Peter Galbert to open craft school

American chairmaker Peter Galbert, noted for his Windsor chairs, has announced he will be opening a craft school. Peter made the announcement on his blog, Chair Notes, saying that he is currently researching locations in southern Maine. 'I am ready to put together a school dedicated to teaching small groups of people chair making and also roping in some of my most gifted friends to share their talent and energy as well,' he said. 'My goal is to keep things intimate and relaxed, just a great place, in a great place to do what we all love.'

Contact: Peter Galbert
Web: www.petergalbertchairmaker.com

Events

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

London Design Festival

London Design Festival celebrates and promotes London as the design capital of the world. Now in its fifteenth year, the Festival will be returning to venues and institutions across the city this September. Events include the London Design Fair, Decorex, 100%design, designjunction and Focus17. There will also be numerous talks, exhibitions and workshops. Check the website for full listings.

When: 16–24 September, 2017
Where: Various locations around London
Web: www.londondesignfestival.com

Cutting edge interior design products are exhibited at designjunction

PHOTOGRAPHS COURTESY OF LONDON DESIGN FESTIVAL

Ron Arad speaking at 100%design in 2016

Events

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

European Woodworking Show

EVENT OF THE MONTH

The European Woodworking Show returns to Cressing Temple Barns near Braintree in Essex this September. This is always a favourite show with demonstrators and exhibitors and most take little persuading to return to the show to either demonstrate their skills or showcase their wares. The overseas contingent this year includes Chris Schwarz of Lost Art Press; Dave Jeske of Blue Spruce Toolworks; Ron Hock of Hock Tools; Thomas Lie-Nielsen of Lie Nielsen Toolworks; and Chris Vesper, Sadatsugu Watanabe of Veritas tools. Firm favourites will also be returning including turners Joey Richardson, Mark Hancock; pyrographer Bob Neill; timber hewer Steve Woodley; woodcarvers Peter Berry, Tim Atkins and Dave Johnson; marionette maker Lenka Pavlickova; scroll saw expert Fiona Kingdon; Japanese joint maker Brian Walsh; plus furniture makers David Charlesworth, Dylan Pym, David Barron and Treeincarnated; The International Boat Building College; blacksmith Nic Westerman; knife maker Ord Knives; stick maker Dave Wilkins, and many more!

There will be many familiar tool suppliers including Turners Retreat, Trend Tools & Machinery, Lie- Nielsen Toolworks, Gransfors Bruks axes, Pfeil, Auriou and Flexcut carving tools, Classic Hand Tools, Lincolnshire Woodcraft, Chestnut Products, David Barron Furniture, and a host of other retailers.

When: 16–17 September, 2017
Where: Cressing Temple Barns, Witham Road, Cressing, Braintree CM77 8PD
Web: www.europeanwoodworkingshow.eu

PHOTOGRAPHS COURTESY OF THE EUROPEAN WOODWORKING SHOW

Visitors will be able to view top quality work from around the world

Woodfest Wales

Woodfest Wales has seven different event arenas with displays on constantly, along with over 150 outside stands of demonstrations and six main marquees full of interesting and unique goods produced in Wales.
When: 29–30 July, 2017
Where: The Showground, Caerwys, Flintshire CH7 5BP
Web: www.woodfestwales.co.uk

Irish Furniture & Homewares Show

Ireland's premier furniture and homewares trade event brings together new products, innovative ideas and exclusive deals and discounts. Exhibitors include 100 Irish and British companies.
When: 19–22 August, 2017
Where: National Show Centre, Cloghran, Swords, Co. Dublin
Web: www.ifhs-tradeshow.ie

Celebration of Craftsmanship and Design

CCD showcases the highest quality bespoke design and craftsmanship available in the UK and around the world. It's the only place to view work by around 70 of the finest craftsmen in Britain all under one roof. There are also several prestigious awards made every year, including the Alan Peters Award for Excellence and The Worshipful Company of Furniture Makers' Design Prize.
When: 19-28 August, 2017
Where: Thirlestaine Long Gallery, Cheltenham College, Bath Road, Cheltenham, Gloucestershire GL53 7LD
Web: www.celebrationofcraftsmanship.com

Charcoal & Woodyard Weekend

Visitors to this event at the Weald & Downland Living Museum will see a traditional early 20th-century earth clamp built, fired and emptied of charcoal. Demonstrations of other traditional skills will be held in the woodyard throughout the weekend, including pole lathe turning, gate hurdle making, bowl turning and blacksmithing.
When: 26–28 August, 2017
Where: Weald & Downland Living Museum, Singleton, Chichester, West Sussex PO18 0EU
Web: www.wealddown.co.uk

Top Drawer

Top Drawer brings together 1,500 brands and hundreds of top quality new products in the categories of Home, Gift, Fashion and Craft.
When: 10–12 September, 2017
Where: Olympia, Hammersmith Road, London W14 8UX
Web: www.topdrawer.co.uk

South West Furniture Show

Now in its seventh year, this show is organised by members of the South West Furniture Manufacturers Agent & Representatives Federation.
When: 12–14 September, 2017
Where: The Sedgemoor Auction Centre, Market Way, North Petherton, Somerset TA6 6DF
Web: www.swfmarf.com

Furniture China

The largest furniture fair in Asia attracts over 3,500 brands exhibiting in Contemporary, International and Chinese sectors.
When: 12–15 September, 2017
Where: Shanghai New International Expo Centre, 2345 Longyang Rd, ShiJi GongYuan, Pudong Xinqu, Shanghai Shi, China, 201204
Web: www.furniture-china.cn

Autumn Long Point

Organised by the Long Eaton Guild of Furniture Manufacturers, the Autumn Long Point is an open-entry trade show featuring over 30 exhibitors.
When: 19–21 September, 2017
Where: Various showrooms in Long Eaton, Derbyshire
Web: www.longeatonguild.co.uk

Minerva Furnishers Guild's Autumn Furniture Show

This year's Autumn Furniture Show will be held at a new venue, the NAEC in Stoneleigh Park. The event is open to everyone in the furniture industry.
When: 26–27 September, 2017
Where: NAEC, Stoneleigh Park, Stoneleigh, Kenilworth CV8 2LZ
Web: www.minervafurnishers.co.uk/autumn-furniture-show/

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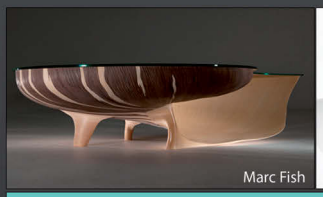
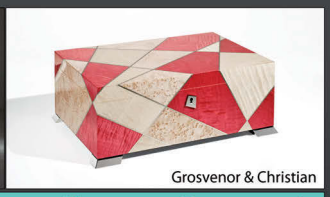

Marc Fish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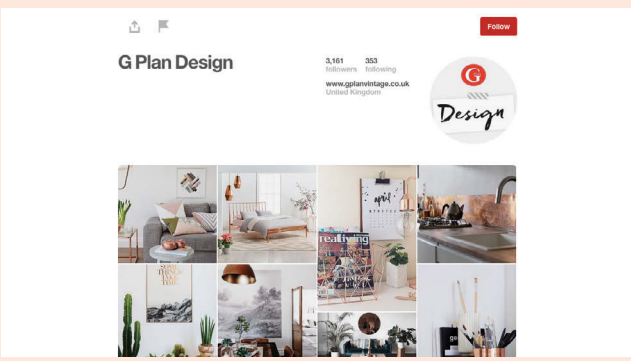
Social media dashboard

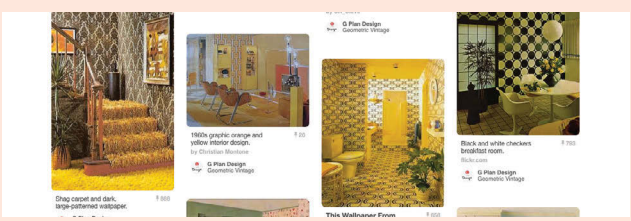
Bringing you a round-up of the best from the online world plus a selection of the latest projects from our readers

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

Pinterest: G Plan Vintage

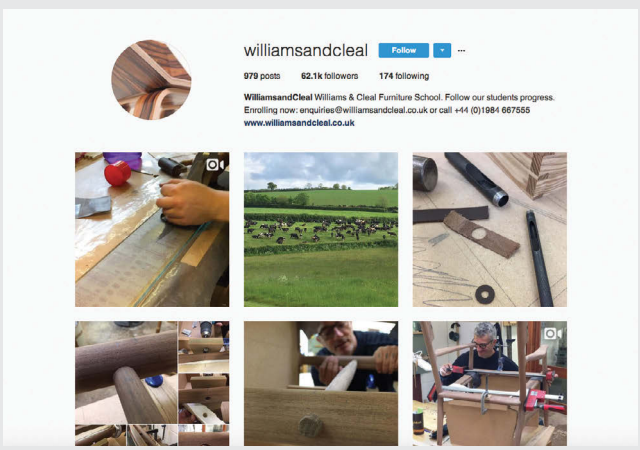
Inspired by the classic British furniture brand, G Plan Vintage's Pinterest page is bursting with inspiration. There are multiple boards to follow based on vintage design styles, current trends, colours and materials. There are also some wonderful images from G Plan's archive.
Address: uk.pinterest.com/gplandesign/





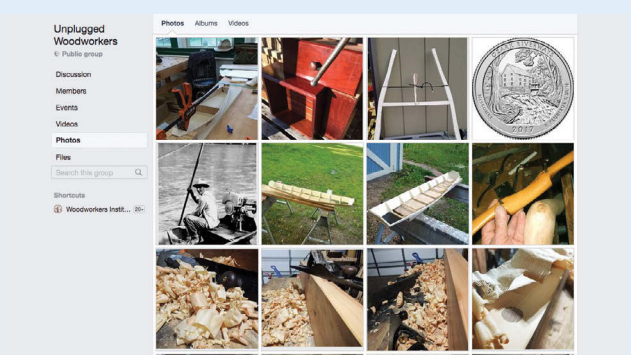
Instagram: Williams & Cleal

Williams & Cleal Furniture School's Instagram feed shares photos and videos of the remarkable work made by their students. You can follow projects through the production stages to the finished item. As well as current students' work, the School shares images from their archive plus updates on their graduates' successes.
Address: williamsandcleal



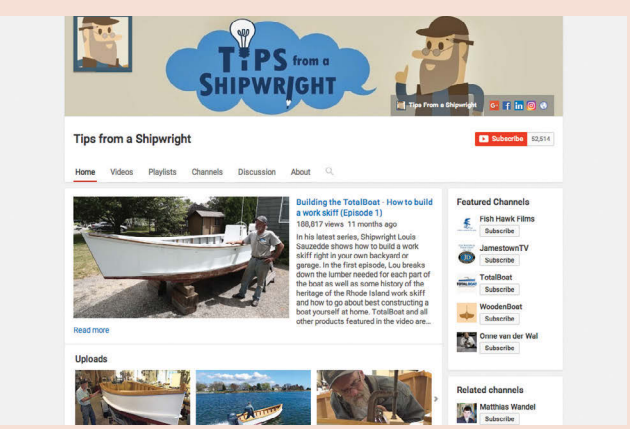
Facebook: Unplugged Woodworkers

This Facebook group is open to any woodworker with an interest in hand tools. Its members come from around the world and share information about tools, techniques and projects. With over 28,000 members, it's a busy group with lots of content to inspire and educate any hand tool enthusiast.
Address: www.facebook.com/groups/213418935481974/

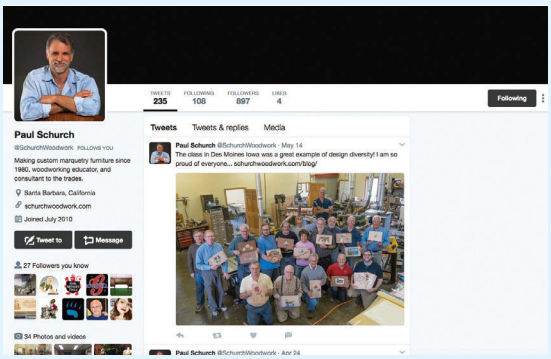


YouTube: Tips From a Shipwright

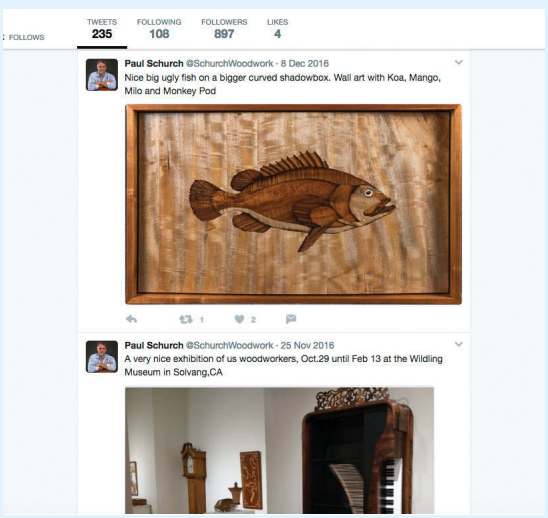
Master shipwright Louis Sauzedde shares his unique tips and tricks for traditional wooden boat building and woodworking via high-quality videos on YouTube. His videos include multi-episode series on building whole boats as well as shorter videos demonstrating techniques such as cutting scarf joints, steam bending and sharpening handsaws using a file.
Address: www.youtube.com/user/TipsfromaShipWright

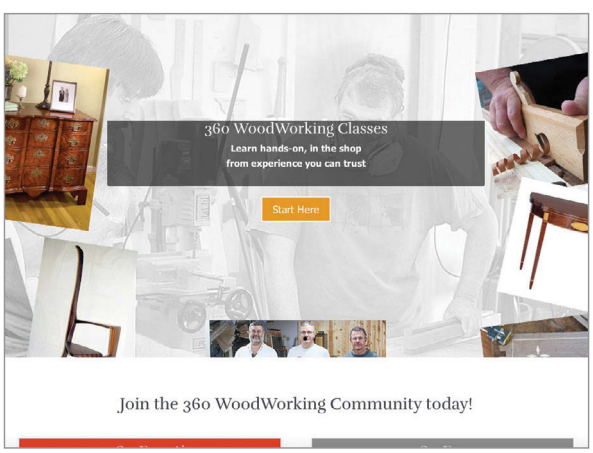


Twitter: Paul Schürch



Marquetarian Paul Schürch was the subject of an *F&C* profile back in issue 248 and if you were impressed with his work, you'll want to follow his Twitter feed to see his latest completed pieces as well as the projects made by his students.
Address: @SchurchWoodwork





Blog: 360 WoodWorking

360 WoodWorking is a subscription website for woodworkers set up by Chuck Bender and Glen Huey. As well as a blog and podcast, members can also access online classes and videos. If you don't want to commit to a paid subscription, there's also a free membership option which gives access to a limited amount of articles, videos and plans.
Address: 360woodworking.com

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.

The Corbridge cabinet

This little cabinet was recently completed by Woodworkers Institute forum user woodbloke. It was made to hold an exact copy of the Corbridge Hunt Cup, a Roman vessel found near Hadrian's Wall. The cup is approximately 180mm high.

The cabinet is made from solid teak and teak veneers with accent details in bog oak. The frame was Dominoed together and the round corners were bearing cut with a router. It was finished with a couple of coats of Osmo and some Swedish beeswax.

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**

Arthur's Seat table

Paddy O'Neill, a student at the Chippendale International School of Furniture, has turned Arthur's Seat into a striking and artistic coffee table. Paddy was inspired by the iconic hill that overlooks Edinburgh and by his his passion for the outdoors and the importance of Ordnance Survey maps for safe navigation. His Arthur's Seat table, made from sycamore and yew, is all to scale from Ordnance Survey maps, has a large two-way drawer underneath and, to maximise visual impact, is glass-topped – giving you a bird's-eye view every time you pick up your coffee cup.

A former oil rig worker, Paddy enrolled at the Chippendale school after deciding on a change in career and, following graduation in June, is setting up The Natural Edge, his own woodworking business in Edinburgh to specialise in furniture design, making and kitchens.
For more information, visit: thenaturaledge.co & www.chippendaleschool.com

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UNDER THE HAMMER:

The Oak Interior

This month we look at some of the coffers, chests and cupboards from Bonhams' latest Oak Interior sale

Bonhams' unique Oak Interior auctions include 16th, 17th and 18th-century carpenter-made and joined early vernacular furniture, often from single-owner and private collections. Sales include refectory tables, panel-back armchairs, coffers, side tables, chests of drawers, back stools, joint stools and Windsor chairs, made from a variety of timbers including ash (*Fraxinus excelsior*), elm (*Ulmus procera*), fruitwood, oak (*Quercus robur*), walnut (*Juglans regia*) and yew (*Taxus baccata*).

Related works of art, including treen (objects made from wood), early metalware (brass, copper, iron, pewter and steel), early carvings in wood and stone, and folk art-related items, are sold alongside furniture in a sale that caters for both connoisseur collectors and clients wishing to recreate period interiors. Period textiles are also included.

Auctions take place at Bonhams in New Bond Street, London twice a year. For more information, visit: www.bonhams.com

PHOTOGRAPHS COURTESY OF BONHAMS

£2000–3000

An early 18th-century oak chest-on-stand, made in England ca 1710. The chest has a cyma reversa and torus moulded cornice, above two short and three long graduated drawers within double-bead applied rail mouldings. Each side has a large single fielded panel, the stand has one long drawer raised on a split-pendant applied block over ball-turned supports, joined by unusual multiple-arched and moulded fore-rails and conforming shaped stretchers. It sits on bun feet.

£6875

A 16th-century boarded oak clamp-front meal chest or ark made in the Welsh borders, ca 1550. This chest has a typical dome-lid constructed using three overlapping boards wedged and tenoned into the upright and extended shaped-ends. With historic iron pivotal side hinges, the side boards are clamped and tenoned between broad stiles that all terminate with a characteristic concave-shaped internal edge. An ark was typically used for the storage of grain, such as meal, corn and flour. Traditionally it is thought the lid was not fixed in place and, once removed, the dished underside allowed for use as a trough for kneading dough.

£3500

A Charles I joined oak standing livery cupboard, made in Gloucestershire and dated 1631. The cupboard is enclosed by a pair of boarded doors, each centred by carved flowerhead-filled guilloche and framed with applied egg-and-dart carved rails. There is a lozenge-carved panel in the centre and the top rail is carved with two opposing pairs of fork-tongued serpents and the date 1631. The lower rail is carved with a leaf S-scroll, and there is an arcaded pendant centred apron. The cupboard is raised on columnar-turned front legs joined by a boarded undertier. The sides are carved with double-heart motifs and similar carved rails.

£5250

A William and Mary joined oak enclosed dresser base, made ca 1700. This base has a T-shape arrangement of mitre-moulded drawers, flanked either side by a geometric mitre-moulded panelled cupboard door and a slender fixed panel, all within an applied moulded framed-edge.

£20,000

A rare Elizabeth I/James I joined oak and polychrome-decorated coffer, made in the West Country, possibly Somerset, ca 1600–10. The two-plank hinged lid has chip-carved ends. The front has three slightly recessed panels, each end panel is carved with an imaginative plant, to the left is a pomegranate, rose, acorns and possibly a hop, to the right with orchid-type flowers and strawberry-shaped leaves, each within a guilloche-carved arcade, raised on stiff-leaf decorated pillars and with leaf-and-berry carved spandrels. The central panel is carved with a large single carnation and scrolling tendrils, the muntin rails are again carved with similar flowers, the front stiles each with a stiff-leaf, the top rail is carved with linked S-scrolls, with substantial dentil-mouldings below the base rail. The sides are carved with a stylised fleur-de-lys filled lozenge, painted/stained in shades of red, green and ochre.

£2000

An early 16th-century boarded oak chest, made in England ca 1500–50. It was constructed using heavy boards throughout, with run-moulded long edges to the hinged top, front and back boards, the slab-ends each with decorative extended saw marks to the apex of the V-shaped cut-away support.

£812

A late 17th-century joined oak chest of drawers, made in England ca 1680–1700. Some restorations have been made to this piece, which has two short over three long mitre-moulded drawers, panelled sides and bun feet.

£1187

A George I walnut-veneered and featherbanded chest of drawers, made ca 1720. It has a quarter-veneered and crossbanded top, above two short and three long drawers within half-round carcase rail mouldings. The chest of drawers sits on ball feet.

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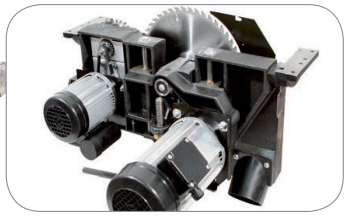

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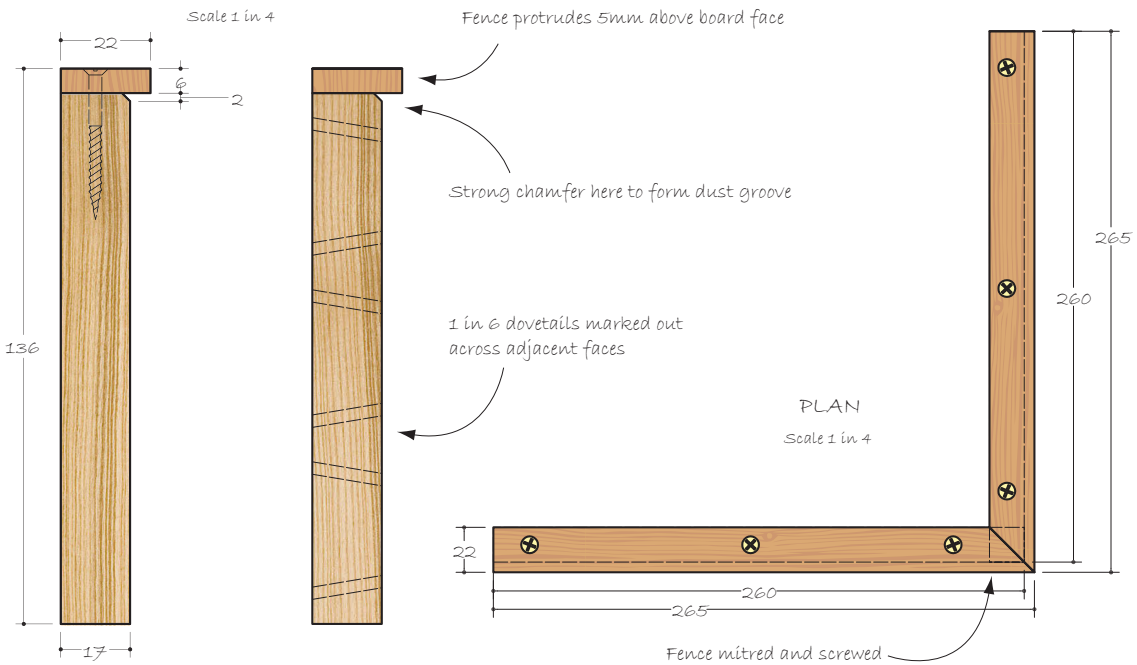
A new twist on dovetails

The secret to clean, crisp joinery is maintaining accuracy at every stage of the process. David Barron's latest alignment board is designed to keep your layout lines exactly where they need to be; on the straight and narrow

PHOTOGRAPHS BY DAVID BARRON

For this project I'm using twisted dovetails and making a very useful dovetail alignment board. This board allows you to line up the bottom edges of your work against the fence of your router table so that the grooves for the box or drawer base will also line up. In addition it keeps things square so that the finished drawer or box sits level. Of course, in order for the alignment board to work well it needs to be made extremely accurately.

SIDE ELEVATIONS
Scale 1 in 4



PLAN
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SECTION/DOVETAIL LAYOUT
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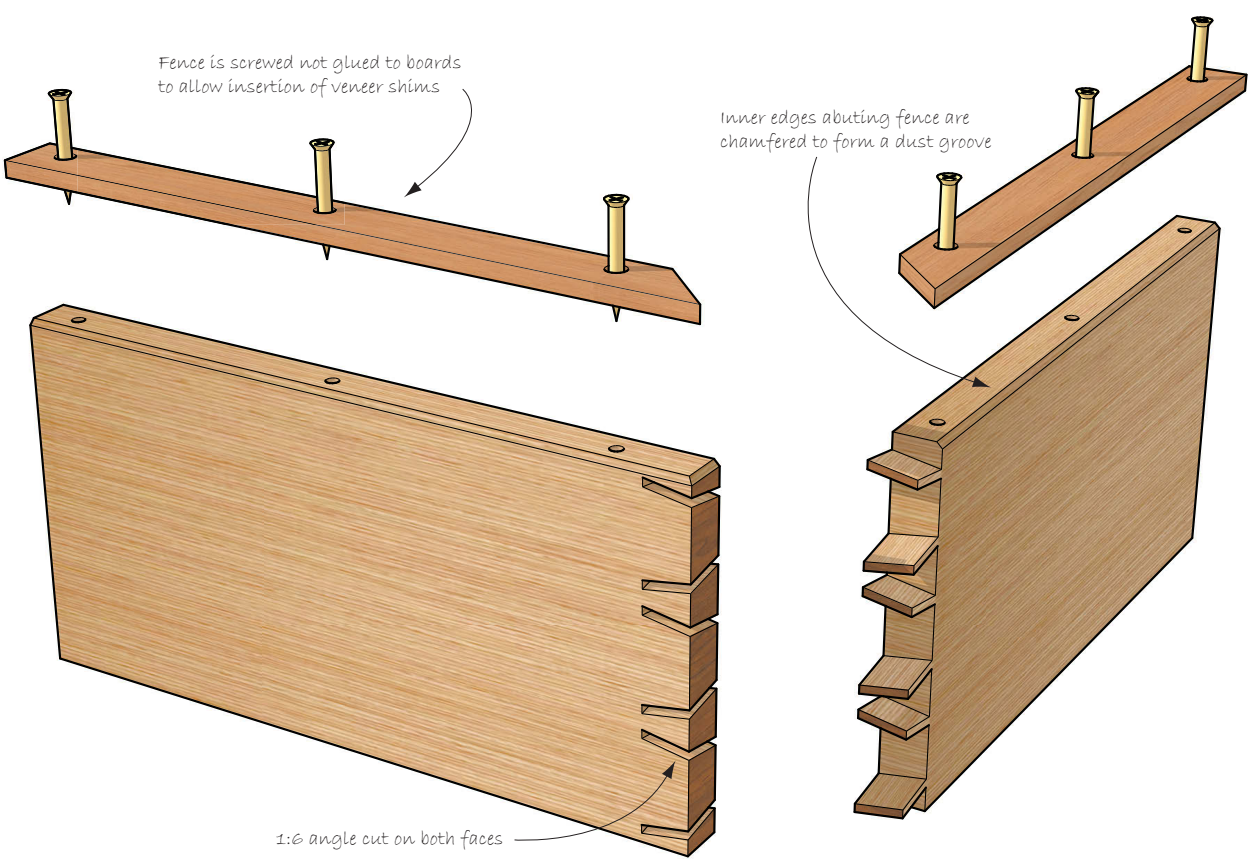
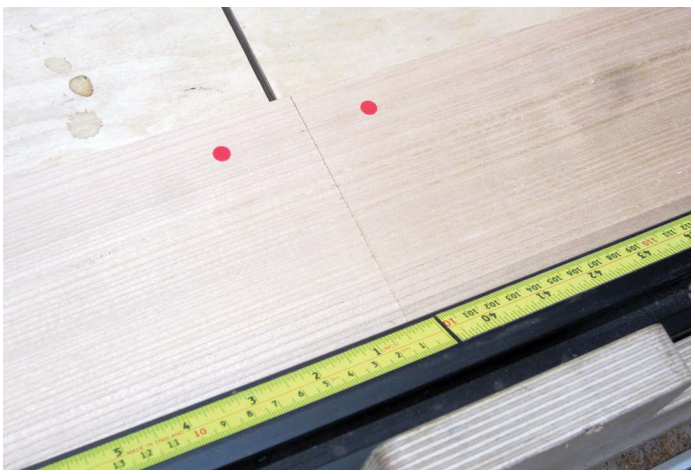
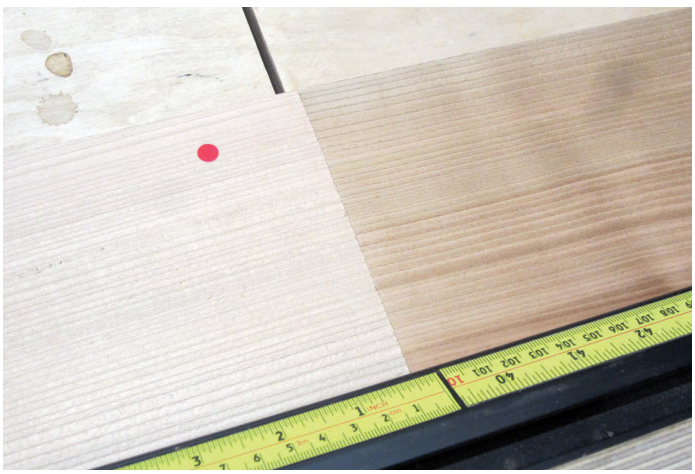


Preparing the stock

It is best to use quartersawn timber for long term stability and using a single board will allow both pieces to move in harmony. In this case I'm using some nice quartersawn elm (*Ulmus procera*). It's very important the cut is exactly at 90°. I use the tablesaw and, by flipping one board against a straightedge, any error is doubled and clearly visible. Shim as necessary until you have a perfect 90° on both pieces.



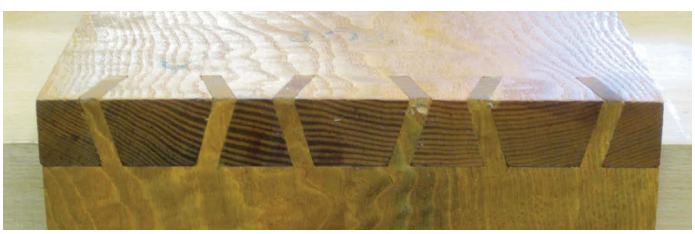
Single board cut to 90° and marked with dots



Checking for 90° by flipping one board over

Marking and cutting the dovetails

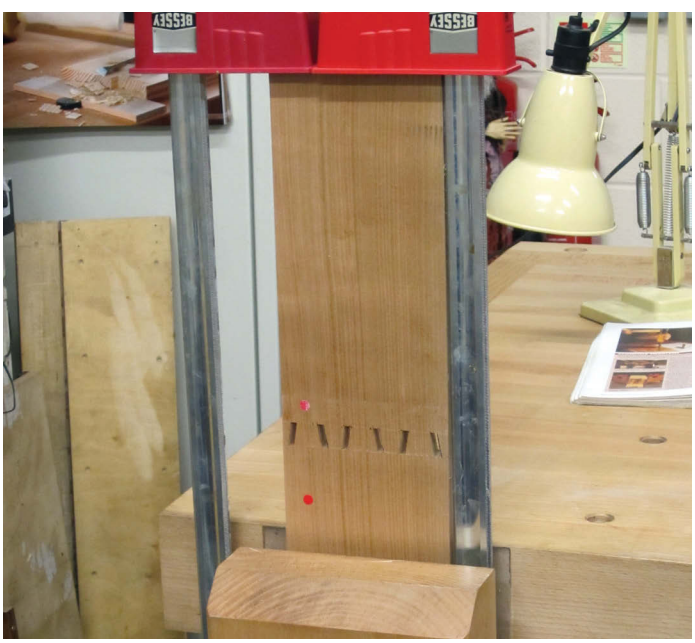
With the stock prepared and marked with dots it's time to look at the dovetails. I'm lucky enough to own the joint that Alan Peters used in his article for *Fine Woodworking* back in November/December 1986 and I chose to copy his spacing and layout. The spacing between the tails on the baseline of both boards is even and this makes the joint look balanced. Having said that, the possibilities and layouts for this joint are endless; have a look on Instagram for an excellent example by Theo Cook at: www.instagram.com/theo__cook



The twisted dovetail joint made by Alan Peters

Marking out using a 1:6 angle across the face as well as end grain

Tails being cut at 45° following both lines simultaneously



Set up for marking the pins from the tails

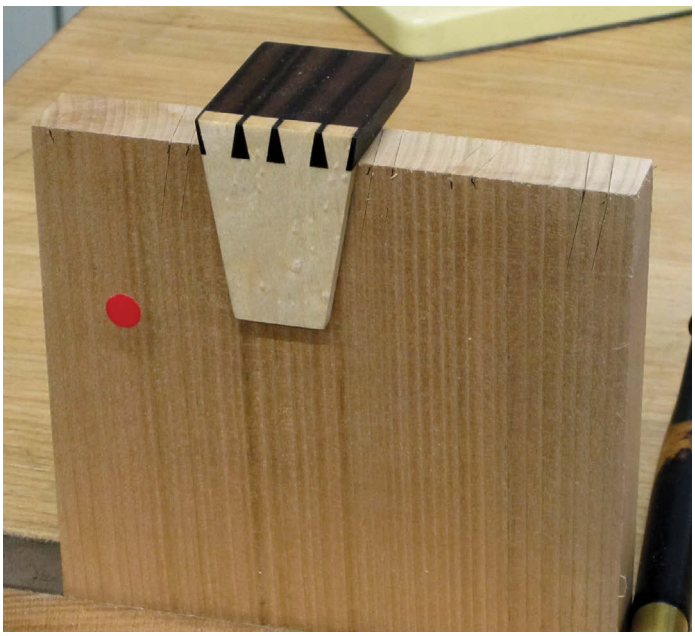
Rear view of tails cut and cleaned out

Cutting the tails requires concentration as it needs to be at two angles at the same time. I find it best to do this with the saw at 45° to the corner, nibbling gently to get things just right with both lines. Once on track the cut goes smoothly. The bulk of the waste was removed with a fretsaw as close to the line as you dare, with the remainder being chiselled out. I found the elm very soft with a tendency to collapse, so I made sure my chisels were razor sharp.

With the tails cut and cleaned out it's time to look at marking the pins. In Alan Peters' article he marks out both parts of the joint in advance and just cuts to the pencil lines. I prefer David Charlesworth's method in his excellent book *Furniture-making Techniques* where the pins are marked from the tails after they have been cut out. With this method you can use a knife rather than a pencil, which I find much more accurate. The actual marking needs to be done with one board directly on top of the other. These also need to be flush on their edges as well as faces and I found it best to clamp them up and make adjustments with a brass hammer. With a final tighten on the clamps and a check with a straightedge, I secured the whole thing in a vice which made the actual marking easy.

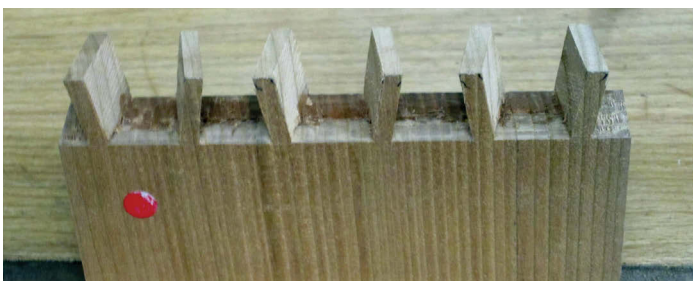
Assembling the joint

I finished knifing the pins on the face side with a 1:6 marker and then cut the pins using the same technique as the tails. After checking the fit it was time to assemble the joint which needs to be done simultaneously at a 45° angle. Both Alan Peters and David Charlesworth used a combination of cauls and clamps on both sides to gradually pull the joint together, a slow-setting glue is definitely helpful here. Instead I used a more low-tech method, a dead blow mallet and a block of wood! This is equally effective for disassembly if needed. I alternated from one side to the other making sure to keep things square and it went together without much trouble.

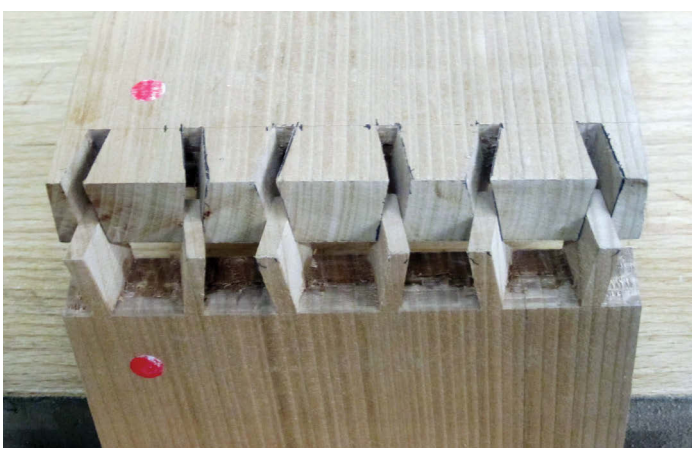


1:6 dovetail marker being used to cut the pins across the face side

The waste area for the pins marked out



Pins cut and cleaned out



The joint goes together at 45°, entering at the corners

Making sure the glued up boards are at 90°

It's most important to make sure the joint closes without gaps on both baselines, otherwise all the hard work getting the pieces to an exact 90° is wasted. Undercutting the end grain when cleaning out the tails and pins is very helpful for this. With a final check to make sure the two pieces are at 90° to each other, the board is left overnight to set.

Planing the board to a finish

After planing up the surfaces and edges, being careful to keep them flat, it's time to choose which side the fences are going to be mounted. With the board on its edge on a dead flat surface, take a square and check to see if the corner is square with the surface. Do this from both sides and on both edges to see which is the best. If any adjustment is needed on the better of the two sides this can be done by carefully shimming the fence with veneer.

Before attaching the fence the inside edges have a strong chamfer which acts as a dust groove preventing any debris from giving a false reading when the board is in use. The fence is made to protrude about 4mm above the surface of the board and screwed in place, rather than glued, so that it can be shimmed as mentioned above.

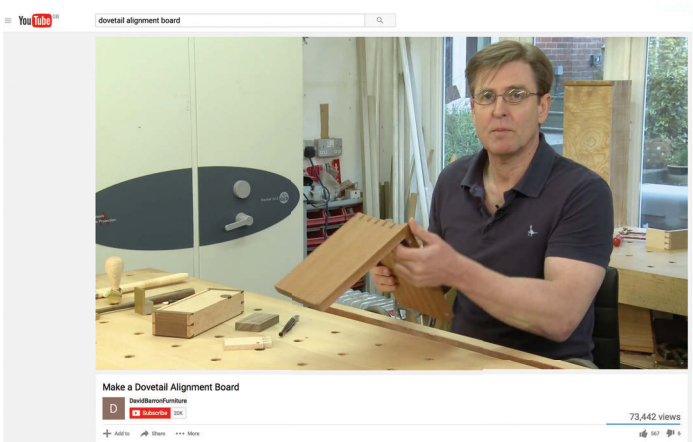
It's quite possible to make an accurate dovetail board with plywood and butt joints, but it just wouldn't look as nice! F&C

Plane a chamfer on the inside edges

The finished board

Watch the video

To see a YouTube video on the making of the alignment board (with normal dovetails), just search for 'Dovetail Alignment Board' at: www.youtube.com/user/DavidBarronFurniture

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Edge-to-edge joinery part 2

In the second of his 3 part series on edge joints, Rob Porcaro covers shop-proven techniques for producing accurate joint surfaces and aligning them for glue-up

The fundamental simplicity of the edge joint demands accuracy. There is no mechanical lock and even tiny gaps are visually and structurally unacceptable, and the finished joint is fully exposed. No problem – here are techniques for success.

The task at hand

As discussed in part one of this series (see *F&C* 259), the joint edge of the board should have just a slight camber (concavity) along its length, there must never be the slightest convexity across its width and, when the camber is closed with only mild pressure, the edges should fully mate along their entire length to produce a flat panel.

Hand planing has no equal in producing these requirements while creating an ideal surface for gluing. A small-shop woodworker can efficiently produce quality joints by using a well-tuned jointer or tablesaw to bring the edge close to ready, and then add the critical elements with a hand plane. In this way, you can produce edge joints that the most sophisticated production machinery cannot match.

The same excellent results can also be achieved without any machinery, working from a hand-ripped edge. It just takes longer and there is more opportunity to temporarily go astray in accuracy.

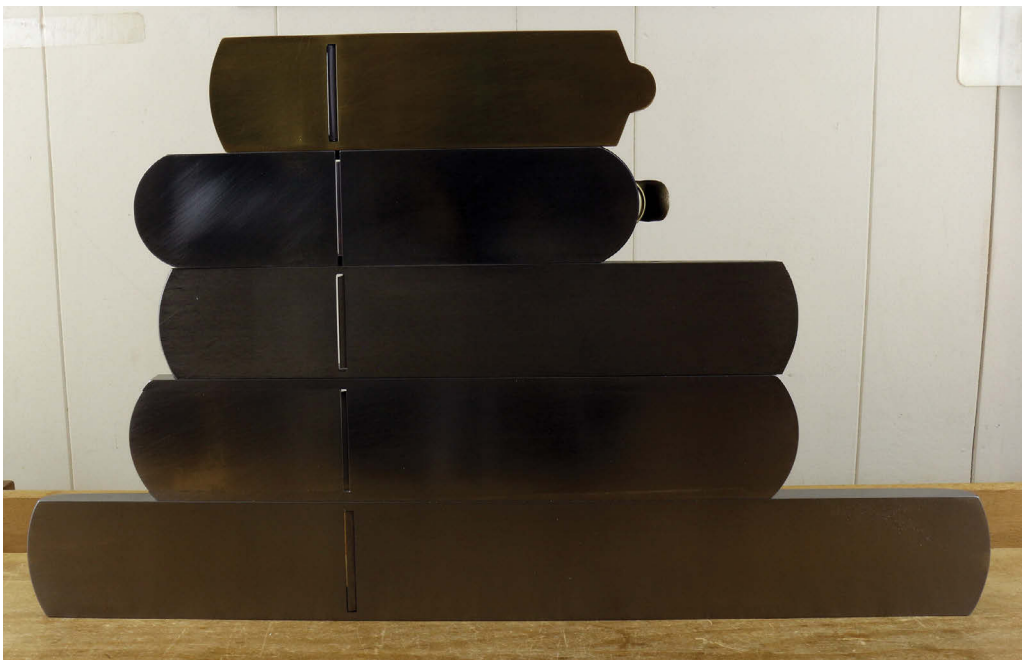
PHOTOGRAPHS BY ROB PORCARO

You can work to a higher standard than any machine operator

The tools at hand

Essential equipment for all but small work is a long plane to bridge the valleys and level the hills to produce an accurate edge. I prefer my #7 jointer, 22in long with a 2¾in-wide blade, while some like the beefier #8 at 24in long with a 2⅝in blade. For long grain shooting of boards up to about 600mm, I like my boxy, heavy 11in #9 shooting plane, but a regular bench plane will do as well.

It would be difficult to overstate the importance of sharpness in producing accuracy. The edge of a dull blade gets excessively deflected into the wood, which reduces your control of the shaving thickness. A sharp blade can take thinner shavings with less blade deflection and less pushing effort, and thus afford finer control in adjusting the joint edge.



Plane soles for comparison, from top to bottom: #4 smoother, 11in #9 shooter, 14in #5 bevel-down jack, 15in bevel-up jack, 22in #7 jointer

Living on the edge – without a jig

This time-honoured technique can be called the camber shift method. Set up the plane by centring the depth of the blade camber across the width of the sole. The amount of camber is closer to that of a smoothing plane than of a jack plane. In use, make corrections to an out-of-square edge by shifting the plane laterally to let the camber depth take down the high side.

You are shifting, not tilting, the plane to make these corrections. Maintain the flat orientation set into your muscle memory from countless hours of planing board surfaces with, of course, the sole parallel to the bench top. Take advantage of this embedded physical pattern by securing the board properly vertical with its edge only an inch or two above the bench surface. This will also help your eyes sense the plane sole parallel with the bench top. I like a broad grip with my forward hand to feel the overall plane balance, with fingers tucked under the sole to register the lateral position.

With just a little practice, it is fairly easy to correct an edge that is consistently out of square along its full length. It is more difficult to snake the plane left and right to take down particular sections of the edge that are high. You can mark the high spots but, unfortunately, the marks are covered by the big plane several inches ahead of where you want the blade to engage them. This method involves repeated checking with a square, estimating the amount to be removed and rechecking. It helps a lot to start with a good edge from the machine (which is, after all, a jig).

The front hand helps to sense flat and guides the lateral position of the plane, as it applies variable downward pressure during the pass

This makes it easier

This method has worked for me for more than 30 years. I have tapped three 10-24 (about M5 x 0.8) threaded holes in the side of my Lie-Nielsen #7 (and the same in a Record that preceded it) to accept a simple, two-part wooden fence that registers the plane sole square to the side of the board. The inner part of my trusty fence, which contacts the side of the board, is 280 x 45mm. Commercial models have become available (see Hendrik Varju's review of the Veritas universal plane fence in *F&C* 259).

The blade is slightly cambered to prevent any possibility of convexity across the width of the joint edge. I sight down the sole from the front of the plane to set the blade to a symmetrical projection just in the working area (e.g. 19mm) adjacent to the fence. Though this method does concentrate wear in a portion of the blade, you can save a trip to the sharpening bench by swapping out the inner part of the fence with one of a different thickness, or simply applying an additional piece with double-sided tape.

I apply pressure to the fence with four fingers while my thumb applies variable pressure to the top of the plane near the knob. I initially concentrate on getting the edge square, then work on producing an appropriate camber along the length.

This fence is simple to make

The front hand maintains pressure on the fence against the side of the board, as it applies variable downward pressure during the pass

Thin boards are another matter

It is difficult to freehand balance the plane on thin stock, usually less than 13mm, and the fence method tends to distort the workpiece. This work is usually not more than 600–750mm long. The solution is to lay these boards flat and shoot the edge with the plane on its side. Long grain shooting is so easy, yet seems to be underutilised by many woodworkers.

I usually use my long shooting board for this. The end stop helps stabilise the workpiece, and the plane rides on a slick plastic surface. Even simpler, you can dog a support board in place on the workbench, and then place the workpiece on the support with the edge slightly overhanging.

To negate any slight discrepancy from square in the setup, place together the two boards to be joined, then close them like a book, and present each edge to the plane in that orientation. Only for thin boards, I use my #9 shooting plane with its usual straight blade edge used for end grain shooting. A bench plane with a slightly cambered blade also works well, but centre the camber depth where the blade engages the workpiece. For shorter pieces, I like to use a grippy glove on my left hand, but longer pieces should be stabilised with clamps.

The grippy glove, along with the front stop, makes it easy to control the workpiece

Two at once?

It is sometimes suggested to plane two edges at once in a closed bookmatch orientation as an expedient way to get out-of-square errors to cancel. This can work well for shooting thin pieces, such as small drawer bottoms, with a straight blade edge. Align the edges and clamp the pair on the support board.

The two thin boards can also be held together in the closed bookmatch orientation in the front bench vice. However, when using a bench plane with this setup, the blade camber should be minimised. With thicker boards, say 19mm, and using your jointer plane prepared with a typical camber, an inherent error in the process becomes significant (see sidebar).

Two 9mm pieces are aligned, clamped and then planed together

With each method

Save a lot of trouble by evaluating the initial condition of the edge to be planed with a straightedge and square. To produce the joint camber, start by taking a thin shaving or two from the middle of the length of the board, easing the plane in and out of the cut. Sense how the blade is grabbing the wood.

The length of the early passes should be shorter if the edge is initially convex or is suspect. On shorter boards with a long plane, you may need to continue in the interior of the length until the blade no longer engages. If the edge is nearly straight to begin with, make the initial pass longer. Progress by lengthening successive passes at each end, keeping the shavings thin.

Finish with at least one full-length, full-width, thin shaving to ensure there are no localised bumps or troughs. On longer boards, it is easy to overdo the camber, even with a jointer plane. If there is too much camber, successive full-length shavings can reduce it.

Use good basic planing technique to avoid dipping the plane at the beginning and end of the board. Exert pressure on the front hand going in, on both hands in the middle and on the rear hand going out.

With practice, you will sense when you have produced a good camber, even before you test it

Aligning the boards into a panel

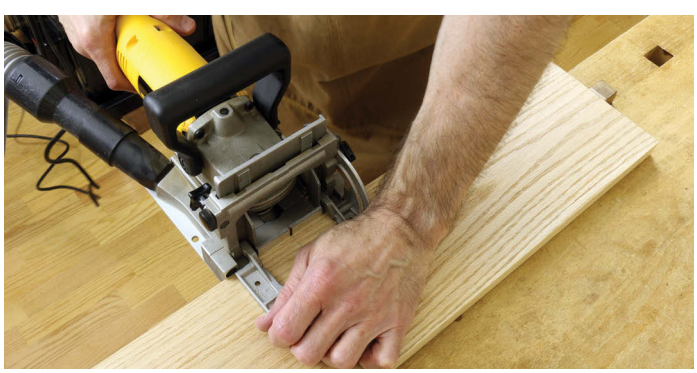
Especially for a small-shop woodworker, it pays to minimise the work and loss of thickness involved in flattening a glued-up panel. Using biscuits to align the boards is an easy way to accomplish this. They are not needed to strengthen a good joint but they won't hurt.

For this work, I do not use cauls, complicated over-under clamps, pinch dogs, dowels, Dominos or splines. I also do not like hammering glued, partially clamped boards into alignment. Time is limited during glue-up, and I would rather not rely on a hit or miss method.

For 19mm stock, I use #20 or #10 biscuits, and #0 for 13mm stock, typically 200–300mm apart, and about 50mm in from the ends. The biscuit joiner's fence must be set accurately square to the blade slot face. Secure the board with its edge overhanging the bench top, and firmly press the fence down against the face of the board as you advance the blade. Even for 'standard' 19mm stock, this is faster and more accurate than trying to tightly register both the board and the joiner sole against the bench surface.

Working with thin boards, such as a 9mm, 14in-long, small drawer bottom, preserving thickness is particularly important, and you must also guard against the panel exploding as you apply clamp pressure. These panels are too thin for biscuits.

The solution is to use alignment blocks at the ends of the panel. These have cutouts to vault the glue-line squeeze out. They are clamped into place after glue and light clamp pressure are applied. If necessary, I push (OK, and tap with a soft-face mallet, if necessary) the middle of the joint into alignment before applying modest final clamp pressure.



Biscuits are a fast, easy and practical way to align boards for glue-up

These easily made clamping blocks keep this thin panel aligned

Does it matter?

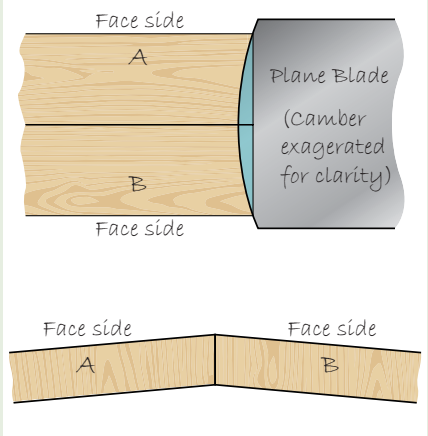
A problem with the two-at-once arrangement for thick boards is that a significant plane iron camber will be taking a thicker shaving corresponding to where the edges will meet, resulting in a panel that is not flat.

Consider an example. Assume a reasonable camber depth of 0.13mm over the full width of a 60mm-wide jointer plane blade. Pairing two 19mm boards will use 38mm of working blade width and a camber depth of .05mm over this width.

When two 150mm-wide boards are planed together in this way, then joined, the resulting panel with have a 0.4mm hollow across its 300mm width. With the convexity of the same amount on the other side, a total of 0.8mm of thickness of the panel will need to be removed, on this account alone, to make it flat. Wider boards, thicker boards, or more plane iron camber will increase the error.

Does this matter? Well, the error isn't huge, but why use a process with an inherent error at all?

One could set up the handplane with a straight blade edge to plane the paired boards, but the honing and use of this blade would leave no margin for error on thick stock. The danger is in creating a crown across the width of the edge, even the slightest of which can make for a poor joint. In summary, it is better to plane these thicker boards individually, and still have the option of using the self-correcting orientation for each alone. F&C



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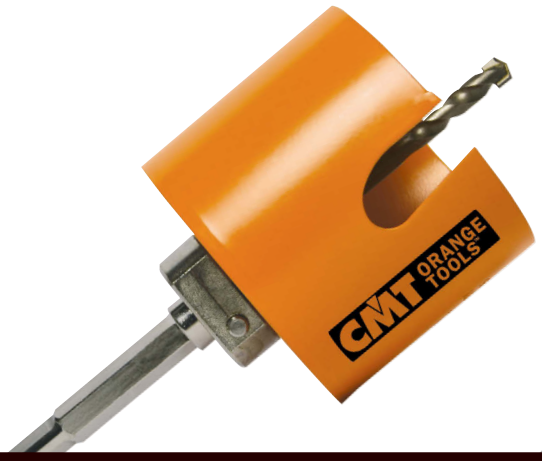
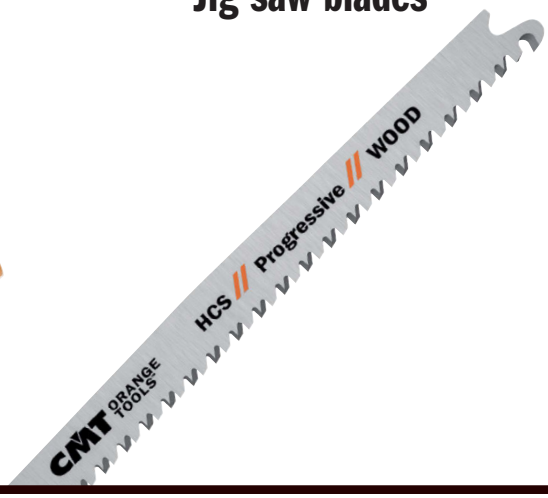


Jig saw blades



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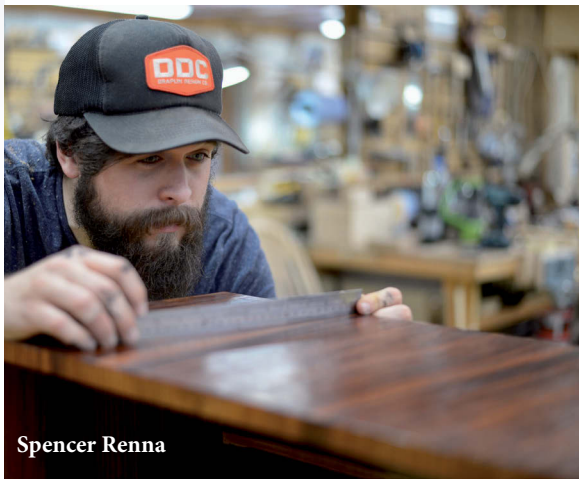
Furniture designers at New Designers Exhibition

Eight exciting designers from the renowned Chippendale International School of Furniture will be exhibiting at the New Designers Exhibition in London.
All eight will be on Stand FP68 from 5th to 8th July. The New Designers Exhibition, now in its 32nd year, is being held at the Business Design Centre, Upper Street, London N1 0QH.
The newly-qualified designers are from the UK, USA, Poland and South Korea, and will be exhibiting handmade and uniquely designed pieces of furniture – so do come along!
It's the first time that Chippendale school graduates have showcased their talents at the New Designers Exhibition, the last stop on an exhibition programme that began in Edinburgh in June.
Here's a little about each designer:


Jonathan Downing


Spencer Renna


Jin Sung Choi

Jonathan Downing

Jonathan, from Surrey, graduated from Northumbria University with a degree in Industrial design, and after working at a design studio in Newcastle enrolled at the Chippendale International School of Furniture.

His background in design can be seen in his signature piece of furniture - a drinks cabinet drawing inspiration from an un-opened flower. The interior of the cabinet, and the hand carved lotus flower handle, have been gilded with 23.5 carat gold using a process that dates back over 5000 years.

This ancient technique has been combined with the modern process of computer-based design and manufacturing. The main body of the cabinet has been constructed from CNC, precision cut discs which, when stacked on top of each other, create the shape. This was then painstakingly filled and smoothed to make the final organic shape.

Jonathan hopes to work in the furniture industry for a few years, gaining enough knowledge and skills before setting up his own business in the South East of England.

Spencer Renna

Spencer Renna, from New York, worked for years in environmental advocacy before committing full time to woodwork and design at the Chippendale school.

His signature piece that will be on display at New Designers is a drinks cabinet made of rosewood veneer and hardwood elm. It is a retro piece, designed to resemble a fashion popular in modern furniture in the mid to late sixties.

After the London exhibition, Spencer will be returning to New York City and setting up a work space that caters to residents new and old and who are looking for unique and bespoke handmade pieces for their homes.

Jin Sung Choi

Jin Sung Choi from Busan in South Korea is a former trainee pilot and Marine soldier, who has discovered a skill and passion for woodworking.

Always interested in both design and the practical skills in making furniture, he hopes to go onto further training in Japan, to develop his technique in carving & gilding.

He then hopes to set up his own business in South Korea where he thinks the market is beginning to embrace outside influences.

"South Korean furniture is traditionally made from solid wood, often inlaid with mother of pearl and with brass fastenings and handles," says Jin.

"I am more interested in bringing a delicate Western approach, and creating furniture that is both Oriental and classical."

One of his signature pieces is a stunning desk in solid fumed oak, with turned legs, brass fixings – incorporating a hidden compartment with a hidden key.

Fergus Hart

They're man's best friend, but that doesn't mean they like to have someone use them as a footstool. But for dog lovers everywhere, Fergus Hart from Edinburgh has come up with the answer.

Fergus is taking one of his hand-made dogs with him to the London exhibition, and part of his business plan is to design and make bespoke doggie footstools from a carefully-shaped MDF core and covered over by specially-chosen English sheepskin.

Fergus believes that he's filling a gap in the dog-lovers' market, because he can hand-build any breed of dog from good photography - and he already has four orders.

He'll also be taking a drinks cabinet with him to London, a small cabinet to showcase a decanter of something very special. His unusual and finely-made cabinet in oak and walnut features brass inlays and fittings.

Fergus will be returning to the school to take incubation space and set up Fergus Hart Bespoke Furniture.

Campbell Deeming

Campbell Deeming, from Aberdeenshire, is a student and teaching assistant at the Chippendale school. He is a graduate of the University of Edinburgh as well as the International Boatbuilding Training College in Lowestoft.

After the London exhibition, Campbell will be establishing The Lost Journeyman Workshop, specialising in contemporary furniture, boat restorations and interiors, and architectural and finish joinery.

He will be exhibiting an elegant office desk that combines the sleek lines, bold contrasts and subtle highlights of Art Deco design. Hand built from spalted beech, ebonized oak and luxuriant sycamore, his desk is constructed with techniques that date back to the Middle Ages and is accented in copper.

It is a beautifully-crafted piece, from a craftsman who has also worked as a professional boat builder and teacher for the Portsoy Coble Project and the Scottish Traditional Boat Festival.

He has also embarked on making a sea chest for the commander of the Royal Navy's new flagship, the aircraft carrier HMS Queen Elizabeth, made from a plank of Burmese teak from a former Naval flagship, the battleship HMS Nelson, which played an important role in World War II.

Zachary Schnitzer

Zachary, from New York, studied studio art with a focus on sculpture, as well as Architectural and Engineering design at Lafayette College in Pennsylvania. Upon graduating, he worked as an apprentice for two years at a custom furniture company in New York.

His background in art and architecture has given him the skills and perspective to blend form and function into pieces of furniture that are both visually-stunning and utterly practical.

His signature piece is a drafting table in solid fumed oak that can be set to any angle, with the use of an entirely wooden rotating track system for the perfect working position. The table comes complete with a matching stool.

He'll also be exhibiting a spiral wooden spring table made from American oak and ash, with a steam-bent spring that gives a playful edge to an otherwise functional piece.

Zachary will be returning to the States after graduation to pursue a career in furniture design and making.

Jack Jensen

Jack, from Milton Keynes, came to the Chippendale school from a three-year furniture making course at Moulton College in Northamptonshire.

His keen enthusiasm for working with wood has blossomed into a very real talent for cabinet making, creating beautifully-made pieces that incorporate absolute originality.

His signature piece for the London exhibition is his Oriental-style drinks cabinet in American black walnut and Scottish olive ash.

His cabinet echoes the style of traditional Japanese archways and bridges, with rice paper sliding doors that perfectly resemble a traditional Oriental interior.

Jack is hoping to further his considerable skills with a furniture making apprentice-ship, and to then open his own business.

Joanna Majewska

Joanna, from the beautiful Polish capital of Warsaw, is a former graphic designer, who decided that she wanted a more practical and hands-on career.

Joanna has always had an interest in design and interior design, but came to the Chippendale school without any prior woodworking skills.

She'll be taking to London a quirky, round drinks cabinet veneered with rosewood. This piece utilised all her design skills and was inspired by the internal mechanism of a clock - incorporating a clever array of oak gears to open, close and lock the cabinet.

After London, Joanna will be returning to the school to take incubation space, and make the transition from furniture design student to woodworking professional.


Jack Jensen

New Designers

www.newdesigners.com

www.chippendaleschool.com


Fergus Hart


Campbell Deeming


Zachary Schnitzer


Joanna Majewska

Oak leaves and acorns

Dennis Zongker carves elliptical oak leaves and acorns for furniture panels

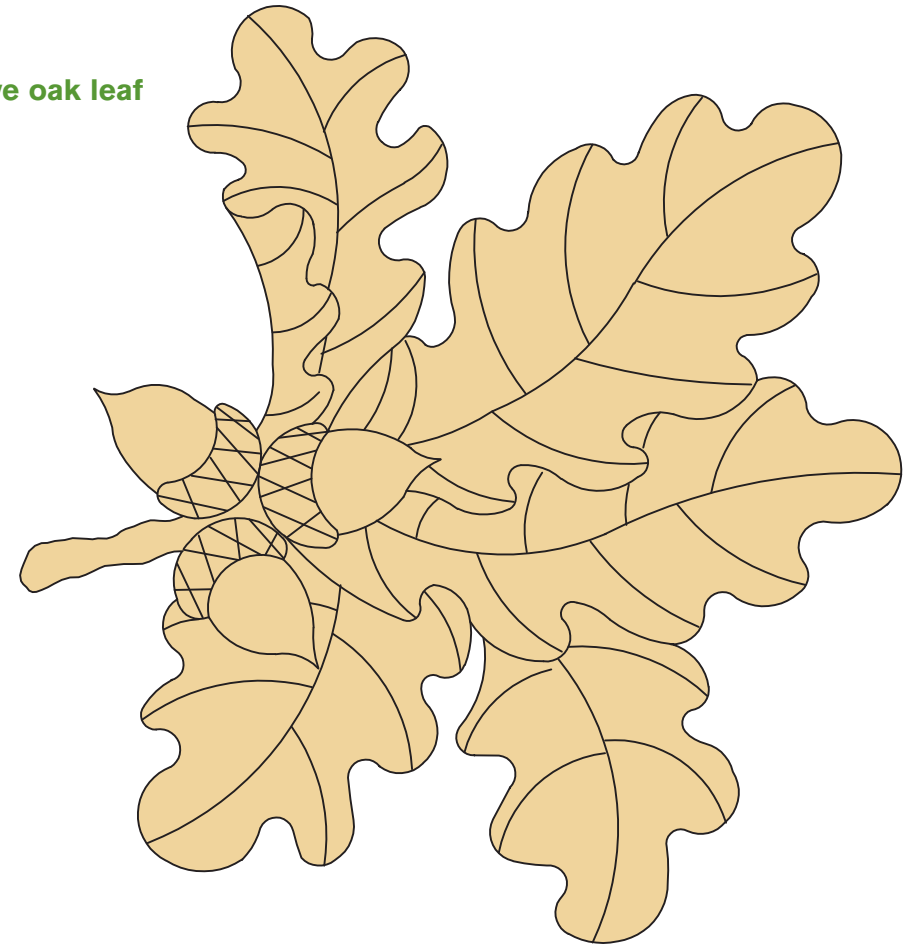
PHOTOGRAPHS BY DENNIS ZONGKER

Woodcarving

This article originally appeared in our sister magazine, *Woodcarving*. For more details about the magazine, including how to subscribe, visit: www.woodworkersinstitute.com/

Many 18th-century furniture makers used a wide variety of hand-carved embellishments to enhance and add visual interest to their pieces. For this French Renaissance style two-sided buffet, designing and carving elliptical centre panels with oak leaves and acorns was a nice and elegant touch. There are two different panel designs; one has five oak leaves with three acorns with one folded wrap leaf, the other panel design has seven oak leaves with only two acorns. To balance the proportion of the buffet the panels were carved in pairs, lefts and rights. The buffet and the eight carved panels are out of genuine mahogany (*Khaya ivorensis*) hardwood. The size of each elliptical carved panel is 25 x 225 x 320mm.

Five oak leaf



Things you will need…

Tools:

Swiss carving gouges:

- No.2, 8mm
- No.2, 5mm
- No.2, 7mm
- No.2, 10mm
- No.2, 20mm
- No.3, 12mm fishtail
- No.3, 16mm fishtail
- No.4, 5mm
- No.4, 8mm
- No.5, 8mm
- No.5, 12mm fishtail
- No.7, 6mm
- No.7, 8mm
- No.8, 3mm
- No.8, 4mm
- No.8, 7mm
- No.8, 18mm
- No.15, 3mm 'V'-tool
- Bandsaw
- Mallet
- Detail riffler files
- Poster board
- 150 grit abrasive

Wood:

- Mahogany

Seven oak leaf

1 To cut out the elliptical panels make a drawing template from poster board, which is thicker than a piece of paper, for the pencil to follow around when transferring the pattern onto the wood. Once it is drawn onto the wood, use a bandsaw to cut out all three panels. Keep the blade to the outside edge of the pencil line.

2 To mark the thickness of the carving measure on the side of the panel 17mm from the face. Then, use your fingers as a guide to draw a line around the entire circumference of the panel with a pencil, this will give you a thickness guide.

3 Next, make two copies of the acorn and leaf template, then use one to draw the outer edge of the leaves and acorns onto the elliptical panel. To draw in the centre section of the template you can either freehand draw, or with the second template cut out around each leaf and acorn and draw around each one individually.

4 The acorns are to be the highest point of the piece so you will need to start carving there. First match up your carving knives to the acorns. Then, stab cut into the wood using a small mallet and lightly tap into the wood approximately 2.4mm.

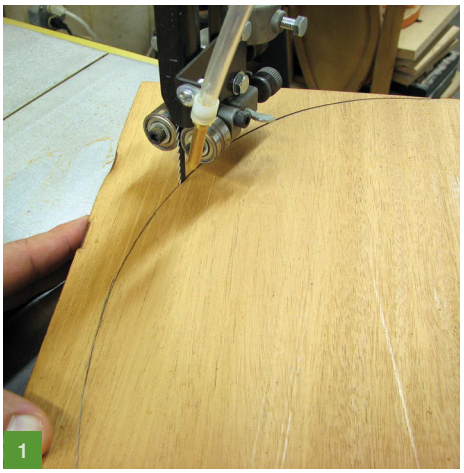
5 Relief cut up to the stab cuts using a No.5, 8mm carving gouge, removing the waste wood. Repeat these two steps until you have carved around the three acorns approximately 9.5mm deep into the panel.

'... match up your carving knives to the acorns'

6 After you have the three acorns carved out, the next step is to shape each one. First stab cut into the separation line between the bottom nut and the top cupule with a No.2, 8mm carving gouge. Now round the bottom nut symmetrical using the same gouge (No.2, 8mm) and gradually shave into the cone shape with the lower tip. To shape the upper cupule, use a No.4, 5mm and No.2, 8mm carving gouge, leaving it slightly thicker than the lower nut section.

7 Now stab cut in the outside edge of all five leaves using an assortment of different carving gouges. Use a mallet with a harder tap to go approximately 3–4mm deep.

8 After you have stab cut around all five leaves, carve up to the stab cuts removing the waste material. Then, repeat steps 7 and 8 until you have reached approximately 17mm deep around the entire carving.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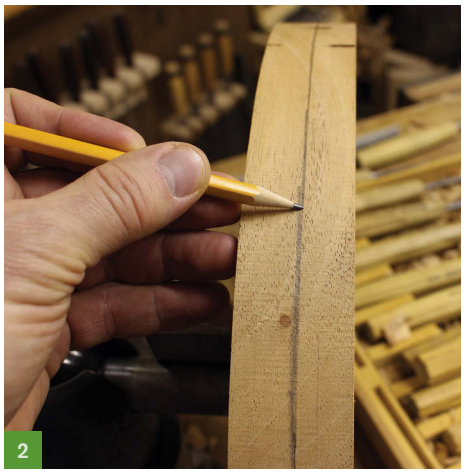
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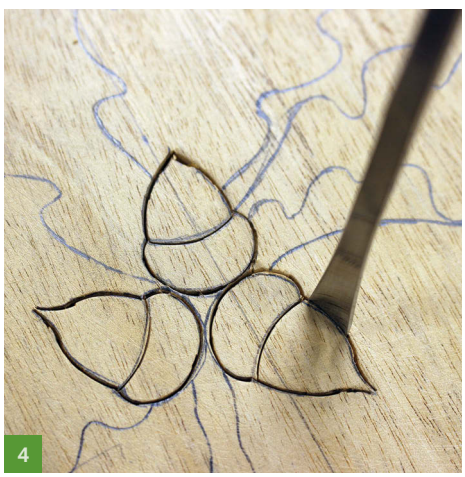
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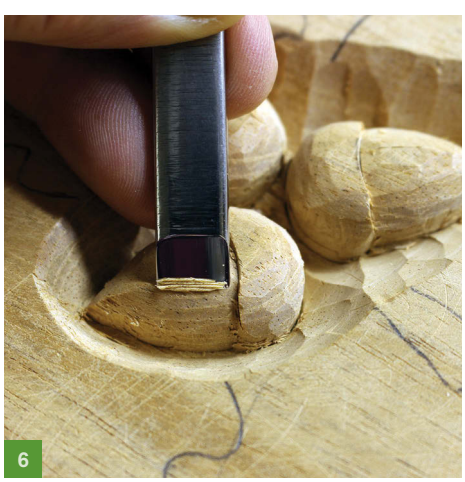
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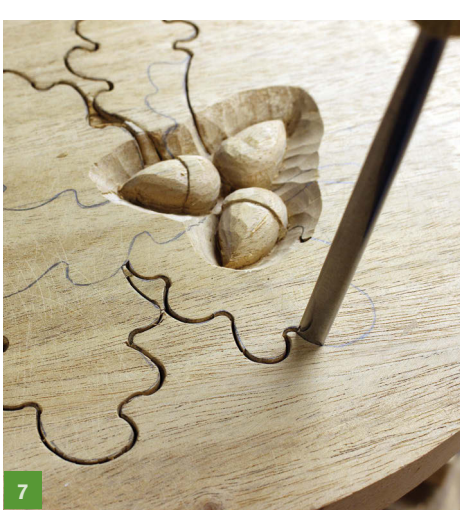
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9 To remove the remainder of the waste material around the panel face use a No.8, 18mm carving gouge cutting against the grain. Note: keep your carving gouge sharp as this will help cut the wood faster. As you get closer to the leaves, tap your mallet softer to prevent hitting the leaves.

10 To get the panel flat use a No.3, 16mm fishtail carving gouge to clean up the gouge marks left behind. For cleaning up around the leaves lightly stab cut around the edges, then come back with your fishtail to remove the remainder of the waste wood.

11 Around the entire elliptical panel there is a 20mm radius, with a No.2, 20mm carving gouge used upside down, start shaping the edges to equal the radius. Be careful not to flatten areas by gouging too deep. When you get close to the final radius take off small shavings at a time to avoid flat spots.

12 As you begin carving the leaves, the largest one is the second highest point of the carving. Work from this one and as you carve your way around, each one will overlap the other. The first step is to stab cut into each leaf then relief cut up to the stab cuts using an assortment of different carving gouges.

13 When carving the leaf with the folded wrap you will need to give it a radius shape on the outside edge. Use a No.3, 12mm fishtail carving gouge to carve on the outside edge, giving it a nice sweep.

14 To shape the inside of the folded leaf, use a No.5, 12mm fishtail gouge and start at the outer edges of the leaf where the leaf will be thicker, then carve deeper as you get closer to the inside fold.

15 The next step is to clean out the inner fold to create shadow and depth to the leaf. Use a No.8, 3mm and No.4, 8mm carving gouges and carve a gradual sweep in the centre of the leaf. Try to undercut the fold as much as you can to create a natural flowing leaf.


14


15

16 Using an assortment of different carving gouges continue to stab cut, to separate the leaves. Then carve each leaf, creating highs and lows. For the side leaf, leave the centre at its highest point and the tip and inner section of the leaf carved deeper. This will give you the shape of a natural flowing leaf.

17 Use an assortment of different gouges to smooth and flatten the faces of the leaves. For example, a No.2, 20mm on the larger leaf works well for cleaning up all the gouge marks.

18 Now, use an assortment of different gouges to clean up the edges and slightly undercut around all of the leaves.

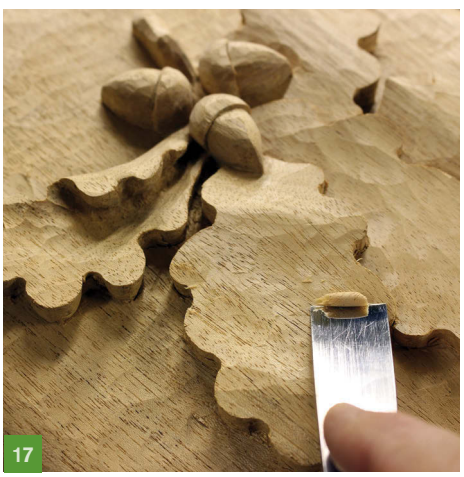
19 Next, use a No.2, 5mm, a No.2, 7mm and a No.2, 10mm carving gouge to clean up the bottom edges around the leaves flat to the panel.

20 After you have the carving panel all cleaned up use a pencil and draw on the tops of the leaves the high points. The pencil lines should be similar to an elongated triangle. These will be used as a guide when carving the concave part of each leaf.

21 To carve out the concave sections of the leaves use a No.7, 6mm and 12mm carving gouges. Try to achieve a nice even clean sweep by carving deep at the ends and shallower towards the middle of each leaf.

22 To radius and blend the high points of the leaves use a No.2, 5mm carving gouge upside down to shave off just enough to give a nice even convex sweep. Be creative because you want the leaves to have a natural looking flow.


16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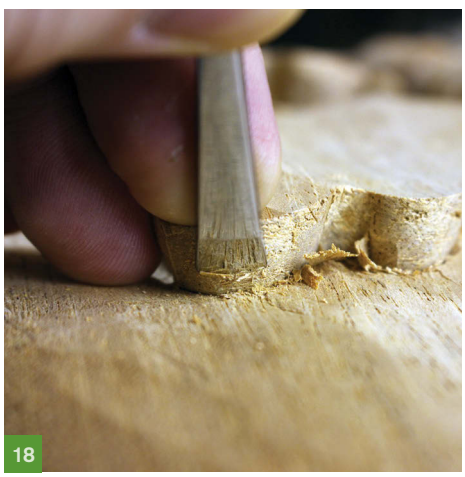
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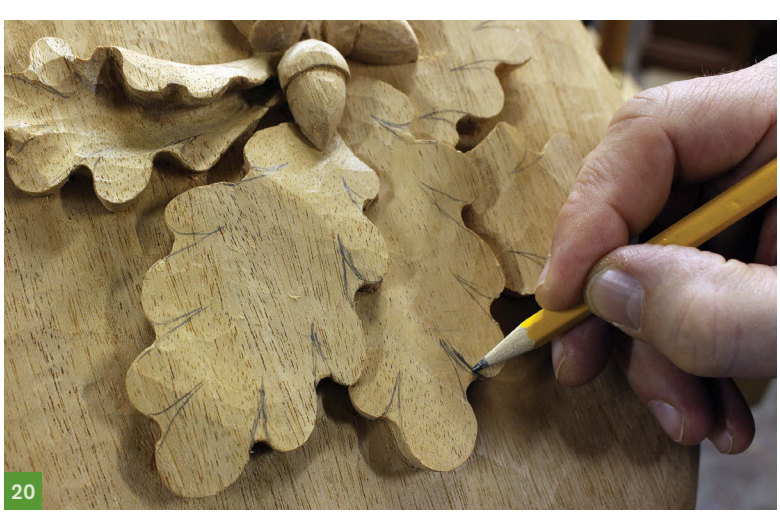
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23 Next, with a pencil lightly draw in the veins of the leaves by following the centre of each concave section. It is important not to have straight lines. Leaving a slight sweep brings life to each leaf. For the acorn top cupule, draw approximately 4–5 lines in two different directions crossing over each other.

24 Now using a No.15, 3mm 'V'-tool carving gouge, follow the pencil lines starting with the long main centre vein, then finish up with the side veins.

25 When carving in the veins for the cupule try not to go too deep. Carve lightly to prevent any tear-outs or chips.

26 To smooth the leaves' veins and edges, I use an assortment of different riffler files. This small round file works excellently on small and hard to get to areas of your carving. Lightly sand all the leaves' edges with 150 grit abrasive. Be careful not to sand too much because it can take away the detail.

27 To get the flat background section of the panel smooth use a flat corner file close up to the leaves' edges and a larger wood file to get the outer face and outside radius smooth.

28 After all the filing and sanding is done look for any place that needs more attention, then move on to the next one. F&C

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Spokeshaves:
planing without a straight face

John Adamson traces the origins of a tool that's found a use in every trade

PHOTOGRAPH BY HELIOSCRIBE/SHUTTERSTOCK

When, in 1915, the writer and Poet Laureate John Masefield was serving as a British Red Cross orderly in the Haute-Marne, he found himself making wooden crutches for the French wounded. 'There is no lathe here,' he wrote to his wife, 'so we have to do it nearly all by hand. We get blocks of beech wood for the rests and long foursquare pieces of acacia for the handles, & then with a spokeshave, rasps & files we cut the blocks to shape & round out the handles.'

We cannot tell from his description whether Masefield and his fellow volunteer Bobby Phillimore were using a spokeshave in wood or metal (by World War I, both were widely available); all we can say is that they were using the tool for shaping and rounding so as to end up with serviceable crutch handles, with as comfortable a grip as they could make them. The crutches certainly served their purpose well, for the men, wrote Masefield, 'go hopping along on them, & calling them voitures de bras'.

The earliest known surviving wooden spokeshaves are two boxwood (*Buxus sempervirens*) examples found in the chest of tools bought by Joseph Seaton in 1796 for his 21-year-old son Benjamin and now in the Guildhall Museum in Rochester. Both spokeshaves have blades with the stamp of P. Law, almost certainly Philip Law, the Sheffield edge-tool maker. Although without maker's mark, the wooden shaves themselves are in all likelihood commercial products too. These were rudimentary tools, but heralded the ever more graceful versions of the following century with their elliptical cross-section ends forming the handles, the undersides cut away, giving the tools their winged appearance. In all these early wooden models, the iron is mounted lengthwise and held fast by friction. Two tapered square tangs at right angles to the cutting edge on the iron are driven into tapering holes in the shaped stock, most commonly of beech (*Betula pendula*) or boxwood. Fine adjustment is hard to achieve, for the thickness of the shaving is crudely determined by tapping the iron with a hammer to set the blade deeper than the body.

View of the undersides of three boxwood spokeshaves and the back of one

PHOTOGRAPHS BY JAMES AUSTIN, COURTESY OF DAVID R. RUSSELL

With their tangs protruding, these English boxwood spokeshaves, ranging in size from 11¾in to 8$^{15}/_{16}$in, seem almost like long-eared owls in flight. Top photo, from top to bottom: by David Flather & Sons, Solly Works, Sheffield; by unknown maker with dealer's mark of George Musgrave of Lincoln and decoration in Indian ink; by David Flather & Sons; and by John Jacob Holtzapffel, London. The Holtzapffel spokeshave is stamped I. Holtzapffel (see above), presumably for John Jacob Holtzapffel when he was trading under the name of John between 1794 and 1804, setting this among the earliest spokeshaves known to have survived

PHOTOGRAPHS BY JAMES AUSTIN, COURTESY OF DAVID R. RUSSELL

Underside of the Flather spokeshave, showing how the cutter is held in place by its two tangs

PHOTOGRAPH BY JOHN JAMES, COURTESY OF DAVID STANLEY AUCTIONS

This 11in adjustable boxwood spokeshave was made by William Marples & Sons of Sheffield and is dated 1918

Improving accuracy

With the introduction of thumb screws the thickness of the shaving could be more finely tuned. Now the plane iron had two tapped holes and the metal screws in the stock could then adjust the iron. There were other refinements. Some flat-fronted spokeshaves were 'plated', in other words fitted with wear strips in brass or ivory. Spokeshaves of different patterns were made for various trades by makers such as William Marples & Sons of Sheffield: radius shaves and travishers for concave work in chair-making; bent shaves for coopers, as well as shaves for coach-makers and for many other purposes. Moulding pattern shaves were also devised, for instance for sashes or for curved or wreathed handrails.

Spokeshaves in cast metal were a late 19th-century innovation and with the introduction of a sole plate brought better cutting action and shaving precision. Although now in metal, the outline of the tool often retained its bird-on-the-wing aspect. Edward Preston & Sons in Birmingham created several patterns, some of which have been the inspiration behind designs of today, like the Lie-Nielsen small bronze spokeshave or the Lee Valley cast round spokeshave. On some Preston models a screw or thumb screw in the lever cap locked the iron, on others a fine vertical adjustment mechanism was provided operated by a thumb screw, and in some instances a lateral wing adjuster was also provided. Others came with fences for chamfering. Across the Atlantic, Stanley and other makers also began making an array of metal-bodied spokeshaves, both non-adjustable and adjustable.

PHOTOGRAPH COURTESY OF LIE-NIELSEN TOOLWORKS

Small bronze spokeshave from Lie-Nielsen

PHOTOGRAPH COURTESY OF LEE VALLEY FINE WOODWORKING TOOLS

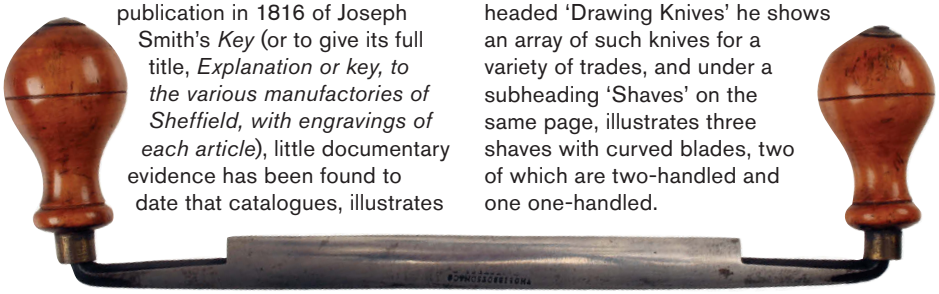
Lee Valley's homage (bottom) to the Edward Preston & Sons cast-metal spokeshave (top)

A 'playne' by any other name

Spokeshaves have a long history for sure, but it is not known quite how long. Perhaps the earliest mention of the word is in a legal document of 1454 in which a 'spoke shave' and a 'two-hand shave' are listed in an inventory of the London wheeler Richard Crips. But there is little more than a clue here as to what either of these tools looked like. The 'two-hand shave' certainly matches the description of a simple draw or drawing knife, a blade with a handle set at right angles at each end. Separate mention of the term spokeshave does suggest that this was a tool somehow to be distinguished from the generic term 'shave'.

This early appearance of the term 'spokeshave' predates by more than 50 years the next known reference, which is in John Stanbridge's *Vocabula*, a compendium published in 1510 of words from the various trades given in Latin with their English translation. 'Spokeshave' or 'playne' is given as the translation of the Latin *radula*, rather than 'scraping-iron' or 'scraper' as the word would be translated today, but tantalisingly there is no gloss given in the book for this, so we cannot be sure that it is indeed the later paring tool bearing the name spokeshave with which we are familiar. The eminent woodworking-tool historian William Goodman suggested that the compiler of *Vocabula* might have thought the Latin term radula was reminiscent of 'radius' in the sense of the spokes of a wheel radiating from the hub and that this gave rise to the use of the word 'spoke' to designate a specific type of scraper or plane. This seems an intriguing idea, though perhaps a little far-fetched. The great Sheffield collector Ken Hawley has pointed out that the word 'spoke' had a wider meaning than one of the bars of a carriage wheel: apparently it was used by early coopers to denote a wooden stave; it was also employed by the shoe-last maker to refer to the block of wood from which a last was shaped. These origins for the term seem more plausible, though by no means certain either.

Between the *Vocabula* of 1510 and the publication in 1816 of Joseph Smith's *Key* (or to give its full title, *Explanation or key, to the various manufactories of Sheffield, with engravings of each article*), little documentary evidence has been found to date that catalogues, illustrates or even alludes to the spokeshave. There are references in Randle Holme's *Academy of Armoury* (1688), one of them under cooper's instruments; and the stock inventories of the tool-maker Christopher Gabriel from 1791 and 1800 feature spokeshaves in bulk, yet neither Joseph Moxon in his *Mechanick Exercises*, nor Félibien in his *Principes de l'architecture*, nor even Diderot and d'Alembert in their *Encyclopédie*, make any mention of the tool. The word 'wastringue' used today by the French to denote a spokeshave seems to have been first recorded only in the 19th century, its etymology uncertain. Interestingly, Joseph Smith reproduces in his *Key* an engraving of a spokeshave and iron (shown separately) on a page of cooper's tools. On another page headed 'Drawing Knives' he shows an array of such knives for a variety of trades, and under a subheading 'Shaves' on the same page, illustrates three shaves with curved blades, two of which are two-handled and one one-handled.



A handsome 6in drawknife by Thomas Ibbotson & Co., Sheffield, with boxwood handles

PHOTOGRAPH BY JOHN JAMES. COURTESY OF DAVID STANLEY AUCTIONS

Wheelwrights and cabinetmakers

We are thus brought to admit that our knowledge about the spokeshave's origins and early use is still wanting. What we can surmise, nevertheless, is that the spokeshave probably grew out of the drawing knife and provided a more precise tool for finishing contour work. Such a tool would have been welcomed by furniture makers like Thomas Chippendale and Thomas Sheraton, especially for the inside and outside curves of cabriole chair legs, but we do not yet have any documentary evidence to confirm that.

It could simply be that what began as a specialised tool of the wheelwright became more generalised among other trades. Whether or not the spokeshave first developed within the wheelwright's trade, it was certainly used by wheelers. In his book *The Wheelwright's Shop* (1923), George Sturt meticulously chronicled his time working in his family's wheelwright business in Surrey in the years around the turn of the 20th century. He described the wheelwright's draw-shave (or drawing knife) as a 'stiff blade seven or eight inches long . . . fitted with a handle at each end for drawing towards you.' When it came to the spokeshave, this was a 'finishing tool for smoothing away any edges left by the draw-shave, after a timber has been sufficiently reduced in size'. This tool, Sturt wrote, 'was characteristically useful in curved places like the front of spokes, where a smoothing-plane could not be used'.

By the middle of the 19th century, the spokeshave was well and truly established as a general tool. Charles Holtzapffel, in the second volume of his influential treatise *Turning and Mechanical Manipulation* published in 1846, spelt out some of the tool's merits: 'it cuts the most easily of all the planes,' he declared, 'and it closely assimilates to the penknife'. He went on to say: 'The spokeshave works very easily in the direction of the grain, but it is only applicable to small and rounded surfaces and cannot be extended to suit large flat superficies.'

When the American writer Nathaniel Hawthorne was US consul in Liverpool he encouraged his young son Julian to learn woodwork from a Southport carpenter. This the boy did, and as his 'masterpiece' he proudly made a model of a one-masted ship. 'Mr Chubbock,' he recorded in his reminiscences, 'accordingly, gave me thorough lessons in the mysteries of the plane, the spokeshave, the gouge, and the chisel, and finally presented me with a block of white pine eighteen inches long and nine wide, and I set to work on my sloop.'

Tips for collecting spokeshaves

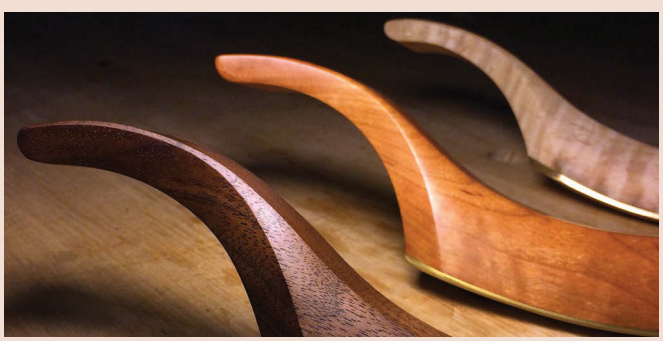
1. Wooden spokeshaves were handmade, so each is slightly different. Make sure that the iron is the one specifically made for the tool and is not a replacement that will never fit so well.
2. Wooden spokeshaves without thumb screws are hard to adjust, they rely on tapping the iron to the required position.
3. Late 19th- and early 20th-century metal-bodied spokeshaves are still in copious supply and thus not expensive.
4. The angle of the cutter cannot be adjusted. On early wooden spokeshaves it is low and the bevel is facing up.
5. Not to be confused either with two-handled cabinet scrapers or with two-handled routers.
6. Preston cast planes were nickel-plated; there is often loss of the plating.
7. More work in archives may yield further information about how the spokeshave has been used over the centuries.
8. A selection of spokeshaves may be seen at the Hawley Collection at Kelham Island Museum, Sheffield. **www.hawleytoolcollection.com**

Contemporary collectables

While there are plenty of antique spokeshaves to be found that are quite serviceable there are also a healthy number of contemporary makers producing new versions of these tools. Here's a selection from three makers with some fascinating interpretations of the classic form.

PHOTOGRAPHS COURTESY OF CALEB JAMES

Caleb James, based in Greenville, South Carolina, USA, produces small batch runs of traditional spokeshaves and moulding planes in a variety of timbers. **www.calebjamesmaker.com**

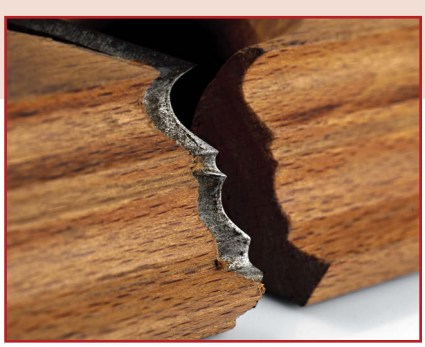


PHOTOGRAPHS COURTESY OF CLAIRE MINIHAN

Claire Minihan operates from her shop in Ashville, North Carolina, USA. She produces this unique style of travisher from locally sourced timber such as cherry (*Prunus serotina*), maple (*Acer* spp.) and walnut (*Juglans nigra*) plus a small selection of exotics including ebony and lignum. **cminihanwoodworking@gmail.com**

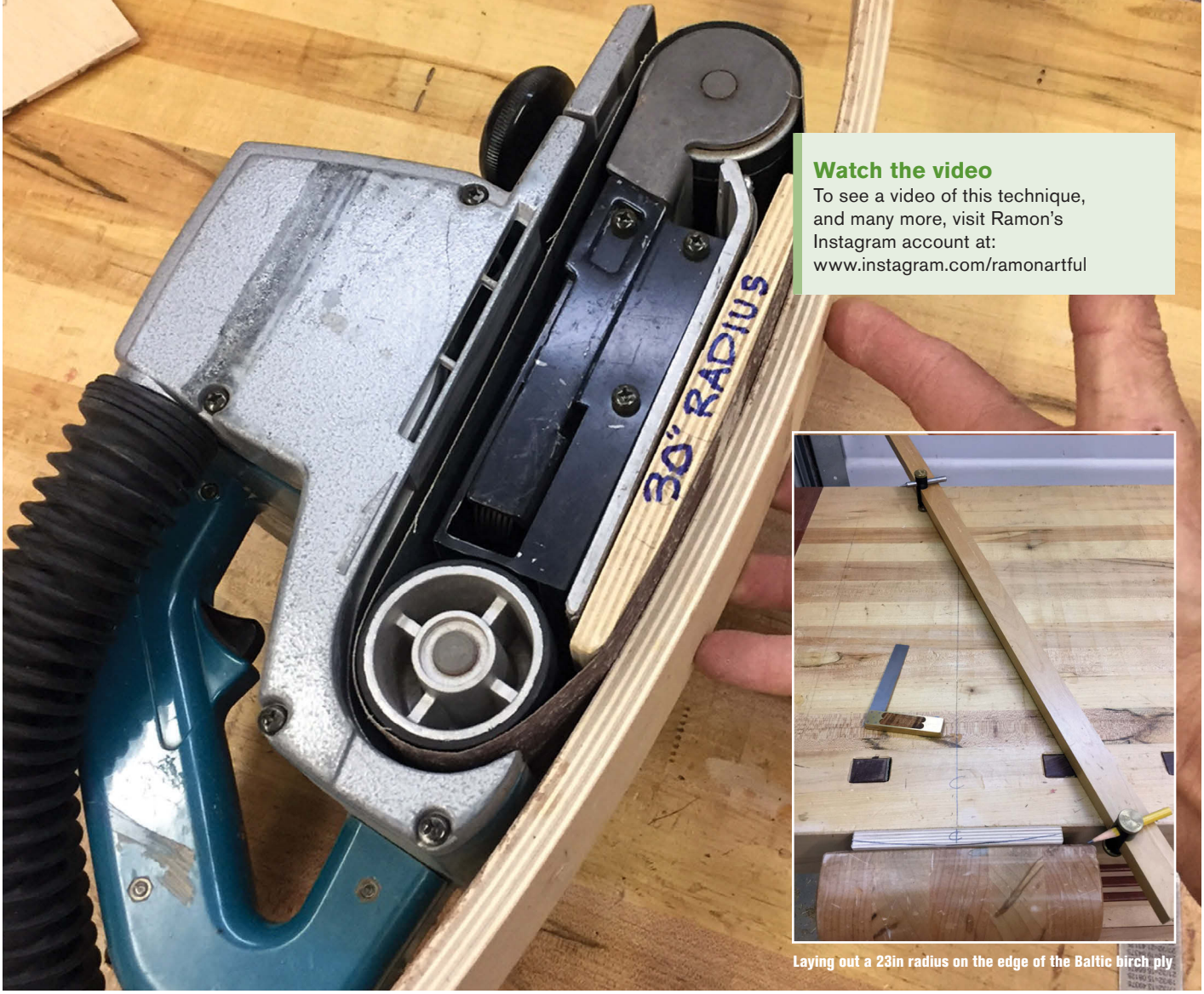
PHOTOGRAPHS COURTESY OF THE WINDSOR WORKSHOP

James Mursell is the master craftsman behind The Windsor Workshop in the rural heart of West Sussex. As well as teaching classes in making various styles of Windsor chair he also produces a range of specialist tools used to build them. **www.thewindsorworkshop.co.uk**



Next month

Next month John will be talking to Richard Arnold about the world of 18th-century plane-makers



Watch the video
To see a video of this technique, and many more, visit Ramon's Instagram account at: www.instagram.com/ramonartful

Laying out a 23in radius on the edge of the Baltic birch ply

Tricks of the trade. . . . . .belt sander platens

Ramon Valdez upgrades his belt sander to tackle concave curves with ease and precision

Sanding inside curves can be tricky to get smooth and accurate. I love the versatility of a 4 x 24in belt sander and for years now, I've been making curved platens with great results. I've made them with a radius as small as 16in and as large as 201in. I like using Baltic birch plywood because solid wood tends to warp, especially when the friction generated creates a bit of heat.

This latest version was made to correspond with the inside or front face of a set of chair backs that featured some decorative marquetry panels. The formers that were used to make the chair backs were a perfect consistent arc so it was easy to calculate the radius for this platen.

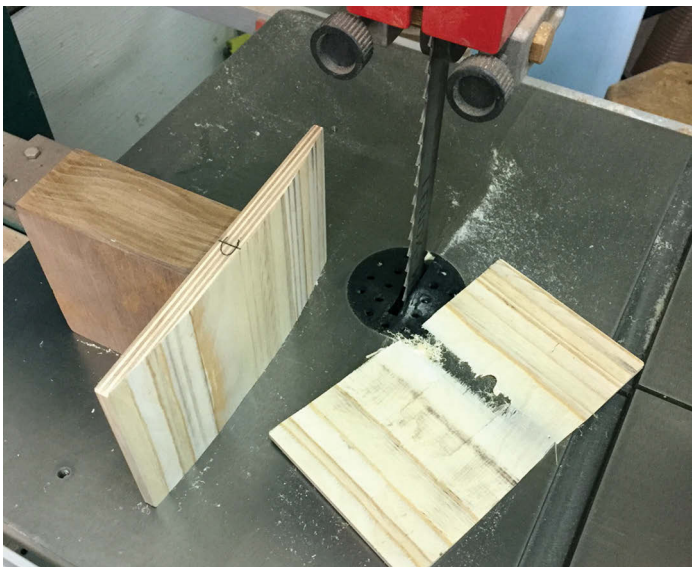
PHOTOGRAPHS BY RAMON VALDEZ

Making curved platens

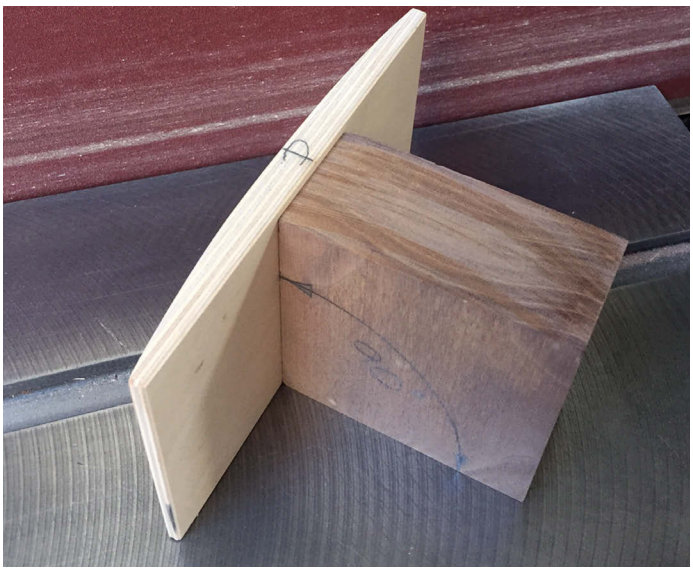
I start with a block that's 4 x 6¾in, clamped in my vice so I can draw a radius. A set of trammel points can be used to mark curves greater than your compass or dividers. Avoid making the blocks too thick or you may find your belts won't fit over the platen when it's fixed to the machine.

After cutting close to the line on the bandsaw, I smooth things up at my edge sander making sure to keep the curved face square across the width and free from any raised or flat points. I use steel banding to make the small bracket necessary to hold the platens in place. It's easy to drill and cut with regular snips or shears

Use tiny dots of glue to attach a small, dead-on square block, temporarily to the Baltic birch

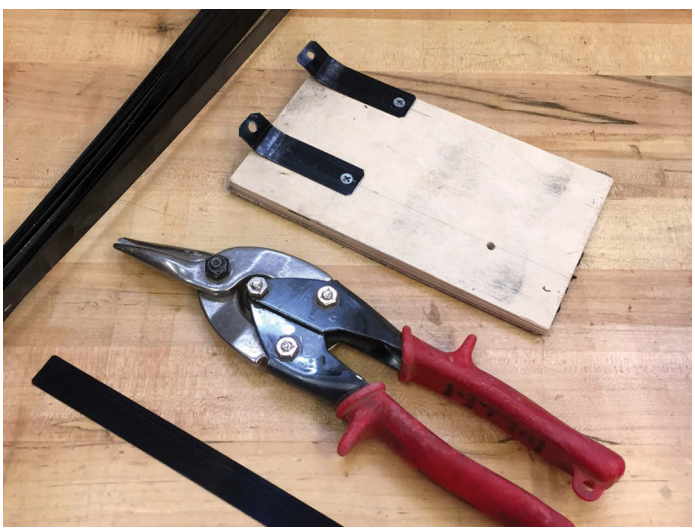


Making the cut at the bandsaw. The glued-on block provides safety and accuracy to keep things square and true



Smoothing things over on the edge sander

Stay accurate by using a square, and carefully do your layout marks for locating and drilling the holes in the platen. Attach the steel banding brackets to the plywood with small wood screws. Before attaching the platen to your machine you may have to remove any other material from the base plate such as the graphite strip and retain the original machine screws to attach the assembly to your belt sander. The factory-fitted graphite sheet performs an important task by reducing friction on the inside face of the belt and therefore wear. If you anticipate your platen will come in for a lot of use it's worth sourcing a self-adhesive graphite strip to fix to the face of the platen. You may find you need to factor the increase in thickness to your original radius setting. F&C



Ordinary metal banding works fantastically well. Attach to the platen with wood screws

Choose a couple of locations to mount the shop-made brackets

Then attach the assembly to the belt sander with the original factory machine screws

My growing collection of platens

Stack marking – part 3

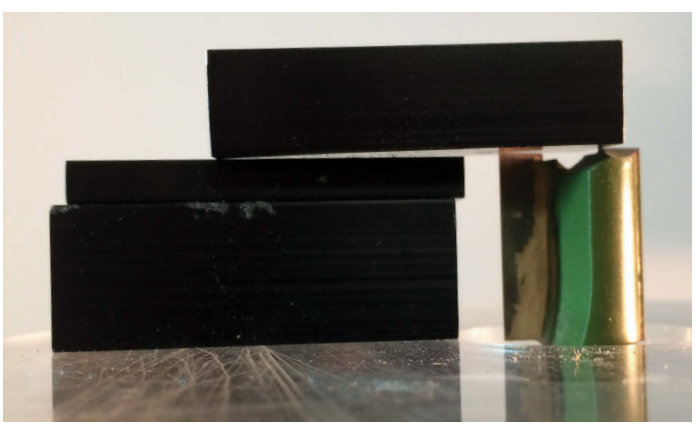
Robert Paul Gurney continues his series on marking and measuring with a technique designed to get the best results possible from your router

Following on from my articles in *F&C* 254 and 257, I am going to discuss using the stack system in combination with the router. This is one of the most powerful joinery tools in the modern workshop; the router is fast and accurate.

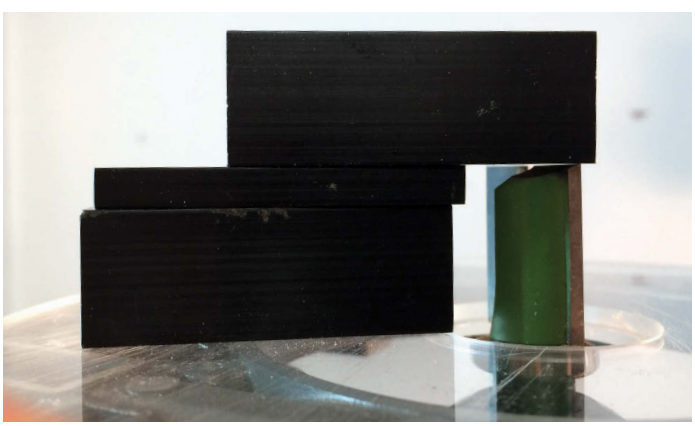
Setting cutter depth

There are many jigs available (both store bought and homemade) but nothing could be simpler than using set-up blocks in a stack to set the depth of your router cut.

With the router upside down, place the desired stack next to the exposed router bit. Use a spare set-up block that bridges across the stack and the exposed router bit. Adjust the cutter until you can't see any light under the spare set-up block and the stack.



Setting the depth of cut



The depth of cut is now set

PHOTOGRAPHS BY ROBERT PAUL GURNEY

Setting the perpendicular fence

Housing joints of some sort or another are chief among the routing repertoire. Cut them accurately and place them well and the dreaded glue-up will be a less stressful event.

There are many elaborate jigs you can make for making cuts square to an edge, but you don't need anything more than a straight piece of MDF with a square fence (photo 1). The straightedge should extend past the fence by half the router base plus another 50mm or so for a clamping surface. If you have a workpiece that is wider than your right-angle template then you can use a longer straightedge against the template.

With all router right-angle templates where the router base rides against a straightedge, you need to accurately measure the distance from the edge of the router bit to the edge of your router base. Not all router bases are concentric, so it is wise to pick a consistent point on the base that you measure against.

To get a precise distance from your router bit to the edge of the router base you need a test cut. On a piece of scrap, make a test cut and use your dial calliper to measure this distance (photo 2). You won't have to do this every time because you can write the dimension down and use it next time you use the cutter. I use that dimension on subsequent cuts but re-confirm it each time I do another project.

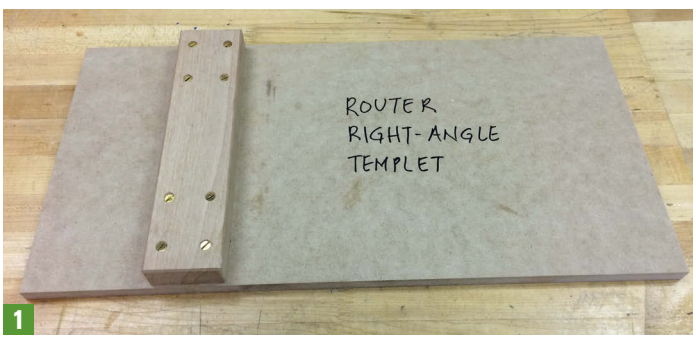
There are two dimensions you will need: the width of the cutter (photo 3) and the dimension to one marked point on the router base (photo 4). I write these numbers down (usually on the router's storage box).

When you have located your shoulder line with the stack, you can temporarily mark it with the saddle square. From this point, with your dial calliper set, you can offset the template from the saddle square. This gives you the first position for the right-angle template.

If the joint needs to be wider than the cutter, you will need to adjust the right-angle template again. The adjustment will be the difference between your cutter and the intended dimension.

To make the adjustment, clamp a saddle square against the back of the right-angle template, unclamp the right-angle template, place a stack of the intended dimension against the saddle square and clamp the right-angle template in the new position. against the stack.

If a cut is too close to the end of a workpiece to use the right-angle template, use the router fence instead. I will discuss this in more detail later.

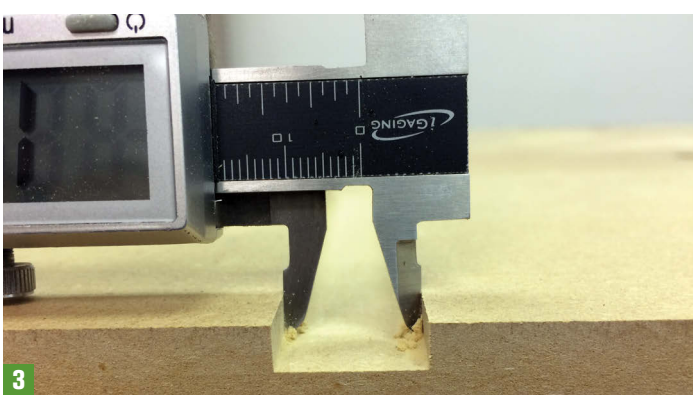


1

The right-angle template

2

Measuring the distance to the test cut


3

Determine the exact cutter width by measuring the width of the cut


4

The indexing point is marked on the edge of the router base


5

First position for the right-angle template

6

Adjusting the position of the template for width of cut

Setting stops

Setting the stops is much the same as setting the right-angle template. I use two simple aids, as shown in the photo below. They are made of a piece of MDF that has two parallel edges and one edge perpendicular to them. A clamping bar fastened to them is all that it needs.

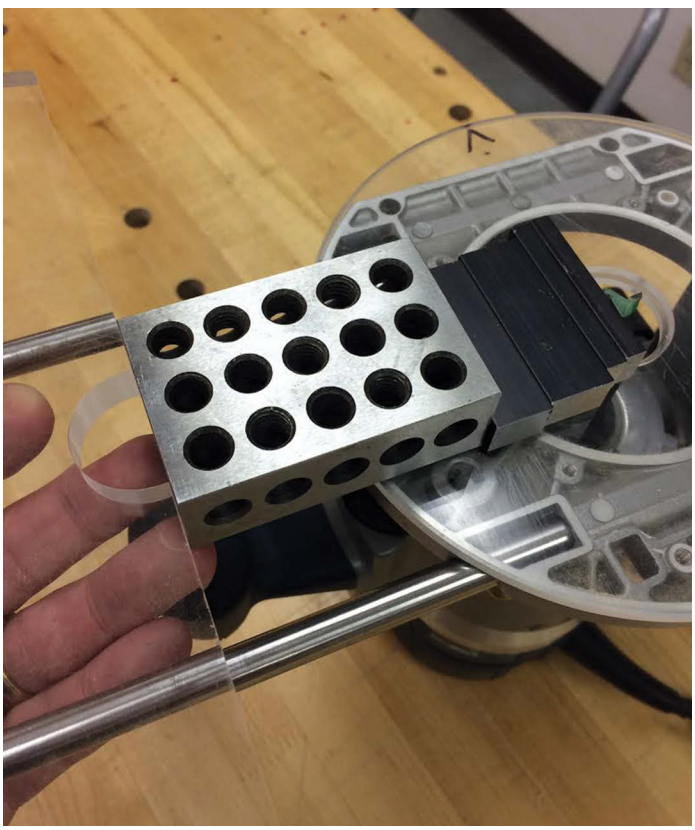
Cutting parallel to an edge

Two measurements are needed to set the fence on your router for parallel cuts. The first measurement is from the edge of the workpiece to the nearest edge of your cut. The second measurement is the one for the far side of the cut which is calculated by subtracting the intended width of the groove from the width of the cutter.

Place the stack between the fence and the cutter and rotate the bit clockwise until it pushes the stack out to its most concentric position (see diagram A). When you get the right position the block moves a fraction. This is the point where you tighten down the fence. If the fence sits outside the router base, the stack may be prone to tipping. You can simply hold your hand or a piece of scrap under the fence. For the far side cut, you use the same techniques but add in the difference between the cutter and the intended cut width.

Pat Warner has an excellent website (patwarner.com) that has a lot of information on routing and also a router fence that has two fences which allow you to place a spacer between the two fences to adjust the cut width.

Simple stops



Adjusting the fence with the stack outside the router base. A clear piece of perspex is used to support the spacer blocks

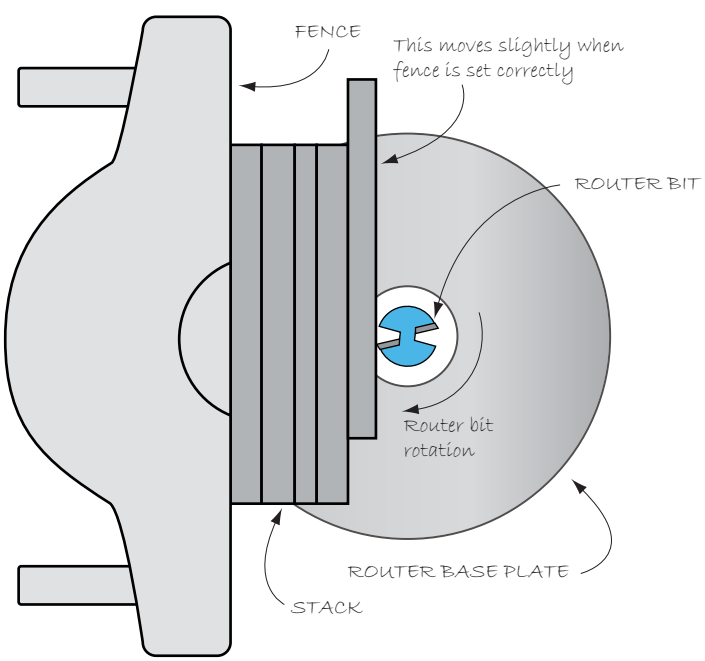


Diagram A. The block has moved so the setting is correct

Router table: rabbets

Going directly from a test cut to a final pass is the key to cutting rebates on the router table. There are two types of fences used on the router table: one is a pivoting fence and the other is a sliding fence. They both can be set the same way with the stack.

You will need some kind of reference piece – I use MDF with a very straight edge. Lay this piece on your router table against the bit with your desired stack between it and the fence. Approximate the position of the fence then rotate the bit backwards until the reference board no longer moves. (diagram B). You can now lock the fence in position.

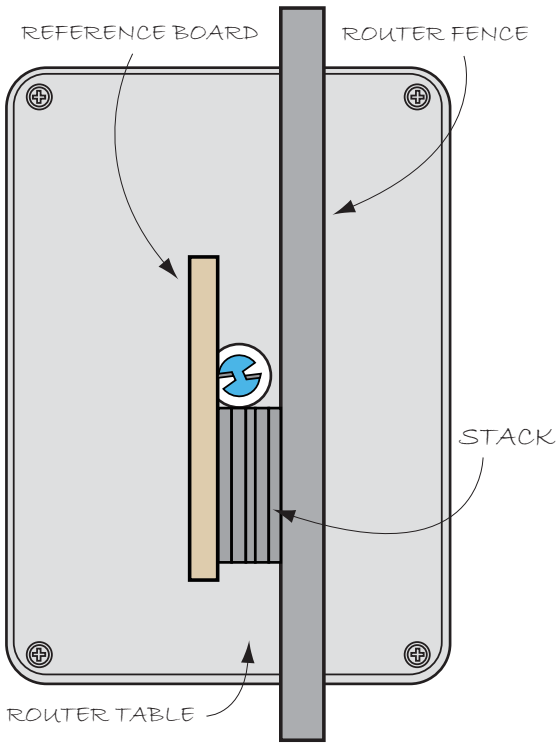


Diagram B
Adjust the fence to complete the rabbet

Sliding dovetails

Sliding dovetails are typically cut by matching the male part to a previously cut female housing cut. This means holding the male part upright against a router fence and making successive adjustments and cuts until you have a well-fitted and centred tail. The trouble with this is that you haven't been able to precisely locate the divider or shelf. It has to be based on an imaginary centreline. It also involves a lot of trial-and-error cuts until the joint fits.

Contrary to the traditional way of cutting this joint, I find it better to cut the tail part first. This allows me to make my adjustments to the groove using the stack.

You will need two dimensions (see diagram C), which you will get from a test cut just as you did with the housing joint. These dimensions vary with every different depth setting of the router bit so they will have to be done each time.

You can set the position of the mating piece by adding dimension 'a' into the stack. Dimension 'b' is used to adjust the right-angle template to get an accurate groove width. For all these measurements, the dial caliper is best. I find this method a little easier and more accurate than the traditional method.

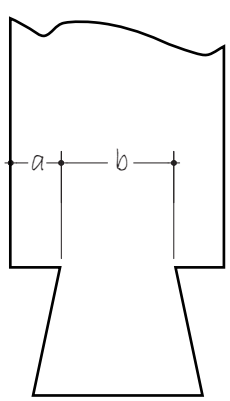


Diagram C.
The dimensions needed for the sliding dovetail

Joinery planes

If the brutality of the router is not what you want or require, you can use a stack to gain the same results. By measuring from your plane fence to the edge of the cutter, you can set your cuts very accurately.

Using the calliper/stack for setting hand tools

Joinery

The stack is designed to gain precision to 1/100mm but all joinery needs a lag: room for friction, swelling and glue. However, this does not need to lead to guesswork and sloppiness. By placing shims in the stack you can get exact locations. I use 1/2000in shims to allow for this lag. F&C

A shim is used to adjust for glue

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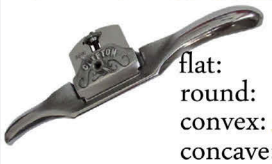

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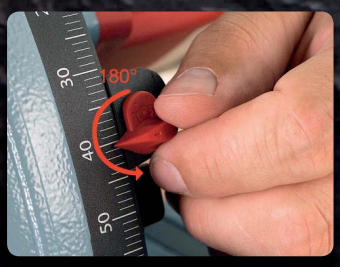

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PHOTOGRAPHS BY DAVID WAITE

A thirst for knowledge

David Waite reflects on the importance of acquiring good technique from the outset

Life in the furniture school settled into a steady rhythm as we moved through our first term. Our confidence was increasing after a couple of months working at the bench on carefully selected projects, all the time improving our hand skills. While you can't underestimate the importance of practice and repetition of these core skills, time at the furniture school is also precious, motivation is high and it's clear that all of the students have a real thirst to learn and acquire as many new skills as possible.

One way the school satisfies this thirst for knowledge is to hold a 'technical day' every couple of weeks. These days provide an opportunity to step away from the school's set exercises and dedicate time to learning new techniques under the expert guidance of our tutor Graham Loveridge. A wide range of topics are covered throughout the year, and a clear highlight for many was when we took our first steps in the fields of veneering, marquetry and finishing.

Veneering and inlay techniques

We first covered the basics of veneering by preparing a simple lipped panel covered in book matched veneers of our choice. This exercise introduced us to the technique of 'shooting' the edges of our selected veneers using our bench planes and the workshop's enormous veneer shooting board. We also attempted a different technique utilising a router and bearing guided cutter against a simple straight edge. We then used veneer tape to butt joint the prepared veneers together and glue-up techniques using both cramps and alternatively the bag press.

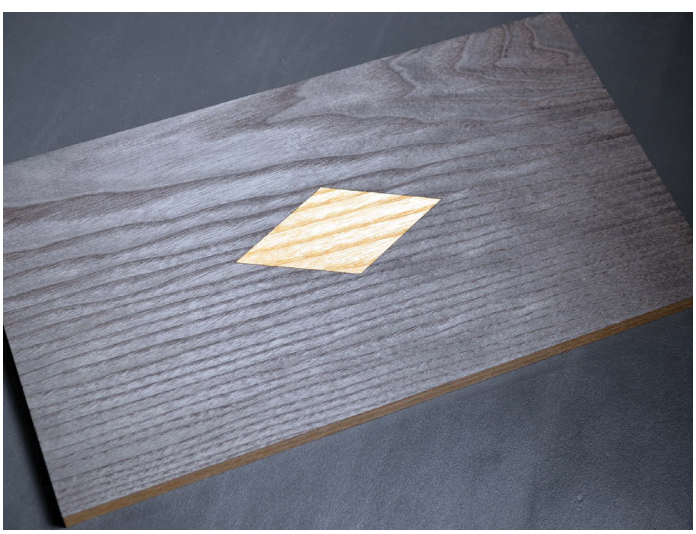
We then moved onto marquetry and inlay techniques. Our first task was to prepare a simple inlay using 'the window pane cutting technique' where a shaped window is created in one veneer and this is then over-laid on a second veneer, the exact shape cut and then fitted into the window. I chose a simple diamond inlay of natural ash (*Fraxinus excelsior*) into a dyed grey ash veneer, carefully matching the grain pattern to achieve a pleasing result. A sharp scalpel blade, steady hand and a lot of patience were key to success.

We were then challenged to design and make a sample marquetry board. Our inspiration came from nature, and our research led us to explore the work of leading exponents of the craft including Toby Winteringham and Violeta Galan, the latter interestingly using straw rather than wood veneers, a technique first practised in the Far East and introduced to England in the 17th century.

I settled on a design using a symmetrical repeating pattern of overlapping curves in rosewood (*Dalbergia* spp.), cherry (*Prunus avium*) and sycamore (*Acer pseudoplatanus*). Using the same window pane cutting technique, the background in ripple sycamore veneer was first cut and then the contrasting curves in cherry and rosewood. The pieces were then carefully joined using veneer tape and glue and the whole panel stuck to an MDF board that had already had a sycamore veneer stuck to its back side. After 24 hours in the bag press, the veneer tape was peeled off carefully and the panel scraped and sanded clean. A simple rosewood lipping completed the panel ready for finishing.

The school's veneer shooting board

Panel covered in book matched veneers



Diamond inlay panel in dyed and natural ash

Finishing school

Following our exploration of veneering, we moved on to surface finishing. The first technique we covered, and the most common one used in the school, was a rubbed Danish oil finish. The first coat is applied liberally with a rag and allowed to soak in for several minutes before being buffed off with clean rags until dry and left overnight. Further very light coats of oil are then applied on a daily basis with a rag and buffed off almost immediately to ensure no sticky residues build up. After three or four coats a beautiful deep lustrous shine develops which can either be left as is or cut back to a satin finish and a wax paste applied.

Another highlight of our finishing studies was Graham's masterclass on French polishing. To the uninitiated, this topic may appear to be a 'dark art' only attainable to the most skilled of practitioners. While it undoubtedly takes years of experience to truly master all aspects of this skill, it is quite possible to learn how to French polish a well prepared flat surface relatively quickly. Under Graham's careful supervision, we learned how to make up fresh polish from crushed shellac flakes and shellac thinners. We then learned how to make a polishing rubber wand how to load and use it with the help of a drop or two of baby oil to help lubricate the surface between layers of shellac. I opted to French polish my marquetry panel and after several days I was able to build up a beautiful polished surface to complete the sample.

Inevitably our technical days can only ever really be a brief introduction to a new skill or technique. That said, being taught the right way of doing something from the outset is invaluable and ensures the long hours of patient practice that lie ahead are worthwhile. F&C

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

MINI TEST
Moxon Vice Spindle Set

The twin screw vice or Moxon as we are more accustomed to calling them now, are enjoying something of a renaissance among woodworkers. No doubt motivated by this, a small number of manufacturers have taken to producing everything from kits to build-your-own versions to fully functioning out-of-the box solutions made from wood or metal components. The basic working principles are pretty much the same whichever material you choose, with perhaps the only distinction between the two being your preference for either waxing or oiling the moving parts as and when it's required.

The physics of a twin screw vice featuring metal threads means they are engineered over and above the requirements of a typical woodworking 'shop. For some reason wooden parts induce a different mindset and pace of work that some users find irritating at first.

This month I came into contact with the Moxon Vice Spindle Set from Dictum while teaching a class to build Moxons at their workshop in Munich. The kit comprises two 19.8mm dia x 240mm long steel spindles with trapezoidal threads, a pair of cast-iron wheel handles and two bronze washers. The threads include a flanged T nut that's welded onto the end of the spindle for attaching to the back face of the rear jaw making assembly a relatively easy affair. You can fine-tune this if you have the means of drilling a series of three concentric neat holes to accommodate the spindle, nut shank and flange separately. It's unlikely you'll notice any improvement in performance by doing so but it's a nice touch if you can.

The only other drilling strictly necessary is a slotted hole through the front jaw to allow it to rack and you're ready to go.

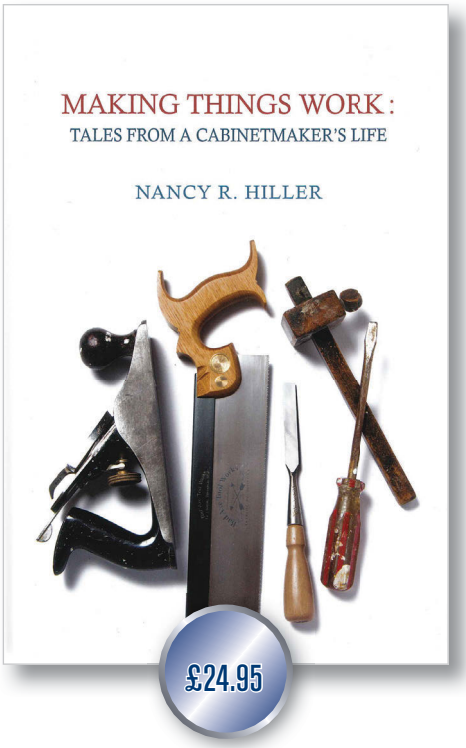
Compared to other kits available this is a quick and easy build but not without its shortcomings as the fixed T-nut determines the amount of thread that protrudes through the front of the vice. Of course there's nothing stopping you from reducing the length of the thread yourself or inserting a spacer behind the T nut or you could just get used to it and find the extra length actually comes in handy for clamping wider components. I did and that's my recommendation.

The polished rims on the wheels make this kit feel like a well engineered product, which it undoubtedly is and at €119 it's competitively priced. Dictum ship worldwide and they'll state the cost of doing so before you hit 'complete my purchase' so worth checking out.

Web: www.dictum.com

Making Things Work: Tales from a Cabinetmaker's Life

By Nancy Hiller



In a series of anecdotes that centre around the author's experience of pursuing a career as a cabinetmaker, Nancy Hiller shares some of her most personal encounters with life, love and the inevitable existential crisis of being a craftsperson. It took me right back to situations that I'd blanked from my memory and to people that have shaped who I am today. Some of those people I miss dearly and others not so. More often than not our Colonial cousins' impression of British culture is drawn largely from the Dick Van Dyke school of cheeky Cockerny sparras. But having experienced the best and worst of English society for which, incidentally, we owe her an apology, Hiller's account of growing up in England in the 1970s is hilarious and at times uncomfortably accurate.

Tradespeople of all persuasions will identify with each scenario and gain comfort knowing that the general public, the world over, is littered with misfits, miscreants and morons hell bent on making life difficult for those seeking to make the world a better place. Buy it, read it and pass it on so that the next time a client expects you to take one for the team, you'll know you're not alone.

From: www.classichandtools.co.uk

Axminster Trade Series BTS10ST tablesaw

This is an extremely compact tablesaw, designed for maximum mobility and the minimum amount of storage space. Built around a welded steel box section frame, it has a pair of sturdy wheels and a telescopic handle to allow the saw to be easily moved around the workshop. The saw can also be stored vertically to save storage space and it has a folding steel stand which is easy to erect. The saw table is extruded aluminium and has a useful 645 x 140mm sliding table with 695mm of travel, which is useful when mitres are cut. The rip fence has two support rails and a clever flip-over function so that it can act either as a fence or wide board support rail. It is powered by a 1,800W braked brush motor and will easily cut to its 90mm maximum cutting depth. Two dust extraction ports ensure that sawdust is removed when connected to a suitable vacuum extractor. The tools as well as the power lead are stored conveniently and all the controls are grouped together for ease of use. It is supplied with a 36T general purpose saw blade.

VpCI Tool Wipes

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Note. The effects of a constantly evolving global market in raw materials and other resources mean that prices can change. Be patient with your supplier and please understand that the prices quoted here are correct at the time of going to press.

Out & about:

Gordon Russell Design Museum

This month we visit a museum honouring a pioneer of furniture design

The Gordon Russell Design Museum is dedicated to one of the most important figures in British furniture design. Located in his original workshop, the Museum celebrates the life and work of Gordon Russell and his company over a period of 60 years in Broadway, Worcestershire. Its unique collection embraces a range of styles spanning this rich period of design, from Arts and Crafts to 1930s streamline Modernism, and Utility Furniture to 1980s postmodernism.

PHOTOGRAPHS COURTESY OF GORDON RUSSELL DESIGN MUSEUM

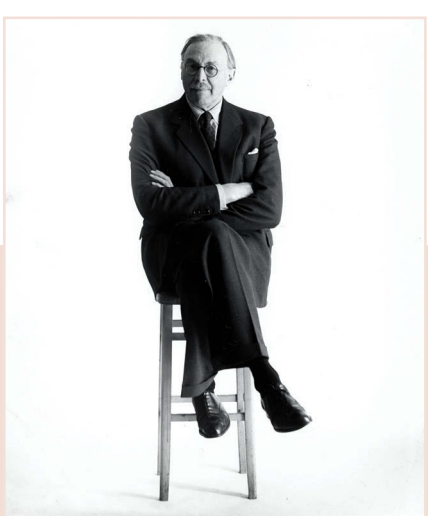
Oak Plan Chest with laburnum handles, designed by Gordon Russell in 1927

History

Gordon Russell established the Russell and Sons workshop in Broadway in 1922. The company would go on to gain a worldwide reputation for the quality of its furniture. Production continued in Broadway until the company was sold in 1986. The Museum is located in the original Grade II listed drawing office and workshop. After receiving funding from the Heritage Lottery Fund and private sponsors, it was opened to the public in 2008. In 2010 additional Heritage Lottery funding enabled an Education Volunteer Group to be set up to develop new resources and a workshop for design and technology pupils. The Museum is run by volunteers, many of whom are former employees of Gordon Russell's company.

What to see

The Museum holds an extensive archive of material from the company, including original drawings, notebooks, catalogues and correspondence, as well as the furniture itself. The collection is arranged in chronological order, beginning with the Arts and Crafts influence of the 1920s and working through to later Modernist styles. Highlights of the collection include the Paris Cabinet, which won a gold medal at the 1925 Paris Exhibition; chairs designed by Gordon's brother Dick for Coventry Cathedral; and examples of Utility Furniture. The Museum's website offers an excellent 'virtual tour' which you can use to whet your appetite before your visit.



Design pioneer Gordon Russell

Oak stacking chair. Designed by Dick Russell in 1962 for Coventry Cathedral

ABOVE & ABOVE LEFT: The Paris Cabinet. English walnut inlaid with ebony, yew, laburnum and boxwood. Designed by Gordon Russell in 1924

Murphy radio cabinets

The company's collaboration with Murphy Radio came at the perfect time: the Great Depression had affected the firm's markets and put its future in doubt. In 1930, Frank Murphy contacted Gordon Russell and asked him to design cabinets for his radio sets. Over the next decade, Dick Russell and Eden Minns designed over 70 radio sets, gramophones and televisions, which have become design icons.

Polished walnut Murphy radio cabinet designed by Dick Russell in 1937

Gordon Russell's design vision

Gordon Russell (1892–1980) was one of the most influential figures in 20th-century British furniture design. He began his career at the age of 16, working in his father's joinery shop restoring and repairing antique furniture. This led to an interest in the Arts and Crafts movement and, with his father's backing, he established Russell and Sons in 1922. Initially retaining the Arts and Crafts influence, Russell's designs became more Modernist in style over the years. Although he valued handmade furniture and traditional skills, he also recognised the benefits of using modern machine technology and making good design affordable for the masses. His work has had a lasting impact, not least through the Design Council, which he established in 1947.

Utility Sideboard. Mahogany and rosewood with routed front pattern on the doors. Designed by David Booth in 1950

Wellbeck Sideboard. Mahogany with inlay on doors of root ash. Designed by Dick Russell in 1934

Information for visiting

Address: 15 Russell Square, Broadway, Worcestershire WR12 7AP
Website: www.gordonrusselldesignmuseum.org
Opening: 11am–5pm Tuesday to Sunday (March–October), 11am–4pm Tuesday to Sunday (November–February), closed during January (open for group bookings by arrangement)
Charges: £5 for adults, £1 for children under 16, free for children under 12, £6 per person for group visits
Information correct at time of publication, check Gordon Russell Design Museum's website before making your visit

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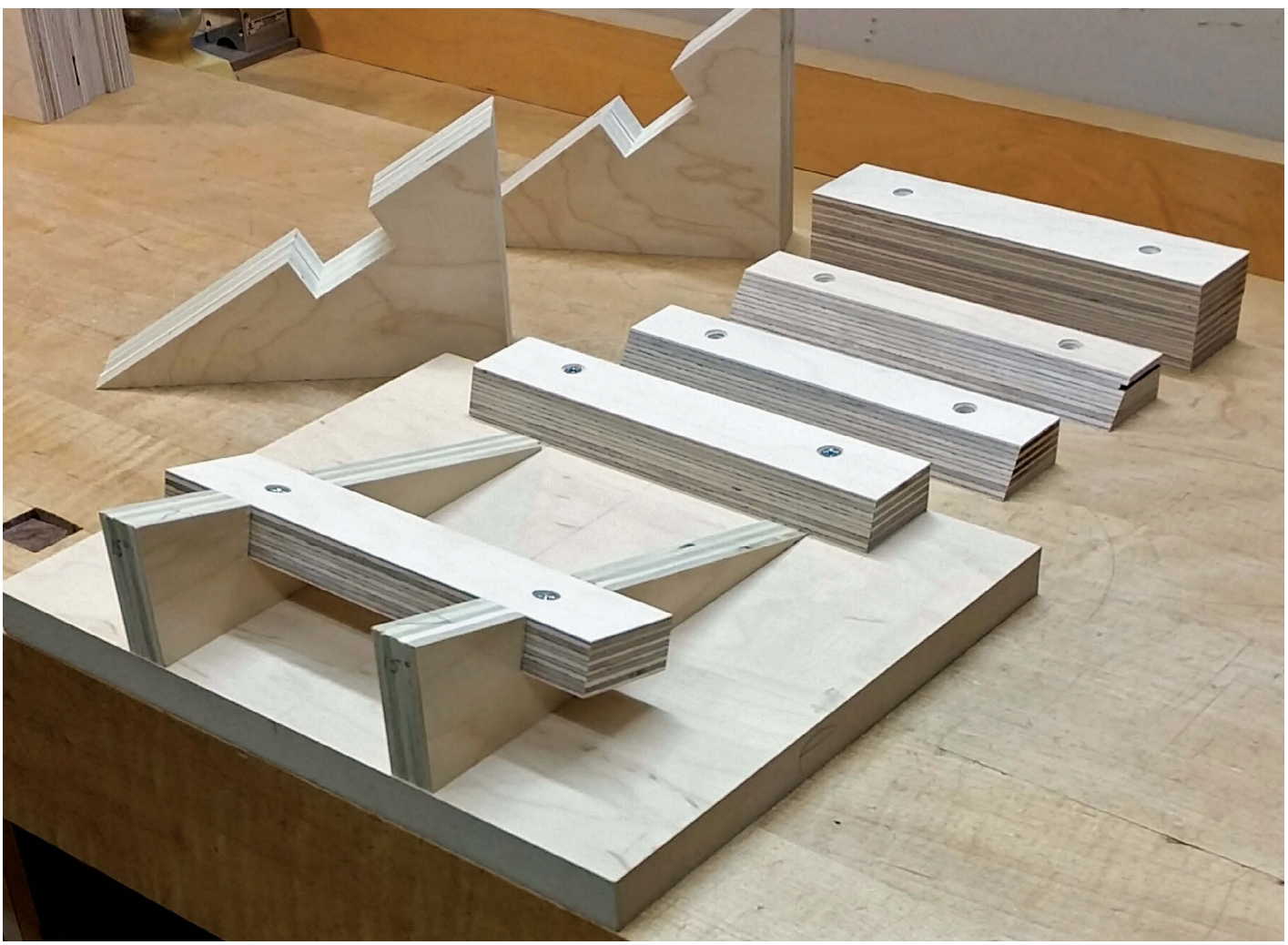

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Tico Vogt explains how he makes the jigs that make the jigs for shooting mitres

FEATURE

Liberté, égalité, fraternité, and saw cut veneer. A tour of France's oldest veneer saw mill

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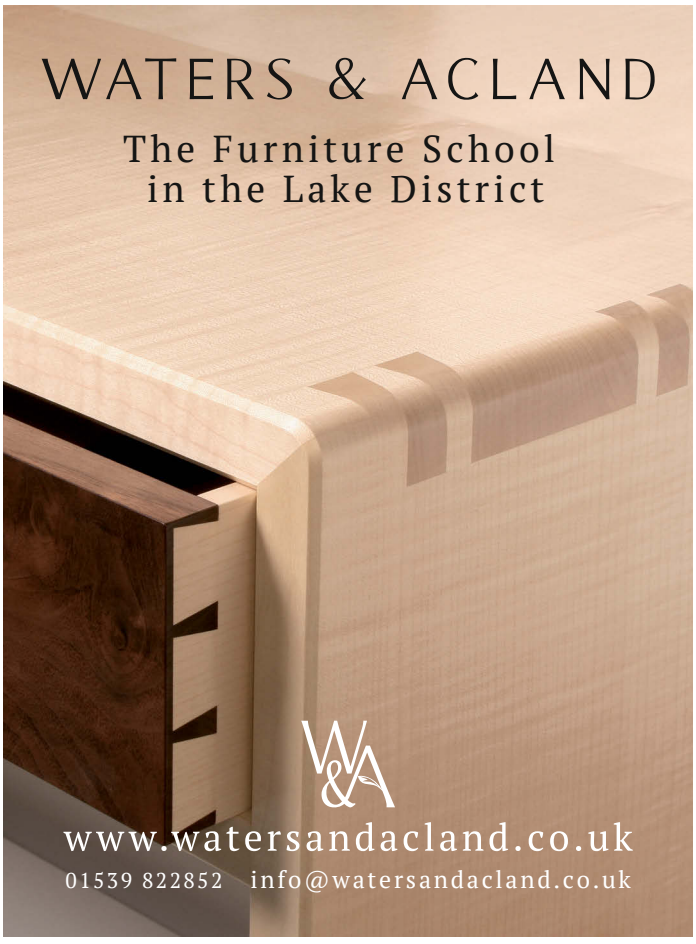

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Shop talk:
Nancy Hiller

F&C talks to cabinetmaker and author of *Making Things Work*

Can you explain the culture of unguarded saws in the US?
I think it stems from our use of tablesaws to perform a far greater variety of operations than you do in the UK. I can't recall using a tablesaw for anything other than ripping in the three English shops where I worked. In the States, we also use our tablesaws to cut grooves and dadoes, as well as the cheeks of tenons. Each of these requires that the guard be removed. The cabinetmakers' shops where I worked in England invariably used a spindle moulder (known as a shaper in the US) for grooving, a router for dadoes and a single- or double-ended tenoner for tenons. When you perform all of these operations and more on your tablesaw, it's tempting to leave the guard off. I bought a SawStop in 2009 and have not regretted the extra expense for one second. One of the things I love about the SawStop is that the riving and knife and guard are outrageously easy to put on or take off.

Describe your most memorable eureka moment in the workshop.
Superlatives are a challenge for me, but surely one of the most magical moments was when I cut my first large cove moulding on the tablesaw. (See? There I go again, using the tablesaw for an operation incompatible with the guard.) It seems delightfully counterintuitive that you can set up a tablesaw, which we ordinarily associate with the straightest of lines, with an angled, ad hoc fence, to create a concave moulding. I felt like jumping up and down to celebrate.

What do you collect?
I collect books published by Lost Art Press. Not only are they chock-full of substance; they're beautiful artifacts in their own right. The fact that they are printed and bound in the United States, then sold through a limited range of distributors, all of whom agree not to undersell the others, is the icing on the cake. At every step of the way, the company's operation exerts a powerful act of resistance against the value-eroding commercial forces of our time. For me, buying their books is a political act.

Do you think we're at a point where discussing gender is actually perpetuating stereotypes and misconceptions?
This is one of the conundrums of our age. Of course the more we mention gender, the larger it looms in our consciousness; we give it power. And yet, by trying to ignore it, we allow deeply entrenched attitudes and longstanding patterns of behaviour to endure. So my answer to your question really has to be yes and also no, because some matters do not allow for easy resolution in the space of a paragraph.

If you're making to a period style how important is it to you to use period methods of construction?
It has never been that important to me, because as someone who has lived primarily on her income from making furniture, both freestanding and built-in, for clients of modest means, I haven't been in a position to take the time to make things entirely by hand. Hand-cut dovetails for drawers and casework? Sure, some of the time. But I use machines (20th-century machines, not their CNC counterparts, which come with a different set of phenomenological questions) to mill lumber and cut most of my joints for everyday work. I have enormous admiration for those who carry their scholarly dedication through every step of the process of making. I'm just not one of them, at least at this point in my life.

Photo by Bradley Cox, Giant Eye Photography

Beyond the bench
I've always seen happiness, for myself, as a three-part thing involving a self-made home, a good relationship and satisfying work. I am blessed at this point in life to enjoy all three. That, to me, is success.

Nancy lives with her husband, Mark, two cats, and a gimpy dog named Joey. She reads David Sedaris and Alexandra Fuller for essential sanity enhancement, cooks a mean nut roast and spends summers covered in insect-induced welts as she persists in growing an English-style cottage garden amidst the inhospitable conditions of the American Midwest.

Do you think you might have taken woodwork at school if it was offered?
I might have, had it been offered at my high school, but it wasn't. I did take woodworking at boarding school in Sussex. It was a school where everyone had to take sewing and woodwork, with no gender division. As a result, my parents have a crude cheese board I carved from apple wood, and I have a mechanical wooden toy in the shape of an alligator (which bears more resemblance to a recumbent dog than a reptile).

Clamps or cramps
When in Rome, for gods' and goddesses' sake, please speak Italian. I spent 16 years in England, beginning at the age of 12, but I've been back in the States for 30 years now. I knew nothing of "clamps" until 1987. Cramps, on the other hand, came in two varieties, one of which visited me every month. (One of the great things about getting older is the freedom from that sort of cramps.) The point of speaking is to communicate. Unless you wish to convey that you're a poser (I do not), it's best to adopt the local dialect instead of straining to hold onto something you imagine others deem exotic. When I visit friends in England, I fasten joints with cramps and machine timber using a thicknesser, pack my bags in the boot of the car, spell with the letter "zed," and visit the bog/spend a penny. (I know, this dates me. Last time I was in England the price had gone up to 20 pence.) In the States I clamp things together, mill lumber using a planer, load my luggage in the trunk, spell with the letter "zee," and go to the bathroom (which is free, because this is America, and we believe in equality – at least where relieving ourselves is concerned). It took some time to get used to speaking the American way when I returned, but I made a point of it, because to do otherwise strikes me as affected.

Alive or dead, who would you most like to commission a piece of furniture for your own home?
This is a tough one, as there are so many makers whose work I admire. I'd be ecstatic if I could have a piece made by Vincent Edwards. I love his fluid way of seeing. He weds plant, animal and mechanical forms.

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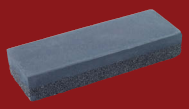

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