# Furniture &cabinetmaking

DESIGN ▪ INSPIRATION ▪ PROJECTS ▪ TECHNIQUES ▪ TESTS ▪ NEWS ▪ EXCELLENCE

# Make a wooden scraper plane

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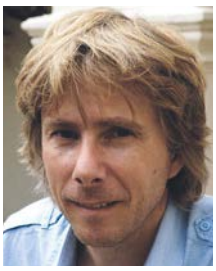
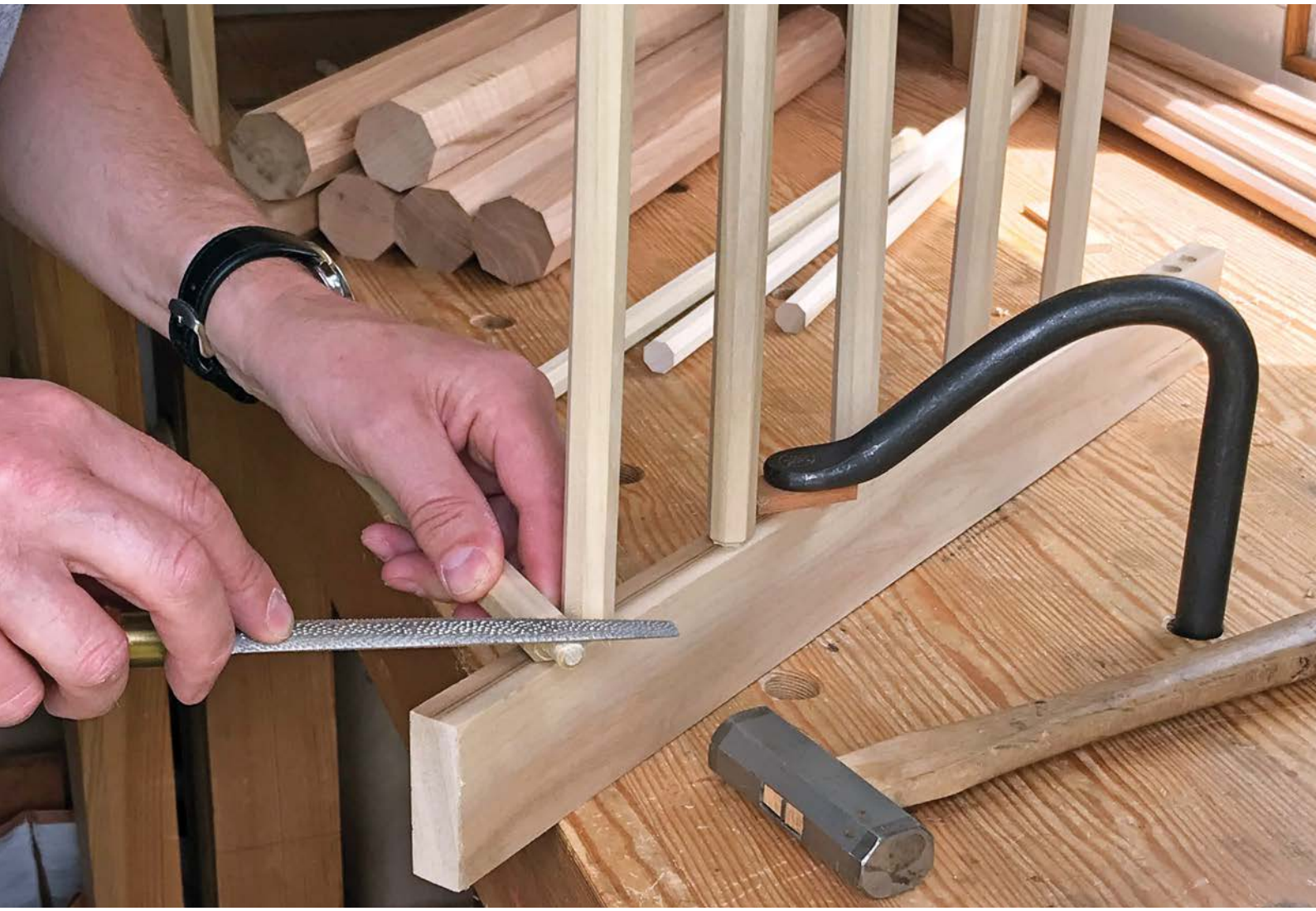


# Welcome to...

## ...hybrid woodworking



PHOTOGRAPH BY DEREK JONES/GMC PUBLICATIONS

It's funny how many woodworkers who take up the craft as a hobby eventually adopt the mindset of a professional maker. Most, I'm sure, start out with the intention that the workshop will be the ideal place to relax and be creative, and indeed it is. That state of mind maybe lasts for the first couple of projects before the sudden realisation that building things well requires the kind of discipline that's, quite frankly, professional. Of course I'm generalising, but on the whole hobbyists do seem to have more time to develop a professional mindset and therefore tend to balance the input vs output equation effectively. And though their time may not be measured in monetary terms it's still a precious commodity.

If there's a theme to this issue it's about balancing the time and motion spreadsheet in order to maximise resources for a happy outcome. You might want to call it hybrid woodworking. The first of our hand tool articles comes from Scott Wynn and looks at setting up traditional wooden hand planes for efficient use. If that doesn't get the metal body enthusiasts rattling their sabres then the second in our four-part series about the WoodRat should do the trick. If making a wooden plane is more your thing, then we have Theo Cook's scraper plane project to tempt you away from the cold hard steel.

You won't find the word octagonalisation in any conventional English dictionary but that's the subject of our second article about machine woodworking. Again it's a router-based technique but there's no reason why something similar couldn't be achieved using a spindle moulder if the scale dictates it.

Yes, the process can be done by hand and if it's just a few components you need then perhaps that's your fastest route. A couple dozen, however and you might want to look at alternatives. Our main feature this month is a two-part 'his 'n' hers' story by Nancy Hiller about furniture design and marketing spin and the sort of stereotyping likely to cause a riot. It's up to you to decide how far we've come in that particular field and whether it warrants a hand-crafted placard or two.

Derek Jones

**Derek Jones**
derekj@thegmcgroup.com

# Contents

Issue 273 August 2018

*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.**

## Projects & Techniques



## Design & Inspiration



## Your *F&C*









# Meet the contributors

### 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 chair maker John Brown.
**Web:** www.overthewireless.com

### Steve Cashmore

Steve is a radio communications engineer who graduated from Plymouth University in 1992. During his engineering apprenticeship prior to university he gained metalworking skills in the machine shop (City & Guilds). In 1997 he became interested in furniture-making and woodturning as a hobby, and has since attended various short courses with Peter Sefton, David Savage, Michael Scott, Adrian Marks, Colwin Way and West Dean College.
**Instagram:** @steveswoodcave
**YouTube:** www.youtube.com/c/StevesWoodCave

### Theo Cook

Theo completed a five-year apprenticeship at Edward Barnsley Workshop and during that time he took a year out to study at the prestigious College of the Redwoods in the USA. After nine years at the Barnsley Workshop he worked at Senior and Carmichael gaining several awards including Guild Marks from the Worshipful Company of Furniture Makers. He now teaches at Marc Fish's Robinson House Studio.
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### Nancy Hiller

Nancy Hiller is a cabinetmaker based in Bloomington, Indiana. Her book *English Arts & Crafts Furniture: Projects and Techniques for the Modern Maker* was published by Popular Woodworking books in June 2018.
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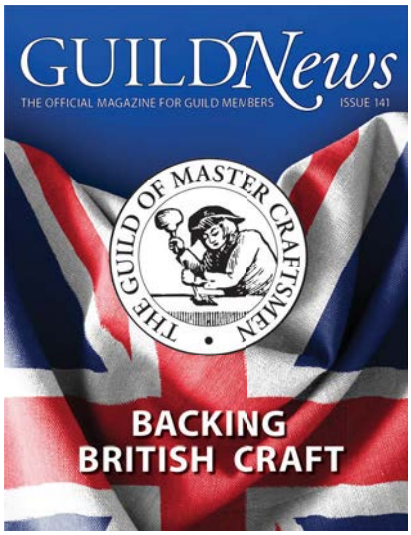
**Instagram:** @nrhiller

### Richard Wile

Richard lives in Nova Scotia, Canada; he is an accomplished IT professional and has been an amateur woodworker for a lifetime. He has tried his hand at many woodworking genres throughout his years in the craft. His personal take on traditional designs is heavily influenced by his global travels and has become a trademark of his work. Using a variety of hand and machine techniques, Richard has crafted many unique furniture pieces, hand tools, turnings, miniatures, and acoustic stringed instruments from his basement workshop.
**Web:** richard-wile.blogspot.com
**Instagram:** @rdwile




### Guild News

This month's issue includes an extract from *Guild News*, which is sent to all members of The Guild of Master Craftsmen. For more information about membership or to have your work featured in *Guild News*, visit the website.
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# Making a wooden scraper plane

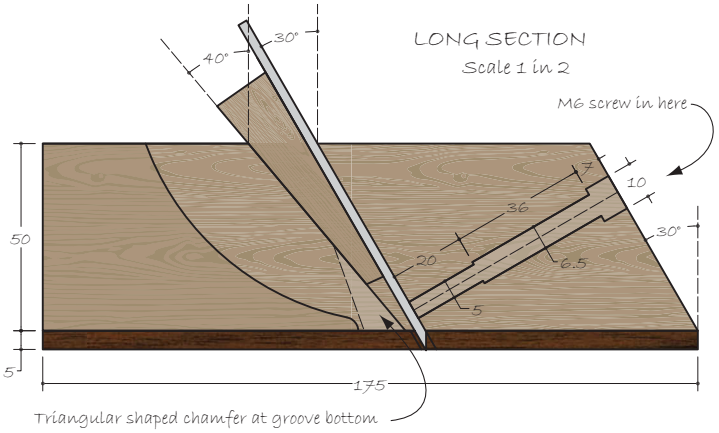
**Theo Cook explains how to make a plane to tame the most awkward grain**

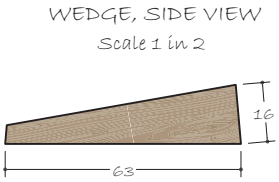

I made my first wooden plane while studying at the College of the Redwoods in California. This is where I came up with the idea of making a scraper plane and it has been the wooden plane I have used most over the last 10 years. After teaching at Robinson House Studio for a few years, this has also been one of the planes that the students have borrowed most. Now the students learn how to make their own plane as part of a year-long course, and we also teach it as a weekend course.

## Materials needed

- Blade. I have these blades custom-made out of high-speed steel. Size is 95 x 42 x 4mm. Please email me if you would like to buy a blade, they cost £35: theotcook@gmail.com
- Wood for the sole. I would recommend lignum vitae. Finished size is 175 x 54 x 4mm.
- Wood for the body of the plane and a small piece for the wedge. Finished size of the plane is 175 x 50 x 54mm but the plane body is made up of three bits of wood glued back together. This is to give the effect of looking like one piece of wood when you've finished. Begin with a larger piece of wood about 360 x 65 x 60mm. This can then be cut up and planed to the right dimensions (see technical drawing). If your wood is too short you might not be able to plane it with a machine, that's why I recommend starting with something longer. This also means you could make two planes – a gift for a friend perhaps.
- Cheese head screw. This is used to push the blade forward a tiny bit to achieve a bigger shaving. Screw size is 70 x 6mm. This screw will need to be cut to the correct length when your plane is finished.

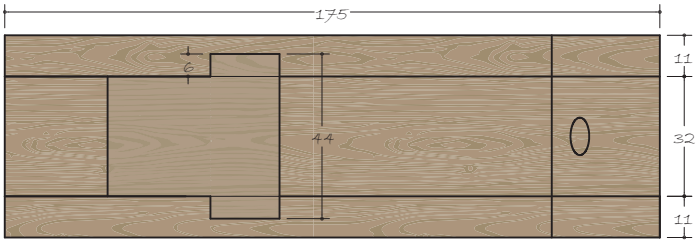
PHOTOGRAPHS BY THEO COOK



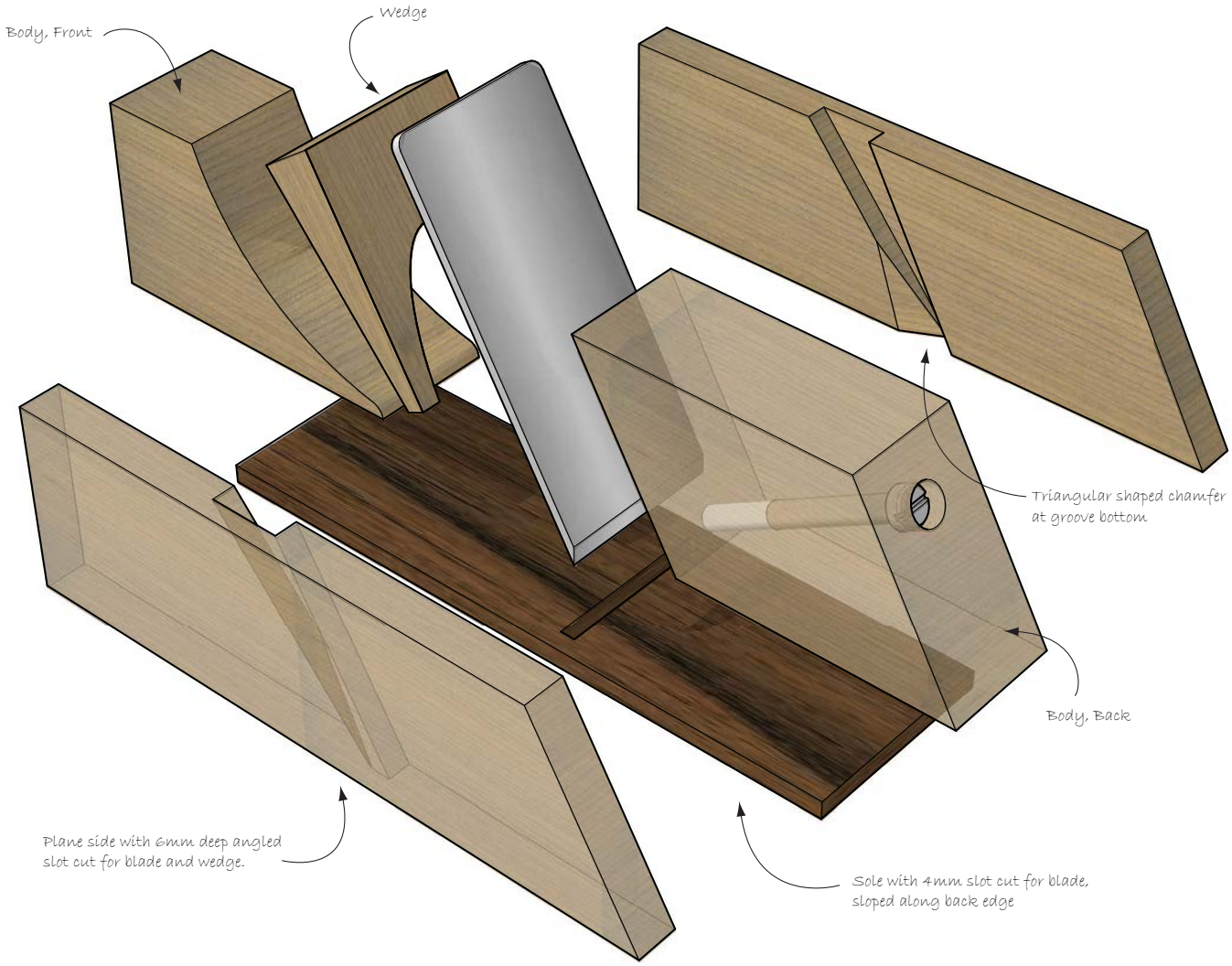













DRAWINGS SHOW PLANE COMPONENTS PRIOR TO SHAPING

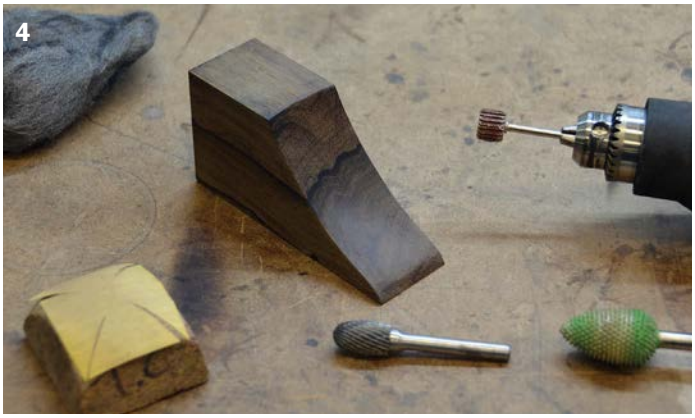
# Making the plane

With most of these steps use the pictures and the technical drawing to aid you along the way.

**1** Plane your wood over size to start with. Then mark out where the saw cuts will go to cut your wood into three sections. I recommend drawing a V on the top of your wood. This helps to put them back in the right order when they are in three pieces.

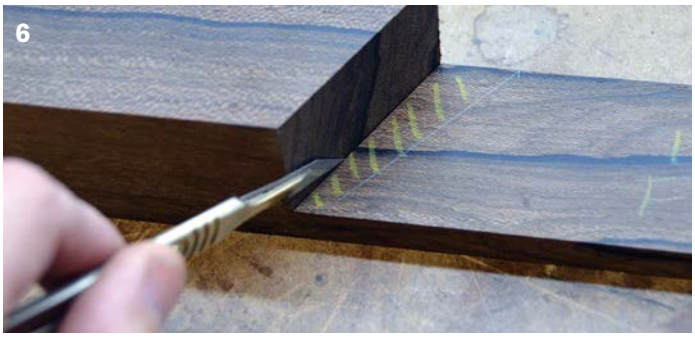
**2** Bandsaw your wood into three pieces then plane them up. You should have two sides at 175 x 50 x 11mm and one main body at 175 x 50 x 32mm. Cut out the wedge, measuring 70 x 44 x 16mm. See the drawing for the profile. Also cut the wedge over length to start with; it can be cut down when it's fitting well in the plane. The finished length is 63mm.

**3** Mark out and cut the body into its two parts. I used a bandsaw but you could probably do this with a coping saw for the front body and a hand saw for the back.

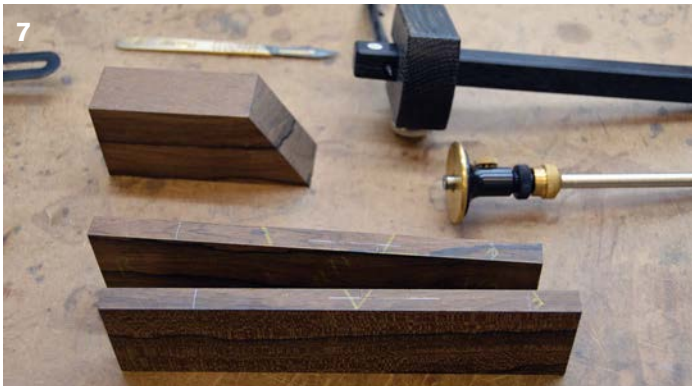


**4** Sand the body front to the profile.

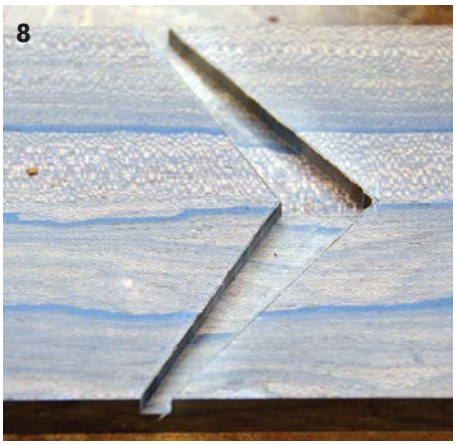
**5** Plane the 30° angle on the body back, making sure it's square as well.



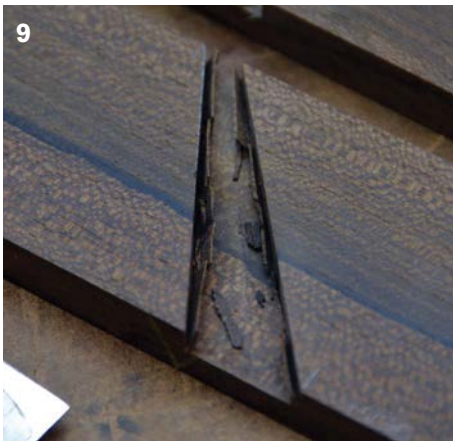
**6** Using the body back as a guide, scalpel the inside of the sides and also scalpel the 40° angle.



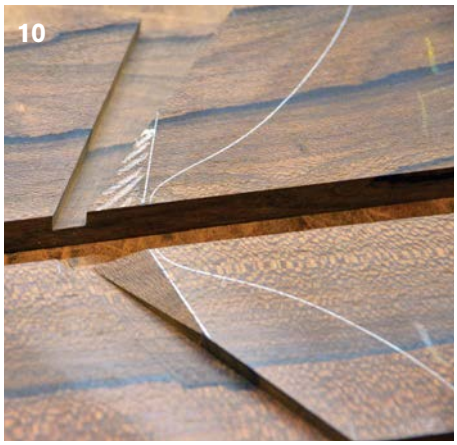
**7** Use a marking gauge set at 6mm to mark the depth of cut for the groove on the sides.



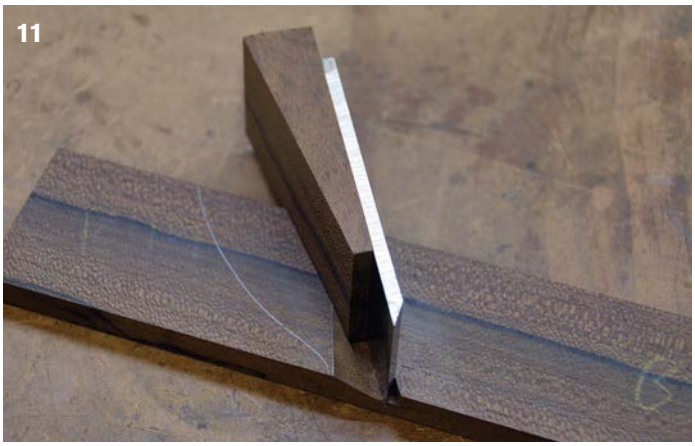

**8** I recommend using a router to cut out the waste. You could also set up the router to cut down to the 6mm as well.



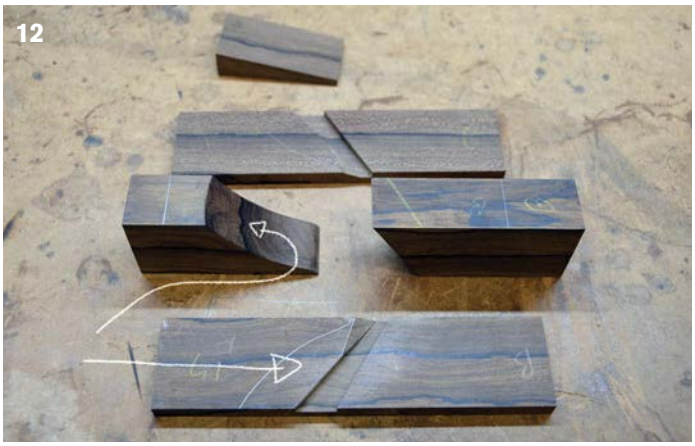

**9** Chisel to the scalpel lines, then sand to clean the grooves up.



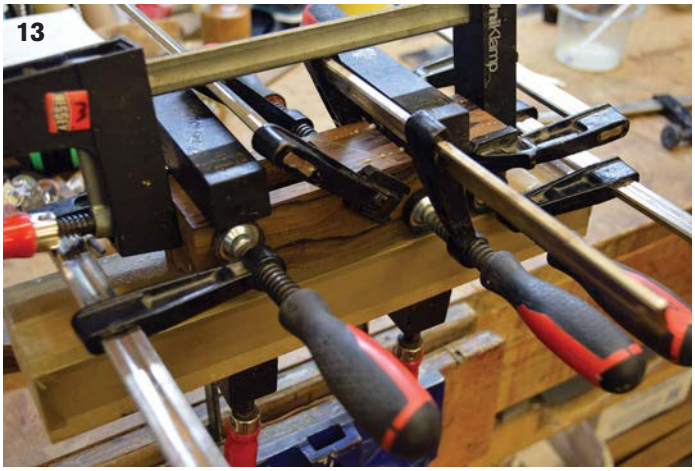

**10** Mark out and chisel the small triangular-shaped chamfer at the bottom of the groove. This is removed to stop the wood shavings getting clogged inside.




**11** Plane the wedge to fit the grooves. Take your time with this step as the wedge needs to fit in the same amount on both sides. The wedge is also used to aid in gluing the plane together to keep everything in line.




**12** Sand the internal parts of the plane.



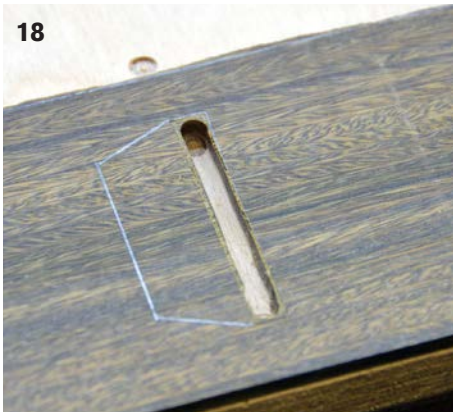

**13** Make a flat block to clamp the plane down to make sure it doesn't move about and to help keep it flat. This is when the wedge should be used with an additional bit of wood to stop the wedge coming out at the bottom, but make sure to remove the wedge when everything is clamped up. Test clamp this a few times to get the process down. Don't forget to put packing tape on the flat block, otherwise the plane will be glued to the block. I would also recommend not putting glue right up to the inner edges of the front and back of the body, this will limit the amount of glue squeeze-out you get into the hole.


**14** While you're waiting for the glue to set you can start working on the wedge's cutout. This is done to make it easier to clean out shavings. Then rough cut using a bandsaw or by hand with a copping saw. I used a die grinder or a rasp to get into the tricky part, then I cleaned it up with a small drum sander attached to a cordless drill. A lot of this could be done with carving chisels as well. Then sand it up to 240 grit.


**15** After the glue has set on the plane you can clean up the inner slope where the blade will sit. This can be done with a chisel or a flat tool with sandpaper stuck on it.

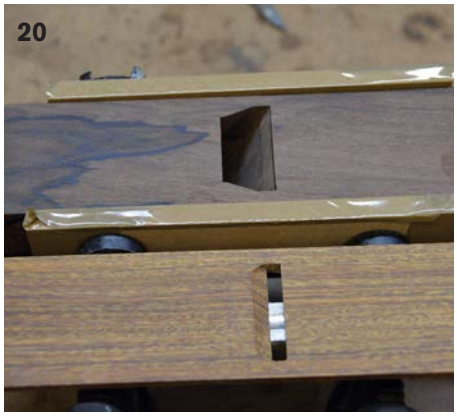
16 If you haven't done so already, cut the lignum for your sole. Cut the plane and the sole to the exact length. Also plane the sole to the exact width, this is a very important step to help with gluing the sole on. Plane the underside of the plane.

17 Place the plane on the sole and mark through the hole to show you where you need to cut the slot for the blade.



18 Mark out a 4mm slot with a scalpel, then use a router to cut through. Clean up the line with a chisel.

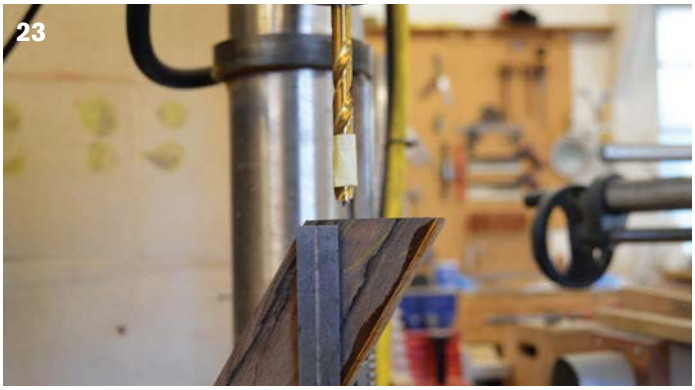
19 Chisel a slope on the inside of the sole. Again, this is to prevent the shavings from getting stuck. Clean the sole with acetone. This wil help the glue stick to the oily wood.



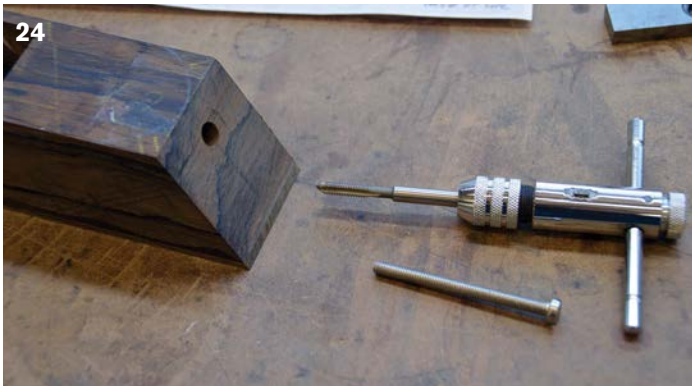
20 Dry clamp to the sole to make sure everything fits. Be sure to use a block underneath with packing tape on.

21 Glue on the sole. I used superglue as this sticks really well to lignum. Make sure you don't put too much glue around where the hole is in the middle (the area you drew around earlier). The other advantage of using superglue is you don't have to wait that long for it to dry. About 20 minutes should do. I used medium superglue.

22 After you take the clamps off you should clean up the mouth in the sole. This can be done with a file and a bit of sanding. Then mark the 30° angle at the back of the plane and cut off the excess bit of wood. Then mark out exactly where you need to drill for the adjustment screw.



23 Select the drill bits you need and put a bit of tape on them as a depth gauge while drilling. Drill the 10 first, then 6.5, then 5. I would drill these holes using a pillar drill preferably. This could be done with a cordless drill but it needs to be quite accurate to avoid drilling through in the wrong place.



24 Use a M6 tap to cut the thread for the screw to go in the back of the plane. Test the screw and cut to the correct length if it needs to be cut down. The screw should only just touch the back of the blade. Sand and polish the end to clean it up.


**25** Now for the fun part (well it definitely is for me!) – the shaping of the plane. I used a disc sander for all the rough work. Next, use a die grinder to cut the hollows on the top and then use a spokeshave to clean up the outside of the plane. This will speed up the sanding process. Then on to hand sanding up to 240 grit. Bear in mind lignum dust could contaminate any paler coloured timbers when sanded together.


**26** Before you put any finish on you need to mask off the areas that the wedge will fit because if you get any oil or wax on the wedge where it tightens it won't work properly or come out.


**27** Time to oil or put some finish on. I used Osmo oil but you could use something else.


**28** While you're waiting for the finish to dry you can work on the blade. This should be sharpened at 30° and then the edge needs to be burnished over using a burnishing tool.


**29** When the finish has dried you can flatten the sole by sanding it on a flat surface like a machine bed.


**30** Now it's time to set the blade in the plane. Make sure the adjustment screw is set back before you start. Place the plane on a flat bit of wood then put the blade in until it contacts the wood. Put the wedge in and give it a gentle tap with a hammer. A hammer can also be used for the lateral movement of the blade. The adjustment screw can be used to achieve a bigger shaving.


**Making a bronze plane was a real challenge**

I hope these steps will help you build a Theo Cook scraper plane of your own. I have enjoyed using mine so much over the years. I have even made a bronze plane, as you can see from the picture above. It was particularly challenging as I haven't worked that much with bronze before. F&C

## Plane-making course

If you haven't got a workshop or the space to make this plane, I will be running a weekend course on plane-making. The dates are 13–14 October. If you're interested please visit our website at: www.robinsonhousestudio.co.uk for booking information.

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# News&Events

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

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

## Hayden Davies installed as new Master

Hayden Davies has been installed as the Master of The Furniture Makers' Company, succeeding Dr Tony Smart MBE. The annual installation ceremony took place on 14 May at St Mary-le-Bow Church in the City of London, followed by a celebratory dinner at Mansion House, the official residence of the Lord Mayor of London.

Hayden Davies said: 'I would like to thank everyone who attended my installation ceremony and helped make it a very memorable occasion. This year my focus will be membership and belonging – not just encouraging more members to join our ranks but making sure as many people as possible from across the industry engage in our activities.'

The evening also included an award ceremony. The Christopher Claxton Stevens Prize was presented to Rupert Senior for the Logmore Table. The Lifetime Achievement Award was awarded posthumously to Mark Wilkinson OBE OLM and presented to Mrs Cynthia Wilkinson.

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

PHOTOGRAPH COURTESY OF THE FURNITURE MAKERS' COMPANY

**Hayden Davies is the new Master of The Furniture Makers' Company**

## Cardiff Metropolitan University student wins national design competition

An aspiring designer is being given the opportunity to exhibit one of his designs at Axminster Tools & Machinery stores around the UK after winning a national design competition organised by The Furniture Makers' Company.

Olly Webb, who is studying a Master's in Product Design at Cardiff Metropolitan University, was awarded first place for his shelving unit called Farm.

The competition, sponsored by Axminster Tools & Machinery, asked students to design a piece of innovative wooden furniture, with shortlisted students then given three months to create their concept using materials sponsored by Axminster. The judges agreed that Farm was a fresh, stylish interpretation on an existing idea that used a good mixture of materials. They were also impressed with the level of understanding Olly demonstrated.

Olly has won £1000 of Axminster vouchers, a work placement with the company and will have his piece showcased on rotation in all eight of Axminster's stores in Buckinghamshire, Cardiff, Cheshire, Devon, Hampshire, Kent, North Shields and Warwickshire.

Sophie Hall, a Product Design student at Cardiff School of Art & Design, and Megan Broome, a Product Design student at Wolverhampton School of Art, came second and third, respectively, winning £500 and £100 worth of Axminster vouchers.

**Contact: The Furniture Makers' Company & Axminster**
**Web: www.furnituremakers.org.uk & www.axminster.co.uk**


IMAGE COURTESY OF THE FURNITURE MAKERS' COMPANY

**Olly Webb's Farm shelving unit design will be displayed at Axminster stores**

# Richard Williams



**In the first of a series of regular articles from The Furniture Makers' Company, we look at the work of bespoke furniture maker Richard Williams**

Anyone who knows bespoke maker Richard Williams will attest to his calm temperament and careful, measured approach to his work. In this way he emulates his hero, woodworker and furniture maker James Krenov. And just like Krenov, Richard's love of wood and devotion to perfecting his craft has resulted in him excelling in his field.

In 2017 Richard received the ultimate accolade for a bespoke furniture maker, the Christopher Claxton Stevens Prize, which is awarded by The Furniture Makers' Company to the most outstanding Bespoke Guild Mark awarded design in the livery year. The awarded piece, a stunning bog oak display cabinet, was commissioned to house a Chinese terracotta horse dating back to the Tang Dynasty (618–907 AD).

'The cabinet needed to provide an elegant and understated backdrop, and I also needed to take into consideration practical issues of lighting and humidity control,' explains Richard. 'I wanted the cabinet to have an oriental flavour, and to also have a lightness about it, achieved by keeping all components to a minimal size and section. Choosing bog oak contrasts beautifully with the terracotta, but it also gave the client the amusing story to tell that the timber being used to make the cabinet actually pre-dated the horse by four millennia.'

PHOTOGRAPH COURTESY OF THE FURNITURE MAKERS' COMPANY

**Richard's display cabinet was awarded the Christopher Claxton Stevens Prize in 2017**

## Early success

Graduating from Buckinghamshire College, High Wycombe in 1989 with a Diploma in Furniture Design and Craftsmanship, Richard tasted success from an early age, as a livery member spotted his final piece, a cabinet, at his graduation exhibition. 'It was suggested that I put it forward for a Bespoke Guild Mark, which I did, and it was successful.'

This was to be the first of nine Bespoke Guild Marks that Richard has been awarded in his career to date, with two of those going on to be selected for the Christopher Claxton Stevens Prize.

While Bespoke Guild Mark success exposed Richard to The Furniture Makers' Company from a young age, it was fine furniture maker Martin Grierson, who Richard worked for after university, who encouraged and sponsored him to become a member in 1992. Over the past 26 years since joining the Company, Richard has built up his own studio, specialising in designing and making fine contemporary pieces for his growing clientele. Richard Williams Furniture now employs 11 people with the team working from a beautiful 18th-century tithe barn in Buckinghamshire. 'I'm very proud when I look back over the portfolio of pieces that we have made and properties that we have furnished, but also that so many of the fine craftsmen that I have had the pleasure of working with have gone on to open their own workshops, keeping this wonderful craft well and truly alive. I enjoy passing on the benefit of experience, and I have done so at many colleges and furniture schools around the country and also in the United States.'

The commitment he's shown to championing the craft made him perfect to lead the Bespoke Guild Mark Committee, which he has chaired for the past few years. Supporting the industry that he loves is clearly important to Richard and he shares The Furniture Makers' Company's dedication to ensuring the long-term prosperity of the industry by encouraging the next generation of designers and makers. 'Being involved with the Company gives a great sense of "giving back" that is, after all, at the core of its ethos. Not only that, it is a great opportunity to mix and blend with others from all areas of the industry. I often also feel like I can be a "voice" for all the highly talented and skilled but often introspective and humble bespoke furniture craftsmen out there who are quietly producing amazing work.'

**For more information about Richard's work, visit: www.richardwilliamsfurniture.com**

# Furniture student's unusual gilding exercise

PHOTOGRAPHS COURTESY OF THE CHIPPENDALE INTERNATIONAL SCHOOL OF FURNITURE

**Dr Phillip Prager with his gilded cat**

The Chippendale International School of Furniture is associated with furniture design and making, so it's not often that one of its students sets out to make a prosthetic tail for a dead cat. But that was part of the task that Dr Phillip Prager undertook to upcycle a mummified cat into a golden work of art.

Phillip, a former assistant professor of aesthetics at the IT University in Copenhagen, wanted an unusual item on which to hone his gilding skills. Learning how to gild, as well as other skills such as veneering and marquetry, is all part of the course. He first bought a spiky sea urchin, but didn't like it, and then came across the long-dead cat on a natural history website. The cat had been bricked up inside the wall of a medieval English house – a common practice to ward off evil spirits – and only recently discovered.

While the cat's mummified body is very well-preserved, complete with claws and teeth, the tail first needed to be replaced – which Phillip did using a strip of leather. 'The cat obviously lived a tragic life, and I thought it would be nice to give it a bit of afterlife splendour,' said Phillip, who covered the carcass with shellac to give it strength and seal the surface, and then gilded it in 24 carat gold. The cat, now named Mrs Slocombe, has her very own velvet cushion to lie on.

The ancient art of gilding is taught at the school by specialist Richard Walker of Watergild Studios, who is one of Europe's foremost experts in gilding, and teaches both in the UK and USA. Richard said: 'It's a very fitting gilding project because the ancient Egyptians worshipped cats, and it was also the ancient Egyptians who invented gilding. Phillip's cat not only has my approval, but it also would also win high praise from any Pharaoh.'

**Contact: The Chippendale International School of Furniture**
**Web: www.chippendaleschool.com**

# 2018 Good Design Award winners announced

PHOTOGRAPH COURTESY OF GOOD DESIGN AUSTRALIA

**The Jumpseat won Best in Class**

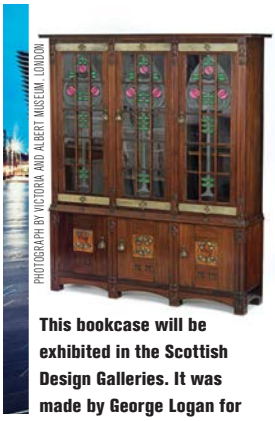
The winners of Australia's design industry awards – the highest honour for design innovation – were announced at the Sydney Opera House on 17 May at the 60th annual Good Design Awards Ceremony.

The Good Design Awards are Australia's oldest and most prestigious international Awards for design and innovation with a proud history dating back to 1958. The Awards celebrate the best new products and services on the Australian market, excellence in architectural design, digital and communication design, engineering design and fashion design as well as rewarding emerging areas of design including business model innovation and social impact.

In the Furniture and Lighting category, the Jumpseat by Sedia Systems and Ziba Design won Best in Class, while Tom Fereday's SIA chair and Chris Connell's Gallery Chair were among the Gold award winners.

**Contact: Good Design Australia  Web: good-design.org**

# Design festival to celebrate opening of V&A Dundee



PHOTOGRAPH BY VICTORIA AND ALBERT MUSEUM, LONDON

**This bookcase will be exhibited in the Scottish Design Galleries. It was made by George Logan for the 1901 Glasgow Exhibition**

PHOTOGRAPH BY ROSS FRASER MCLEAN/V&A DUNDEE

**V&A Dundee opens to the public on 15 September**

A two-day festival celebrating design, music and performance will mark the opening of V&A Dundee and its place at the heart of Dundee's transformed waterfront. The 3D Festival – a name that pays homage to Dundee, design and the city's spirit of discovery – will be co-designed by young people from across Dundee working alongside Scotland's largest promoter and events company, DF Concerts and Events.

The festival will take place in Slessor Gardens at the centre of the Dundee waterfront, with the new museum designed by Japanese architect Kengo Kuma forming an impressive backdrop. The festival will open on Friday 14 September, the eve of the museum's official opening, with a one-off outdoor performance involving music, design and dance. It will continue on Saturday 15 September with family activities, hands-on design workshops, music and creative collaborations on the main stage.

**Contact: V&A Dundee  Web: www.vandadundee.org**

# Events

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

EVENT OF THE MONTH

## Celebration of Craftsmanship & Design (CCD)

CCD is the largest selling exhibition of high quality bespoke furniture in the country and every year it draws visitors and exhibitors from around the world. The emphasis is on furniture, but this is complemented by work from several other disciplines such as jewellery, art and glass. There will be a stunning array of around 300 unique, contemporary, meticulously crafted exhibits, that will undoubtedly become the heirlooms and antiques of the future.

During the exhibition, the Alan Peters Award for Excellence, which rewards students and emerging talent, will be presented to three designer-makers. Other awards to be presented at the show include Best Use of British Timber, The Worshipful Company of Furniture Makers Design Prize and the craft&design award.

Housed in the magnificent neoclassical Thirlstaine Long Gallery in the Regency

Laurent Peacock's Aesculus cabinet

Spa town of Cheltenham the exhibition is ideally placed to form part of a summer escape to the beautiful Cotswolds with all its internationally celebrated scenery, style and culture.

**When: 18–27 August**
**Where: Thirlestaine Long Gallery, Cheltenham College, Bath Road, Cheltenham, Gloucestershire GL53 7LD**
**Web: www.celebrationofcraftsmanship.com**

The Rhipidura chair by Burke & Marshall

PHOTOGRAPHS COURTESY OF CCD

PHOTOGRAPH BY ROSS FRASER MCLEAN/V&A DUNDEE

Several skills will be demonstrated at the school's popular open day

### Peter Sefton Furniture School Open Day

Peter Sefton's annual Furniture School Open Day gives visitors the chance to meet Peter and see professional demonstrations by experts in skills such as French polishing, tool sharpening and joint cutting. There will also be trade stands where you can get expert advice on buying tools from the school's tool shop.
**When: 14 July**
**Where: The Threshing Barn, Welland Road, Upton Upon Severn, Worcester, Worcestershire WR8 0SN**
**Web: www.peterseftonfurnitureschool.com**

### WoodFest Country Show

WoodFest showcases a variety of wood-related activities, crafts and forest industries. There will be demonstrations of pole climbing, chainsaw carving, axe racing, wood chopping and logging skills, plus the WoodFest Rocks music festival, an arts and crafts market, food stalls and much more!
**When: 28–29 July**
**Where: Pen-y-cefn, Caerwys, Pen-y-cefn CH7 5BP**
**Web: www.woodfestcountryshow.co.uk**

### Irish Furniture & Homewares Show

For the fifth year running, this event gives Irish and UK companies in the furniture trade the opportunity to do business in relaxed surroundings and provides attendees with a welcome environment to see new products, innovative ideas and avail of exclusive deals and discounts from the businesses on show.
**When: 18–21 August**
**Where: The National Show Centre, Stockhole Lane, Cloghran, Swords, Co. Dublin**
**Web: www.ifhs-tradeshow.ie**

### Autumn Fair

The Autumn Fair brings together thousands of UK and international retailers and buyers to discover the best new products, freshest ideas and trend-led inspiration. This year's event will include a brand new sector called Global Handicraft, which will feature a diverse range of artisanal and handcrafted products from around the world.
**When: 2–5 September**
**Where: NEC Birmingham, North Avenue, Marston Green, Birmingham B40 1NT**
**Web: www.autumnfair.com**

### The Old House Show

The Society for the Protection for Ancient Buildings (SPAB) is launching its first ever grand exhibition this September. Focusing on the SPAB Approach, and its unique emphasis on independent advice, crafts and education, The Old House Show will be a must-attend event for those interested in the art and craft of building care. There will be demonstrations of traditional crafts, talks by SPAB experts and other invited guests, an array of exhibitors and hands-on activities. The show is free to attend, see SPAB's website for details about registering for tickets.
**When: 7–8 September**
**Where: Old Royal Naval College, King William Walk, Greenwich SE10 9NN**
**Web: www.spab.org.uk/whats-on/events/old-house-show**

### Robinson House Studio Open Day


Robinson House Studio is the furniture making school set up by award-winning Marc Fish Furniture Design. The Studio and student workshops will be open to the public once again this year and will include live demonstrations on jointing, sharpening and laminating. As the world's leading experimental veneer laminating workshop it's not to be missed.
**When: 4 August**
**Where: Robinson House Studio, Robinson Road, Newhaven BN9 9BL**
**Web: www.marcfish.co.uk**

### Bentley Woodfair

The Bentley Woodfair is a celebration of woodlands, forestry, timber and woodcrafts. There will be over 150 exhibitors, demonstrators and craftsmen.
**When: 15–17 September**
**Where: Bentley Wildfowl & Motor Museum, Harveys Lane, Nr Halland, East Sussex BN8 5AF**
**Web: www.bentley.org.uk**

# Social media dashboard

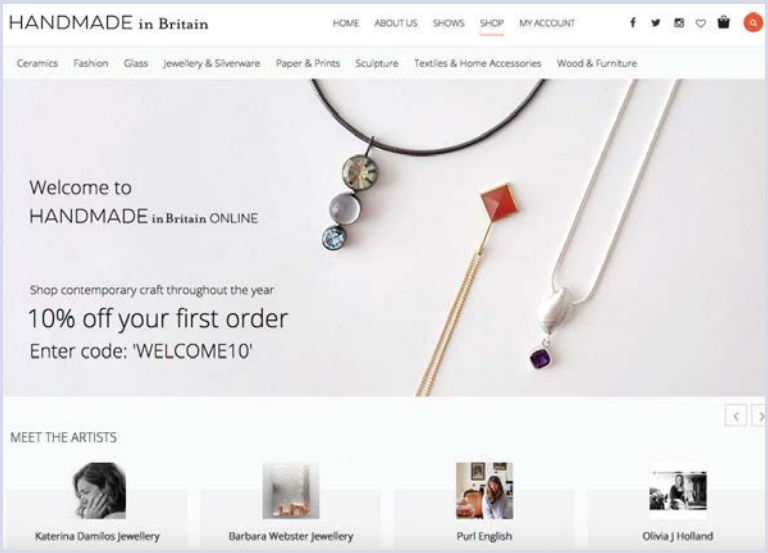
**Bringing you a round-up of the best from the online world, plus a selection of the latest projects that have caught our eye**

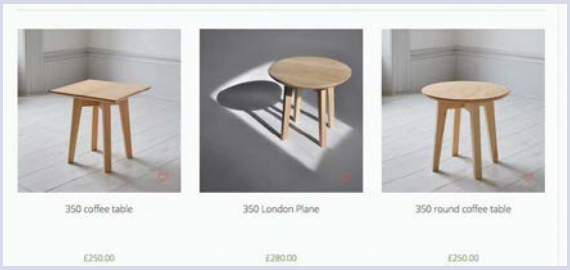
In this section of the magazine we bring together the best furniture and woodworking related content from social media. Here we'll recommend who to follow, where to comment and which online communities to join. We also feature projects we love, readers' letters, comments from the Woodworkers Institute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

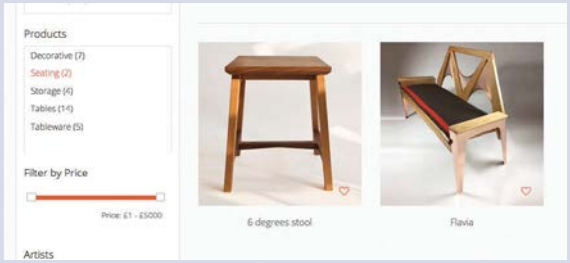
## Website: Handmade in Britain ONLINE

Drawing on over a decade of experience creating some of the UK's finest craft and design events, Handmade in Britain has launched Handmade ONLINE, a fantastic new online marketplace for designer-makers, with a section dedicated to wood and furniture. The site also includes maker profiles and interviews. Details of how to apply to sell your work via Handmade ONLINE are included on the site.

**Address: www.handmadeinbritain.co.uk/shop**



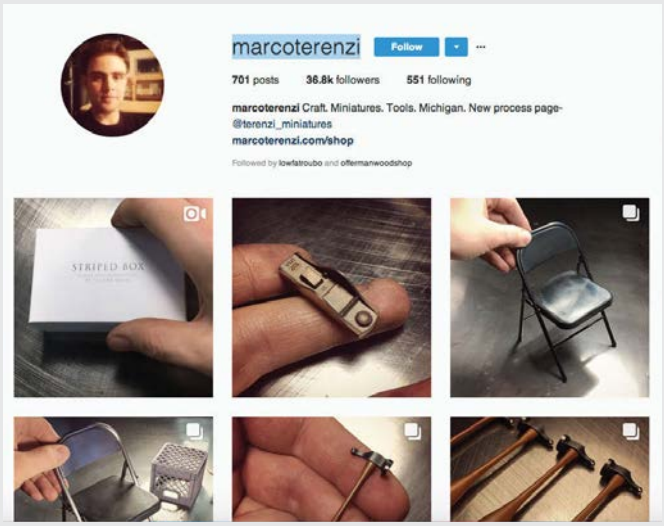



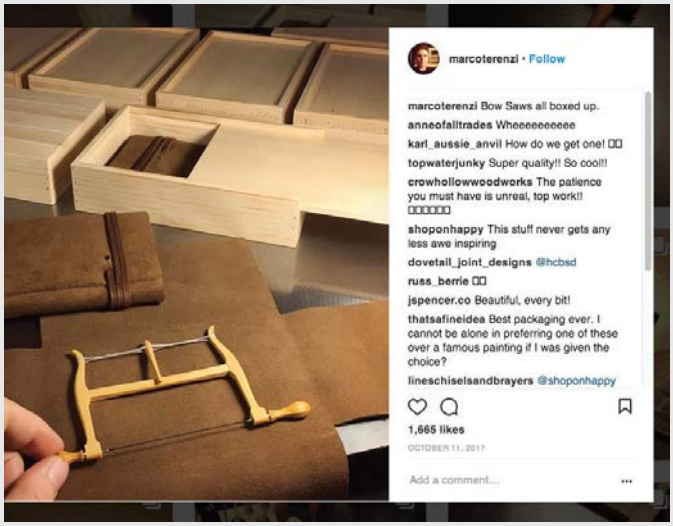




## Instagram: Marco Terenzi

Long-time readers of *F&C* may remember Marco Terenzi's series of articles on making miniature tool boxes. Marco continues to showcase his work on Instagram, where you can marvel at the incredible level of detail he achieves on tiny tools and pieces of furniture.

**Address: marcoterenzi**



# 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**

## Scandinavian classics from the Aram Store

London's Aram Store is stocking several pieces of classic Scandinavian furniture design. These include the Society table designed by Arne Jacobsen and manufactured by Carl Hansen & Søn. Originally designed in 1952 as a gift for the American-Scandinavian Foundation's New York office, this is the first time it has been available elsewhere. The company have also released Børge Mogensen's Hunting table. As the name suggests, the table was originally conceived for use in a hunting cabin and was designed in 1950 along with his better known Hunting chair. Both featured in the Copenhagen Cabinetmakers' Guild exhibition in the same year under the theme 'A Hunting Lodge'. The Beak lounge chair was also presented at the Copenhagen Cabinetmakers' Guild furniture exhibition albeit the following year. The light and organic frame highlights designer Ole Wanscher's sculptural flair with the arms' beak-like form inspiring the chair's name.

**For more information, visit: www.aram.co.uk**

**The Hunting table by Børge Mogensen in oak**

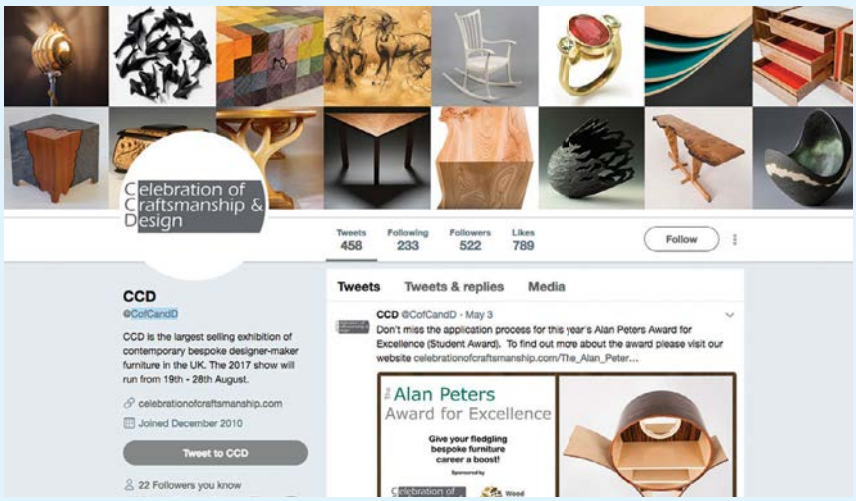
**The Beak lounge chair by Ole Wanscher in oiled oak**

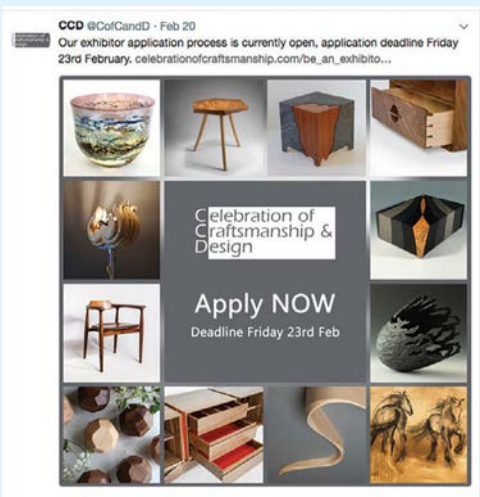
**The Society table by Arne Jacobsen**

## Twitter: Celebration of Craftsmanship & Design

CCD is our event of the month this issue (see page 17) and you can keep up to date with all the preparations via the show's Twitter account. Here you can find out who'll be exhibiting in August and read the latest news about the awards that will be presented.

**Address: @CofCandD**



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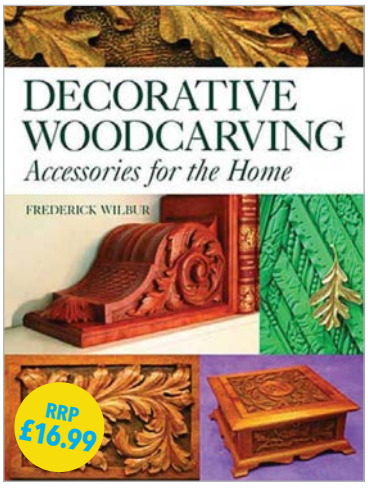


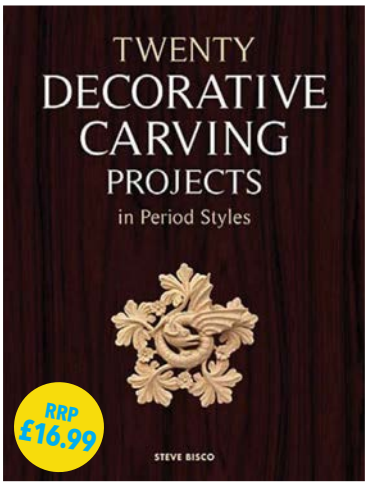



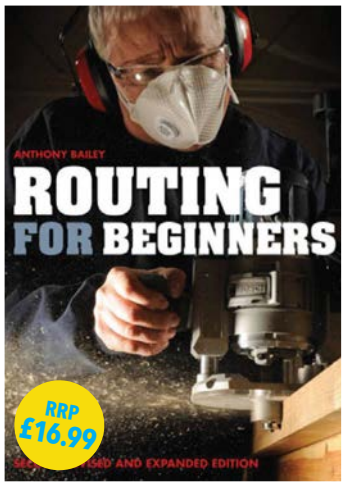


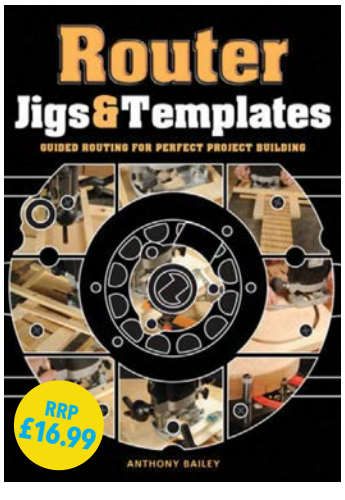


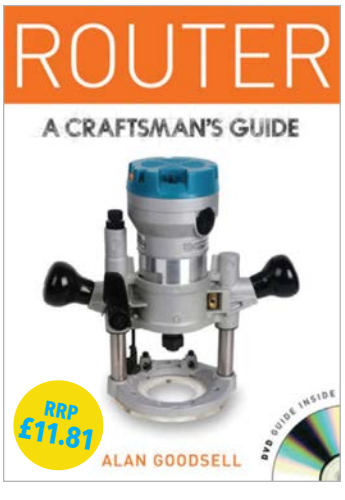


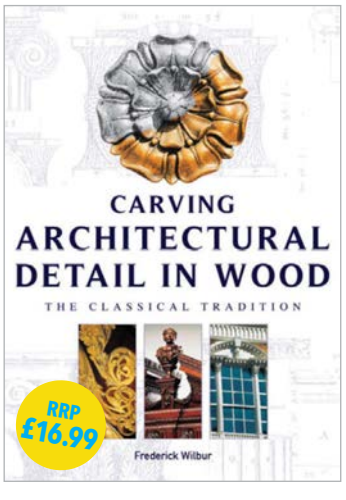


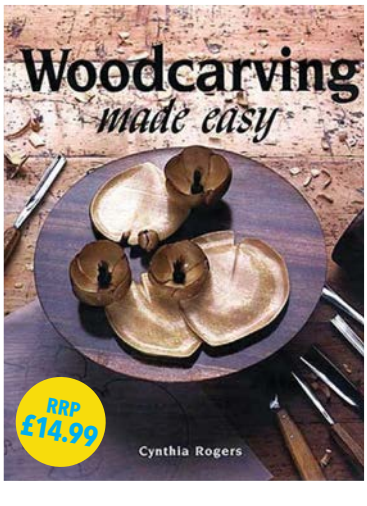


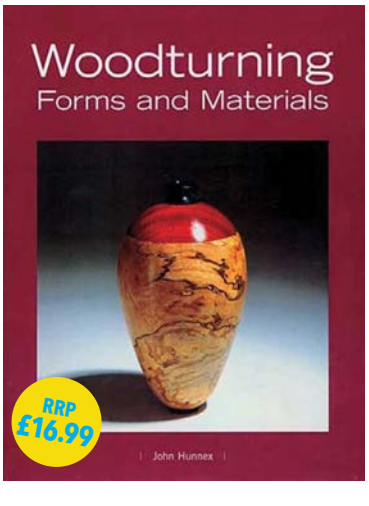


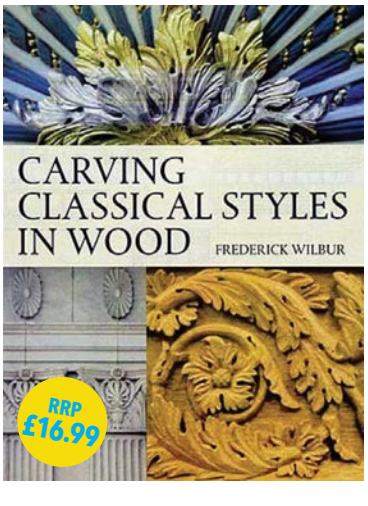


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# Behind closed doors

## Nancy R. Hiller uncovers the history of the Wooton desk

Mention Indiana and more Brits than I'd like to admit will get a glazed look in their eyes. 'Hang on', you see them thinking. 'Isn't that one of those "I" states in the continent's belly? "Middle America" right?' Or as we call it here in the States, 'flyover country', the idea being that all of the truly important and exciting events take place on the coasts (with the possible exception of Chicago).

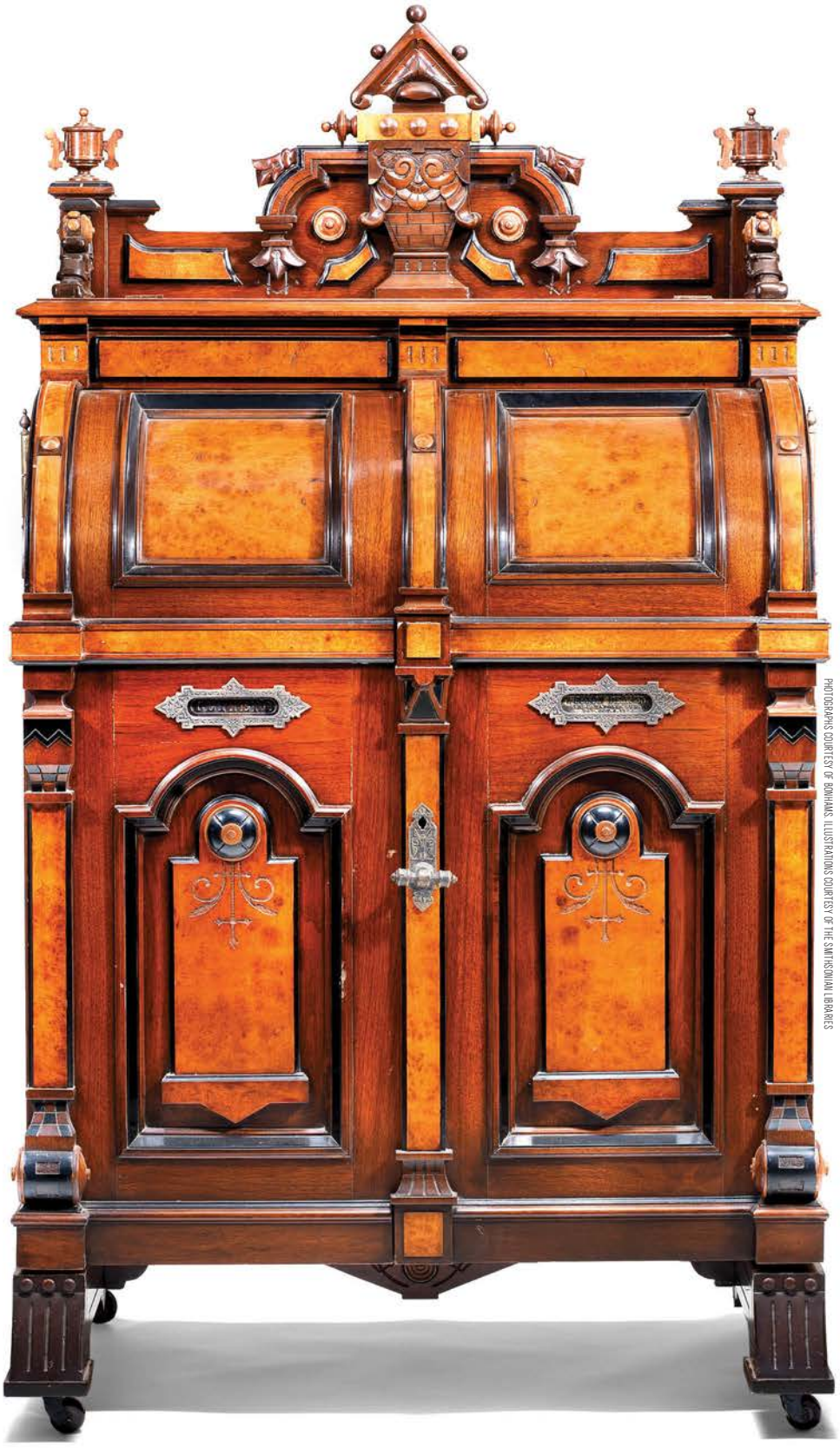
Yes, Indiana is in 'Middle America', along with its fellow I-states Iowa and Illinois – a region mocked for its love of all things comfy, bland and beige. The Hoosier State, as Indiana is known, is famous these days for corn production (maize, to you Brits) and the Indianapolis 500 car race. But for one decade near the end of the 19th century it could claim a classier association: it was the home of the Wooton desk, a furniture form that symbolised prestige and power – not only in the United States but also in Canada, South America, Europe, Britain and the Far East.

## A tool of efficient organisation and a symbol of success

An 1894 advertisement published in the British newspaper *The Graphic* described the desk thus: 'One hundred and ten compartments, all under one lock and key. A place for everything and everything in its place. Order Reigns Supreme, Confusion Avoided. Time Saved. Vexation Spared… Nothing in its line can can exceed it in usefulness or beauty, and purchasers everywhere express themselves delighted with its manifold conveniences. Hundreds in use in Great Britain.'

The Wooton desk reflected 19th-century concern with efficiency and systemisation that grew out of the classical economic theories of Adam Smith, John Stuart Mill and others among their contemporaries. Industrialisation and improved transportation by canal, sea and rail changed the businesses of manufacturing, mining and even office work itself, concentrating vast power in the hands of a relative few men. One result of these changes was a growing volume of correspondence and records related to inventory, billing and property. The Wooton combined the workspace typically provided by a pedestal desk along with organised storage, all in a single piece of furniture.

Beyond these practical functions, the Wooton desk could be closed up tidily and locked when its user's work was done. With its contents safely secured, the sheaves of paperwork neatly concealed from view, the desk fulfilled its second purpose, that of impressing visitors.



PHOTOGRAPHS COURTESY OF BONHAMS. ILLUSTRATIONS COURTESY OF THE SMITHSONIAN LIBRARIES

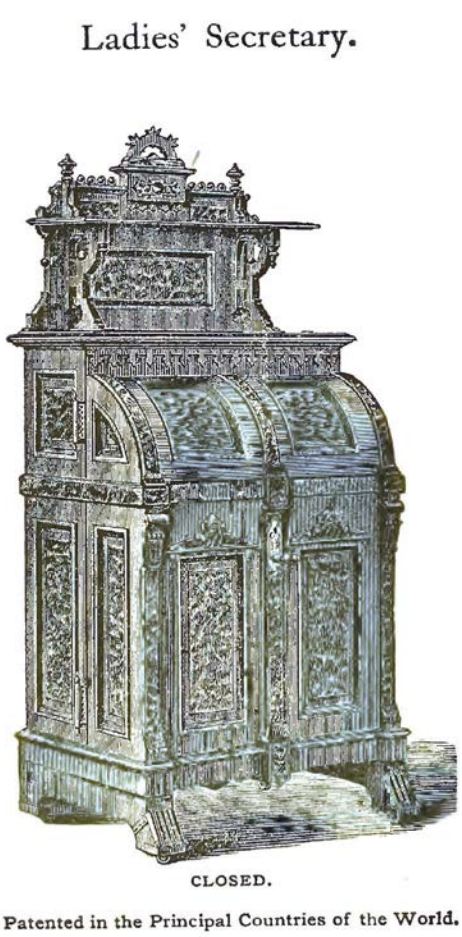
**Walnut, burr walnut, maple, bird's eye maple and ebonised Wooton Patent desk. This desk sold for £3750 at Bonhams' London saleroom in October 2015**

PHOTOGRAPHS COURTESY OF BONHAMS. ILLUSTRATIONS FROM WOOTON DESK COMPANY 1876 CATALOGUE COURTESY OF THE SMITHSONIAN LIBRARIES

**Walnut and maple 'Extra Grade' secretary desk. This desk sold for $9375 (£7042) at Bonhams' New York saleroom in September 2014**

Even in its most basic forms the Wooton desk was ornate, with carved decorative elements, inlay and striking hardware such as steeple-tipped hinges cast with elaborate Victorian patterns that would be visible when the desk was in use. But why limit yourself to basic? We're talking about the era we now call the Gilded Age. The culture of late-19th-century business was just as concerned with displaying wealth and power as amassing them. The Wooton desk was no less a status symbol than a piece of working furniture.

Accordingly, it was available in four distinct grades, ranging from Ordinary to Standard, then Extra, and culminating with the Superior. All were built primarily of Indiana-grown black walnut. What differed were the ornamentation and the species of veneers used on decorative panels – for instance, the Standard grade incorporated burl walnut, the Extra Spanish cedar or maple, and the Superior holly, satinwood and ebony. Each grade was available to order in three sizes. Prices ranged from $90 (roughly £1750 in today's prices) for the smallest Ordinary grade to $750 (approx. £14,500) for the largest Superior. (After finding the Ordinary and Superior grades slower to sell, the company switched its marketing approach in the early 1880s, concentrating on the two middle-range grades, which they offered in different 'patterns': To the Standard and Extra they added Queen Anne and Eastlake.) Among the owners of Wooton desks were oil industry businessman John D. Rockefeller, railroad magnate Jay Gould, Secretary of the Smithsonian Institution Spencer Baird and President Ulysses Grant.




## Why Middle America?

To comprehend how this prized artifact, the Tesla Model S or Rolex Yacht-Master of its time, grew out of the humble Hoosier state you need to understand some Indiana history.

Between 1787 and 1816, when Indiana became a state, Indiana was part of the Northwest Territory. There was no comfy 'Middle America' back then; the Indiana Territory was largely frontier, populated by native peoples along with bears, mountain lions and other ferocious wildlife, all of them intent on guarding their territory from invaders.

Early settlers were drawn by the prospect of opportunity: cheap land, abundant natural resources and precious few restrictions on activities, at least compared to the civilized areas from which they emigrated. It may be tempting to assume that such primitive conditions would only give rise to the sort of simple homemade furniture these settlers would have needed for their own daily use, but this assumption would be wrong. It wasn't long before skilled cabinetmakers began to be wooed from eastern states. An emigrants' guide in 1818 promised land rich in ash, walnut, oak, sugar maple and other hardwood species that could be bought for just $2 (approx. £25 today) an acre.

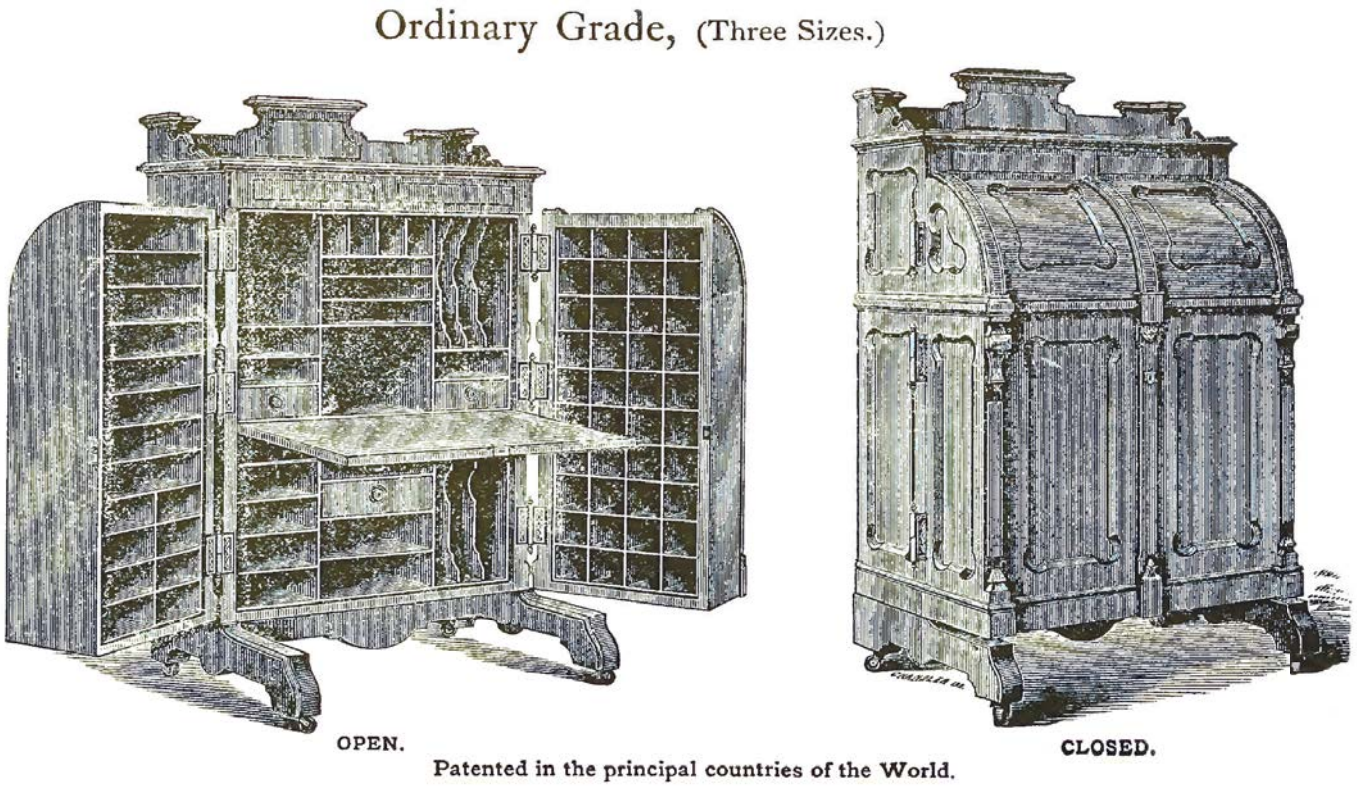
Why attract cabinetmakers specifically? Aside from the obvious connection – the supply of old-growth hardwoods – East Coast cabinetmakers were a ready target, because their livelihood had suffered a mortal blow. Factories were supplying urban markets with furniture at prices against which the skilled cabinetmaker could not compete. Newly formed states such as Indiana were blessedly free from this problem. Towns were being established; there were houses, shops and government offices to furnish. In less-populated areas, farms needed implements, many of them made from wood. Then, as now, the cabinetmaker may have spent much of his time on utility pieces such as bread boards and rolling pins. Coffins were many a cabinetmaker's bread and butter. There will always be someone dying. But there would still be occasional opportunities to build elegant chairs, bureaus and bedsteads; the 1830 records of one Andrew Gardner note sales of such divergent items as a 25-cent sausage stuffer (probably similar in form to a rolling pin), $6 bedstead and $23 wardrobe.

Some of these cabinetmakers brought with them imported veneers such as mahogany, as well as tools. In the earliest years of the state, work was done by hand in primitive structures such as log cabins. Water-powered lathes appear in records by the 1820s. Dogs were also used to power lathes, though horses were more common for these and other machines. (My dog would definitely not have been a business asset.) As towns grew and businesses prospered, advertisements for furniture makers gradually began to boast new workshops built of brick, a dramatic improvement in terms of fire risk and an admirable achievement considering that the bricks had to be made nearby, starting with digging the clay.

By the 1850s, the state was home to numerous skilled emigrants from Britain and Europe, as well as the East Coast. At this point the state's railroad system became the focus of serious expansion, which improved opportunities for receiving raw materials and shipping finished goods to wealthy eastern and southern states, as well as abroad. Also by this time, the furniture industry had largely caught up with developments on the East Coast, becoming so mechanised that there was less economic opportunity for the individual skilled craftsperson.

## Enter William Wooton

William S. Wooton (1835–1907) was a native of Ohio, which neighbours Indiana to the east. He spent much of his life in Indiana, where he worked in the furniture industry in the eastern town of Richmond before moving to Indianapolis, located in the state's centre, in 1870. In 1874 he obtained the patent for Wooton's Patent Secretary: 'a secretary constructed in three parts, two of which are together equal in width to the other, each part being provided with compartments or pigeonholes suitable for storing books, papers, etc., and the lesser parts hinged to the greater part, to serve as doors to the secretary.' A month after obtaining the patent, he and two partners formed the Wooton Desk Co. and began planning a factory large enough to accommodate 150 workers.




**A Wooton oak rotary desk. This desk sold for $3600 (£2704) at Bonhams' San Francisco saleroom in June 2008**

When the company's first illustrated catalogue appeared in 1876, it showed that the partners had significantly standardised the basic design, which enabled them to mass-produce parts, although the higher grades still offered opportunities for handwork embellishment. A mere two years after its establishment, an Indianapolis newspaper reported that the business was turning out 150 desks per month and selling them worldwide – a testament to the partners' ambition, energy and marketing savvy as well as their management skills and product. The Wooton desk was proof that Indiana had caught up.

## The desk's demise

The Wooton desk was a piece of 'adaptable furniture', with mechanical parts that allowed it to serve as a work surface, file cabinet and impressive piece of decorative furniture. But this very adaptability was criticised by some on the grounds that it required too much effort to unlock the doors, lift the writing surface and pull up a chair, only to repeat these steps in reverse at the end of work. 'Much ado… to write a note,' complained an English critic who identified himself as 'TRUE BRITON' in a letter to *The Furniture Gazette* in 1876. Moreover, with limited space for filing, the desk was not adaptable enough to accommodate the relentless increase in paper records generated by businesses and government offices.

Wooton's Patent Secretary continued to be manufactured in Indiana until a time between 1884 and 1885. As for Mr Wooton, business success alone held limited interest; in the early 1880s he shifted his focus from furniture to become a travelling Quaker evangelist.

*The author would like to thank David Buchanan, Curator of Decorative Arts at the Indiana State Museum, for his assistance with research materials for this article.* F&C

**A standard grade Wooton cabinet secretary. This example sold for $3750 (£2817) at Bonhams' San Francisco saleroom in June 2012**

## Traditional Wooden Handplanes


PHOTOGRAPHS BY RICK MASTELLI & SCOTT WYNN. ILLUSTRATIONS BY SCOTT WYNN. COURTESY OF FOX CHAPEL PUBLISHING

By Scott Wynn, published by Fox Chapel Publishing, 2018, £14.99
Available from: www.thegmcgroup.com

# Setting up planes

**In this edited extract from *Traditional Wooden Handplanes*, Scott Wynn explains how to set up and tune planes to work to their fullest**

Basic procedures for setting a plane up are performed in a specific order, followed by tweaking of the various tactics—throat opening, blade shape, bevel angle, etc.—which will determine the plane's function. The same basic procedures are followed in the same order:

1. Inspect the plane for condition issues
2. Prepare the blade
3. Prepare and fit the chipbreaker (if there is one)
4. Bed the blade properly
5. Configure the sole
6. Adjust the mouth
7. Attend to the details of the body and sole
8. Attend to the details related to the grip and finish

# Fitting a sole plate at the mouth of a plane

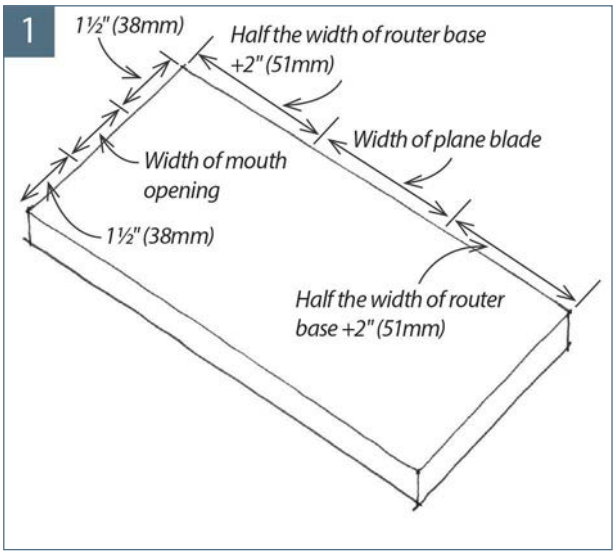
Every plane should have a mouth opening sized to the task it is to perform. Or, said another way, the mouth opening should not be much larger than the thickest shaving the plane is expected to make. The performance of every plane in general—and a smoothing plane in particular—will improve if it has a sharp, properly sized mouth opening.

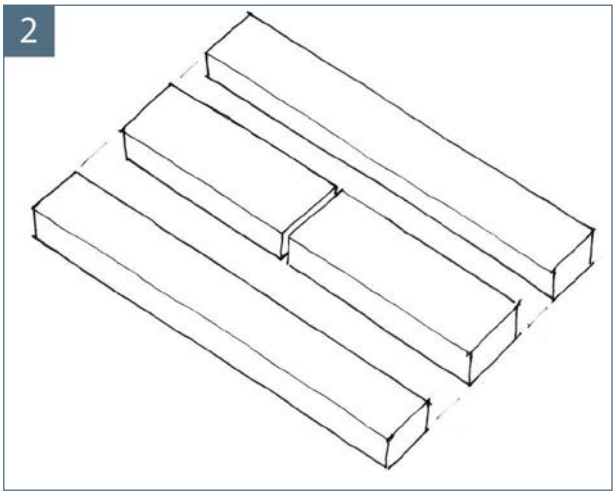
Fitting a sole plate at the mouth of a plane is a good way to restore an old wood plane whose mouth has worn and become too open to give the best performance. Many old wood planes are quite affordable, have good quality cast-steel blades, decent chipbreakers, and many years of service left in the bodies. Repairing the mouth opening with a sole plate will rejuvenate such planes, giving exceptional value for the effort.

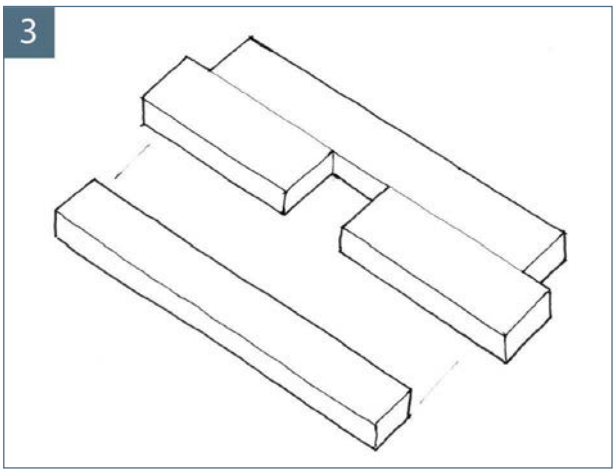
Rather than chiseling an opening for the plate by hand, this technique uses a router and a custom-made template. Though time is spent making the template, I believe this is offset by the speed, and in particular, the accuracy of the router in cutting the flat bottom recess, which is difficult to do accurately by hand. Reuse the template for sole plates on planes with the same blade width.

The sole plate, the piece used to repair the mouth, should be the same species of wood as the body of the plane, with the grain oriented the same way—traditionally, flat-cut with the bark side down. It should be ½in to ⅝in (13mm to 16mm) thick, about as wide as the plane body, and long enough for several repair pieces. Do not rip it to final width yet.

**1.** Prepare some ¾in (19mm) MDF to make a jig for routing the sole-plate recess.
**2.** Rip 1½in (38mm) off one side, then rip a piece the width of the mouth opening. With the saw still set at this width, rip the sole-plate blank to width. Having the jig and the blank exactly the same width simplifies fitting the repair. Next, cut the center piece in half.
**3.** Mark a distance equal to or less than the blade width (this dimension is less critical—the sole plate is roughly square) at about the center of both of the sidepieces. Using 5-minute epoxy (to allow hand alignment to set the pieces and reduce clamp time), glue the two centerpieces to the sidepiece at the mark. Work on a clean, flat surface to help align the faces.
**4.** Glue the second side to the centerpieces, reinforcing the glue with screws or dowels. Pre-drill the screws to prevent splitting. You can trim the ends of the centerpiece flush, if you want.
**5.** Mark centerlines on vertical faces of the centerpieces.
**6.** If your plane is too short to have the jig clamped without interfering with the router, clamp the jig in position and screw a fence to the jig at the side of the plane. Use the fence to clamp the jig when routing.
**7.** Mark a centerline down the sole of the plane. Adjust the plane blade so it just barely cuts, and mark the position of the blade edge with pencil on the sole and down the sides. Then remove the blade.
**8.** Align the jig with the centerlines of the plane, the back of the jig opening (the plane-blade end) slightly behind the pencil line indicating the blade edge. Verify that the jig opening aligns with the width of the mouth opening; this position takes precedent over alignment with centerline markings. Use the centerline markings to make the jig parallel with the length of the plane. Clamp the jig to the plane.
**9.** Use a ½in (13mm)-diameter by ¾in (19mm)-long pattern-routing bit with a top-mounted bearing. Set the depth and begin the cut by plunging to the full, or nearly full, depth in the center of the jig (so you do not damage it). Finish routing in the recess.
**10.** Square the rounded corners at the blade edge, carefully preserving the wedge abutments if they intersect. You can square up the other corners of the recess, or round the corners of the sole plate, your choice.



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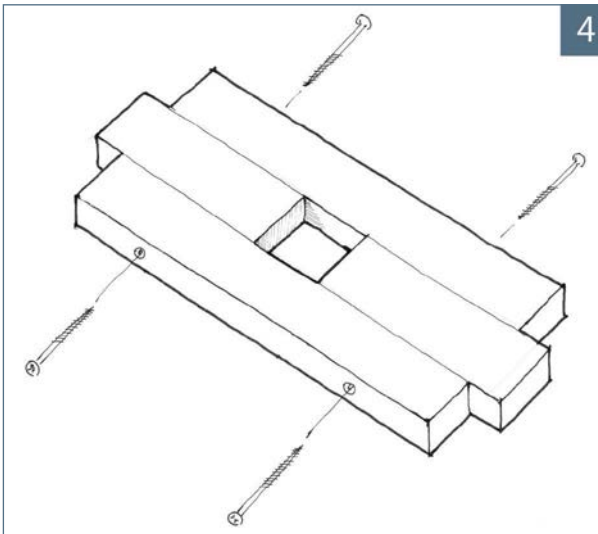

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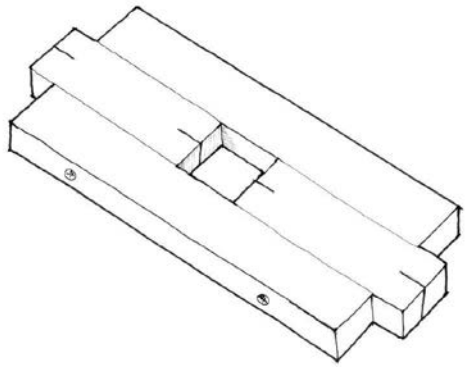

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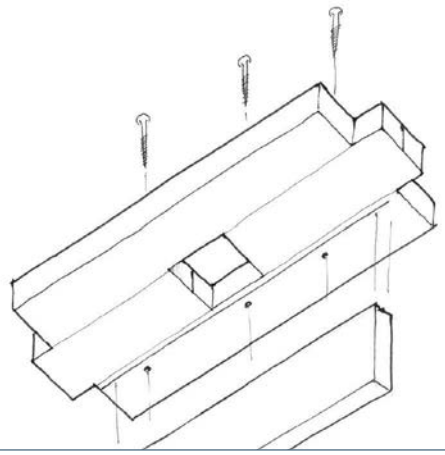

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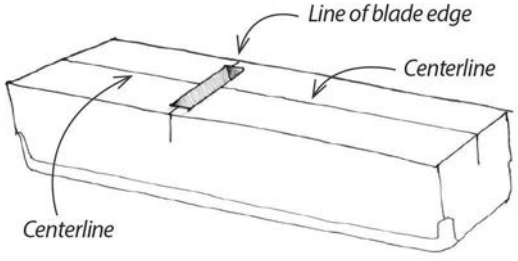


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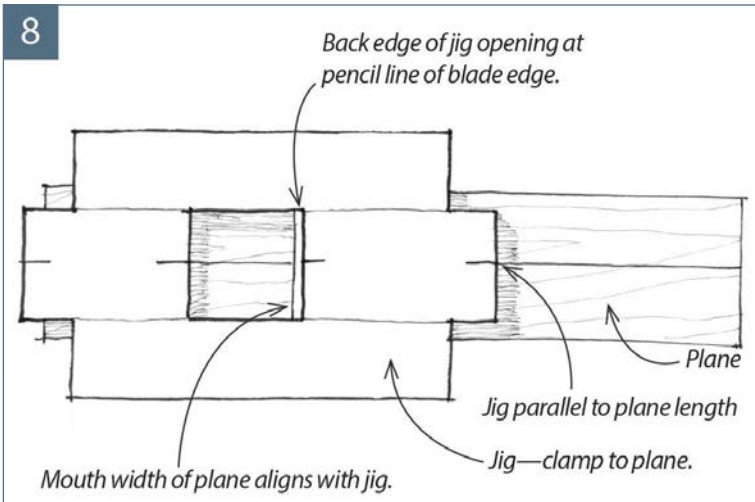


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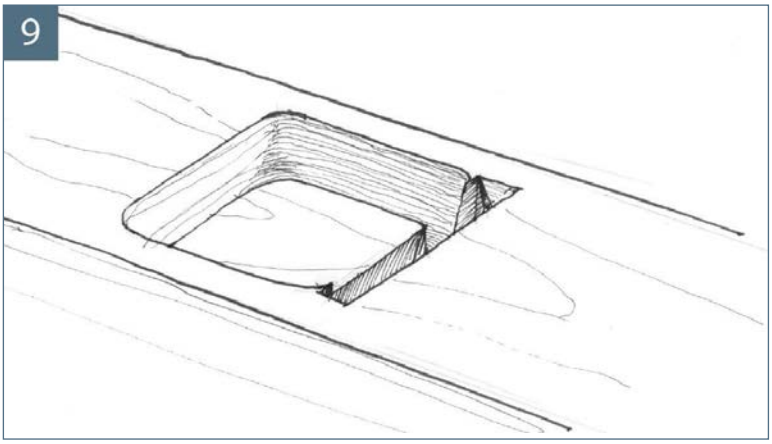

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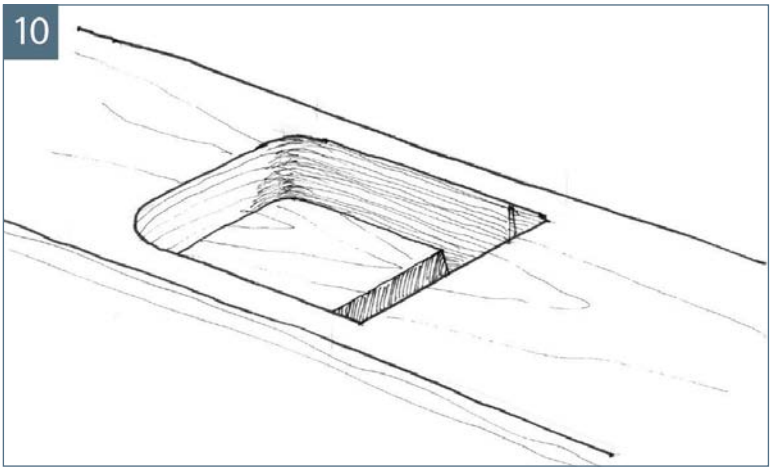


Cut the length of the sole plate to match the blade edge line. Fit the sole plate into the recess and insert the blade into its position. The sole plate might be slightly larger than will allow the blade to be set to its cutting position. If not, move the sole plate to its final position in relation to the mouth opening you want and glue it in place.

If the sole plate is too long, remove it and trim it on the shooting board until it just fits, establishing the mouth opening you want. If you want a throat-clearance angle less than 90° (70° or 80° is common for a plane other than a fine smoother), or, alternatively, if you want to increase the chip clearance angle for a fine smoother, plane the mouth end with the piece shimmed up on the shooting board to achieve the angle you want. This will, of course, shorten the sole plate, so be careful you have enough left. Be aware, the angle may complicate fitting at the wedge abutments. Lastly, glue the sole plate in.

# Fitting a movable sole plate

A movable sole plate has a number of advantages. It increases the versatility of the plane since the mouth opening can be set for fine or coarse cuts or to accommodate unruly grain. Additionally, as the sole wears and is trued, the plate can be readjusted to close the mouth, rather than having to be replaced.

The process for fitting a movable sole plate is the same as fitting a glue-in repair. There are some additional steps, however. It is not necessary, but probably better, to laminate the sole plate for wear and stability. Also, slots must be cut for the fixing screw and screwhead.

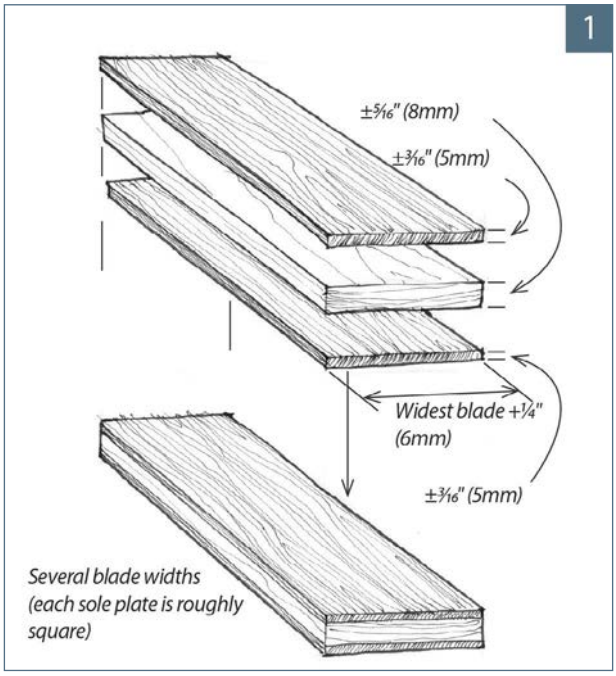
Glue up the blank and let it sit overnight, preferably longer, before jointing one edge and then ripping it to width when the jig is made.

Fit the sole plate as you would a fixed plate: if it is too long, cut it so it gives the maximum mouth opening you may want for this plane when it is in its far forward position. Check that the edge of the mouth is parallel with the blade edge when the blade edge is parallel to the sole of the plane. Adjust the clearance angle of the throat to your requirements as described above for fitting a fixed plate. Then, with the sole plate in position, drill a hole the diameter of the screw shank at the front end of the screw slot to a depth just shy of the bottom of the core veneer of the sole plate (Figure 5, opposite).

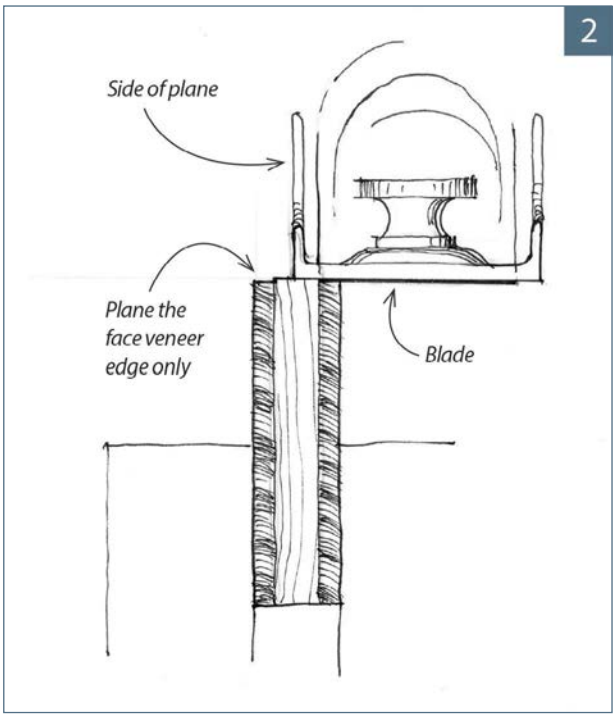
Remove the sole plate, clean the hole of all debris, replace the sole plate, and screw the machine screw (with a washer attached) into the hole in the sole plate. This will tap threads into the wood as it goes. If you have to remove the screw and reinsert it, be careful to properly start the screw in the already-cut threads.

When the mouth needs to be closed down, after the screw is loosened, sometimes the sole plate sticks and cannot be moved with the fingers. You can cut a notch about 1⁄16in (2mm) deep by approximately 3⁄8in (10mm) wide at the front of the plate—first remove the plate, of course (Figure 6, opposite). Then, when the plate sticks, a small screwdriver can be gently inserted to coax the plate into position. Don't forget to lock it in place with the machine screw.

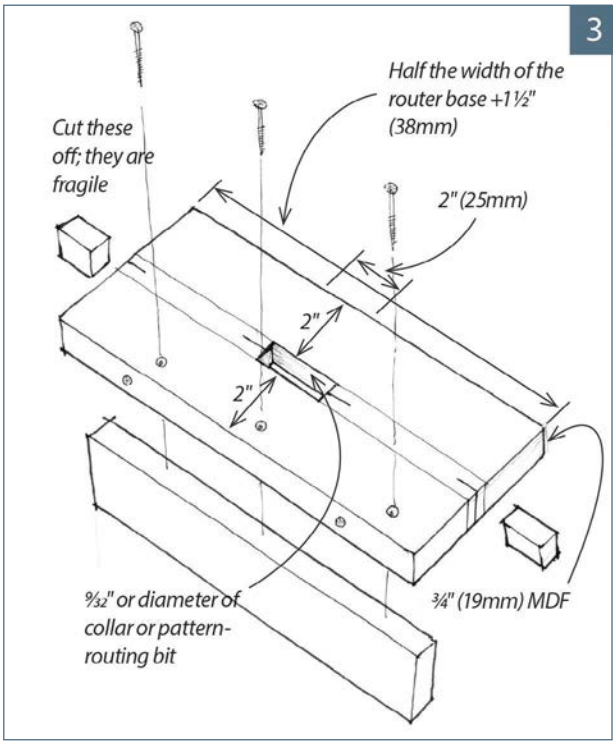
Now, if the edge of your mouth is parallel with the blade and its edge is clean and sharp, you are good to go.




**1.** Begin by laminating up the sole-plate blank. Make it at least ¼in (6mm) wider than your widest mouth opening, and long enough for several repairs. The face material should be about 3⁄16in (5mm) thick, each side, with a core (one ply) of the same wood as the plane body, about 5⁄16in (8mm) thick, and the same grain orientation as the main body of the plane. For the wood, lignum vitae, ironbark, ipé, or pau ferro are good choices; some dark tropical woods, such as ebony, can chip and sometimes leave dark streaks on light wood.




**2.** Do not glue the sole plate in. Fitting the movable sole plate involves an additional step: leave the core wood a snug fit in its recess; however, plane back the width of both face veneers, one light shaving on each side.




**3.** Make a jig for routing the slot for the screwhead using the same techniques. You can make the jig to accommodate a ½in (13mm)-diameter pattern-routing bit with a top-mounted bearing, or you can use a ½in (13mm)-diameter straight bit with a collar. Each has its advantages and disadvantages. With the pattern-routing bit, it is easy to size the jig, but also easy to damage it. With a straight bit and collar you'll have to size the jig cutout to accommodate any offset between the diameter of the collar and the diameter of the bit, but the jig is less likely to get damaged by the bit. You may have to use a straight bit anyway to get the length required. Check before you make the jig.

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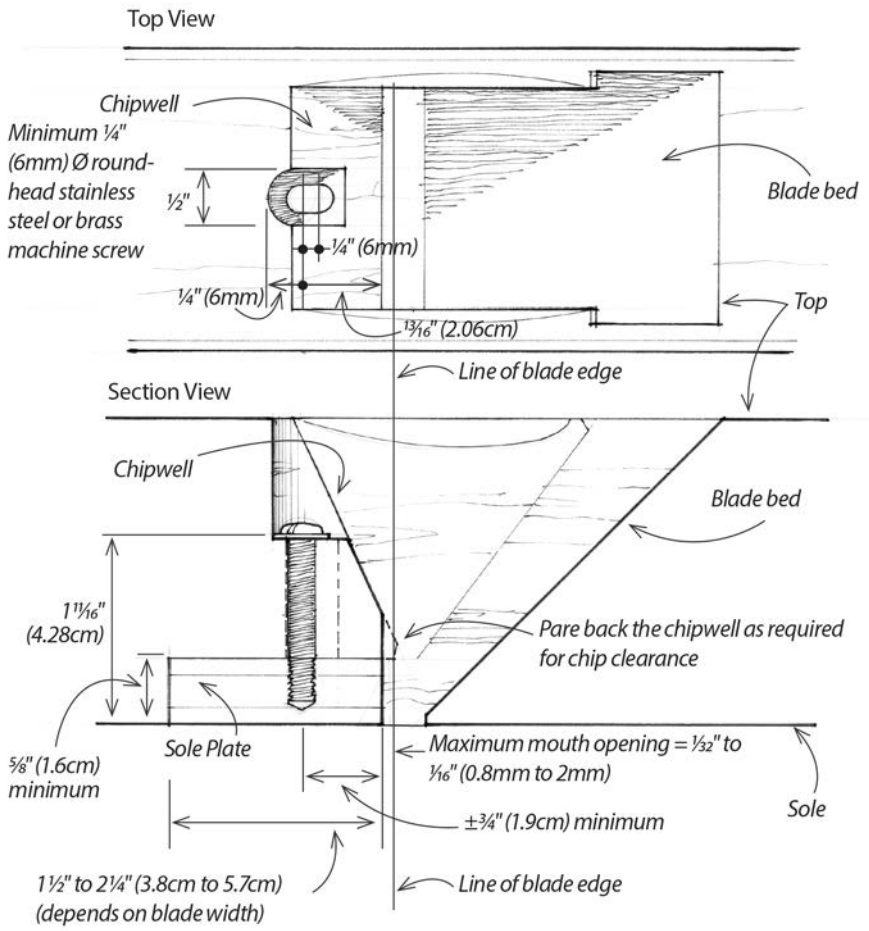


Slot for screw head must be deep enough to allow ±¼" adjustability and bearing for the screw head's washer, and be able to use a standard length screw that does not penetrate the surface ply of the sole plate.

Cut a ½" (1.3cm) slot for the screw head and its washer, and a through slot for the shank of the screw. Make both long enough to give the screw about ¼" (6mm) travel.

**4.** Again, if the plane is too short to clamp on top, mount a side fence below to clamp to. Mark the centerlines on the top of the plane and the front location of where the slot will be (see Figure 4, above) for calculating the position of screw. Set the jig on the centerline with the front of the jig opening at the mark for the front of the screw. Route the slot for the screwhead with a ½in (13mm)-diameter router bit. If you are using a pattern-routing bit, make sure the bit is long enough to reach while still keeping the bearing within the thickness of the jig. Set the depth of the bit so the bearing is within the jig before starting the router. Otherwise, you will be making another jig. Locate the centers of the screw-shank slot and drill each end and then the center on the drill press. Clean out the slot with the drill bit to get an unencumbered slot. A Forstner bit is best for this, or a good brad-point.

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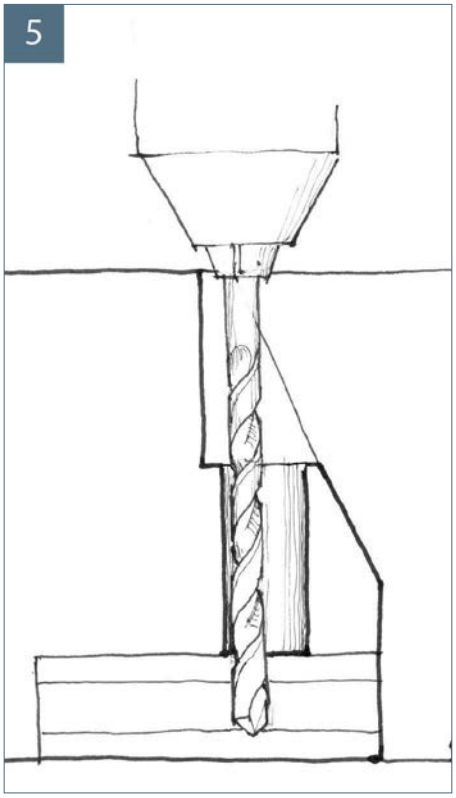

**5.** Drill a hole the diameter of the screw shank (not the thread diameter!) at the front end of the screw slot, to a depth just shy of the bottom of the core veneer of the sole plate.

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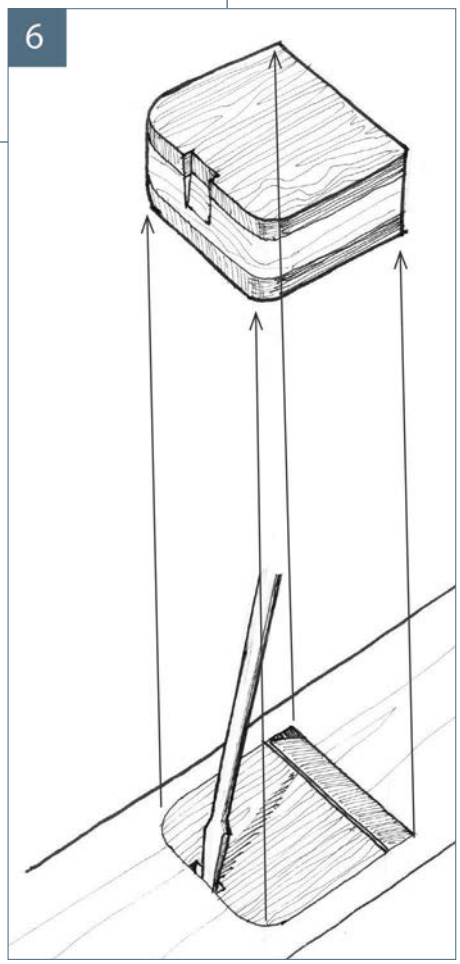

**6.** Cut a notch about 1⁄16in (2mm) deep by approximately ⅜in (10mm) wide at the front of the plate so that when the sole plate sticks, a small screwdriver can be gently inserted to carefully coax it into position.

# Fitting the movable sole plate to a vintage plane

**1.** I decided to fit a movable sole plate to this flea market purchase. Using the jig described above, I cut a recess for the fixing screw with a router and drilled a hole for the screw's shaft.

**2.** On the sole, before I started, I marked the position of the blade's edge when set deep enough to just begin to cut. You can see faint pencil lines either side of the mouth. I will use those to determine the length of the throat piece after I have cut the recess for it. I routed a recess for the plate using the jig and elongated the screw hole so the plate could be moved forward and backward after it is installed.

**3.** I had a sandwich left (at the top) from some other throat plates that I'd made for other planes. It has a core of about 5⁄16in (8mm)-thick beech and facings of 3⁄16in (5mm) pau ferro, all parallel. I measured the length of the recess to the pencil lines I made at the blade's edge and cut the plate. Then I rounded the front of the plate to match the recess. In front is a completed sole plate made for a 2½in (63mm) blade, and the screw that will be used to fix the plate.

**4.** The sole plate fitted, fixed with the screw, and planed flush. The plate will move about ⅛in (3mm), starting with a maximum mouth opening of about 1⁄16in (2mm). This means that if a 1⁄16in (2mm) mouth opening is acceptable, another ⅛in (3mm) could be taken off the sole of the plane for maintenance before the sole plate would have to be replaced.

**5.** The fixing screw. The aesthetics of screws: I chose a slot drive round head stainless steel screw, but it could easily be brass.

**6.** Working pretty well now. To get the finest shaving the blade needs a little less curve and the bottom could be flatter still. F&C

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# Cutting the corners

**Derek Jones weighs up the cost for a small-scale batch production run of octagonal components**

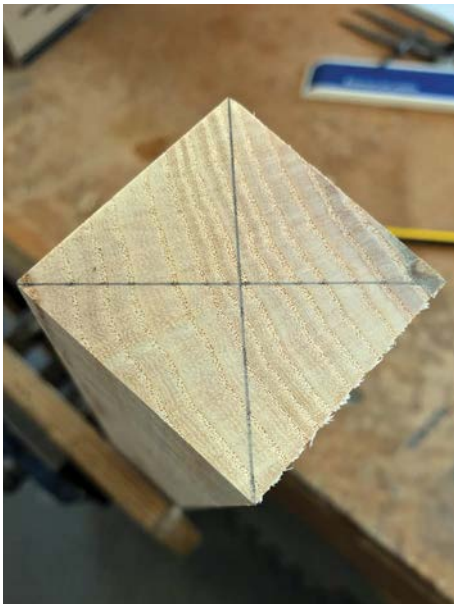
PHOTOGRAPHS BY DEREK JONES/GMC PUBLICATIONS

Handtool work is a bittersweet pill for me as it involves the things I like and dislike the most about woodworking; making things blunt and making things sharp. In fact just like a balanced diet, a more accurate metaphor for life is hard to imagine. While firing up an electric router may not be everyone's idea of fun, there's no denying that on occasion they provide a faster route from A to B and for a lot of us that edge translates into a process that's commercially viable. Before we go any further it might help to identify in the first place the operations that require a disproportionate amount of time and attention. When the removal of material is the basis for nearly all woodworking processes there's no easy answer until you factor in the volume of material being removed. Whether your output is for commercial gain or not, nobody likes to waste time on the mundane stuff if they can avoid it and that's the premise for this article. For the small workshop, investing in a router table probably makes more sense than having a bandsaw, a tablesaw and maybe even a planer-thicknesser. These labour-saving devices perform some very specific tasks of which none are particularly unique or bespoke. And as most timber suppliers are happy to perform these tasks for a modest fee, it often make sense to pay them to do so.

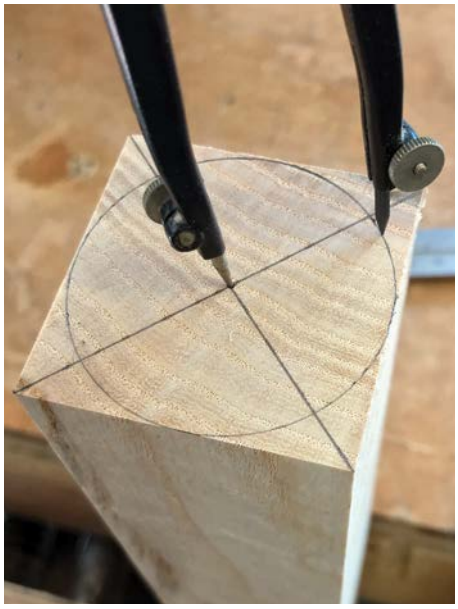
A table-mounted router will allow you to perform a number of accurate and repeatable processes quickly and to unique dimensions and specifications. Perhaps one of the most frequent being running lengths of identical moulding or profiles to matched components. In this article we're going to look at a technique for rapid stock removal that also results in a decorative component with a few added benefits for further shaping and future projects. Making things out of wood sometimes involves taking a piece of timber that's not quite straight and making it straight before turning it back into something that's not quite straight again. This technique works in much the same way; we start off with something round, make it square and then make it nearly round again. A more fancy word for it might be 'octagonalisation'.

## Squaring up

No matter what size leg or spindle you're intending to make you're going to need to start off with a square section blank. The example shown here has been cut from a board approximately 200mm wide and 50mm thick. It's quartersawn and ideal for something like a leg vice chop or chair seat as the growth rings pass from opposite faces. Reduced into four separate square blanks across its width and ready to thickness down to 45mm square, the growth rings are still passing from opposite faces and as such wouldn't make for a good choice aesthetically for four square legs. Two of the faces would display a cathedral grain pattern while the other two would feature pin stripes. But, as we're going to turn these squares into octagonal shapes we can pretty much assume that at least six of the eight sides will have a consistent stripy appearance. Having found the centre of our square we can now draw a circle with a diameter equal to the width across two opposing faces of our octagon. Or put more simply, just touching the faces of our square. Note that at this point the size of the square doesn't need to represent the size of the octagon, it just needs to be bigger or equal. Making repeat passes on any machine requires a good system for identifying a whole number of things, such as which face has been worked, which face is being used as a reference and even which direction the component needs to be passed over or under (or past) the tooling. You could opt for a simple squiggle or a continuous band around the square but nothing beats a good old-fashioned sequence of numbers. If you're consistent with your numbering it will tell you at a glance the direction as well as the orientation in respect of rotation. It's easier to appreciate in practice than to describe in theory by the way. One of the benefits of machining identical components is that not every component needs the full complement of marks. In this case just one will do.

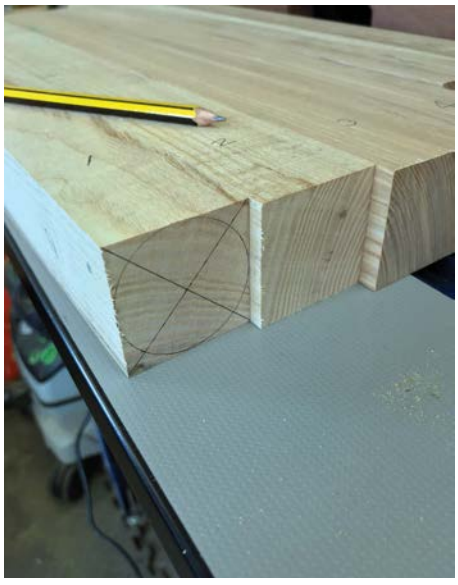


**X marks the spot and the centre of the square**



**Draw or scribe a circle the full width of the blank**

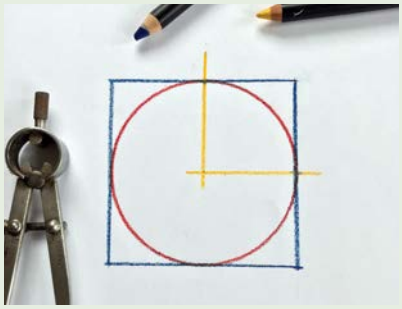
**Use a number system that's clear and mark each face of the square blank**



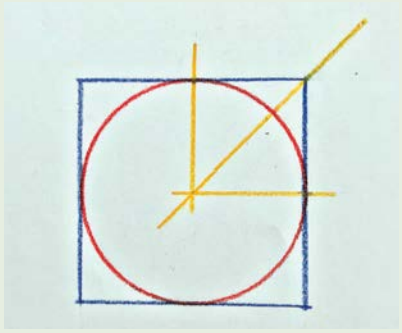
**There's no need to mark the end of every blank**

## Alternative layout

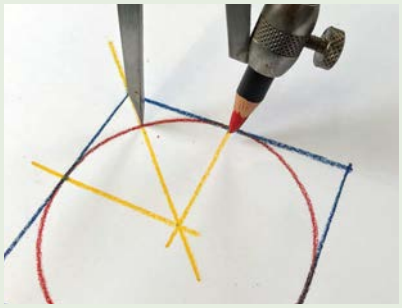
The geometry for creating an eight-sided polygon is quite straightforward if you want to draw it out with a compass and square.



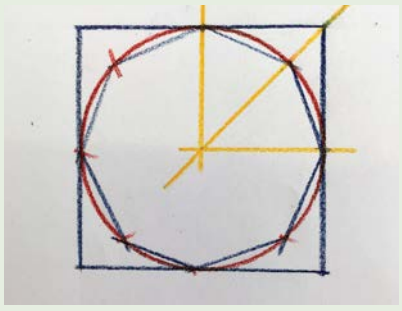
1. Draw a circle on the end of your square blank that spans the full width and depth of the component then add the vertical and horizontal lines to intersect the centre.



2. Bisect this angle by striking a line from the centre of the circle to the corner of the square.



3. Set your dividers or a compass to capture the distance between one of the centre lines where it passes through the circle and square and bisected angle.



4. Walk the compass around the circle and mark arcs at each point. Connect the points to create your octagon.

## Good first pass

The cutting geometry required to convert a square column into an octagonal one couldn't be simpler as the tooling will take care of the maths for you. All you need is a basic 45° chamfer cutter, preferably with a bottom-mounted bearing. I know, in the picture the bearing appears at the top but remember the router is inverted in the table, which now makes the bottom the top. Note that in router catalogue terminology cutters are generally referred to as having their shank pointing skywards. I don't know who makes the rules but that's what they are.

If your cutter has a bearing, set your fence to be in line with it as it will offer extra support to the workpiece and in some instances negate the need for a breakthrough fence if the cutter aperture is fixed as in this example. More complex versions comprise two separate fence sides that can be opened up or closed to suit the tooling. The downside of these is that they tend to have quite low fences that impose other restrictions. To my knowledge Festool is the only manufacturer to buck this trend. The object of the exercise is to chamfer the corners of the square to the depth of the circle. The first pass isn't critical in terms of accuracy if the cutter is capable of removing all the material you need in a single pass.

However, you may want to creep up to the finished dimension in stages leaving the finest cut for the last pass to achieve the best finish. Moving the blank slowly will also result in finer machine marks and help to avoid any furring up of the grain or breakout. After each pass rotate the blank a quarter of a turn to present a fresh corner to the cutter. After a complete round at one setting raise the cutter closer to the circle and repeat. When the cutter reaches the circle the octagon is complete. If you're worried about any unevenness you can make extra passes rotating the blank ⅛th of a turn. This will likely remove some or all of your pencil marks.

**The first cut is most certainly not the deepest. A little bit shy of the edge of the circle is quite sufficient**

**Leave a millimetre or less to remove on the last pass**

**A zero cut should just remove the pencil marks and nothing else**


**Number all eight sides before thicknessing**


**You're now at the halfway point and position No. 5. Time to set the thicknesser to the final dimension**

## Further adjustment

Further adjustments can be made using the same method on the router table but in this configuration the machine is not really functioning as a precision instrument. Feather boards, push sticks and other devices will certainly introduce a good level of consistency but for an exact finish you might want to turn to your thicknesser. When you want to run objects through the thicknesser that don't have parallel faces you need to make up a cradle or sliding carriage to support them as they pass through. Octagons, however, have four pairs of parallel faces so can be thicknessed or in this case re-sized quite easily. Before doing so you'll need to decide the new overall thickness between any two parallel faces. Let's say it's 16mm and the octagon sections are currently standing at 18mm. Number the faces 1 to 8 and set the thicknesser to 17mm and pass each component through taking a pass at position 1 to 4. If you haven't worked it out yet the amount you're removing is half the total amount needed to achieve the new thickness.

The number sequence is really important at this stage as the octagon will start to look quite misshapen. Ignore the proportions and trust the numbers as it is easy to make a mistake. For the next and final step you'll need to adjust the thicknesser to the final dimension – 16mm – and pass the blank through the machine in positions 5 to 8.

It's worth mentioning at this point that it's not uncommon for thicknessers to start or end a pass with a little indent of around a millimetre deep, anything from 50–100mm long at either end. Commonly referred to as snipe it happens as a result of the knives not being set properly in relation to the out feed table during planing mode. The discrepancy is then mirrored to the opposite face when it comes to thicknessing. Be aware you may experience a similar quirk when routing. While it's annoying it's not the end of the world as long as you accept that the first and last 100mm of the board is not to the finished dimension. Similarly when thicknessing thin stock in soft material the ends can get slightly compressed by the feed rollers also giving a false reading. For an accurate picture of what's going on check your dimensions from the middle of the board. F&C


**As long as every pair of parallel faces is to the finished dimension you can reduce the octagon again using the same 1 to 4 and 5 to 8 technique**

# UNDER THE HAMMER:

# The Oak Interior sale

**We look at some of the best lots from Bonhams' recent auction**

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, elm, fruitwood, oak, walnut and yew.

Related works of art, including treen, 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 re-create period interiors. Period textiles are also included.

Auctions take place at Bonhams' New Bond Street auction house twice a year. After last month's focus on chairs, here we're looking at a selection of cupboards, chests, coffers and other items.

PHOTOGRAPHS COURTESY OF BONHAMS

**£15,000**

**A joined oak and inlaid tester bed, made in the West Country, ca 1600–20. This is a 16-panel tester bed and the panels are carved with four different designs, including interlaced lozenges and ovals, filled with guilloche and floral motifs. The horizontal rails are carved with S-scrolls, the remaining rails with guilloche, the cornice with floral-carving. The headboard is carved with a pair of leafy S-scroll panels below a gadroon-carved top rail, flanked by carved corbels. A pair of floral marquetry inlaid panels are below, with gadroon-carved framing rails, flanked and centred by figural terms. There are four plain panels below, the end-posts are ornately carved with foliate interlaced motifs over a floral and gadrooned cup-and-cover and a stop-fluted plinth base. The footboard has two cinquefoil-carved panels and a central knot-pattern inlaid panel within a carved arcade.**

## £13,750

**A rare and small joined walnut three-tier buffet or court cupboard, made ca. 1600. The upper-tier has a strapwork-carved drawer and similarly carved ends, the middle-tier has cushioned and gadrooned-carved rails, with acanthus-leaf carved corners, the nulled-carved rails of the bottom tier are above scroll-profiled spandrels. The paired front supports of bulbous form have gadrooned-over-strapwork carved cup-and-covers, and the rear uprights are carved with stiff-leaves, later cut into two parts to facilitate removal.**

## £11,875

**A good joined oak coffer, dated 1648. It is profusely and deeply carved, having a quadruple-panelled lid. The front top rail is carved with paired vine and foliate-filled vases, centred by the initials and date 'E S' over '1648', and a pelican head, erased, to each end. There are three panels below, two carved with various flowers and vine issuing from a pineapple-shaped vase, with the centre panel similarly carved with oak leaves and acorns, all flanked by figural terms and enclosed within bold 'egg-and-tongue' carved upper and lower applied rails. The base rail is carved with meandering hops-like foliage, the base of each front stile is carved with a single pineapple, the sides with two panels carved with a carnation plant, their simplified design is repeated on the muntin rail, interior till and drawer apertures.**

## £8750

**An impressive joined and boarded oak court or press cupboard, made in Salisbury and the surrounding area, ca. 1620. The frieze is incised-carved with a repeat pattern of stylised flower-petals and is raised on baluster and reel-turned end-columns. The recessed cupboard is enclosed by panelled doors, each panel fully-carved with a leaf-quatrefoil interlaced design. The carved motifs on the horizontal and vertical rails are, unusually, treated differently, with the former worked with guilloche and the latter with a 'stiff-leaf'. The two larger lower doors are also carved in this atypical manner, again with leaf-and-berry spandrels.**

## £3750

**A rare joined oak, red-and-black-stained livery cupboard, made in Devon or Dorset and dated 1692. The frieze is carved with scrolling leafy buds against a stippled-ground, and with alternate red-and black-stained dentil-mouldings and scroll-profiled corbels. A pair of five-panelled cupboard doors are below this; the horizontal top panel of each door is carved with ornate scrolls highlighted with stain, the panels below are punch-decorated with a number and date to read '1692' over 'S W'. The low waist-moulding also has dentil-mouldings. A further pair of horizontal panels below are each carved with three roundels, the outer roundels with a large daisy-flower, the centre with a Green Man mask.**

## £8750

**A joined oak standing livery cupboard, made in Gloucestershire, ca. 1630. It has a triple-reeded twin-boarded top, and a gentle cushion moulded and leafy S-scroll carved frieze. It is raised on columnar end-supports, enclosing a pair of boarded doors centred by a fixed panel, all carved with a double-heart motif. The open undertier has a cable-carved top rail, and similar turned front supports joined by a pot-board. The sides have corresponding motifs.**

## £3500

**A joined and boarded oak food cupboard, made in the North Country, ca. 1640. The interior has two shelves, enclosed by a large single-panelled cupboard door that is carved with whorl-filled guilloche. This is flanked by pairs of small upright panels, each panel centred by a carved flowerhead, with a nulled-carved top rail. The remaining front rails are either guilloche or cable-carved. The cupboard sits on an associated sympathetically carved stand.**

## £3125

**An impressive mid-17th-century joined oak court cupboard, made ca. 1630–60. It displays many unusual features, including a dentil and chip-carved cornice. The frieze is carved with flowing flowerheads and a central heraldic badge. The cupboard is raised on ornately ball-turned end-columns, enclosing two boarded doors, carved with grotesque-headed foliate scrolls, and centred by a similarly carved deep recessed panel. This is flanked by stiff-leaf-carved pilasters, over a pair of carved drawers and a pair of large panelled cupboard doors. The panel is carved with fleur-de-lys inspired motifs, and the rails with atypical incised-carved leaves. The central broad muntin rail is generously recessed and carved with scrolled foliage including a pomegranate. The front uprights have curved full-height stiff-leaf carved pilasters.**

## £2250

**An oak joint stool, made in the West Country, ca. 1640. The top has a pronounced ovolo-moulded edge, and the rails have an incised-lunette design highlighted with various punched motifs. The legs are turned with two inverted-balusters, and joined all round by plain stretchers, on squat pear-shaped ring-turned feet.**

## £2250

**A joined oak chest with drawers, made in the West Country, probably Gloucestershire, ca. 1630–40. The twin-boarded top has a double-reeded edge. The front has three panels, each carved with a double-headed eagle or phoenix, above a pair of base drawers, each carved with paired forked-tongued serpents. The top rail is carved with carnations and flowing leaves, while all the remaining front rails are carved with cable motifs.**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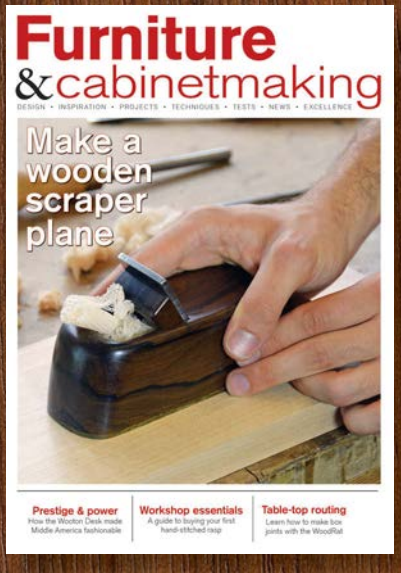


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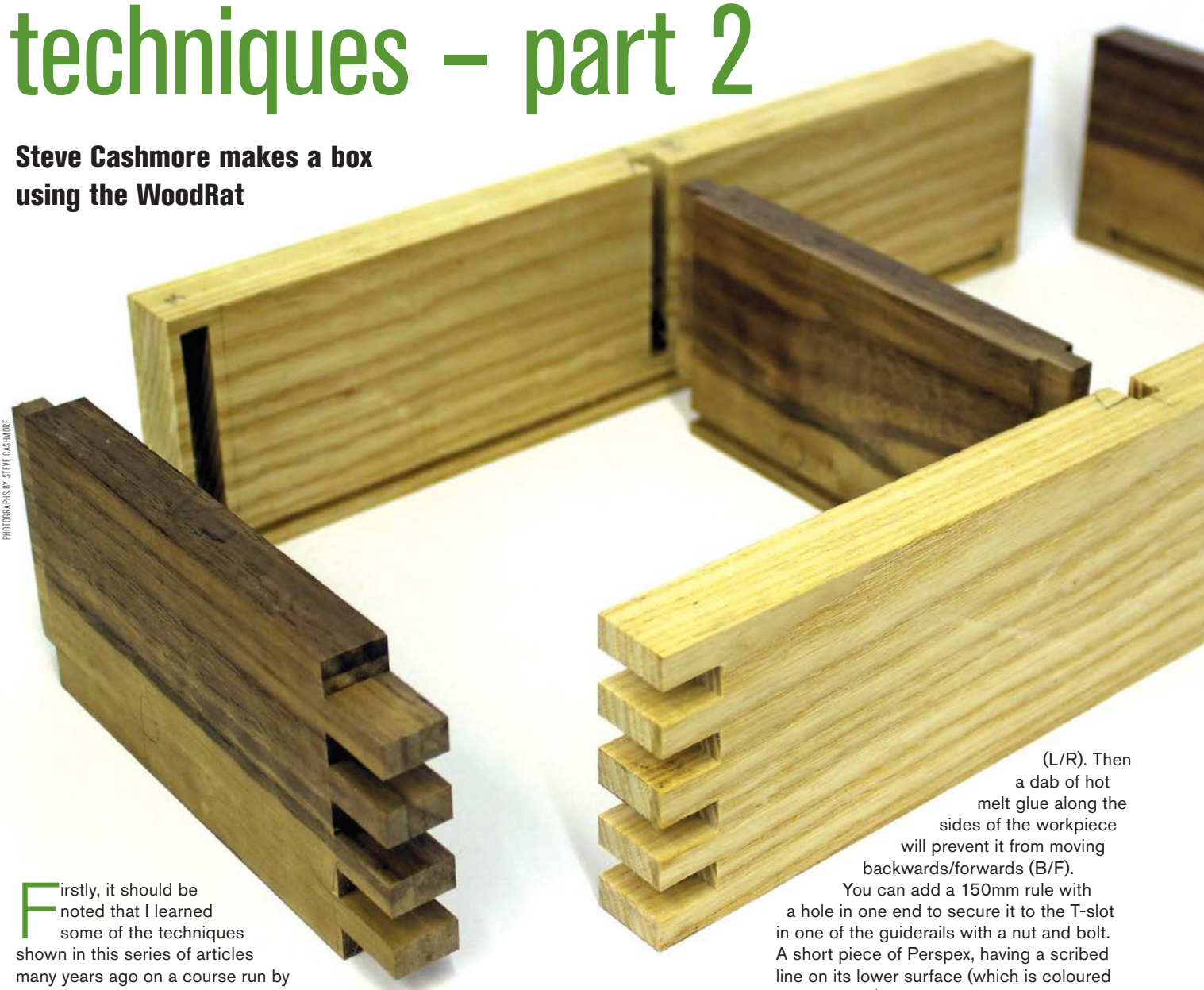
# Basic WoodRat techniques – part 2

**Steve Cashmore makes a box using the WoodRat**



PHOTOGRAPHS BY STEVE CASHMORE

Firstly, it should be noted that I learned some of the techniques shown in this series of articles many years ago on a course run by Mike Humphrey, which has influenced my woodwork using this machine.

In order to show you some of the basic WoodRat techniques I decided to make a simple box with two chambers in ash and walnut. The chambers are created by a dividing wall, which is housed into opposing sidewalls. Each corner of the box is made with a different type of joint: mortise and tenon, comb joint, through dovetails and half-blind dovetails. For the long sides I used two ash boards (312 x 73 x 20mm) and for the short sides three walnut boards (164 x 73 x 15mm). Let's look at how to make some of the simpler cuts first.

## Mortise and tenon joint

The mortise and tenon joint is surprisingly easy to do on the Rat. The mortise will be cut first and due to the design will be across the grain, so this means the ash board must be held in a 'horizontal table', which is a homemade anti-gravity platform!

It's made from a piece of melamine (720 x 270 x 15mm) with two slots (300mm long, spaced 100 and 170mm from the long edge) for two adjustable pine fences, and a couple of triangular ply supports, which are held in the camclamps. The ash is 20mm thick so we need to add a MDF spacer, of which two are supplied with your Rat. This elevates the base plate and router to allow thicker boards to pass underneath. The base plate, rails and spacer need to be carefully squared up and the front edge of the spacer needs to be flush with the front face of the Rat. Now the ash can be squeezed between the top surface of the table and the underside of the base plate, with the two camclamps locked to fix the height of the table.

The board is secured between the two pine fences and their bolts tightened; this prevents the workpiece from moving left/right (L/R). Then a dab of hot melt glue along the sides of the workpiece will prevent it from moving backwards/forwards (B/F).

You can add a 150mm rule with a hole in one end to secure it to the T-slot in one of the guiderails with a nut and bolt. A short piece of Perspex, having a scribed line on its lower surface (which is coloured in with a pen) can be used as a B/F cutter position indicator.

Wind the workpiece next to the cutter and zero the side of the cutter against the end grain of the workpiece. Secure the ruler under the perspex to the 10mm mark to set a datum. I used an 8mm diameter down cut spiral bit and, as the walnut is 15mm thick, we need to move the router forward until the indicator lines up with 21.5mm on the ruler. This number is half the diameter of the cutter (4mm) plus half the thickness of the walnut (7.5mm), which equals 11.5mm. This is then added to the 10mm datum to give 21.5mm. Now lock the black star knob on the left-hand side of the router plate to secure the cutter in this B/F position.

Then with a couple of pencil marks to define the start and stop ends of the mortise you can set the depth of cut on the router and cut the mortise by plunging down at one end, winding the workpiece with the handle

to the other end and lifting the cutter up out of the workpiece. The result is shown in the photograph on the bottom left.

Now place a scrap board in the cutter position (end grain up) without loosening the star knob, and make a shallow slot by winding the board L/R through the cutter using the handle. Now loosen the star knob and move the cutter backwards until the periphery of the cutter is in line with the rear wall of the slot. For clarity I took the router bit out of the router in the photograph on the bottom right to show you where the cutter should be positioned relative to the slot you previously cut. The slot represents the mortise you just made in the ash board. This trick makes it easy to set up the required thickness of the tenon.

Now place a walnut board in the cutter position and cut the first tenon cheek, if you're nervous just add one or two post-it notes between the front face of the Rat and the workpiece, which will cut a thicker tenon. Then flip the board round so the opposite face of the board now faces the cutter and cut the second cheek. You should find, without using the post-it notes, that the tenon thickness fits the mortise perfectly. If instead you made the mortises with a mortising machine then you can use the machine mortised workpiece to position the cutter to the sidewall of the mortise and then cut the tenons for the joining workpiece(s).

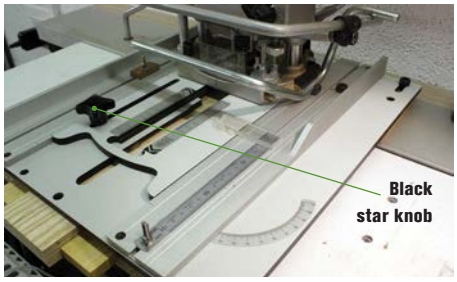
The end grain of the tenon can be positioned aside the mortise to mark two pencil marks which represent the width of the mortise and then rout the tenons to width.

You can either pare the ends of the mortise with a chisel to make them square so the tenon fits completely into the mortise, or alternatively round over the tenons with a rasp to fit the rounded mortises.

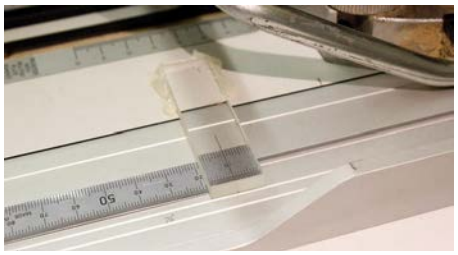
**The underside of the horizontal table**

**The base plate spacer**

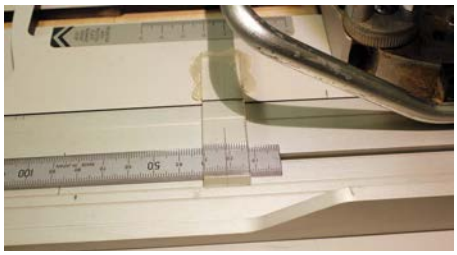
**Hot melt glue secures the workpiece**




**A 150mm rule secured in the right-hand guiderail**



**Setting the datum at 10mm on the rule**

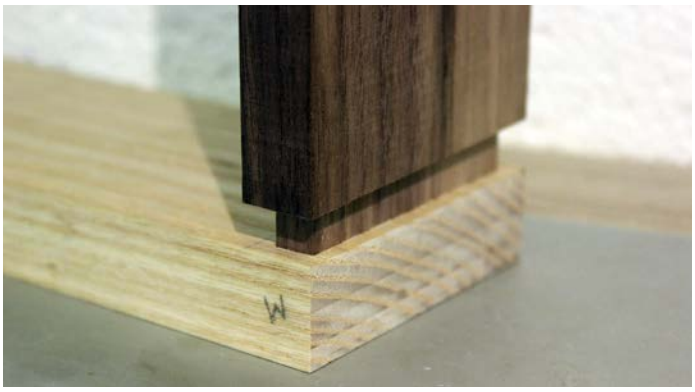


**Pulling the router forward to 21.5mm on the rule**

**After cutting the mortise**

**Router cutter removed and placed next to the rear wall of the slot to demonstrate the B/F alignment**

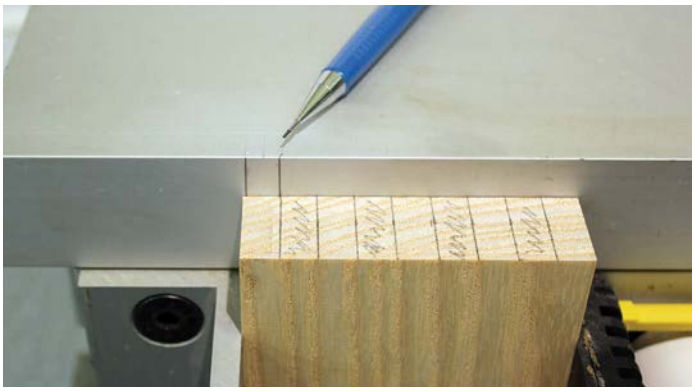
Cutting the tenon cheeks



Mortise and tenon fit

## Comb or finger joint

Ash template location to remove the first part of the 8.5mm shoulder



Ash template location to remove the second part of the 8.5mm shoulder

The next corner is made with the same 8mm straight cutter. The 73mm-wide board was divided into nine sections giving five fingers in the ash board; 9 x 8 equals 72 so we have to add 0.5mm to each end finger of the ash board. Shade the second division from the left to denote the part to keep on the walnut board (this also marks the waste to be removed on the ash board), and repeat for every other division along the width as shown.

As described in the first article in *F&C* 272, use a pencil to transfer the outline of the cutter to the marker position (front face of the Rat body), a clutch pencil (0.7mm) is best.

Using the marked-up ash board as a template in the marker position, align the pencilled cutter outline with the first part of the left-most division by moving the template L/R with the handle. This shoulder will be cut in two cuts in the walnut, since we need to remove 8.5mm using an 8mm diameter cutter, so placing the cutter to remove roughly half of the first division is fine and does not have to be accurately set.

Place the walnut board in the cutter position, ensuring it is pushed up to meet the underside of the base plate, and make the cut at the full depth of 20mm (corresponding to the thickness of the ash workpiece), preferably from front to back to minimise tearout.

You have now cut the first part of one outer shoulder, so you can now move the handle to align the right-hand pencil line of the cutter outline in the marker position to sit just aside the pencil mark on the ash. Now make another cut from front to back. You should now have the 8.5mm division completely removed.

You now repeat this for every next unshaded division on the ash template, the photographs opposite show the next alignment and cut. The next three slots cut in the walnut will be only 8mm wide so you only need to cut with a single pass. The final division or shoulder will be 8.5mm again and cut in two passes.

Next move the ash board to the cutter position and move the walnut board we just cut into the marker position while keeping the same face outwards.

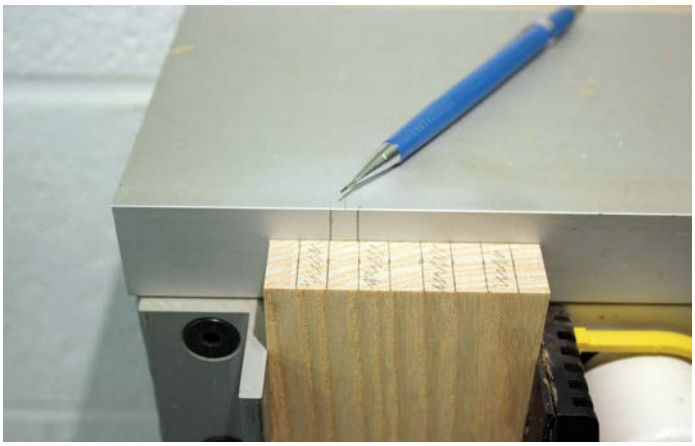
Align the left-hand finger with the cutter outline in the marker position (notice that the pencil lines representing the cutter outline are covered by the walnut finger). This will now set it up to cut the ash using the 8mm cutter, which will be exactly the same width as the finger. BEFORE you make the cut, change the cutter depth using the thickness of the walnut board as you need to cut the ash fingers 15mm deep. Now cut the first slot in the ash.

Next align the second finger of the walnut to the cutter outline in the marker position, and cut the next slot in the ash. Repeat this for each of the remaining two fingers. You should now have a completed ash board which fits like a glove into the walnut board. This method, however, will most likely give an asymmetrical cut of the fingers and slots.

Alternatively and preferably (but not shown here), for complete symmetry, as each of the shoulders are made by removing two parts per shoulder to obtain 8.5mm-wide shoulders, we need to make four cuts in total. Align the ash template to remove the first part of each shoulder and make the first cut as described above. Then without touching the handle, remove the walnut board and turn it around 180° so that the face which was facing you in the cutter position is now facing the front face of the Rat, and make a second cut. This means that the first parts of each shoulder (first and second cuts) are now cut and symmetrical. Now align the ash template to remove the second part of each shoulder and make a third cut and then without touching the handle, remove the walnut board and turn it around 180° so that the face which was facing you in the cutter position is now facing the front face of the Rat and make the fourth cut so that the 8.5mm shoulder is complete and symmetrical on both shoulders. Then move the ash template to the second cutting position (aligned with the cutter outline), as seen in the photo 'Ash template location for the first inner slot'. You can now repeat the above symmetrical cutting procedure for the next slot in from the edge of the board, make the cut, turn the board round 180° in the cutter position and make the second cut. You will now have the two shoulders cut and two inner slots cut, all symmetrical. For this particular layout we also have a single slot in the centre of the walnut board, so we just make one cut for that to complete it or to ensure that it is completely symmetrical make two cuts by turning the board around 180° as for the other cuts. This is the preferred method because then when

you cut several boards all with the same layout, they will fit into any corresponding board in any orientation. If you want to make a whole box just using comb joints then you can use this symmetrical method for every end of each board. For a single alignment at the marker position, for every board you not only rotate the board 180° to make two cuts at the first end of the board, but you also flip it from top to bottom in the cutter position and make two cuts at the second end of the board (again by rotating the second end of the board 180° to make the two cuts). This will then make four symmetrical cuts in the board for a single marker position setting.

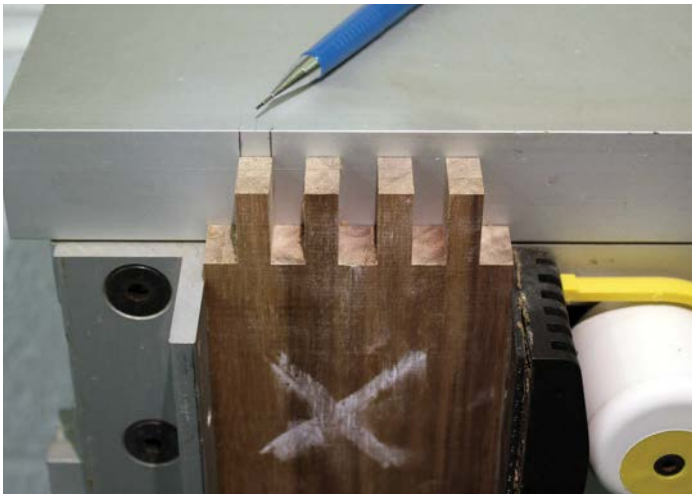
**The walnut board with the first shoulder removed**



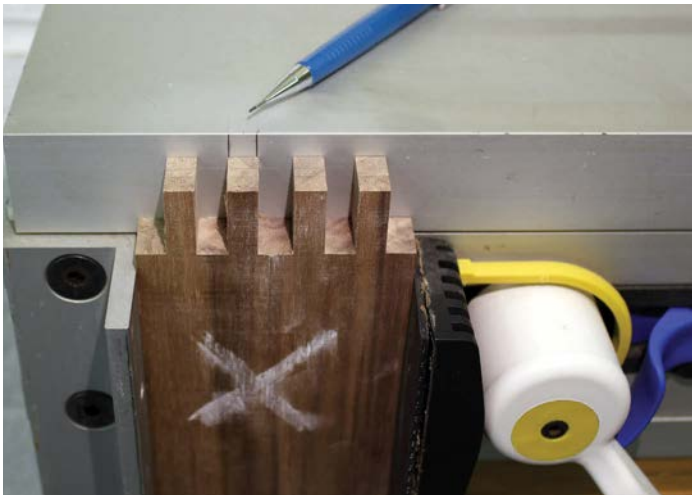
**Ash template location for the first inner slot**

**The walnut board with the first inner slot removed**

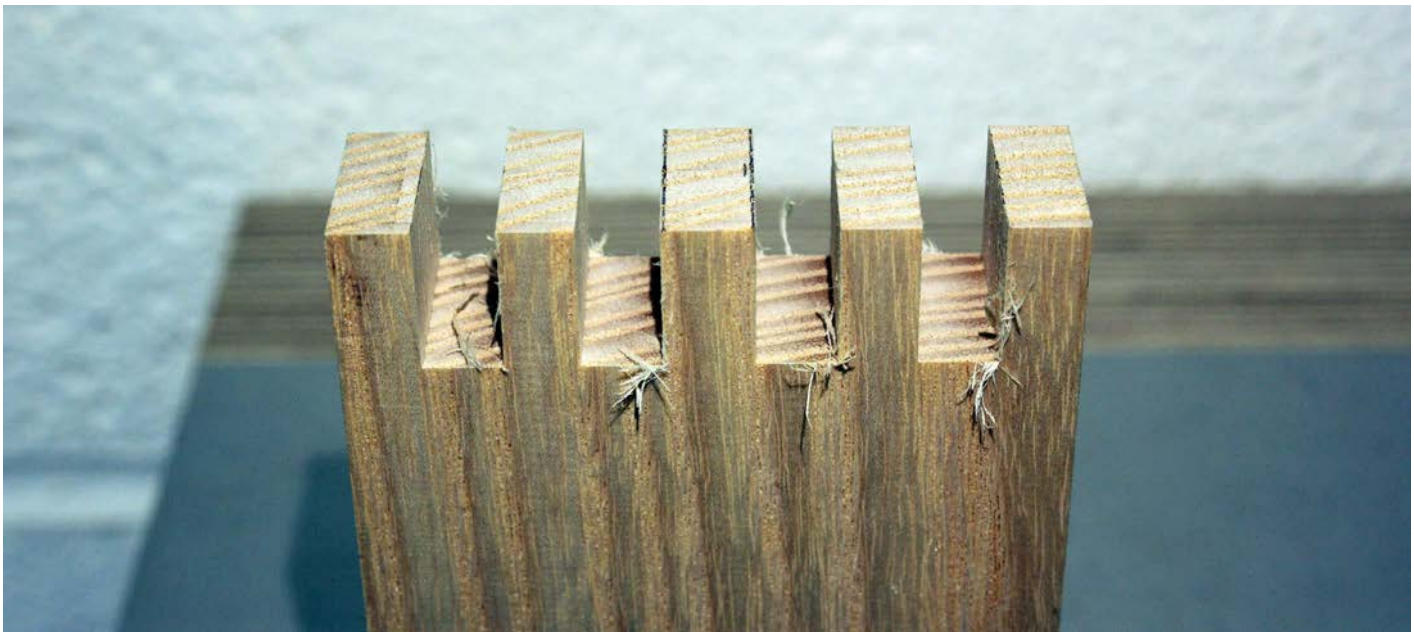
**The final walnut board**



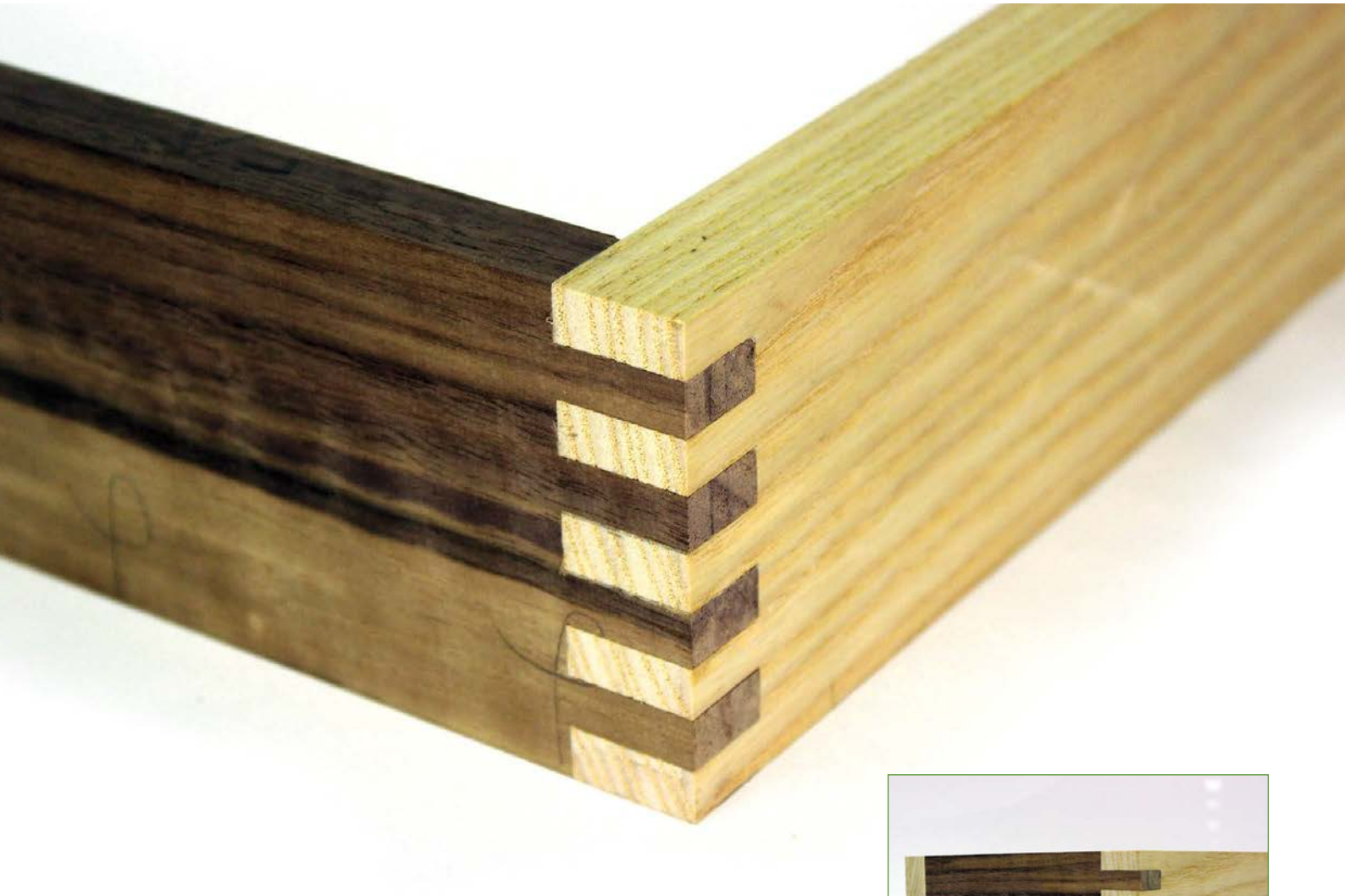
**The final walnut board now in marker position to be used as a template**



**The walnut board now located to cut the second slot in the ash board**



**The final ash board**



**Fit of ash and walnut comb/finger joint**

## Next month

Here's how the box is looking at this stage. In the next article we will look at continuing the joinery of the box using a sliding dovetail, a stopped housing, forming some base grooves and the base itself.

**The box so far**

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**2600 mm** Cutting Stroke

**Forsa 9.0**
1300mm | 107 mm
**3200 mm** Cutting Stroke

MADE IN GERMANY

| Model | Specification includes (as per quoted price) | HP (input) 240V / 415V | Depth of cut & Length of stroke | Price Exc VAT Plus Carriage | Price Inc VAT Plus Carriage |
|---|---|---|---|---|---|
| Precisa 6.0-P2 | Inc 2m STC + TWE + TLE (as illustrated - excluding pre-scorer) | 4.0 / 6.5 | 110 mm x 1400 mm | £2,995.00 | £3,594.00 |
| Precisa 6.0VR-P1 | Inc 2m STC + TWE + TLE + pre-scorer (as illustrated) | 4.0 / 6.5 + 1.0 | 110 mm x 1400 mm | £3,450.00 | £4,140.00 |
| Forsa 8.0-P3 | Inc Pro STC + TWE + TLE + rear support table + clamp + scorer | NA / 6.5 + 1.0 | 107 mm x 2600 mm | £5,420.00 | £6,504.00 |
| Forsa 9.0-P3 | Inc Pro STC + TWE + TLE + rear support table + clamp + scorer (as illustrated) | NA / 6.5 + 1.0 | 107 mm x 3200 mm | £5,575.00 | £6,690.00 |

STC = Sliding Table Carriage. TWE = Table Width Extension. TLE = Table Length Extension.

# Rasps – ending the tyranny of straight and square

**Richard Wile and Kieran Binnie explain how to add rasps to your furniture-making tool kit**

PHOTOGRAPHS BY KIERAN BINNIE AND RICHARD WILE

Rasps have traditionally been a mainstay of many handwork disciplines, including lutherie, chair making, shoe making and stonemasonry. But they also make excellent additions to the furniture maker's tool chest, opening up the possibilities of curves and transitions to work, as well as allowing for precise adjustments to be made to joinery.

The variety of rasp options available, including how coarse (or refined) the rasp cuts, together with the multitude of shapes and prices, and choosing between hand-stitched or machine-cut rasps, mean that for the newcomer investing in a first rasp can be a daunting experience. This article attempts to help modern woodworkers introduce rasps to their woodworking hand tool arsenal, focusing on hand-stitched rasps, which are increasingly available from retailers in different price points (and which we both use to the exclusion of machine-cut rasps), and explain how rasps can release your work from the tyranny of straight lines and square corners.

## What is a rasp?

Rasps are shaping tools that excel at creating and refining curves, chamfers and decorative detail. For the luthier, rasps can transform a block of the hardest figured wood into a graceful guitar neck, heel and headstock in no time. For the cabinetmaker, the rasp takes a bandsawn cabriole leg from rough to ready for sanding in a few minutes, refines the curve of a lamb's tongue chamfer or chamfers the feet of chairs and table legs.

While many rasps look like files with bigger teeth, they are in fact quite different. Firstly, the teeth are let into the hardened steel by hand, with a process known as stitching. Each individual tooth is hammered in by a skilled craftsperson using a specialised tool called a 'barleycorn pick', a skill which takes years to perfect (see the profile on Michel Auriou in *F&C* 249 for more discussion on this technique). Unsurprisingly, this handwork aspect is the greatest influence on quality, as

**RIGHT: Hand stitching produces teeth with slight variations, which gives a smoother cutting action and reduces chatter**

## Near endless options

Similar to files, rasps are available in seemingly limitless shapes and sizes, including flat, round, semi-round, leaf-shaped, tapered and tiny rifflers. A few simple guidelines will help the novice 'rasper' to make an informed choice on where to start. The stitching of the rasp is the most important aspect to understand. Generally speaking, the higher the number, the greater the number of 'stitches' per inch, and the finer the rasp. Individual makers use slightly different grading systems, but generally speaking a stitching of 4–8 is coarse, with 4 being extremely coarse for the most aggressive stock removal and 8 for more general rough shaping work. A medium stitching of 9–11 is the most versatile pattern for general woodworking, providing a controllable cut that requires minimal cleanup. The fine patterns range from 12–15 and provide the ideal configuration for final shaping or very detailed work. As a result, the high-grain rasps tend to be smaller than their coarser brothers, (generally 6–8in long).

well as cost. The slight imperfections and inconsistencies resulting from the hand-stitching process contribute to the rasps' effectiveness; an attribute that machine-made rasps are unable to replicate. A hand-stitched rasp is able to create a surface much smoother than their machine-made brethren, with far less chatter in use – even with difficult grained timber.

**RIGHT: The teeth on hand-stitched rasps are shaped using a 'barleycorn' pick and a small hammer**

**A coarse rasp quickly removes the hardest material, even this cocobolo**

# Using a rasp

The cabinetmaker's rasp is the most useful rasp for many types of work

Small rasps are ideal for exceptionally fine work for miniatures or small details

The three categories of stitching roughly equates to the specific uses of the rasp; with coarse-grained rasps suited to heavy stock removal or initial shaping tasks before introducing a finer rasp or moving to sandpaper. The medium-grained rasps are best for intermediate shaping and fine-grained rasps provide excellent tools for final refinement of the project.

A rasp's most powerful attribute is that it allows the user to shape in three dimensions – creating a rounded edge, or shaping a component, is done in one operation with no machine setup or jigs to slow you down. With the workpiece held in place, the rasp brings one's creative abilities to the fore and allows a true organic expression of the woodworker's skill to emerge.

Many uses for each type of rasp exist and rasps can enhance or even replace existing techniques. Rasps do not seem to care about the hardness of the workpiece, and hogging away large quantities of material on the most stubborn of timbers can be carried out with ease. Wood can be rapidly formed to shape with a coarse rasp where bandsawing may be difficult or dangerous. Turners often use a coarse rasp to knock the corners or protrusions off a piece to reduce tearout on square or odd-shaped workpieces, and using the spindle lock on a mounted piece is an excellent way to get closer to round before turning on the lathe.

Medium-grained rasps are the most flexible, and a medium cabinetmaker's rasp is a versatile tool if you only intend to buy one rasp. This type of rasp can perform a wide variety of shaping tasks and leaves a surface that can be cleaned up with abrasives if no other rasps are available.

The fine-grained rasp is for final refinement or very detailed work. With practice the woodworker can clean up a piece so that it requires no sanding; indeed these detail rasps can reach places sanding cannot, allowing smoothing of inside curves or complex shapes. These are also well suited to small work or small details in larger pieces; refining an edge detail with sandpaper is frustrating at times, while a rasp allows a controlled approach to get that final shape one is after.

Regardless of how coarse a rasp is, the user's cutting technique has a dramatic impact on the quality of cut. Much like carving, one must pay careful attention to grain direction to get the desired result. Working the rasp across the grain increases the roughness of the cut, removing material rapidly but increasing the risk of tearout. Following the grain produces the smoothest and cleanest cuts. Working along the grain can produce very smooth cuts that require little cleanup. Both can be effective techniques, depending upon the intended purpose. Heavy stock removal can be achieved by increasing how much you work across the grain.

Most hand-stitched rasps are handed, meaning they are designed to be used either right- or left-handed. Using the rasp wrong-handed will result in a heavily scratched surface or with no wood removal at all. The general technique is to hold the rasp two handed, the dominant hand on the handle and the other holding the tip of the rasp. The smoothest cut is achieved by pushing the rasp away from the body along the grain of the piece; this direction is not always possible and practice will help to achieve the best result for the job.

Using a rasp is an extremely tactile skill, with the feedback through the hands giving more information about the quality of the cut than simply looking at the workpiece. Generally, the smoother the cut feels, the smoother the cut is, and if the rasp is jumping and chattering across the grain, the cut will be uneven and irregular. Remarkably smooth surfaces can be achieved with semi-rough rasps by using the right technique. Like most hand tool skills, the best results are achieved with use and practice. There are few things more satisfying than feeling a rasp cleanly glide along an edge leaving behind a perfectly feathered and consistent facet for that important project.

# Using rasps for joinery

In many types of joinery, getting a good fit can involve fine-tuning the individual components. A medium or fine grained rasp can be an excellent choice for this type of work. Many joints involve flat surfaces, and the larger flat face of a cabinetmaker's rasp will register against the workpiece to stay in the correct plane. A through-mortise can be cleaned up or enlarged by gripping both ends of the rasp and aligning it with the face of the material to keep things square; sneaking up on the fit with light strokes. Tenon cheeks often need cleaning up to remove saw marks and to fine-tune the fit, once again the flat surface of the larger rasps is ideal to keep things square and in plane. Here the versatility of the rasp comes to the fore; simply by altering the force applied, one can easily control the amount of material removed for fine-tuning or serious stock removal. For woodworkers who prefer to fit their tenons with a rasp, several makers offer a joinery rasp, which is ideal for this application, and functions much like a planemaker's float.

The flat face of the rasp is ideal for cleaning up the surfaces of many types of joints

A fine thin rasp is perfect for refining the facets in this hammer handle

Shaping the convex portion of an ogee curve with the flat face of a cabinetmaker's rasp

Shaping the concave portion of an ogee with the curved face of a cabinetmaker's rasp

Stick-chair maker Chris Williams shapes the arm of a Welsh stick chair with a rasp

## Choosing your rasps

With rasps coming in so many shapes and grains, the conventional wisdom is to start with a three-rasp set. The most versatile and useful rasp is the cabinetmaker's rasp and is usually 12–13in long, with a flat surface and a semi-curved surface, and a medium grain finish. This rasp is perfect for general stock removal and leaves a surface similar to 80-grit sandpaper (depending on which grain you select) that is ready for final smoothing. The flat face provides a reference for smoothing and the size makes it much easier to use. If you buy only one rasp, this is the one to start with. Smaller than the cabinetmaker's rasp, but with a similar overall shape, is the modeller's rasp. Typically 8–10in long with a fine stitching, this rasp excels at final shaping and refining the surface left by a cabinetmaker's rasp. The smaller size of the modeller's rasp lets it get into small areas that may be difficult to sand and leaves a smooth surface requiring little or no cleanup. The third rasp in the typical starter kit is a medium grain rat tail rasp, for working tight radii, refining shapes and widening holes for expansion joints. This rasp can also be used with light cuts to refine an edge, leaving a surface smooth enough to sand.

Properly cared for, high-quality hand-stitched rasps will provide many years of service and can open up a whole new world of curves, flowing transitions and precise fine-tuning of joints. F&C

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# Right on cue

**In an extract from *Guild News*, Ian Musk tells Janette Wolf how Hamilton Billiards produce their range of bespoke tables and accessories**

Any fan of *Downton Abbey* will be familiar with the Billiards Room. Like the kitchen and the library, it is one of the quintessential settings in the long-running saga of the aristocratic Crawley family. The billiards room is one of those defining cultural emblems that we associate with the Edwardian aristocracy – or rather the male members of it.

The irony is that in the real Downton Abbey, actually Highclere Castle, the women are also fiendishly good players, according to the Countess of Carnarvon who confesses to a passion for the game on the castle's website. This will come as no surprise to Ian Musk, owner of Hamilton Billiards, the country's leading specialist supplier of bespoke games tables.

'We have numerous women customers,' he says. 'Many have played pool while at university and want to carry on playing. While some are not keen on having a whole room dedicated to a pool table, they happy to have the compromise of a convertible dining table.'

## Modern age billiards

Hamilton Billiards was founded in the 1980s and had been through several incarnations before Ian bought it in 2008. It not only supplies billiard tables but also snooker and pool tables and all the associated paraphernalia that goes with them as well as a variety of traditional games (croquet) and the not so traditional (such as air hockey).

While the Edwardian enthusiasm for games was understandable in an age before television, social media and *Grand Theft Auto*, it is perhaps slightly surprising that these games are still thriving. Hamilton not only supplies the kind of elegant hand-crafted table you would expect to find in Downton, but also numerous modern variations in aluminium, say, with electric blue or purple baize.

Nor are tables the preserve of bachelor billionaires.

A games table can slip into more modestly proportioned family rooms when it doubles up as a dining table and Hamilton supplies a variety of pieces

that are dual purpose. Ian explains: 'The market for snooker and billiards isn't as big as it used to be in the UK, but the demand for convertible pool dining tables is steadily growing as people come across the concept. Many think it is a new idea, when in fact it has been around for well over a hundred years.'

The company grows organically, developing new ranges and expertise depending on prevailing tastes. 'We try to move with the times and have expanded into other areas, most noticeably doing more general furniture restoration, which is a natural move for us as we have been specialising in restoring high-quality snooker and billiard tables for a good many years. We also develop new models and designs, as well as new finishes including paints and polyesters,' Ian says.

A key sector for the company is the hotel trade. 'Hotels are a good part of our client base, as top establishments like to provide their guests with the traditional games room to relax in and play a frame or two of snooker after having dinner,' Ian says. He also is expanding the company's work in the area of interior design. 'We work extremely closely with interior designers across the globe, supplying numerous tables to some for many years for their projects around the world.'

## The Hamilton craftsmen

Hamilton employs a small team of craftsmen who produce everything from the tables to the cues, with the exception of UK pool tables and some of the American ones. Both of these are outsourced because these models are aimed at mass markets rather than the more discerning or exacting customer who is after a bespoke design or finish.

Most of Hamilton's craftsmen have been with the company for between 10 and 20 years building up an unrivalled level of expertise. 'We use traditional methods to construct our new tables,' Ian says. 'We have a small team of skilled cabinetmakers to hand-build our tables; many custom-designed to a customer's requirements. We also have experienced polishers to match tables to individual preferences for colours and finishes, while using our own fitters to install tables around the world.'

Unlike many other small and medium-sized companies, Ian has no fears about the impact Brexit will have on his markets. 'We have developed a good reputation delivering tables to countries in Europe including France, Spain, Portugal and also Switzerland and haven't noticed any decline in interest from European countries due to Brexit. I hope that this will remain the case,' he says.

As with any item that requires craftsmanship of this level of sophistication, the end result does not come cheap. A new handmade billiard table would set you back about £5000, while cues cost from about £12 to more than £100. If you want to start kitting out a games room, you could opt for a handmade mahogany card table at £750 or a dartboard for £58. For anyone feeling seriously flush, Ian says the most expensive table currently on their books is a 'a very rare cast-iron table part-way through being restored, which is listed for £35,000.'

But just as in Lord Grantham's day, a billiard table is still regarded as the ultimate residential accessory and while Ian is far too discreet to publicise his client list, he does admit that many of his tables find their way into the homes of the very rich, if not very famous. 'Often the customer's identity is a closely guarded secret,' he says. 'Our tables have been delivered to country estates where security is extremely tight and we have been escorted at all times by bodyguards. We have delivered to more celebrities than I can remember, all very excited to receive their own table which they have often dreamt




about since childhood.' In fact one of the glowing testimonials on the company's website reads: 'Sorry I haven't emailed you sooner but I've been practising my snooker!'

Hamilton Billiards has been a Member of The Guild of Master Craftsmen for seven years. Ian regards it as an important validation of the skills and standards that the company represents to its customers. 'I think it gives customers the confidence and assurance that we will provide the quality and service that they expect from a Member of The Guild,' he says. 'Our theory is that the tables built over a hundred years ago are still as good today as they were then, so ours will be in a hundred years' time. The tables we build are the heirlooms of the future and already we are seeing them being handed on to the next generation.' F&C

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*Jamie Smith. Test Report. Good Woodworking. February 2018.*

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# Kit & tools

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

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Little details like the contrasting wedge make the Wile Plane Hammer a joy to own

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## MINI TEST
## Wile Plane Hammer

I use all sorts of hammers to make adjustments to lots of tools and equipment around the workshop. Actually if I'm honest, that sentence should read: I use all sorts of tools as hammers to make adjustments to tools and equipment around the workshop. Though that may sound a little crude it's not like I open tins of paint with a chisel or stir the contents with a screwdriver, at least not one of my own anyway. While I have a healthy respect for tools I don't want to be a slave to them or the manufacturers that churn out products that apparently we can't do without. Having rulers and scales in every direction won't necessarily improve your accuracy when you need to adjust something by a hair's breadth. For example, the fine adjuster on my router table fence is whatever hard and heavy implement I have to hand to tap gently on either face to nudge it back and forth; hammer, dead-blow or mallet they're all precision instruments to me. Of course there are tools that, because of their size, require a light touch and for that I have a range of smaller implements capable of delivering the appropriate force in the appropriate place. The Veritas Wile Plane Hammer is one such implement to find its way into my tool chest. Based on a design by Richard Wile, the hammer is made in-house at the Veritas factory in Ottawa. The brass head is ⅝in in diameter and weighs just 3oz and is nicely sized to enable adjustments to be made to the most inaccessible blades on your smallest planes; block planes, small moulding planes, mitre planes and spokeshaves being the most obvious examples. Moving up the wooden body plane scale, a second heavier implement would be required for some adjustments. At one end of the head there is a hard plastic (Delrin) tip shaped to minimise impact on wooden surfaces like plane iron wedges. The handle is just short of 11in long and made from unfinished torrefied maple, which results in a comfortably balanced non-slip grip. It looks similar to walnut which is generally accepted as a good contrast to brass.

Planes with lateral adjusters also respond favourably to a gentle tap to make fine lateral adjustments now and then, however sophisticated the mechanisms are. My shooting plane, smoother and rebate planes are always set by using this method.

Although a plane hammer is not an essential tool, having a tool specifically designed for the purpose of hitting other tools makes perfect sense if you want to acquire a degree of control, and if it brings a smile to your face in the process, that's got to be good thing.

*From: www.classichandtools.co.uk*

## Red Rose Reproductions Spill Plane


The spill plane was a unique 18th-century tool that was not used to improve the surface of the wood, but rather to create a shaving with a tight stiff curl that could be used to transfer a flame from one place to another, such as from a fireplace to a candle or lantern. The plane was used as any wooden plane would be, using straight-grained scraps of wood about 12in long. Each pass produces a spill, so named for the way the chip 'spills' out of the escapement hole in the side of the plane. The blade is sharply skewed, and the chip is forced into a tight curl by the contoured bottom of the wedge. The edges of the spill overlap each other, which gives the spill a tapered shape. The blade is made of tapered O-1 tool steel, hardened to Rc 60-62, and sharpened, ready for immediate use. Price ranges from $135 to $145, depending on wood type and/or figure. Red Rose Reproductions also offer a package that includes the blade, plans and construction notes to make your own spill plane, the wood blank is not included.

*From: www.redrosereproductions.com*

## Haru Stuck-on Design interior tape


Haru Stuck-on Design was launched in the UK at Clerkenwell Design Week in May, it's the first time this unique tape has been available outside Japan. The adhesive tape can stick to all kinds of surfaces, from furniture to walls and floors, and its special technology means it can easily be peeled off without a trace. The product received a Red Dot Design Award in 2017. The tape is available in eight colour families, different patterns (some traditional, some graphic, some transparent), different kinds of materials (some tougher for floor use) and four different widths.

*From: www.nittoonlineshop.eu*

## Veritas combination plane




A combination plane can be invaluable for restoration work and is an ideal choice when you need to make a short run of moulding. Originally created to replace numerous wooden moulding and joinery planes, early combination planes were often over complicated and difficult to set up. Today, however, they are invariably easier to use than taking the time to set up a machine. Veritas have designed their combination plane to eliminate problems that made using the originals so frustrating. This modern example is precisely machined, quick to adjust and holds its settings securely.

The two-part design (a main body and separate sliding section) lets you accommodate blades of different shapes and sizes to make cuts ranging from grooves as narrow as ⅛in up to 1in-wide rebates. The sliding section adds stability and support to the blade, and clamps securely in place on stainless-steel rods. You can position the fence on either side, allowing you to use the plane left- or right-handed to accommodate grain direction. The plane comes with two pairs of fence rods (125mm and 200mm). A micro-adjust thumbscrew allows you to fine-tune the position of the fence. The depth stops on the body and sliding section also have threaded adjustment. A ¼in straight blade is included with the plane, and a selection of blades for grooving, rebating, beading, reeding and fluting are available separately. You can use the blades individually or in sequence to create a variety of decorative profiles, from simple to complex and from furniture-edge treatments to architectural details. The Veritas combination plane is made of stress-relieved ductile iron with brass fittings with a torrefied maple tote and fence facing. Optional extras include a storage box and a blade box.

*From: www.brimarc.com*

## Bridge City measuring and marking tools


Axminster Tools & Machinery recently added the Bridge City collection to its range of quality measuring and marking tools. These tools are exclusive to Axminster throughout the UK. Bridge City Tool Works enjoys a worldwide reputation for designing sophisticated, highly functional woodworking tools. As standard bearers of the industry, they have been innovating how to make traditional hand tools for over 35 years. These tools are crafted to the highest of standards using the finest materials.

Tools within the Bridge City range include the Try Square TS-2v2 200mm. An accurate and reliable tool with a glass bead-blasted stainless steel blade that is graduated: 0–200mm on the outer edge and 0–150mm on the inner edge. The edges of the blade are square, but not sharp and the scales are easy to read even in a dim light. There is also a 1:8 cutout for dovetail layout. It's priced at £65.95.

The Mitre Square MS-1.5v2 226mm has outstanding accuracy and styling. The handy size makes the MS-1.5v2 mitre square perfect for marking out or checking mitres. The blade is satin finished hard stainless steel, 31mm wide, 226mm long and an impressive 1.5mm thick. Its price is £63.95.

The Multi Tool MT-1 combines the following functions: a 200mm sliding bevel, a 1:8 dovetail saddle square, a 1:6 dovetail saddle square and regular saddle square. An effective cam-lock holds the stainless steel blade firmly in position. The blade has a 1:8 dovetail cutout and a pencil notch on the tip that allows you to use the MT-1 to draw a line parallel to an edge. Its price is £101.95.

The Adjustable Square AS-24v3 600mm is one of the most versatile bench layout tools you will ever own. Featuring a 285mm long, split, anodised aluminium head. The fixed half gives you a permanent 90°, 600mm long T-square with an accuracy of ± 0.05mm over the entire blade length. The other half of the head pivots; set the blade of the tool to any angle you require and flip the square to use it as a 600mm adjustable bevel. Its price is £171.96.

*From: axminster.co.uk/bridge-city*

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.

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Out & about:

# Kelvingrove Art Gallery & Museum

**This month we visit one of Scotland's most popular attractions, which has an important collection of work by Charles Rennie Mackintosh**

Glasgow's favourite visitor attraction, Kelvingrove Art Gallery & Museum holds one of Europe's greatest art collections. It is also a must-visit for fans of the renowned architect, designer and artist Charles Rennie Mackintosh, particularly in the year that marks the 150th anniversary of his birth.

## History

Kelvingrove Art Gallery and Museum opened to the public in May 1901 when it formed part of the Glasgow International Exhibition, which was held in Kelvingrove Park. The building was designed by the architects John W Simpson and EJ Milner Allen in a Spanish Baroque style. Made from Locharbriggs sandstone, it is a flamboyant building, decorated with towers, spires and statues.

Kelvingrove has an eclectic range of exhibits, from spitfires to natural history

PHOTOGRAPH BY EGROY/SHUTTERSTOCK

PHOTOGRAPHS © CSG CIC GLASGOW MUSEUMS, UNLESS OTHERWISE STATED

A popular legend about the museum is that the building was accidentally constructed back to front and that, when this was discovered, the architect committed suicide by jumping from one of the towers. This is, however, untrue.

The musuem's original collection mainly came from the McLellan Galleries and the City Industrial Museum. Over the years, this was added to by various explorers, traders and collectors, such as Captain James Cook, Charles Darwin and David Livingstone, who donated their collections.

The museum was closed for a major refurbishment between 2003 and 2006. This created more exhibition and gallery space and also added new education rooms, a restaurant and shops. The interior blonde sandstone was also given a thorough clean. This attractive space helped Kelvingrove become one of Scotland's most popular attractions and one of the UK's most visited museums outside of London.

**A view of the Mackintosh and Glasgow Style gallery displaying interior panelling sections, furniture and fittings from Miss Cranston's tearooms in Glasgow, designed between 1897–1907**

**Panelling and furniture from Mackintosh's first full tearoom interior designed for Miss Cranston's Ingram Street Tearooms in 1900. The high-hung gesso panels (The May Queen, left; The Wassail, right) were the first pictorial friezes that Mackintosh and his wife Margaret Macdonald worked upon**

## What to see

Kelvingrove has 22 themed galleries but perhaps the first one *F&C* readers will want to head to is the one dedicated to Charles Rennie Mackintosh and the Glasgow Style. This outstanding collection features furniture, decorative panels and light fittings from the Ingram Street Tearooms, designed by Mackintosh in 1900–12. The reconstructed rooms include the Ladies Luncheon Room.

The other galleries cover a vast range of subjects, including masterpieces of Scottish, Dutch and French art; an impressive collection of arms and armour; prehistoric and ancient artefacts and natural history. One popular exhibit is the Spitfire LA198, a Mark 21 Spitfire which flew with 602 (City of Glasgow) Squadron between 1947–49. It now makes an impressive sight as it hangs in the East Court.

**A simplification of Oriental forms: an ebonised domino table and four chairs designed by Mackintosh in 1911 for the Chinese Room in Miss Cranston's Ingram Street Tearooms**

**Works by Mackintosh's Glasgow Style contemporaries. The wardrobe was designed by E.A. Taylor and made by Glasgow cabinetmakers Wylie & Lochhead, 1901–02**

Glasgow cabinetmakers Wylie & Lochhead launched a new art (Glasgow Style) furniture range at their pavilion in the Glasgow International exhibition of 1901. The glazed display cabinet and chair are among the designs they exhibited.

# Mackintosh and the Glasgow Style

This year is a perfect time to visit the museum as 2018 marks the 150th anniversary of Mackintosh's birth. To celebrate this event, Kelvingrove is holding a special exhibition called Charles Rennie Mackintosh: Making the Glasgow Style, which runs until 14 August.

The exhibition will span Mackintosh's lifetime (1868–1928), taking a chronological and thematic narrative, presenting his work in the context of Glasgow, his key predecessors, influences and contemporaries, particularly those working in the Glasgow Style.

'The Glasgow Style' is the popular term given to the design and decorative arts centred around the work by teachers, students and graduates of The Glasgow School of Art produced between about 1890 and 1920. At the core of this style is the work of The Four: Charles Rennie Mackintosh, his future wife Margaret Macdonald, her younger sister Frances Macdonald and Frances's future husband, James Herbert McNair. Glasgow was the birthplace of the only Art Nouveau 'movement' in the UK and its style made ripples internationally.

This exhibition presents the very best of Glasgow's internationally important civic collections, drawing from both those


PHOTOGRAPH BY ELECTRIC EGG/SHUTTERSTOCK

The entrance to the Glasgow School of Art

of Glasgow Museums and The Mitchell Library and Archives. A number of these civic works have never previously been on public display, and the majority has not been shown in Glasgow for 30 or more years. The exhibition will also include important loans from private and public collections. About 250 objects will be on display across the full spectrum of media, including stained glass, ceramics, mosaic, metalwork, furniture, stencilling, embroidery, graphics, books, interiors and architecture. The act of making will be communicated across this breadth of media – both through the exhibition and the accompanying event programme – to truly engage and inspire audiences of all ages to visit the other Mackintosh-related buildings and collections in and around Glasgow, and to make and create.

## WHERE ELSE TO SEE... works by Charles Rennie Mackintosh

**The Hill House**
Helensburgh, UK
www.nts.org.uk/visit/places/the-hill-house

**Mackintosh at the Willow**
Glasgow, UK
www.willowtearoomstrust.org

## Information for visiting

**Address:** Argyle Street, Glasgow G3 8AG
**Website:** www.glasgowlife.org.uk/museums/venues/kelvingrove-art-gallery-and-museum
**Opening hours:** Open daily
**Charges:** Free entry

Information correct at time of publication, check the museum's website before making your visit

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# An airbrush with the past

**Derek Jones dips into *F&C*'s archives to showcase the work of Wade Muggleton**

We're going back to September 1998 and issue 20 for this month's Airbrush with the Past to showcase the work of Wade Muggleton. There's a definite resurgence in interest in the Welsh stick chair of late, something that will probably continue for some months, maybe even years, following the release of two books this year about this particular design. Back in 1997 when Wade made this example the style would have been described as vernacular and perhaps even viewed as a rather crude version of the Windsor family. But with a new appreciation for the simplicity of the form I think we can predict that more stick chairs will be made in the next five years than in the last 50. So what makes a Welsh stick chair? According to Wade it's the uniqueness of the finished product; something that's inherent with any handmade item. In his article he talks about the look of the chair in terms of composure, giving very little away with regards to the angles of the rake and splay to the legs and back. It's not intentional or meant to hide some trade secret but more the rules of construction that define the form. The legs on a majority of chairs and therefore a form we're used to seeing, are anchored through or in close proximity to the four corners of the seat. In comparison a Welsh stick chair will typically have them extending from mortises drilled further towards the centre of the seat with a steeper splay and rake for stability.

Wade also mentions the need for riven timber with straight grain for the legs and spindles to maximise material strength. This single detail enables the pieces to be shaped to quite delicate proportions while still remaining strong. The seat is made from a single piece of elm 50mm thick, something that would be hard to find in 2018, chosen for its erratic and interlocking grain. While this type of grain structure is pretty to look at, it's also incredibly strong and, as Wade explains, less likely to split where the legs and spindles have been driven into the mortices and wedged. The spindles and legs are made from ash, which has the capacity to flex rather than snap under load. Wade's choice of finish is equally natural and appropriate for this style of furniture. After applying a diluted water based stain he gave it several coats of linseed oil over a couple of weeks and then followed up with a few coats of Black Bison wax.

## Next month

Next month we'll be going back to 2003 and *F&C* 83 for a closer look at Ian Saville's sheet music cabinet.

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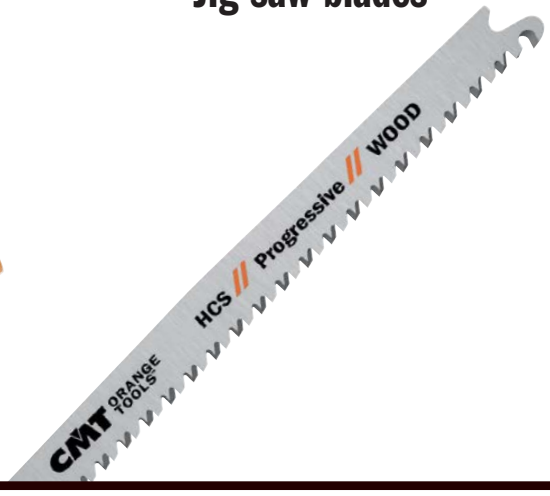


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# Shop talk:
# Sean Feeney

## *F&C* talks to the craftsman turned game keeper

Sean Feeney is a designer-maker with no less than seven Bespoke Guild Mark pieces to his name. He also served for six years on the panel that judges the Guild Mark awards. *F&C* caught up with this craftsman turned gamekeeper.

**If you could trade the workshop for an alternative career what might it be?**
A restaurant chef or a round timber merchant. Cooking is so creative, stimulating and ultimately rewarding, as is buying a tree, opening it up and seeing what nature has created with this remarkable resource.

**Describe your most memorable 'eureka' moment in the workshop.**
Designing a console table that 'defied gravity' and producing a 1:5 scale model to access the stability before submitting the proposal to my client.

**Enzo Ferrari wished he designed the E-Type. What item would you have loved to have a hand in creating?**
An item of furniture that I would liked to have been involved with would be the 1954 stool and table by the Scandinavian architect and designer Alvar Aalto. The perfect integration of the bent, solid wood legs that fan out in order to join the tabletop and stool seat with soft organic movement.

**Suggest a museum that everyone should go to and why.**
The Gordon Russell Design Museum in Broadway, Worcestershire. A museum devoted to one of the 20th century's most influential furniture designers. A showcase of design and manufacture throughout the firm's history set in one of the original workshop's Grade II listed building.

**Do you have any flat pack in your home?**
No, not presently.

**How amenable would you be to making a piece of furniture to someone else's design?**
I don't know, the question has never arisen, however if the design was worthy I may consider its production.

**What do you collect?**
It took me 30 years to collect a full set of Round and Hollow Beechwood moulding planes. Nowdays I have no aspiration to collect.

**What haven't you got time for?**
Plagiarism and mediocrity.

**Aside from quality, is there a trademark feature that identifies a Sean Feeney piece?**
Yes, each item is name stamped somewhere very discreet and catalogued in the archive together with a copy of the design.

**Is there a particular style or period of craft you're drawn to?**
I respect the craftsmanship of the late 18th century considering their environment and working conditions with limited mechanisation. The digital age now presents us limitless possibilities with new materials and technology.

**All about Sean**

**Greatest success to date**
My greatest success to date is to have made a career and living from designing and making furniture for over 40 years – an immensely rewarding career.

I took a sabbatical in the early 1990s to learn the technique of musical instrument making, focusing on the double bass, the 'furniture of the orchestra'. The opportunity of learning in the workshops of Patrick Charton, a leading French luthier, provided both Italian and French methods. A valuable string to my bow while the country was enduring another deep recession.

Sean lives and works near Stratford-upon-Avon with his partner and best friend Jackie and their three Border Collies. He is a part-time lecturer at the Peter Sefton Furniture School and Trustee at the Gordon Russell Design Museum. He is also a Freeman of the City of London and a Liveryman of the Worshipful Company of Furniture Makers.

**Alive or dead, who would you most like to commission a piece of furniture from for your home?**
Alan Peters for his outstanding craftsmanship or Andrew Varah for his great sense of integrated humour.

**What's the tool you can't live without?**
In the workshop it would be my Norris No. 10 dovetailed steel and rosewood infilled shoulder plane made by craftsmen for craftsmen.

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