

WORKING WOOD BY HAND

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EXCLUSIVE INTERVIEW

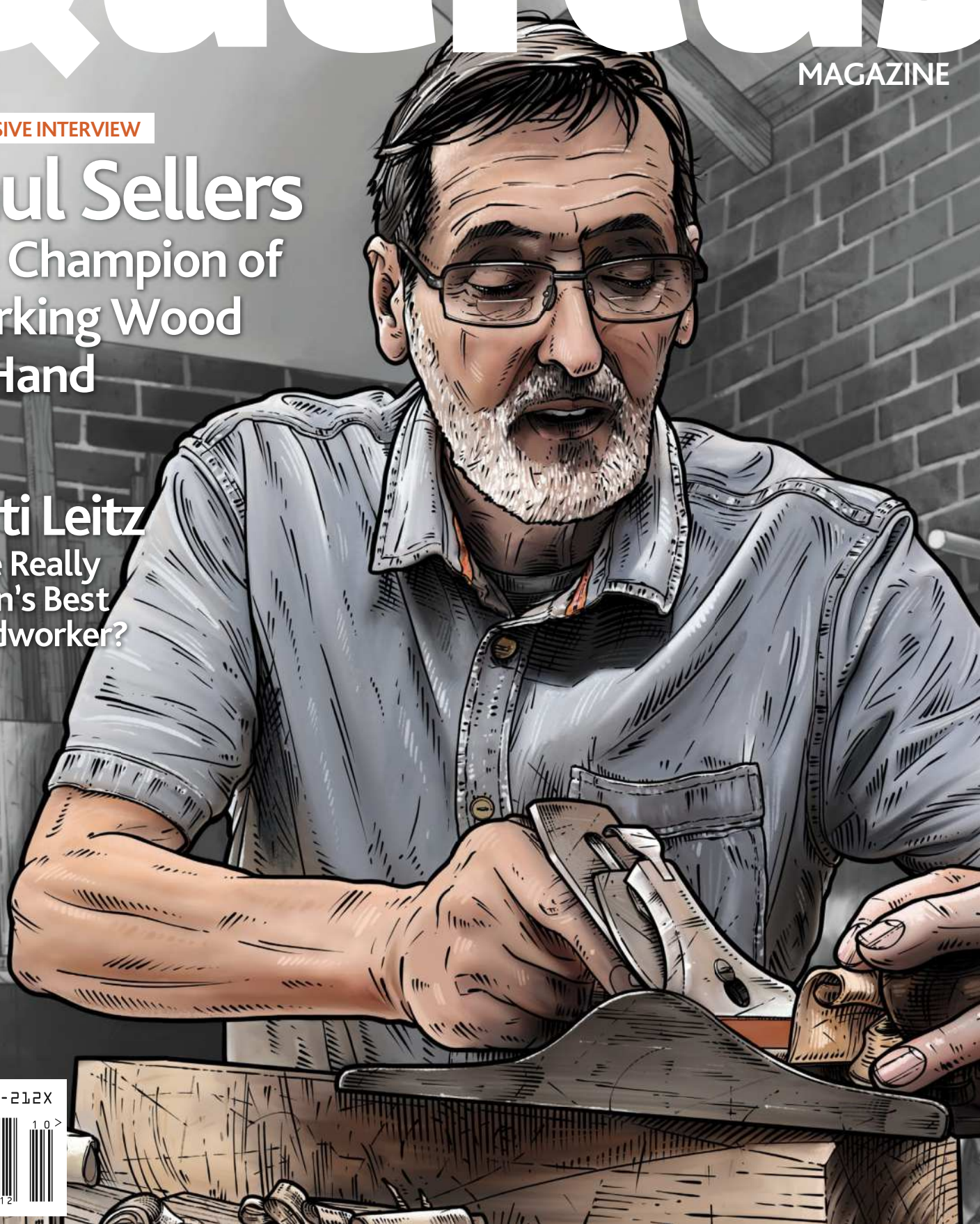
Paul Sellers

The Champion of
Working Wood
by Hand

PLUS

Misti Leitz

Is She Really
Britain's Best
Woodworker?



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Germán Peraire shows how to cut wedged through mortise and tenon joints in his 21-step instructions



ON THE COVER

16 Paul Sellers

First of a two-part exclusive interview with one of the most influential woodworkers, who advocates working by hand with as few tools as possible on the basis that you only need to know how to cut three joints

FEATURES

04 Misti Leitz

Is the newly crowned Best British Woodworker happy with her award?

22 Handmade Chairs

Radha Sivyer reveals the challenges of making a chair in two days

24 The Riki Windsor

Dylan Iwakuni discovers how an antique shop inspired a chairmaker, by chance

26 The Warrington Chest

New contributor Bill Ratcliffe on the history & value of making tool chests

30 Edge Protection

Three ways to protect flesh from edges, and edges from nicks

34 The Endangered Crafts

Learn the meaning and significance of the HCA Red List of threatened skills

36 Wedged Through Tenons

Germán Peraire's 21-step manual to cutting a wedged, through m&t joint

50 A Cannibal's Bog Oak

Ethan Sincox makes a box for a plane

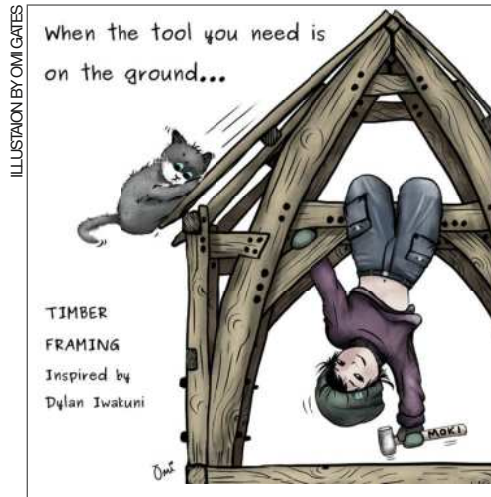
REGULARS

07 Voices: People & Lives

40 Honed: Sharpening +

45 How to Subscribe

57 The Edge: Tools +



26 Meet new contributor, Bill Ratcliffe, as he explores the history and value of tool chests



50 Ethan Sincox has made us a bog oak and boxwood box for a Lie-Nielsen LN102 block plane, hopefully to help inspire the Quercus Young Woodworker of the Year

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Some readers, particularly from this part of the World, may have watched *Handmade* on the telly; Channel 4's reality challenge to unearth Britain's Best Woodworker. The show had been devised as a contest to find, from a group of nine, who is Good With Wood better than the rest, but the title got changed after filming and Misti Leitz was 'crowned' Britain's Best. Flattered though she might be, as she writes this issue, Misti's tongue is firmly in her cheek when it comes to discussing the title. Hers is an intriguing story, with Chair Week, the third of nine episodes, being a highlight for us, especially as fellow finalist Radha Sivyer features on p22.

Of course, it's hard to escape that we're fortunate Paul Sellers has been fool enough to invite me into his workshop and his home to discuss his life, his courses, his woodwork and much more. For the first of two interviews he and I sat in comfy chairs to learn about his times in America, his spell as a policeman in Manchester, and his thoughts about the ardent support for crafts he discovered in the USA. We spent another afternoon in his workshop, and so next issue he'll be revealing his thoughts about tools, tool design, and router planes, of course.

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Is the Best Good Enough?

In November, the C4 TV channel in the UK chose Britain's Best Woodworker. Now the champion, *Misti Leitz*, tells how her life and career took her from being good with wood to uncertain glory

Misti's oak chair, with an inverted cone shape



Winning a television competition show called 'Handmade: Britain's Best Woodworker' is a double-edged sword: It's an honour to have been judged the best out of nine competitors, and a delight to win, but there's no way on earth I would ever describe myself as Britain's best woodworker. In fact, I'm not a woodworker at all; I'm a sculptor; a practical soul who loves making things, and wood is the material that allows me to do it to the very best of my ability.

In June 2020 a friend sent me a casting call flyer for a show with the working title of 'Good with Wood'. I applied without hesitation, and to this day, I'm not entirely sure why I did it. Maybe it was because I needed a challenge; maybe it was to raise awareness of the transgender community; maybe it was to test my woodwork skills; maybe it was simply to show off... whatever the reason, it seemed like the right thing at the right time.

For as long as I can remember, all I have ever wanted to do is to design and make beautiful things. I grew up on a fruit farm in rural Worcestershire in the early 1970s. We had no television, and little contact with the outside world, which meant that making your own entertainment became a way of life, and central to that for me, was artistic and creative endeavour. In the mind of a small child, an old fencepost with a couple of blocks of wood and a dowel or two nailed onto its flat surface became the Titanic;

a fruit crate wedged carelessly up a tree became a magnificent castle in the sky... I could go on – but you get the idea. As I got older, my talent for drawing and making was fostered by a series of brilliant and inspirational teachers who shared a boundless enthusiasm for passing on their knowledge, and it was wood that allowed me to express my wildest imaginings in three dimensions.

Having excelled in art and design at school, and having gained a degree in product design, I started out my working life in 1989 as draughtsman for David Ackroyd, a self taught cabinet-maker. It became my responsibility to not only prepare presentation drawings for his clients, but also to prepare the cutting lists and working drawings for the workshop, order the timber, and, as the person who had prepared the drawings, oversee the manufacture of the extraordinary creations we produced.

Decorative arts

My seven years with David proved to be something of a traditional apprenticeship, by the end of which I had mastered the art of draughtsmanship and amassed an enormous knowledge of furniture and joinery, and of the decorative arts in general. It is to David I owe my eye, my approach to design, and above all, my love of working with wood.

As my career developed, the accurate recreation of period detail became my area of expertise. Working for the National Trust and Historic Royal Palaces Agency as a designer, decorator and restorer, it took me into some of the finest houses in England including Harewood House, Petworth, Windsor Castle, and The Tower of London, where I designed showcases for an exhibition of some of the crown jewels. In 1996 I worked on the fit-out of a Knightsbridge apartment that broke the world record for domestic property prices at the time, and which set the tone for the type of work I produced thereafter.

Later on, I set up a design company with a gilder friend, supplying furniture to London's top decorators and interior designers. Our work was bought by the rich and famous, and sent all over the world. At one point we were employing 24 people and an enormous network of subcontractors, managing a design studio, a gilding and restoration workshop, a carving workshop in Istanbul and a factory in Vietnam supplying our designs to our own shop in Fulham.

In time, it struck me that whenever a craftsman turned up with the end product of one of my designs, I felt a pang of jealousy that they had had all the fun of making the piece. I felt I had achieved as much as I ever could in my career as a designer, so I gave it up and moved back to Shropshire and taught myself to carve wood and stone instead. Converting a leaky tin shed into a rudimentary workshop, and using a small selection of ancient hand tools, I started making abstract sculptures in a bid to rid myself of the strictures of client briefs and specifications.

The first two or three years of sculpting were frustrating, to say the least. A lack of funds and equipment meant that I needed considerable ingenuity to work out methods of making things from salvaged and recycled materials that would be simple in a well equipped workshop. Even though I had an encyclopaedic knowledge of materials and processes, it took a long time before my hands would do what my head knew was possible. Lengthy sessions watching the great Paul Sellers on YouTube taught me

Misti in her winning
garden structure



how to get a decent edge on a chisel, which was something of a revelation. In fact the Internet has proved to be a fantastic resource for learning any number of techniques. After about four years, I finally felt capable of making what I imagined, to a high enough standard to satisfy even my inner perfectionist, and it was at this point that the casting call flyer for 'Good with Wood' landed in my lap.

The premise of the show, for those that haven't seen it, was to find out what an amateur woodworker could produce in two days.

Six briefs were given to us, designed to test our ability to fashion wood in different ways, ranging from the practical to the decorative, and using as many techniques as possible. Our designs were presented in advance as part of the audition process, and the timber we required was provided to us in boards of the right thickness. The most incredibly well-equipped workshop was provided for us to 'play' in, and from that point onwards, it was up to us.

Peppered with interruptions

Each episode was filmed over three consecutive days. We had been allotted 18 hours to complete each project, which was peppered with interruptions to cope with the mechanics of filming. Constantly stopping and starting while trying to concentrate on a complicated process is stressful at the best of times, but when you add a competitive environment and the inevitable nerves arising from knowing that whatever kind of fool you make of yourself, it'll be seen by millions of people, it makes for an interesting experience! The filming of each episode followed directly on from the previous one, so we were utterly exhausted at the end, and in just 18 days nine of us had managed to create 105 objects, which was a remarkable achievement.

While it was gratifying, as a sculptor, to win the sculpture challenge, and while the garden building I produced for the final was undoubtedly an impressive piece of work, of the six designs we made, I am most proud of the chair.

My starting point for the design was to try to make something comfortable and curvy using mainly straight lines. I came up with an inverted cone design, arranging shaped uprights around a circular ring. The ring is rebated to take an upholstered drop-in seat pad, and is notched around its circumference at regular intervals to hold the uprights in position.

Each upright is also notched, creating a halving joint at each intersection, with the thickness of the circular rail and the tightness of each fitted joint providing strength and stability. Each of the uprights was then cut to produce the arm and back rests and a parabolic cut-away at the base.

Designing a chair is easy. Designing a comfortable one is not! Taking my cue for the ergonomics from 18th Century armchair designs, the proportions of this chair are generous, and despite its rather spiky look, it is very good to sit in, and drew much admiration from all who tried it out.

Two days is not a long time to make anything, and to a professional woodworker, the objects we made were not



Misti's career as a sculptor in wood was epitomised on C4 by her Zebra sculpture (left)

necessarily of the highest standard, but to another amateur, or someone thinking of getting into making things in wood, the show demonstrated beautifully what is possible, using a range of techniques, and given only a little knowledge and experience

Ultimately, that was the whole point of the show, and I have since been inundated with messages of thanks from all over the world for providing the inspiration to pick up a tool and start making things. For some reason known only to them, and after we had finished filming, Channel 4 decided to change the title from 'Good with Wood' to 'Handmade: Britain's Best Woodworker', which inevitably drew in criticism from some of the professional fraternity. Not only are none of us 'Britain's Best', few of us (including me) are actually woodworkers. I would gladly have taken the title 'Good with Wood' though, and, with the knowledge I gained on the show, and given a decently equipped workshop, might even produce some top quality cabinet work.

For now, though, I have returned to making sculptures in my damp and draughty shed with its collection of ancient tools, reconnecting with a child-like sense of possibility, and happy in the knowledge that with my fifteen minutes of fame, I helped to spread the joy of working with wood.

To find out more about Misti's sculpture and design work, please visit misti-leitz.co.uk. Handmade: Britain's Best Woodworker can be found on All 4 and YouTube.



The uprights are notched for a halving joint with the circular rail

Rise Up & Carve

Kaylyn Messer writes how she first joined RUAC and carved axes

I have been carving actively for about a year and a half, after being introduced to it two years ago. I was introduced to spoon carving when a few friends and I attended a Wild Crafting community event in December 2019. I chipped away at a dry piece of maple during that event to carve my very first spoon. It felt like it took weeks to carve. I didn't carve another spoon for quite some time. However, in 2020 my job became remote due to Covid and I began working from home with a few extra hours of time each day now that I was no longer commuting. I wanted a hobby that was creative, worked with my hands, and where I could create something useful in a relatively short period of time. I remembered spoon carving in June and after a few more attempts at carving seasoned wood I found some resources online that introduced me to greenwood carving.

I bought Wille Sundqvist's book and a few tools from Pinewood Forge, then I stumbled upon Rise Up and Carve. It was perfect. Not only did I find a craft and creative outlet that I was passionate about, I also found a virtual community that became a really important part of my life. Carving helped ground me in times of uncertainty and gave me a meditative practice that I am very thankful for.

In the early days as a newer carver the Rise Up Spoon Challenges helped me not only to build up my carving skills and technique, but also to have an event to look forward to when we could share our interpretation of a template. I was amazed at how welcoming and encouraging everyone was when I first joined. I'm really thrilled that this year I was asked by Sunny and Chuck to provide my own axe-shaped Butter/Cheese Spreader template. It was really wonderful to have an opportunity to give back to the community and to engage with everyone who worked with the template.

Working with greenwood also provided me a deeper connection to my local area and improved my tree identification skills. All of the wood I carve is locally sourced and I carve as a hobby so my resulting spoons go to friends and family as gifts - a way for me to connect with them from afar as they prepare and enjoy meals.

Anyone can join a daily Rise Up and Carve Zoom meeting: ID 529 157 0928, PW: 671121. Visit @riseupandcarve or riseupandcarve.com



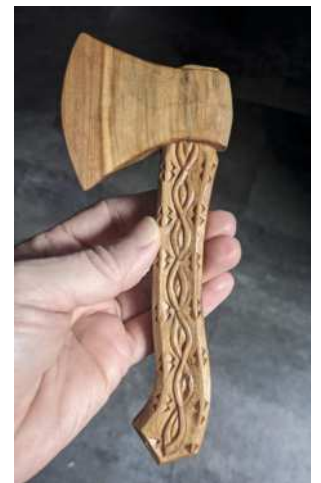
Kaylyn Messer (above) and apple and wild cherry wedge billets (above left) prepared for carving axe spreaders. Lots of stop cuts are recommended for removing material



Axe spreaders roughed out (above right). Chip carving and hook knives can help establish the line defining the axe head from the handle. An accompanying spreader can be created using the axe handle and the blade edge elements (above left). The RUAC Challenge (#ruacspoonchallenge) templates started in May 2020. Zoom Show & Tell sessions close each Challenge with people sharing their work. Anyone else can follow sessions without carving



The template can be adjusted to create variations, like the firefighting pulaski (left) with milk paint head and a burned Shou Sugi Ban style handle. Chip carving can be added for decoration, as with the Viking style rope motif in apple (right). Templates can be found on the RUAC website, riseupandcarve.com and new ones are added every two-three weeks



Hands for a Community

A man of the woods, *Stuart Livings* argues that the use of hand-tools can work for society and Nature

Having been in the carpentry game for about 15 years I've been involved in most projects from the construction of timber-framed houses to hand built kitchens using a wide range of materials from solid chestnut, ebony and elm to cherry and wenge veneers to oak and walnut. It wasn't until I started focusing on using hand-tools on purely solid wood and greenwoodworking that I really fully connected to the materials and the projects I was doing but more importantly to the environment in which I was doing it.

I take great pleasure in jobs taking twice as long now while all my old power-tools collect dust in the corner of my workshop. It's not just my hands but the whole body that comes into action when greenwoodworking, and I love that compared to just pulling the trigger on a saw, sander drill or jointer. The difference between using a power-tool and using hand-tools for me is connection and ultimately true understanding of one's craft.

You can get a good feel for how the wood wants to be worked with a hand-tool especially when following the grain during cleft work. There is a feeling of nostalgia when I pick up the old tools that I have restored from the past such as drawknives, spokeshaves and planes. It leads me to ponder over the scenarios they must have been in, and in my opinion the much more capable and sustainable societies they had been used to craft things for.

One way it has led me is to start gathering and foraging a lot of my own materials as people once would have done. It can be a day or two until I've processed and hauled my materials back by hand from whatever location they are hiding in the woods and



it's that process I now crave, at times even more than the project itself. There is so much more wholesomeness and investment to this approach than just ordering materials from an unknown source online or picking up wood from a timber merchant. If I can't find the materials myself then my next port of call are local tree surgeons or sawmills. If they don't have it then I will wait until the right thing comes along as there is always something else that can take over. For example I carried the best part of a fallen ash tree over a mile on foot, to do so I cleaved it and reduced it down into manageable pieces.

The timber has made a dining room table and a chair so far but will also provide enough wood for several primitive longbows and much more. I had been out walking in the Highlands of Scotland where I live and had come across the recently-fallen tree next to a riverbank. I knew the landowner so I asked if they

would mind me splitting it up and hauling it out. They had no problem and even offered to help with their 4x4 and laughed when I declined because I fancied the challenge. I carried a bowsaw, two wedges, an axe and a decent lump hammer to the riverbank and cut the tree into a 2m section for longbows and some shorter sections for table legs and other jobs. Being ash the tree split easily with wedges down the middle and then I quartered the sections so that they weren't too heavy.

Walking the dog

Over the course of a week I carried them out a bit at a time whilst walking the dog. I'm taking this approach a little further now as I am building several cabins and outbuildings out of windblown and locally sourced larch trees including an A-framed workshop, a cabin built on a steep hillside and a reciprocal roofed roundhouse. These roundwood timber-framed structures will feature hand-tooled joints such as



Stuart Livings gathered materials from the woods in the Highlands so he could make a chair (above) and longbows (left)

the butterpat and mortise and tenon. I try to remain methodical when working with roundwood. It's a challenge especially when things are not straight and it pretty much forces you to use hand-tools, which keeps things disciplined and quiet! It's all about keeping it local and keeping it green and chemical-free for me now.

The extra time I have been spending in the outdoors and woodlands as a result of this new approach to woodworking has opened my eyes to the state of the environment, and the need for humanity to re-educate itself and mutualise more with Nature while pursuing its ambitions, be that woodworking or anything else. Maybe some endeavours should be left aside altogether if they are not sustainable.

I believe there is a moral responsibility for us all now to take a good look at everything we do and how we do it. The environment has to come first and if we are causing more damage than is necessary



to make money or pleasure then we need to own that and change it because it doesn't work in the long term. The best way is usually just by keeping it as local as possible. I know I've cut a lot back in terms of how I run my woodworking business and I see a lot of others doing the same.

Community interest

This realisation has pushed me to start a community interest company called Woodhism (woodhism.co.uk). I will be creating an opportunity for volunteers to build and work with their hands on native woodland creation and natural building projects through funding. The company works by offering a service to clients wanting to establish native woodland to create habitat, sequester carbon or just take advantage of the carbon capture and woodland creation schemes that are available.

By creating an opportunity for volunteers we can provide a more cost-effective service

and at the same time provide education and access to the local community that wants to connect to nature and play an active part in the green movement. The idea behind the natural buildings is to create longer lasting and inspiring spaces in woodlands that can become education facilities year round that not only blend in with their surroundings but also speak volumes when it comes to building sustainably. They are built by the community and used by the community for the future.

The more I meander down this path the more people I meet that are craving the same things and I can't wait to find out where it all leads me. It's been a great journey so far which all started when I picked up an axe to make a primitive bow and arrow.

Keep an eye on Stuart's Instagram page @livingedgecarpentry for upcoming projects as there are a few in the pipeline.

Flaky Finishing

Barbara Roberts says we shouldn't be afraid of shellac



Here's a quick woodworking trick that makes your life easier, with a twist in the tail. Finish or pre-finish parts before assembly. I used shellac here. There's no need to be afraid of shellac. It's super-convenient once you get used to it. You can wipe or brush it on and it dries in minutes; thin coats in seconds. I recommend buying good quality shellac flakes instead of ready-mixed shellac. Mixing is easy. Just add flakes and clean (denatured) alcohol. Stir it every once in a while. The flakes will dissolve overnight. Don't try to mix shellac just before you need it. Trust me on this. I know because I try to do it almost every time and it never works. I like to make a heavy mixture and add alcohol to thin it down for a specific purpose. I prefer thin mixtures and several coats. After finishing a piece with shellac I sand it with 0000 steel wool or fine Scotch-Brite and then add wax. I've tried making a French polish a couple times, but even though the YouTube videos make it look easy, I haven't been able to get it right.

Shellac is basically odourless and the alcohol that I use smells of tequila. I mean really. It basically screams for a pinch of salt and a slice of lemon. You should be able to buy clean alcohol at the same store where you buy your shellac flakes, but if you can't, you can use even good quality spirit burner alcohol. It's not optimal but I've done it several times. The most important thing is high alcohol content. This one time I ran out of alcohol and the impatient person that I am, instead of waiting for tomorrow, I raided Kenneth's liquor cabinet. I took some of his Meukow VSOP and 15-year-old Jameson (Sorry, darling!). I thought I could thin down the heavy mixture and end up with whiskey- or cognac-scented shellac. I don't understand the chemical reaction, but I ended up with a floating lump of 'omelette' in each jar of clear liquid. Maybe I should have tried Ken's Macallan with the higher alcohol content.



A Shetland Sunrise

A year ago *Alex Ward* set himself a New Year challenge. Now he helps us have a go in 2022

The first time I saw a Japanese dovetail was in the 1980s, in a magazine article written by Alan Peters. I must have been about 18 at the time and promised myself: "One day I'm going to be able to cut one of those."

I have been doing woodworking for as long as I can remember, and by the age of 13 I had decided to make it my career, spending most of my spare time at my bench at the bottom of my parents' garden already taking on commissioned work. Since then, I have studied and practised my hand skills and gained many qualifications to include joinery, advanced cabinetmaking and advanced chairmaking, as well as a BA (Hons) degree in Furniture Design and Craftsmanship and have now been running my own cabinetmaking business for nearly 30 years.

The workshop eventually moved to the beautiful Shetland Isles, UK, where I live with my family, continuing making traditional and contemporary fine furniture predominantly using hand-tools.

Twisted dovetails

Over the years I have cut several Japanese dovetails, including Japanese Twisted and Sunrise dovetails. What I like about them is the fact they look impossible at first glance, cannot be cut by machine and both halves must be marked out and cut separately. There lies the thrill; only knowing if they have worked when you finally bring the two halves together for gluing. They either work or they don't. It is a real test of accuracy, marking and hand skills to produce such joints. Every so often I just cut one to keep my skills sharp and at a distinctively high level.

At the beginning of 2021, a year ago, I decided to challenge myself. So, on New Year's Day



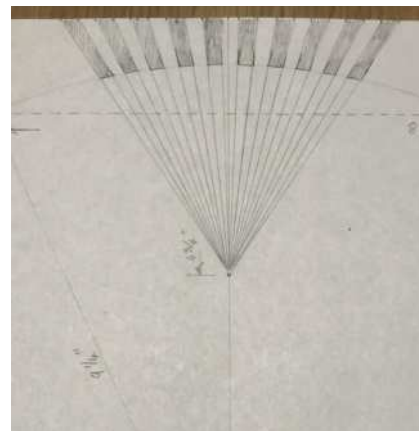
I started sketching and came up with a possible idea that would push my boundaries of skills. I decided to reverse the direction of the rays that I had previously cut, by taking the line of each ray from the same origin, meaning that each pin/tail had a different angle. With a width of 1/4in for each pin/tail I ended up with more rays than I expected (19 pins/tails in total). At the last minute I thought the joint would look more like a sunrise if the shoulders were curved like the sun as it comes over the horizon, as opposed to a normal straight shoulder line.

It is all well and good

drawing an idea on paper, it then must be marked out and put into practice. The following day I started the marking out process. Two pieces of 8x2in timber had already been machined: one American black walnut and the other of maple, for contrast.

Blue tape technique

Due to the sheer number of fine marking lines, grain pattern and the dark timber, I decided to use the 'blue tape' method on this occasion. The base of the rays was 43/4in from the central origin and the sides were marked using a scalpel and metal rule. To mark the



Initial layout drawing of the dovetail (above) and cutting down the sides of the rays (below), just touching the tape



curved shoulder, I sharpened the end of a pair of old dividers to a knife edge so as to cut the blue tape, with this second origin 91/4in from the base line on the rays. The most difficult part was marking out the end-grain, as both the origins were off the side of the timber. After some careful measuring on a piece of scrap wood cramped to the side of the timber (then double and triple checked), both end-grains were marked with the origins on the scrap timber and the waste blue tape then removed.

All looked good so far. Out came my Lie-Nielsen dovetail saw and I carefully cut down



Chiselling out the curved shoulder line (above) and a dry fit pushed together at 45°, before gluing up (below)



the sides of each line, just touching them. I did not want to be paring back to the lines as I try to cut my dovetails straight from the saw. The bottoms were cut as close to the curved baseline as possible using my Knew Concepts fretsaw, to be then cleaned up using a small chisel. At this point it was on to matching the back curved shoulder lines using chisels and a shallow gouge until the scribed line had been met.

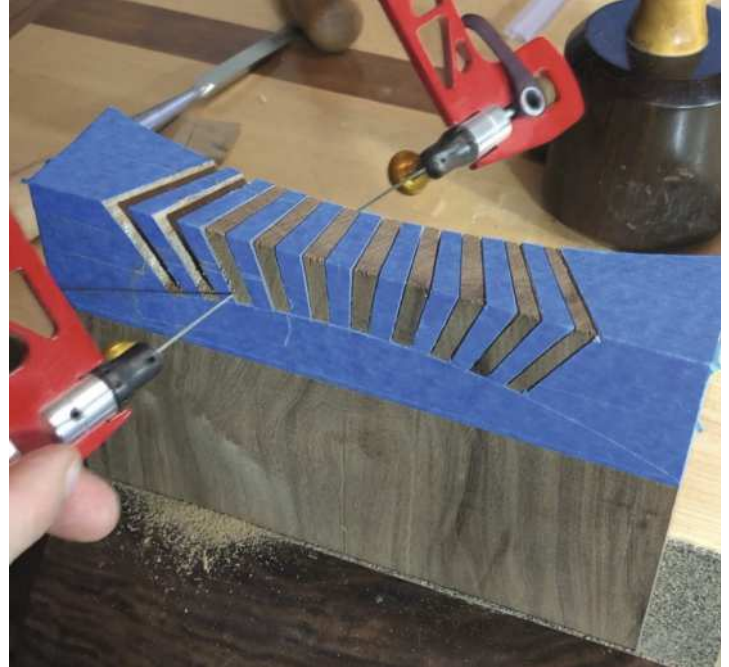
Both halves had now been completed, but with no way of knowing if it was going to work. I did a small test fit to see if the tails and pins lined up

on the back entry edge of the joint. They did. There was no point in pushing together any further as I wouldn't be able to get the joint apart again due to the friction between the tails and pins, and the joint must go together at 45°.

I then proceeded to apply the glue and gently tapped the joint so that it went together square, eventually resorting to the pressure from sash cramps to get it finally home as the friction became greater.

A plethora of cramps

The joint was now hidden beneath a plethora of cramps. All I could do now was to go to



Removing the waste with Alex's Knew Concepts coping saw (above) and the completed 'Shetland Sunrise' (below)



bed and wait. A sleepless night ensued thinking about whether it worked.

The following morning the cramps came off. To my relief I couldn't see any gaps, so I cramped it into my leg vice ready for final cleaning up.

The joint was planed up and given a couple coats of polish and wax. In total it took me nine hours of actual working time, including all the marking out, cutting and cleaning up. To date this is the hardest joint I have ever cut, and I admit I was absolutely delighted with the result. Rising to my personal challenge made it all worth while.

It now sits quietly on the windowsill in front of my bench with the others, as inspiration for future projects, to remind me of what can be possible when at first things look impossible. It is amazing what you can achieve and learn about yourself along the way if you truly put your heart and soul into something and try to achieve the very best you can.

Details A short video is viewable on Alex's Facebook page, Instagram page and YouTube channel. Search for Shetland Fine Craft.

Four Hours with Jack

When Jay Montepare found an emotive plane his passion for chairmaking took a leap forward

At 7am I open my roll door. It screeches as light fills my shop. I put on my beat-up chore coat and tighten my boots, which makes me feel like Mr Rogers; Fred Rogers that is, from *Mr Rogers' Neighbourhood*, which ran from 1968-2001, and was one of the most popular children's shows in American history. Mr Rogers would start each show by entering the set and singing "Won't You Be My Neighbour," while he put on his cardigan and changed his shoes, making sure the were tied nicely. Everybody wanted to be Mr Rogers' neighbour. Mr Rogers' Neighbourhood was a place where life was simple and everything made sense.

I turn on the radio – Radio Country fills the air – I need music, or I feel like nothing is happening. The shop is alive. I can start working now.

I open the drawer of my tool chest and see my grandfather's old Bailey No.5 jack plane. When I was a boy he knelt down and told me: "Jay, the best things in life are built with your imagination and your own two hands. With those things and a little improvisation, you can make anything." He was an incredible craftsman.

My favourite picture of him was taken when he was working one day at my childhood home. He's standing in the middle of the yard wearing a cap and a plain white T-shirt tucked into some carpenter pants. He holds his jack plane in his right hand, a smile on his face. He seems so at peace. He looks like he can do anything with that plane.

I'm on my second day making a pair of Welsh stick chairs, part of a dream commission: 10 chairs to match a client's enormous 18th Century farm table. He says he wants them all to look like they've been sat on by 200 years of butts. Each chair will be different - as though they were created by different makers at different times with varying finishes and degrees of wear. I think the only way to do this convincingly is to build them exactly as they did in the old days, so I'm exclusively using hand-tools and not worrying about tool marks. Before I build a chair I come up with the story of its life. Who built it? Who owned it? How did they use it? I look at examples of old chairs to see how they look and how they aged.

I need to plane the legs square, then taper their full length, then make them into hexagons before I round them off. I grab a



Jay Montepare in his Los Angeles workshop, buried in shavings (left), and his grandfather, Val Montepare, circa 1988

leg from the pile I rough-cut the day before with my old Disston No.12 and place it on my bench jig. Pick up my grandfather's plane, sight down the blade and adjust the lateral lever, run a squiggle of wax on the sole, set my feet and start the dance. With each return pass I flick the depth wheel instinctively until the blade is dialed in and I'm shaving beautiful full length ribbons.

Spinal fusion recover

Five years ago I found myself on a lounge chair outside my home in the Los Angeles hills looking at the view. It was a beautiful day but I couldn't enjoy it. I was recovering from spinal fusion and knee surgeries from injuries I had gotten during a six-month renovation of my house.

For 12 years I'd been a professional stand-up comedian, actor and television host. I'd headlined clubs and colleges all over the country and performed for US troops overseas. I'd done television, movies and many commercials. The year before my renovation I'd finally gotten what was supposed to be my big show business break; as the host of *Ellen's Design Challenge* on HGTV (Home & Garden TV).

As Ellen Degeneres' furniture design competition show, it aired and did very well. Then I found out they were going to do the next season without a host. I lost my job and my agents dropped me.

I was broken and depressed. I was sleeping till noon and spending my days getting stoned. My wife wanted to kill me. The question I kept asking myself was, What did I want? It killed me that at 39 I didn't have an answer.

I decided that every morning I was going to wake up and ask myself, How do I want to spend this day? As soon as I had an answer I would get out of bed and do it. All I wanted to do was build stuff. I built a huge fence that surrounded our entire property and then I built matching gates. I built built-in benches, retaining walls, pergolas, floating patios, planter boxes.

Then one day, I was at a local hardwood store and accidentally walked into the employee lounge. Up against the back wall were two hand-made chairs. They were simple and beautiful and I was mesmerised. I found the maker - he worked in the shop - and he



The Welsh comb-back chair (right), with aged 'Spirit of Wales' finish inspired by John Brown. Others (above) have faux-aged details, tool marks and worn milk paint. 10 chairs commissioned for a dining table (below)



told me they were Gerrit Rietveld knock-offs. I saw the pride in his face, and he gave me pointers, I bought some lumber and headed home.

I set up a knock-down shop in my carport and started building my first chair. It was Rietveld's Crate Chair (the pre-cursor to the Adirondack) a rectilinear little number I made out of pecan hickory. When I finished it I must have spent a full day just looking at it. I was ear-to-ear smiles and felt like a junkie who'd found a new drug.

I looked to the masters and devoured every book I could find by Esherick, Nakashima, Maloof, Krenov. They spoke of seeing what a piece of wood wanted to be, working with it in harmony, rather than imposing their will on it. They spoke about their furniture having soul and a higher connection they felt to wood through the use of hand-tools. They created unique expressions of themselves through their furniture and their creations became the language with which they spoke to the world. Each piece left a part of themselves that would survive long after they expired. They spoke of oneness, of calm, patience, practice, dedication, purpose and pride in

making something truly beautiful.

The next time I went back to my parents' house in Massachusetts, I was rummaging through a barn and found my grandfather's old No.5 in a dusty box of tools collected after he passed away. It felt like a talisman. Working with my hands was my birthright. I never knew it before.

Now, today, I've been planing for more than four hours and the tempo of my strokes can be set to a metronome. I've switched over to my Lie-Nielsen and it's riding through the white oak as if it were pine. I'm doing the same motion over and over and I'm having a great time. This simple act of shaping wood with a hand plane fills me with purpose and joy. Everything else fades away; my problems, fears, worries. It's me, the tool and the task. The tool is an extension of me and life has gotten real simple, real fast. It's a great feeling.

I finish rounding my final leg and examine all the beautiful little facets that can only be made with a block plane. My feet are buried in shavings and my legs look like saplings growing out of the pile. I've sweat through my shirt, my right elbow

is sore and blood blisters have developed on the pad of my right thumb and the heel of my left hand. I look over at my tablesaw. I could have done all this work in 20 minutes that way, but it's not about finishing a piece, it's about making it. This is how I wanted to spend my day.

My wife texts to see if I want to come home early and take the dog for a walk. Our relationship has never been better. I sweep my shop, clear my bench and put out the materials I'll be using tomorrow. I wipe down my grandfather's plane with camellia oil and place it back in the drawer next to a tinner's hammer with his initials etched into the handle. I love using his tools. It's like spending time with him again. I close my roll door and take off my chore coat, hang it on the hook by the door. Before I flick the lights off for the night I glance at the picture of my grandfather and his jack plane hanging on my wall. I look down at my clothes. Funny, we're wearing the same thing.

Jay Montepare's work can be found on Instagram @valmarcraftsman and on his website valmarcraftsman.com.

Lightening the Mood

More & bigger shed windows help *Robin Gates* beat the winter blues

My winter woodwork is all small projects, restoring tools, cleaning up reclaimed wood and making quirky one-piece things before my feet are frozen. There's nothing like a shot of woody endorphins in the bloodstream to lift the spirits. But I'm one of those sentimental hand-tool woodworkers who likes to conjure the atmosphere of the village carpenter's shop lit only by windows, and since I don't work wood using electricity I don't want to work by its anaemic light from fluorescent tubes or those dazzling blue-white LEDs that are proving so disastrous for nocturnal wildlife. Yet this poses a challenge because I'm mildly susceptible to what we used to call the 'winter blues' but which now goes by the medical term of Seasonal Affective Disorder – and its very apt acronym SAD.

Around one in five people in the UK are affected by SAD which manifests in a variety of ways, like feeling less inclined to get out of bed in the morning, low self-esteem and bingeing on bad foods. It's exacerbated by the shrinking daylight hours, and as UK winters grow increasingly grey and damp thanks to climate change it's becoming more common. The scientific explanation is that insufficient light reaching the eye's retina causes disruption to normal working of the hypothalamus, a part of the brain exercising wide-ranging influence around the body.

People who get it bad can be helped by light boxes installed around windows to simulate long sunny days, or taking antidepressants. Here in the Welsh Marches, where ten-tenths cloud has been anchored above this unplugged shed like a moth-balled warship for days on end, I've opted for the natural alternative of fitting more and bigger windows.

This is a project that's been continuing in fits and starts for seven years, ever since we moved to an old house where the shed had been used only for storage and was entirely devoid of windows. Somewhat dismayed by the quality of shed windows available commercially, not to mention their cost, for the first few weeks I worked by the light of the open shed door, squinting at the pencilled line unsure which side of it I was sawing. But as the wind got up in autumn a gusting north-easterly would grip the open door and fling it hard against the shed as if to say, 'So when are you going to fit windows?'



Being an inveterate recycler, it wasn't long before I'd spotted a display cabinet ear-marked for the rubbish tip outside a charity shop, and immediately claimed it with a small donation. The cabinet itself was genuine rubbish, a mix of damp veneered chipboard and delaminating plywood, but the two glazed doors had solid wood frames and an applied lead lattice which, as windows, I saw adding some old-world charm to the shed.

Solid walls

Cutting a first window aperture in these thus-far solid walls felt like a step into the unknown, like meddling with interior walls in a house: would the ceiling collapse? Timidly I bored the corner holes, joined them up with the pad saw and removed the tongued-and-grooved pieces one by one. And of course I needn't have worried: whoever put up this shed hadn't skimped on fastenings. When the new-old windows were screwed in place all seemed as solid as ever. It was a rough-and-ready job, more state of emergency than stately home, but how the shed was transformed: I could close the door at last and carry on working by western daylight slanting onto the bench. Spring came and went with me still working by this single pair of windows like a moth drawn to the light, when serendipity again took a hand in events while browsing a local antiques market. Normally the

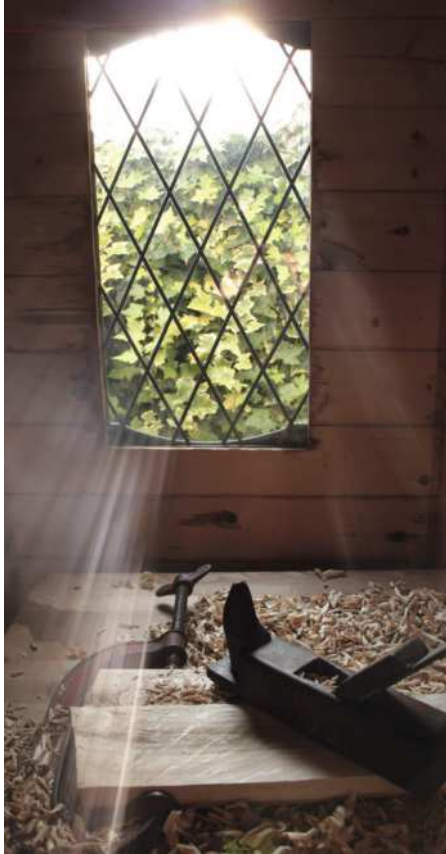


prices in these places make me chuckle, the sheer bravado of dealers attaching such hopeful figures to junk which, it seems to me, was made only yesterday. But at the risk of incurring displeasure from the eagle-eyed proprietor, I shifted a forest of rusty garden tools and ventured to a spot where it seemed no customer had rummaged this side of the millennium, and uncovered three Victorian stained-glass leadlights marked at only £6 each. They were of the top-hung awning type, with a flower-like stained glass motif lending a touch of art nouveau. In a shower of dust and cobwebs I landed them on the counter and tendered the exact money. At first the proprietor seemed not to recognise them, then his face dropped as he squinted to read his ancient price tags. I'm sure I made his day.

The glass and lead cambs were undamaged, doubtless preserved through tough times by lead's flexibility, but the frames were broken at every corner, only

Saved by a Sheffield Saw

Starved of a chainsaw, *David Keys* tests his brittle with an English crosscut



held together by old putty. Fitting these windows was not going to be so quick and easy. I toyed with making new frames, but was put off by the likelihood of wrecking the glass panels in the process and settled for repairs with screws, glue and graving pieces. As I cut back to sound timber the old forest pine released a resinous aroma as appetising as a well-cellarred wine. Once again, as I removed the T&G pieces the daylight flooded in, this time from the east, and the windows with their rebated edges plopped into place as snug as teapot lids.

Another year passed, and I thought the next windows fitted might be the last for a while: a pair of glazed kitchen cupboard doors added to the north wall. Sunlight from the south is too harsh for artistic endeavours at any time of year – north light is better, being sympathetically diffused. But it was a case of ‘last in, first out’ because in September I replaced those windows with one larger window cut from an old exterior door we found marked ‘please take’ on the street. That was a stroll into town which didn’t turn out as expected – my arms feel the weight of that door even now!

If you’re at all prone to those dreaded ‘winter blues’, be sure to fling the curtains wide, be outside at every opportunity and if you want a really worthwhile woodwork project – fit more and bigger windows in your shed.

Work a lot with community and youth groups, and we often make things like three legged stools, benches, or small tables, working out in the forest with hand tools. I usually cut what I need for a group from long lengths of ash that I store, meaning that it’s usually quite green and easy to work with.

Given that I’m very fond of using hand-tools, I thought that this might be the time to buy a crosscut saw. Not an old rusty thing with worm-ridden handles, but a shiny new one, that is sharp and ready to go. My chainsaws had been stolen recently, so when my son made the point that a new one might also be pinched, my mind was made up. There probably isn’t a big demand for ‘hot’ hand saws in the stolen goods market.

I’ll admit that I didn’t do much research. A few clicks on my phone, and I was on the Thomas Flinn & Co website, but I knew that I needn’t look any further. I’ve bought enough old chisels and planes to know that when a piece of steel has the word Sheffield stamped on it, it will be quality. A couple of minutes later, I had the order placed.

I was very impressed that it only took a couple of days to arrive, and I’m not embarrassed to say that I was like a child at Christmas when opening the huge parcel. When I got over to the workshop, I realised my first problem.

You cannot just start cutting a trunk lying on the ground as you would with a chainsaw. It needs to be raised up a bit, to a comfortable working height. So I set about making a sawhorse to hold the logs.

Fuelled with a cup of good coffee, I started on my first log. The saw has a set of smaller teeth at the end for starting the cut, which work very well. It didn’t take long to get a good rhythm going. All of the traditional sawing clichés apply with larger saws too, “let



the saw do the work”, “don’t force it”, “use long strokes”, I could almost hear my teacher’s voice in my head.

I was pleasantly surprised with how well the saw worked. The trick seemed to be not to rush. When you try to go too fast, the far end starts to wobble and is difficult to pull through the cut. The finish on the cut surface is massively better than what is left by a chainsaw. I spent an hour cutting sections of ash to be cleaved for stool legs, and I managed it without a problem. After use, I cleaned and dried the saw, and popped a length of pipe insulation over the teeth for protection.

At a quarter of the price of a chainsaw, a crosscut saw is also much better for the environment, safer, and much cheaper to run. Granted, I wouldn’t like to process a whole tree in one sitting, but for my purposes, where I can just cut as I need, a crosscut saw is a wonderful tool.





The Real Paul Sellers

In the first of a two-part interview, *Nick Gibbs* meets woodworking's most influential 'amateur'

Paul Albert James Sellers was born in 1950 in Stockport, just south of Manchester, becoming an apprentice furniture-maker in the town aged 15. Ten years later, having been working for himself, he joined the local police force, dissatisfied by the challenges of self-employment and the inclement weather. Embracing the shift patterns and income as a constable, Paul kept his small business going, making furniture in the evenings and at weekends. A decade later he left the police to become a full-time furniture-maker again, this time taking a leap to America, where at first he worked unsuccessfully as commission-only staff for a woodworker in Texas.

When that failed he set up business himself, putting a sign for Paul Sellers Furniture Maker outside the house he built, finding that Americans are far more amenable to craftsmanship and artisans than you find in Britain. Such was his success, that at one stage he was making cabinets for the White House. A chance invitation to run courses at a Texas university eventually led to the formation of the Homestead Heritage School of Woodworking. After 14 years of teaching near Waco, Texas, Paul and his family of wife Liz and two boys Joseph and Abraham returned to North Wales, finding a workshop in Penrhyn Castle on the north coast. An invitation to demonstrate woodworking there ended up with courses for adults, and led to him writing his first book *Working Wood*, and with Joseph's help, Paul started making videos. These have become a thriving success, with free films on YouTube, and paid-for Masterclasses for projects and techniques, plus Paul's personal, emotive blog at paulsellers.com.

Paul and Liz have since moved down to Oxfordshire, where Paul's first workshop was at the Sylva Foundation, in Long Wittenham, which provides workshops and hot-benching for woodworkers of all types. *Quercus* once looked to rent an office there. Needing more space, Paul and his team moved to a larger property nearby, where they intended to keep running courses. This they did, in particular for people with autism and for their carers, but most of their time was spent working on online courses, ending any wider ambitions for face-to-face courses. Most recently Paul has written *Essential Woodworking*, promoting hand-tools and what he refers to as 'Real Woodworking'.

NG One of the things you say on your profile is that you are a 'life-long amateur woodworker'. Considering your career, is that entirely fair?

PS It is if you consider that the word amateur comes from 'amare', which is to love. What I've learnt is that if you tied the hands and feet of an amateur woodworker, somehow they'd still be managing to work wood. There is something inside them that drives them to keep working and making. I think it's intrinsic to who we are as humans: we want to make, we want to grow, we want to bake.

Are you saying that you'll always be a woodworker?

I just couldn't stop. I mean it's not really a lot different to you. I know you had a mega incident in your life that could have destroyed you. I look at my diabetes. I've been a diabetic for 20 years, and I'm healthier now than I was when I was 50 and I'm 71, I'll be 72 in January. I have much more resilience, so my brain is functioning perfectly well, as I hope you can see. And I still put in probably close to a 12-hour day, most days, and it's because I love my craft. It's not just loving my craft it's loving those who



are on the same page. What I was going to say was that when woodworkers started coming into my classes, I felt a kind of compassion for them because you know whether they were 50, 60, 70 or 15 or 20 there was something inside them that had almost been displaced. If you like, the legacy of apprenticeship and of passing on your skills to a generation 10, 15 or 20 years behind you was lost. I was thinking about this the other day. I've been working for 56 years, and I don't know anybody, anywhere that's been working with their hands for 56 years who's living now. All my neighbours have retired at 55, 60, 65. That's not even on my radar. It's not even in my psyche to think about retirement.

How did it all start?

I apprenticed in Stockport when I was 15, then I became a journeyman, a shop fitter and finally went into furniture-making. When I was 25 I joined the police in Manchester. People don't realise that. The only reason I was in the police was because it was a great wage. At that time, Margaret Thatcher was in power and we were well paid. And my shifts lent me all the time I needed for woodworking because I could get eight hours a day in woodworking and eight hours in policing, and eight hours sleep. It was perfect. It solved all the problems. The important thing for me was that I could still be a furniture-maker. I was still in business the whole time I was in the police. Being in the police took the pressure off being a single income earner with a young family. That's the biggest dilemma for most people. That's why I've had to stop saying to students: "You can do this too," because you can't. You can, if you're in high demand and self-reliant and out there, and you're prepared to work.

So why did you leave the police?

To be a woodworker again. I was disillusioned with society then

because I'd been in the police for that length of time. And I just felt somehow claustrophobic and that in Manchester it was always raining. Every time I made a piece of furniture, I'd be blanket-wrapping it, trying to get it air-dry and things like that. The moisture levels in the atmosphere were way too high. There were always problems like that. Then I just said to my wife, what do you feel about living in another country like America? And she just said yeah, if you want to do that. And we applied, and it took us three and a half years to get a visa. We got the visa and we arrived Stateside and found the person that had offered us employment was a charlatan. I had written to about 30 people in Canada and America as an English woodworker to see if they would offer me a job.

You were searching to find furniture-makers?

Exactly. Woodworking magazines had addresses, so I would write to those. But only one offered me a job. And I arrived in the US in the middle of nowhere, really, very remote work. Right down south on the border, in a place called Uvalde, Texas, which is 60 miles north of the Mexican border. Everything that is good and bad about America is better and worse in Texas. I went to America to work for a Texan craftsman. I worked for him for about six months, but it didn't really work. The expectations of a good wage weren't there. I didn't get paid anything for six months. And I was running out of my savings. You got a percentage of the sales of what you made. I just had access to his workshop, basically.

Then what happened to you?

I just started woodworking on my own. I built my house. I built my house from the ground up. And then I opened up my gate and put Paul Sellers Furniture Maker outside and people started coming in. I just kept doing this. You know, I stayed there for about four years. And then I moved to another area. It was called Fredericksburg, which is more of a touristy, artsy, crafts place. That was in 1990. And I did the same there. I opened up the doors, and we just had dozens and dozens of people. This is the nice thing about America, that they love crafts. They love handwork, they love hand crafts, and they really do support it.

Especially English people?

I thought that was the real magnet at one time, that they would want Old World craftsmanship. But I think that Americans have probably contributed more to the preservation of crafts, by putting their money where their mouth is in supporting local artisans than anywhere I've ever been. Even more than here, like a million times more than here. If I could sell a rocking chair for 6500 in the US, I might only get 3000 for it in the UK.

I remember one time a woman came into the workshop and she

asked me about the pieces that were in the workshop made out of mesquite. She went back to her boss, and she said, "I found this Englishman, and he makes furniture out of mesquite. And it's just beautiful." And the man calls me and says, "I'd like a chest of drawers made this size, this size and this size, with diminishing drawers that go from top to bottom. And it's got to have 10 drawers in it." And I said: "Those are very specific sizes, aren't they?" "Yes," he replied, "you'll find out why when you deliver it to me." So I said, ok and he gave me the order over the phone. It was for about \$5000. I made the piece and then when he called me he said: "Can you meet me at Kerrville airport?" "Sure. Where do I go to?" He said: "Go to hangar number five, and I'll meet you there." I ended up carrying this piece of furniture onto his plane. It was a music chest for his wife's birthday. And the specific sizes were to get in through the door of the plane.

Were you escaping the British class system?

That was it. There was no class. That was the whole thing. Nobody said: "Oh you're a Northerner!" They said: "I love your accent, it's so beautiful." The reception was refreshing. It transformed me as much as anything in my life. There was nobody who could recognise that I was a working class man, not that I'm ashamed at all of being a working class man. "I'm just a rough joiner, me," I'd say.

You've mentioned mesquite. Why did you use that?

Because Texans love mesquite. It is the most stable wood in the world. It's like mahogany. It swells pretty much the same on its width as its length. It doesn't expand and contract like any other wood. The cabinets for the White House had cross-banding from it. We did things with those pieces you can't do with any other wood.

Would mesquite be your Desert Island timber?

I would use it for its unique qualities, but I think oak is a hard wood to follow, because of its built-in strength, because of its historical value to us as a nation, you know, all the warships and battleships, the sailing ships. Everything was built from oak. Oak is very versatile. If you leave it in its natural colour, and you just apply a finish it really is a very pleasing wood and it's very variable too. You can have your quartersawn with all the medullary rays. You've got red oaks and white oaks and so on. You can have a more sombre colour on one side and there's so much character to the oak.

And you were asked to teach in the US?

I started teaching for Texas State Arts and Crafts Board in 1990. They came to me, and asked if I would be a demonstrator for them at a woodworking event. And then at the end of it, the audience asked if I would ever teach classes. The woman who organised the whole event asked: "Would you like to teach a class for us?" And I said: "Yes." And that was the start of it. That was the first class I ever taught.

I was invited to go to a workshop and see some children making spoons or spatulas. And when I got there, and there were probably 10 men, and 10 boys, they were all standing in line to go on a bandsaw. I asked what's this about? They were waiting for the Dads to cut the shape out from the bandsaw. Why on earth are they doing that? I asked. And they said: "Well, how else would you do it?" That was the mentality of the people teaching. "Well, there's a coping saw, there's a rasp, there are split cuts." Children can use a chisel and hammer quite safely if they are supervised. And then someone asked: "Would you organise a class?" And that was really how I got going, making that class work for young children.

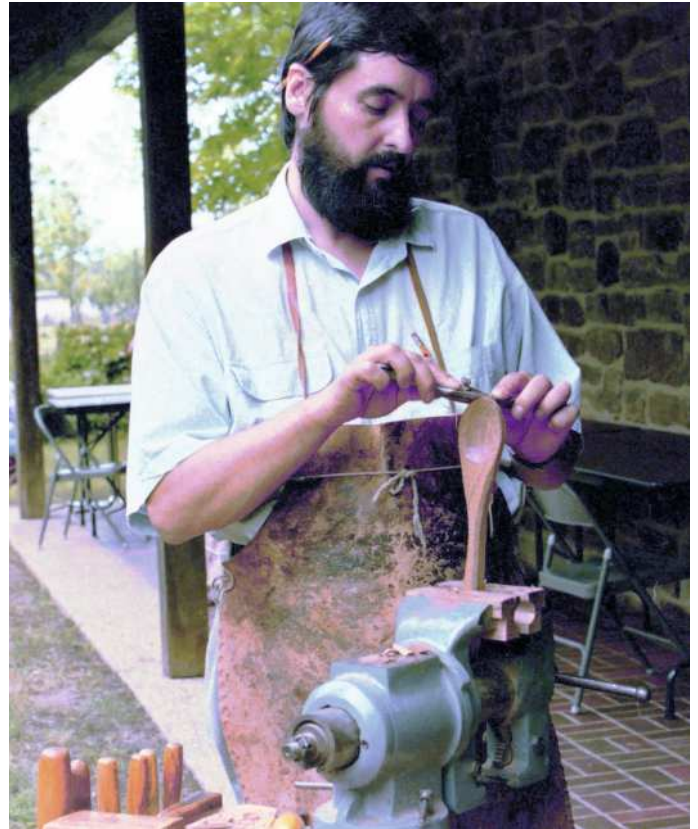
It wasn't a question of dumbing everything down. It was a question of making it work. It was practical, interesting, stimulating. And then I've seen other courses where they have a



One of the mesquite White House cabinets



Early days living in the USA, right at the end of the 1980s



Paul demonstrating woodworking at an event in the early 1990s



The house and workshop Paul built in 1988. The sign displayed was an early, short-lived trading name he used

Paul and Joseph's first studio on moving from Wales to Oxfordshire, was at the Sylva Foundation



technician that does all the work for the students. Like they have in schools now. It's all been dumbed down. You have a technician that makes many of the cuts on machines, on routers and things like that, because you can't really put a 12 or 15 year-old boy or girl on a power router. So it's actually machine woodworking that has excluded children from the workshop. What our Woodworking Masterclasses have done is to make woodwork inclusive.

You've mentioned autism. How can woodworking help?

Autism is a massive issue. And it's hugely bigger than many people realise. About three years ago I got in touch with an organisation that teaches autistic children. They go across the gamut. Some are high functioning. And then you have some who are really needy and have to have supervision the whole time. What we found was that you find one boy, or a girl, young adults aged 17 or 18, and those are the ones that I worked with there.

We developed a whole curriculum for them, but it was based on what I had been teaching for years. We were using a brace and bit. We were using eggbeater drills. We were using planes and spokeshaves. And then somebody would come in and say: "Well, what's he making?" And I'd reply: "What's the basis for your question?" "Well, his actions have to be making something," they'd reply. "Why can't his actions be making the shaving? And that's the end result. Does it have to be round like a dowel? Does it have to conform to something you buy in Ikea?" It was a complete success.

But you also need to help the teachers themselves.

That's where I ended up, having classes for the support workers. It's not always best to teach 10 people with autism at the same time. The most important thing is to teach the teachers. There are so many people who are engaged with that ethos. One student here was suffering greatly from his work in Afghanistan.

Has it had an effect on your courses?

I saw it early on. I thought I could teach autistics in my naivety, until I saw the breadth of the disability. And parents want me to teach their children. And that's the difficulty. I don't have time. That's what our online presence has done. It has replaced the hands-on classes in the best way possible. Even though I'm not saying it's as good as being in a class; minute-by-minute when somebody shouts: "Hey, Paul, can you come over here? I've done this." But it is the next best thing. I didn't know if it would be. It was Joseph's idea that we started videography, and started our own company to do it. And it's been brilliant.

How does it feel to be a movie star?

Some people have thought that somebody, somewhere is handing me the pieces pre-milled, but they're not. I have to make at least two of everything because I prototype the whole project first out of a lesser wood to make sure it is going to work, and then I make it from solid cherry. I start with the rough boards and I plane and I bandsaw every surface. I think this has been really helpful for people to see. I just did a Facebook post about a TV cabinet I made with six tools and a bandsaw in 60 hours. People say: "Well that's impossible. How can you possibly do that?" Well I did. And it's because I'm fit and healthy. I'm strong. I've got the tools. And what I'm passing on to my audience is that you can do this. You just have to be prepared to go through about two years of an afternoon a week, four or five hours. And at the end of that two-year period, you should be able to make everything we've made on our Woodworking Masterclass channel, a house full of furniture. That includes some fairly complex things. We've got a coffee table, a new rocking chair, a bookcase and now we've got a TV stand. It might take them a while. Say it takes 120 hours to make the same TV stand, we are talking about 25 days at five hours a day. That's not prohibitive. It might take a year, but you're making



One of Paul's projects for the 'Sellers Home' is a TV Unit

heirloom quality that's top notch. It's all dovetails, mortise and tenons. The by-product is the coffee table. The real product is the skill, and you've got somebody who's really developing skills, and not only that, those skills are transferable to other people. It doesn't end up with one person. It can end up with 10 people.

That doesn't mean you are infallible, does it?

Often I'll make my mistakes on a prototype, like the TV cabinet. We did a curved front on the first one but then realised it was going to take forever for us to film the laminating of the curve. It would be too long a series and it was too complicated, so Joseph and I talked about it. We said we'll just have to ditch it and we'll put a flat front on the lower shelf and we'd have a curved front on the top. And that's what we did. Those are the ways you work through things.

What about the books?

When I wrote the curriculum for my first book it was basically three joints and was based on my premise that with three joints and 10 hand-tools you could make just about anything in wood. You may get variations on the joints, but they are basically a dovetail, a housing dado, and a mortise and tenon. Some are mitred, some are haunched, fat, thin, twin, double; all of those things. Even now, I might use 10 hand-tools but I have 50 hand-tools on my bench. But we're not advocates for living in the past. We're living in the present. We've taken the best of the past, to give it to the future.

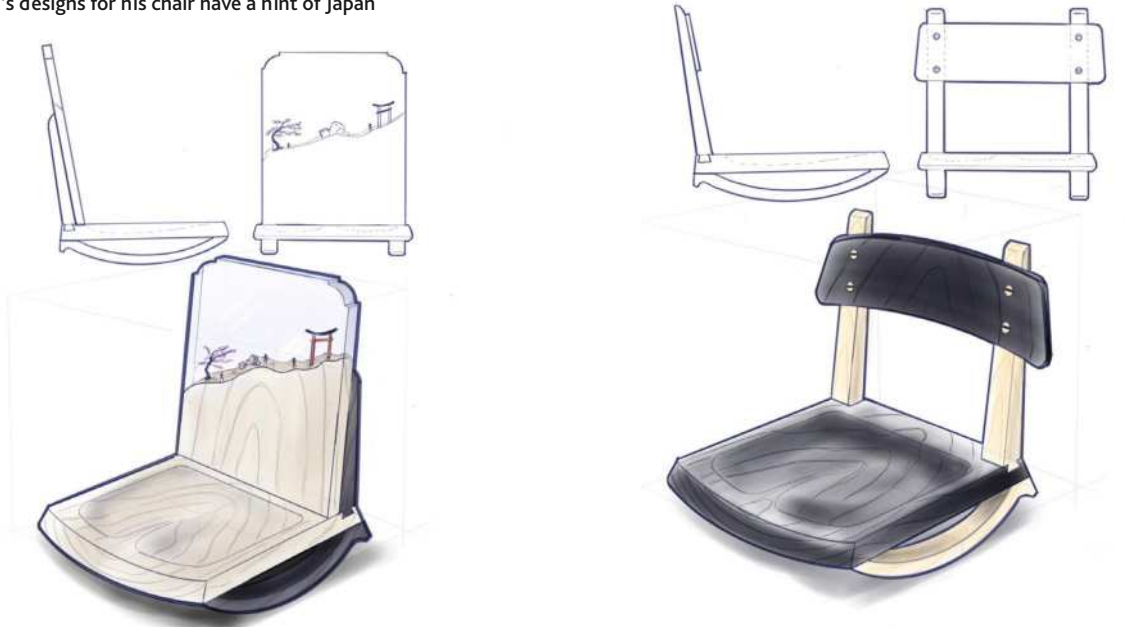
Next Issue Paul discusses tool choices, design and manufacture, and the router plane (right) he's designed for woodworkers to make themselves. Visit paulsellers.com now to discover Paul's blog, his YouTube channel and dedicated videos for projects and techniques with Woodworking Masterclasses.



The Meditative Chair

Finalist in the Britain's Best Woodworker challenge, *Radha Sivyer* reports on his Japanese chair design

Radha's designs for his chair have a hint of Japan



The brief that was set to us for Episode Three: Chair Week was the judges would be expecting a classic design for the future, good ergonomics and that the chair be robust and sturdy. One thing that's really getting more popular in the West is meditation, but many people (including myself) struggle with mobility and being able to fully sit in the Lotus position (cross legged). I found that by elevating slightly above the ground it allowed me to sit in a crossed-legged position with much more comfort and ease, allowing me to focus more on the meditation itself rather than being uncomfortable on the floor.

Having a deep love and admiration for Japanese culture and furniture, I sought inspiration from low Japanese chairs, and added two rocking legs to be a soothing and relaxing movement while seated. I set out designing a low rocking chair, with a steam-bent back rest, wedged tenons, and contrasting stained woods.

Back to the drawing board

After consulting with Channel 4, they urged me to continue down this path but add more forming and more interest to the piece. So back to the drawing board I went, and I decided to implement a new technique that I hadn't had much experience with, resin casting. It's worth remembering we only had 18 working hours to make this project. Fortunately each episode was filmed over the course of three days so I took advantage of that for the setting time of the resin. This particular resin needed 48 hours to fully cure which would have only left me with two hours at the end of the day to sand, polish and fasten the back to the rest of the chair at the end of the challenge. But I felt confident enough and took on the task.

Due to the resin needing a well-ventilated area they set up a

tent outside of the main workshop and told me I could work in there to do the resin pour. After setting my figurines along the live edged board, I poured the resin, all going smoothly, and clean. I then covered the resin with a board and put a heater underneath it to make sure the temperature in the tent didn't drop too low, which would have slowed the curing time.

Big mistake

Turns out that was a big mistake. By covering the resin and placing a heater under the piece, it essentially turned into an oven and baked the resin, causing it to smoke, crack and melt the figurines. What a disaster. At this point I was six hours into the build with only 12 to go, and I had absolutely nothing to show for it. So I resorted to the original idea and had to construct the chair from scratch, using hand-cut dovetail joints to fasten the back rails and steam-bend out a backrest.

Unfortunately on the show I ran out of time to test and adjust the ergonomics of the chair, which had me en route for being eliminated in that episode, however the judges seeing traditional joinery and careful construction decided to keep me on the show and it got me through that round and onto the next 'week'.

After the show I took the chair back to my workshop and adjusted where necessary, and invested the time to properly finish the chair to a much better standard. I have used that chair everyday for over a year, and it's just as strong, supportive and effective as the day it was built.

You can follow Radha Sivyer on Instagram @radhasivyer. You can learn about Helen Welch's LSF by visiting furnitureschool.co.uk or on Instagram @the_london_furniture_school

Judging Chair Week

Helen Welch recalls Episode 3 of C4's Handmade



Radha Sivyer (left) with judge Helen Welch, presenter Mel Giedroyc and judge Alex de Rijke

What can I say about the chair challenge? We know that chairs are a difficult thing to get right. They have to be strong but not too heavy, comfortable but not over padded, and look good from every angle. Even Jim Krenov decided they were tricky and avoided making them, so expecting an amateur to come up with a design that in any way came close to fulfilling the brief was going to be a stretch. A few chairs failed simply because they were blooming uncomfortable. Misti's tub chair was very heavy, but I liked the way it cocooned the sitter like a throne. The skeletal lines of Charlie's chair were very pleasing, but the seat was way too deep and as a consequence didn't provide any lumbar support. In the end Joe's bent plywood seat came out on top. It was comfortable, light and the design would suit a contemporary living room. My only gripe was that getting out gracefully was impossible.

I've no idea if there's another series in the works but I hope we get to see more woodworking on the telly. Perhaps a competition for professionals, or a series following aspiring makers at the start of their careers. You read it here first.

The Splinter Group and London School

My career in woodworking started in 1984, when the head of the Sixth Form suggested that I left school if I wasn't prepared to study for my A-Levels. So off I went and had the luck to fall in with The Splinter Group; a committed group of woodworkers running a Youth Training Scheme. It was love at first sight and just what I needed. Sadly the workshop lost its funding and I had to leave after six months. I spent a while faking rustic French antiques before joining a carpentry and joinery apprenticeship with Camden Council.

In the intervening years I've studied and worked in loosely-related subject areas including building surveying, forestry, greenwoodworking, and modern fretted instrument making. I've made a few guitars, the odd seat, and a bunch of tools for fun, but most of my paid work has been cabinetmaking and fitted furniture.

I started the London School of Furniture (LSF, furniture.school.co.uk) in 2013 after noticing that there was a dearth of woodworking classes for keen amateurs. I've been teaching for nearly 30 years at a variety of schools and colleges, for the most part on vocational courses. A qualification is important for those planning to work in the industry, but that isn't especially important to amateur woodworkers, so I set about developing a programme that could act as a bridge between the two. We now teach a series of intensive classes, from four to five days duration, which cover the subject areas you would find in a full-time course. Plus we run a series of Core Skills modules.



Chairmaker Takuya Aoki

**Working on a building to house 500 chairs,
Dylan Iwakuni finds a single-minded chairmaker**

Takuya Aoki is a furniture-maker specialising in chairs but he is also a colleague of mine. He works alongside those of us carpenters relocating a 93-year-old traditional house. The structure will become a resource centre for chairs, where people can observe and study a collection of approximately 500 chairs from around the world. With an exhibition coming up, Takuya took some time off the carpentry work to focus on what he specialises, crafting chairs. His workshop is near the site where I work, so I would occasionally visit and watch him meticulously work on his chair. At each visit, I'd see it evolve from slabs of wood to a finely-crafted chair. The wood for the chair is keyaki (Japanese zelkova), a hardwood species native to Japan. The legs are from what used to be a Daikoku Bashira (central post) of an old traditional house, and the seat from a big slab of keyaki which was left unused in a warehouse. Several coats of Urushi lacquer are applied to finish the surface.

Sticking to a single design

This chair is the only one in Takuya's portfolio. Though he was advised to come up with a few new designs for exhibitions, he sticks only to this one. "I knew it would be impossible for me to come up with new designs every time," he told me. "So I decided to focus all my time and energy into one chair and create the best chair I possibly can."

Takuya Aoki's design is the result of at least 20 refinements over five years. One distinctive feature has been the joints used on the backrest. When asked to explain, he told me about an old chair, thought to have been designed originally by Riki Watanabe, that he had found in a friend's antique shop.

"The seat was cracked, the surface burnt from the sun, with a hastily repaired armrest and bug-ridden legs," Takuya said, adding that 'beautiful' would have been the last word to describe this chair. "There was this joinery used on the backrest that made it irresistible. I felt this was signifying the start of my woodworking journey. I knew I had to get it."

Takuya had recently quit his corporate job to pursue the dream of becoming a woodworker. "Having found a furniture-making school to attend, I was in the process of packing my belongings for the move," he said, "yet I bought that chair. For my graduating work, I made a study of the chair. However, I couldn't do the joinery for the backrest and went with a lamination instead."

Takuya told me that after finishing college, he wanted to pursue the craft further and he joined a furniture workshop owned by Tak Yoshino, who also employs me. "On a visit to his workshop," Takuya recalls, "his chairs caught my attention and a familiar shape took me by surprise. He was using joinery on the backrest like my antique chair. He makes custom-made chairs skillfully using numerous Kanna (hand planes). As I like Kanna and chairs, there wasn't a better place to be."

Follow Takuya Aoki on Instagram @aoiaua.

24 January/February 2022 @quercusmagazine



Instead of using typical dowels to connect the legs to the seat, a tenon is cut on the legs for extra strength (above). Getting the angled shoulders to fit flush is the really difficult part



Details of the joinery on the backrest on the Riki Watanabe chair (above). The joinery used on the backrest made the chair irresistible and inspired Takuya to use a similar approach for his chair



The fine-textured seat (above) is finished using a Shiho Sori Kanna (compass plane) seen on the far left. The light stand is the sole source of light in the dark. Moving the light around and shining light from various angles creates shadows showing the subtle details of the texture



The 'Riki Windsor' chair (above), designed by Riki Watanabe. Buying this chair in an antique shop transformed Takuya Aoki's path as a chairmaker



The finished chair (above), ready to be exhibited in Tokyo. The dark, matte colour is the result of Urushi lacquer. Aoki generally applies between two or three coats, but other makers apply up to five coats. The more layers of Urushi, the glossier it becomes



The Kanna (hand planes) Aoki uses to shape and finish his work (above). The various shapes and curvatures in the design mean numerous Kanna are needed, each shaped to create a specific shape or curvature. On top of that, separate Kanna are used for the rough shaping work and the fine finishing work. Many of the Kanna Dai (hand plane body) are made by him to achieve the ideal shape

Shaping the armrest (below) with the Nankin Kanna (spokeshave). Though the changing grain direction makes it difficult to plane, the surface is finished with the Kanna, giving it a distinctive sheen and feel



Reviews

The Chest of Time

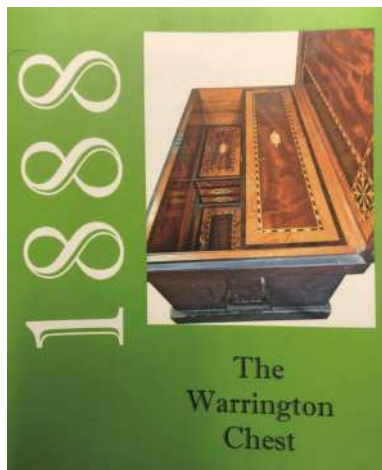
Inspired by a valuable new book, *Bill Ratcliffe* considers making a tool chest a rite of passage

As I write this, I am in the middle of a week teaching Keith, a student and now friend, how to make the lid for his traditional tool chest. This Covid-interrupted project started with him coming to my workshops near Ely, Cambridgeshire, 18 months ago. He came then to make the tool chest carcasse, and now I'm supporting him for work on the lid.

I want to talk about a book I read earlier this year, titled *'The Warrington Chest, 1888'*, published by The Tools and Trades History Society (Taths). I posted it on my Instagram feed, @cravenconservation, in June of 2021. To paraphrase myself, I said I had never been so pleased with a book I had ordered, and it provided an important insight into the lives and trades in 19th Century England. In my view you can get as much or as little as you wish from this book. For me, it appeals to the conservator and the maker in me, the historian, the teacher, the lifelong student, the collector, and the human. Many books cover the technical element of woodworking, and some others are historically based. This book appeals on many levels: the chest design, the personal stories, social history, marquetry techniques and the tool history.

Traditional nod

My rather lame title, *The Chest of Time*, is a nod to *The Warrington Chest* and its contents, a time capsule which has survived the test of time. It's also a firm nod towards the traditional tool chest in general, its continued use and its link with our predecessors, having in this case survived centuries. Keith's making of a tool chest demonstrates that despite all the technology we have in 2021, many woodworkers still have that connection and the desire to make and use tool chests. There are many popular books that discuss them and their making, but this one, written by chest owner Ted Cole and other contributors, is different in being based on the research of one remarkable historic example, covering several topics,



Keith (right) cutting dovetails in the making of his tool chest. Bill describes this as a rite of passage, making your own storage as well as learning valuable skills and building an embodiment of one's abilities and purpose and perseverance

from social history, to the people, tools and techniques of the late 19th Century.

In 1888, an 18-year-old Sheffield patternmaker, Ernest Warrington, made a tool chest to keep his tools safe. After Ernest's early death at the age of 27, the chest passed into the hands of his brother, Tom, also a patternmaker. After Tom's death in 1953, it was inherited by his daughter. She gave it to her neighbour, Bernard Broadhead, who also trained as a patternmaker. In 2018, when Bernard went into residential care, it was sold by his daughters, and bought by TATHS member, Ted Cole.

Remarkably, this chest has survived in near-perfect condition. It is skilfully and beautifully made, with exotic wood marquetry and veneer of an uncommonly high standard. It has the most unusual design with full-width and half-width tills and the most ingenious system of locking supports for the sliding tills. Recognising its uniqueness and its outstanding beauty,



Ted invited a group of tool enthusiasts and historians to help him tell this story of the chest, its tools, its context in Sheffield and the patternmaking trade and share this wonderful find with the world.

I do not wish to spoil your read, should you decide to get this book, however, I must mention some key sections, so join me on a whistle-stop tour, of sorts. The book starts by explaining how the chest came into the hands of current owner, Ted Cole. It is an interesting tale in itself. Chapter One then provides the context of the industry, plus living and working in Victorian Sheffield. I am sure many of us have old tools stamped 'Made in Sheffield', and an insight into the trades and areas of Sheffield will only make you appreciate the workers and makers even more.

Then we have the Warrington family history. This is so well researched, including a family tree, street maps and photographs, bringing to life 18-year-old Ernest. Chapter Three describes the tool



Bill with his own tool chest, and above his head the sort of framesaw you can find in *The Warrington Chest*, and being used to cut veneers at Hay Cabinet Shop in Colonial Williamsburg

Reviews

chest in detail, with the use of quality images, leading readers to the interior, which is a highlight of the chest. Once the lid is opened it reveals the glory of the stunning marquetry. The till/tray lids and the inside of the chest lid are adorned with boxwood, ebony, pitch pine, mahogany, holly, satinwood and brazilwood.

The skills used include marquetry, stringing, cross-banding and the main point to make is that I cannot do justice to the quality of the interior. You have to see it. Which is why the book is so valuable, demonstrating the number of different skills that had been included in the making of this chest. Above all, Chapter Four is devoted to the stunning marquetry, focusing on the 'how' by completing some re-enactment and the making of replica veneer panels. This shows the traditional techniques in a step-by-step format, including the use of a frame saw, as demonstrated by harpsichord maker Edward Hay and his apprentice cutting veneer by hand with a frame saw at the Hay Cabinet Shop in Colonial Williamsburg. There are images of the key timber veneers used, and the use of a mitre box for forming chevron patterns.

Anyone with a passion for the history of traditional woodworking tools will love Chapter Five, offering you a fully-stamped tool kit to study, beautifully photographed, listed and researched. There's even an Appendix listing all the tools in the chest. The book concludes with excellent drawings of the chest's construction and a full 'Table of Dimensions & Components.' This is such valuable information; facts and figures for a historic tool chest for study purposes or perhaps to attempt to replicate one day. I am still considering that as a future project.

So, what is it about woodworkers and tool chests? Is it more than something practical for storage? We, people in general, like to organise our lives, we have our lives in boxes, we live in a box full of smaller boxes, we have cabinets, drawers, filing cabinets, sheds and numerous forms of storage. Just look around your home or workshop and see how many boxes, drawers, containers and cabinets there are. Having a tool chest also appeals to the 'collector' inside us all. We can assemble a collection of our favourite tools, curate it, take joy in admiring its contents. The expenditure-guilt is offset by all the amazing objects we aim to make.

Centuries ago, people completed lengthy apprenticeships, and buying tools was relatively expensive so they made many of their own. Your tool chest contained a massive investment in time and money. Your trade, and your ability to earn a living, were contained in a lockable but mobile chest, and your tools were stamped to



identify them as your own. Stamps were used more to protect tools than stamp items of furniture made with the tools.

I accept we are all different, but for me the tool chest is much more than simply practical storage. For me it is a connection with the history of our craft. Making a tool chest was once part of your apprenticeship and a rite of passage for a cabinetmaker, patternmaker or related tradesperson. The Warrington Chest is a beautiful example, and we are fortunate that it is honoured in this amazing book.

Initial training

I have made several tool chests over the years. Some were at important stages of my learning journey, like the one made during my initial training when I was 17 years old. Then there was the one I completed as the first project at the start of my Degree in Furniture Restoration in High Wycombe, as a continuation of the town's apprentice traditions in the furniture trade. More recently I made the tool chest I've always wanted to make. It has been probably the most enjoyable making process of my career, not the most challenging, but so rewarding. I enjoy working from a tool chest. It makes me disciplined about my tool kit, it protects my tools and I have everything at hand. Opening my tool chest starts my working day and closing it is a good feeling at the end of a productive eight hours.

The inspiration for this build was reading the excellent *Anarchist's Tool Chest* by

Christopher Schwarz, which I am sure many of you have read.

His book provides historical background, plus information on much of the practical making process. Yet you're not spoon-fed every detail; you need to problem-solve, think about your own tool kit, how you work and make a tool chest to suit yourself. This is an important part of the learning process for any woodworker; not just the making and tool handling, but also the thought-process and the planning. This helps you understand construction methods and the flow of tasks required. In my opinion that is also why it has come to be seen as a rite of passage.

I would argue the most important quote from the *Anarchist's Tool Chest* refers to the stage when you complete the making of your chest: "After you build your tool chest you should be able to fit every tool you need into it. Set it at your right hand (or left, if you are sinister). And let it serve as a reminder that it holds the tools to build almost anything you can design. And more important, it holds the tools that can release you from consumption, decay and further consumption."

My tool chest sits at my right hand and is used daily. I would encourage everyone to have a go at making one, for the enjoyment, the learning and of course, to have a chest for your tools. My advice, for what it is worth, is to read a few tool chest books, make notes, pull out the nuggets of information that resonate with you, make a plan and then go for it. Depending on

New Books

Matthew Lepper reviews Richard Wile's new book, and asks: 'What is sharp?'



Cutting multiple dovetails is an ideal way to embed skills and display one's abilities

the space you have, there are many plans and designs out there. For inspiration, *The Warrington Chest* is a great place to start, and the *Anarchist's Tool Chest* is a more holistic resource, superb with practical information, in addition to the history. Then there are the myriad of other designs, like Mike Pekovich's much smaller portable tool chest. These projects are also a useful combination of working off plan, so you can customise elements of the interior to suit your tools, which allows you to be more creative too.

If you find dovetailing a challenge, then what better way to focus the mind and practise, practise, practise? A project that can require more than 100 dovetails is ideal for embedding that skill.

We have now come full circle. One of the main reasons why the tool chest was an ideal apprentice piece or training project, was to perfect and demonstrate your skill, the chest itself being a bonus. But it is not simply about needs, it is about the learning and the connection with our craft. The stunning Warrington Chest, built by an 18-year-old patternmaker in 1888, may be all the inspiration you need to make something far less ornate but nevertheless of a quality to adorn your workspace and to protect your tools.

The Warrington Chest can be bought from taths.org.uk and is good value at £12.50 plus p&p. Authors and contributors include owner Ted Cole (@cole.ted), Jack Metcalfe (@jackmetcalfe), Simon Barley, Jane Rees, Andy Tuckwell and Nick White. TATHS is a charity founded in 1983 to further the knowledge and understanding of hand-tools and the trades of the people who used them. This is an important job and buying this book supports them in this task.

What is 'sharp'? The latest book by Richard D. Wile, *A Sharpening Handbook*, tackles that very question. Drawing on his personal experience as a woodworker, tool designer, and luthier, Richard breaks down the one thing that undoubtedly frustrates many a woodworker as they blaze their own journey through the many genres or types of woodworking.

His emphasis on manual methods makes this the perfect one-stop reference for novice to intermediate hand-tool woodworkers.

In each chapter he takes a deep dive into the basics of sharpening, steel/metalurgy, abrasives/sharpening media with exceptional photographs, profile charts, and geometric illustrations that this visual learner greatly appreciated!

As someone who considers themselves a hobbyist, I quickly recognised that sharpening aid engineering and media choices have evolved and that I have failed to keep

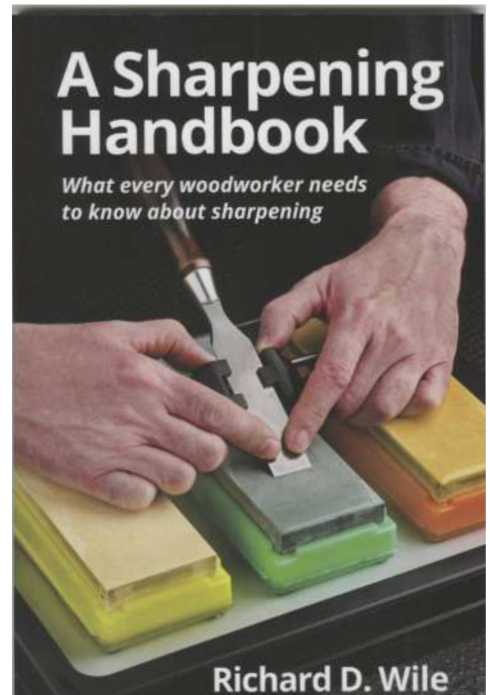
up. Most of us seek efficiency wherever we can find it, and Richard's suggestions for sharpening workflow will likely make sharpening your tools much easier and repeatable.

Whether your chosen tool is a hand plane, chisel, carving gouge, or skew chisel, Richard offers tips to help research and develop the sharpening solution that will work best for you.

Along the way he offers multiple solutions including my personal favorite, the ruler trick, which was popularised by David Charlesworth in the 1970s. "A thin metal ruler," Richard writes, "is placed along one edge of your finest stone and the blade placed on top with the edge near the opposite side of the stone. A few short passes with light pressure parallel to the side of the stone is enough to complete the ruler trick."

It's a shortcut of sorts, but for those that have my problem of bringing home vintage hand planes to give them a second life, this will save you a lot of time that could be directed at woodworking.

A Sharpening Handbook is published by Algrove Publishing and is 104pp.



The Stick Chair Book by Christopher Schwarz is something of a tome for chairmakers. *The Cleft Stick* is a brilliant digi-newsletter for anyone interested in coppicing and is free and worth downloading at ncfed.org.uk.

Winter 2021 /22

The Cleft Stick

News from NCFed and the UK Coppice Industry



Gathering and AGM 2021

The Federation's Annual Gathering and AGM was held, during October, near Reading in South Oxfordshire, hosted by the Chilterns and Thames Valley Coppice Group. It had been a long time coming and was a huge success. More than eighty coppice workers, friends, representatives from allied trades and organisations turned up to chat, exchange information and simply enjoy being with a group of lovely, like-minded people. Full report inside.

A Pint With... Nick Gibbs
The well-respected editor, writer and public speaker, talks to CS about inspiration, tools, his latest magazine title - Quercus and his recovery from the terrible accident that came close to ending his career. Page 12

Take a Better Picture
Vivian Rendell guides you to better use of your camera - how to produce images that will make an impact on your social media channels (and NCFed too). Page 16

Safer Forestry
There has been a rise in fatalities in the forestry industry this year. Haverford's Tony Allen offers some important advice to keep us all safe in the woods. Page 18

www.ncfed.org.uk

www.coppice-products.co.uk

Sharpness Preserved

Preparing tools for travel, *Robin Gates* keeps the sharp edges covered

The sense in protecting sharp edges when travelling with tools struck me somewhat forcibly while cycling. I'd spent the summer vacation as lock-keeper at a south coast marina, meanwhile reading every high seas adventure I could find. Eager for some sea time of my own before returning to university, I sank every penny into an elderly clinker boat in need of some TLC, confident of getting her afloat by the end of the week. But a mile down the road I was compelled to get off the bike and investigate a burning sensation in my lower back, only to discover that a chisel keen to start work had begun cutting a mortise in me. As it turned out the wound was less impressive than the blood suggested, but I'd learned my lesson about travelling with tools. My next lesson learned was that repairing an old wooden boat in the corner of a field isn't as simple as putting up a shelf at home. It was left to the next owner to reacquire her fragile timbers with the sea.

Dedicated edge protection for hand-tools is of less concern in the workshop where they typically reside in chests and racks or simply hang on nails, each in their own space, but the moment they join the hurly-burly of the tool bag all that fussing with stones and bevels can be wiped out in moments by a rogue rasp or hammer.

Protecting a saw

For the few tools I carried on the bike I used whatever came to hand: a towel wrapped around the saw, chisels stuck



A 0.075in cutter produced a good fit for the saw

in corks, but as my interest in hand-tools grew I adopted more traditional methods.

I enjoy sharpening plane and chisel blades. Circling the tool around the stone and the smell of warming oil are almost therapeutic. But sharpening a saw is a different story. So many teeth and so small, half filed this way and half the other, not to mention all that dreadful screeching – it's a damned penance! So I'll begin with making proper wooden edge guards for saws. I don't like those floppy plastic things the makers use, they're such a faff to fit and very eco-unfriendly. For

the shorter blades of tenon, dovetail and gents saws the groove of a wooden edge guard may be cut with the saw itself, but for longer rip and cross-cut handsaws that isn't practical.

A tablesaw will groove an edge guard in a flash if you don't mind the dust and noise, but all you really need is a little router made from a woodscrew and a squared-up block of wood. That's what I used for the guard on this Double Century 22-inch 10-point panel saw, which was Spear & Jackson's flagship for the firm's bicentenary and surely the E-Type Jaguar of 1960s hand saws. This saw made a lasting impression on me when visiting the local tool merchants with my Dad. Like a ceremonial

sword it was presented in a purple velvet-lined box and displayed behind glass.

To inspect the saw you had to request the cabinet be unlocked, and then the assistant handled it as reverently as a holy relic. We were invited to appreciate the beauty of the Brazilian rosewood handle, note the taper-ground blade with elegantly skewed back, and distinctive purple medallion. Based on 'an opinion poll of experienced joiners', the ergonomics of that sleek and foxy handle counted for more than the extravagant ornamentation of its ancestors, and was angled to



Routing the long and narrow groove required for the edge guard



Filing the screw to shape in the Record Imp vice (above), to form the cutter shape (left) after filing but before honing

A hand-routed groove guard works as well for drawknives as for saws



is now an endangered CITES Appendix 1 species, prohibited in trade, proved impossible and I had to settle for Indian rosewood (*Dalbergia sissoo*). When cut this species proved more redolent of old sweat than roses but the graft took well, I survived the nerve-grating racket of sharpening, and the saw was back in business. Now my priority was to keep it that way, caring especially for those precious teeth.

Blade guard

I used a slightly over-length strip of softwood 11/8in deep and 3/8in thick for the guard, and my mini-router to cut the groove. It's a pocket-sized and more sophisticated version of a 'granny's tooth' which I call a 'baby's tooth', comprising a flat oak stock having the advantage of a screw-adjustable cutter filed to shape from a 12 gauge 2in steel screw. The cutters of small routers commercially available are far too wide, so a home-made cutter of some sort is essential.

For such small-scale metalwork the clamp-on Record Imp vice is a fantastic work horse, with 21/4in jaws and a close-fitting square-section slide that virtually eliminates racking. The clamp attaches to a surface up to 2in thick and is every bit as rugged as a Record G-cramp, made in one piece with the rear jaw and ribbed for rigidity. There's a little anvil tough enough to soak up the hammer blows of riveting, and a bending guide for small diameter pipe or rod. Although the Imp ceased production in the mid-1980s it sold in tens of thousands and is not hard to find.

I began by filing flats on the front and sides of the screw's lower threads, taking care not to damage the upper threads which would function for depth adjustment, then squared off the tip and shaped a back bevel to reduce drag. Experiment

deliver thrust precisely half way along the toothed edge. Raising eyebrows in its day, this handle draws jaundiced looks from those steeped in tradition even now, but I rather like it; a classic of smooth 1960s styling. Some of its detractors go so far as to reshape the handle like a piece of Victoriana, with long curly horns and a lamb's tongue, but even putting aesthetics to one side, cutting away so much wood only succeeds in upsetting the saw's weight distribution and balance.

Half a century on from my first encounter with the Double Century, the saw I found was more the unholy mess than holy relic, sheathed in rust and blunt as a butter knife. And as if to test my commitment to 1960s styling it was that controversial handle which posed the biggest problem. The top horn, a back-swept curl of timber that snugs between forefinger and thumb, was a mere splintered stump. Tracking down a suitable piece of sweet-smelling Brazilian rosewood (*Dalbergia nigra*), which



This shows the temporary panel pin fence (above) used in the early stages of grooving the guard



Restored Double Century panel saw protected by its edge guard

suggested a hollow above the cutting edge improves performance, which I shaped with a jeweller's round file. The cutting edge I honed on a diamond slip, finishing on a leather strop, before screwing the cutter into its pilot hole until just proud of the sole. To centralise the cutter on the work in the early stages I drove a panel pin beside the cutter as a temporary fence.

Having established a straight groove about 1/8in deep the panel pin was removed before lowering the cutter, thread by thread, and routing to 1/2in depth. While experimenting, my first groove made with a 0.1in cutter was a tad loose for the saw, so I made another at 0.075in and that was the Goldilocks size: just right. To finish, I radiused the ends of the guard with a spokeshave, bored holes for a couple of ties, and parked the Double Century in its slot. With luck this saw will be around to celebrate S&J's tercentenary in 2060.

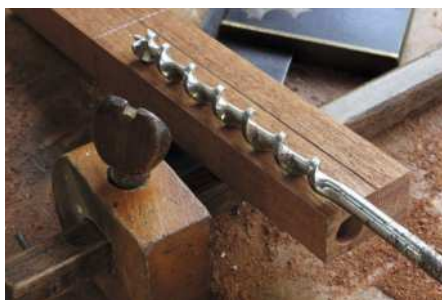
Boots for auger bits

When it comes to making a clean cut, a blunt drill bit is every bit as damaging to the outcome as a blunt saw or chisel, but it's almost invariably the bits which end up swilling about in the bottom of the tool bag. Auger bits are especially prone to damage because although they look big and tough they have more sharp edges requiring protection than other bits, and are more vulnerable to damage.

First, there's the threaded lead screw which, as its name suggests, leads the way into the wood. It's job is to pull the bit deeper as you turn the brace, so you don't have to exert so much downward force, but if the point of the screw gets damaged or the threads get clogged with dirt it only makes the job more difficult. Next come the pair of spurs which circumscribe the hole, neatly severing a circle of fibres for the bit to enter the wood more cleanly,



The new boot for an auger bit flanked by older examples



The boot marked up (above) with 1/4in around the hole and 1/2in at the end

and if they become chipped or blunted they do just the opposite. Now the real business begins as the auger's cutting lips get into their stride, lifting chips as neatly as shavings from a low-angle plane – or at least that's the idea. If the lips are blunt they'll struggle to get going and in no time the whole procedure will become tiresome and frustrating. All you need is for the chips to get stuck inside the auger's clogged flutes and your bad day is complete. Put the kettle on, find the safe-edge file and loupe – some careful sharpening is required.

Or, you can guard against all these problems by keeping your auger bits safely inside wooden boots where lead screws,

spurs, lips and flutes will remain sharp and clean. In the workshop auger bits can be kept safe in a tool roll but if only one or two are required for the tool bag then a full roll of thirteen bits (from 1/4in-1in in stages of 1/16in) is unnecessary bulk. Safe in their wooden boots, a couple of auger bits can mix it with the wrecking bar and not feel a thing. Each boot is barely bigger than its bit and simply made from an offcut using the bit itself. The ideal wood for the purpose will be free of knots, have straight grain running lengthways and be diffuse porous, with an even texture. Boring into end-grain, it's all too easy for the lead screw to be led by changes in grain direction, which would cause the bit to burst through the side of the boot. For this 7/16in single-twist auger bit made by William Ridgway & Sons I used an offcut of reclaimed mahogany, being careful to check that it would be wide enough to leave about 1/4in all round the hole when finished and also long enough to house the full 'flight' of the bit.

Having sawn the two ends square and planed all round I clamped the wood in the vice vertically, and commenced boring. Supporting the pad of the brace against the forehead helps steady the tool and also puts you in the best position to see



Checking for vertical with a combination square (left) and chamfering the corners (above) to stop splintering



A screwdriver through the loop handle has increased leverage (right) in the production of the gimlet caddy (left)



how work is progressing; or so you'd think. Even being careful it's all too easy to lose the vertical, especially in this shed where the walls are useless for reference purposes, blasted by prevailing south-westerly winds the whole shed leans several degrees to the east. So I stopped periodically to check for vertical using a toolmaker's combination square, the beauty of which is that it stands squarely on its stock, something few woodworking try-squares will do, and the built-in level allows me to check the bench is standing level. When the last twist of the bit had disappeared inside the hole, leaving about 1/2in solid wood at the end of the boot, I laid the brace aside, marked the width and length, sawed and planed all square, then chamfered the corners with a block plane to prevent splintering. That auger bit is now ready for the tool bag and also easier to manage. I can leave it 'booted up' when loading into the brace, only removing the boot when ready to begin work.

Gimlet caddy

Golfers will appreciate that, having carefully sized up the next hole, it's intensely irritating to be handed a driver when it's the putter that's required. A well-organised caddy is essential if

temperatures are not to become frayed, and exactly the same applies when selecting an auger gimlet for the next pilot hole before starting a screw. Auger gimlets are invaluable where there's insufficient space to manoeuvre a hand drill, so you need to keep them ready and sharp, not milling about in the tool bag among the loose screws and shavings. For around £11 in the UK I don't believe there are better auger gimlets than the set of seven (ranging from 5/64in - 3/16in) made by Lee Valley, their only drawback being the way they're supplied loose in a cardboard box. The temptation is to keep them in the box until it falls apart, their delicate points and sharp edges meanwhile being blunted and with every chance of one (the one you need, of course) becoming lost.

This is another of those one-piece projects ideal for winter woodwork, done and dusted before hypothermia sets in. I used an offcut of pine shelving and once again let the tools in need do the work; there's nothing better for boring the well-fitting holes required for their pin-thin shanks. Having sawn and planed the piece square I marked the centreline along the top edge, and then hole positions which grew closer in proportion to the decreasing size of gimlets. The important thing was to

leave clearance between adjacent gimlets at the point where the wire twists around the shank below the loop handle.

Then it was simply a matter of getting stuck in and turning, and turning, and it just shows the strength of these little tools that they can bore to the full depth of the shank; that's up to 3in depth for the 3/16in tool. Admittedly it was torture for my unprotected fingers but that was alleviated by threading a screwdriver through the handle to increase leverage, also wiping candle wax on the cutter to reduce friction. Back-tracking a few turns and removing the tool to shake out shavings also helped. For the largest gimlets I prepared the way with a smaller gimlet.

Instead of rounding edges I planed them at 45° for a prismatic look. With a wipe of linseed oil to resist moisture the wood took on a golden glow and the job was done. This gimlet caddy has been a real problem solver, turning a disorganized rabble into an orderly queue. It handles well and slips inside the tool bag without a care. Its dimensions are roughly 33/4in height x 33/8in width x 3/4in thick, but if I were to make another I'd add a little to the height because the longer gimlets came perilously close to boring through the base.



Squaring up the wood for the gimlet caddy (left) with a Stanley 9 1/2 block plane (left), then waxing the gimlet (above) to reduce friction

Saving the Red List of Endangered Crafts

Despite what feels like a resurgence of crafts, many remain endangered writes HCA's *Mary Lewis*



PHOTO: KATHERINE MAGER



Robin Wood speaking at an early HCA Forum (above) and Monica Cass (left) weaving a 'tau tray' using skinned willow in Norfolk

The *Red List of Endangered Crafts* was first published by Heritage Crafts in 2017 and was the first research of its kind to assess crafts by the likelihood they would survive to the next generation. From blacksmithing to basketry, from weaving to woodturning, we have an incredible range of heritage craft skills in the UK and some of the best craftspeople in the world. But many of these skills are in the hands of individuals who have been unable to make provision to pass them on.

Four years on, the research has been repeated twice and it is this 2021 edition that has seen it embedded into our national craft discourse. It has proved itself to be so much more than just a grim listing of declining craft skills; it is a conversation starter, it is a celebration of highly specialised, niche and sometimes esoteric skills, and it is a call to action.

For us at Heritage Crafts (we are a small team of committed craft geeks) a six minute slot on *Have I Got a Bit More News for You* and numerous mainstream media articles felt like a moment of acceptance and validation, a moment to hang up our keyboards. In reality, we started on Red List IV, because this work will never be finished. Each time we update the Red List we learn more, and we fill in more gaps. We see this as a strength, as it has the capacity to grow, develop and improve each time.

So what if oak bark tanning is lost to us, or Devon stave basket making? Perhaps we won't notice the impact if they quietly pass into history and perhaps they eventually will. After all, crafts have always changed and adapted to the culture and society that we live in. However, when we look at the list of 244 crafts that are now covered by the research, we can see the sheer breadth and diversity of skills and knowledge that are held within the heritage

craft community and the potential cultural loss that is borne each time a craft dies.

Each craft is classified into one of four categories of endangerment – Extinct, Critically Endangered, Endangered and Currently Viable - using a combination of both objective criteria (such as numbers of crafts people and trainees) and subjective criteria (issues affecting the future viability of the craft including training opportunities and market trends). Each time the research is repeated we contact over 1000 organisations and individuals directly by email and telephone. Participants are asked to provide background information about each craft, such as its history, techniques and local forms, as well as current information relating to the number of skilled craftspeople and trainees, and the ongoing issues affecting the viability of the craft.

Endangered species

Critically endangered crafts list include things such as clog making, plane making, sieve and riddle making and swill basket making. Most critical crafts will have fewer than 10 makers and many will have only one or two. Making Devon stave baskets, which are a rugged relative of the Sussex trug, was on the verge of extinction in 2017 with only one maker and a few remaining examples made by Jack Rowsell. The Red List shone a spotlight on this and now we have five makers, courses being taught and an increasing awareness of these sturdy workhorse baskets.

Sieve and riddle making was listed as extinct in 2017 as the last practitioner, Mike Turnock at Hill & Sons, retired. When Heritage Crafts member Steve Overthrow saw that it had become extinct, he made it his mission to save it. Four years on he is the

PHOTO BY THOM ATKINSON



Lorna Singleton makes swill baskets using riven oak on a hazel rim

UKs only sievwright and is making a living from the craft. So, despite being listed as 'critically endangered' these are crafts on the up, albeit with only very few makers. Another craft that will be familiar to *Quercus* readers is pole lathe bowl turning. This was an extinct craft from the 1950s to the 1990s when it was revived by Robin Wood. It is now thriving, with many professional and amateur makers, and many learners. Since the Red List was created, pole lathe bowls have moved from critically endangered to now being considered viable.

Ultimately, it is not Heritage Crafts or the Red List that that will save craft skills, it is those people who make a positive choice to learn, make and teach an endangered craft who will do that. Our society would be a poorer place without these people – the people who decide they will be a coracle maker, folding knife maker or saw maker – and our culture would be poorer without them.

And we may not win them all. Barometer making is likely to become extinct in the next few years as the use of mercury is now prohibited for safety reasons. Tinsmithing, with only one or two remaining makers, is on the verge of extinction and will be a focus in the coming year.

Whilst carrying out this research, I have realised that we must first understand the problem if we are to make change. If we genuinely want craft skills to survive to the next generation, we need more people of all ages and diverse backgrounds to become makers. New entrants and new ideas are crucial and we must ensure that the high level skills and knowledge of current craftspeople are transferred in a way that continues to be useful and relevant. Heritage crafts must not be consigned to glass cabinets. This is about a wide variety of skilled people working

today to create high quality, beautiful, functional items that add value to our lives.

Whilst some obstacles facing these crafts require funding or policy change, change can also come from the grassroots and be driven by the makers and creatives in their workshops. They have the best idea of how to preserve their crafts. It is for this reason that we make sure that we have makers represented at every level in our organisation and that we support makers to effect change through the Endangered Craft Fund and other projects.

The last two years have been both challenging and transformative for many of us. COVID 19 has put additional pressure on craftspeople but it has also accelerated broader social change, more people are taking up crafts and more people are buying craft items. We have seen a surge in Heritage Crafts membership and we often feel that we are riding a wave of interest and support.

However, if we are seeing a craft revival, it is being held back by structural issues such as lack of training routes and government financial support for training. Behind the scenes, we continue to lobby for change and for proper recognition of the contribution of craft to our cultural heritage, society and wellbeing.

To join the Heritage Crafts Association and give your voice to a growing movement visit: <https://themakers.directory/join-us/>. To see the Red List of Endangered Crafts visit: heritagecrafts.org.uk/redlist. For the Endangered Craft Fund visit: heritagecrafts.org.uk/ecf-apply/. If you have any questions or queries, or you have more information about a specific craft, please email redlist@heritagecrafts.org.uk.



Precise preparation of components
is the ground for accurate work

Through & Through Joints

In his 21-step lesson, *Germán Peraire* explains, from Barcelona, how to cut a strong, distinctive joint

Something I love from carcass work is that every design idea can be solved in many different ways. Some can be understated yet strong; others can enhance a particularly beautiful end-grain and make a point of it, or show the craftsperson's efforts put into the build.

The through-wedged mortise and tenon joint is probably one of the strongest and is a clear statement on how the engineering of a piece can also be the decoration. It speaks of thoughtful, sound work and it was a favourite throughout the Arts & Crafts movement and beyond.

Fixed shelves or rails connecting both sides of a carcass find positive support in the housings when bearing heavy loads and these same housings will prevent any cupping of the timber. The through mortises are wider on the outside than on the inside, allowing the tenons to expand when wedged, achieving great tensile strength combined with long grain to long grain glue surface. Carcass sides joined to shelves this way won't bow or cup, ever!

I have done a good deal of those and I have a few tricks and observations that will help you get perfect results consistently and in a reasonable amount of time. I often recommend my students cutting practice joints like the one shown in this article:



A joinery exercise completed (left) and a dissection of the same joint showing the dovetail shaped tenons (above). Temporary pencil lines (below) show the expansion of the mortises at 1:8 ratio. A knife nick is used to transfer the final lines more precisely

one can focus on the method avoiding the hurry to see a finished piece. A quiet observation of every operation is essential to develop skill.

How it's done

Beginning with accurately prepared stock is essential to accurate marking-out and execution. We'll need in each board one reference face (it should be the inside face for the mortise board). As the tenons are located across a considerable distance, we'll be using both edges as reference surfaces for gauging (overly long gauge settings become awkward in my experience), and the result will be symmetrical. Both boards need to be exactly of the same width. If a shelf needs to be recessed into a carcass or if

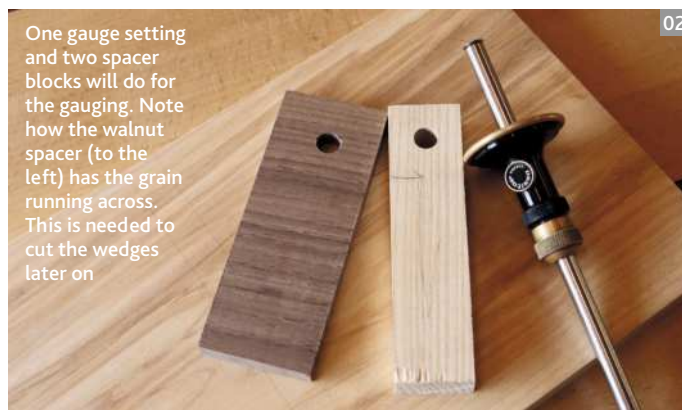


you want curved edges, these can be cut after the joint is completed.

Precise preparation of components is the ground for accurate work. The marking-out begins with the housing, which doesn't need to be very deep (3mm is plenty) and its width is that of the tenon board thickness minus 4mm to allow for 2mm shoulders on each side. Both the mortises and the tenons will be flared at a 1:8 ratio. Mark this angle on the edge and then transfer some temporary pencil lines to the exterior face. These temporary lines will tell you where to start

and stop mortise gauge lines. Temporary pencil lines show the expansion of the mortises at a 1:8 ratio. A knife nick is used to transfer the final lines more precisely. To scribe both the mortises and the tenons only one gauge adjustment is required and two spacer blocks: one accounts for the offset between tenons and the other accounts for the tenon thickness. The latter is also the stock from which the wedges will be cut. This way, all wedges will match the mortise width automatically (Pic.3).

The last step in the marking-out is to substitute the pencil



One gauge setting and two spacer blocks will do for the gauging. Note how the walnut spacer (to the left) has the grain running across. This is needed to cut the wedges later on

lines for bold knife lines only where is needed.

Drill out most of the waste coming halfway in from either side. The rest of the waste can be chopped out in this order: first, chisel the cuts across the grain and then take the cuts along the grain. This way the risk of splitting the timber along the grain is reduced and the waste will come off more cleanly, leaving sharp corners.

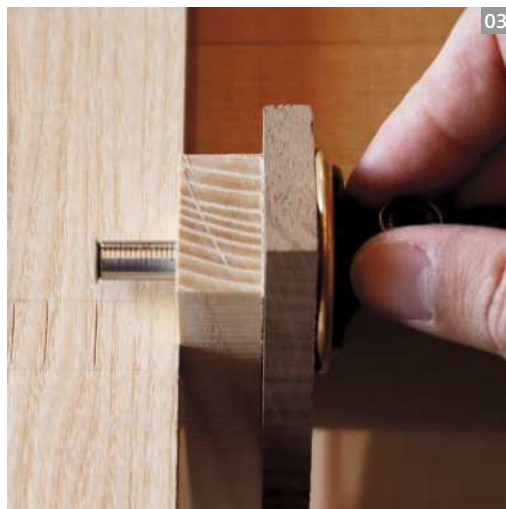
Use a bevel gauge (Pic.5) as a reference for the sloped cuts (I use the Barron dovetail guide which stands very stable). The plumb cuts (Pic.6) are the actual gluing surfaces (no end-grain there) so they need to be very accurate: any bump will hinder the fit, but any hollow will undermine the glue surface contact. Check carefully every cut surface with the edge of a narrow chisel.

Try to have the walls in the groove as clean and perpendicular to the face as you can. For that, I don't rely on my router plane, which tends to dig in with the corners of its blade. Instead, I cut these walls by defining the groove by chiselling a step against the knife mark (Pic.7) and then with a chisel and mallet (Pic.8), freeing the waste to be removed with the router plane (Pic.9).

The tenon board

Transfer the tenon width from the groove (Pic.10) and scribe it along the end-grain and edges. Mark also the shoulder line. Before we can mark out the tenons, two rebates are created to fit the stock into the groove. The ideal tool to hog out the waste is a skew block plane: the fence, nicker and skew of the blade make for accurate clean shoulders and fast waste removal. To ensure that the faces created are parallel to one another I then switch to my router plane and take the final cuts.

Strive for the perfect fit that enters with hand pressure but will hold both pieces together when lifted. I advise my students to cut the tenons straight to the line: with some practise, we easily achieve perfect results straight from



Using the spacer blocks to mark up the joint (left) and tidy marking of the mortises will result in much neater work (above)



A visual reference is used to do the sloped cuts across the grain (above), with a small square a useful reference for plumb cuts (above right). Secure the square with tape if necessary



Begin defining the groove by chiselling a step against the knife mark (above) then define the walls of the groove with a chisel and mallet (right) before using a router plane (left) to remove the waste, leaving a flat bottom



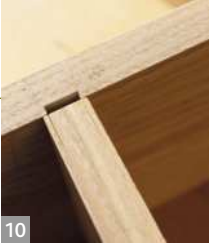
the saw with a pleasurable sense of confidence.

Note that the housing is through on one side (typically at the back of a cabinet) and stopped at the other end (the show side). The tongue is 0.5mm shorter than the housing is deep, to ensure a tight closing of the

shoulders. That gap between the tongue and the housing will accommodate excess glue, minimising squeeze-out.

The cuts that will accept the wedges need to be carefully marked with a pencil gauge for consistency. The final step is to cut the wedges out of the marking spacer block. They are

marked using a 1:8 (or slightly more) bevel gauge and a square (Pic.15). To account for the saw kerf it is best to mark one wedge, take the rip cut and mark the next one, etc. Once all rip cuts are done, you can crosscut all the wedges free. Try to get all the wedges as similar as you can. At the glue-



10

The tenon width is defined by the groove width (above). A skew plane with a nicker (right) defines the shoulder, and to achieve parallel cheeks it is best to use a router plane. Make sure saw cuts (above right) are stopped at the tongue line, as often as you can!



11



12



15

Wedges being cut from the spacer block (above & below)



17

Checking the fit of the wedges (above). They shouldn't be too thin or too thick at the point. Then the joint is ready for assembly



13



14

Removing the waste between the tenons with a Knew Concepts coping saw (above left). Try to make the wedge cuts as consistent as possible (above right)



16



18



19

Clamping pressure should be as evenly distributed as possible (above), then use a flush-cut saw (right) and some planing to reveal the finished joint (far right)



20



21

up stage, you might realise that the wedges bottom out before fully spreading the tenons. This often occurs when they are too thin (feather-edge points are to be avoided) or have an excessively acute angle. Don't forget to cut a few spares!

With the joinery completed, I cut the front edge of the tenon board 3mm back to simulate a shelf recess. At this moment all 'interior' surfaces can be finished. This offset in furniture components provides a sense of depth to the pieces (Pic.22).

Glue-up

It is always tricky to achieve the right clamping pressure while having room to drive the wedges in. A meticulous dry rehearsal is indispensable, as

always. Glue is only needed in the tenons, mortises and wedges. The housing is a long grain to end-grain joint and glue won't have strength there. Drive the wedges with a small hammer (100g is ideal) making sure they enter evenly for a consistent result.

Wait till tomorrow to remove the clamps, flush the tenons off and enjoy that first coat of shellac. Clamping pressure must be distributed as evenly as possible (Pic.19), then a flush-cut saw (Pic.20) and some planing reveal the finished joint (Pic.22).

Visit Germán Peraire at germanperaire.com or Instagram @germanperaire.



22

The 3mm offset provides a sense of depth to the pieces

SHARPENING & FETTLING Honed

Arguing for Augers

Yearning to retain antique tools, Zach Gillenwater honours a classic hand-operated Ajax beam auger

I have always been drawn towards items, ideals, processes, and the way of life in the old days. As a child, my grandparents owned an antique store in my hometown where I would help procure, clean, and ultimately sell the antiques. I would go to yard sales with my mother and auctions with my grandfather to buy antiques to sell.

As I got older and my grandparents passed away, I still had that affinity for antiques and anything old. I would peruse the stores nearby, attend weekend flea markets and even walk the local fields in search of Native American artefacts of which I have found hundreds throughout the years. Fast forward through my college years and early 20s and I found myself a homeowner with a decent job and some extra income. I thought I could use that to produce a little more so I started back into the antiques, going to auctions and buying anything I could that I could turn a small profit on. I attended an auction that was the estate of a local craftsman which changed the course of my focus.

Willing to pay

I purchased a large amount of vintage and antique tools and found that there are plenty of people interested in those tools; some willing to pay a fair amount of money. At first, this was exciting to a fellow in his mid-20s. I started to understand the importance of what I was doing, preserving history. Saving the memories of craftsmen through the years, who've used these tools to build furniture, houses, toys for their children and many other things. They had to make do with what they had and use the tools that were handed down. Often, these tools were the only means they had to provide for their families through odd jobs, repairs, and other labour.

Recently I finished restoring a beautiful Ajax Mfg. Co barn beam auger. Around where I live, in Southeastern Pennsylvania, this tool was a must-have for anyone with a barn. The beam auger was integral in



creating mortises for the joinery that was widely used in the construction of barns. Depending on the size of the mortise, you would drill a few holes in succession and then use a slick to clean up the mortise so the tenon would fit nice and tight. They would also be used to drill holes in



Before restoration

the beams for wooden pegs to secure the tenons. Though simple in design, mortise and tenon joints are extremely strong which is why we have many early barns still standing in our area today.

The drill itself is genius for its time. Rather than having to use a T-handle auger, which is taxing and difficult to keep perpendicular, the beam auger allows for a perfectly-drilled hole at whatever diameter you have in augers. To use the auger, you would simply set it on the beam with the auger bit chucked, sit on the drill's extended wooden 'seat' and then use the two handles in tandem to drill down in the beam. The large feeder screw on the auger helps pull the auger bit down into the wood as it cuts beautiful curls. A lot of these augers, like the Ajax I restored, had the ability to change the angle at which you would be drilling; something that would be difficult with a standard T-handle auger. There were many manufacturers of these augers and I have even seen some home-made versions which speaks to what I had mentioned before, making do with what you've got. Necessity is after all the mother of invention!

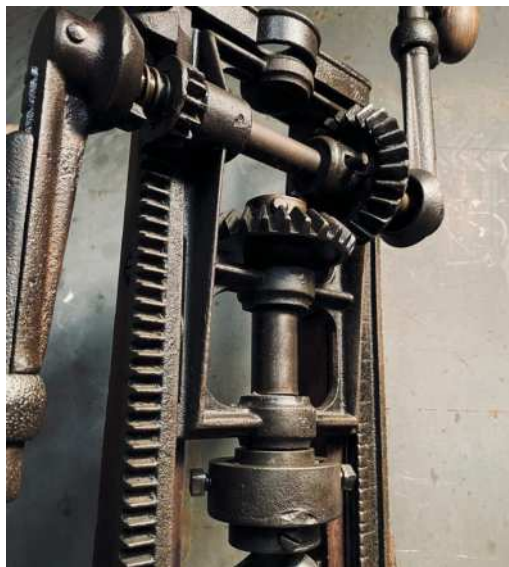
Steeped in culture

Luckily for me, the area in which I live is rich with vintage and antique tools. There were many manufacturers of machinery and hand-tools that were in this area of the country. Tradition is also something that is heavily steeped in our local culture. Often, you will see family members with tools of their great-great grandfathers that have been handed down through the generations. Someday I hope to be able to pass down the tools that I own to the next generation of antique tool preservationists. Until then, I will continue to do my best to save as many vintage and antique tools to ensure they are preserved for our future.

You can follow Zach Gillenwater on Instagram at [@thetradescorner](#).



Close-up of the side rails (above) and a close-up of the auger bit (below)



Mechanics after restoration (left), and the wooden seat after restoration (above)

Better Reasons to Buy Old

After years of restoring second-hand tools, *Mike Flaim* tells why & how he upgrades an old plane

Being a hobbyist woodworker, I always tried to save money when buying new tools. Often, I had to save up for weeks in order to afford a brand new tool that I wanted. It's one of the reasons that buying antique tools has always appealed to me. From one afternoon at the antiques show, I can come home with several old tools that only cost me a fraction of what they would be brand new.

Because I buy old tools that I intend to put back to work, I will often look for the planes that the tool collectors don't want. The majority of collectors prefer hand planes in near perfect condition. They want planes with as much of the original japanning intact as possible, and no rust. They even prefer it has the original box. Any pitting on the body, and broken or missing parts turns them off. However, those are the planes that I know I can get to work again with a little bit of effort so I buy them dirt cheap.

When I'm on the hunt for old hand planes, I normally look for Stanley Bailey planes. They were the most prominent brand in the USA and were a good quality plane back in the day. I will look for other brands as well such as Millers Falls, Union, Sargent etc but Stanley was the dominant player in the industry so there are a whole lot more of them available in the used tool marketplace.



The majority of Stanley Bailey planes have beautiful Brazilian rosewood handles. However, sometimes the wood dries out and the tip of the tote cracks and falls off. This hurts the value of the plane so I'm able to buy them for a lot less than one in perfect shape. Repairing the tote to make it comfortable to use again takes a bit of work to do but is well worth the effort.

The first thing I do when deciding to buy a plane to restore is to make sure it has all of its parts and that they are in good working order. If the plane is missing



a part, I consider whether I have the replacement at home or whether I can buy the part off the Internet for a decent price. I flip the plane over and see if the bed has a crack on the side of the mouth. If the bed is cracked, I may shy away as the bed may need to be fettled for it to function well. If all the boxes are checked, I'll take it home to be restored. The plane I bought here was missing the lateral adjustment on the frog but I knew I had an extra frog at home that would work.

When restoring an old plane, I first take it completely apart and soak all the parts in a citric acid bath to remove all the rust. I use one cup of citric acid in three gallons of water and let the parts sit in the solution for a few hours. I use a 30in long plastic planter wall box so I



A plane bought with a broken tote (left) and 5lb citric acid bought online (above). A plane disassembled in the citric acid bath (right)





can dip a 24in Stanley No.8 jointer plane if need be. The more citric acid I use, the faster it will remove the rust. However, if you let the parts sit in the solution too long, the metal will get acid burn creating tiny little pits all over the plane's bed and lever cap. The acid burn doesn't hurt the metal's strength, it just makes it look bad. Once the plane has sat for a few hours, I'll take the parts out of the solution and wash them off in my utility sink with a green scrubby pad. Then I polish the parts with a 220 grit sanding sponge and coat the plane's parts with my home-made penetrating oil.

The oil consists of one part melted beeswax, one part mineral oil, and one part orange oil. I melt the beeswax on a hot plate and add the mineral and

orange oil in the pot once the beeswax is completely melted. The oil works really well as it lubricates all the parts and protects them from rust.

On this plane the tote needed to be repaired. I shaved the tip flat and glued a new piece of wood to the top with Gorilla Super Glue Gel. Rosewood tends to be a bit too oily for regular woodworking glue to work but I have had great good fortune with the Superglue gel. However, because Brazilian rosewood (*Dalbergia nigra*) is outlawed for import and export by the US government, I have to use a close rosewood type species like cocobolo (*Dalbergia retusa*) instead of Brazilian rosewood for repair. The grain and colour of cocobolo is close enough to the rosewood that I'm happy with the results. Plus, the

Four Restoring Don'ts



1 I don't repaint the body. A plane with 50% japanning works just as well as one that has been freshly painted. I want my planes to look like they're 100 years old so I don't bother grabbing a can of paint.

2 I don't buy a replacement blade. More often than not, the blade that comes with the plane will work just fine. Even if the blade has some mild pitting at the end, I'm able to sharpen off the pits so they don't affect the blade's cut.

3 I don't fettle the bed. Unless the bed is warped, the plane should take a nice cut. I'm not interested in spending the hours in order to get the bed .0001in flat. Wooden planes worked fine for millennia without having their beds be .0001in flat. The only planes I'm concerned with their beds being perfectly flat are my smoothing planes because those are the ones that take the finest shavings. My No.5, No.6, No.7 and No.8 bench planes all take a heavier cut and normally their beds are flat enough that they work just fine without the need for fettling.

4 I don't fettle the face of the frog. Some like to run their frogs over sharpening stones so that they are perfectly flat to reduce the chance of blade chatter. Again, I don't care as long as I can achieve a good cut. Millions of Stanley planes were sold for decades, and no one ever worried about how flat the frog's face was. They simply sharpened the blade.



Gluing a new piece of wood on the tote (left) and home-made antique oil (above)

wood will darken with age over time so the repair appears seamless anyway. In fact, I have some old totes that I fixed years ago with almost invisible repairs.

Once the glue has set, I trace the shape of the top of the tote with another tote that I have lying around and cut it out on the bandsaw. Then I shape and sand the piece to its final form. The overall shape is not that important. What is important is that the tote feels comfortable in your hand. I then take a long 3/16in drill bit and drill up through the bottom shaft hole and poke it out of the top. Next I'll use small rasps and open up the top of the hole to fit the brass nut. Once the hole is nearly complete, I chuck up the nut and threaded rod in my drill and use the slot of the nut as a cutter to drill into the opening to create a perfectly-sized hole.

Once the tote is finished, I test fit it back onto the plane and then apply a couple coats of shellac to both the tote and the knob so that they look similar in sheen and colour.

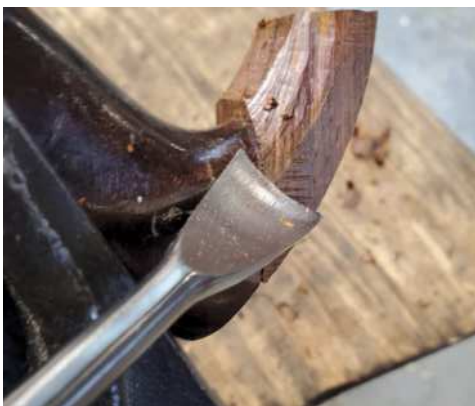
Next, I focus on the blade. I flatten the back of the blade and sharpen it on my Tormek sharpening water wheel. I grind a 25° bevel with my Tormek and then hone an edge with 4000 and 12,000 grit waterstones. I get the blade sharp enough to effortlessly slice a piece of paper like a sword while I'm holding it up in the air with

my hand. For me, that is sharp enough to get the work done.

Then I make sure that the cap iron sits snugly on the blade with no gap between the two. If there is a small void, I'll hone it on my waterstones with a few quick passes to remove the void. A nice snug fit between the cap iron and blade prevents shavings getting stuck in between the two, jamming up the plane.

Once I'm satisfied with blade and cap iron, I reassemble the plane making sure that the bottom of my frog is perfectly parallel with the plane's mouth. If the frog is not parallel with the mouth, the blade will take a heavier cut on one side. After everything is assembled, I set the blade's depth by playing with the brass adjustment wheel behind the frog and swing the lateral adjustment slightly to the left or right if the plane is taking a heavier shaving from one side. If I'm happy with the shaving the restoration is complete. Because this is a Stanley Bailey No.5 jack plane, I'm not looking to get a microscopic thin shaving out of it. I'll use this plane to size wood and for general planing so a heavier cut is preferable. If I need a super thin plane shaving, I'll leave that for my Stanley No.3 and No.4 smoothing planes.

Details

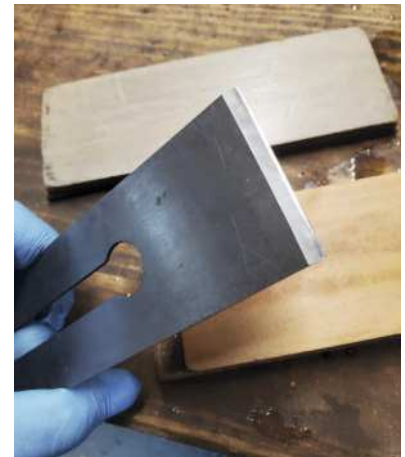


Carving the top of the tote (above) and drilling with a 3/16in bit (right)



Finalising the fit for the brass nut (left) and honing the edge of the chip breaker

Four Restoring Do's



1 Saving money. Obviously, you can save a whole lot of money through buying old hand-tools instead of brand new ones. It takes a little time to get them working at their best, but an afternoon's attention in the shop will have them performing well.

2 You get to understand the function of the plane. By taking the plane apart and putting it back together, you get to know what each part does and the function it serves. You'll understand how far back you should place the frog away from the opening of the mouth and how far up you should have the cap iron from the bottom of the blade's edge in order for it to advance properly when spinning the brass adjustment knob. By playing with the plane, you'll understand all of the parts functions.

3 It'll force you to learn sharpening. Any old plane you buy, the blade needs to be sharpened. Have you ever known someone who just bought a brand new hand plane but was too scared to sharpen the blade because in their mind, the blade would never be that sharp again? With old planes, you need to jump into the pool. Buy sharpening stones, buy grinders or water wheels, buy all different grits of sandpaper, whatever. Just buy a sharpening system that you like. It doesn't matter if you screw up the edge, just resharpen it until you get it right.

4 Honouring past owners. Taking a plane that has been sitting in a barn or garage for decades rusting away and bringing it back from the dead gives me great satisfaction. I know that after I'm gone, I want my tools to carry on and inspire the next generation of woodworkers. I want them to enjoy using my tools as much as I have and the previous owners who owned them before that.

WORKING WOOD BY HAND

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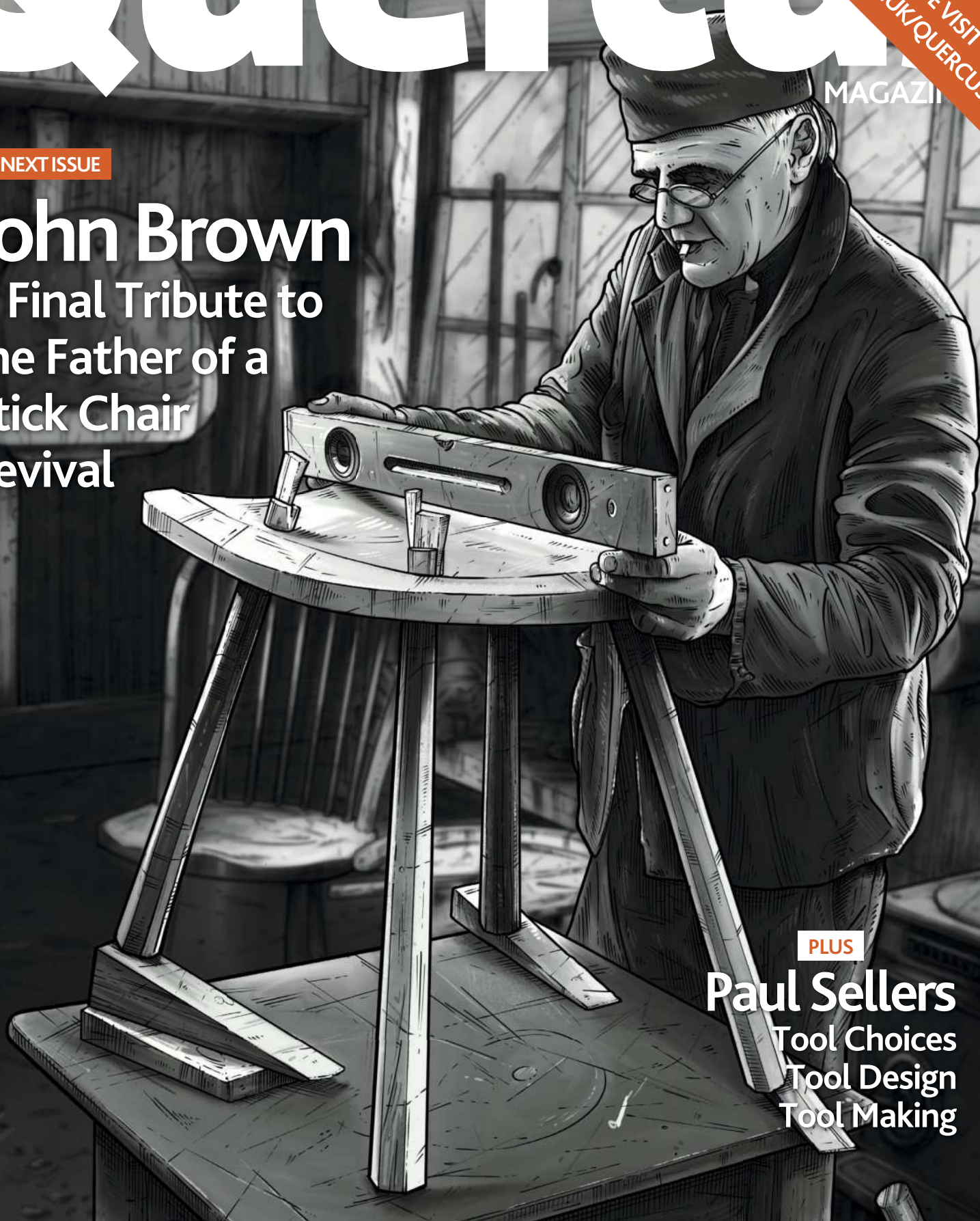
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NEXT ISSUE

John Brown

A Final Tribute to
the Father of a
Stick Chair
Revival



PLUS

Paul Sellers

Tool Choices
Tool Design
Tool Making

All the Residents' Men

Back in the saddle, *Nick Gibbs* gets caught up in a seating saga that becomes Chairgate



A recent project has been the stripping and re-seating of a bergère chair. The red leather upholstery was so 'well' pinned and stapled that a pair of pliers had to be requested from Maun (boxout, right). So many holes were there that one restorer refused to take on the project, so melted Liberon waxes were used to fill the cavities (right)



It's been a long time since QM09 in September and finally I've been out on my travels meeting woodworkers around England. I had hoped some trips would be taken on Muttley, my new Mutt Mongrel 250cc bike, but Chairgate has forced my hand. This saga starts when I bought Muttley, who came with a faux leather seat, pierced with fake stitching that let rainwater seep in, seeping out for days afterwards from the soaked foam seat. On recommendation I found Josh, an upholsterer in Cowes who did a brilliant job on Muttley, fitting honey-coloured leather, with black piping.

So happy was I with the result that I mentioned that my ex-wife Tina runs a chair caning and rushing business, which my parents bought in 1969, and I foolishly offered her restoration services. Within a week my phone purred with a call from a charming gentleman, who shall now remain nameless for good reasons. "I have a leather bergère," he said, "and I want the leather to be removed and the chair to be

returned to how it was when we first met," the 'we' royally referring to the Georgian armchair and this retired solicitor.

The chair was indeed upholstered in red leather, so I poked around in one corner to expose the woodwork and search, Poirot-like, for caning holes, of which there were many. He was satisfied with the £500 estimate, so I took the chair across the Solent on my next visit to England and staying with my girlfriend Jane, began exposing the chair's frame.

Staples and pins

The upholstery had been done by an expert, certainly not a beginner. He or she had clearly concluded the bergère would never regain its former glory, machine-gunning it with staples and pins. It just so happened that coincidentally I came across Maun, makers in England, of wonderful pliers. I was ashamed that since *Quercus* is dedicated to hand-tools, the brand is so new to me, the blame perhaps being more theirs than mine. So

I rang them up, and spoke to their PR manager, Serena who sent me a pair of 125mm Snipe Nose, Serrated Jaw, Parallel Pliers, Maun's most finely-pointed model. Pin after pin, staple after staple and nail after nail had to be removed. I had taken the naked, holey chair to Alex O'Neil, a restorer friend of Jane's, who also runs The School of Furniture (alexoneil.co.uk) from his home near Tunbridge Wells, and comes highly recommended for his teaching and restoring. Alex looked at the chair, still peppered with holes, raised his eyebrows, turned down the job, and said: "Rather you than me." He agreed that Liberon wax sticks might be the best solution, commenting that you can play with the tones by rubbing flakes of different colours until they are warm enough to merge. I didn't have time to do that, nor the eye for colours, but I discovered that the best way to apply the wax to holes is by melting a stick as one might do with a glue pot, what chefs call a *bain marie*.

Job eventually done, the chair was

Maun in GB

Near Sherwood Forest since 1944



The pliers we used to dissect an upholstered bergère were made by Maun, near Sherwood Forest, Nottingham, and would normally cost £31, which sounds a large sum for pliers if it weren't for them being such a fine pair. The 'Snipe Nose' comes to a sharp point, the 'Parallel Jaws' are pivoted so that they close exactly that way, and are 'Serrated' for a tighter clasp. Model 4330-125 is just one of hundreds of pliers and clamps that have been made by Maun since 1944, when the company was named after the River Maun. One of its many engineers has worked for the company since before Neil Armstrong walked on the Moon.

Maun are now based in Sutton in Ashfield, Nottinghamshire. Visit maunindustries.com to discover their amazing range of pliers and tools.



How could anyone want the seat of this bergère upholstered?

taken from Sussex to Gloucestershire, to my daughters' home, where it would be recaned by Tina, or her assistant Jackie.

The solicitor's request had been for the chair to be returned as it had been in the 1960s, when it first graced his office. How were any of us to conclude that was to put this antique in anything but its original state, just as it was in Georgian times? The caning holes along the front rail were evidence enough that both the sides and seat had originally been caned.

And so, at great length and great expense, a beautiful job was done, and eventually I was able to pick it up and return it to the Isle of Wight. From June to October I'd been travelling around the Mainland by car, rather than on Muttley, just in case the chair might be ready. But then Jackie broke her ankle and was then inhibited by Lockdown.

Chairgate's natural end?

So in November, Chairgate came to what I imagined to be its natural end, leaving

the lawyer's home with a £500 cheque in hand. Then, a week later, I returned a call from Unknown caller, who turns out to be my favourite solicitor in Newport. "I have a feeling of impending doom," I replied when he answered and revealed his identity in a friendly way. I worried that he'd stepped through the cane or perhaps he'd wanted it *au naturel* rather than shellaced, the polish being applied a) for added age, and b) for added strength.

Not at all. I was bemused, until he said: "I asked for the seat to be upholstered." Bemused turned to startled and then dumb-founded. "But it was originally caned," I retorted, beginning to recall how I'd been struck by the multiple layers of webbing beneath the red upholstery he'd wanted removed and replaced. "The clue," I said, "is in the ancient holes along the front rail. That's how the chair would have been drilled some 150 years ago." The caned seat, I've concluded, probably gave way between the Wars, the sculpted shape of the caned arms



Geoffrey Fowler before a live BenchTalk stream (above) and with the BT 'students'

and back left undamaged. My Mum and Dad would probably have noticed this in the first place and refused the job, because in hindsight the seat had probably been upholstered because the seat and back share holes. Recaning just the seat calls for holes to be shared after the event, and would have been almost impossible to do, and very expensive. So, just as blame bounced round the White House in 1972, I passed Chairgate to Josh, Muttley's upholsterer, and just hope he was able to make a shaped cushion for the 19th Century bergère and the beautiful caned seat hasn't been removed.

BenchTalk comes alive

Since then, as you will learn next issue, I have learnt how to cut dovetails with Bill Ratcliffe, realising that those that I have produced in the past have been done with a Woodrat or a Gifkins jig. My trip to Ely, Cambridgeshire for three days in Bill's workshop, coincided with a flying visit to the London Design & Engineering UTC (University Technical College), which has been pioneered by the remarkable Geoffrey Fowler. He was one of the founders of BenchTalk101, the Zoom virtual collective that 'meets' every Thursday for a talk or two from a plethora of speakers, and then lots of chat.

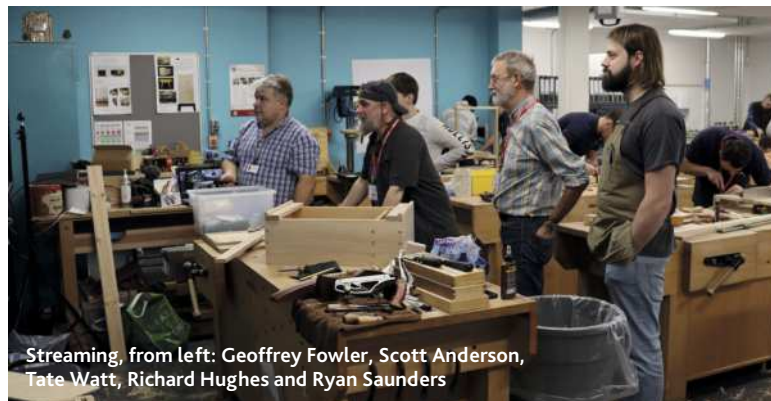
BenchTalk blossomed with Lockdown, but too few of the members have met, physically speaking. So during a brief spell of personal freedoms, Geoffrey hosted a week-long 'course' during which participants were guided through the making of an ash whisky cabinet. Milled timber was supplied by Richard Arnold for the dozen 'students', and further assistance was given by Derek Jones, who is one of the LDE tutors. And of course, as Mattias Hallin writes opposite, there was one another to help.

And then there were the tools. Not just the college racks of well-known brands, but Show & Tell specials, from the most exclusive, and even elusive toolmakers, not to mention the unique masterpieces made by the BenchTalkers themselves. I left with a long wish list for Santa, more often than not deflated to learn that queues were running round the London Docklands for some of the items, and others are just not for sale. We go to press just before Christmas, so it's too late anyway, but for next year, Santa, I'd like one of those faceted pencils made by Ric Archibald (@fairwoodworking), a pair of Shrenik Savla-Shah's winding sticks, a set of Mitch Peacock's pinch sticks, a Rusty Tchernis spokeshave, and a Kevin Gooch plane, but most of all, please Santa, now that I'm a would-be tailer, a Scott Anderson dovetail marker. Please. Happy New Year.



BenchTalk Goes Live

Mattias Hallin reports on the meeting of Zoom minds in London



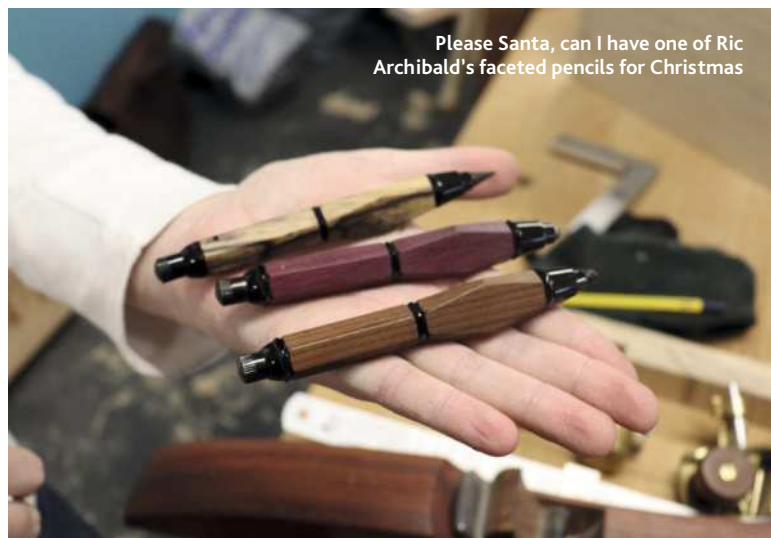
Streaming, from left: Geoffrey Fowler, Scott Anderson, Tate Watt, Richard Hughes and Ryan Saunders

The BenchTalk101 weekly gatherings on Zoom have been a beacon of light and delight in the general dishwatery dullness of the past 18 months, but to meet so many of the regulars, not only for real but for the best part of a week, and to have such fun working wood together, was just fabulous! It was fantastic how everyone turned out to be even nicer in person than on Zoom. And the spirit in the room was so supportive: everyone talking to everyone, helping each other out, lending hands and tools, sharing knowledge and skills. And the evenings down't pub meant we didn't have to stop talking just because the day's work was done, either. So we didn't.

I'm immensely grateful to Geoffrey Fowler for making this happen: organising it, coming up with the ideas and design for the cabinets, getting the

resources together, letting us into the school, everything. Not to forget all those who helped him, one way or another. This was only my second time ever cutting dovetails, and I managed to lay out and cut both my pin boards wrong. So at it again. The second attempt turned out not only better, in the sense of correct, but actually rather neater than the first attempt. Which is nice. What's even nicer, cutting the pin boards twice seemed to have flipped a switch for me: I can now see dovetails and how they go together in my mind's eye, which I couldn't before. I knew them in principle but hadn't really sussed them. Apart from anything, that was a great result to take home.

For me it was a challenge to build something, as it were on the fly, following someone else's design step by step. I'm used to beginning with a vision



Please Santa, can I have one of Ric Archibald's faceted pencils for Christmas



Mattias Hallin (left) and Kevin Gooch, who makes his own planes (above)



of what I want to end up with, and then mull that over (and read up on it as needed) until I can see in my mind the build sequence and how I plan to execute it. Only then will I make some basic sketches and plans to figure out actual dimensions and catch problems I may have missed while thinking. Geoffrey's plans and instructions were absolutely first-rate, so this is not a critique of them. I'm just not used to working that way. Then again, being pushed a bit out of my comfort zone may be a tad scary, but it was a good experience to have and a great way to learn even more.

I really, really, really hope that this will not be a one-off! I know ambition is already afoot to do it again next year, and it's well and duly noted in my agenda as time to keep free at all cost.

In the meantime, I'm happy to report

that I've continued working on the whisky cabinet in my workshop here at home. During the class, I'd managed to get the carcass glued up, and the stiles, rails and panel for the door prepared but not fitted together, so I have pushed on with that: fitting the tenons, shortening the panel and re-cutting one of the rabbets (I'd calculated the length incorrectly, but thankfully in the right way, ie. making it too long), cleaning up the carcass and the panel, fitting the back, and making the first inroads on the external finish, which is going to be a linseed oil stain/glaze in the (to my mind at least) rather appropriate colour Ardbeg Green.



A veritable car boot sale!!! Not!!! Pinch sticks by Mitch Peacock (front left), small mallets and dovetail markers by Scott Anderson, winding sticks by Shrenik Savla-Shah, planes by Bill Carter and spokeshaves by Rusty Tchernis



Eric McRory with a whisky cabinet as almost made as anyone's. Smiles counted more for the BenchTalk team than dovetails



Shrenik Savla-Shah with one of his own marking gauges (left) and Geoffrey Fowler planing with Sean O'Donnell. Behind them are Alex and Fraser from Classic Hand Tools (Alex in pink) and Tate Watt. Ryan Saunders (right) also works for CHT, as a demonstrator



A Cannibal's Bog Oak Box

Inspiring the next generation of woodworkers, *Ethan Sincox* picks up tools he's upgraded uncertainly



Minimum size of the box is to fit the LN102 Bronze Block Plane (left) and the maximum to match the cardboard box in which the box is sold. A Sauer & Steiner SN04 was used to remove resaw marks (below left), while a Bad Axe mitre saw (below) was used in the vintage Stanley 150 mitre box



Earlier this year, Editor Nick Gibbs asked me if I could build a box to hold a Lie-Nielsen LN102 block plane, that I might help inspire people for the *Quercus* Magazine's Young Woodworker of the Year contest. I agreed to make something 'in my fashion' and eventually decided on a small box with a sliding lid and hand-cut dovetails made out of 5,000-year-old bog oak and English boxwood. I figured I would devise a few additional design ideas on the fly during construction and, once I was done, I would evaluate it to see if I was satisfied or if I needed to do more.

For many years, I've built up my woodworking kit by patronising woodworkers and toolmakers in the USA, Canada, the UK, and Europe. When possible, I like to collaborate with them to make the tool more personal to me, usually by sending them some wood for which I have an affinity. Using tools that were made just for me adds to the pleasure I get from shop time; similar to how I feel when I use a tool into which I've breathed new life by restoration.

This method of acquiring new tools has resulted in a disturbing number of tools made in whole or part with bog oak! I have bog oak planes, hand saws, marking knives, marking gauges, awls, scraper shaves, hammers, and the list goes on. My first personal

challenge for this build was to use hand tools as much as possible and the second one was to use bog oak hand tools when I could! In retrospect, it was a little disturbing to use tools made with bog oak to work bog oak lumber; it felt a little like cannibalism, you know? Or... maybe that was just me.

Don't re-make the wheel

When I started considering design, I already knew I was going with a classic dovetail box with a sliding lid. Once you figure out how to set up the various details, like dovetail spacing that allows for the lid's groove, you can adjust the dimensions to suit your needs. The same basic construction can be used to build a tea box, a wine box, a candle box, or almost any sort of box you want.

I knew I was going to use bog oak for the body and bottom of the box and English boxwood for the sliding lid. I knew it would need a thumbnail catch to make it easy to open the lid. The only thing left to figure out, then, was the dimensions.

There are many opportunities in the shop where you do not have to spend much time trying to figure out something that someone else has already figured out. I decided to put my faith in Lie-

Grooving with the
Record 043

Nielsen and use the outside measurements of the cardboard box the plane came in: 7x31/2x3in. A box that small needs thin sides to avoid it looking chunky, so I picked out a piece of bog oak that was just a little over 31/2in wide and 7/8in thick. I resawn the board to 3/8in thick on my old Rockwell bandsaw and had plenty of wood for the sides.

Bog oak opportunity

This brought up my first opportunity for bog oak cannibalism as I used my Sauer & Steiner (sauerandsteiner.blogspot.com) SN04 bog oak infill smoothing plane to clean up the re-sawn faces. The second act of bog oak cannibalism came when I had to trim the two boards to length using my Bad Axe Tool Works (badaxetoolworks.com) mitre saw and Stanley 150 mitre box. I had Mark at Bad Axe make the handle of my custom 18in mitre saw using a large hunk of quartersawn bog oak.

This wood was carbon dated to about the time the city of Londinium (modern day London) was founded by the Romans, which is why the wood is more of a darker brown than black. It would need to sit in a bog for another few thousand years to be as

A Blue Spruce
marking knife



David Barron's coloured dot trick keeps the pieces organised (above). A Record 043 with custom wood fence (left). Making marks with my Philly Planes Superior Marking Gauge (below)



black as the box pieces. Before I did anything else with the two boards, I precisely laid out cut lines to separate side pieces from front and back pieces and then used a trick I saw David Barron use to keep my boards oriented. By placing matching colour sticker dots on the outside of the boards, near the upper corner of paired ends, I could easily tell top from bottom and inside from outside on each board at just a glance. These dots also helped keep me from mixing up which dovetails went with what pins once they were cut.

I once again used my Bad Axe mitre saw to separate the side-and-front and side-and-back boards. The weekend I spent completely restoring my Stanley 150 mitre box three years ago paid off the first time I used it; every time after that has been a bonus. My 90° crosscuts were dead-to-nuts square and only required a few seconds of block plane work to clean up.

When I pulled out my vintage Record 043 to plough the grooves for the lid, I realised I'd mixed up this step and the last one; I should have done this before separating the side/front and side/back boards. It's not really a huge deal since these grooves are all short and none of them took more than 75 seconds to make,

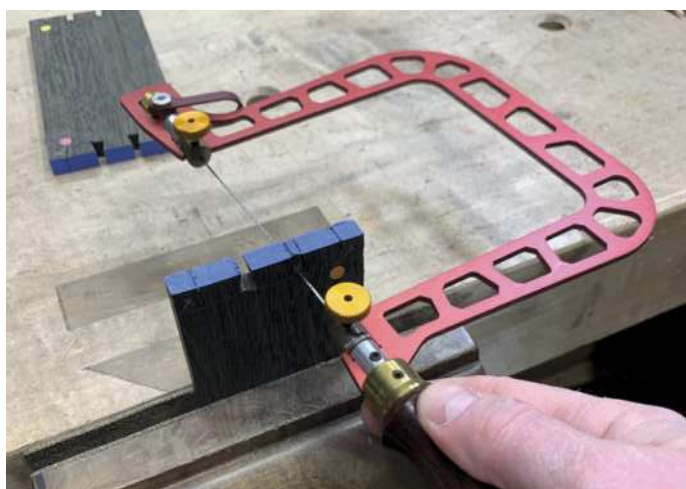
but it would have better ensured good groove line up. With my DB dots already in play, I quickly ploughed all four grooves, confident that I had the orientation correct. Sadly, my 043 fence is Cuban mahogany and not bog oak. I've thought about replacing it, but... I really love this fence. And the chunk of Cuban mahogany (*Swietenia mahagoni*) I used for it is tough as nails, much more dense than Honduran mahogany (*Swietenia macrophylla*), which makes it great material for a plough plane fence. I also think a bog oak fence might mar up other woods with black marks. So no cannibalism in this step, but stay tuned, more is on the way.

Front or back?

With the four sides now clearly laid out, I took a moment to determine which end I wanted to be the front of the box and which would be the back. I didn't have much by way of options, but the yellow/orange end had a small knot about 2/3rds of the way up on the left so I decided to make that the front. With that decided, I rearranged the two dots to lower them just a bit and pulled out my Bontz Saw Works (bontzsawworks.net) dovetail saw with its custom bog oak handle. I used it to cut off the top 3/8in, using the



caption



Cutting tails with the author's Bontz Saw Works dovetail saw with bog oak handle (above). Marking out dovetails with two sets of dividers (below) and removing waste with his Knew Concepts fret saw (left)



bottom of the groove as a guide. This created the space needed for the sliding lid to slide in and out of the other grooves in what would be the assembled box.

I would have been disappointed if I wasn't able to use at least one of the five (!!!) bog oak tools Phil Edwards (phillyplanes.co.uk) has made for me over the years in my Cannibal's Box Project. My Philly Planes Superior Marking Gauge, with its bog oak head stock and stem and curly boxwood wear plate, is an absolute joy to use. I have several marking gauges in the shop, but this is the one I always reach for first. For this project, I used it to mark the base lines for the dovetails and it performed perfectly in that duty.

Second trick of the tail

The other trick I used was Mike Pekovich's blue tape trick. First, I covered the end-grain of all four boards. Then I used two dividers to mark out the spacing for my tails on the two tail boards. This technique hurts your brain a little the first time you try it, but after you understand the principles of it, you will be able to use it to space out dovetails like a pro. Chris Schwarz has an excellent video on YouTube called 'Laying Out Dovetails with Christopher



Transferring to the pin board using Ethan's dovetail transfer board (above). Clamping the sides (top right) and checking for square, then clamping the bottom to the sides (right)



Schwarz' that explains the process much better than I would ever be able to here.

With my David Barron 1:6 ratio dovetail guide, I used my custom bog oak handled Blue Spruce marking knife to change the divider tip marks into tail marks. I carefully removed the blue tape on the waste areas and used my Bontz dovetail saw to cut the vertical lines for the tails, making sure to just touch the edge of the blue tape with the set of my saw's teeth. After removing the waste with my Knew Concepts fret saw and some very sharp chisels, I transferred the tail lines to the end-grain on the pin boards using my dovetail transfer board.

Again, I removed the blue tape from the waste areas and finished marking the pins with the David Barron 1:6 guide. I removed the blue tape from the waste areas and sawed out the pins, keeping my saw in the waste side and just brushing the blue tape. Once more, I used my fretsaw and chisels to clear out the waste. I cleaned up my work area and laid down some paper in preparation for assembly and glue up, but I did NOT throw away the waste material from cutting the dovetails. Hold on to those scraps. I'll show you why shortly.

When I test fitted the dovetail assembly it felt a little tight, but

my immediate thought was that they would slide together just fine if I used Old Brown liquid hide glue during assembly. So that's what I did, and it worked just like I thought it would. I used a pair of my eccentric clamps to make sure the joints pulled together tight and checked for square with a small machinist square.

Removing the clamps

After the side assembly had some time to dry, I removed those clamps and glued the bottom board (3/8in thick) on and clamped it up, making the box assembly. While this dried, I began working on the boxwood lid. I measured the width of the opening and cut/planned the lid to fit. Then I used my Superior Marking Gauge once again to mark out the rebates. Because of the size of the lid, I decided to just use my Lie-Nielsen rabbeting block plane to make the rebates around the three sides of the lid using a straight piece of wood for the fence. When the lid slid into place, I marked the length to fit and trimmed off the excess lid material, using a gouge to add a thumb catch before sanding.

I removed the clamps from the box, but before I did a final clean-up of the outside of the box, I had two small holes to fix. Because I used through dovetail construction, the small 3/16in

Boxmaking Tip No.1 Dot to Dot Marking

Ethan Sincox, The Kilted Woodworker, shares a layout tip that will help any boxmaker organise components well

This idea is something I learned watching David Barron's videos. I use tiny, colourful sticky dots to visually organise my boards when making a box. You can find David's video on his Youtube channel, in the Half Blind Dovetails Made Easy film.

1 Start by setting the four boards on a flat surface so they are standing up on their bottom edge and oriented the way they should be for the box.

2 Then place an orange dot in two places on the outside-face of the boards - the top right corner of the front board and the top left corner of the right side board. Be sure and place the dots far enough away from the edge so they don't interfere with joinery and avoid placing them where you will cut away any waste.

3 Then place a yellow dot in two places - the top right corner of the right board and the top left corner of the back board.

4 Place a green dot in two places - the top right corner of the back board and the top left corner of the left side board. Finally, place a pink dot in two places - the top right corner of the left side board and the top left corner of the front board.

Obviously, you can use the colours in whatever order you want. If you use the same colours in the same positions every time, then you have even more knowledge available to you at a glance. Orange dot on a pin board? That's the front of the box. Green dot on a tail board? That's the right side of the box.

You know without even thinking about it which side is the outside face (it has the stickers on it); this is important to know for things like laying out dovetails or making sure your grooves are on the inside face. And you know which set of tails goes with which set of pins just by matching up the dots.

My dovetailing speed and precision have both increased by leaps since I started using David's method of coloured dots.



David Barron: dovetail crazy



x 3/16in groove I made for the lid in the back board came out on either side. This is when those scrap pieces from the dovetails came into play. I took one of the pieces with similar end-grain pattern and pared it down into a very slightly tapered plug that fit the opening. I added a little bit of hide glue to the edges of the hole and tapped the plug into place.

I repeated those steps for the other side. When the glue had dried sufficiently, I trimmed the plugs flush. Because the pins showed end-grain where the groove came out, adding a bog oak plug with even remotely similar end-grain made the patch disappear completely.

Finishing touches

With the final patches made, I cleaned up the outside of the box, sanding all sides with 400 grit sandpaper, before adding a coat of Odie's Oil to the box and the lid. After an hour, I buffed it all off and gave everything a final wipe down.

As a final precautionary measure, I decided to add a catch to the underside of the lid to prevent it from ever getting lost. I drilled a stopped 1/4in hole on the underside of the lid, about 1/2in from the back edge. Then I cut a small piece of 1/4in diameter

bronze rod, about twice as long as the stopped hole, and cleaned it up with a file and sandpaper. Putting the lid partially back into the grooves, I added a dab of thick CA glue to the end of the bronze rod and inserted it into the hole (this was a little tricky). Now the lid will never get lost and the owner of the box will still have full access to everything inside.

And that is my presentation box for my Lie-Nielsen LN102 block plane. If you would like any additional details about the build, please go to my Instagram page, @thekiltedwoodworker, and look for the recent posts about the bog oak box. I have several discussions and videos about various aspects of the process there, including one post about fixing a mistake I made where I accidentally sawed 1/2in past my baseline!

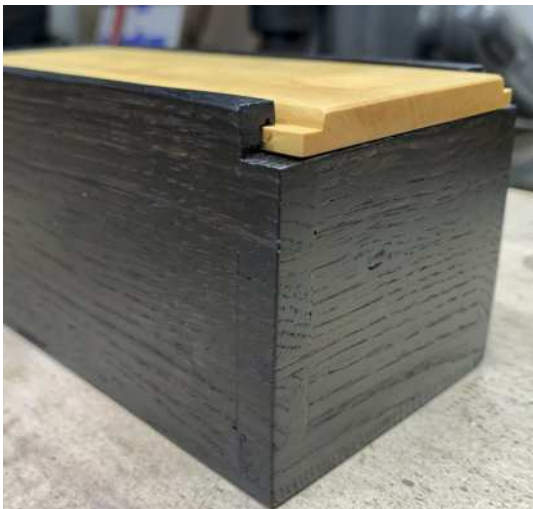
Ethan Sincox: thekiltedwoodworker@gmail.com, @thekiltedwoodworker, thekiltedwoodworker.com. Inspired by Ethan Quercus has made a donation to the Kieran Binnie Memorial Fund for making & contributing his Cannibal's Box to help inspire entrants to our Young Woodworker of the Year: The Next Generation 2022.



Filling holes left by the 043 plough plane (above), and adding rebates to the boxwood lid (below right). The Fine Old Cannibals Box (below) is the size to fit an LN102 block plane (right), and the size of the plane's cardboard case



We hope the boxwood and bog oak box may inspire young woodworkers



The Edge

TOOLS & TOOLMAKERS

Fenner Toolworks

In a remote part of Germany, *Quercus* asks a bespoke toolmaker about marketing & manufacture

Matthias Fenner Toolworks started in 2016 as a side-business to Matthias Fenner's normal woodturning shop. He started making hand-tools after he couldn't buy high-quality tools in Germany and didn't want to import everything from the USA. In 2020 he moved about 400 kilometres north from the tool region of Wuppertal to the more remote area called Wendland, and converted a 100-year-old barn into his new workshop.

QM What was your old workshop like?

MF It was in a basement, with the business growing over five years into a small company. The barn has given me the space and freedom for more and bigger machines.

How many tools do you sell?

About 500-600 tools a year. I am shipping them around the world from New Zealand to Alaska.

Is that because of marketing?

I have been able to win a majority of my customers through my profile on Instagram (@matthias_fenner_toolworks), with around 12,000 followers. Instagram enables me to keep in close contact with my customers and to respond flexibly to requests and suggestions. I also get new ideas for developing my work. My social media work allows people from around the world to take a view into my daily shop life and work.

What is your work life like?

A week of production starts with turning the blanks on my copy lathe. All the tools I make are hand-crafted by me. Each one goes only through my hands, so I can only make a certain number of tools. I regularly produce 15 different tool from file-handles to marking-knives, and mallets with nylon or brass heads. None of the hand-tools are made before the order arrives, which means I have a big range of tools in a small



one-man workshop and customers have endless options.

So you make bespoke tools?

In addition to my standard range with a walnut handle and brass ferrule in my online shop, I am making more and more custom-made handles and tools in all kinds of woods and premium metals. All my hand-tools are available in around 20 different woods, and metal parts from brass, bronze, German silver or titanium. I also grind and harden the blades and needles in-house from O1 tool steel. Branding irons are also part of my range, which I manufacture in the old way on manual pantograph engraving machines.

Visit www.matthias-fenner.de or on Instagram @matthias_fenner_toolworks.



Matthias starts each day at his copy turning lathe (below) to produce handles in many species



Engraving (above) is done the traditional way with a manual pantograph engraving machine. Matthias uses premium types of metal, from brass to titanium and German silver



Honing on the Side

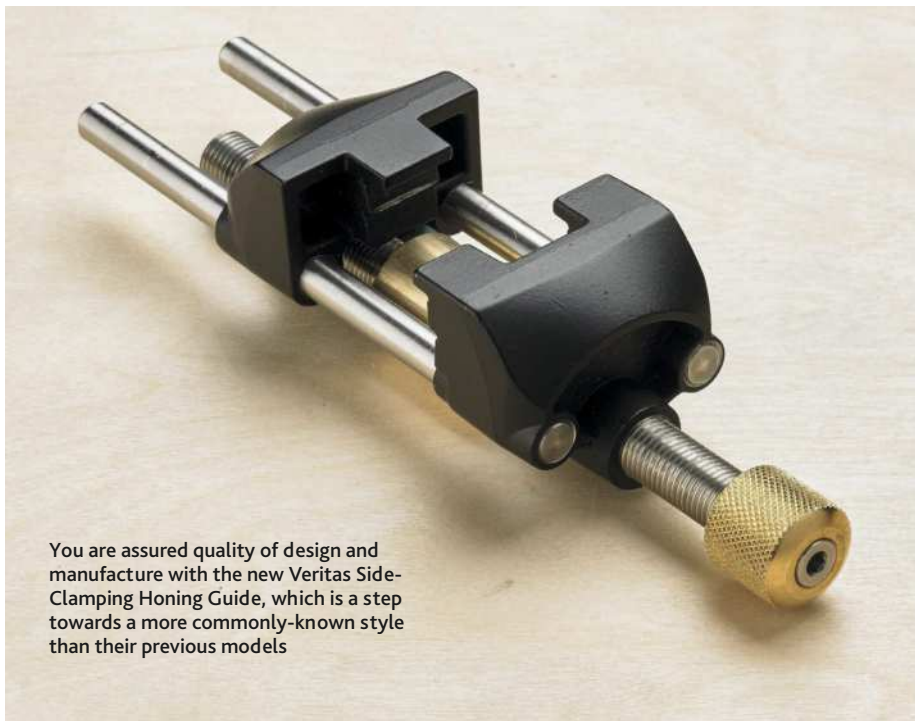
Welcoming the new Veritas Side-Clamping Honing Guide, *Nick Gibbs* turns wistfully to a total Eclipse

Let's assume for a moment there's no Richard Kell, no Lie-Nielsen, no Trend, not even the Veritas Mk.1 and Mk.2. The *Quercus* workshop is just like many anywhere, the Eclipse honing guide acting as benchmark, as a standard by which all others might be measured, not necessarily for its quality, but for its longevity. There are duplicates everywhere, clones acting as toppers, with plane irons perched on flat jaws sliding along a pair of rods, squeezed by a threaded bar. They are side-clampers, just as the new Veritas honing guide is eponymously named.

The quality of the Veritas Side-Clamping Honing Guide can be assured, and as ever it looks sleek and is manufactured with precision. The clever, unusual interlocking jaws guarantee that even the thinnest of chisels can be held securely, a failing of the Eclipse having been its inconsistent grip on narrow blades. David Charlesworth showed in QM04 how he loved the genuine Eclipse but only because it could be taken apart and upgraded with better jaws for differing types of chisel and irons.

Veritas have approached the side-clamping in a different way, counter-intuitive perhaps for us oldie guide users. Effectively, their honing guide 'hangs' from beneath the plane iron, rather than the iron sitting atop a clasping heli-pad. As a result there's a knack to inserting the blade, and a bit of a fiddle pushing your iron or chisel between the stepped Veritas jaws, which are well prepared for whatever tool you are aiming to sharpen. The only other side clamping honing guide we can think of upon which you can rest your blade is the Richard Kell No.1 and No.2, but those have wheels set apart, making them best suited for sharpening on glass.

It is Veritas precision and their new honing guide's versatility that far out-



You are assured quality of design and manufacture with the new Veritas Side-Clamping Honing Guide, which is a step towards a more commonly-known style than their previous models

perform the simpler things in life. It is the sharpening supporter for the workshop, where speed is less of an issue, and a wider range of tools need to be kept sharp. It is perhaps for the woodworker who wants a premium guide to match their premium tools.

And not to put too fine a point to it, the Veritas is suited to less confident sharpeners, who have greater need for the wider wheel, the better grip and the weight than the more experienced, who consider their Eclipse as a bridge between honing freehand and honing with assistance.

For now, until the *Quercus* workshop has been built, I see myself as a site

woodworker, best suited to the basic guide I have already. I like being self-sufficient, most of the time adjusting the angle of a blade in the guide by eye and a 6in rule, redressing bevel drift on a bench grinder or Tormek, or similar, later. I've found the diamond wheels to be remarkable, and have transformed my approach to grinding, though probably not for turning tools, which from my experience need a slightly softer surface, with a bit more wow and flutter. The diamond wheels are flat and consistent.

Once we're set up properly with a static sharpening station, as promoted by Lee Valley's Richard Wile and Lie-Nielsen's



At £33 the new Veritas Side-Clamping Honing Guide is good value considering its versatility, especially the ease of holding chisels effectively. It is far better than an Eclipse clone (left, dark blue), but the original Eclipse is hard to beat for its simplicity. That said the vintage Eclipse shown here cost us £26. There are an upper (above left) and lower (above right) locations for blades on the Veritas to account for different lengths & thicknesses of iron

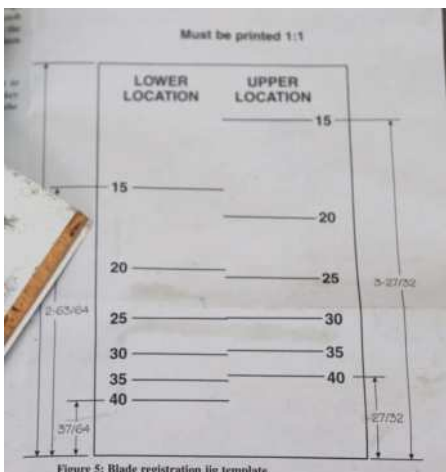


Locating an iron on top of the jaws in the case of the Eclipse (below) makes honing much easier and quicker, especially for the 'old hands' amongst us, and you need a bit of a knack to fit a blade into the new Veritas (above)



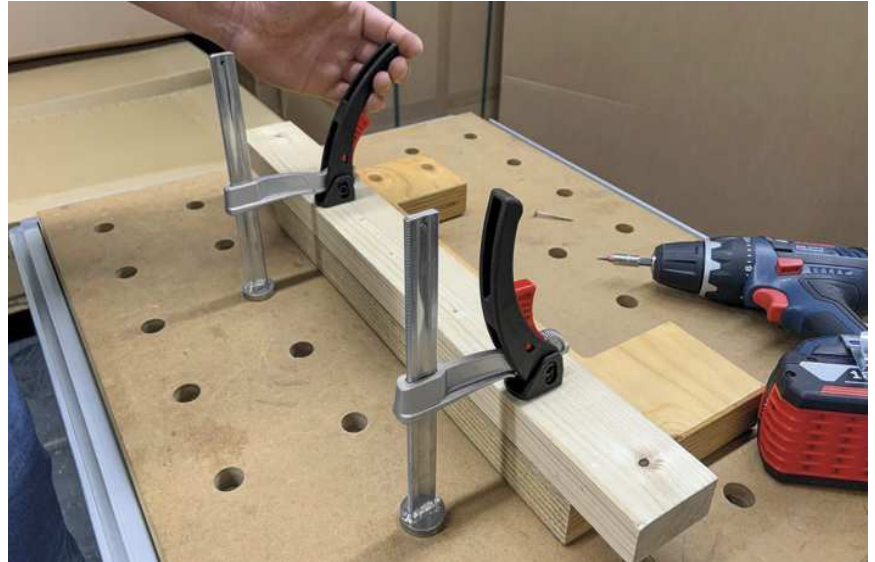
Deneb Puchalski, I'll be spending £33 on the Veritas SCHG as it appears to offer great value for money and plenty of potential, especially with the printed angle registration template within the instructions. I'm sure with time I'll come to terms with the slower pace, and that'll be a small price to pay for quality and versatility. As the Veritas instructions state: "The machining tolerances on this guide are tight to make it accurate and as durable as possible."

The Veritas Side-Clamping Honing Guide (SCHG) costs roughly £33 or \$43US. Visit veritastools.com for more details.



Holding matters

New products that might make a difference in your workshop



Bessey sent us two new holding devices recently, which we'll be testing next issue. Based on the KliKlamp hi-tech lever clamp, the TW-KLI (above) acts as a bench clamp with a ratchet cam adjustment mechanism. Bessey also now have a quick F-clamp, with additional long jaw for longer reach. The Table Clamp (as Bessey name their TW-KLI) costs about £30inc.VAT. Details at besseytools.co.uk



Classic Hand Tools (classichandtools.com) have a few new tools on their website. The Crucible Tool Dividers have been upgraded with the new Type 2 model (left) so you can adjust the tips with one hand, locking with a No.8 screwdriver. Still made in the USA, the dividers have a slightly different, matte finish at a more affordable price. The Tormek DC-200 Coarse Diamond 360C Wheel (above) has a 360 grit for faster stock removal. You get Anti-Corrosion Concentrate with all wheels to prevent rust

Making German Gratsäges

Christopher Wilson reveals the secrets of how to cut sliding dovetails the Moravian way



Split nuts installed after drilling holes with the Yankee North Brothers No.1005



Punching out saw teeth with the Foley 385 retooter

One of the core tools that I use for making Moravian-inspired furniture is the Gratsäge (Graht-Zay-Guh), or the saw to cut a sliding dovetail. This tool excels at cutting the edges for a sliding dovetail track, and, when paired with a sliding dovetail plane (Grathobel) and a router plane (Grundhobel), it will allow you to create beautiful and functional sliding dovetails that are both strong and resilient.

Why not just use a regular back saw such as a tenon saw or a mitre box saw? Although regular back saws do not clear sawdust as well, they work fine for through sliding dovetails that pass fully across the width of the mating piece. For a 'stopped' sliding dovetail where the dovetail does not slide the full width of the mating piece, the Gratsäge is really the only tool that I have found that will cut this joint efficiently due to its cut on the pull stroke in conjunction with its coarse teeth. I also believe that much of the knowledge of how to use a Gratsäge has been lost over the last century, and traditional woodworkers are not familiar with it, so it has been abandoned despite the fact that it is much more efficient for the job.

When I first began looking for this tool,

I learned just how elusive they can be. There was a manufacturer in Germany that was selling them prior to the Covid-19 pandemic, but many times they were in short supply here in the United States. To my knowledge, there is nowhere to buy them as of today without commissioning a custom saw from a professional sawmaker. As for vintage tools, I waited patiently for a few antique tool dealers here in the USA to offer some that I could restore and use, but not many of these saws made it across the Atlantic over the years. This situation led me to begin ramping up a small production process here in my shop to make the sliding dovetail saws that I use for teaching classes, but also to offer them to the public as an effort to keep the German tradition of the sliding dovetail saw alive.

Traditional saw

I would like to share a bit about my process of making a traditional Gratsäge in order to encourage other woodworkers to learn about this tool as well as how to use it. First, I start with a roll of 1095 spring steel that is 0.020in (or about 0.5mm) thick and 4in wide and I use Muriatic Acid

to wipe down the steel and remove the blue temper colouration. I then use an 8in benchtop plate shear to cut the sawplate to 12in long, wide enough for two plates, and I feed the saw plate blank through my restored antique Foley 385 Saw Retooter.

This machine is a hand-powered rotary punch that punches out the saw teeth based on the points-per-inch (PPI) selected by the various ratchet bars that come with the machine. These teeth are now rough, and still need to be sharpened, but it allows me to get consistent tooth profiles accurately. After cutting the teeth, I will cut the sawplate to the final width and length (about 6x2.25in).

Next, I turn my attention to the saw handle, for which I use my clear, acrylic template to select a piece of quartersawn or riftsawn wood that is 12in long, approximately 1in thick, and 4in wide. These saws come in many different shapes and sizes, but I am basing my design on my 19th Century Weiss & Sohn Austrian saw that I am particularly fond of.

I square up the piece of wood with my hand planes, paying particular attention to the parallelism of the two faces that will be the sides of the saw. The wooden body of



A sliding dovetail joint on a small wall shelf cut with a traditional Gratsäge



An acrylic template modelled after a 19th Century Weiss & Sohn Austrian Gratsäge (above) and an acrylic template showing the depth of the sawplate into the handle



Using a Gratsäge to cut the sides of sliding dovetails for a shelf and bracket

the Gratsäge references against a stand-alone fence and it is critical that the sides of the saw are parallel so that both faces are truly parallel to the sawplate. I then use my template to draw the outline of the saw handle and mark the centre points for the split nuts that will be installed later. I then rough cut the saw handle with a coarse coping saw and I try to stay about 1/16in off the template line. Next, I come back with a coarse cabinetmaker's rasp and bring the edges all the way to the template line. I work with progressively finer rasps until the surface is smooth enough to use a card scraper to clean it up to a final finish. I repeat this process for beveling the edges to make the handle more comfortable.

Yankee North Brothers

Next, the holes for the split nuts need to be bored out. For this task, I use a restored antique Yankee North Brothers No. 1005 manual drill press, and I set up a fence system that has two lateral stops for locating the centre points in alignment with the centre of the drill chuck. This allows me to change out bits and still get perfect hole alignment when drilling

multiple diameter bores that need to be perfectly concentric. I utilise depth stops on the drill bits so that I can accurately control the depth of each counterbore to match my split nuts. It is also worth mentioning that I will polish the split nuts at this point with a 3000 grit wet sandpaper on top of a surface plate to get the final shine as well as a perfect fit, with the split nuts level with the saw handle surface or slightly sunken to allow for final planing/scraping of the saw handle before applying a protective finish.

Once the holes for the split nuts are bored, I will cut the kerf for the saw plate by using a jig that holds a sawplate of equivalent thickness (0.020in or 0.5mm), but no saw tooth set, and this allows me to reference the saw handle on a fence to guide the cut. I only use this jig for the first inch or so of the cut, then I switch to a freehand operation with my dovetail saw which also has a 0.020in or 0.5mm plate. I make the switch because I find that the freehand cut is faster, but remains accurate because the first 1in cut by the jig is guiding me. At this point, I insert the sawplate into the handle and I line it up to its final position and clamp it tightly

to keep it in place. I then use a transfer punch to translate the split nut hole location to the saw plate. I remove the sawplate at this point and use the Yankee drill press with a carbide drill bit to bore the first hole in the sawplate for the split nuts to pass through. It is important to get this alignment perfect, so I drill the first hole, install it into the saw handle, and then drill the second hole using the actual saw handle as a drilling guide. This ensures that the two holes in the saw plate are perfectly aligned with the two holes in the saw handle.

From this point the only remaining steps are to cut the split nut stems to their final length, ensure everything is flush on both of the two faces of the saw handle, and sharpen the saw teeth. I like to perform a few test cuts to ensure that the saw teeth are tracking correctly before applying a finish to the handle. Once finished, I have a Gratsäge that clears sawdust like a champ and will cut sliding dovetails for generations to come!

Follow Christopher Wilson on Instagram @moravianfurniture.

Making Your Mark

Keeping parts in order, writes *Charles Mak* from Canada, helps for error-free assembly

Nothing is more frustrating, if not heart-breaking, than finding, for example, a centre-piece exotic veneer glued to a panel door is upside down, and 12 hours after the fact. The good news is that you can avoid this kind of silly mistake by following a reliable marking system to guide your work.

Broadly speaking, there are two types of marking schemes in woodworking, one for reference, such as the 'pigtail and carat mark' for a true face and edge, and the other for orientation, including alphabets, numbers and abbreviations that some woodworkers use to label their project parts. Both are, of course, essential. Here, I will focus on various orientation approaches.

The triangular marking method can quickly identify the components of an assembly in their proper orientation. The triangle is marked to point up or away from you, with each component carrying at least two lines of the triangle. Let me explain it with a few examples. For a panel glue-up, a single large triangle is enough to keep track of the pieces (Pic.2). If you have more than one panel, simply add lines to the triangle or make each triangle different in size or shape.

Cabinets or frames

For a typical cabinet or frame that has four pieces, we will need more than one triangle. Treat the sides as one pair of components, and the other two pieces (top/bottom or front/back) as another pair (Pic.3). Orient each pair properly and mark a full triangle on the edges of the pairs, spanning across both edges (Pic.4). Again, when working on multiples, simply add lines to the triangles to denote their difference.

When working with vertical parts such as legs for a table, mark the triangle on the top ends (Pic.5). For multiples, I can choose to add extra lines or make slightly different triangles for each set. Sometimes, it takes effort to remove pencil or chalk marks made on the work. Self-adhesive colour dots, a method British furniture-maker David Barron (and Ethan Sincox elsewhere this issue) uses, and painter's tape offer simple ways of marking without leaving any marks behind on the surfaces (Pic.6).

When restoring furniture, I also label mating components with masking tape before they are taken apart because parts may look alike, but are usually not interchangeable (Pic.7).

Pencil marks, tape or dots can be removed by accident, during milling or sanding before assembly. For concealed areas or joints, I stamp letters or numbers onto the wood to mark the mating parts securely so they will stay. Now, you can stamp silly errors out of your assembly.



If any lines are misaligned (above), one or more of the parts have been incorrectly assembled. Add lines (right) or make the triangles different when marking similar assemblies



Organise and orientate the parts (left) into pairs before marking. Mark the triangles on the reference edges or faces



Putting one simple triangle (above, left) on the top is simpler than marking several on the faces. The colour difference (above, right) from the dots makes it easy to pair the mating parts



Trust the labelled tape (above) not your memory when handling many look-alike parts



Use stamps of the right size to suit the size of the work to be marked



Christopher Wilson using one of his Gratsäge saws for cutting sliding dovetails to make Moravian-style furniture (p60)

Skein basket weaving is on the HCA Red List of Endangered Crafts. Monica Cass, weaving here a tau tray, is one of the few remaining craftspeople weaving with skein, which she does in Norfolk
Photo by Katherine Mager

