

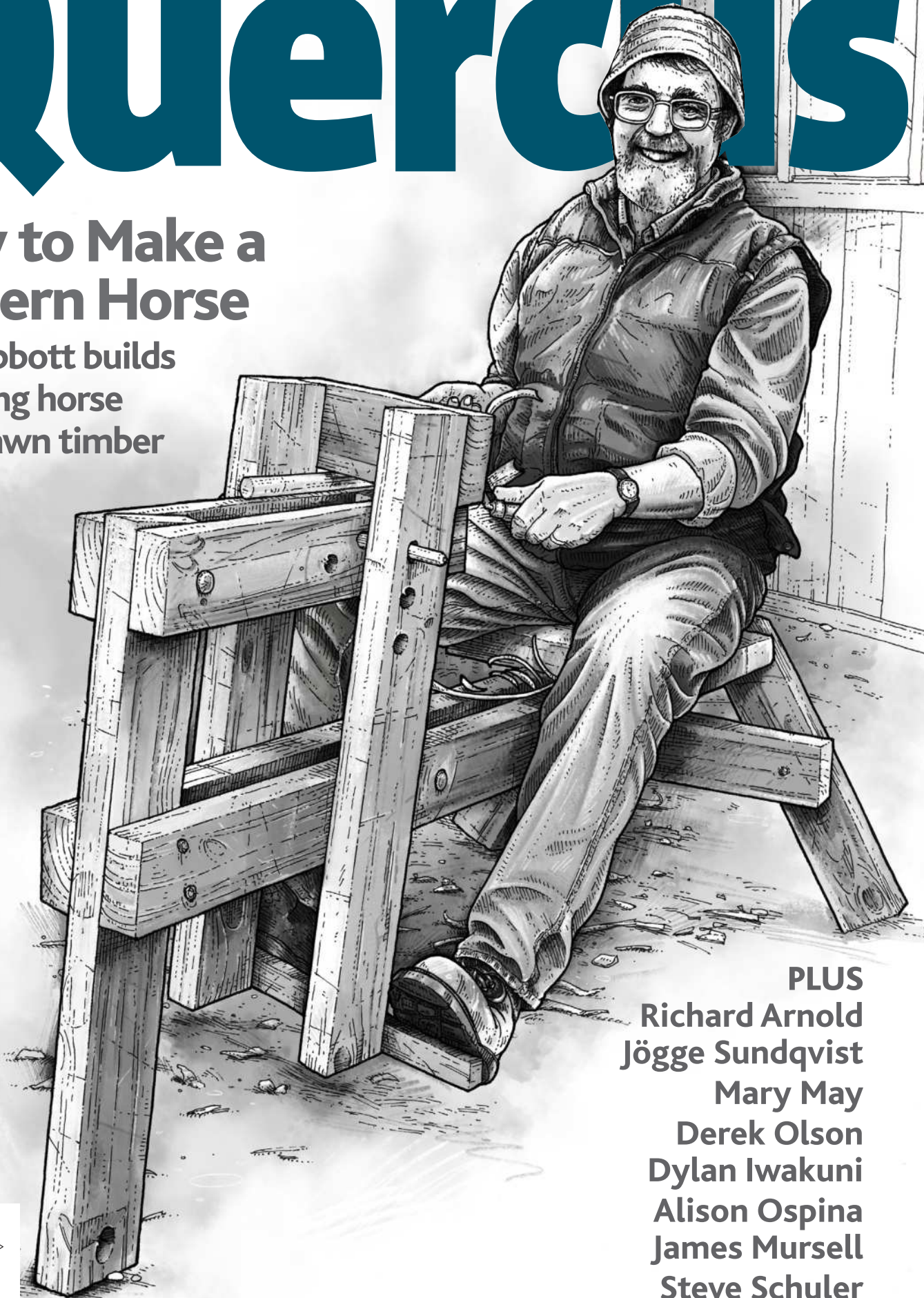
WORKING WOOD BY HAND

NOV/DEC 2020 QM03
@QUERCUSMAGAZINE

Quercus

How to Make a Modern Horse

Mike Abbott builds
a shaving horse
from sawn timber



PLUS
Richard Arnold
Jögge Sundqvist
Mary May
Derek Olson
Dylan Iwakuni
Alison Ospina
James Mursell
Steve Schuler

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Perhaps the notable change (improvement) this issue is that we are featuring and exploring more reviews of books, videos and social media. From the start a significant aim of *Quercus* was to act as a hub for the community of woodworkers world-wide, and particularly conversations and chats. Digital discussions and revelations are so valuable, and we wouldn't survive without them, but that QM02 seems to have sold out in the UK (but not quite yet in the USA and Canada) suggests there is still a passion for paper.

Whether publishing that way or for screens, a magazine team is rewarded by evidence that readers are responding to content. Sometimes one wonders what the effort is for. And then woodworkers show, mainly through Instagram, that the features have an impact, in this case the replicating and upgrading of Robin Gates' (@made-in-the-marches) sawbench last issue, as illustrated on our Letters page (p16). Readers have also recommended their favourite spokeshaves (p26) in numbers.

That's not to say contributors aren't important. Welcome this issue to Derek Olson (@oldwolf_workshop), Jason Reuter, Jögge Sundqvist (@joggesundqvist), Dom Campbell (@dominicmccampbell), Alasdair Kilpatrick (@alasdairkilpatrick), Alison Ospina (@greenwoodchairs), Steve Schuler (literaryworkshop.wordpress.com) Joel Paul (@thepunkrockshaker), and Brian Williamson of West Country Coppice, whose history of large crosscut saws hopefully symbolises the breadth of content in *Quercus*. Thanks to one and all of you.

Nick Gibbs, Editor

Quercus Magazine takes no responsibility for any injuries or mistakes relating to anything published in this and other issues.

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Once Bitten

Robin Gates pits toothed metal against wood for a planing stop

For the hobbyist woodworker researching pre-industrial ways the breadth of historical resources available online is staggering. Thanks to the generosity of museums and libraries uploading rare texts and illustrations we can access every age and its tools at the touch of a smartphone screen, from the palaeolithic flint axe to the sophisticated Parisian's *chevalet de marqueterie*. Commit to the necessary Googling and we'll find all we need to set up shop like a Roman, a Viking or Peter the Great.

Of special interest to the would-be 17th Century or 18C woodworker are Joseph Moxon's *Mechanick Exercises* of 1683, and Andre-Jacob Roubo's five-part treatise *L'Art du Menuisier* (The Art of the Carpenter) of 1769 which, for a little extra fun, can be read in the original French. Still, following a 300–400 years-old text to the letter must be balanced with the practicalities of the present day, and for me working in a garden shed whose floor moves like custard skin that rules out the massively-built 'Roubo' bench. For the time being I'm working on a kitchen work unit that's substantially lighter and, at thirty quid from a charity shop, proportionately cheaper. A bit of triangulation between the legs using free branch wood has steadied it sufficiently for moderate planing and sawing.

Roubo's work-holding accessories, however, are a different

proposition – they appear feasible for even the most modest of benches. The *crochet de bois*, for example, which is a wooden hook on the front of the bench used when planing the edges of large boards, and the *morceau de bois creux en form de boete*, a little box pivoting from beneath the bench and containing grease for lubricating saw blades and the soles of planes. But the device which excited me most was the *crochet de fer* or 'hook of iron', a savage-looking saw-toothed planing stop.

For some years the humble wood screw has served me adequately as a planing stop. Installation couldn't be easier: bore the pilot hole, countersink, insert the screw and it's ready for work. Precise screw adjustment comes as standard, while its sharp-edged head bites into the end grain to prevent lateral movement. When planing is finished the screw is turned neatly out of harm's way below the bench surface. But for the woodworker in search of an authentic 18C experience, suitably attired in tricorne hat, puffy shirt, knee-length breeches, hose and smoking a clay pipe, a wood screw looks decidedly lame. Everything I'd read from today's experts suggested I'd be laughed right out of *une boutique d'un menuisier* if found planing with anything less than the menacing iron claw called *le crochet de fer*.

Ideally it should be forged by a time-served blacksmith who understands these things, with a tapered square shank, top flattened like a fishtail, dipping from front to back, and teeth filed sharp as a rip saw blade. The shank should be bashed into a 3in square wooden post which is at least a foot long and precisely cut to fit a through-mortise in the bench.

Sturdy British forks

Blacksmiths being thin on the ground in my locality I searched on Etsy and found sturdy British examples at around £40, while more shapely designs from the USA were nearer £75. Much as I lusted after a fancy hand-wrought *crochet de fer* from across the pond I wasn't going to spend more on the accessory than I'd spent on the bench. Besides which, a 3in square shaft mined in my little work top would be a significant loss of area. While dealing with the disappointment of this situation an unlikely workaround presented itself in the shape of a Victorian garden fork turned up from the corner of a farmer's field – formerly a rubbish tip. The socket for the handle had corroded beyond restoration as a garden tool but the tines rang true and, fitted to a mounting block carved from alder, this would be my first – and only – forged iron planing stop. As a substitute for the frankly agricultural workbench device described by Roubo the garden fork seemed entirely apt if also a little on the large side. Besides, the proof is in the planing, and when put to the test while flattening a lump of knotty oak the antique fork performed superbly. I felt encouraged to investigate further.

Lowering my sights I looked at planing stop kits but these now seemed wussy compared to my four-pronged iron friend, and although more affordable I thought also a tad costly for a small metal plate. Rummaging in the shed I found a hefty steel door hinge I'd bought for 50p, conveniently drilled and countersunk for screws. I'd get four toothed plates out of this if



Wood screws make efficient planing stops



Planing oak stopped by the garden fork, which proved to perform superbly



I wanted them – although, as things turned out, one would be plenty. Having scribed the hinge I cut it to size with the Eclipse 670 Junior hacksaw (with its beech handle and solid frame this model is a better user than the wiry 14J), clamping the work in my ever-handy Record Imp table vice. The bright-red Imp is sturdy as you like with a square steel slide, hardened anvil and facilities for working with rod and tube – a real boon to small-scale metalwork. With a square file I shaped the teeth with 90 degree gullets, following the pattern of a planing stop kit, then attached the plate to an oak block cut to fit a rectangular mortise in the bench. But clumsily, and even before making a first test run with the plane, I cut a forefinger on those freshly sharpened teeth, only realising it was more than a scratch when red marks appeared on the oak board I was setting up for the trial. The sting of a small cut always seems out of proportion with its severity, but this one obstinately oozing blood gave me good pause for thought.

Metal planing stop

Surely the toothed metal planing stop is as safe to use as a chisel or any other sharp tool? Well not quite, because we're taught to keep both hands and body behind the cutting edge of a chisel, whereas with this saw-edged device both hands and body are moving towards it, travelling at speed and with some force. The leading hand on a smoothing plane is often placed low, perhaps even brushing the wood. What if the plane were to stray from the straight and narrow line of force holding the wood perpendicular to the teeth, the wood rotates off the toothed stop as a consequence, and the plane loses its purchase? The plane and hands holding it will fly forward with a chance of the left hand being impaled on the teeth or the plane suffering a scored sole or chipped blade.

Curious to see how others had fared with this device I searched online and stumbled across grisly injuries to both hands and planes. Woodworkers more skilled than me had ploughed into these things – both the forged iron type and the kits – with hands suffering lacerations to fingers, palms and wrists, and planes trashed. In one instance the damage to a hand appeared alarmingly close to the ulnar artery, and if that springs a leak a tourniquet will be needed. Given that

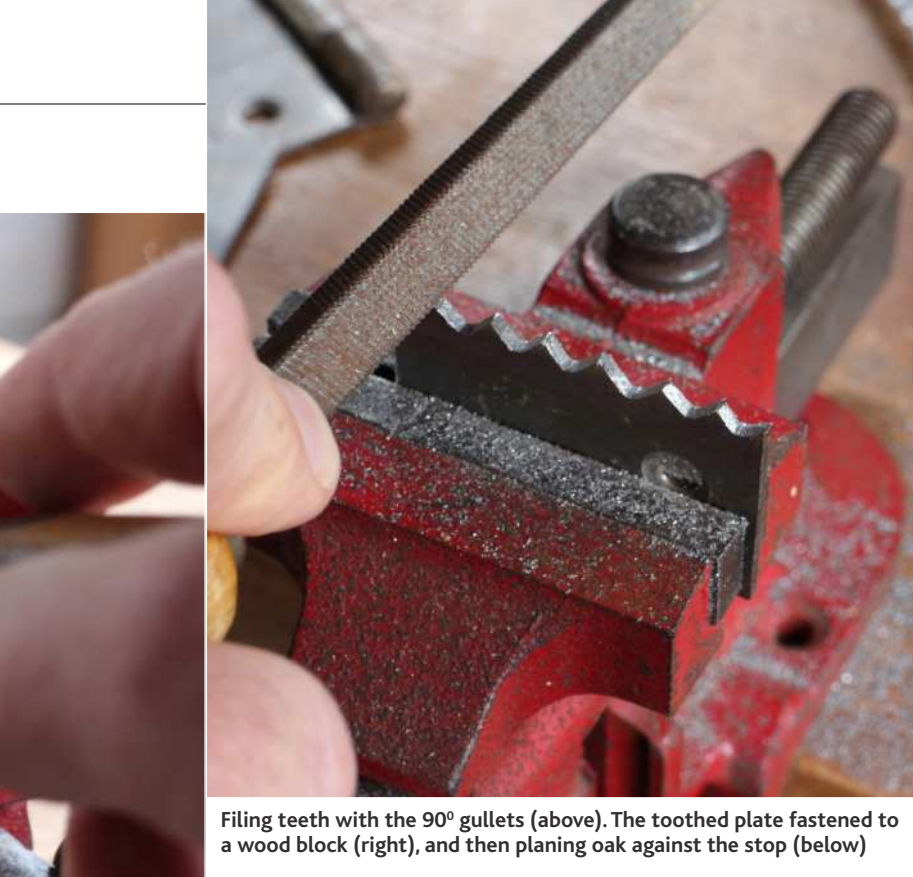


Cutting the steel hinge with a Junior 670 hacksaw for the toothed stop

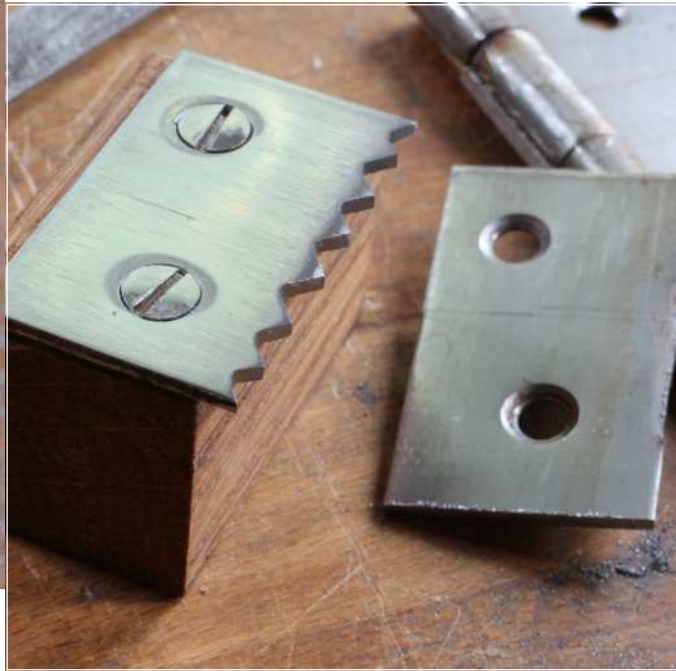


Boring the bench for a blind mortise (above), and then levelling the mortise floor with a Stanley 71 router (below)





Filing teeth with the 90° gullets (above). The toothed plate fastened to a wood block (right), and then planing oak against the stop (below)



flesh-sensing technology is now used in amateur woodworking machinery it seems ironic that hand planing with a traditional *crochet de fer* could be more dangerous than feeding timber through your table saw.

Pressing on, I decided the safe way forward was to completely immobilise the wood. While those skilled in the art of pre-industrial hand planing may fly back and forth on a board held by teeth alone, carefully balancing the forces, and never having suffered a scratch, I fear we lesser mortals should take precautions against the wood pivoting off the stop or face bloody consequences. Erring on the side of caution I pushed the far edge of the wood against a thinner piece which itself pressed on a row of wooden bench dogs, and further clamped its free end using opposing wedges. Now the wood could not move and I have to say the shop-made *crochet de fer* worked a treat, holding a rough oak board solidly while I worked it down to a fair surface.

Bench dogs and wedges

But where is the advantage in a toothed metal stop with its better grip on the wood if, to be used safely, the wood must be supported all round by bench dogs and wedges? I decided to rid the bench of this saw-toothed nod to history and use a wooden planing stop instead.

With brace and bit, chisel and Stanley No 71 router I had earlier cut a blind mortise in the bench for a planing stop cut from blackthorn, and also made a blank to fill the mortise when the stop wasn't needed. Now I cut more wooden stops of different thicknesses to suit boards down to ¼ in (6mm). In conjunction with oak bench dogs, spacers and wedges I have an all-wooden system for immobilising the board while planing, with nothing to mark the work, blunt the tools or injure myself if for any reason I miss my stroke with the plane.

Although this experiment was conducted only to satisfy my curiosity it does raise a serious issue, which is how far today's amateur woodworker should follow the lead of professionals seeking to recreate the working methods of an earlier age. For those of us coming to the bench with hand skills in working a TV remote and clicking a mouse the transition to razor-sharp tools may be abrupt and shocking. The expert carving a living by hand in the 21st century works much harder than we may realise, spending long days at the bench refining skills which, in years gone by, would have been acquired through a seven-year apprenticeship and further years as a journeyman before becoming a master of their trade. We can't hope to emulate their muscle-trained abilities and confidence through reading books or watching videos.

For example, the expert may take pride in never sinking the *crochet de fer* below the bench surface when it isn't being used, leaving it proud and ravenously bare-toothed as illustrated by Moxon, Roubo et al – ready to bite a board's end grain at a moment's notice. One professionally immersed in the historical ways and skills of their craft knows the state of their bench like the back of their hand, but the part-timer clearing space on a bench that's infrequently used could very well sweep a hand through a heap of shavings and find themselves stuck to the stop like a piece of pork on a butcher's meat hook.

And that's all the more likely since shavings ejected from the plane at the end of each pass gather naturally around the point where the plane stops. I'd suggest at the very least the toothed edge should be covered with a guard of some sort when not in use or, as some do, sunk into a recess shaped to receive it. But I can see that setting the *crochet's* friction-fitting wooden post accurately could become bothersome. As seasonal changes in humidity make the post too tight or too slack its adjustment using a hammer from above or, more awkwardly, from below the



Preparing squared oak against a blackthorn stop to make bench dogs

bench would be annoyingly imprecise, and the temptation would be to leave the hook where it stands once set.

Using a wooden stop which is essentially a loose-fitting tenon in a blind mortise you face neither the danger of working towards sharp teeth nor any difficulty in setting the height. If a different height is required you simply make another stop, which takes only minutes. As a bonus, and in contrast to a retracted iron hook, when the wooden stop isn't needed its blind mortise can be filled by a block which restores the level surface of the bench.

It's inevitable that a move forward to using hand tools comes with a big look backward, because the past is where the knowledge lies. But three or four hundred years ago joiners were plentiful and perhaps employers were less concerned about health and safety. Now, as a desire to restore craft skills grows stronger and traditional woodwork becomes more mainstream, health and safety must be taken more seriously. While I admire the artistry of the blacksmith forging a *crochet de fer* as much as the skill of the professional driving their plane towards it with consummate ease and efficiency, I shudder at the consequences if these vicious hand-traps filter down to the benches used by children or beginners.

Blind mortise

The first wooden planing stop I made for the blind mortise was shaped from half a round of blackthorn, and I used that for practising my planing technique without further support for the workpiece. If the wood pivoted on the stop and the plane slipped there'd be no harm done. And since the practice piece of square oak was not much larger than the dog holes in the bench I decided to use this to make a set of ¾in bench dogs. Until now I'd made do with a scruffy bunch of mongrels crudely cut from the branch wood of various species, and with somewhat unpredictable holding power - their irregular surfaces worked better in some positions than in others.

Using only a gents saw, chisel and rasp I developed a technique for making a set of near identical square-topped dogs. Shaping the short tenon to fit the dog hole gives practice in making square wood round, which could be useful in more complex projects like building a staked chair or bench.

For each dog I marked through the hole in the bench onto the end grain using a pencil planed to small diameter for the purpose. The shoulders of the dog were established by sawing across the corners 1½in from the end of the piece and, using the bench hook to push against, I then chiselled up to the shoulders and oppositely down to the diameter of the hole I'd marked. When nearing final diameter the fit was perfected by knocking the dog into its hole with a mallet and giving it a twist, thereby burnishing any high spots which could be attended to with a rasp.

Bench dogs can be complicated by ball catches and springs, or made entirely of metal which could damage edge tools in the same way as a metal planing stop. Plain wooden dogs are tool-friendly, efficient and easily made from offcuts.



Planing oak with the wooden stop and bench dogs (above). The dogs need to be cut to the required length (left). The wooden planing stop (below) and the blind mortise



Quick Stools

According to author *Alison Ospina*, the two-hour stool has a future

The stool, in its varied shapes and forms has been around for thousands of years. Whether a tree stump, a log or a handy rock, humans seem to naturally seek out a place to sit which lifts them off the ground. Having said that, at least half the world sits on the floor cross-legged or kneeling, seating seems to be chiefly a European thing. Stools are the simplest form of seating and in recent years I have enjoyed exploring their endless variety.

I use hazel for almost all my chair and stool making. Hazel has beautifully-smooth bark and very few side shoots. It grows tall and straight and produces perfect chair and stool components. I make this project all in one go, that is why I call it the Two-Hour Stool, not because it is a quick job. In our house we have at least one stool in each room. They are without doubt, the handiest pieces of furniture we own; versatile, useful and robust. Depending on their shape or size they are used as laptop tables, lamp stands, for sitting on to light the fire or stove (more comfortable than kneeling) as a seat/table for children, for putting your feet up or just a handy place to put a cup of tea or the remote controls!

I usually encourage people to take their time when chairmaking and enjoy the process, but in this case it is important to start and finish within a fairly short timeframe. Throughout you will need to be able to twist and turn the joints until everything is sitting right.

The joints need to be loose enough (ie. the glue must not set) to allow them to move relative to each other, until you are satisfied with the shape.

Those of you who have my *Green Wood Chairs* book will know that the stools I used to make were really more like tables in that the legs were straight and reinforced with side rails. I have never found the same satisfaction in making stools as I do with chairs; they lack the same elegance!

Looking at the new version of the stool, the most noticeable difference is that the legs are at an angle. I know that is not unusual in that kitchen stools are always made like that, but I discovered you can



Send us photos of the stools you make for our Reader Challenge

drill holes at 90° into the hard wood plank which forms the stool top and force the legs to splay by inserting a slightly longer rail. No need to drill at an angle!

Due to the natural shapes of the sticks being used, the greenwood frame will never be square, although it is being forced into it. In consequence, it is permanently under tension which gives strength to the structure. Hazel can withstand tremendous pressure, it always bends, and (almost) never breaks.

The holes in the stool top are 7½in apart. If you make the rails 9in long and insert them approximately half-way between stool top and floor, you will force the legs to splay, creating tension, which gives the structure strength and stability. For this project I use approximately 1½in diameter for the posts and something lighter for the rails.

If this is to be your first greenwood stool, use the very straightest material you can find as that will make the job much easier and will ensure success!

Curvy material is very attractive but hard to work with.

I use a cordless drill and three Veritas tenon cutters (⅝in, ¾in and 1in). You can manage with just the ¾in and whittle down to ⅝in with a knife. The 1in tenon cutter is simply for neatening the ends of the posts which can equally be done with a microplane or sander.

Veritas tenon cutters come in inch sizes and the Disston Multi Angle Drill bits I use are metric. I use an 18mm drill bit with the ¾in tenon cutter (tenons need whittling slightly) and a 15mm drill bit with the ⅝in Veritas tenon cutter (only whittling is necessary).

Instructions

Cut four straight hazel poles 20in long. Use a ¾in Veritas tenon cutter to put an approximately 1in long tenon on top. Slightly whittle the tenons so that they will fit snugly into the 18mm holes.

Cut four hazel rails 9in long, then form a tenon on each end with the Veritas ⅝in

tenon cutter (approximately $\frac{3}{4}$ in long). Cut a plank for the seat, a minimum of $1\frac{1}{4}$ in thick plank, roughly 12x12in square or 10x12in. Drill four 18mm holes $7\frac{1}{2}$ in apart into the underside of the stool top at least 1in deep.

Pair up the posts. If they have a curve or kicking foot make sure it kicks out and not under the stool. Use chalk to mark the face you are going to drill into, hook a tape measure over the bottom end and measure 10in up from the end on all four posts. Drill approximately $\frac{3}{4}$ in deep using a 15mm drill bit.

Make two H-frames with the components using glue, pulling them together using a sash cramp. Once assembled, take off the cramp and pull the tops in, transforming the 'H' shape into something approaching an 'A'. Make sure you have the posts facing in the right direction so that any kick-out or curve is facing outwards and not under the stool.

Tap the tenons lightly into the four holes in the stool top and pull the posts outwards slightly creating a 'splay'. Stand the stool on the bench top and settle the posts into position.

Wiggle the posts

Measure from the bottom of the post up to $10\frac{1}{2}$ in and mark with chalk for drilling. Do this on all four posts. Wiggle the posts out of the holes in the seat and drill into the posts using a 15mm drill bit. Insert and glue the rails. I use the sash cramp to help locate tenons into mortices without much use of a mallet and I insert glue blocks to protect the green bark.

Firmly twist and tweak the frame as necessary, ensuring all the 'feet' touch the ground, more or less. Glue the posts into the seat top. Knock them in using a mallet and then use a sash cramp to pull each one in as deep as it will go. Too much glue is better than not enough: I make sure the sides of the mortice and the tenon are coated. Otherwise the glue can pool in the bottom of the hole and do very little work. Wipe off excess glue

If the feet do not all touch the ground, be prepared to trim them slightly as necessary. I use a 1in Veritas tenon cutter to finish the bottom of each post;

If you are making a greenwood stool, in this case using hazel (above), do so with straight rods to make it simpler. Follow Alison's advice when it comes to matching the tenon cutter size and the drill bit size (right). Start by gluing up two 'H' frames (below) before assembling the stool, gluing the underframe into the seat holes (right)



just a couple of turns gives a neat finish. This stool can be made in all shapes and sizes. Do not get hung up on the dimensions I have used here, experiment with the design: try it with birch or ash or even blackthorn!

Reader Challenge Have a go yourself making a Two-Hour Stool and send us photos. Alison Ospina runs courses making greenwood chairs near Skibbereen, Co. Cork. Find out more at greenwoodchairs.com.

Large Crosscut Saws

Brian Williamson explains the difference between crosscut teeth

The big, old-fashioned, crosscut saws had evolved into a variety of patterns for different purposes before they were consigned to the scrap-heap of history by the chainsaw. However, if properly understood, maintained and used, they can still fulfil a useful role for the woodsman.

The narrow bladed, parallel side 'ribbon' saws (on right) were for felling and especially for the felling of smaller trees. Here, the thin blade enabled a wedge to be inserted into the felling cut very early on to help control the cut and the direction of fall of the tree. For crosscutting, though, the narrow blade was less of an advantage and a stiffer saw was more useful. Convex backed saws (opposite, top), known as sway, fish or salmon backed saws were produced to give that extra stiffness. Inevitably also, there are hybrids – straight backed saws. These can be a practical, half-way house between the other two types, but they were also easier to manufacture and hence slightly cheaper.

Another, nowadays often unnoticed, characteristic, particularly of the sway backed saws, was that the better quality ones were taper, sometimes crescent, ground. That is to say the back of the saw was ground thinner than the toothed edge to reduce the binding of the blade in the kerf. One of my saws proudly proclaims '5 gauges thinner on back'. This does not make for a big difference, but it can be felt purely by feel and without the need of measuring.

After the overall shape of the saw, the most obvious difference between them is in the shape of the teeth, which can be many and various. Simplistically, though, these can be boiled down to just two – saws with rakers and saws without rakers.

The early saws all had simple peg teeth, designed to cut equally in either direction. Somewhere around the time of the Industrial Revolution, people began to experiment effectively with different patterns of teeth in an attempt to get them to cut more efficiently.

The symmetry of the teeth was broken up by the introduction of gullets (deeper spaces between groups of teeth). Although these are commonly thought of as aids to carrying sawdust



Brian and Ruth Goodfellow at work in their South Gloucestershire yard

out of the kerf, their principal benefit was in reducing the tendency of the saw to chatter, and hence to bind. 'M' and 'Crown' (also known as 'Great American') are common examples of this.

The big breakthrough, though, came with the introduction of raker teeth; teeth designed not to sever the wood fibres but to 'scoop' them out from between the cuts made by the slicing teeth. Here, the gullets really did become useful in carrying out the ribbons of sawdust created by this more efficient tooth configuration. Most commonly you'll find the cutting teeth in groups of four separated by rakers. Sometimes you get them in pairs ('Tuttle' and 'Champion' being two named varieties of this). Whether there is any effective benefit in these or whether they were more of a marketing ploy designed to sell more saws is uncertain.

An interesting question posed by this evolution is: why are there as many peg toothed saws around today as there are raker toothed saws, if the later were more efficient? The answer is almost certainly because the peg-toothed saws are much simpler to maintain.

To sharpen them there is a maximum of three operations. Jointing, which is the running of a flat file across the tops

of the teeth to ensure that they are all at the same level. Sharpening itself, which ensures that both sides of the teeth are filed to an equal point. And setting, which is the bending of each tooth alternately to one side or the other to ensure that the kerf of the cut is wider than the blade. These three stages are simple processes that most people could manage with one file and a simple saw set. And, if you look after your saw, you could get away with lightly re-touching the teeth once or twice before you need to re-joint and re-set.

Raker toothed saws require extra stages. The rakers need to be sharpened to a height just below that of the cutters and, ideally, they need to be 'swaged', that is, they need to be hammered into a shallow hook shape to be at their most effective. This needs to happen every time that they are sharpened and requires more skill and more equipment.

The next question is: just how efficient are these old-fashioned saws? Well, if you're a commercial firewood producer they'll not be for you. If you produce relatively small amounts and would rather avoid the expense of a chainsaw and all its associated PPE, then they're worth thinking about. If you'd just rather work in peace and quiet then they're worth thinking about. If you love tools and



Trying out a crosscut saw at the Cherrywood Project (above) and tooth types (below)

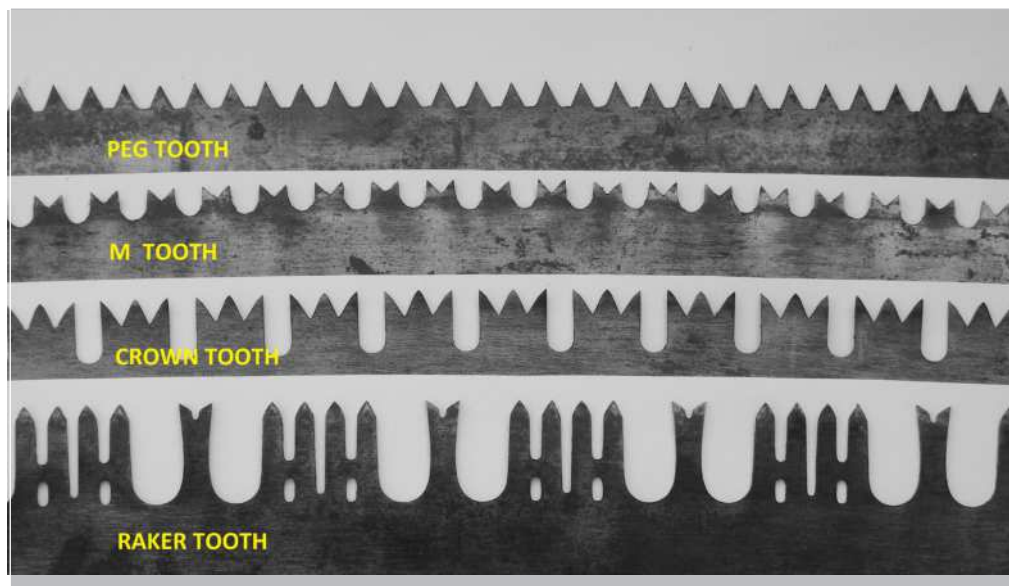
trees and working in harmony with your environment, then they're definitely worth thinking about.

If you're looking to acquire one of these saws, there are a couple of important points to consider.

Firstly, for felling, a saw needs to be more than twice as long as the diameter of the tree that you're felling, so a two foot tree would be best cut with a five or six foot saw. This is because you need to be able to pull all the teeth right through the wood in order for the sawdust to fall clear. If the saw is too short, sawdust will build up on the lower side of the blade and force the cut out of line, making the work much harder.

This is less critical with crosscutting, as the sawdust falls down equally on both sides of the teeth and will probably find its way out of the kerf eventually.

Secondly, along with old saws often comes rust, but it is surprising what you can still make work effectively. Superficial rust can easily be cleaned off with wet and dry sandpaper. Light pitting can often be lived with if it doesn't affect too many teeth. With worse pitting you have the option of filing the outside of each tooth down to clean metal before you start the sharpening operation. This is a lot of work but may be worth it with the right saw.



If you'd like to learn more about crosscut sawing, the Americans have a great forum (www.crosscutsawyer.com) that is well worth dipping into. In many of their wilderness areas the chainsaw is banned, so all their trail clearance work is done with saws and axes. And they have much bigger trees than we do in the UK!

Details Brian Williamson has been a woodsman for over thirty years, specialising in hazel coppice and cleft oak. He uses axes and handsaws regularly in his work and runs a range of courses in south Gloucestershire. See www.westcountrycoppice.co.uk.

Halcyon Days

Are hand-tool skills, asks *Derek Jones*, for professionals or amateurs?



Almost every page or post I turn to just lately finds the creator desperately trying to capture the essence of a bygone age. Whether it's the condition of our planet, a period of political stability or a quest for closure on our ancestral lineage the root is the same; how it was done back then. Inevitably and before any reliable conclusion can be made we first need to rearrange the statement and ask. How was it done back then?

It's not that long ago, somewhere in the early to mid 80s, that I remember being apprenticed to a thriving furniture-making industry. At its core was a strong trade in antique furniture where the bulk of the output was destined for the United States. Within walking distance of my employer's workshop there were similar emporiums engaged in a variety of ancillary services. In one direction there was Ken and Terry's polishing shop.

In the same building on the ground floor there was a guy knocking out skivers of tooled leather for desks and writing slopes. In the next street there was Othello (not his real name) the pine stripper and an iron mongers staffed by chirpy brown-coated men whose sole purpose I felt back then was to publicly humiliate prospective customers with the

question, "What do you want it for?" It's a ritual we all went through, I know that.

I take great delight now, though, by turning the table and responding with a full and comprehensive explanation until their cheeks puff and their eyes roll back into their sockets. Touché Mr Hardware man, revenge is a dish best served cold. Just to complete the picture, up the hill in the other direction was an upholsterer, a turner called Derek, his sister who specialised in Japan work, a clock and barometer repair man and a carver. And as you moved out of town the pattern repeated itself several times and expanded to include veneer specialists, gilders, glaziers, a foundry and metal-plating company all in a three-mile radius. A handful of these businesses still survive albeit in different hands and much further apart and I still use them. Not because I can't turn, or polish or lay up veneers but because I value their skills and expertise.

James Krenov was reported as saying that in the future all the best furniture will be made by non-professionals. I believe he was referring to making fine work to a budget and how this can have a detrimental effect on the outcome, rather than any aesthetic or technical hierarchy. He may be right of course but first we need to define what 'best' looks like and

that's not something we are or should be in agreement on. As non-professionals we go some way to preserving the lost trades by adding these skills to our repertoire but in doing so are we actually pushing them closer to extinction?

The relationship I have with my local turner is one of trust. Almost every new job I take to him results in a two-way dialogue on how best to progress the project. His years of experience means he spots complications or flaws in my design that would take me several attempts to correct if I were to do them myself. His input is vital and I don't see it as a failure on my part, I see it as making commercial sense and for that I'm happy to pay. After all, he's the one with the overheads, that huge pile of shavings to get rid of and machines of a quality and spec that would not make sense for a one-man band or non-professional.

I find the journey back to the halcyon day's of hand-tool work a difficult one to take sometimes; on the one hand I mourn the old ways where an honest days work was rewarded by a fair wage, but I suspect it was probably closer to a dystopian regime with very few perks and even less frills. Instead I use the knowledge I glean from studying old tools and techniques to connect with other trades and keep the conversation going. I once took a sweet little dovetail saw to the saw doctors for sharpening. It came back razor sharp but with far too much set for my liking so I've never been able to use it. I'm certain that if I knew then what I know now about saw plates and tooth geometry things would be different. Sure, I could use the knowledge to reset the tooth line myself but where's the long-term good in that? Is it our natural instinct for survival or just a yearning for a self-sufficient lifestyle that drives us to make things when we don't really need to?

Many have suggested that the current trend to make do and mend is born out of frustration and Amen to that, but consider its origins; necessity, remoteness and poverty and you start to wonder if we are about to repeat the cycle. The question I'll leave you with is this - should we adopt Krenov's fatalistic mantra or gift the skills back to the professionals and retrace our steps to a system where expertise is valued, in every sense?



Letters

Straight-Leg Sawbench

I've been thinking of making a sawbench for months, but couldn't settle on a design until I saw Robin Gates' version. This used up some leftover wood from making a Moravian style workbench base. It's not an exact copy. I happened to have a bit of $\frac{3}{4}$ " birch ply left over from making some Pilates equipment for my wife, and used that to make a bottom shelf instead of a stretcher. It's glued and screwed so provides plenty of stability, and it makes a handy spot for keeping copies of *Quercus*. I also beefed up the joints with a couple of nails each, just in case.

I'm also a fan of plough planes, and used my Record No.44 to make the spline rebate. I got it second-hand, and it came without the longer fence rails, so my splines are perforce closer to the top. It's finished with just one coat of linseed oil.

This is a really useful bit of kit. It works very well as a sawbench, but it is also perfect for my wife to sit on with a cup of tea chatting to me while I make shavings. So, thank you for publishing the bench, and please pass on my thanks to Mr.Gates.
Guy Windsor, England

Shaving horse design

I'd be particularly interested in articles on greenwoodworking, such as the best shaving horse design, and timber conversion for the lone worker. Also care, and sharpening, of hand-tools. Vicky Jao

Care farms

My small interest in woodwork links to a care farm where I am a volunteer worker with young adults. Most have quite severe autism and are taught the use of woodworking hand-tools to make simple but very rewarding items such as spoons, walking sticks, planters, etc...

Moki rips
a board



CARTOON: OMI GATES

The students can learn how to co-ordinate their movements by using hand-tools and for some the sensory experience that they have with working with wood is a really positive and pleasurable experience.

Krzysz Lender

Good day with Quercus

The magazine arrived on a day I was acquiring new old tools. Beside *Quercus* I found someone who sold me some old tools that I am restoring. Subscribing to *Quercus* is one of the most interesting things I've ever been able to do. I feel like a child in front of a new toy.

El Bozco, Saint-Priest-Ligoure, France

John Brown's Celtic Cross

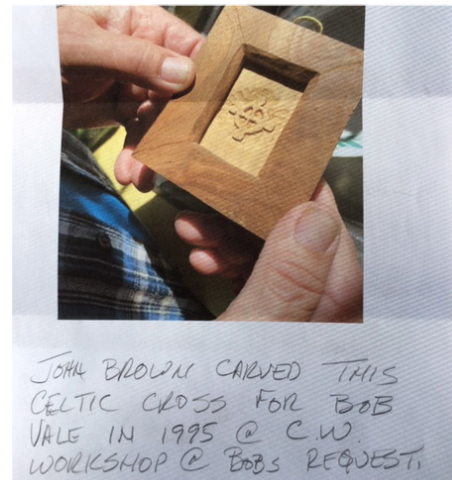
In your Q&A with Klaus Skrudland in QM02 the Norwegian chairmaker said of John Brown: 'John talked about 'The Chairmaker Above' in his book when he explained how he marked each chair with the Celtic Cross.

I'm not sure what he meant by this, but at least he suggested there are more dimensions to chairmaking than the ones we see immediately upon inspecting a chair.' This picture (below) I found on the Internet will clear up what Chairman Brown meant by marking his chairs with a Celtic Cross.

Joe DesLauries, North Carolina, USA



Guy Windsor made his version of Robin Gates' QM02 straight-legged sawbench from offcuts of a project to make Pilates equipment for his wife



JOHN BROWN CARVED THIS CELTIC CROSS FOR BOB VALE IN 1995 @ C.W. WORKSHOP @ BOB'S REQUEST.

Sam's sawbench

Sam Okerlund upgrades a QM02 project

For my bench build I stayed pretty much to the dimensions described by Robin Gates, using some offcuts of laminated sassafras for everything except the wide shelf, which is walnut. I glued and clamped up the top first. Legs, stretchers and top are all 2½in thick and the legs are about 3in wide. In addition to the joints being rabbeted and glued they each have ⅜in rived oak pins securing them. The shelf is joined by a rabbet for its whole width. The corner vice is a Littco No.165, bought second-hand.

Sam Okerlund, Tucson, USA



Sailing Different Courses

With therapy in mind, *Quercus* asks Alasdair Kilpatrick about his Little Acorns



Over a few weeks of repeated sessions a group of primary school pupils with special needs ended up making Douglas fir boats with hazel masts and a holly keel

Little Acorn Furniture (LAF) was born just over three years ago, after Alasdair Kilpatrick and his wife Abi relocated to Devon from Anglesey. Following a career in forestry management with the National Trust, the opportunity to share his skills, knowledge and passion for green woodworking evolved into the courses that LAF delivers today. At the heart of each course is accessibility: from young children to retirees, those on limited incomes to large organisations supporting mental health. Through establishing close local links with the Woodland Trust, Landmark Trust and NHS Alasdair has been able to design courses that put the needs of each group at the core of their experience.

QM What is special about your courses?

AK Rather than follow a template for a stool, table or chair, those attending Little Acorn Furniture courses receive tailored tuition and are given the opportunity to design and make their own bespoke, unique piece to take home. By making this calming and creative process available to a wider audience, green woodworking can inspire a greater understanding of the historical connections to our landscapes, while also encouraging the understanding of our vital woodland habitats. The positive mental health implications for everyone teaching and learning this wonderful craft are obvious, from improved self-esteem, teamwork and communication skills to the mindful nature of drawknifing and pole-lathing. It is this aspect of my work that makes my collaborations unique.

Developing my own range of furniture alongside teaching the courses has allowed me to develop my own techniques

and preferences for tools and materials. I take the approach that I am no expert but I do not hide the fact that I immensely enjoy what I do. This has led to a teaching technique that is based almost entirely on learning as you go, allowing people to make their own mistakes, overcome them and develop their own techniques. This style of instruction is particularly suitable and applicable to young children and people with learning difficulties, and problems with motivation or communication. Even the simplest woodworking project is a journey, overcoming problems and adapting to the will of the wood are a necessary part of the process and one that I encourage people to delve into rather than try to avoid. After each course or session participants don't just leave with a hand-crafted piece, they leave with increased confidence in themselves and their skills.

What are the benefits of greenwoodwork?

Anyone who has sat on a shaving horse with a drawknife gently peeling and shaping a freshly cleft ash log will know the immediate sense of satisfaction that can be achieved from such a simple task. There is no need to strive or work towards a goal, the task in itself is achievement enough for anyone, no matter what challenges or dissatisfactions they may be facing in life. No matter how complex, or how intricate, the big picture or the final piece that you are making is, you are forced to focus on the immediate moment, the pleasing task of rounding a tenon or shaping a leg is all that matters and all other the concerns and worries are left behind. You are forced to live in the moment, content to be where you are right now and doing just what you are doing. This mindful focus is something that is increasingly



Activities can be adjusted to suit the participants, and equipment can be altered for different age groups, like the pole-lathe which is cut down to size for younger turners



unavailable to many in modern life, and I firmly believe it provides the key to unlocking many of the problems and issues that we face in the modern world.

Is it important to have good local contacts?

I spotted the potential to realise my aim and was lucky enough to be able to work with organisations such as the Landmark Trust, the Woodland Trust and the NHS. This led to projects that continue to bring me into contact with a hugely varied range of groups and individuals; each with their specific needs and requirements and each deserving of a unique approach to course structure and pace. We cater for groups of primary school children with issues such as autism, ADHD, physical disabilities and victims of extreme bullying to adults with mental health or addiction problems and families who have children with special needs. In addition to this things are often much more subtle with courses geared to young adults who are struggling at work and in life to find satisfaction and fulfilment. One memorable young man stated that his job was “fine” but he couldn’t in any way be himself or put any personality or passion into what he did. What could be more different from putting your heart and soul into a project completed with your own hands?

How are courses tailored to needs?

Given this diversity of people, the courses are necessarily varied. Often sessions are short, lasting only two hours or so. In that time it may be necessary to present a number of projects that can be worked through quickly to prevent the build-up of anxiety and frustration. This is particularly true of younger

children or adults with issues such as addiction. As sessions progress and confidence grows there is always a marked extension of attention span and engagement.

What sort of activities are popular?

A recent project funded by the Woodland Trust involved repeated visits from a group of six children from a local primary school. The issues that these children faced ranged from autism and physical disabilities to severe bullying. It was seriously doubted that some of them would make it to the end of the school year so extreme was their collective behaviour. We started with very simple drawkniving projects such as making a sword from round wood, cut part way through on either side to shape down for a blade (weapons are always a good start but can be problematic) and simple mallets made in a similar way. These were interspersed with more energetic activities such as treasure hunts and den building. As the weeks passed we progressed to turning on a pole-lathe and ended up with them making toy boats from cleft Douglas fir with hazel masts and flag poles and a nice dense holly keel. These we sailed down the river on the final session. The sense of fun and achievement of the sessions is something I will remember forever and strive to repeat. Suffice to say that they all made it through the school year and the marked improvement of their behavior can be attributed to being engaged in something that quite simply helped them to feel good about school and learning.

How do you find the right skill level for different courses?

It is essential to design and present tasks that are achievable



Though projects are often made, they are usually designed by the participants themselves. Activities like drawknifing are therapeutic on their own, whether or not anything particular is made. Weapons tend to be very popular, but a bench or stools are good for group tasks



and engaging, we have made gliders from cleft hazel using paper for the wings and tail, or simply peeled the bark from a freshly-cut branch. Presented in the right way these tasks can be equally engaging and satisfying. The pleasure comes not from the magnitude or complexity of the task but from the fact that the individual is able to carry it out entirely on their own with a minimum of assistance. It is necessary to align your expectations with those of the participants and often ask no more of them than they are able to give. Over time abilities can be tested and through positive encouragement they can be pushed to achieve more but it is never about what I want them to do or what they should do or even what their friends have managed to do. It is a personal experience for each individual.

Is time an issue?

Some situations call for sessions that are much longer but perhaps less frequent lasting from half to a full day and occasionally carried out somewhere other than my workshop. This was the case with a project recently completed at NHS Langdon, a secure Hospital providing care for men with mental health problems.

As a part of a Landmark Trust building restoration program I had the task of building a replica Voisey bench and needed to include a small group of patients in the process. The challenge here was to extract from this complex and detailed project an element that would be both suitable and provide a strong contribution to the finished article.

We made the base of the seat which involved numerous dovetail joints and had to be exactly the correct size (although

this was almost completely covered by a cushion later!). We were then able to assemble the entire bench in the workshop.

By presenting a relatively simple and non crucial part of the project in the right way the feeling was that the entire project came together as a direct result of the workshops in the hospital. Rather than feeling that they only contributed a small part, the response was "look at what we made". This amplified the sense of pride and pleasure and made the contribution far more significant for all. As with all craft courses it is far better to oversee from a distance, thinking on your feet and doing what is required in a hands-off way to ensure that both the process and the end result are pleasing and satisfying to those taking part. The challenges may be more and the expectations may occasionally be limited but the results are always breathtaking and the rewards immense.

What about equipment and setting?

Those of us that prefer hand tools to noisy, dusty power tools and a woodland setting to the confines of a workshop, do so purely out of a love of the process. Passion for greenwoodworking extends beyond the simple making of things to a love for the material, the tools and the greater environment that provides the materials with which we work. By working with wood in this way, we can not only gain great benefits to ourselves but also benefit the woodland habitats that surround us and are so desperately threatened at the moment.

Details Learn more about Little Acorn Furniture at littleacornfurniture.com or on Instagram @alasdairkilpatrick.

The shaving horse has been adapted with a bungee for younger participants





Riding the Modern Horse

Mike Abbott shows how to make a shaving horse from sawn timber

A shaving horse is one of the basic devices in all branches of greenwoodwork, used for gripping the workpiece with a foot-operated lever, which leaves both hands free to hold the necessary shaping tool, such as a drawknife or a spokeshave. There are numerous designs of shaving horse to be found in books and on the Internet. Generally, shaving horses are used with the operator sitting on the horse – hence the name – to hold it steady, but in his book on making Windsor chairs, James Mursell illustrates a horse used while he is standing up. Bob Slade has also developed a standing horse. Kerry Pearce illustrates a neat little shaving attachment to fit into a bench vice.

For over 20 years I had always started a shaving horse project with a 4ft length of log, about a foot in diameter – not the sort of thing that most people have lying around the workshop. For some time I had wanted to come up with a design that uses materials that would be easy for anyone to obtain. In autumn 2007 I ran a couple of days' personal tuition for Gillian Bathe, an artist keen on teaching greenwoodwork in schools. She had made a shaving horse based on some pictures she found on the Internet and wanted me to help her improve it. When I saw Gillian's attempt out of scrawny bits of softwood my initial reaction was to use it for kindling wood and to start all over again. However, when erecting a new workshop a few years earlier, I had discovered the effectiveness of using powerful cordless drills to drive modern turbo coachscrews into softwood beams. I had also spent a few hours that summer chatting to Owen Jones, a swill-basketmaker, while he was sitting astride his shaving horse, designed for gripping thin slivers of oak.

All these factors brought about the conception of 'the lumber horse' made out of two 4.8m (16ft) lengths of planed softwood beams plus a few odd bits, all held together with a box of turbo coachscrews. Some years on and a number of changes to the shaving horse have evolved, the main ones being:

- The platform must be parallel to the bed of the horse so that it can be used to grip chair rungs and rails while they are being tenoned, with the spirit level on the tenoner showing they are cut straight.
- Uneven lengths with different gaps on the seat let it be used as a cleaving brake.
- The option of converting it quickly into the undercarriage for a chairmaking bench.

You are going to need several 25mm (1in) holes in the platform and arms of the horse. If you have the use of a pillar drill and/or a bench vice, you will probably find it easier to drill the holes in each section of the platform and three in each arm. Without this specialist equipment it is probably better to make the horse first to hold the wood in place when it is being drilled. This can be fairly easily done with an electric drill, a brace and bit or a bar auger.

When assembling the body make sure the fixings are not too near the end of any timbers, so that they do not split the wood. First saw all the pieces to length. Take one section of the bed and measure back 50cm, then fix the riser behind this mark, so that it is square to the bed. Measure 35cm up the front leg. Fix



By keeping the bed horizontal you can keep a tenoner level

the bed to the leg just above this line, using only one screw, so that the leg can be rotated. Screw one of the platform sections to the top of the riser. Rotate the front leg so that it can be fixed to the front of the platform, and check that the platform is parallel to the bed, then fix the platform to the front leg.

Turn this assembly over and lay the other bed section on top, making sure it is lined up directly opposite the first section. Fix this half of the bed, using two screws at each joint. Fix the other half of the platform, again using two screws at each joint.

Slip the rear spacer between the two bed sections near the rear, allowing space for the leg brace to be fitted flush with the end of the bed. Making sure the spacer is square to the bed, screw it to the bed then turn the body over and screw the bed to the spacer from the other side.

Mark a line around the leg brace, 25cm from one end and 35cm from the other. Mark around each of the back legs 25cm from the ends, then screw them (with just one screw each) to the ends of the leg brace with this mark flush with the bottom of the brace. Stand the horse upright and clamp the rear leg assembly firmly to the horse body, with the previously marked line centrally between the two bed beams. This means the leg assembly is 10cm off-centre. Screw the leg brace to the spacer, with two screws.

Fix the longest of the seat components to the back end of the bed, 10cm off-centre as with the leg brace. Fix the two remaining seat components so that all three are flush on one side of the bed and projecting different amounts on the other

side. Position them with different gaps between them (and with the middle section at an angle). These gaps serve at least three purposes (and I'm sure you will find more). It can be used as a cleaving brake for splitting various sizes of green wood, and to support the workpiece when knocking in a froe. It can also be used to support a stool leg if using a hammer to hit in a rung. Put in plenty of extra fixings for the seat, especially on the side that hangs out to withstand the stresses imposed when cleaving. Swing the legs across to meet the seat so that they both have the same slope. Screw the tops of the legs to the rear of the seat. The tops of the legs should protrude just above the seat, which can be useful.

Gap between the arms

Screw the top bar onto the arms so that the gap between the arms is about a couple of centimetres wider than the width of the platform, so it can swing freely. Make sure that both arms are parallel and that they are square with the top bar. Fix the footrest to the bottom of the arms. This could be another 50cm length of 4x2in, a strong length of 2x1in or anything in between. I just happened to have a length of 2x2in suitable for the job. If you haven't already done this, mark out two holes in each half of the platform (to give some variation when the horse is gripping a workpiece). I suggest 20cm and 25cm (8in and 10in) from the front and 3cm and 6cm (1in and 2½in) from the top. Drill the two 25mm (1in) holes in each section, keeping square to the body and as horizontal as possible. Use either a power drill (with a Forstner bit or a spade bit), or a brace and auger bit or a bar auger.

Measure down the centre of the arms 15cm, 20cm and 25cm (6in, 8in and 10in). Drill three holes in each arm.

Lift up the front of the horse then slide the frame into place and pivot it with a wooden pin about 22mm (7⁄8in) diameter. I have shown a simple hazel rod to get started with but this will be replaced by a shaved ash pin. The seat is bearable to sit on for a while, but for longer periods of use, I suggest getting hold of an old cushion. The one pictured is rather large, but it was free!



Going with the Grain is available for £15 with free postage in the UK from goingwiththegrain.org. For overseas enquiries email abbott@living-wood.co.uk.



Check the spacer at the rear (above left) is square to the bed. Fixing the longest of the seat components to the back end of the bed (above)



Fixing the bed to the riser (above). The pivoting clamp (right) is made from the same stock as the rest of the shaving horse, with the top bar or jaw screwed to the arms. Screwing the back legs in position (below)

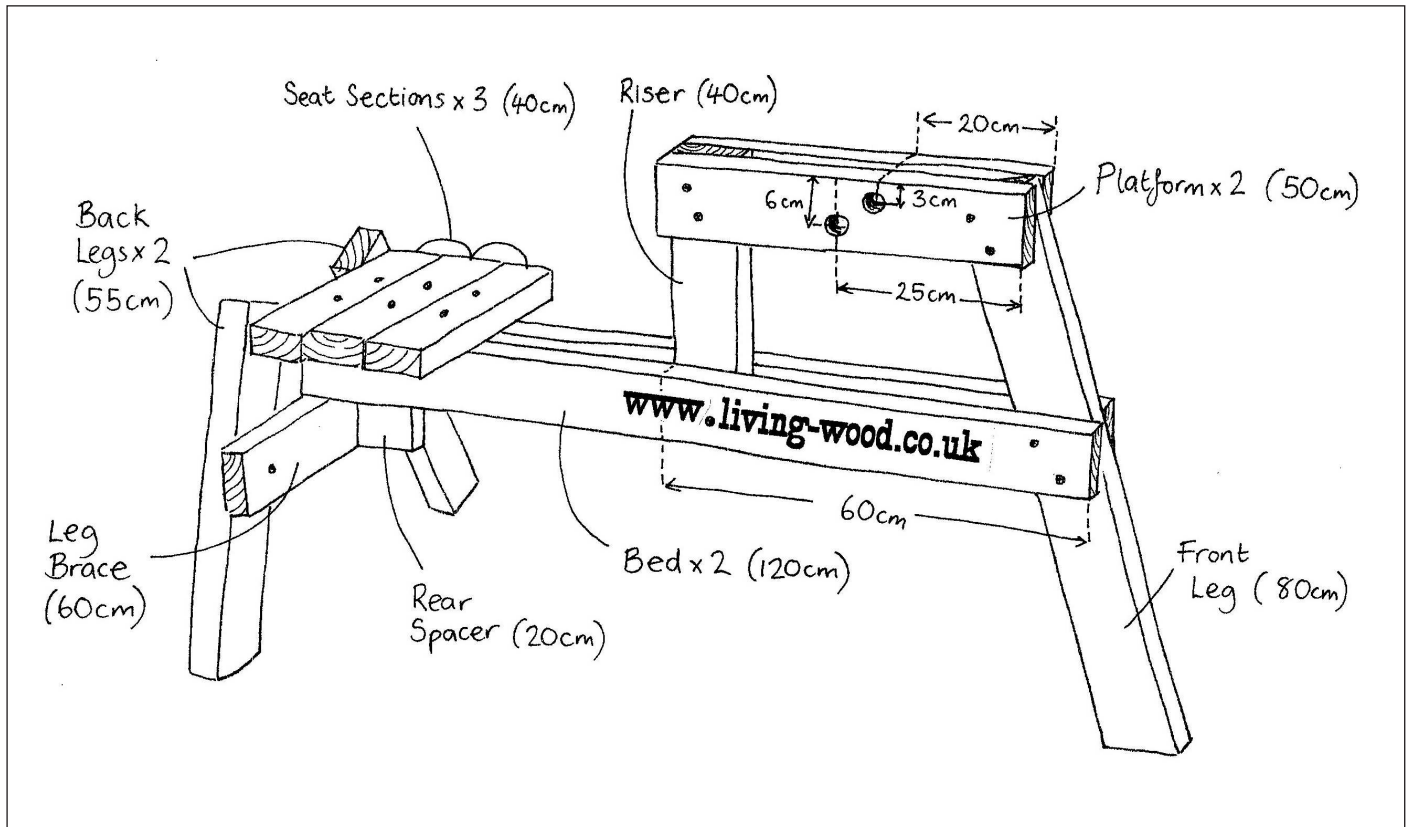




The back leg assembly is offset from the bed by 10cm (above) and taking a test ride with a soft saddle



Drilling the platform with a Forstner bit (above) for the pivot, or use and auger (left)



Top Ten Spokeshaves

Asked about choosing a spokeshave, *Quercus* readers offer a wide range of options

The spokeshave symbolises *Quercus*. It may not be the tool every woodworker chooses to take to a desert island, but it must be up there with the block plane or the drawknife. Perhaps readers could send us their choice by emailing queries@quercusmagazine.com. This time we simply asked 'Which spokeshave would you choose?'

We received a wide range of answers, from people choosing old wooden ones to flash new Cliftons, Lie-Nielsens or Veritas. Flat-soled seemed to be more popular than ones with a shaped or curved body. Many readers seem to favour wooden spokeshaves, like Windsor Workshop, Philly Planes or Mujingfang. Some readers confessed that the Taiwanese rosewood spokeshaves are their favourites, which happens to be the same for *Quercus*. That said, the old Stanley 53 was *Quercus* co-founder John Brown's first choice.

1 Rosed bodied

I have three spokeshaves that get used regularly. The oldest and biggest is the flat-soled rosewood bodied Philly Planes spokeshave. Adjusts with two set screws and normally gets set with a slightly deeper cut at one side than the other. The other two are relatively recent curved sole metal ones from Lie-Nielsen and Veritas. These are better for very fine work and they won't do thick shavings or green wood very well.

The Philly one is the favourite but is the most difficult to sharpen as it has two posts that stick up from the blade. A narrow stone or the corner of a stone works. Freehand on the Tormek for regrinding but that's not often. Blade setting on the metal shaves is by guess against a surface then small hammer taps to fine adjust. The Lie-Nielsen is better for this as it has a continuous blade whereas the Veritas has a slot.

I've used James Mursell's Windsor Workshop spokeshaves too and those are excellent for green and dried wood as you'd expect from a chair maker!

Matt Morse

2 Wooden woods

If the workshop was on fire the first thing I'd rescue would be my box of spokeshaves. I have 30 odd, 27 wooden ones and a few metal ones, but the wooden ones are way superior, arguably one of the finest hand tools ever created, just such a lovely tool to use and nothing comes as close as that complete contact with the wood and the control to alter angle and cut with the most subtle of finger tip pressure.

I have rather collected wooden spokeshaves, partly that are just lovely objects as well as fantastic tools, but as something to collect they are not expensive. I of course have a few go-to favourites, but the range of sizes and timbers is interesting as is the way various attempts were made to try and improve on



Matt Morse prefers curved-soled shaves by Lie-Nielsen and Veritas (above), and a flat-soled model from Philly Planes (above left). Of his 30-odd spokeshaves Wade Muggleton would keep the wooden ones (left) while others would buy a Windsor Workshop (right)



the basic design, with little success in my view. If it ain't broke don't fix it. I believe production ceased in the 1950s of the wooden shaves so in theory any you see are a good 60-plus years old. Whilst beech is the commonest timber used, some of the smaller ones can be found in box, I also have oak and fruit wood examples. Lovely tools. A couple of rarer examples where designers attempted to incorporate a greater level of adjustment.

Wade Muggleton

3 Vintage metal

I am partial to the old Stanley 53 adjustable throat spokeshave. It just seems to work better than other vintage metal spokeshaves and the adjustment is quick and easy, with no fussy lever cap to deal with. Fun fact; it was a favourite spokeshave of John Brown, so that's good company! I tend to keep one side of the blade out further for heavy cuts, and the other side in slightly for light cuts.

That way, depth of cut can be determined while using the tool, instead of constantly adjusting the blade depth. While newly made boutique spokeshaves can conquer end grain and leave smoother cuts. The Stanley is more of a workhorse, sort of like the jack plane of spokeshaves. Still can be found at attractive prices. I would feel lost without mine.

Craig Regan

4 Shrinkpots

I love spokeshaves and I use them in all of my various forms of work, from furniture and cabinetmaking, to Windsor Chairmaking, and most forms of green woodworking, spoons, bowls and shrinkpots.

I have about 16-17 shaves that I have in constant rotation. They each have a function that they perform well and each has its own sharpening approach as well. They are all my favourite! I don't keep shaves that don't serve a purpose in my shop. I sell them to collectors or give them away.

Each shave that stays in my arsenal is a perfect tool and part

of that is completed by the maker when the tool was produced, the other part is up to me to tune and keep the tool sharp. So without further ado here are some standout shaves and some details.

1. Lie-Nielsen Brian Boggs shaves, flat and curved sole.

I list these first for two reasons. If I were to recommend one set of shaves to a newcomer to the tool, these would be the pair. They can perform most any spokeshave task and keep a nice edge. They require specific sharpening though. When sharpening the blade for this tool you must use the 'ruler trick' creating a small micro bevel on the back of the blade. If not then over time you will make the blade slightly wedge shaped or tapered and the blade will not hold properly between the body of the shave and the cap assembly. It won't hold adjustments otherwise. Adjusting this tool is a breeze. Simply tap the bronze where the handle meets the body on a piece of wood, or a bench edge, in the direction you want the cut to go. A slight tap and the cut advances. If you go to far, turn it upside down and tap until you get the perfect cut. With practice it becomes second nature. I use these shaves on the outside of hewn bowls and for finish cuts around the Windsor chair seat. They're nimble and don't chatter if they're razor sharp.

2. Stanley 151. I use this the most of all shaves oddly enough. I have one with a curved base but mostly I use the flat base. I replace the original blades with 3/32in thick blades from Ron Hock. This seriously eliminates chatter! This is a comfortable shave with a large base which makes it easier to stay flat in a cut. I use this shave almost exclusively for shaving spindles for Windsor chairs. I use it mostly by drawing it toward me but it excels either way. I can use this tool for hours with no fatigue. Not bad for \$35

3. Caleb James Monster Shave. This tool we like to call "drawknife for dummies". It is a reproduction of one of Pete Galbert's antique shaves and is huge. Many old shaves were this size but I rarely see them in usable condition. Al Breed uses



PHOTOS: ROBIN GATES

Probably the most consistently popular of all spokeshaves, new or otherwise, is the Stanley No. 53, as favoured by Quercus co-founder John Brown. It is the adjustable mouth that makes the tool so versatile



one religiously. I use this tool for roughing and blending tool marks from drawknives. If you can get one it's a marvel.

4. Caleb James standard shave. This is an amazing tool for carving and shaping. It is a low angle approach and the cut is defined by the roll of the tool, much as many old shaves were. Roll the tool forward and it takes a lighter cut. Roll back and it digs in. It takes some practice and then becomes second nature. I use this tool for shaving around the back of the chair seat across the end grain. Clean and waxy facets! I bought an extra one just in case. That's how much I love this tool. I recommend the hardest wood available when he has them. Mine are boxwood.

5. Daves's Shaves. These used to be recommended by Mike Dunbar when he was teaching. Dave makes three sizes of shave, flat sole, compass sole, and detail shave.

These are amazing tools. The cut is adjusted with an Allen key on each side. You can set the cut deeper on one side and shallower on the other and somewhere between will be the perfect cut no matter what.

Beautiful tools but the one drawback is that the finish is thick and shiny. Not what you want on a spokeshave. I strip them and hit them with some oil. The detail shave is a tiny, curved sole shave that is my second most used shave. It is wonderful. I chamfer the rims of shrinkpots and the underside of hewn bowl handles with this tool.

6. Antique Shaves. These are dirt cheap online and in shops but will require quite a bit of work to get working. The blades need enough workable steel to sharpen past whatever was filed or ground on there for 100 years.

More than likely a new sole must be inlaid in front of the mouth with wood or brass. The square posts are loose and need to be tapped apart to keep them tight, or the holes need to be shimmed. It's a pain but everyone should do at least one. Bring it back to life. That old cast steel is amazing.

These old shaves when tuned and sharp will take an

incredible shaving and they seem to stay sharp forever. I use these on Shaker round tabletops. It just seems authentic to me.

If I had to choose only one shave to bring to our new colony on Mars? Stanley 151/ Hock blade. It would survive. *Joe Paul*

5 Self reliant spokeshaves

I volunteer with the charity Tools for Self Reliance. We collect old tools, refurbish them and create kits of tools which go to partners in Africa. Tools which are not required by our partners in Africa are sold to raise funds for shipping and training.

Our tool collections provide us with a good supply of spokeshaves, wood and metal, flat and convex, often sadly in a state that indicates neglect or misuse. Fortunately most respond well to cleaning sharpening and adjusting.

We only ever put metal spokeshaves in our kits, both flat and convex. My preference is for the products of Stanley or Record, and whenever possible I choose those tools with the two adjusting screws at the top of the blade.

On one occasion when trying to sell surplus tools I was asked for a cigar-shaped spokeshave. This was quite unknown to me so I did some research and found on line the Millers Falls No 1. I will leave you to check it out unless you already know of it. A few months after the enquiry I came across one in an "antique" shop and bought it along with a seriously old Ransomes mower in need of much renovation. *Dick Mohito*

Tools For Self Reliance (TFSR) have recently celebrated their 40th anniversary. Visit tfsr.org to learn more.

6 Mole grip tip

I was using my spokeshave just yesterday in the workshop finishing some spoons, spatulas etc and thinking what a marvellous and useful tool it was and how everyone should have one! James Krenov turned me onto this one perhaps back when he wrote articles for one of the woodworking magazines. It's a Stanley No 53 which I use with a one handed grip as he



Clifton (above left) make beautiful spokeshaves in Sheffield, while Sugita Sosaka sells wooden Nankin Kanna (above) for from 16200yen-30200yen (info@sugitaso-saku.jp). Kunz shaves are distinctively green, but our choice is Mujingfang (left)



suggested. Also it's got a little wheel for speedy, very accurate and fine blade adjustments. PS Top tip is to hold the blade in mole grips for honing.

Robin Fawcett, England

7 Style from Taiwan

I'm afraid I'll have to be contrarian on this one: I've been using the Taiwanese style spokeshave and I find I like it quite a lot for the work I do (I don't do a lot of spindles!). It's smaller and I find it easier to control and manipulate on refining cuts than having my hands so far outboard on the typical Western spokeshave.

For long shaping cuts I often prefer using a drawknife or even a slick rather than a spokeshave as I feel I can not only remove more wood quicker, but with greater control. For refining the shape I prefer to use shaped planes as the short sole of the spokeshave makes getting long smooth curves without some waviness more of a challenge. And with a chipbreaker on the plane I can pretty much eliminate tearout, something that's more difficult to do with both the bevel up and bevel down spokeshaves.

The Taiwanese spokeshave is a bevel up spokeshave and as such it is prone to tearout when used along the grain, but for cross- and diagonal-grain shaping the short handles make it easy to swoop around curves to get just the shape you want. Extremely simple construction (2 pieces), easy to adjust, a hand forged blade (try and get that in the West!) that gets sharp and stays sharp, affordable, comes in two (small) sizes. Other than it is not as effective for removing large amounts of stock the only drawback I've found is that the wood sole wears quickly (as all wood spokeshaves will) and I really should install a brass wear plate at the sole. The brand I've been using is Mujingfang.

Scott Wynn, USA, @scottwynnatelier

8 Good advice

I have done three greenwood chairmaking courses. I have curved and flat spokeshaves, both metal, though I'd be

happy to to use a wooden one. On the course the instructor recommended setting the blade so that you could hardly feel the edge because when the screws are tightened the blade protrudes a bit more. Good advice that works for me.

Lawrence Daniell

9 Gordon and Windsor

Two favourites for me are the medium shave from The Windsor Workshop for quick removal of timber then the HNT Gordon either flat base or curved shave to fine tune the work home.

Phoebe Everill, Australia

10 Spoon mule

Anyway, there was one last thing that I use the spoke shaves for. When I'm having a go at spoon carving I find the spokeshave the ideal tool to get nice consistent bevels as needed. From very fine easing the arris to taking heavier shavings.

I hold the shave around the middle for these cuts.

With regard to the 4x2 spoon mule. I also use it to clamp the handle of a conventional drawknife, this then allows one hand to hold the other handle and the other to strop as needed. Really have found this a very safe way to hold this tool securely for sharpening/ honing.

I tried a number of material options to close the mouth of the 'standard' Stanley type shave by packing under the blade. I used shim stock which was OK, laminate samples from the kitchen worktop centre(they are happy to give you more than enough) . They can split when cutting but when they do stay intact, work OK. But I also tried a bit of plastic (old milk bottle) and this was surprisingly good. It seems to dampen all chatter, it's easy to cut and of course there's an infinite choice of thicknesses.

Steve Lewis, England

If you have any spokeshaving ideas, suggestions, tips or comments please contact us at info@quercusmagazine.com.



For removing stock, Phoebe Everill favours an HNT Gordon flat or curved shave (above). Steve Lewis uses a 'spoon mule' (left) for shaping with a spokeshave, and has made a simple clamp (right) to hold spokeshave blades for honing



Using the toolbox

'I have now used this tool chest on and off for over 30 years,' says Richard Arnold. 'On the most part I have found it to be user friendly. One drawback that I have encountered is that the divisions in the drawers do not always suit the size of tools I was storing, but the divisions are not glued, or fixed in any way. They are merely housed into the side of the drawers, so on occasion I have removed a division to accommodate longer tools. The top drawer is flush with the chest top, so if you place anything in it that protrudes, it hits the chest lid when you close it. The many scars to the underside of the lid bear witness to this! Having said that I do like the open drawer layout rather than an enclosed till. I see it easy to find, and select items in an open-topped drawer system.'

'I have recently decided to retire the chest from everyday use in the joinery business, and now keep it in the home workshop, where it is still much loved and used.'

'The chest has been filled with all the original tools that were marked with the G Shelton name stamp, and I have endeavoured to fill in all the missing gaps with period tools that I consider would have made up a late 19th Century joiner's working kit.'



Richard has made a holder for saws (above) to fit in the gap at the front of the tool chest, beneath the trays of other tools (below). The drawers are all dovetailed, with nailed-on bottoms (left) and provide good access (below)



Mr Shelton's Tool Chest

Traditional joiner *Richard Arnold*, is retiring the tool chest he inherited 40 years ago

While writing the recent articles on wooden plough planes, I made passing comments regarding the tool chest I inherited when starting my apprenticeship, and with the recent publication of the new edition of *The Tool Chest of Benjamin Seaton*, and also the *Anarchist's Tool Chest* by Christopher Schwarz, I thought it might be interesting to look at the similar chest I inherited 30 years ago from my grandfather Cecil Incles, which is similar in detail and deserves some study.

Unfortunately it is impossible to put an exact date as to when Mr Shelton's chest and its associated tools were first made, but by studying the makers of the surviving planes we can place it somewhere between 1870 and 1900. This is an interesting point in time for the woodworking trade, as a lot of changes were occurring both in the way craftsmen worked, and also the tools they used.

At about this time machinery was becoming far more commonplace in the workshops, and the American market was beginning to supply metal-based planes, and other tools, which in time would almost totally replace the wooden hand tools previously used by all branches of the woodworking trade. It is sad, but inevitable, that a lot of the original tools from the chest have been lost over the years, but there are thankfully enough of them to give a picture of the sort of work Mr Shelton may have been involved with.

My feeling is that this craftsman was probably a workshop joiner, rather than a site-based carpenter, or a cabinetmaker. A lot of the tools are specific to the production of sash windows, which is something a carpenter, or cabinetmaker would be unlikely to undertake. The chest itself is fairly basic with few of the embellishments one would expect to find from a cabinetmaker, but it is a little more sophisticated than something a carpenter would perhaps own.

It is 35³/₈in wide, 19³/₈in deep, and 20¹/₂in tall. This last measurement has proved very important to me over my working career, for the simple reason that it is a comfortable height for sitting! I have probably consumed more meals sitting on this chest than anywhere else in my life.

Carcase construction

Nearly all British tool chests are made from softwood pine, and this example is no different, in fact all the interior fittings are of that material. The main carcase is joined at the corners in the usual way with sturdy through dovetails, and the base is simply nailed into place, and is made up of 8in boards that are tongue-and-grooved together. Two battens have been nailed across these boards to add further strength, and also keep the main carcase off the floor, which I'm sure in a lot of workshops would quite possibly have been damp. This base is then covered over with a 3¹/₂in skirt which surrounds the chest. A second batten is mitred around the top of the carcase about a 1/4in down from the edge. This forms a dust seal that the lid fits over. The top batten is 1³/₄in deep.

On a lot of chests the skirt and batten are dovetailed at their corners, but on this one they are merely mitred. Having said that they have held up well, and after 100 years or more, show no



The tool chest Richard Arnold inherited from his grandfather

signs of opening up. Both the skirt and batten are finished with a simple chamfer to their edge.

The lid is formed with a simple mortise-and-tenoned frame, enclosing a flush bead and butt panel. This has proved to be the chest's one weak point, as due to the thin groove on the framing which receives the tongue worked on the panel's edge, it has given way on a few occasions. This is probably due to people sitting on it to eat their lunch! The edge of the lid is bordered by a small mitred batten that forms a downstand to produce the dust seal. A 1/8in bead has been worked on its edge to break the line between the chest and lid.

The edges of the chest have remained in remarkably good condition, and this is mainly down to the fact that a thin metal strip has been fitted to the front and sides of the lid's perimeter. This is held in place with neatly countersunk screws. The only other ironwork to the exterior of the chest are two iron carrying handles, one at each end.

For as long as I can remember, the chest's exterior has been finished with a matt black paint. This seems to be almost always the case for tool chests of the 19th and 20th Centuries.

Inside the chest, we find a fairly straightforward approach to its layout, found in many chests of this period. The bottom half is

divided down its length with a simple $\frac{3}{8}$ in wooden divider, nailed in place to small upright battens. The top half of the chest contains three full width drawers, which are graduated in width, and slide from back to front of the chest on simple wooden cleats that are screwed to the ends of the carcass. These cleats are made of three separate pieces of $\frac{3}{8}$ in softwood, screwed one on top of another. The drawers themselves are all equal in depth and are $2\frac{7}{8}$ in deep. Each drawer is subdivided into compartments. The top one into two, the middle one into three, and the lower one into four.

The sides and ends of the drawers are made from $\frac{3}{8}$ in stock, and are joined together with plain through dovetails, front and back. The bottoms are $\frac{1}{4}$ in stock, and are simply nailed to the sides from below. The battens which form the slides for the drawers fall short of the front by a distance of around $1\frac{5}{8}$ in, and there is a batten level with the bottom of the drawers bridging this gap.

I have long held a suspicion that there was something missing from the front portion of the chest, and have come to the conclusion that there was a lift-out till that sat on these battens.

There is even a shadow mark in the carcass ends which adds weight to this theory.

Most tool chests have provision for the storage of saws. Sometimes they are held onto the underside of the lid, but in other cases a separate saw till was created in the interior of the chest. As there is no obvious place for hand saws within this chest, I made the decision to create a new one for the front section. The only problem was the limited size of the till, but with a bit of juggling I managed to find room for two hand saws, and one tenon saw. It may be that the original till was used to store large setting out squares, or other thin tools, but this would still leave the issue as to where the saws would have been stored.

The interior of the chest is mostly unfinished pine, but the drawer fronts, inside of the lid, and the top edge of the chest have been stained, and polished to resemble mahogany.

The drawer pulls are particularly attractive, and are made of brass which has been gilded. They strike one as being a cut above the rest of the chest.

Visit Richard Arnold Traditional Joinery at richardarnold.co.uk



Beneath the three open-topped drawers are divisions for rows of moulding planes (right). Richard thinks the chest was made for a joiner as so many of the tools would have been used for making sash windows



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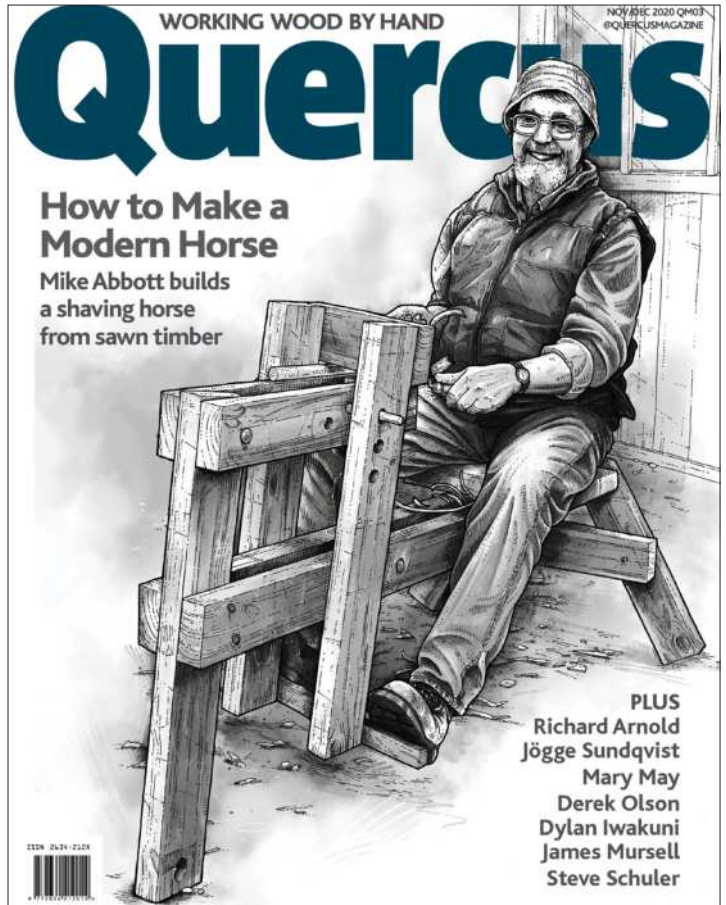
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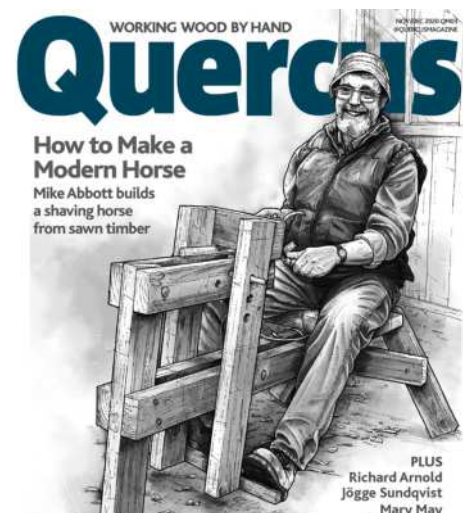
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QM01 A FEW LEFT



QM02 A FEW LEFT



QM03 PLENTY LEFT

A Classic Sharper Guide

Derek Olson reviews Leonard Lee's Complete Guide to Sharpening

Because I'm human and because I forget things, I keep a recipe box in my shop. It has coloured dividers and index cards and I even try to keep a dedicated pen inside. When I finish making something I want to repeat, whether it's mixing up hot hide glue, calculating pound cuts of shellac, or the resultant angles of chair legs, I jot it down on an index card and file it. Now I don't have to remember everything, I can just look it up. That is, unless I forget where I put that damn box!

The skinniest section of index cards are my notes on sharpening which might seem odd considering it's the MOST important craft skill. (Fight me!). Sharpening is a skill both elementary and complex, multiplied by the variations in tool shapes. Tracking solutions to every sharpening task can be a challenge. I sharpen my chisels and plane blades all the time so I don't need a reference for them, but I use my lathe four times a year if I'm lucky. What reference do I use to remind myself how to best sharpen my parting tool?

Instead of notecards, I keep a whole book on sharpening, and I didn't have to write a word. It was all done for me by Leonard Lee in *The Complete Guide to Sharpening* (Taunton Press, 1995).

Good reference books are like deep waters, it's easy to forget what's under the surface until you bother to look, and Lee's book is exactly that. Flipping pages while writing this note distracted me with a forgotten sidebar on why mortise chisels should have a slightly rounded back. 'Rounding the bevel,' Leonard Lee writes, 'and the blade back would make it easier to lever waste out of the mortise.' A different section reminded me I should redress my neglected grindstones and showed me how.

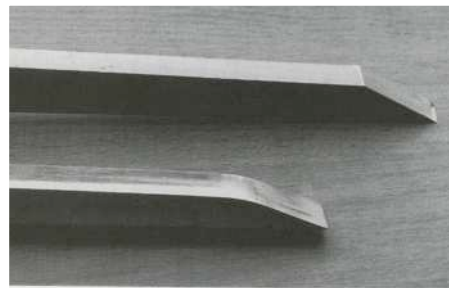
I haven't researched where Lee developed his ideas from, but I see the bones of his writing in a lot of sources. Watch a notable woodworking personality rehab a smoothing plane or sharpen a saw's toothline to joint and you'll see the scaffolding they probably built on written here. I've seen many of the book's



jigs and tricks demonstrated across the Internet without citation and it's possible I'm guilty of this too.

This assimilation is a hallmark of a worthwhile reference. What's inside makes so much sense as it's easy to disseminate the ideas without mentioning the source. The words just feel like good common knowledge even though it was published 25 years ago. In that time there have been updates in both sharpening mediums and available tool steels but I'm certain every sentence holds up in the face of progress.

There are techniques in here I see all the time and use every day. One is setting a blade in an Eclipse-style honing guide using a shop-made jig with preset measurements, because the exactness of the measurement to the millimetre doesn't matter as much as the consistency of my setting repeating every time. Another is getting a 45° bevel on the scraping plane blade by clamping it in the vice against a block of wood already beveled at 45°, wrapping painter's tape around the stone to keep it from wearing on the wood (and embedding wood in your stone,) and running the stone to get the right angle.



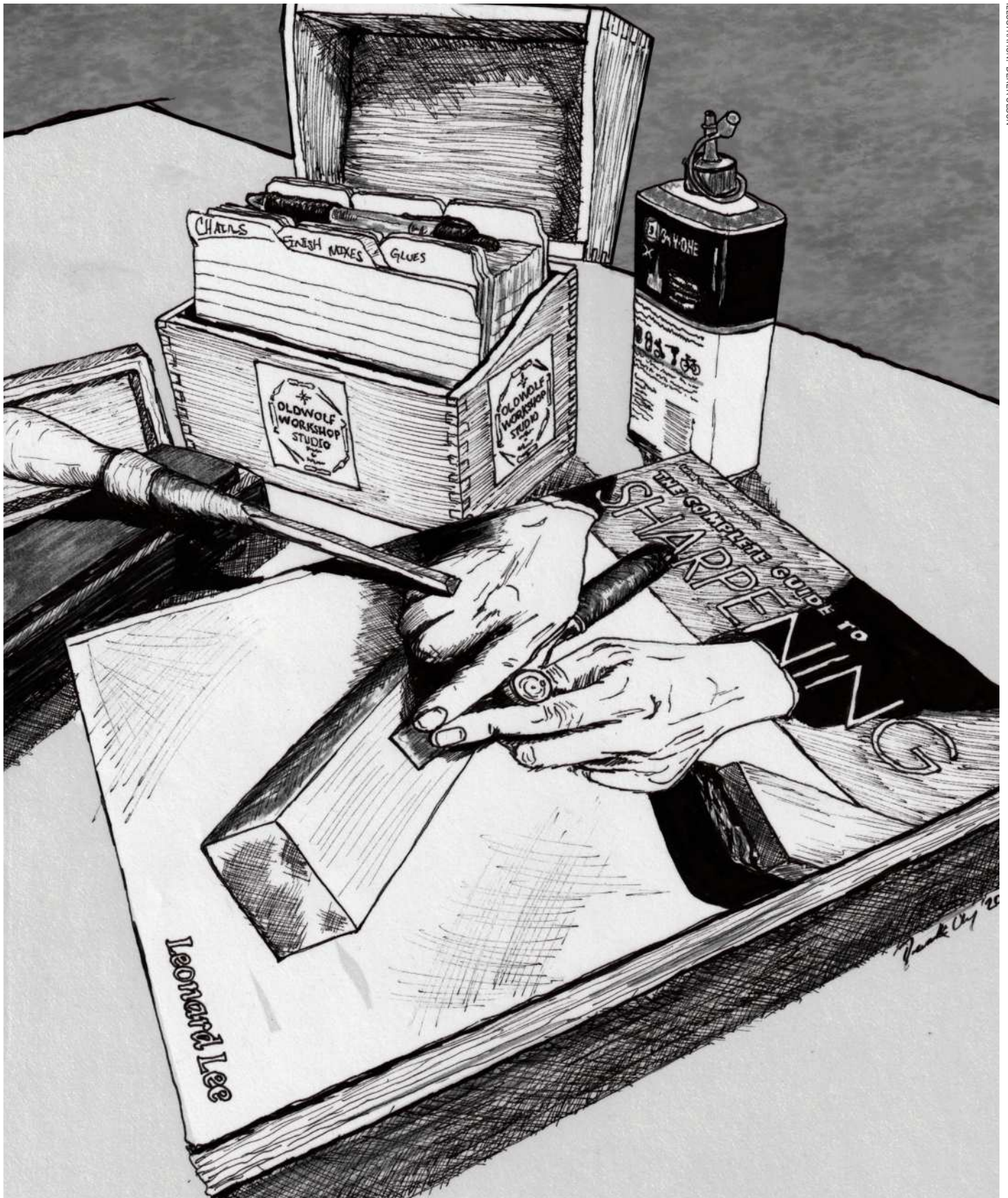
In *The Complete Guide* Leonard Lee writes how on a visit to the Sorby factory in Sheffield, Leonard had found a mortise chisel with a rounded junction (above) between the back and the bevel. 'I realised this would make it easier to lever waste out of the mortise.' Sadly this design feature disappeared from Sorby chisels later

There are quirky things too. I never contemplated the best grind angle to sharpen a gutter adze before I brought one home and looked it up and sure enough, the discussion of the relationship of the blade angle to the swing of the cut made a lot of sense and turned an "it kinda works" tool into a winner.

I also used Lee's advice to modify my cheaper trammels points to act like the more expensive sets where one point is offset to dial in precision. Following instructions, I chucked one trammel in my drill press and re-ground it to an eccentric point with a file and finished with my stones. Now I can set the thumb screw close and turn the point to the precise measurement.

There are other sharpening books out there. Ron Hock's is probably the most notable, but I don't have any experience with it. I picked up Lee's book in the late '90s when I started this craft journey and it's never left me wanting. Out of the 300+ books on furniture, woodworking, and craft I keep in my study, *The Complete Guide to Sharpening* is the only book that lives in my shop, ready at hand, on the shelf next to the recipe box.

Wait... Where'd I put that box now?



Digital Future for Crafts

Festival director *Sarah James* introduces a new approach to celebrating crafts

Keith Brymer Jones, Jim Parkyn and James Otter are just a few of the major names signed up to host live sessions at the Digital Craft Festival, taking place November 27 -29 at digitalcraftfestival.co.uk with over 150 curated, contemporary makers from across the world selling to an international audience.

Sarah James, Craft Festival Director, remarks: "This is the second Digital Craft Festival we will be hosting this year after receiving unprecedented feedback from our makers wanting to rebook. The international response we received from visitors was so overwhelming, that we're returning with even more free interactive show content."

Known as the teary-eyed judge we have all come to love on The Great Pottery Throw Down, Keith Brymer Jones, will be taking part in a live Q&A with Craft Director, Sarah James on Zoom, chatting about all things craft, pottery and his iconic word designs which are partly due to his dyslexia. Keith's co-judge, Sue Pryke, will also be attending as one of the makers at this year's festival.

Ever wanted to know how plasticine has created some of our most loved characters of all time or what's involved in sculpting beaks and chicken bums? Aardman Animation Senior Model Maker and Animator, Jim Parkyn, who is responsible for creating some of the UK's most loved plasticine characters – from Shaun the Sheep to Chicken Run - will reveal some secrets of the trade while hosting a live demonstration and Q&A session.



James Otter, master craftsman, award-winning wooden surfboard maker and newly published author, will be chatting with Sarah James in a live Q&A from his workshop in Cornwall, Otter Surfboards. They'll be talking about his custom-made wooden surfboards, his connection to wood which fuels his inner creativity and of course his latest book *Do Make* to rediscover the joy in making.

Designing with the environment in mind has always been a key challenge. Mark Shaylor eco-innovator, public speaker and Director at Ape, an innovation and sustainability consultancy, will be lifting the lid on how we can truly design with climate in mind.

Festival Highlights

As well as being a virtual festival where you can meet and buy from 150 of the finest UK craft makers showcasing their

work, across the three days there will be a hand-picked selection of makers running interactive workshops, craft demonstrations and show and tell features.

Plus, a selection of in-depth interviews 'Meet the Master Makers' which promises to be particularly engaging, focusing on a range of media from wood, ceramics, textiles and metal. This is the perfect chance to learn something new and meet some great new people.

For younger visitors and families, there will be an exciting portrait competition, judged by Jim Parkyn, where you can let your imagination run wild and experiment with textiles, recycled materials, collages – anything goes – to create any type of portrait you see fit. For those of you wanting something a little more active, there will be live, online yoga workshops, live Qigong sessions and even guidance to running from beginners from the Secret Run Club. Not forgetting the Kitchen Disco presented by Print Garage.

James adds: "The Digital Craft Festival provides an incredibly important platform to champion all these small brilliant businesses that I work with, and one of the advantages of it being hosted online is that visitors can join from anywhere in the world - so come along Friday, 27th November as we open our virtual doors – and join in the free interactive workshops, hear from the makers and finish off your day by purchasing an amazing piece of craft."

For further information please go to digitalcraftfestival.co.uk



Work by Rosie Brewer (top & above) and by Ash & Plumb (left & right)



The YouTube Toolmakers

Hugh Thompson visits YouTube to find 27 videos of Sheffield's toolmaking history

Ken Hawley, who died in 2014, aged 87, was Sheffield born, setting up a retail tool shop that he ran for 30 years until retirement in 1989. During this time, the mighty army of toolmakers in Sheffield, who for centuries had supplied the world with hand-tools, were being hit by a combination of automated manufacturing methods and cheap imports from the Far East and were gradually disappearing. Ken was one of the few who recognised this loss of Sheffield's heritage. With his intimate knowledge of the toolmaking companies and individuals he set about amassing what many see as the best collection of hand-tools and associated ephemera in the world. The collection is now run by the Ken Hawley Collection Trust and is housed in the Kelham Island Industrial Museum in Sheffield.

The Trust has just uploaded 27 videos to their YouTube channel showing their films of various craft skills that Ken either took himself or was involved with. Go to YouTube and enter Ken Hawley Collection Trust. It has to be said that the technical quality of some is not of the highest, but we need to remember that they are period pieces, made in the 1960s.

For those who don't know of the collection, Ken Hawley emphasised the importance of knowing not just how the tools were used, but how they were made and about the individuals who made them. The videos illustrate these makers and their skills. Today's woodworkers can find many things of interest and use in them. The videos cover a variety of subjects; I particularly liked Gimlet Making, Moulding Planes and Swan Neck Timber Scribes.

To make a gimlet shaft you heat a metal rod, bash it to round, twist it, straighten it, cool it, and pass it to another to sharpen the point and put a handle on. For 75 years [yes, 75 years!] John Ridge worked at his trade. He had perfected his method such that each gimlet was made with the same number of twists and the same number of hammer blows; and despite being hand-made, each gimlet "looked like peas in a pod".

Again, the moulding plane maker Norman Bayliss had perfected his working method, so as to make the manufacture as quick and easy as possible. I like the



PHOTO: SIMON BARLEY

use of his shoulder to put pressure on the edge of the chisel. Must try that myself. Another video shows Bench Plane Maker, Albert Bock, using similar techniques. I was interested to see a skew chisel in action, something I've rarely used myself. Swan Neck Timber Scribes were used for marking timber before conversion. In this two-minute video, Arthur Ellis shows how a blank of steel is manipulated into the shape of the handle and V-cutting edge.

There are also videos of Ken talking about the collection, 'Ken Hawley Complete Interviews Part 1/2/3/4'. I found Part 1, from 11 mins in, when he talks about how the collection came about, an entertaining listen. And, for

those of us who knew him, it's just lovely to see the inimitable Ken talking on the subject he loved and cared about so passionately.

You can't watch these videos without being struck by the arduous nature of the work; very highly skilled, but cramped and dirty conditions, long hours, repetitive stress issues, industrial diseases, little or any protective or dust/fume abatement equipment and, if any, generally only a few years of retirement to look forward to. These men and women were heroes.

Details Visit hawleytoolcollection.com for links to the YouTube video.

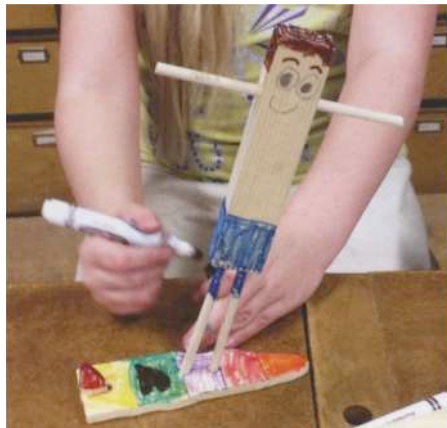
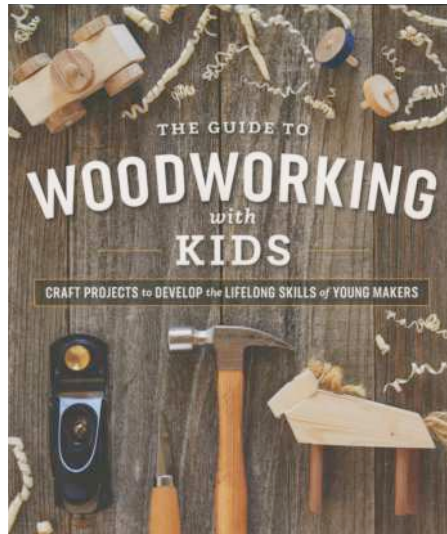
Hammer and Nails

Inspired by last issue's extract, *Nick Gibbs* reviews Doug Stowe's latest missive

Reading Doug Stowe's new *Guide to Woodworking with Kids* I am drawn to recalling my early years making things. Then the materials were incidental, though writing has reminded me of happy trips to the local timberyard with my Dad when I must have been no more than four. No, it was all about the tools. My first was a Junior Hacksaw, but that clouds the essential ingredient of almost anything I made. Now as an experienced woodworker (up to a point), I'd forgotten, until that is I opened the latest step in Doug Stowe's quest to inspire a new generation of 'makers', that I made very few things without a hammer and nails.

The mission statement of this 140-page softback, is: 'Craft Projects to Develop the Lifelong Skills of Young Makers'. And do that it does, by not only offering clever methods to help the 'tutor', but also ideas to inspire the 'student'. And the section that really got me thinking is Hammers and Nails. One of the few books I have retained since childhood is *Jack's Adventure*, No.33 of the Happy Times Series. More than anything, Jack wanted to build a bunkhouse for his life as a cowboy. Yes he went to the lumberyard with his father, but the whole thing was assembled to the bim-bam-bim-bam sound of his hammer. On the ground you can see rejected nails he's bent, and here and there ones that haven't gone in straight. What a pity he didn't have Doug's book for a bit of advice. I am slightly embarrassed to admit finding tips I had never considered myself, such is my reliance now on glue and screws.

Then of course success for Young Makers is not how you and I might view it. Success for a Young Maker is to build a project that conveys their design, their materials and their techniques. Inspiringly, Doug leaves plenty of room for manoeuvre on all these counts. Initially, though, he offers you and I the advice we need to lay the foundations for 'lifelong skills'. He lists appropriate tools, from saws and drills, to planes and marking tools, with photos to illustrate safe, wise ways for the Young Makers to conquer some of the challenges and master some of the techniques. And Doug recognises that holding materials is the crucial part of any work by showing how to make the



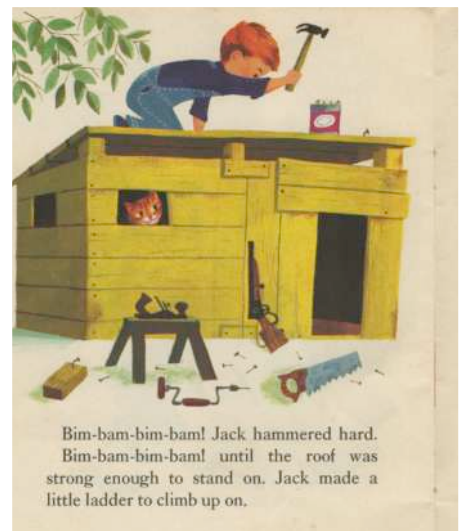
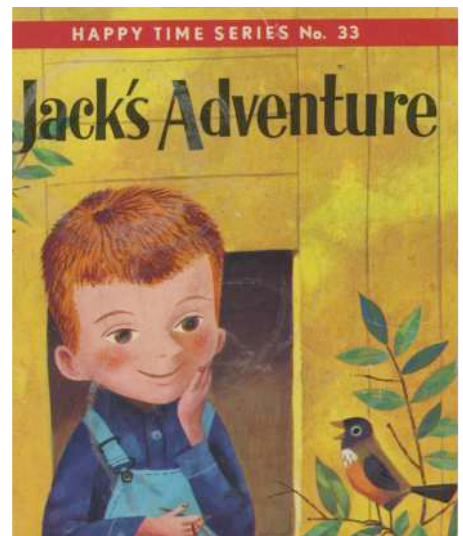
A Dad as a surfer (above) illustrate the use of markers, while Jack (right) goes bam-bim-bim on the roof of his bunkhouse

child-centred workbenches (see QM02) he has designed and made for the Clear Spring School in Eureka, Arkansas, where he has developed classes that act as models for educating schoolchildren as craftspeople. Projects include cars and trains, superheroes, boats and boxes, pens and puppets, all of which are as suited to boys as girls. There is a wealth of fun and creativity, which is why *The Guide to Woodworking with Kids* is such a valuable asset for the future of our craft.

The Guide to Woodworking with Kids is published by Blue Hills Press. Visit [@douglasstowe](https://www.douglasstowe.com) or [douglasstowe.com](https://www.douglasstowe.com).



Rare earth magnets are embedded into the simple tool for holding small nails or pins while they are started in wood



Bim-bam-bim-bam! Jack hammered hard. Bim-bam-bim-bam! until the roof was strong enough to stand on. Jack made a little ladder to climb up on.

The Pioneering Tools

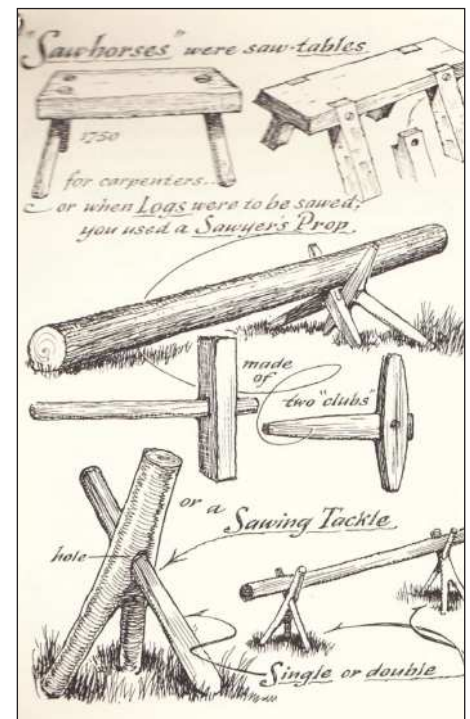
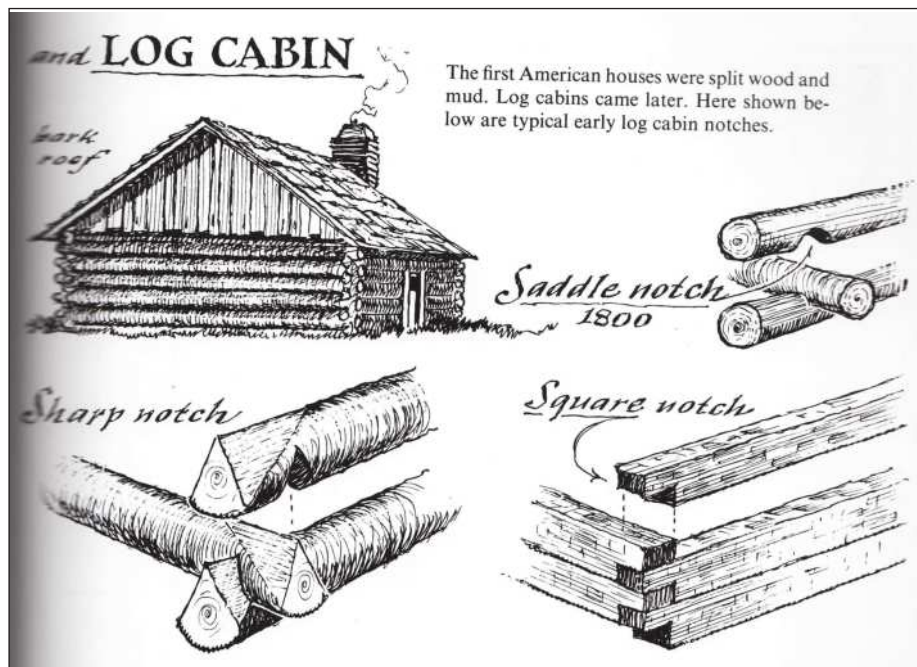
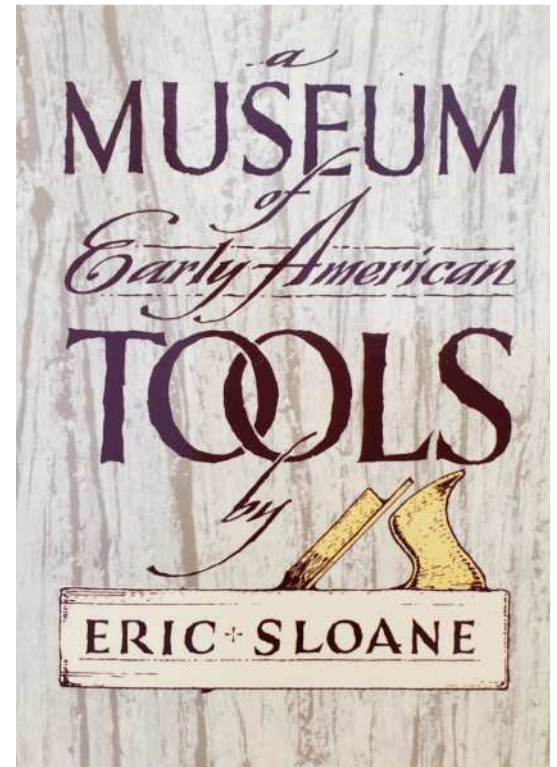
Jason Reuter reads one of Eric Sloane's remarkable pioneering books

Strolling through the pages of Eric Sloane's *A Museum of Early American Tools* is like stepping into 1800s America and being whisked away to a homestead in Maine, to a tool house in Pennsylvania, to a barn in Illinois. You can imagine the pioneers you encounter along the way, including blacksmiths, wheelwrights, carpenters, and other talented craftspeople. How great would it be if at every stop the handy proprietor walked you through his collection of tools and implements? Each tool was hand crafted with care, with a sense of identity and pride, often times it was given a name. These tools had to be well made, for these self-dependent pioneering families relied on them to make everyday essentials and the food they harvested for survival.

Mr. Sloane describes the intimate relationship between the tool and the craftsman, "When you hold an early implement, when you close your hand over the worn wooden handle, you know exactly how it felt to the craftsman whose hand had smoothed it to its rich patina. In an instant you are as close to that craftsman as you can be—even closer than if you live in the house he built or sit in the chair he made. In that moment you are near to another being in another life, and you are that much richer".

Sloane's book is an excellent way to take this imaginary journey. It is extensively illustrated by his own hand, each pairing of pages shows a grouping of related tools with a brief summary of the history and use of the tools depicted. Modern day hand tool users will recognize many of the tools described, but will be surprised in the various forms, adaptations, and names given to these innovations of the time. The next time you happen by an old tool or strange implement in an old barn, yard sale, or flea market, there is a good chance you will recognize it by name, know its use, and appreciate the hands that made and relied upon it after reading this book.

Details *A Museum of Early American Tools*, by Eric Sloane, published first in 1964. Reprinted by Dover Publications, 2002



Finely-drawn illustrations grace the pages of Eric Sloane's books, like these in *Weather Almanac*

For Love and Money

Steve Schuler turns a woodworking hobby into a side business

I had been making wooden spoons for a couple years when an acquaintance suggested I try selling them at a local outdoor market. So I made a few spoons and spatulas, laid them out on a table, and hoped for the best. Soon it was obvious that I was in the wrong place. Other vendors were doing a brisk business. A couple of teenagers across the lot were making toy swords out of PVC pipe, foam insulation, and duct tape. Kids were buying those swords as fast as they were being made. I, however, made exactly one sale that day. It was to an older couple who I'm pretty sure bought my cheapest item out of pity.

This was my first lesson in selling hand-made woodwork locally. I needed to get my work in front of people who would be eager to pay for it. That meant finding a venue frequented by people who had a little disposable income, and who could see the value in hand-made objects. I learned that a nearby art museum would be inviting local artisans to sell their work at a market in their spacious lobby. I immediately signed up for a table, and my wooden spoons and other objects sold quite well there. The kinds of people who visit art museums are exactly the kinds of people who value the work I do.

These days, it seems everybody in my region is hosting a craft market. (COVID-19 put a temporary stop to that, but they'll be back soon enough.) It's tempting to say "Yes" to every market I get invited to, but I prefer to commit to just a few markets and return to them again and again.

For the individual artisan, building relationships with customers is crucial to long-term success. People may walk by your booth for several markets in a row before they decide to buy something. But once people know you make an excellent product and sell it for a fair price, many of them will come back again and again. It helps if they know where to look for you.

But how do you decide which markets to apply to? First, visit as a customer before committing to being a vendor. See if the market is well-attended. Chat with the other vendors. See if you can visualise your products fitting in among the other items offered for sale. If you can, find the organiser and tell him or her that you are interested in being a vendor.

Then consider what your table display will require. Some venues provide tables, while others require you to bring your own. Once I started selling at markets regularly, I bought a canopy and built a collapsible display table. I also made myself a corkboard sign for posting prices, and I invested in a card reader for processing credit card payments. (Basic card readers that work with a smartphone app are fairly cheap.) I collected a couple of wooden crates and some mason jars for displaying the spoons on the table. Aside from the canopy, none of this was expensive, but it took some time to put it all together.

Table fees for vendors

One unavoidable expense is the table fee; the fee markets charge vendors for the privilege of selling their wares there. Some table fees are shockingly high while others are quite reasonable. If a market is well-advertised and well-attended by your ideal customers, then it is usually worth paying a healthy table fee. In my area, some municipalities require market vendors to pay for business licenses and to collect sales taxes, while others do not. I've opted for markets that require a minimum of paperwork. You should follow whatever is legally required of market vendors in your area. Often the requirements are fairly simple. But doing business is not free. The costs of compliance can add up, so it is important to weigh the time and expense of legal compliance against potential profits.

Once you commit to selling your work, you have to decide how much to charge. Setting prices seemed arbitrary to me at first, but eventually I hit on some simple ways to establish appropriate price points.

One way is to do a basic calculation: $\text{Price} = \text{Time} \times \text{Hourly Rate} + \text{Materials}$. That is, you pay yourself a reasonable hourly rate, keep track of how long it takes you to make each item, and add the cost of materials. The result is the price of the item. But what is a reasonable hourly rate? Don't undervalue your skills. What is the normal cost of skilled labour in your region? How much does a plumber or an auto mechanic earn per hour? You are working as a skilled labourer, so pay yourself a fair wage.

An even simpler way to set prices is to do some research on what other people charge for comparable work in your area, and set your prices accordingly. This is ultimately how I set my prices. There aren't many spooncarvers in my area, so I looked at a lot of hand-made wooden spoons online, and I noted their prices. A few had exorbitant price tags, while others seemed far too low. But the majority were clumped in narrow price range.

I set my initial prices on the low end of the normal range. I was a beginner, after all, and I was unsure of my ability to sell my spoons at a higher rate. Once I had become established at markets, I raised my prices a little.



A cork board has been valuable for displaying prices and details



Be prepared to make the same item
many times in market season

A lot of people at markets ask me if I have a website. Early in my spoon-selling days, I interpreted that question as customer demand, so I opened up an online shop on Etsy, an online market platform for independent crafters. Although I did sell a few items, sales were sluggish from the start. And once Etsy loosened their restrictions against selling mass-produced items, my sales stopped altogether.

In the meantime, I discovered that selling online requires a lot of extra work. For each item I wanted to sell, I had to take pictures from a variety of angles, and then crop and enhance the best photos on the computer. I also had to write product descriptions. I even had to measure each item so I could include dimensions in the product description.

Then, once the item was posted for sale, I spent additional time responding to queries from potential customers. While most of my interactions with people online were pleasant enough, they took up additional time. Once I did make a sale, I had to wrap the item up securely and drive it down to the local post office to mail it.

None of these tasks by itself was particularly onerous. I even learned a few things about photography, about writing product descriptions, and about dealing with customers. But taken all together, they cost me quite a lot of time that I would have been happier to spend in other ways.

The thing I like the least about online sales is that there is no way for the customer to handle the items before buying. Woodworking is a tactile endeavour, and wooden objects invite touch. When people pick up items at a craft market, they can run their fingers over the wood grain and admire it from all sides. They can feel several similar utensils and choose the one that best fits their hand. None of that is possible on the Internet, where wooden items tend to all look the same.

I also learned early on that if you want to sell your woodwork online, you have to do a lot of self-promotion. The Internet will not promote your work for you. If you're interested in selling online, first search Google for the things you make and see what you're up against. How many other people are already selling what you sell? What is it going to take to get your products to show up in a web search before theirs do?

Important truths

We use the Internet all the time, but we forget two important truths about it:

1. You will never see most of the material on the Web. Search engines are great at locating information, but they are just as good at concealing it. For every 10 hits you see at the top of your search results, there are literally millions on the bottom. You have to figure out how to get your products to show up at the top of the pile instead of being buried at the bottom with everybody else's. You will not automatically get the attention of the search engines just by posting things for sale. And if you don't get the search engines' attention, you will never get your work in front of potential customers online.

2. Somebody is paying for Internet searches. We get so used to cheap or even free access to the Web that we forget about the vast infrastructure that makes our every Web search possible. But in reality, search engines are only free to the user because advertisers are paying most of the bills. The top hits in any Web search are always 'sponsored' links, or paid advertisers. The fastest way to get to the top of the Internet search heap is to pay for it.

There's nothing wrong with paid advertising, but I decided that it wasn't for me. I didn't want to add overhead costs just to promote an aspect of my woodworking business that I didn't really enjoy doing in the first place. So now I stick to posting occasional pictures of my work on my personal social



media pages. It doesn't take a lot of extra time, and my online acquaintances seem to enjoy seeing my work. Sometimes they even buy something from me.

One of the best parts of selling your work at markets is meeting wonderful people. It's great to take home some pocket money at the end of a successful market, but the conversations I have over the display table can be profitable in their own way.

When one customer showed me an old roux spoon and paid me to make several as gifts for her friends, I knew she was on to something. (Roux is the basis of gumbo, a traditional soup from the American Gulf Coast region, made in a deep pot and simmered for hours. A straight-ended spoon is needed to scrape the bottom of the pot.) I quickly added roux spoons to my standard repertoire, and they sell consistently.

Listening to customers

It took me a while to learn which customers to listen to, though. At practically every market, someone will come up to my table and say, "You know, what you should really make is a...." One item suggested by several people has been the double-ended spoon. There is a big bowl on one end for stirring/serving soup and a small bowl on the other end for tasting it. I admit that I tried making a couple; they took a long time to sell. I learned that there's a difference between what people will suggest that you make and what people will actually purchase.

How do you tell the difference between a potentially profitable product and a gimmick? Money. If somebody offers to pay you a reasonable sum to make it, then it's profitable.

One of the problems with selling your work is that you end up doing one thing over and over. The amateur can dabble in many kinds of woodwork, but the professional must specialise. At the peak of a normal market season, I'm just making one spoon after another as fast as I can. My hands ache, my workspace is a mess, and I'm sick of spoons. I will go months without touching my joinery planes or my paring chisels because I'm so focused on making spoons.

There is always a tension between what you do for love and what you do for money. When I started working wood for money, it did drain some (not all) of the joy out of the craft. Yet there is also joy in being able to do one kind of work really well. I can now make a good spoon very quickly. The dilettante does not know the pleasure of having real expertise.

If you shape wood long enough in certain ways, the craft starts shaping your identity in return. People know you by the marks you leave on your environment, for good or for ill. None of us wants our personal identity reduced to the work we do, much less to the things we sell. I can make lots of things other than spoons, but I'm not just a generic 'woodworker' anymore. At local markets, I'm The Spoon Guy. It's a title I happily accept.

Follow Steve at literaryworkshop.wordpress.com or @steve_schuler.



Steve uses a 25mm No.7 gouge to carve out the bowl of a wooden spoon (above). For a market a few shapes and sizes sell consistently, variety coming from different woods. When making things to sell it helps to buy the best tools, as tools that hold their edge reduce time spent on maintenance



The Wagaton Tray-Maker

From his garage, *Dom Campbell* reveals how he makes his distinctive grooved trays



I started woodworking, properly, around three years ago but have always tinkered with things. I used to be a competitive road cyclist, and got into making things after a crash that made me reconsider cycling as a sport. I used the broken wheels to make a coffee table and got a good buzz from making something useful. However, I don't love working metal, so shifted to wood pretty quickly. I didn't have a workbench or much space when I started, which is what initially led me to working in the Japanese tradition. It's mostly vice-less work, in much smaller spaces than you would find in the UK which suited me perfectly. It's been a central part of my life ever since.

I first started carving trays about a year ago, and the path that led me to them took quite a few turns along the way. Since very early on I have used Japanese tools, and have been inspired by the Japanese approach to craft, as well as the Japanese aesthetic. Alongside my interest in Japanese woodworking (mainly carpentry and joinery at the time) I also started getting into greenwoodworking and carving. The two felt so distinct and separate, and so I juggled these interests for a while, never really committing to one or the other. I then stumbled across the work of Shinichi Moriguchi, Masashi Kutsuwa and Jarrod Dahl, who were doing greenwoodworking in the Japanese tradition, through wagatabon carving. The lightbulb went on in my mind and I was immediately hooked. I made one wagatabon, then another, and have been making them ever since.

I have an amazing one-car garage, which is a dream come true. My wife and I bought our first house in December 2019, and a garage was non-negotiable! Haha. It has a Japanese end, with a floor workbench, and a greenwoodworking end with shaving horse and chopping block. I am a lucky man.

I get a lot of my seasoned wood from my local Axminster shop,

which in turn comes from local sawmills I believe, although I wish I knew a bit more about where exactly it came from. I also have a couple of friends, one a tree surgeon, one with a house in France and some woodland. I get my greenwood from them. Good people to know, and I appreciate their support.

Everything I make is done completely by hand, from the roughing to the finishing. It's one of the great things about this craft; it can be done with a handful of simple tools that most woodworkers will have. It is very democratic. I don't have anything against power-tools, per se, but feel that hand-tools give the finished work a much different 'flavour' than those that are made entirely by machines. Machine tools can be, in my opinion, great time-savers in the preparatory stages, but I would never use machine tools in finishing work.

Part of the magic in wagatabon trays, for me, are the flowing lines of the grooves and the subtle, unconscious variations, which can only be achieved by hand. As mentioned above, traditionally this style of tray is carved from green wood, and so is much easier to work from start to finish with just a gouge and chisel. I, however, make a lot of mine from seasoned wood, which can pose challenges in the roughing stage.

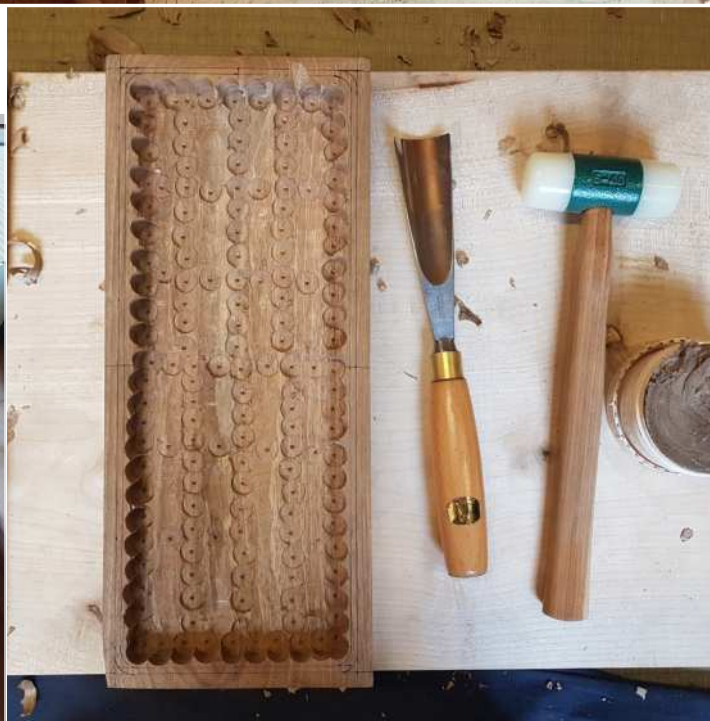
I break a bit from tradition and often bore out a lot of the waste, but even here I use a brace. With practice (you get a lot!) it can be pretty quick and efficient. That said, on deeper trays I do sometimes get very close to buying a pillar drill! I just prefer a quiet, dust-free workspace over the minimal time-saving that machines can provide, and have resisted so far!

After the rough hollowing, it's just judicious use of chisel, gouge, mallet and plane.

Follow Dom on Instagram at @dominicscampbell.



Dom Campbell does all his work with hand-tools, following the Japanese tray-making tradition of wagatabon. Sometimes he uses green timber from tree surgeons, but usually it is seasoned



When Marking Matters

Keen to expand on an Instagram post, *Dylan Iwakuni* reveals the secrets of marking

I had always been told: “No matter how good your tools or skills are, if the lines aren’t marked properly, it won’t work.” When I first heard this, the sentence made sense, but as time went on, I realised I had not fully appreciated nor understood the full meaning behind the words. Only when I became able to work dead precisely to the lines, did I truly feel the importance of accurate markings.

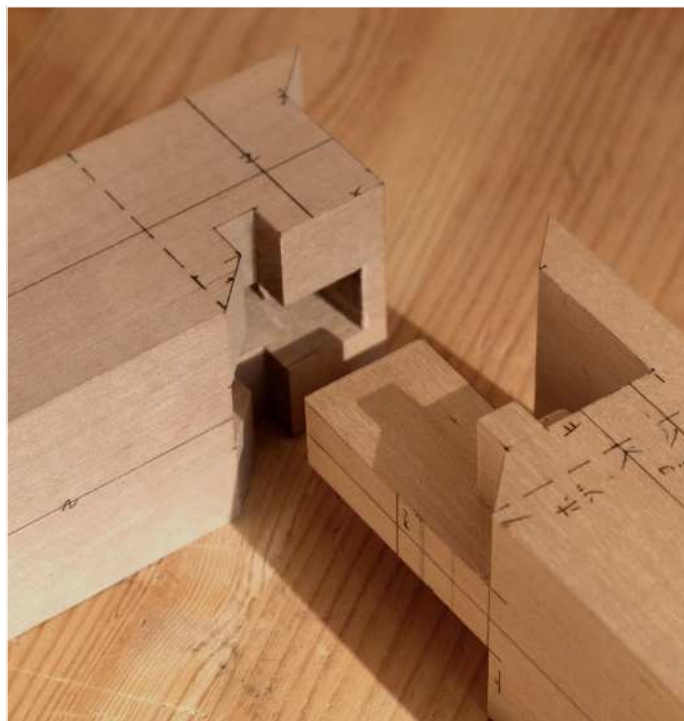
The joinery marked out in the photos is a corner joint used in the corner of exposed mud sills. It is desirable to have the end-grain hidden, both from the elements and view. End-grain tends to absorb moisture, in turn making it weather more quickly. Hiding the end-grain preserves the structure longer and also looks cleaner with consistent grains showing. This joinery is called ‘Sumidome Hozo Sashi’.

In Japanese carpentry, the traditional way to mark lines is by using a fine brush made from bamboo, dipped in ink (similar to the ones used for calligraphy). Marking with ink makes it less likely for the markings to fade or be accidentally removed. But for smaller-scale work I prefer marking with a very fine pen (0.1mm). Ink and pen are both permanent so you may wonder, what happens if you make a mistake? Well, one has to go through the extra effort to lightly chisel away the line, or if required hand plane the certain part clean. So, be extra careful when marking.

The first step of marking is to create or decide on a reference. When we work on structures, we mark a straight reference line down the middle of the materials. When working with milled wood, two adjacent surfaces of the material are also chosen as reference sides. When putting the carpenter’s square against the material, one would make sure the square is always flat against one of the reference sides. This helps keep the perpendicular lines consistent as they are all marked from one of the two sides. Once we have the necessary reference sides and lines selected and marked, I like to mark the bigger lines first. For this joinery, I started with marking the width of the material, then worked myself into the details. For the perpendicular lines, the carpenter’s square is simply applied flat against the reference surface and a right angle line is marked. For parallel lines, two points are measured from the reference line on two ends and are joined together.

Many parts of Japanese joinery are based on the width of the Sashigane (Japanese carpenter’s squares) which are 15mm wide (for metric ones). For the joinery I marked, I used the width of a small Sashigane I had (10mm width) to mark certain parts of the joinery such as the haunched tenons. Using the width (Pic.5) is efficient and keeps the markings consistent.

When you first start out on marking, it can be tempting to over-mark the lines, possibly leading to confusion later on. It comes with experience, but understanding the process will allow you to know which lines need to be marked where. In the photo, the lines which are required later are marked on the shoulders, allowing it to be easily transferred to the newly cut surface. Cutting joinery based on the originally marked lines is ideal, but some parts inevitably have to be remarked as you go through the steps of making the joinery.



Pic.1 As a rule, the lines are cut until half the line. But certain parts are made slightly looser or tighter by removing or leaving the full line. I use a paring chisel with a flat guide block to pare the lines clean

Symbols are an essential part of the marking process. It helps make the lines easier to understand and reduces the chances of mistakes. Different carpenters have different symbols and ways to mark but here are several I use: the ‘N’ or ‘Z’ mark to indicate the reference lines, the ‘X’ for the cut lines and the flick for parts which is removed (Pic.2).

A big part of the accuracy is affected by how precise the materials had been milled flat and straight. If the straightness of the material can be trusted, a marking gauge is a very convenient tool to use when marking. Many of my marking gauges have been modified to mark with a pen rather than a knife. Using a marking gauge creates consistently parallel lines and is efficient, especially when several materials require the same lines. With this as well, make sure to always apply the marking gauge from the reference side.

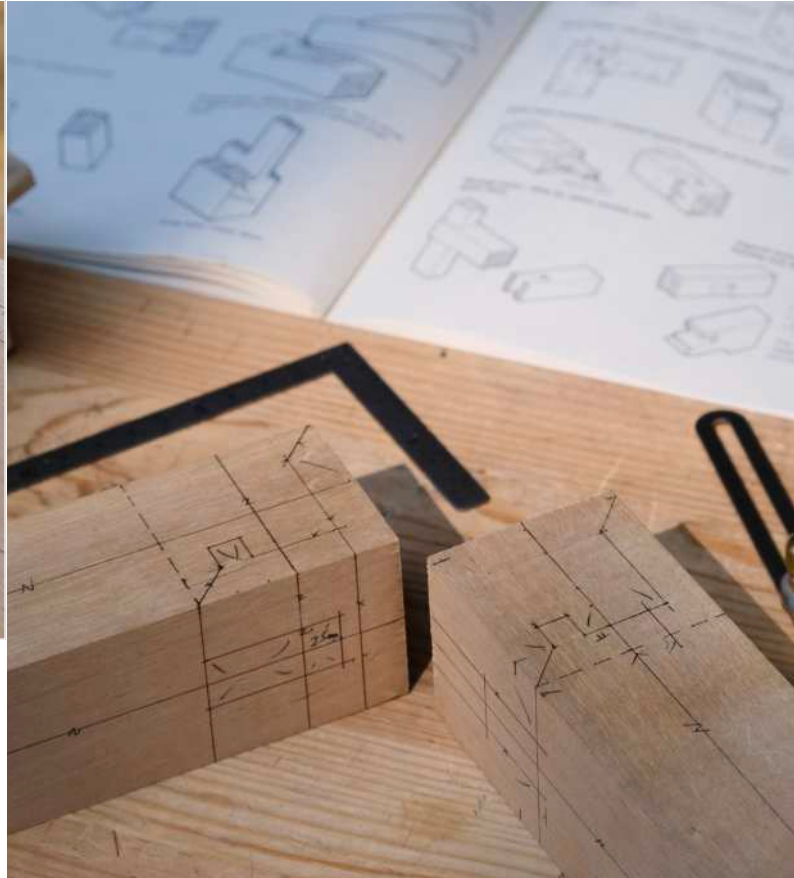
By having reference lines, it makes it easier to check the work as the markings would have been measured from the reference line. This means if a tenon does not fit, the measurement from the reference line to either end of the tenon will be measured to figure out which part is off, without having to blindly adjust the joint and risk misaligning it when assembled.

Once the joinery is assembled, the reference lines on each piece should match with the other. As a final check, a carpenter’s square would be aligned with the reference line,



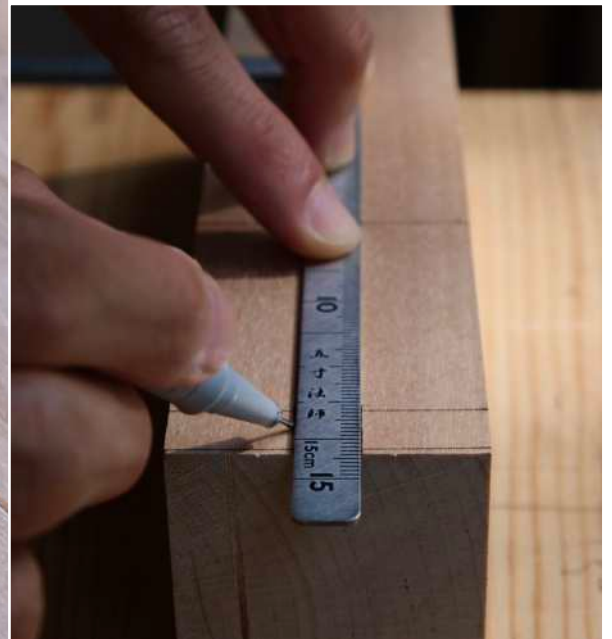
Pic.2 The different symbols in the markings (above) show the tasks to be done. The 'X' represents the cut lines and the 'flicks' show the parts to be removed. An exciting part of making joinery for the first time is never completely knowing if the markings are correct until it is cut.

Pic.3 The lines on the end-grain (below) show the reference surfaces I decided on. Making sure always to place the square against one of the reference sides reduces the margin for inaccuracy.



Pic.4 Many joineries drawn in books only show one or two angles of the joinery. Marking out can require some visualisation to see the whole image from different angles (above)

Pic.5 Using the width of the square (below) to mark creates consistent, parallel lines. It's helpful to have different sizes of squares to use for various tasks



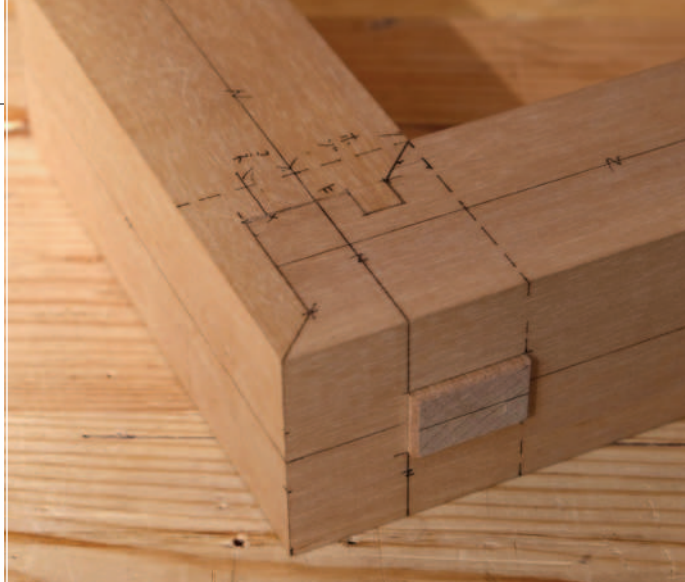
checking if the joinery is assembled straight or at a right angle. In the end, the only way to understand how to mark out lines comes down to marking it out, cutting the joinery according to the marked lines, and observing how it fits. I believe marking the lines is one of the hardest parts of making joinery. As I'm sure many of you can relate, any inaccuracies at this step will come back and bite you.

For this joinery I used the book *The Complete Japanese Joinery* as a reference. Originally two Japanese books compiled and translated into English, it is a very practical book, covering from setting up Japanese hand-tools to understanding how traditional structures are assembled using joineries. It goes over numerous carpentry joineries, with various drawings and measurements. It is a detailed book for those looking to try their hands on Japanese joinery.

Another good book would be *The Art of Japanese Joinery*. It is more of a visual book, with beautiful black and white pictures of various joineries glossing the pages. It goes into detail of how each joinery functions and where particular joineries or properties would be used. However, compared to *The Complete Japanese Joinery*, it lacks the technical aspect of how the joineries are made. It's written more for those who enjoy the aesthetics of joineries and are interested in understanding why joineries are used and the purpose they serve.

Traditionally in Japan, once an apprentice carpenter is finished with their apprenticeship, the first job he or she will be given is the honour to mark the lines for a house, a duty which carries the most responsibility. Even if one does not build a house, I believe the most important skill, other than the right techniques, is visualisation. The ability to look at the final 3-dimensional product and be able to visualise how it should be represented in 2-dimensional lines. It is a skill gradually achieved by making various joineries and products.

Marking precise lines can be a struggle at times. But with the right techniques, knowledge and most importantly, patience, you can be rewarded with a joinery which fits perfectly on the first try. Personally, one of my favourite moments of making joineries is when this happens.



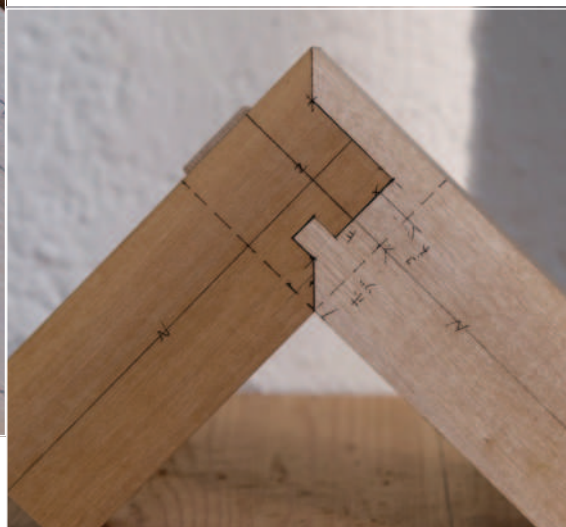
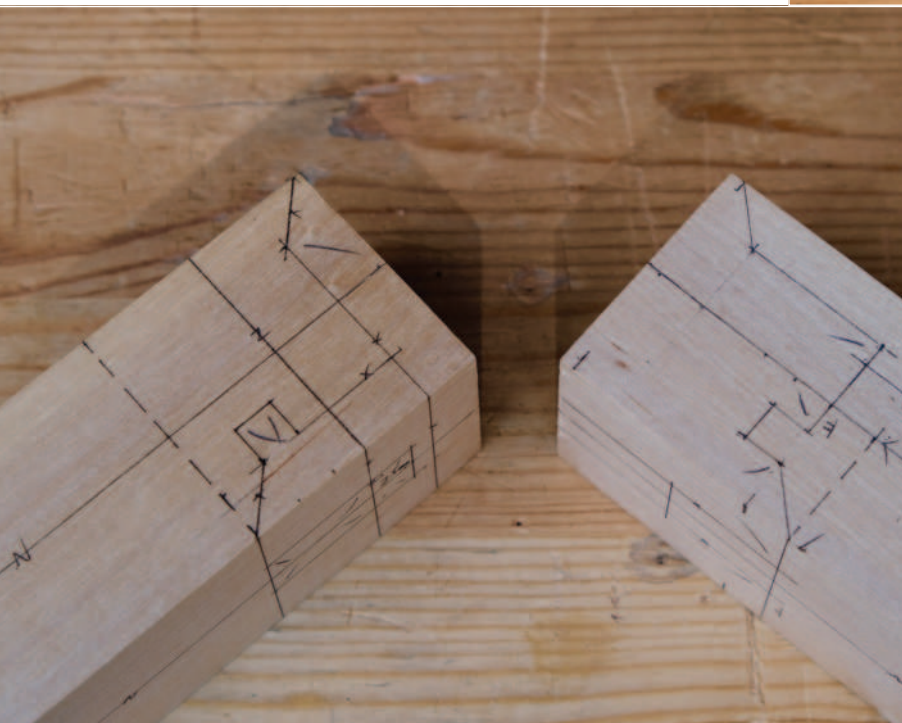
Pic.6 It is always a happy moment when the joinery assembles successfully

Pic.7 Getting the mitres flat is the difficult part (below). When this kind of joinery is used in structures, it will likely be reinforced with screws or nails. This is to reduce the gap which inevitably appears at the mitres over time as the wood shrinks



Pic.8 It's important to take your time when marking the lines (left). Once marked, visualise the completed shape and make sure the lines are marked where they need to be. A mistake at this step can have consequences later

Pic.9 Once it was all assembled (below), I realised I had forgotten to mark the reference line on one of the pieces. It's a never-ending lesson: mark out the lines, cut the joinery, see what went well and what didn't, improve the next one



Planing end-grain

Having posted this topic on Instagram in May 2020, *Dylan Iwakuni* explains the technique in detail



Hand planing the end-grain makes it smooth and brings out the depth and richness of the growth rings. But planing end-grain can be difficult so here are some tips. First apply some water on the end-grain before planing. Water makes the wood softer and easier to plane. But make sure the surface is not dripping wet when planing.

Remove or slightly withdraw the chip-breaker. Having the chip-breaker tight will jam the shavings. As the grain of the wood runs perpendicular to the surface, the grain will not tear. With that said, the wood can still tear at the edge of the material. To prevent the edges from tearing, it's better to plane from the edges towards the centre.

Use a straight edge to check for high spots when flattening the surface. Only when the higher areas are taken down can the lower parts be planed. It's easy to get carried away so it's important to check at times.

When you first start planing, only the high areas will touch the hand plane so have the depth of the blade out slightly more. As the surface gets flatter, slowly reduce the depth of the blade. When you get close to finishing, resharpen the



On hard surfaces, plane the surface with the hand plane skewed (above). If the blade is sharp, the shavings should come out as actual shavings, not powder.

The finished surface (left) reflecting the afternoon sun reveals the age and story of the tree. This log offcut became a display stand for a finely-crafted wooden bowl

blade, retune the body and finish off with thin shavings, resulting in a smooth surface. Skewing the hand plane slightly reduces the resistance, making it easier to plane.

Use a sharp blade. The shavings should ideally be actual shavings, not powder. Keep in mind end grains dull the

blades quicker. Shaving end-grain can be difficult. But keep these tips in mind and give it a try. I promise you, you'll be surprised at how beautiful a hand-planed end-grain can become.

This was posted on Instagram on 22nd May 2020 by @dylaniwakuni.

A History of Slöjd

In his new book *Slöjd in Wood* Jögge Sundqvist discusses the history of his craft

There are many different ways of working and joining wood. I'm dedicated to slöjd because of the tool marks and carved bevels, the worn colors, the idiosyncratic design and the self-confidence of the unschooled folk art expression.

Slöjd is part of the self-sufficient household, how people survived before industrialisation. Slöjd is the work method farmers used when they made tools for house building, farming and fishing, and objects for their household needs. For thousands of years, the knowledge of the material has deepened, and the use of the tools has evolved along with the understanding of how function, composition and form combine to make objects strong and useful.

The word slöjd derives from the word stem slög, which dates to the 9th Century. Slög means ingenious, clever and artful. It reflects the farmers' struggle for survival and how it made them skilled in using the natural materials surrounding the farm: wood, flax, hide, fur, horn and metal. I have picked up a dialect expression from my home county, Västerbotten, that has become a personal motto. We say *Int' oslög*, "not uncrafty," about a person who is handy and practical.

In slöjd, choice of material and work methods are deeply connected to quality and expression. To get strong, durable objects, the material must be carefully chosen so the fibre direction follows the form. This traditional knowledge makes it easy to split and work the wood with edge tools. Slöjd also gives you the satisfaction of making functional objects with simple tools. When a wooden spoon you made yourself feels smooth

in your mouth, you have completed the circle of being both producer and consumer.

My intention is to give an inspiring and instructive introduction to working with wood the slöjd way: using a simple set of tools without electricity. There are many advantages to this. You can make the most wonderful slöjd in the kitchen, on the train or in your summer cottage. Simple hand-tools make you flexible, free and versatile. And the financial investment compared to power tools is very low.

Traditional slöjd knowledge is vast, and requires many years of experience before you can easily make your ideas come to life. It also takes time to master the knife grips, the essentials of sharpening and the specific working knowledge of individual wood species. As you work with slöjd, the learning enters your body. Through repetition, you will gain muscle memory for different tool grips. The ergonomic relationship between your body and the power needed for efficient use emerges over time. "Making is thinking," said Richard Sennet, professor of sociology. In slöjd, the process never ends.

Because slöjd is inherently sustainable, it feels genuine and authentic. In an increasingly complex and global society, it is important for an individual to experience an integrated work process from raw material to finished product.

People from all walks of life benefit from the interaction between mind and hand. Slöjd affects us by satisfying the body and in turn, the soul. There is a kind of practical contemplation where there is time for thought – a certain focused calm, which is an antidote to today's media-centered society.

I think we can use the knowledge of slöjd to find that brilliant combination of a small-scale approach to a sustainable society that doesn't exclude the necessities of modern technology. Traditional slöjd is a survival kit for the future.

Working by hand

It is difficult to describe handwork in writing. How should the body interact with the tools and the wood for maximum strength and control? What should the tools look like and how should they be positioned during use? How do you know what material is good to work with? The final result and design choices are the sum of many years of experience. Decisions evolve from very deliberate choices into more intuitive ones that your body executes automatically. The best way to learn is to work with an experienced woodworker while he or she makes an object, and let him or her talk about the process as it unfolds.

If you are looking for deep knowledge of the qualities of different wood species and more advanced joinery, I recommend other publications or Internet resources. For those who are experienced woodworkers, I am sure you will find in this book helpful work methods or design ideas that I have developed during my 30+ years of working in the slöjd tradition.

I have been making objects in the slöjd tradition since I was a child. In 1985, I started producing and selling my work. When I switched to a full-time basis, in 1998, I began an inventory of all the slöjd objects I make. The inventory contains more than 4,000 objects, from butter knives to large public sculptures. The

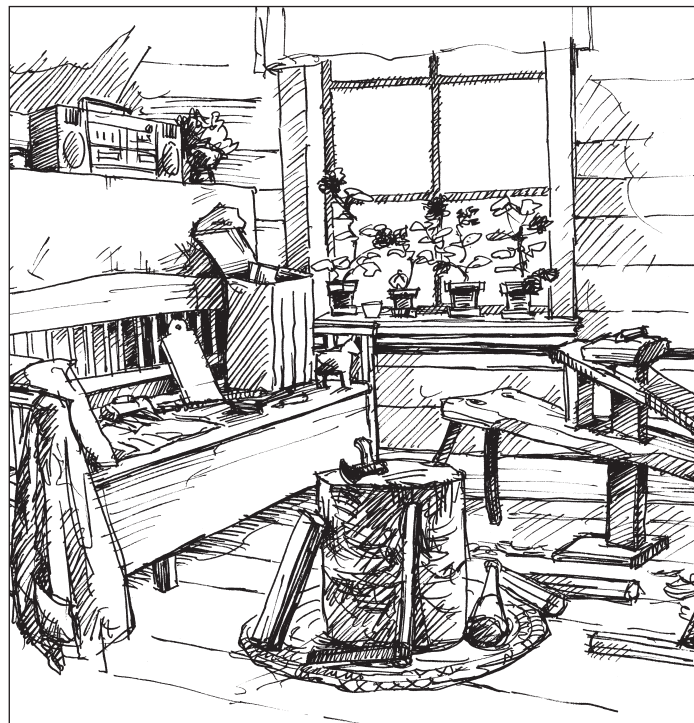


ILLUSTRATION: ANNIKA NORDIN



more experienced I become, the more respect I gain for other woodworkers who have inspired me over the years. I extend a special thank you to my father, Wille Sundqvist, who taught me to carve and who has passed on his passion for woodworking traditions. And to my mother, Margareta 'Maxan' Sundqvist, who has given me a desire to express form and colour. Wille has written the book *Tälja med kniv och yxa* (Swedish Carving Techniques) that deals with tools and fundamental techniques in an extensive way.

Slöjd creates lasting, functional and deeply personal objects. It gives you a strong back with little expense. It's a sustainable use of resources. Restricting oneself to hand-tools grants you more creative freedom – a beneficial paradox. Green wood is easy to work. Making and using your own objects means taking part in the entire process. It creates lasting, functional and personal objects. It gives you a strong back with little expense.

Practise with patience; repetition is the mother of knowledge. Slöjd means taking small risks, which increases your working knowledge and produces more opportunities for creativity and problem solving. Avoid big mistakes by following good advice. Work in peace and quiet, focused and mindful of how you are working. Have fun! Be sharp. This applies to your tools as well as to your brain. Dispose of oily rags properly. Ask permission from the property owner before you take material.



Next issue Jögge will be showing how to make slöjd coat hangers

The satisfaction I get from slöjd is knowing how to make things and what materials to use. Wood is a pragmatic medium; if a part breaks, I can replace the piece. If it is too thick, I can take my knife and carve it down to the desired thickness. If I get an idea I can try to create it immediately. Nothing can beat the satisfaction of having made something yourself with your hewing axe and Morakniv. As with other folk cultures, slöjd is a deep cultural heritage and is an intangible part of my toolkit.

The kitchen as a workshop.

Slöjd is based on historical peasant traditions of self-sufficiency. Before the industrial era, people had to make most of the things they needed from materials that were found around their farms. As agricultural people, they had easy access to many natural materials and knew their uses. Those who did woodworking had a natural introduction as children that continued throughout their lives. The social, religious and practical aspects of survival dictated the types and forms of everyday objects. The ordinary farmer used relatively common tools; professional craftsmen such as blacksmiths or carpenters had more extensive, specialised tool kits.

Slöjd in its pure self-sufficient use is characterised by an individual using simple tools with great skill, a deep knowledge of raw materials, and the ability to solve functional problems. The resulting objects are intended for the maker's personal use.

In the slöjd tradition, knowledge accumulated over time becomes intuitive and determines the level of quality in the work. The maker's direct experiences with the tools, materials and joinery techniques are so vast and specialised in slöjd, that it is difficult to understand that knowledge today.

Makers in the slöjd tradition are their own designers, so the results are often particularly ingenious. We identify and solve problems by understanding the context in which the object is to be used: What is the desired function? Does the person using it require a customized design? What materials are available? Which production methods are best for the available timeframe? Continuous innovation appeared due to changes in requirements, when different materials were used, or when new technology became available.

Slöjd is about quality – the best and most durable choices of material and joinery to stand up to the wear and tear of everyday use but still be pleasing to the eye.

The everyday knowledge of slöjd led some practitioners to develop their own unschooled artistic expression, which was highly individualistic. This folk art is often influenced by historical styles, but because it has evolved over hundreds of years and shaped by individuals, it has given rise to locally distinctive ways of expression.

Slöjd is an undocumented folk knowledge which has largely been lost. Today, slöjd is being recreated and developed through the handicraft movement by woodworkers, handicraft consultants and non-profit organizations. Direct support from the Swedish government has been crucial to continuing this tradition. Slöjd is characterised by being developed within a tradition with responsibility and control for production from maker to user with hand-tools and intuitive skills with natural slöjd materials with resource efficiency through recycling with a personal expression.

Details This is an extract from Slöjd in Wood by Jögge Sundqvist published by Lost Art Press, available in the UK (£34.50) and Europe (£41.50) from Classic Hand Tools (classichandtools.com) and from Rubank Verktygs AB (hyllar.se/en/lost-art-press) (356.16kr).



More Than Hot Air

Inveterate steamer, *James Mursell* discusses the arts of bending wood

Steam bending is one of those woodworking activities that everyone has heard about, but most have not attempted. It is a little mysterious and foreign to our everyday experience but when everything comes together correctly, steam-bending wood is incredibly easy. In this article I will attempt to demystify the process and identify the key ingredients for success.

What are the key ingredients and tools? Obviously you need steam, plus a container in which to heat the wood, the timber itself, a bending former and time. There are other things that you may add such as straps, winches, jacks, stopwatches and so on, but these are not the bare essentials.

The most popular method of making steam is with a wallpaper stripper. These can be quite inexpensive and produce lots of steam, but they are limited by the size of water reservoir. If you are going to bend more than one piece of wood, you may need to replenish the water. In order to keep the steam coming, refill with boiling water from a kettle so that you don't have periods of no steam! Alternatively, I use a 20litre tea urn which will produce steam for about four hours, which is quite enough for most bending sessions. The golden rule is that you can't have too much steam, but you can easily have too little.

The container, otherwise known as a steam box, can be made of almost anything. Many people use plastic pipe with bungs in the end and the hose from the steam generator fed through one end. If you can get heavy-duty pipe that will be best, with 6in water or gas main pipe ideal, but probably hard to source. Soil pipe will work fine, but it may become soft after a while and begin to sag, so attaching it to a board is sensible.

The temperature inside the 'box' needs to be as close to 100°C as possible. Therefore insulation is a great idea. It could be a blanket, loft insulation or any other material which will cut down heat loss from the box. My box is made from 12mm ply, foil-backed insulation and batten. The walls are made up of panels, with the insulation sandwiched between two layers of plywood, and these are screwed together. Even after three hours of steaming there is no discernible heat loss through the walls. My box (with a hole in the bottom) sits on top of the tea urn so that the steam feeds directly into the box.

The wood is likely to be the weakest link in the chain. You need a species that is prepared to bend. Ash, oak, yew, elm and beech are a few that will co-operate. I am sure there are others, but I do not have experience of them.

Stretching forces

The wood has to be straight grained. Any knots or short grain will be likely to cause problems when you begin bending. A knot will concentrate the compression and stretching forces and will likely lead to failure, while short grain may fail along the grain lines as the wood is bent.

You must be aware that you will be subjecting the wood to stresses that it is not designed for and so you need the best quality material that you can find for success.

What is 'best'? Straightness and freedom from knots have already been mentioned. Equally, if not more important is the speed of growth of the wood. The faster it is grown, the greater

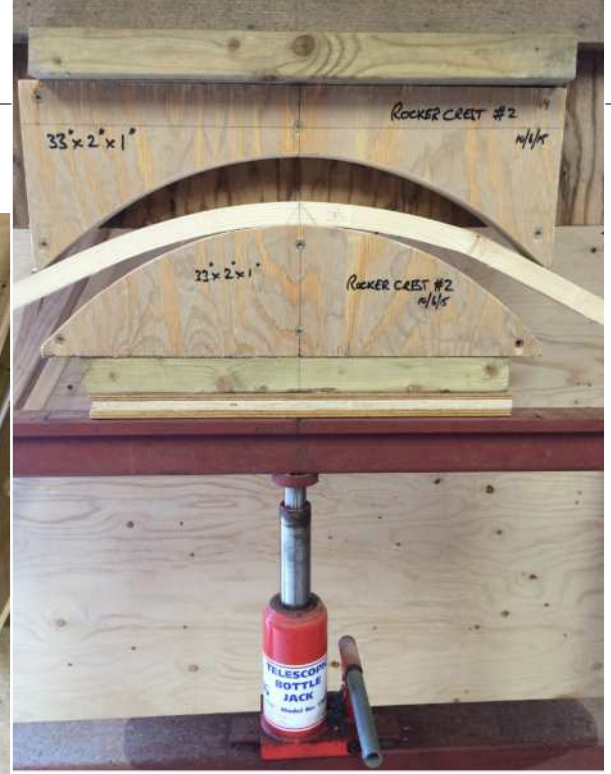


the proportion of summer growth to winter growth. It is the summer growth that is strong and that will put up with being bent, while the winter growth is relatively weak. Wood with say three growth rings per inch will bend far more successfully than wood with 10 rings per inch.

The other consideration is the moisture content of the wood. Firstly, do not waste time trying to bend wood that has been kiln dried. It has been cooked and altered and is unlikely to bend successfully. Otherwise, the wood should not be dry. In my experience you can cut down an oak tree and bend the wood five minutes later, but ash does not like that.

Ash bends better when air dried. I store my ash for bending as 1¼in thick boards under cover, but in an open-fronted shed. The moisture content stabilises at around 20% and the wood will remain bendable for years.

Almost any material can be used to make a former. I use 18mm plywood. Make the former to exactly the shape that you need the bent piece to be. Do not worry about spring-back as you might for laminating. Once the wood has been bent it needs to be held in that shape until it is dry, usually with a clamp or by tying the ends together with string. In fact steam-bent wood is never actually fixed. As you dry the bent piece the bend tightens up so that when it is dry the string will become loose,



James Mursell's crest-bending jig (above). Fast-grown ash (on left, below) is easier to bend than slow-grown ash (on the right, below)



The arm-bending jig (above) and the rocker-bending jig (below right)

or the clamp may drop off; this is a good indication that it is dry. Conversely if the bend dampens then it will open up again!

There is a rule of thumb that has caused me no end of trouble, that you should steam the wood for one hour for every inch of thickness. Ignore this maxim. For bending air-dried ash my starting point would be to steam for 12-15 minutes per square inch of cross-section. If the wood is fast grown and dense then give it more and less if slow grown. Also as the cross-section increases over 1sq.in then slowly increase the time per square inch.

The length of time to steam the wood is one of judgement rather than science. If the wood is fast-grown then it will be far more tolerant of over-steaming, while if it is slow-grown the timing will be far more critical. Whatever you do, I would try to steam for the shortest possible time.

Steam bending can be a most frustrating experience, but if you get the basic ingredients right it is incredibly rewarding and quick. I wish you luck!

James Mursell is well-known for the tools he produces and sells, including spokeshaves and travishers, the courses he runs in West Sussex, England, and the chairs he makes. You can find out more at thewindsorworkshop.co.uk & @windsorworkshop.



Sharpening Gouges

Carving tutor *Mary May* explains how she sharpens gouges

The most important technique to master before starting to carve is how to sharpen woodcarving tools to a razor edge, also called honing. Fighting and pushing a dull tool through wood can be extremely frustrating. Safety is also a concern, as the excess effort needed to push the tool through the wood will result in an uncontrolled cut. My first woodcarving gouge was about as sharp as a butter knife. I managed to get it to cut through the wood by sheer force with a whopping heavy mallet, but this technique is not recommended. When I finally discovered the secret to sharpening gouges, it was so much nicer and quieter. And my arm was not nearly as tired.

The sharpening method I use is one that has been passed down through generations of woodcarvers. Basic sharpening tools are all that are needed – sharpening stones, slipstones and leather strops. Other methods use elaborate sharpening machines, sanders, buffing wheels, grinders, etc. But I prefer to keep it simple. Follow the steps below to achieve a razor sharp edge that will slice smoothly through the wood. Learning this challenging but vitally important skill will help make your carving experience an absolute pleasure. Your tools will sing as they slice cleanly through the wood!

Choosing a stone

There are many sharpening stones available today. Of them diamond plates are a relatively recent addition to the sharpening world, and are the stones I use for the most part. They range from #120 to #8,000 grit (also referred to as mesh). I use the #1,200 grit (extra fine, 9-micron diamond particle size) for more aggressive sharpening then move to the #8,000 grit (extra-extra fine, 3-micron diamond particle size) for the final honing. Water or a water and detergent solution (Simple Green soap is one woodworkers often use) is a lubricant for these stones.

Natural Arkansas stones come in soft, medium, hard, translucent and surgical black, and are a natural oilstone. They do not refer to a grit number, as other stones do. The medium or hard Arkansas stones can be used for more aggressive sharpening, and the translucent or



To make sure that the gouge is placed on the stone at the correct angle, colour the entire surface of the bevel with a waterproof marker. After moving the gouge across the stone several times, look at the bevel to confirm that the marker is being removed along the flat surface of the bevel. If the marker is removed just at the tip of the gouge or just at the heel of the bevel, adjust the angle

surgical black can be used for the final honing. Oil should be used as the lubricant for these stones. My Greek woodcarving teacher insisted on using extra virgin olive oil.

Ceramic waterstones range from #120 to #10,000 grit and work best when soaked in water. The #1,000 grit can be used for more aggressive sharpening, and the #8,000 grit for the final honing. One thing to keep in mind is that these stones will need to be flattened occasionally on very coarse diamond stones as they can become misshapen. Water is used as the lubricant for these stones.

Ceramic stones range from #120 to #30,000 grit. The #2,000 grit can be used for more aggressive sharpening, and the #8,000 grit for the final honing. Water can be used as the lubricant for these stones, or they can be used dry.

Sharpening a Curved Gouge

STEP 1: USING A SHARPENING STONE

1 Position your sharpening stone parallel to the edge of the bench on a non-slip pad similar to one used inside kitchen cabinets. I start with a #1,200-grit

diamond stone to remove metal more quickly and finish with an #8,000-grit diamond stone to create a polished, mirror surface. Any type of stone with the equivalent grit can be used.

2 Put the recommended lubricant on the stone. I use water for diamond stones.

3 Position the curved gouge on the stone with the bevel (back of the gouge) flat against the stone. The recommended bevel angle is 22° to 23°, as this is the ideal angle to comfortably hold the gouge against the wood.

4 Hold the handle of the gouge with your dominant hand and lock that elbow to your side. With your other hand, place two fingers about an inch back from the edge and apply moderate pressure to the metal shank.

5 To ensure the bevel is flat against the stone, raise and lower the handle like a lever while maintaining pressure on the shank until you feel a slight click as the flat of the bevel meets the stone.

6 With your elbow locked and the bevel flat, gently sway your body side to side in front of the stone while twisting your wrist to rotate the gouge so the full edge of the gouge rolls along the surface of the stone.

7 Continue rotating the gouge across the stone until a tiny wire edge or burr is formed along the inside edge of the blade. This is a tiny fold of metal that can barely be seen. If you carefully run your fingernail up the inside curve, you can feel it catch. Don't go the other way! No bleeding! Remember?

8 Change to the finest sharpening stone and repeat steps 2-7 to create a mirror surface on the bevel. I use the #8,000-grit diamond stone.

STEP 2: USING A SLIPSTONE

Slipstones are small stones with at least one rounded side used to remove the wire edge that was formed during the first stage of sharpening. They are shaped to fit the inside curve of gouges and V-chisels, and are often made of either Arkansas stones or ceramic.

1 With the rounded side of a slipstone against the inside of the gouge, move the slipstone up and down along the blade, making sure that it comes in contact with the entire inside edge. Do this until the wire edge is pushed to the backside of the gouge.

2 Place the gouge back on the #8,000-grit sharpening stone and move it along the stone in the same movement as when sharpening. Do this long enough to push the wire edge back to the inside of the gouge.

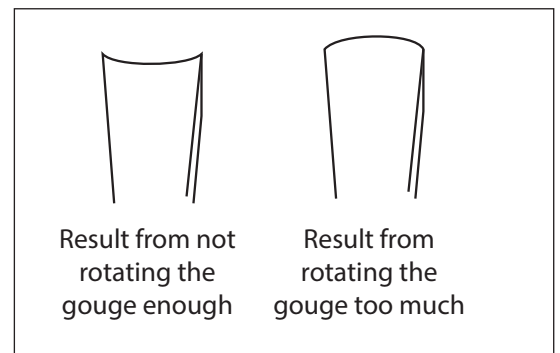
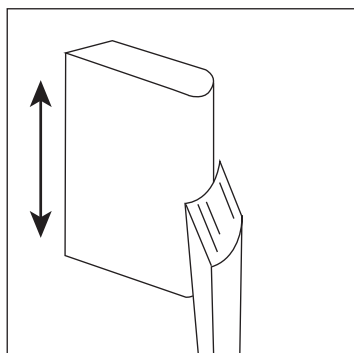
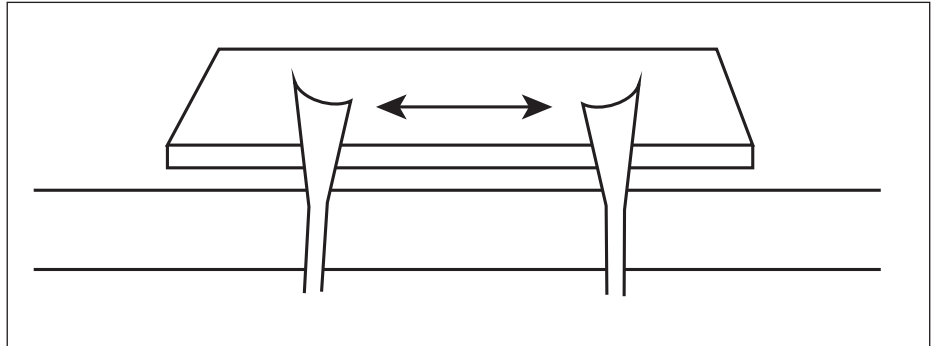
3 Repeat steps 1 and 2 until the wire edge gets so small that it falls off the end of the gouge. Depending on how large the wire edge is, you may have to repeat these steps 10 to 15 times.

STEP 3: USING STROPS

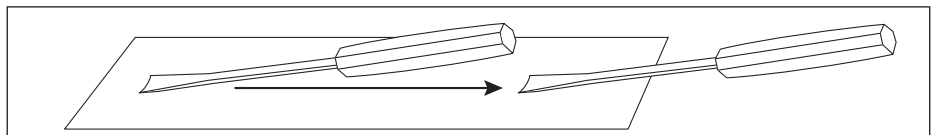
As a final touch, gouges are pulled backward along the surface of a strop to create a polished edge. I also run my gouges along a strop to occasionally touch up the edges as I am working on a carving project.

Stropping the bevel side of a gouge which can be done with a flat strop can be made from a piece of leather, an old leather belt, thin cardboard or wood. Apply a polishing compound to the surface. There are many of these compounds available, but any buffing, honing or polishing compound will work (even toothpaste works – believe it or not – and it smells minty, too).

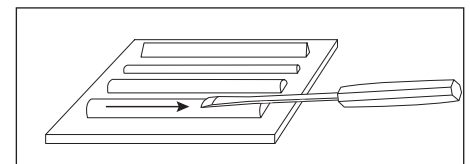
To strop the backside (bevel) of the gouge, pull the gouge backward several times along the surface of the strop, making sure the bevel is flat against the strop. Rotate it slightly on each pass so the edge comes in contact with the strop.



The slipstone can be positioned at a slight angle to create a small micro-bevel on the inside of the gouge. I mostly sharpen mine without this inside bevel, but a micro-bevel can be useful for particular cuts. **NOTE:** This micro-bevel is on the **INSIDE ONLY** of the gouge, not the backside. If the gouge is rotated too much or not enough, the edge of the blade will eventually become misshapen. When not rotated enough, the center of the blade will dip toward the handle and the corners will remain high. If the gouge is rotated too much, the corners of the gouge will be rounded. It can take some time for these mistakes to become evident



To strop the backside (bevel) of the gouge, pull the gouge backward several times along the surface of the strop (above). To strop the inside of gouges Mary glues dowel to a solid base (right), and uses polishing compound with leather glued to the dowel



Stropping the inside of the gouge can be accomplished by making curved pieces of wood, which provide a secure and solid surface to press the inside of the gouge against. These can be made by cutting dowels of different radii in half, or shaping lengths of wood to the desired curves. I have mine glued to a board with leather glued to the curved surfaces and polishing compound applied to the surfaces of the leather. Bare wood can also be used with polishing compound but it tends to be more difficult for the entire edge of the blade to come in contact with the strop. The layer of leather gives just

enough cushion to press into awkward shaped gouges. To strop the inside of the gouge, pull the gouge backward along the curved strop that fits best, keeping the gouge as flat as possible. Stropping the inside at an angle will dull the blade.

To learn more about this process watch Mary's free beginner lesson 'Sharpening a Curved Gouge' at marymaycarving.com/carvingschool. Mary May's book *Carving the Acanthus Leaf* is published by Lost Art Press. In UK & EU £46.50 classichandtools.com and \$49 in the US at lostartpress.com

Fitting an Axe Handle

The final stage of *Sean Hellman's* axe renovation is to fit the handle

Ash, being resilient to shock and commonly found, is the wood of choice in Britain for axe handles. Choose a piece that is fast grown, 9-12 growth rings to the inch, is ideal. Fast-grown hardwoods are structurally stronger than slow-grown woods, and the opposite is true in conifers. Find a piece longer than 12in, and above 4in diameter as a minimum.

Wood is always split in half; otherwise, the split will run out to the edge. The piece of ash I am using here is about 11in in diameter. Most axes I use are small and are used with one hand and so I use radially-split wood. The traditional method is to use a tangentially split section which is stronger, but you will get less axe handles out of the same size piece of wood. Split down any existing shakes or splits in the wood and carry on until you have a triangular section that is now a plank of about 1½x3x13in. If you are using a smaller diameter log, the section will be more triangular than shown here.

Mark the width of the eye onto the plank and draw the axe handle shape onto the wood. Axe away any wood that is not the handle. If you have a shaving horse and drawknife the handle shape can be quickly refined. If you do not have these tools, use a knife which will take a little longer.

Take out all the axe marks, keeping a keen eye on the handle profiles, and roughly shape the tang. The tang is the top of the head which goes inside the eye. Keep the tang over-sized as green wood will shrink as it dries.

I like faceted handles as they have a more positive grip in my hand; I have gone off smooth round handles. It is best to mark out, clearly, how much wood is going to be taken off the corners of the handle before cutting. You are about to change the handle from having four sides or facets to a more comfortable eight.

The handle is best carved when the wood is green, remembering to leave the tang over-size. Dry the handle. Left next to a fire or radiator, this can be done overnight, but it is best to leave it for a few days.

Fitting the head to the handle is a time-consuming process of slowly carving the tang down to size. Make sure that the head is square to the handle and start by carving the end of the tang to fit the eye. Fit the tang into the eye and tap gently in, and again gently tap out by banging on the poll (rear of the

Shaping the handle



The marked-up handle ready for shaping (above). Once that is done you should leave the shaped handle to dry (below) and only then should you start oiling the handle (below left)



Axe Handle Fitting with Sean Hellman, England

Choosing and splitting the wood



Unless you split your piece of ash down the centre there's a good chance the split will chase to the side



Sean favours a log at least 12in long and 4in diameter. Marking the eye width (right) on the handle blank (below)



head) and blade alternately to remove. You will see rust and pressure marks on the tang: this will show you where to remove and cut away more wood. On most axes I have used, the eye is narrowest in the middle, so the end of the tang will probably need to be made smaller. Keep carving and fitting until the tang goes all the way through the eye, with a $\frac{1}{4}$ in or more protruding.

Paint the tang with linseed oil, and bang the head fully into place. This is done holding the axe vertically with the head uppermost. Lift the axe up by the handle and strike the end onto your chopping block. Check that the head is properly aligned, and tap the pommel to square it off with the handle.

Fitting the wedge

Using an old chisel, start a split into the end of the tang. Then, from another piece of wood, carve a wooden wedge. This wedge is to be inserted into the chisel-split. Depending on the internal shape of the eye in your axe-head, estimate the correct taper for the wedge – often, the length of the wedge will only go half way down the length of the axe-head. The width of the wedge needs to be exactly the same as the length of the eye.

Bang the wedge in. The sound that is made will change when the wedge is fully home, so listen out for it. Cut the top of the wedge nearly flush with the axe head. I often put at least one metal wedge across the wooden wedge. I have read that in the past these metal wedges were not used because it was considered shoddy workmanship to use them; but when I first started making axe handles I just copied what I saw, and found out that the metal wedge helped keep the wooden wedge in place. It is not shoddy workmanship to ensure a completely secure axe-head. Finish by oiling the handle and make a sheath for the axe head out of leather or wood. If nothing else, at least keep the head wrapped up in an old cotton or linen cloth.

Axe maintenance

Never let the edge of the axe touch anything such as metal or stone, as a sharpened edge can easily be blunted or nicked. Be careful when laying it down next to other metal tools.

After outside use, wipe the axe down to dry it thoroughly, as steel can start rusting very quickly even in slight damp. If you are not going to use the axe for some time, then give the head a light oiling to keep the rust at bay. Do not store the axe in damp conditions or out of doors, as most wooden handles can rot within months.

The most common problem with axes that have not been cared for is the head becoming loose on the handle. Do not soak the axe in water as although this will temporarily solve the problem, it will make matters worst in the long run. The wood fibres will swell and become soft and will compress against the inside of the eye, thus causing them to begin to lose some of their structural integrity.

When the tang dries out the head will be looser. If possible, take any wedges out of the end of the tang and replace with new ones after tapping the head down the handle. I hold the axe vertically with the head at the top and I strike the fawn's-foot or end knob onto a chopping block. If this does not work, make a new axe-handle. Using glues, soaking in linseed oil or putting more wedges in are at best temporary solutions to delay the inevitable. The bigger the axe and longer the handle, the more important this advice is considered.

*Sean Hellman runs Woodwright Designs, producing wooden products, running courses and photographing woodlands and landscapes. You can contact him on 07841 924428 or visit seanhellman.com to find out more. He has published *Shaving Horses*, *Lap Shave & Woodland Vices*, and is working on another book on sharpening.*

Testing the handle for the fit



When you fit the head to the handle don't rock the head too much, side to side. To remove the head, hit the pommel and the head alternately



Removing the head (above) so as to show if any trimming needs to be done. Rust and pressure marks (below) show from fitting the axe head on the tang



Fitting the wedge to fit the handle



Starting the split in the handle for the wedge (above). The tang almost through the head during fitting (below left). Banging the wedge into the handle (below right)



Removing Rust from a Plane Iron

Dylan Iwakuni brings a friend's Kanna blade back to life



One simple method to remove rust is to use PVA glue. You need to start by applying a thick layer of glue (01). The glue will absorb the rust. A thick layer of glue is easier to remove (02). A brush and water helps remove the last of the glue (03), and it dries ready for sharpening (04)

I am sure many of us have old, rusted tools lying around, whether it's your grandfather's old tools or a hand plane picked up from a flea market, they could use some cleaning up.

Here's one simple method of removing rust. You most likely already have the tools needed: wood glue (PVA glue) and a brush. For this example, I have a Kanna (Japanese hand plane) blade I got from a good friend.

The blade was in a box of used tools he got from an online auction in Japan. It had been left in the workshop for a while and had a fair bit of rust on the surface.

First, apply a generous coat of wood glue on the surface of the blade. A thicker layer of glue will make it easier to peel off.

Let the glue dry thoroughly. As the glue dries, you will notice the glue absorb the rust. Once the glue is fully dried, peel the glue off. Don't worry about removing everything perfectly.

Using a brush with water, brush off any remaining glue. Wipe it dry and you're done.

It's a simple yet effective method!

Keep in mind this method is only effective for removing rust on the surface and not rust which has corroded the metal. If there is any coating or paint on the blade, the glue may peel that off as well. With the rust removed, sharpen the blade and it's ready to begin its new life!

Marking & Honing

In Northumberland *Quercus* meets Richard Kell, maker of marking & honing guides

You'd be forgiven for never having heard of Richard Kell. He's one of our great exports, more famous in the USA than in Britain. Those that do know the name are likely to be fortunate enough to own some of his beautiful brass tools, notably for honing tool edges and for marking out. Richard is the sort of man who lets his hands do the talking, with the help, that is, of a Ward 1A 1945 capstan lathe and his faithful-ish beagle Smudge. So we went to Northumberland to meet him.

Richard Kell works alone in a small industrial unit near Blyth. He was brought up in the North, and spent his childhood and adolescence devouring books on ornamental turning and horology, and his favourite hobby was inspecting algae from ditches and ponds with a microscope. Over a cup of tea and a share of his sandwiches, he expounded on the uses of diatoms, a particular group of algae that are integral to the manufacture of toothpaste, dynamite and the white lines on roads.

Before he was 18 he'd bought his own ornamental turning lathe, with 5½in centre height and an overhead gear. "It was a marriage of two lathes," he says now. Richard's dad was a fitter (and his dad the last in a line of joiners) and had a model engineer's workshop of his own, but he wasn't a good teacher. "It made me independent. My dad was equally good at wood and metal, and he was quick. I tend to be more meticulous: it has to be flawless. Perhaps that's a reaction to him."

Richard wanted to become a toolmaker, and on 20th January 1975 he joined Hardy's, the makers of fishing rods and reels in Alnwick. He spent four years in the machine room and four in R&D, working on new mechanisms and ideas for reels. In the late 1970s he read an article in *Crafts* magazine about David Pye which inspired him to move away from ornamental turning. He produced dice and shakers and lots of carefully designed containers, pushing design and selling them through the Contemporary Applied Arts in London and Katherine House Gallery in Marlborough. He left Hardy's in 1983, to set up on his own,



producing anything from decorative door knobs made from blackwood inlaid with gold wire, to hinges and fittings, hand-made planes and a dovetail marker.

Ultimately, the marking tools proved to be the most enduring. "I thought the planes were the way forward," he recalls, "but in those days people wanted the original." He made things for David Linley, and at one stage produced six sculptural mobiles for the Queen's cousin. "Producing furniture would have been too intense for me. It took me 30 hours just to make the packing case for the mobiles!"

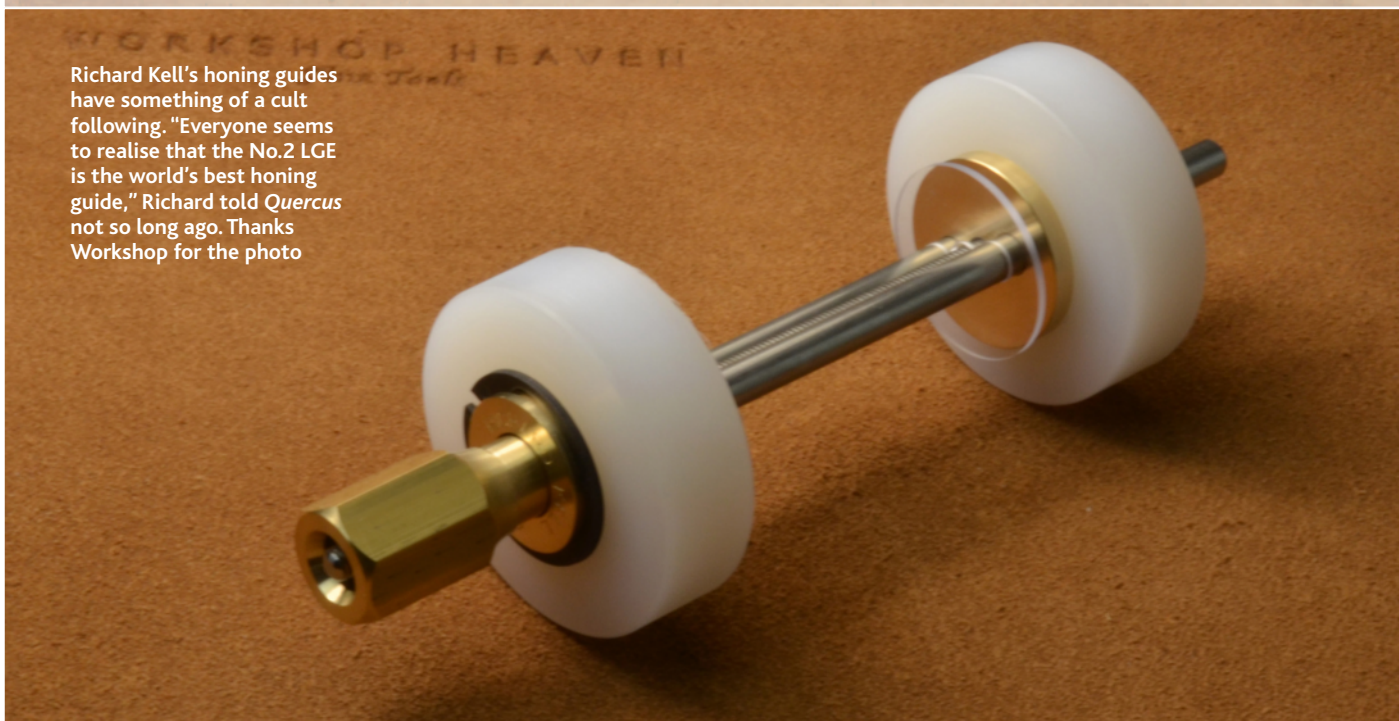
After the dovetail marker came his bevel gauge and then the double-ended calipers for measuring wall thickness on turned trays. "At Hardy's," he says, "I loved making special tools. All my tools are made without a milling machine."

When we visited he was making the hubs for his small honing guides; measuring and selecting them to within 0.0003in to ensure they are kept in matched pairs. After a bit of coaxing he lets me have a go. He shows me how to let the clutch in and out, how to reverse the gears and how to revolve the four-tooled capstan. The process is addictive, all the clunking and the feel of the polished wheels. No wonder Richard Kell loves his work, and no wonder his tools are so special.

To learn much more about the sundials, reels, luthiers planes and tools Richard Kell makes, and about the way he works, visit his website richardkell.co.uk. It is fascinating, and reflects Richard's remarkable approach to his work.



Richard's marking tools include (from left, clockwise) the bevel angle gauge; centre marker for turning; dovetail markers; plumb; and wall thickness calipers



Richard Kell's honing guides have something of a cult following. "Everyone seems to realise that the No.2 LGE is the world's best honing guide," Richard told *Quercus* not so long ago. Thanks Workshop for the photo

