FURNITURE & CABINETMAKING



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WELCOME

As the world continues to reel from the Coronavirus pandemic and lockdowns, it's inspiring to start seeing some positive stories coming out of the crisis.

London luxury design studio Dean Watson Bespoke Interiors has developed its business much quicker than originally planned and Dean has been busy creating his own furniture line and planning a move to a new workshop. The pandemic prompted design studio Vonnegut/Kraft to leave Brooklyn, New York, for the Hudson Valley countryside, where a bigger workshop has made their production more efficient and is giving them the chance to create a more inclusive working environment. Italy-based dovetail enthusiast Vasko Sotirov had to put his in-person woodworking classes on hold, but is working on video courses he hopes will reach people all over the world.

As people spend more time at home, they are investing more in their properties: Kansas-based James Wesley Furniture is just one of the furniture businesses that has seen growth in dealings with private individuals looking for beautiful and practical works to adorn their homes. And social distancing prompted Thomas Eddolls to handle the glue-up of an arts and crafts-style wardrobe all by himself – quite a feat!

For some, the pandemic will mean they are constantly double booked, but others may find they have time on their hands. Could this be the perfect moment to try out a new skill, such as making a live-edge project, designing a spindle, restoring a damaged piece of furniture or creating a joint you've never made before? If you're in the market for learning something new, this issue is packed with possibilities. And if you're more in the mood for putting your feet up, turn to page 98 to learn how to get hold of a new documentary on George Nakashima – great viewing for any exhausted woodworkers out there.

'Optimism is the faith that leads to achievement. Nothing can be done without hope and confidence.'

HELEN KELLER, AUTHOR

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COVER IMAGE Vasko Sotirov

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



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John Bullar explains how to make this strong and attractive joint







When I had to design a piece of furniture for a country house kitchen, I was excited. It was my chance to develop my version of a piece of traditional Spanish kitchen furniture that's used to store bread. Normally these storage units have a tambour door, but mine doesn't. The bread needs to maintain its humidity in every season, no matter what the conditions are. So, taking advantage of the wood's features in terms of humidity exchange, I made a small cabinet with two main compartments. One would keep the bread – a big box with a sliding lid, so the interchange of humidity is only through the wood. The other compartment, with two open drawers, will be used to store other food, such as eggs and garlic. However, I wanted to close those open drawers to keep the inside safe, so I made a sliding door that closes the two drawers and leaves the bread drawer open.

I used French quartersawn oak for the carcass and the two open drawers, maple for the big box and Spanish oak for the sliding door. The back and the drawer bottoms were made of quartersawn red cedar so wood movements will not be a problem.









1 Dimensioning the stock by hand 2 Working on the carcass joinery 3 Dry fit of the carcass 4 Making the sliding dovetail for the divider

BUILDING THE CARCASS

After dimensioning the pieces I joined the top of the carcass with the sides; I used half-blind dovetails so the top could be easily cleaned up. The bottom was joined with a dado to the sides, leaving one small foot on each side. I reinforced the dado with three shop-made pegs and covered them with diamond-shaped inlays. The divider for the two sides was joined by sliding dovetails. The back is held on a 10mm rebate.

I made a groove on the top and bottom fronts to hold the sliding door. After gluing it up, I planed the whole carcass smooth.

THE OAK DRAWERS

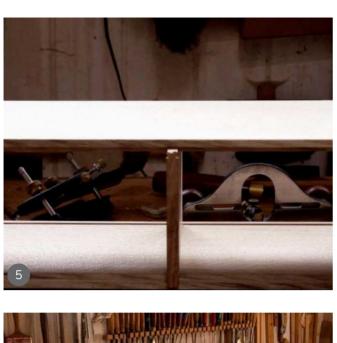
Working with this Spanish brown oak for the two drawers was a real pleasure – it's so easy to plane and to chisel. I made these drawers with through dovetails. The upper one slides on two maple runners joined to the carcass on dados. They are only

glued up on the first half and I used a tiny nail for the second half to allow wood movements. The red cedar bottom is held on with grooves. Before gluing them I added the details and made the pulls, which I marked on the dry fit test.

THE SLIDING DOOR

Sliding doors are easy to make. In this case I made a solid door with two slots (top and bottom). I glued up two pieces of oak and then made the slots with the plough plane and carefully adjusted them with the shoulder plane. Those slots will run on the grooves I made in the carcass so it gets in the top groove and then rests on the bottom one.

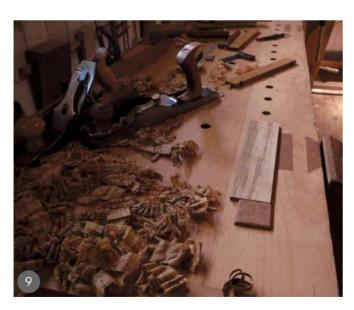
Once the door was a perfect fit, I added two pieces of ebony as door pulls. The door also has a groove inside so that it can run over the maple drawer pull.





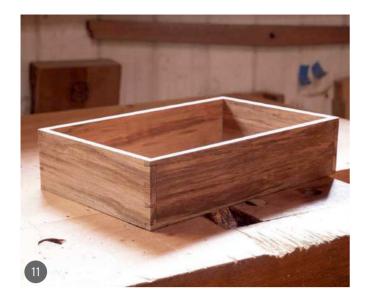






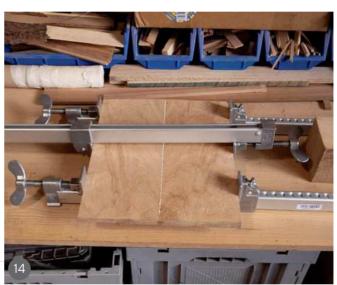


Testing the fit of the sliding dovetail **6** All the carcass joinery is complete and the surfaces are clean **7** Planing the top smooth after glue-up **8** The Spanish brown oak for the drawers **9** Planing the oak drawer pieces **10** First the tails...













11 ... and then the through dovetails are made 12 The top drawer on its runners 13 Making the drawer pull and a view of the cedar bottom 14 Gluing the oak door 15 Making the slots on the door 16 The grooves on the carcass

























17 Testing the door on the top groove 18 The door slides correctly 19 Planing the ebony for the pulls 20 The holly and ebony butterflies 21 Working on the recess for the holly butterflies 22 Details of the holly butterflies 23 Details of the ebony butterflies 24 Making the dados on the sides and bottom pieces 25 Details of the mortises where the pegs are hidden 26 Detail of the wenge covers 27 Working only on the reference faces and edges 28 Planing 'almost' perfect opposite sides of oak drawers

BUTTERFLY INLAYS

I love adding details to the pieces I make. The two oak drawers have holly butterfly inlays and the door has two ebony ones. I made the butterflies first, then I held them with my finger and marked with a marking knife (with a thin blade). I started cutting with the chisel a bit inside the knife line and then worked the bottom of the recess with the small router plane or the chisel.

The recesses for the inlays are about 1.5mm in depth. Holly is easy to prepare but the tiny ebony pieces had very weak grain on the corners; to cope with this, the chisels had to be very sharp and I worked on them little by little. The ebony pieces were also made to hold a small crack on the oak.

DADO WITH INVISIBLE REINFORCED PEGS

This is a fast way to make a durable joint. Using only a dado can be a little bit weak, so adding pegs or dowels makes a much stronger joint. I've added some diamond-shaped inlays made from wenge to cover the pegs, so that the end result looks like three through diamond-shaped tenons. First I made the mortises and then I adjusted the wenge covers.

TIPS FOR DIMENSIONING WOOD BY HAND: PRECISION VS SPEED

I dimension wood using the David Charlesworth method. I use a cambered iron and the radius of the blade decreases on each plane, from the scrub plane to the smoothing plane. I make some variation on this method in order to work faster. I think that, when working only with hand tools, you have to find the balance between precision and speed.

For that purpose, I normally don't remove the stopped shavings when flattening because I don't plane the final dimension pieces, so at the end I will cut the pieces to length, removing those 'stopped shavings'.

Another tip for speed is, after making perfect reference face and reference edges for each piece the opposite face and edge are not as 'perfect', so it takes less time to prepare those, given that they won't be used for marking or measuring purposes. The lack of precision is less than 0.05mm and it can be fixed or adapted after the piece is done.

WOOD AWARDS 2020 WINNERS

WE CELEBRATE THE WORK OF THIS YEAR'S WINNERS

The winners of the UK's annual Wood Awards were announced in November 2020. The judges selected six structures and three products that represent the best of British architecture and product design in wood.

The Wood Awards was one of the few design competitions to go ahead despite restrictions imposed by the Covid-19 pandemic. The independent panel of judges always visits all the shortlisted projects in person, making this a uniquely rigorous competition. This year, the usual judging process had to be adapted, but the competition persevered, and the judges still managed to see each project.

woodawards.com





GOLD AWARD & PRIVATE ARCHITECTURE WINNER: THE RYE APARTMENTS

Location: London
Architect: Tikari Works
Structural engineer: Webb Yates
Wood supplier: Stora Enso
CLT subcontractor: Eurban
3-layer board: Binderholz
Wood species: Austrian spruce

The judges chose the Rye Apartments by Tikari Works for this year's Gold Award, which is given to the 'winner of winners'. The residents' quality of life is at the heart of the design for these sustainable apartments. The project was driven by two key considerations; how to resist standardised or default positions within housing design, and how to minimise the materials, embodied carbon and cost. Cross-laminated timber was used for the superstructure and all the internal walls and staircases. The CLT is exposed throughout, creating large, light-filled spaces. Delicate spruce strips form dropped ceilings in the hallways and bathrooms. Kitchen cabinets are made from CNC-grooved three-layer spruce ply boards and the worktops are made from recycled paper.





COMMERCIAL & LEISURE WINNER: FRINDSBURY MANOR BARN

Location: Rochester

Architect & client: The Heritage Design

& Development Team

Structural engineer: The Morton

Partnership

Main contractor, joinery & wood supplier: Dolmen Conservation Wood species: British oak

This Grade 1 listed medieval barn, originally built in 1403, was damaged by fire in 2003. At 64m long it is the longest barn in the UK. A third of the barn was rebuilt in locally sourced green oak. Large quantities of curved timber were selected for braces and tie beams. Extensive stone repairs were also needed, and 95,000 Kent peg tiles were used to re-tile the old and new sections of the barn.



SMALL PROJECT WINNER: **WOODEN ROOF**

Location: London

Architect: Tsuruta Architects Structural engineer: Webb Yates Main contractor: JK London

Construction

Joinery: Pracownia Wystroju Wnetrz Art

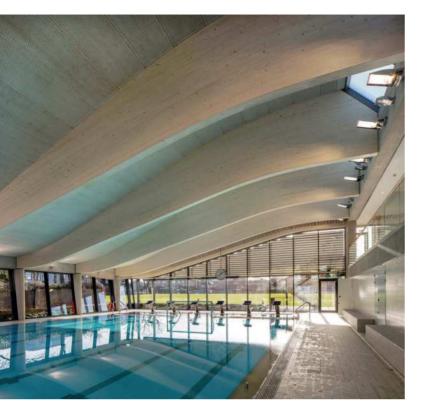
Deco -R

Wood supplier: Arnold Laver

Wood species: Accoya (New Zealand),

ash (Canada)

This conservatory, built for a Grade 2 listed house, sits in a north-facing garden. The roof profile had to be pitched shallow to ensure that it sits below the existing adjacent boundary wall. The roof also needed to be well drained. One solid piece of wood, enclosed by four seasons glazing units, forms the entire structure and acts as the building's envelope, structure, insulation and cladding. The diagrid frame is a combination of falls that are either short and steep or long and shallow. The pieces were all CNC fabricated and were light enough to be assembled manually on-site. The beam cross junctions were fixed without any glue or mechanical fixings. Each wood section is wide and deep, which helps to emphasise natural light and cast shadows throughout the space.



EDUCATION & PUBLIC SECTOR WINNER:

SWIMMING POOL HALL AT KING'S **COLLEGE SCHOOL**

Location: Wimbledon

Architect: David Morley Architects Client: King's College Wimbledon Structural engineer: Price & Myers Main contractor: Knight Harwood Timber contractor: B&K Structures Joinery: Suffolk and Essex Joinery Wood supplier: Metsa Group

Wood species: Spruce, pine, fir, larch (European)

The Swimming Pool Hall is one of three linked pavilions making up a new sports centre. The building's design has strong visual connections between indoors and outdoors. From outside, the roof sweeps down to respect the boundary with a Grade 2 listed building. Internally, it sweeps up to accommodate a viewing gallery. Curved glulam beams support CLT roof panels with integral timber acoustic linings. The roof's geometry and pale stained finish reflect natural top-light and artificial uplighters, eliminating the need for any light fittings above the pool.

STRUCTURAL WINNER: NATIONAL AUTOMOTIVE INNOVATION CENTRE

Location: Coventry Architect: Cullinan Studio Client: University of Warwick Structural engineer: ARUP Main contractor: Balfour Beatty

Joinery: B&K Structures

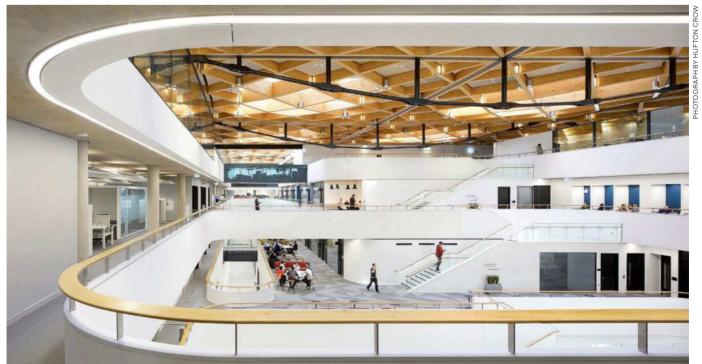
Quantity surveyor, cost consultant & project manager:

Rider Levitt Bucknall Timber engineer: engenuiti

Wood supplier: Rubner Holzbau, Ober-Grafendorf, Binderholz

Wood species: CLT, spruce glulam (European)

The National Automotive Innovation Centre is the largest research and development centre of its kind in Europe. Timber was chosen for its warm, natural feel within the industrial setting and its wellness and low carbon properties. The walls were assembled using a pioneering system of prefabricated, self-spanning timber and CLT mega-panels that could be erected quickly. As one of the largest timber roofs in the world, the glulam CLT lattice structure unifies the many activities housed beneath a single umbrella. Primary and secondary joists are arranged on a diagrid, spanning on to supporting beams on a 15m grid. Each bay is slightly pitched above to create a nominal fall for the roof, tapered internally within each bay.





HOTOGRAPH BY PETR KREJCI



BESPOKE FURNITURE JOINT WINNER: **DUO**

Designer: Studio Woodgate Maker: Benchmark Furniture

Client: Royal Opera House as part of

'Legacy' for LDF 2019 Project facilitator: AHEC Wood supplier: Morgan Timber Wood species: American red oak

Duo is a pair of deceptively delicate sofas designed for Alex Beard CBE, chief executive of the Royal Opera House. When first tasked with the project, Studio Woodgate started by observing the space at the Royal Opera House. The existing sofas were the same height as the chairs in the room, as a lower sofa would create a different dynamic. The approach was to create something more comfortable than a bench but not as soft as a sofa. The light rectangular arms have a curved chamfer detail with cleverly hidden metal rods to ensure the sofa is robust. A subtle 2mm radius runs around the edge of the wood throughout the piece. The two end frames for the arms were made up from solid timber and shaped on a five-axis CNC machine. The seat and back are made from a solid timber frame and sit on a nook cut into the end frames secured by a metal dowel. The seats are upholstered in tan leather.

PRODUCTION FURNITURE WINNER: **TENON TABLE**

Designer: Daniel Schofield Manufacturer: L Ercolani Wood species: Ash, oak (Italy)

Designer Daniel Schofield has taken a pragmatic approach to the design of the Tenon Table. Material has been removed where it is not needed, leaving the base weighted and stable, which naturally creates the joint for the top. The oversized wedged tenon has become a focal point that highlights the construction of the piece and the quality of craftsmanship. A combination of woodturning, CNC machinery and hand-jointing have been used to create each piece. The table is available in two sizes.



INTERIORS WINNER: BROCKERIDGE STAIR

Location: Bristol Staircase & joinery design: Future Joinery Systems Architect: CaSA Architects

Structural engineer: Mann Williams Digital fabrication: FabLab Cardiff, Cardiff Metropolitan University's School of Art & Design

School of Art & Design Joinery: Silverthorne Joinery

& Carpentry

Wood supplier: Hanson Plywood

Wood species: Ash, birch

This prototype staircase is part of a UK government-funded research and development project to enable digital fabrication directly from BIM modelling environments. The stair rises three floors and is cantilevered from flush-mounted stringers. The parts were CNC-machined and assembled on-site using standard tools. The new platform developed during research allows designs to be defined parametrically, enabling the user to configure bespoke objects to specific requirements. Parameters such as height, width, depth and material thickness can be usercontrolled. Digital manufacturing is enabled directly from CAD or BIM software via the platform, which enables faster fabrication, better pricing information and reduces errors and waste. Items can be locally fabricated through a distributed manufacturing network model open to any CNC-enabled workshop. The process greatly improves construction efficiency, supports Covid-19 social distancing restrictions and increases the type and complexity of work undertaken by smaller site-based joiners.



BESPOKE FURNITURE JOINT WINNER: **THE BEEHAVE**

IIIL DELIIAVE

Designer: Studio Marlene Huissoud **Maker:** Benchmark Furniture

Client: Science Museum London as part of 'Legacy' for LDF 2019

Wood supplier: Morgan Timber Wood species: American red oak

Sir Ian Blatchford commissioned Marlène Huissoud to create a beehive to feature in a new permanent gallery at the Science Museum focused on the future of agriculture. Marlène's artistic outlook is rooted in the natural world. Rather than a traditional, house-like beehive, Marlène created something more organic. The log-like hive is a refuge for wild bees rather than a place to make honey. The piece was hand carved and the red oak was then blackened using a scorching technique. It took 100 hours to add the tactile engraving details to the surface using a pyrograph. It was then covered with propolis, a dark resinous material produced by bees, to seal the gaps. This protects the timber and the bees from disease and also attracts bees with its scent.





ARTS & CRAFTS-STYLE WARDROBE

THOMAS EDDOLLS MAKES AN OAK WARDROBE

INSPIRED BY THE EARLY WORK OF GORDON RUSSELL

In 2019 I was fortunate to receive a commission for two chests of drawers. After they were completed and everyone was happy, other working engagements took me off in different directions. Last year, the same client got back in touch with a request for a bepoke wardrobe based on a classic early 1920s design by Gordon Russell. It was a wonderful piece: solid quartersawn oak with bog oak detailing and fielded panelling, a craftsman's dream!

CHOOSING THE TIMBER

First things first, I needed to source the materials. After an advisory discussion with my timber merchant, we opted for European oak as, due to the different thicknesses needed for the job, there would be a more consistent colour and structure found working across different trees. Selecting from one English tree was not an affordable luxury in this case.

Once the project had been drafted on the drawing board and listed up, I sent the list over to the merchants. Three different thicknesses were needed: 50mm for the framework, 25mm stock for the rail work and doors and 18mm for the panelling. I stipulated that I would prefer consecutive boards to give me bookmatching options during the making process.

Normally I would be able to select this at the yard, but due to the size of the order and the ongoing Covid-19 situation, I opted for merchant selection and delivery, trusting Tyler Hardwoods' expertise.

When the friendly driver pulled into the yard, I moved some quite hefty boards into the shop to mull over the selection possibilities.

Looking carefully at what I had been given, I began with the carcass framework by sawing out the components, keeping an eye out for defects and for attractive figuring. Once these were milled up, I selected the most attractive medullary rayed lengths for the front sections of the skeletal framework.

MAKING THE CARCASS

A point regarding construction that often arises is whether to use Dominos or time-tested mortise and tenon joints. I have absolutely no problem with the Domino system and use the joints when necessary, but I felt on this occasion it was appropriate to keep things traditional and go with the latter option. When you have a lot of joints to cut and a schematic common working system to keep, personally I find this process easier to map out in my head and on to the project for this kind of furniture joinery.

Scaling off from my working drawing, I mapped everything out on to the uprights, marking both the rails' extremities and the mortise slots, clamping the workpieces together in their sets to mark multiples in unison. Once I was happy things would work, I worked the mortises out with a hollow mortiser, a ½in chisel in this case.

When this task had been completed, the rail work was carefully cut to length on the panel saw and tenoned up on a single end tenoner. I find a 0.1mm difference in tenon thickness to mortise slot size is the perfect fit; there can often be a bit of variation, but this can be easily adjusted with shoulder planes.













1 The oak boards in the workshop, ready for me to make my selection 2 Boards with the most attractive medullary rays were selected for the front 3 My working drawing for the wardrobe 4 The assembled framework – everything was looking good so far

5 The grooves for the panels 6 The end frames were glued on the mortise and tenon joinery housing the solid panels in grooves

Back on the bench, it was time to work the tenons in, using the bandsaw, handsaws and chisels to shoulder the ends of the tenons off. I then decided to assemble the framework to check the dimensions and layout.

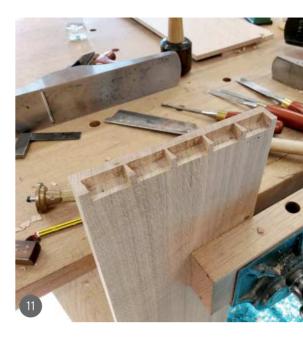
Everything was looking good so it was on to the panelling next. I decided to mill up all of the panelling in one hit for the carcass and doors, as they would all need to be fielded on the spindle moulder and I was trying to avoid multiple set-ups. Working through the conversion process, I was able to select the boards in such a way that the sides were bookmatched identically, as were the back panels. Most importantly, so were

the door panels, the most visible and prominent aspect of the job. I needed to complete these steps in order to ascertain the finished panel thickness, the fielding size and ultimately the groove size to house the panel work in. It seemed a bit of a catch-22 situation and, ultimately, I stuck with convention and worked my grooved sections in for the panels to be fitted to.

Due to the nature of the construction, the grooves had to be stopped and so I opted to rout them in working carefully off a side fence. I used 6mm twin-fluted cutters, one of which sheared clean off on the shank due to overheating and, in all honesty, a heavy-handed overload. Luckily I had ordered two of them!













7 The back boards were added in stages 8 The shelf dividers and drawer runner were added next ... 9 ... before the final glue-up could be completed 10 Transcribing the door hinges on to the carcass 11 The drawer features hand-cut dovetails 12 The doors and drawer fitted in place

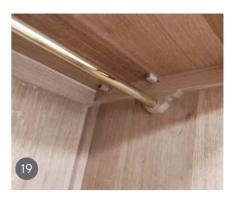
With the grooves made, I now had to make the panels fit. I worked out all of the dimensions and the panels were sized before the fielding began. I approached this process cautiously at the start as I had to mount a big fielding cutter block in the spindle moulder, but after making sure the speed gearing was correct and triple-checking the machine set-up and power feed positioning was safe and accurate, all the panels were produced in one hit. I left them slightly heavy on the thickness to allow for a good clean-up.

The sides needed to be finished and assembled next, ensuring the panels were cleaned up and all of the joinery went home nicely. It was time to get some glue on. A point worth mentioning: because the panels were made in solid wood and allowed to float and move in their housing assembly, I oiled the edges so that if and when there was any movement in its final domestic arrangement, no raw timber lines would appear due to shrinkage.

With the glue on and using T-bar sash clamps to hold everything in place, I spot-glued the panels in the centre of the end grain into the rail grooves before applying adhesive to the joinery elements of the frame and clamping up, sighting down the extremities for straightness. The panels were a good fit but there was some bulge-out along the dry sections so any discrepancies were knocked in with a rubber mallet.

















13 The drawer needed a little adjustment but I was satisfied with the fit

- 14 & 15 The octagonal-shaped handles were bandsawn and then hand carved 16 A spigot was turned on the lathe to help attach the handles
- 17 The ancient bog oak handles are a striking feature of the piece 18 Pegged tenons add another nice finishing touch
- 19 A brass rail completed the interior work 20 After a coat of satin oil, the wardrobe was ready for delivery to a happy client

Things were moving along nicely and while the glues were curing, the next assembly stages were planned and prepped. The back boards had to be done in staged operations. With a lot of joints to marry I needed to have faith in all of my previous work and so working through the steps I thankfully arrived at a point where I was happy. That was, I have to say, after a heart-stopping moment when briefly glancing over things, I realised that I had

accidentally put the top panels in the wrong hand; fortunately the glue – Titebond 3, which I use because of its slightly longer open time – was still pliable and the correct arrangement was eventually made.

The full glue-up was edging closer, but to get there a bit more prep was needed with the shelf dividers and, importantly, the drawer running system. I decided upon a framed system akin to a

dustboard arrangement which would span in between the sides, the drawers guiding off a rail incorporated in the side assembly.

So the time had come for the grand finale. The big glue-up had to be done on my own due to the difficult arrangements of social distancing. A bit of thinking later, some profoundly muffled and semi-muted exclaimed profanities and a broken sweat triumphantly resulted in the whole thing hitting home just in the nick of time, 30 minutes in and the glue was edging off. There it was, a beautiful solid oak-panelled carcass.

THE DOORS AND DRAWER

Once assembled, the doors were shot in mostly on the surfacer and tickled in by hand with the No.7. Spacing around the perimeter with a veneer shim, first the hinges were cut into the doors then transcribed on to the carcass with a marking knife. The carcass had been carefully shimmed up true and level beforehand.

The doors were hung for the first time with a single steel screw, later to be replaced with all brass slotted. It was a happy moment to have them swing after all of the hard work.

I tackled the drawer next, a traditional fitted affair involving hand-cut dovetails and slip work. To begin the fitting, the drawer front was grafted into the opening; the rest of the arrangement was then worked around this important initial procedure. Working through the sequences and stages, finding a comfort in the familiarity of the process after the glue-up and wisping down of the drawer sides, it was an utter delight for the drawer to push home after a bit of tinkering. With so many elements that could have affected the fit I was more than happy with the results of many hours of painstaking work. The piece as a whole was really starting to come together now.

ADDING THE DETAILS

The handles were tackled next. These were made in bog oak in an octagonal pattern. After a few attempts and advisory conversations with the client, we both agreed on the final pattern, which was achieved using a combination of bandsawn facets and hand-carved elements. The ancient fenland bog oak was crafted into a beautiful stand-out contrasting detail.

To joint the handles on to the working elements, they were through-bored with a bottom-cut router cutter and wedged from behind. Once in place, they really made a statement.

The original Gordon Russell piece from which mine drew inspiration has moulded details and all of the tenons were pegged. As this wardrobe is not a direct copy, it was up to me to make my own decisions on the final detailing. I added a simple beading detail around the base and a closing strip to the door join.

When I considered the pegged tenons, an inkling of an idea germinated and, still having a quantity of bog oak left over, I asked the client for their thoughts on jet black bog oak pegs. We both agreed that would look rather nice, so these works were undertaken.

A solid quartered oak top was built up and buttoned on to the carcass and, finally, a nice brass hanging rail was added inside the wardrobe.

The piece was finished with Osmo satin oil. Finally, the project was delivered to a happy customer. It was strange to do the handover in face masks, but still enjoyable nonetheless.



GOING IT ALONE

THE COVID-19 PANDEMIC HAS ACCELERATED **DEAN WATSON**'S LONG-TERM GOAL TO OPEN HIS OWN WORKSHOP AND LAUNCH A LUXURY FURNITURE COLLECTION. HE SHARES HIS PLANS WITH *F&C*

Dean Watson has always had a burning desire to be recognised as a designer in his own right – but the Covid-19 pandemic, resulting lockdowns and economic fallout have pushed him to develop his own business more quickly than planned.

'Before Covid gripped the country, about 30% of my business was designing and making for private clients and 70% was supporting other businesses in a design capacity, alongside designing and making my own pieces,' he says. 'Sadly, my work with these other companies dried up almost overnight as the first lockdown was enforced and the construction sites and manufacturers were closed and their own staff furloughed. This led me to accelerate my departure from the design support side of my business into solely designing and making for my own private customers, and now I am making the full transition to opening my own workshop.'

He is set to move into his new workshop in early 2021, and hopes to take on his first employee or apprentice soon. Dean is also in the process of launching his own custom-built furniture collection. He says: 'Our luxury custom collection will be a very varied range of freestanding pieces for the home, designed as standard in very common sizes for their locations and purposes, but with the ability for the customer to adjust the size to their needs, should they want an exact fit for a specific space for example, and to be able to choose whatever material and surface finish they want.

'The result is that they not only get a design they love, that perfectly fits their space and fits in with their interior, but it can also be produced in a fraction of the time of a fully bespoke piece as much of the work has already been completed – the design and manufacture processes are tried and tested, with jigs ready and waiting. What's more, when a potential customer makes an enquiry about one of our customisable pieces, we are able to create a 3D visual of their unique version of the design and send it back to them the very same day! I think this is the perfect additional service to offer to our customers, who can then

purchase such items towards the end of the project timeline, without fear of them not being delivered in time, as would likely be the case with full bespoke items.'

AMAZING APPRENTICESHIP

Dean first got interested in woodwork in high school technology lessons. 'I was amazed at all the different machines and tools, and wanted to try them all to see what they did,' he recalls. After school he took a traditional apprenticeship at West Yorkshire-based furniture maker JT Ellis, where he was taught by Malcolm Jones, and which he describes as 'amazing'. During that time Dean entered the multi-trade SkillBuild competition each year, and won silver and gold medals for cabinetmaking.

He says: 'My apprenticeship was frankly incredible, it was filled with so much time devoted to the traditional techniques of joint-cutting and cabinetmaking. From secret mitred dovetails to double and twin tenons, we were taught how to cut every joint and were scrutinised on technique and accuracy every step of the way. I have no idea how many sets of dovetails I must have cut in my training years but it was a lot!'

Alongside his apprenticeship on the factory floor Dean attended Leeds College of Art & Design one day a week, where he got NVQ and City & Guilds qualifications in cabinetmaking and wood machinery. During that time he completed his first furniture project: an elliptical coffee table with legs bridle-jointed into a cock-beaded skirt and a top with traditional button fixings. 'I created a wacky marquetry design on the top that at the time I thought was great, but in all honesty was hideous,' he says. Dean then went to Buckinghamshire Chilterns University to gain a degree in in Furniture Design and Craftsmanship. He has gone on to work at the forefront of the interiors industry, with prestigious private residential and commercial interior projects, from Bloomberg's new European headquarters to homes in Park Lane and other prime London locations, and even Buckingham Palace.







He spent many years as an employee, but always wanted to design for himself. 'Ever since completing my degree, I have had an itch that I could not scratch and I just knew that if I was to be truly happy in my work I needed to go out on my own,' he says. But with a mortgage and a family – he was married with a newborn baby at the time he launched his business – the process had to be balanced and well thought out.

'I left employment and took steady freelance design work working for other businesses, and during evenings and weekends I built on my own skills and read book after book on business and digital marketing,' he says. 'I then taught myself 3D modelling and rendering and learnt how to build websites. In fact my website and all of its content is now entirely built by me. My journey to this point has been long and somewhat winding, but with all of the skills and knowledge I have acquired over the past few years I feel that this is very much my time, and I am both ready and confident in my position and abilities as an independent designer and maker.'

DESIGNED TO BE HASSLE-FREE

'My entire working life has been in furniture design and manufacture, much of it working at the very highest level on luxury bespoke projects. I have naturally developed a very keen eye for detail and quality, so I simply strive to deliver the very best service, design and quality of build to my customers through a hassle and pressure-free process where the customer is informed, kept up to date and most importantly is confident in my ability to deliver the very finest results,' Dean says.

His design process used to start with a paper sketch, but these days he is more likely to turn to 3D modelling software at the outset. 'This is usually because I have an idea for a particular detail or concept and get straight to modelling it to its intended size, allowing me to instantly see any issues with proportion or its general aesthetics. I also find that if the concept idea is perhaps very organic in shape, then having a 3D model that can be spun around and viewed from all angles right at the start of the process really helps for me. I also use 3D printing to print

physical versions of some of my designs or parts of them. This is especially useful for unique intricate carved elements or moulding details and bespoke handles.'

When working on commissions he starts by offering customers photo-realistic 3D concept visuals for free, which builds their trust and confidence in him. 'The visuals I create are usually dimensionally accurate, so that what they see is as close to their end result as possible right at the start of the process. I also create for them their own personal web page on my site where they can view photos and videos of the progress of their bespoke commission live as we produce it, and they are encouraged to be as involved with the process as they wish to be right through to its completion,' he explains.

In his workshop he balances the use of machines and tools, but admits that in spite of being 'a big fan of some of the older traditional hand tools such as spokeshaves and the humble chisel', machines are becoming a bigger and bigger part of his work. 'I love to create dovetail joints by hand when I have the chance, but truth be told I am also a huge technology fan. I am under no illusion that to remain competitive in the future I need to embrace the technological advancements that our industry makes over the years. This is why many of my designs are created with the full intent of using CNC machines for their manufacture. Take my Orbit mirror for example, the components are created entirely by CNC.

'I do not doubt that most of even the smallest of workshops will very soon have some form of CNC machine, as the technology has become very affordable in recent years.'

Timber remains the main material in most of Dean's work, and he loves working with oak and walnut in particular. 'I also love to experiment with bright wood dyes and stains to create a more striking and bold appearance and love unique veneer work and marquetry. I keep telling myself that I need to find ways to incorporate more marquetry into future pieces where possible, so watch this space,' he says. As well as wood, Dean works with a whole array of other materials, including metals such as copper,









brass and silver for inlays and trim details; stone, marbles and man-made composites for cabinet tops and other details, and a whole range of other materials from project to project. 'I am not afraid to use any material, as long as its properties are suitable for use, and where possible I will always bring on board a specialist in that particular material if needed to ensure that the quality is achieved and that we get the very best of its use.' He prefers handapplied finishes such as liquid wax and oils, partly because they soak into the timber and allow you to still feel the surface of the wood. 'Plus they are easy to re-apply, whereas finishes like lacquers, which essentially create a film over the surface, make the wood feel less like wood and more like a smooth, painted surface,' he adds. 'Having said that, we also need to ensure that the finish we choose is durable enough for the functions the piece will perform.'

FURNITURE WITH A TWIST

Dean's favourite projects include his signature twisted drawer front. 'It is truly a pleasure to create and the customer always comes to me, having seen it on the website or somewhere else, and is choosing it because they absolutely love it. There is nothing better than doing a job you absolutely love for a customer who you know will love and treasure the end result,' he says. His most challenging commission was a full lounge collection for a customer who provided a visual of exactly what they were looking for. 'On the face of it that sounds easy, but as the visual was full of technical inaccuracies and proportional errors I had to completely model each item from scratch, trying to come as close as possible to the design intent visual while ensuring that each piece would function as intended. The range included two armchairs, a sofa, a coffee table and also a bespoke rug and light. They were all designed from the inside out to work as required and be ergonomically correct, while still looking like the provided visual. Needless to say, the customer was absolutely delighted with the end results. It was a very rewarding challenge.'

Much of his inspiration comes from playing around with a manufacturing process or idea and developing a concept design

from there. 'I love to design sleek and clean furniture and strive to create a uniqueness that where possible is born out of its very construction. As an example, my Orbit mirror's form is created from its simple layered construction.' He is currently working on a five-drawer cabinet for a private commission, which incorporates his hand-carved twisted front design. 'In fact the cabinet will only have four drawers as the bottom two twists are fixed together to create one deeper drawer. All drawer boxes will have hand-cut dovetail joints and be hand-finished in liquid wax with the base frame and rear of the twists stained slightly darker to highlight the twists and define the separation between the upper cabinet and the leg frame. The twisted fronts are cut from solid oak specially cut to order and kiln-dried,' he says. 'I am also working on a bespoke boot room and a bedroom for another customer, and then have a media wall and four freestanding items to complete, which will keep me busy for at least the next four months. Enquiries are still coming in thick and fast so I expect to soon be working to at least a six-month lead time for new commissions, which is great.'

Looking forward, Dean plans to use more technology in all areas of his business, without sacrificing any design or build quality. 'There will always be elements of a project that need to be done by hand and the need for skilled craftspeople to pull the various elements together on a project is always going to be there. I would love it if in a few years' time I was to have a small team of dedicated and passionate people to take the business forward, creating unique and beautiful furniture.'

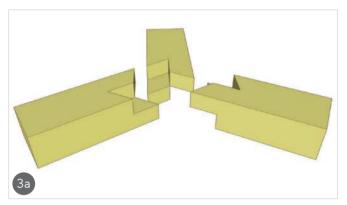
When he's not working, Dean spends time with his wife and three young sons. His youngest, Eddie, is only six months old and keeps him busy, while Dean is keen to curate his eldest son Joel's music choices. 'He now knows that the best music is to be found in the heavy metal and hard rock genres, and I am looking forward to taking him to his first concert next year, all being well,' he says.

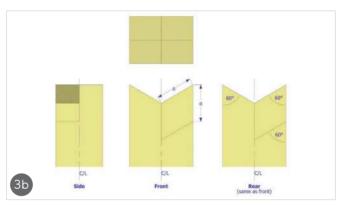
deanwatson.co.uk @dwbespokeluxury

















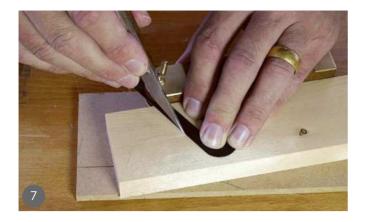
COMPONENT PREPARATION

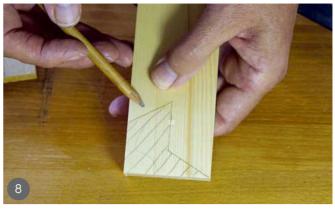
1 For a symmetrical joint, flush on both sides, each of the three components had their joint ends prepared square and true, and thicknessed equally. If you are trying this yourself, a few shavings worth of extra thickness for cleaning up the assembled joint is recommended, and it's worth noting that only the joint ends require this preparation, which should extend back far enough so as not to interfere with the marking out tools.

MARKING OUT

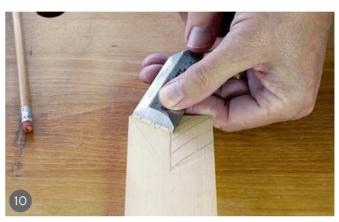
2 In addition to the usual marking out tools, I needed an accurate 60° reference. A draughtsman's 3:4:5 square and a digital bevel gauge were used to set and check my carpenter's sliding bevel gauge. I could equally have used a pair of compasses to construct a large equilateral triangle, where all corners are automatically 60°, or a large protractor.

- 3 Both front and rear sides of the components are marked out the same, and the waste areas of each are only removed to half thickness, so centre lines are a must.
- $4\,\mathrm{l}$ used a cutting gauge to mark in the centre line on the front and rear faces ...
- 5 ... before knifing in the outward bevel cut. Keeping the single bevel of the marking knife on the waste side of the cut preserves a crisp edge for the finished joint. Extending this knife line to the opposite edge, gives the location of the next line.
- 6 I checked the location of the inbound bevel cut by offering up a second component to the bevel gauge; with one edge tight to the bevel gauge's blade, the opposite edge lines up perfectly with the far corner the magic of equilateral triangles.

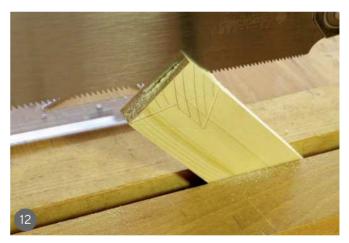












7 This line was then knifed from the centre line to the edge.

8 With the waste on the front side marked clearly, I was ready to flip the component over and repeat the process.

9 After marking out the front and rear sides of all three components, I reset my cutting gauge and marked in the centre lines on the edges.

10 l pared down to the bottom of the knifed lines, as an aid to clean sawing. This knifed wall provides a reference for paring the joint surface square to the side, ensuring the joint can close tightly.

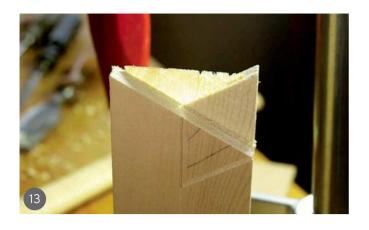
11 The long bevel cuts were sawn down to the centre lines ...

 $12\ldots$ and the majority of the waste sawn away with angled rip cuts, making sure to stay on the waste side of the centre lines.

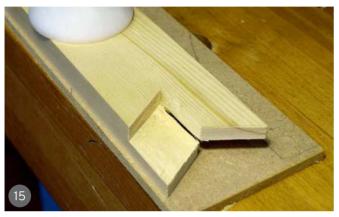
13 A paper-thin remnant was left from the rip cuts, which was simply broken away before ripping through the middle to the joint's internal corners.

14 This saw cut was slightly angled, to ensure it remained on the waste sides of the centre lines, which are not back-to-back.

15 After a little chisel work, I had removed all the waste from the joint, and with a little fettling it slid together well.













ASSEMBLY

16 Trying to assemble the joint in one go was awkward, so when it came to gluing it together I decided to tackle it in two steps. First, the mating surfaces of just two components had glue applied and were lightly clamped, and then using the third component dry for alignment, they were positioned and the clamp tightened. The third component was then carefully withdrawn. Then the remaining mating surfaces were glued, and the whole piece assembled and clamped.

FINISHING OFF

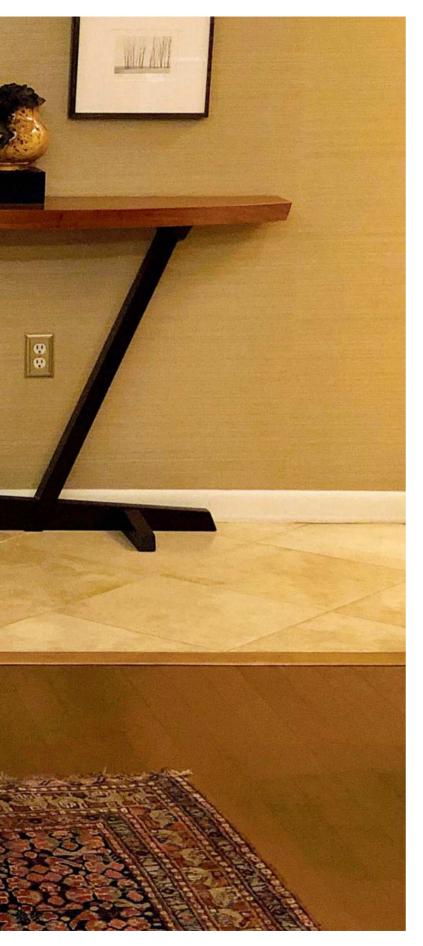
17 Once the glue was cured, the joint was flushed with the smoothing plane. A cambered iron helped plane the confluence

of grain directions, but I still ended up using a little fine abrasive paper. A thin piece of MDF, prepared at a 120° angle on one edge, worked as an excellent planing stop, and prevented any damage to the otherwise awkward shape.

18 Here you can see the completed joint in the table top.

After the test piece turned out okay, I was confident enough to use the joint in my side table. The steam bent legs were more difficult to control during joint preparation, but the result was very pleasing. As with most joints that look a little challenging at first sight, once you get your head around the geometry it becomes much easier.





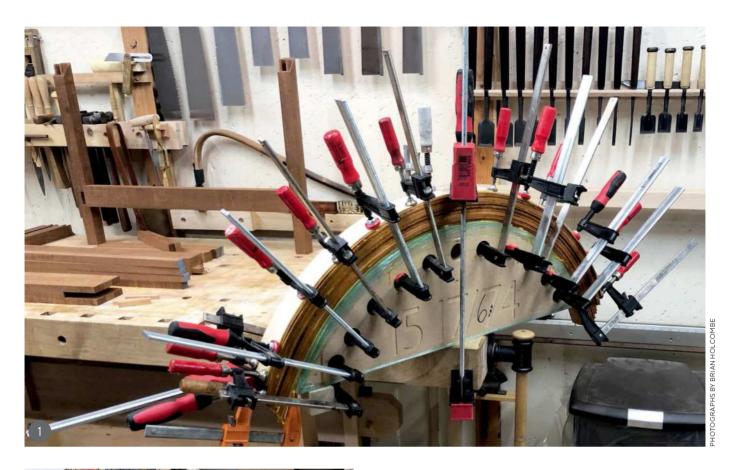
CLUB CHAIRS

BRIAN HOLCOMBE EXPLAINS HOW
HE COMPLETED A CHALLENGING
COMMISSION TO MAKE A PAIR OF
CARVED, UPHOLSTERED CHAIRS

Earlier this year a client commissioned me to build a pair of upholstered chairs. This project would require me to branch out from my usual range of work. My client provided a basic framework for what he wanted the chairs to look like. From there, I began drawing up ideas for what I would create, leaving room for the creative process to unfold during the building process.

Building these chairs began with creating a design centred around human proportions, however, without the upholstery present it can be a bit challenging to build around the idea of where the upholstery will eventually be placed. I found myself often referencing Mario Dal Fabbro's *Upholstered Furniture: Design and Construction*. Mario's book helped me to form the basic dimensions and account for the necessary addition of padding and upholstery. Once the rough dimensions were in hand, I could plan out the remainder of the layout, leaving a bit of flexibility on the final depth until the later stages of building.

I wanted to create a strong and lightweight frame without the need to tack on a lot of plywood. Keeping chairs on the lighter side helps them to survive one of the dangers of moving across a floor. Moving chairs across a floor can so often be the end of them, so with that in mind I chose lightweight materials, mahogany and poplar, to build out the chair frame. Mahogany is a beautiful show wood and poplar is light, strong and takes nails and tacks well but, while beautiful to my eye, it is better suited to remain behind the scenes.





MAKING THE CHAIRS

The first aspects of the work were straightforward: I cut mortise and tenon joinery to assemble the sides to the skirt and the skirt to the legs. This was followed by cutting a blind mitred bridle joint for the joint between the arms and legs. This joint leaves an equal amount of material on both sides and offers a lot of glue surface. Glue surface is critical to a mitre joint at such a stress point.

With all of the square parts now joined I could start building out the curves. For the bent parts on this chair, I chose to create laminations. Laminations are very strong, they are very predictable in spring back and they can be made with wood that does not steam bend well. I find them to be superior to approaches such as bricklaying for structural applications. Bent lamination allows for continuous grain and heavy sectional thickness and so they are uniquely suited to any applications requiring both.

Once the laminations were formed and trimmed up I assembled a mock-up to plan out their final locations, then began cutting the joinery. The process of cutting joinery on curved parts is not without its challenges, so I created forms to allow the parts to be processed as if they were square. For situations the square forms would not accommodate,I simply cut the joinery by hand.

- **1** Forming the laminations **2** Trimming the laminations
- ${\bf 3} \; {\bf \&} \; {\bf 4} \; {\rm A} \; {\rm mock}\text{-up}$ was used to plan the locations of the curved parts
- **5 & 6** The chair was assembled and the poplar capped off













7 The carving is based on a Ming design 8 The carving was fitted to the panel 9 The finished chair

Once the chairs were in their forms, I took them down, moulded the parts and began assembly. After assembly I capped off any exposed poplar with figured mahogany and finished up the framework necessary to accommodate the upholstery. This completed the frame, leaving one detail left to consider: what to do with the panel space. In planning with my client we had determined it would be covered with either a latticework or a carving, but in seeing the final shape I leaned towards a carved panel.

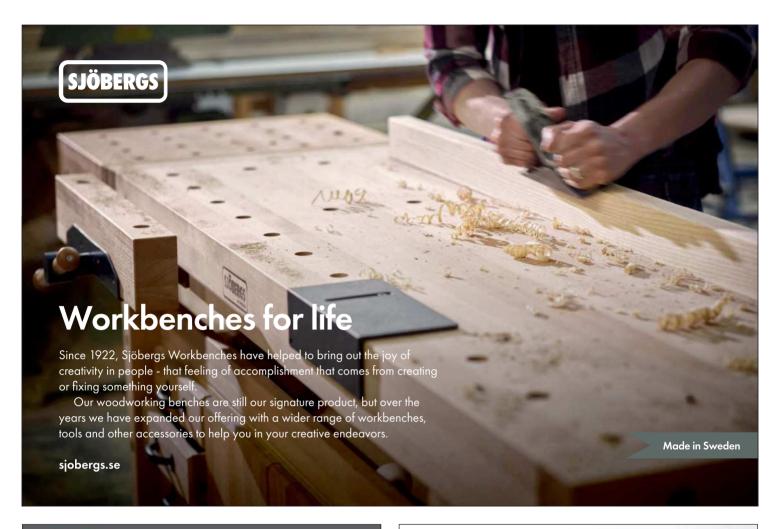
I found myself flipping through books of Ming dynasty furniture until landing on a carving which struck me, a beautiful 18th-century motif of two phoenixes. Once this design was approved by the client, I began consulting with two very talented woodworkers to recreate the work: Roman Horoszewski, who

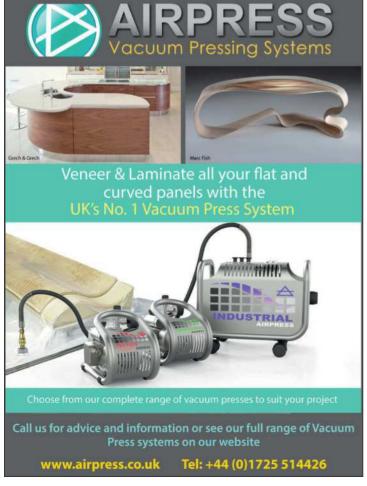
specialises in hand carvings, and Jim Becker, a CNC operator. Jim mapped out the original work from a photo using a programme that helps to duplicate such detailed works. He then created rough-outs of the carvings and sent them off to Roman, who chased out the work by hand, bringing the details to life. Hand carving with sharp tools leaves finely polished surfaces and crisp edges, it creates a finished surface in the process of its creation and it shows beautifully.

While th work was being completed the chairs were taken in by the upholsterer, Tom Szalus. Tom's shop built out the spring forms in addition to shaping the padding and covering the chairs with upholstery.

Once Tom had delivered the chairs to the client, I installed the panels to finish the build.









VASKO SOTIROV

VASKO SOTIROV GAVE UP A CAREER AS A CHEF TO MAKE FURNITURE FOR A LIVING. HE SHARES HIS JOURNEY WITH *F&C*

Vasko Sotirov's journey to professional furniture-making was 'a long and tortuous path,' he tells *F&C*. From making early projects – noisily – in his parents' garage to a fully fledged business producing mainly smaller-scale furniture in Bergamo, Italy, he has lived from moment to moment, building his career on experience rather than to an overall masterplan.

'For as long as I can remember I've always been attracted to making stuff with my hands,' he says. 'The problem is that it took me a long time to fully understand it, so I never focused on this passion until a few years ago.' Online videos inspired him to make a special present for his girlfriend: a wooden chest with compartments to hold glass spice jars. Now, thinking about the way he made the project, 'I get shivers down my spine', he admits. 'I was completely ignorant about good woodworking techniques and safety measures, but I somehow obtained a pretty decent result and happily didn't hurt myself."

He went on to make more projects for his home, including a dinner table and a bed, until the neighbours started to complain about the noise coming from his parents' garage. 'Stopping was not an option, so the search began,' says Vasko. He hunted for a year before he found a small, cheap workshop near where he lived. 'At that time I was working as a chef and hardly had any free time, so I had to visit my shop before and after going to

the restaurant, basically during the night. Sleep was really a luxury at that point and I was getting a bit frustrated because I couldn't see my girlfriend for more than a few hours a week, even if we slept in the same bed,' he recalls. 'Something had to change. I was working to pay the rent on a space that I couldn't use nearly as much as I wanted, and even when I did, it was taking me away from my family. I never thought about getting rid of my workshop - it was too important, so I decided to quit my job and make it as a furniture maker. That was not as straightforward as I wished or hoped, but I have never feared hard work.'

LEARNING THE ROPES

Vasko says he started out with a 'a very naïve approach - basically underestimating the difficulty of any project'. One of his biggest learning curves was a credenza he agreed to make for a friend. 'It was the best example of the saying: "If you don't know how to do it, say yes and learn how to do it later." The only problem was that I thought I knew how to do it,' he says. 'The picture was painful - four months of delay, and I lost double the money that I charged my friend by buying material twice after wasting it all due to mistakes and issues.' Unable to accept defeat, he ordered five books on making solid lumber furniture by next-day delivery. 'That pretty much was how I trained: problem, learn why, learn how, remake,' he says.

His first fine furniture project was a wine cabinet which he made straight after finishing the credenza. 'It's a tall cabinet made out of walnut and mahogany with a single drawer and a glass door. It sits on a steel base and serves as storage for wine bottles and glasses,' he says. 'It was a fun project because I had to apply the many new notions in my head and it all went well. I started with a beautiful and huge slab of mostly quartered Italian walnut. The outer structure is jointed with what felt like a million dovetails and the inner sections are all held in place by grooves and sliding dovetails. The drawer construction is very traditional, with halfblind dovetails at the front and a sliding dovetail back, inspired by Israel Martin who was going to become my teacher not long after. The whole piece is really well made, but it's lacking a lot of delicacy and elegance in its proportions.'

Vasko loves working with dovetails, which for him are 'the culmination of woodworking'. 'They are beautiful, functional, a joy to cut and so versatile. I'm a bit lost for Japanese joinery and sashimono work, but implementing complex joinery in a piece is very difficult from an economical point of view. Dovetails on the other hand are quite easy and fast to make, once you make a few of them. Another aspect I like about working with dovetails is the fact that a dry fit of a well-executed joint will not differ from one that's been glued up. This leaves a lot of flexibility.'





IN THE WORKSHOP

Vasko is now based in a 50 sq m workshop in Bergamo, in what used to be a furniture-making factory in the 1960s. 'It's made up of two square small spaces: one is my woodworking area and the other is dedicated to metalwork. At times I think about getting rid of the metalworking station and dedicating all of the shop to woodworking, but even if it's not very often, I still have to do some minor metal work,' he says. 'I love my workshop and where it is located, but it wouldn't be bad to have some more space and taller ceilings. That said, I'm probably going to stay here for some more time.

'The main area of my shop is very neatly organised to be as efficient as possible. In the middle of it, just under the huge skylight, there's my workbench. It's very minimalistic, made out of ash with a twin screw front vice and a newly added small tall vice. I would love to add a little tail vice as well, I'm drooling over the HNT Gordon one, but that's another story. Behind the bench and under my tool chest hung on the wall, there's another flat surface that holds my shooting boards and miscellaneous equipment. Opposite there are the bandsaw and the jointer. The rest is a tiny lumber storage.'

When it comes to tools, it's very important to Vasko that the whole process is enjoyable. 'Most of my work is done by hand, not because I try to be a purist, but because that's what I enjoy most. I love my machines, don't get me wrong, but I prefer the sound to the noise, the delicate to the violent, the shavings to the dust. Reality is different though, time is never enough and tools are not cheap. My workflow starts with a rough dimensioning at my bandsaw and jointer planer combo. Then almost everything is done by hand, except for some routing here and there.'

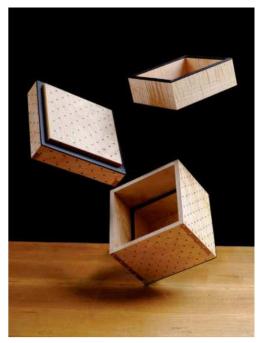
He has an old SCM Mini Max S45 bandsaw and a hobby grade DeWalt DW1151 jointer planer. In terms of hand tools he has a set of modified Irwin Marples chisels that now have a bevelled edge; a Lie-Nielsen dovetail saw; a Japanese dozuki saw for cross cuts; a Bahco fretsaw; a couple of Veritas bevel-up planes; a jack; a smoother and his beloved Lie-Nielsen 102 block plane. 'The rest is the essential kit of squares, marking gauges and knives, dividers and so on,' he says. 'You can never have enough tools I guess, but the bills always take priority, and for a small production shop like mine, the benefit of having the right tool is not always economically sustainable.'

Vasko's favourite wood to work is walnut, because of its smell. 'It brings me back to my childhood,' he says. 'I like working with domestic lumber, if possible lumber that I know the origin of.' Along with walnut he enjoys cherry, oak, ash, maple and quartersawn wenge. 'The exotics are amazing too and I like using them for little details or small pieces. Most of the time though I'm not very happy about how exotic lumber is made, so I try not to use big quantities. What I get extremely picky and selective about is the grain. I almost exclusively use quarter or rift-sawn lumber. It's just so elegant.' He also loves working with brass. 'My secret dream is to have a lathe and a mill so I can take the brass aspect of my work to a new level. I find that wood and brass are made to be together.'

Finishing is one of his biggest weaknesses, he says, and he prefers to use two or three thin coats of shellac, lightly buffed with a very fine steel wool and no wax. 'I prefer to touch the wood as it is, without putting products on the top, and the thinned shellac gives me just the right compromise between sufficient protection and very little alteration of the nude wood feel. It's also extremely convenient to apply as it dries in seconds.'











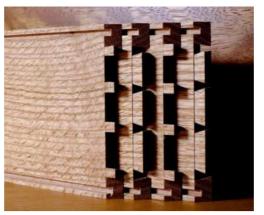




















TALES TO TELL

Vasko says emotions are at the foundation of everything he makes. 'I want my furniture to tell stories and be special for someone,' he explains. 'In order to achieve that, every piece is created for a specific person. Getting to know the client as much as possible is fundamental, and that's the reason why I never stop the communication throughout the whole build. It's not about asking for decision-making, but more about picking up small details, ideas and inspirations, almost as if I were trying to materialise their intimate sentiments. A perfect piece has a purpose to exist that goes beyond functionality and need.'

He adds: 'I get inspired by people and the intriguing relationships between them. The secrets untold, the small unique details and the depth are the main fulcrums of my creations. A deep respect for the raw material characterises my intimate way of working and pushes me towards hand-tooled work. I'm really convinced that the hands are able to infuse emotions into physical objects.'

His design process is 'hard to explain' and works differently for pieces he creates for his own collection and those commissioned by clients. For his collection, inspiration could come

at any time. 'It might happen while I'm working, while I'm going to bed or just about any other time. Then that idea starts living in my mind and quite subconsciously it grows and becomes more detailed and tangible. As I get more and more enthusiastic about it and if I feel like it's a good one, I make a quick sketch,' he explains.

'The sketch serves as a reminder. If an idea is so good that I actually really want to make it become a real piece, and I have the time to, my mind starts working on it constantly. It's like having an obsession. I have to be very confident about every single detail before anything gets done. This process might take a different amount of time depending on the complexity of the project, but as I feel ready and everything looks perfect in my mind, it's time to start.'

He adds: 'I used to jump right into the making without precise plans and drawings, but as my pieces are becoming more and more complex I felt the need to have actual plans to follow. Sometimes I even make a quick scale mock-up. The plans might change during the build – it's really nice to be able to follow intuitions and inspirations that come along the way.'

Vasko goes on: 'On the other hand, when dealing with commissions, I gather

as much information and inspiration as possible from the client. Once the needs and desires are all clear to me, a new obsession begins. Perhaps obsession is not the best word to describe it because it's something really enjoyable and positive. Any ideas that are born are then discussed with the client, just to make sure that we're on the right path.'

SMALL IS BEAUTIFUL

'People are surprised how small my pieces are,' says Vasko. 'I tend to prefer working on small furniture, as the proportions just feel more elegant to me. This actually brings more difficulty to my work, as the slightest error is magnified. Just to let you get a better idea of the size of my furniture, it ranges from the tiniest cube boxes I've ever made, measuring 50mm, to the biggest piece so far, excluding some tables, that was a credenza 2,000mm long by 900mm tall and 400mm deep. That credenza was actually pretty huge for my standards. Small creations are better suited to be filled with a crazy amount of details and are more manageable in my small workshop too.'

As his work progresses, Vasko loves exploring new challenges and setting himself ever tougher goals. 'It's really hard for me to choose a familiar path,'



he says. 'I want to explore more and more, even if this means dedicating a lot more time and effort. Hard things bring better rewards. The flip side though is the fact that I usually like my creations only for a couple of days after completion, and then I don't any more. They feel obsolete.'

Vasko only accepts big commissions if they fit in with his philosophy or make him feel passionate. 'There are only so many hours in a day, and unfortunately I can't make as much as I would like to, so most of the time I work for clients,' he says. 'A few personal projects still make it through, but very slowly. I really like working with clients as the process always brings new ideas, inspirations and I might even do things that I wouldn't do otherwise. It's that magical collision of two personalities that gives rise to something amazing. I hope to be able to stop taking quick jobs to help me pay the bills and dedicate all of my time to the work I'm passionate about, but it's really hard - especially in 2020.'

Vasko also loves teaching, and started out doing it in response to internet requests for workshops. 'As I actually like getting to know new people and helping someone out, it was easy to understand where things were going. Teaching is just a tiny part of what I do because my time

schedule is pretty busy. Unfortunately, as 2020 was scarred by the Covid pandemic, it was not possible for many to come to my workshop.' However, he is working on video courses which he hopes will reach people around the globe.

Looking forward he sees his work getting more complex. 'Mechanical

movements, secret compartments and a crazy quantity of little details,' he lists. 'I've already dipped my feet into some of this and it's definitely a direction I'll be following in the near future.'

vaskosotirov.com Instagram @vaskosotirov

DOVETAILS: VASKO'S TOP TIPS

Dovetails aren't really that tricky, all you need is some practice and a bit of attention. A few important points are:

- Have sharp tools, always. This will allow for greater control and more pleasing workflow.
- The precision of the final joint is the combination of how well executed every step is, from the squareness of the stock to the layout and the actual cutting. So don't rush any of the steps and be as precise as possible.
- Always cut the tails first and then the pins. The reason is that it's easier to be precise with a chisel than it is with a handsaw. Paring the tails is difficult, if not impossible in some cases (like London style dovetails) so it's better to pare the pins. You could master to fit your tails straight off the saw, but I prefer not to risk it.
- So if you go tails first, the only thing you have to make sure of is that the cut is perpendicular to the stock face. No paring needed. Then trace the pins from the actual tail board with a knife and cut just a hair outside the line (around 1mm or less if you feel comfortable). A slight paring with a chisel will bring you to the perfect fit.
- Don't stress and have fun. It's not the end of the world if you make a mistake and try again.















More than 30 years ago I was studying at the London College of Furniture and in the final year we had to make a simulation piece for our final project. The brief was to find an item of furniture we would like to simulate. The construction and techniques used would need to be the same as the original (barring concessions made by the senior lecturers). Ideally it should display as many of the techniques we had learned over the two-year course as possible.

I chose to simulate a silver tea table made from Brazilian mahogany in the Chinese Chippendale Rococo style of around 1750–75. The original table is in Christchurch Mansion in lpswich, Suffolk. Silver tea tables were used to display small silver items and to serve afternoon tea.

Having discussed the project with my senior lecturers and due to the prohibitive cost of finding a piece of mahogany wide enough for the top, they agreed the top could be made of board material with timber edging and then two sides veneered.

I kept the table after graduation and, although it gained a few

knocks over the years, it survived the attentions of both small children and dogs with wagging tails – until now, when yours truly caught her foot on the bottom of one leg and heard an ominous cracking noise. But it wasn't my foot ...

ASSESSING THE DAMAGE

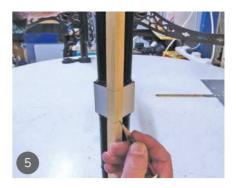
1 When I turned the table on its top, I found that not one but all four legs had cracked at either the top or bottom of the top cluster of turnings. Half of the corner brackets had been split along the grain, as well as separating from the leg block and rail.

STAGES OF RESTORATION

2 First the brackets had to be carefully removed so as not to cause any more damage. The edge of a sharp chisel was lined up at the joint and a swift tap with a mallet prised the bracket clear. The same procedure was used against the first leg block. All the brackets were removed, numbered and laid out to keep the broken sections together.

















- **3** The broken leg sections were carefully prised apart. At each corner there are three turnings jointed into a solid block above and below. Some of the turnings were held fast in the top, some in the bottom. The leg construction was jointed the same as the original table with a short stub of turning then a smaller peg in the middle.
- 4 As the joints holding the stretcher rails were still sound, once the legs had been prised apart the remaining leg sections with stretcher rails were lifted clear. The old glue on the joints was removed using a small chisel. The opposite ends of each turning were checked and, if slightly loose, they were prised out and cleaned up, their positions and direction of placement marked with small pieces of tape.
- **5** Re-gluing the table legs was now going to present a problem. The table is lightweight and the construction quite fragile. When made, each leg was glued up against a right-angled jig the length of the leg, clamps held the blocks against the jig to keep them square and straight and a sash clamp was used to clamp the leg lengthways. The rails and stretchers were then glued up in two stages. The weight of the clamps was going to be too heavy to glue the legs in the same way. With the longest section of the leg still together, right-angled sections of timber were prepared and thin card was used to pack out the blocks level with the turned beads on the column. The position of the leg blocks were then marked on the angled section.











6 Masking tape was used to tightly strap the right-angled section to the leg blocks. To prevent the tape tearing at the corners, the sharp edges were removed with a chisel. With the help of a second pair of hands the top leg turnings were re-glued and sash clamps used to pull the length of the leg together with enough pressure to pull the joints together but not enough to bow the legs out of shape. The legs were checked for square and the excess glue was cleaned off.

7 My attention now turned to the four split brackets. The breaks were clean and, when placed together, they fitted tightly. They were glued up and held with thin strips of tape until set as, due to the shaping, clamps were not an option.

8 The only serious casualty was one bracket where the corner point was missing. It had split at the corner when the leg broke and, when removing it, the piece had disappeared across the workshop. Holding the bracket in position with a piece of card behind, the key points were marked out on the card as well as the shape of the bracket.

9 With the card flat on the bench the bracket was positioned over the top. The curve was then carried through from the shape of the bracket and extended to the marked points to recreate the broken corner.

10 The required shape was cut from the card. A small section of old mahogany was cut and the edge for a butt joint prepared with a chisel. The required shape was then cut from the small section using a coping saw. Removing the bulk of the waste prior to gluing to put less stress on the bracket when cleaning up the shape.

11 Using animal/hide glue, the small section was then rub-jointed to the bracket, held flat on a waxed piece of card and left to dry.

12 To re-fit the bracket a chisel was used to size and true up the two square sides. A small amount was trimmed off and the fit checked before repeating until a tight fit was achieved. With the bracket fitted the curves were double-checked against the table leg and rail.

13 Holding the bracket firmly in a small vice with padded jaws, needle files were used to shape in the replacement part, working with the grain and from both sides to prevent the grain tearing out at the edges.

14 With the brackets repaired they were glued into position using the animal/hide glue, rub jointing as much as possible. But for added security to keep them in line at the back edge, thin strips of tape were used to hold them until the glue had set.

15 The small repair was stained and polished to match and the whole table was given a coat of wax. Round, short-bristled brushes were used to wax the fretwork.



MEANS TO AN END

A HAPPY AND PRODUCTIVE PROCRASTINATOR EXPLAINS HOW PUTTING OFF ONE TASK (BUT STILL COMPLETING IT ON TIME) CAN ACTUALLY HELP TO GET MORE THINGS DONE

Procrastination. It's something with which most people are familiar. It's that time when you're doing something 'essential' even though there are more pressing tasks that need to be completed. One way of identifying that what you're doing is procrastinating is if you find it easier to explain and justify the behaviour to yourself than to other people. This might be because procrastinating - deferring action or delaying tasks - is generally regarded as a negative thing. It can make procrastinators feel guilty about their behaviour and not want to explain it. But is this right? Should the procrastinators among us feel guilty for something that feels natural?

There are two types of procrastinator: the unproductive (in pure practical terms) and the productive. The former might avoid doing a specific task because they 'can't be bothered' and watch TV, scroll through social media or read a book instead. Most people will have done this at

some point. The latter, on the other hand, might avoid a specific task by engaging in another project. If there's a deadline looming, a productive procrastinator might clean the house, wallpaper the spare room or start work on a chair that's due in six months, rather than the one that needs to be finished in three days. The act of procrastinating tends to end in one of two ways – the deadline is either missed (negative) or hit (positive). If it's the latter, and a task is completed satisfactorily, is there really a problem?

Many people view procrastination as putting off the completion of a task for no reason. But there can be many legitimate explanations for the behaviour. Some people believe they work better when under pressure, so they procrastinate until the deadline is imminent.

Psychologists Dianne Tice and Roy Baumeister, writing in the journal Psychological Science, explain: 'The present evidence suggests that procrastinators enjoy themselves, rather than working at assigned tasks, until the rising pressure of imminent deadlines forces them to get to work. In this view, procrastination may derive from a lack of self-regulation and hence a dependency on externally imposed forces to motivate work.' Again, if it's effective, then perhaps it isn't a negative thing after all.

SENSE OF SATISFACTION

Another cause of procrastination is a desire for immediate gratification, or reward. This can subconsciously encourage people to place a higher value on things for which there is immediate benefit, rather than on things that defer it to some point in the future. In this way, the feeling of satisfaction gained by wallpapering the spare room might seem more appealing than the sense of achievement gained by completing a task that's unlikely to be acknowledged for some time.

Uncertainty can also be behind a tendency to defer tasks. Take Christmas

shopping, for example (apologies for mentioning it so soon in the new year). Timothy Pychyl, associate professor in the department of psychology at Carleton University, Canada, explains: 'You don't know what you're going to get for people. You don't know what they want or even what size to get, so there's a lot of uncertainty, and uncertainty is one of those situations that leads to procrastination. Then you add to that crowded parking and stressful situations getting gifts in the stores, and you get something that's aversive and leads most of us to want to put it off.'

BRAINPOWER

Recent research by a team from the faculty of psychology at Ruhr University Bochum, in Germany, has shown that procrastination is all about how the human brain is wired. Its findings suggest the possibility of a genetic bias. Headed by Caroline Schlüter, the team describes a battle in the brain between the limbic system and the prefrontal cortex. The former is the pleasure centre of the brain, while the latter controls executive function, which differentiates between conflicting ideas. Unsurprisingly, the limbic system is much more appealing and guides towards procrastination. Also, those who defer tasks have a higher volume of amygdala in the brain, which forms part of this system. This evidence suggests people whose genetic make-up is along these lines can be more inclined to procrastinate, which makes it even more inappropriate for society to imply that everyone should feel guilty about their behaviour.

It is nonetheless advisable to control avoidance tendencies and try to fulfil obligations on time, even for those who find leaving everything to the last minute is mostly effective. Why? Well, underestimating how long a task will take isn't too much of a problem if the deadline is weeks away, but discovering the evening before a project has to be handed in that you don't actually have enough time to complete the work isn't great. It might result in an all-nighter, below-par quality or a request for an extension, none of which is ideal.

PERSONAL PRODUCTIVITY

I see myself as a productive procrastinator. I always meet my deadlines and have a good understanding of how long activities and tasks will take me to complete. I don't see why spending two hours on a task the day before it's due for completion is any different to working on it five weeks ahead of schedule. As a writer, my procrastinating often involves ruminating on and researching the subject I need to explore. In this way, when I do finally sit down and get to work, my idea of what an article or book will look like is largely already formed. My procrastination has been a valuable tool in preparation - that's what I tell myself, anyway.

My biggest sense of pride, however, is that I get a lot done. I rarely sit and watch TV. Procrasti-cleaning is my most common activity (I do get a great deal of pleasure from a spick-and-span house, garage and loft if I have something to do which I'm avoiding), to which I add creative pursuits. I am also a serial procrasti-learner - a term used to describe someone who takes numerous courses rather than completing a specific task. Some are work-related, others are pure enjoyment and many are, honestly, avoidance. My mindset is that education is rarely a bad thing, so while I may be using it to delay starting a particular task, I am nonetheless learning more about the world.

Putting my general approach to procrastination into practice would result in a scenario that goes something along these lines: I have a task I don't want to work on at this moment, so instead I get on with some cleaning, enrol on a course, complete an assignment, socialise with friends and then decorate the spare room. I still finish the original assignment on time, but I've also done five other things that might not otherwise have happened. It makes me productive and removes the need for any guilt society suggests I should feel. And for me, that can only be positive.

WORDS: CHARLOTTE BOOTH

WORK TO YOUR SCHEDULE

If you're a procrastinator by nature and would like to make your taskavoidance time more productive, here are a few ideas that might help

- Prioritise jobs according to importance, or by deadlines. If you ensure you're always aware of your deadlines, you tend not to miss them, even if you're inclined to delay tasks.
- Identify how long each project takes to complete be that two weeks, two days or two hours. That way you can be more confident about the absolute latest time you can begin work on any assignments.
- Explore why you are avoiding a task. Are you uncertain about what you're doing? If so, you could do some research (procrasti-learning) to gain a better understanding of what's involved, which can help to remove anxiety, or ask for more guidance from your client.
- If you find you're avoiding a project by doing lots of other things, you could employ Gretchen Rubin's one-minute rule. The author of bestselling book The Happiness Project, she suggests completing any tasks that will take one minute or less - putting books back on to a shelf, emptying the dishwasher, sorting a load for the laundry, etc. It's amazing how much can be achieved in only 60 seconds, and it might be the encouragement you need to start the task that's waiting in the wings, because to be an effective productive procrastinator, it's vital to finish that assignment on time.





NO PLACE LIKE HOME

KANSAS-BASED JAMES WESLEY FURNITURE'S GOAL IS TO ENHANCE
THE PLACES – OR COMMUNITIES – WE CALL HOME. **JAMES WESLEY**,
MORE COMMONLY KNOWN AS WES, SHARES HIS STORY

What is your background and how did you first get interested in furniture making?

I grew up helping on house projects with my dad. Working on these projects gave me the confidence to use tools and break down raw material. I have always been interested in being creative in different ways and eventually landed on furniture making.

How did you train?

I have trained by teaching myself with tutorials, videos and many books. I have also attended seminars by woodworkers I admire. I don't have any formal training in woodworking.

What was the first project you completed?

I made my first furniture project when I got engaged to my wife – I built our first bed. I wasn't happy with it and this ultimately pushed me to learn how to perfect my mistakes.

What made you decide to set up your own business?

I pursued work in the business world before starting my own company. I attempted to be satisfied working for my in-laws' successful family business. I saw many things in how they ran their business that I respected and wanted to be a part of. While in this position, I learned that I really needed to be creative and be handson in my daily work. I felt that I was losing some of my creative self while working in the traditional business world, and this began to take a toll on me. I began to use my garage as a workshop and

started making furniture for fun. Over time, I realised that it was more risky to stay in a 'comfortable' job where I couldn't use my skills and talents than to make the leap to start my own business.

How did you go about it?

My wife and I connected with multiple business mentors and knowledgeable family members who could help us learn how to start a successful business. One mentor in particular really encouraged me to think through what making things with my hands means to me and why creating and building is important to me. Another mentor challenged my fear of failure and helped me to recognise that failure wouldn't likely happen overnight, that I would have constant opportunities to self-correct and pivot. We have strived to make sure that our business represents these core values in how we operate. Our garage workshop and business started with projects for friends and family, and has expanded by word of mouth across our area.

Is there an overarching ethos behind your work?

Our vision for James Wesley Furniture is to create a powerful legacy of craftsmanship and sustainability through our passion for making. We aspire to use functional art to inspire and enrich the communities people call 'home'. We are dedicated to our core values of innovation, integrity, adaptability, collaboration, sustainability and meaningful service. These ideas are important filters for us that guide us as we make decisions.

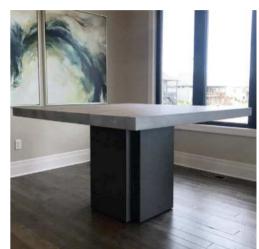














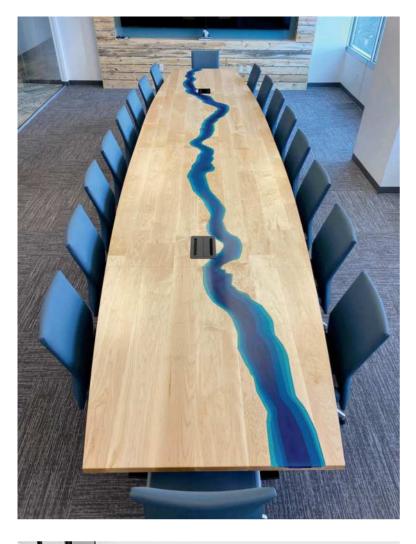














Tell us about how you work – what type of tools do you like to use and why?

I enjoy using a wide variety of tools. I consider myself a hybrid woodworker, using both hand tools and power tools. I love to learn new things and find it interesting to try different types of tools.

Tell us about your workshop.

I have a lot of fun in my shop. I had the pleasure and blessing of getting to design my shop from the ground up. The shop is located on our relatives' property out in the countryside in Kansas and we wanted it to be appealing to them as well. Together as a family, we decided on a classic red barn look. I tried to set up the interior of the shop with a smooth flow of production in mind. The front of the shop begins the process of breaking down materials and moves through planing, sanding and so on. Toward the back, I have an area to complete minute details and finish my work. I weld in a separate area as the addition of metalwork seems to be the perfect fit for some spaces. I started in the shop with many more tools than I currently own and realised along the way which tools would be my most used tools. We outgrew our garage and moved into the shop in January of 2018. I imagine this is the long-term home for our business.

How does your design process work?

I am constantly inspired by my surroundings and try to implement some of my inspirations into my projects. Most of my clients are looking for custom furniture and haven't been able to find the perfect piece to function and look exactly as they have desired. I work with my clients to find a unique design that will meet their needs and be one of a kind. After we have decided on a design, I love to document the building process with photos and videos. It has been so fun to see people getting excited to watch raw materials turn into something functional and beautiful. I believe that sharing this process with others helps to promote the craft that gives me so much fulfilment.

Which woods do you most like working with?

I love working with walnut. We have lots of walnut native to Kansas and our customers love using local wood. Walnut has such a deep, beautiful richness to it and I get excited to open up each walnut tree I use and find its uniqueness.

What sort of finishes do you prefer?

I love using hard wax oils, such as Rubio Monocoat, on my pieces. I prefer the feel and colour richness. I also like that it is non-film forming while still offering protection. When I do use a different finish, I typically polish a lacquer.

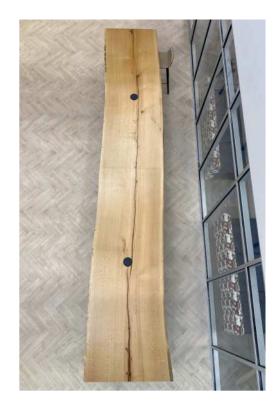
You do a lot of stunning work with live-edge furniture. What are the challenges and highlights of working with wood in this way?

Live edge offers a one-of-a-kind look for customers who enjoy seeing the detail of a large portion of a tree. It is a challenge to work with because of the expectation of wood movement. When designing a piece with live edge, I structure my piece to account for the possibility of wood movement to the best of my ability.









Are there any special techniques you would like to pass on to readers? One trick I use to improve the sanding quality and technique

is to water pop the grain between grits. This helps to eliminate swirls when using a power sander.

What inspires you and where do you get your ideas from?

I am a visual person and find inspiration in random textures and designs I see around me. I love many woodworkers and designers and am particularly drawn to designs with sleek and clean lines.

What is your favourite project you have worked on?

My favourite project to date is the walnut burl tambour door bar cabinet. It was a culmination of the techniques I had been learning and working on. I had to learn how to make the sliding doors after learning how to bookmatch burl veneers. I was able to use many tools, from hand tools to the CNC, to achieve the design. This project was not designed for a specific client and I was also able to fully design this piece from start to finish. I love it when I get to have that creative opportunity.

What is the most challenging project you have worked on?

My most challenging project was a 22ft long conference table that needed to fit in an elevator in order to reach its final destination. It was also a complex design and featured a topographical map of the river out the window of the office this table was designed for. This table was also our first out-of-state delivery and provided a great learning curve in many ways. We ended up creating a modular design for smooth delivery and installation. Luckily, all the challenges paid off and the table was beautiful and is well loved.

Have the Covid-19 pandemic and lockdowns affected your business?

As a very small business, the pandemic and lockdowns have not impacted our business in major ways. I am mostly working alone in the shop and have been able to work each day. When we learned that the pandemic was creeping toward America, I

stocked up on my most frequently used items in order to limit my trips to the hardware store. Our biggest impact from the pandemic has been on my wife, as she leads our communication and keeps the business running behind the scenes. She quickly became 'teacher' to our four kids on top of her personal job and helping me. Over time, we have worked to share more tasks and accept that we are slower in some areas of our work as we do the best we can with the situation. Our clientele has shifted in that we are working with fewer businesses and corporate settings and more homes and individuals as people shift from the workplace to their homes. If the health and economic impact of the pandemic continue without recovery, I imagine we would be impacted more distinctly as time moves on. Considering all that the world has been enduring during this time, we are grateful for the work that we have, the extra time together as a family and we are especially grateful for the essential workers who are working tirelessly.

Where do you see your work going in the future?

I would love to continue to grow my ability to create my own designs from start to finish. I enjoy the opportunities I get to design without limitations and challenge traditional limits of furniture making to create new ideas.

What do you do when you're not working?

I love being home with my wife and kids. I make it a point to be home and available frequently, as the business does consume a lot of energy. My kids range from three to 10 years old and get to come to the shop with me while my wife works. I love seeing them mess around with off-cuts and sawdust. We enjoy being outdoors together and have most recently been loving taking our huge canoe around Kansas. I am currently designing a really fun teardrop camper so that we can explore America together in our off time.

jameswesleyfurniture.com

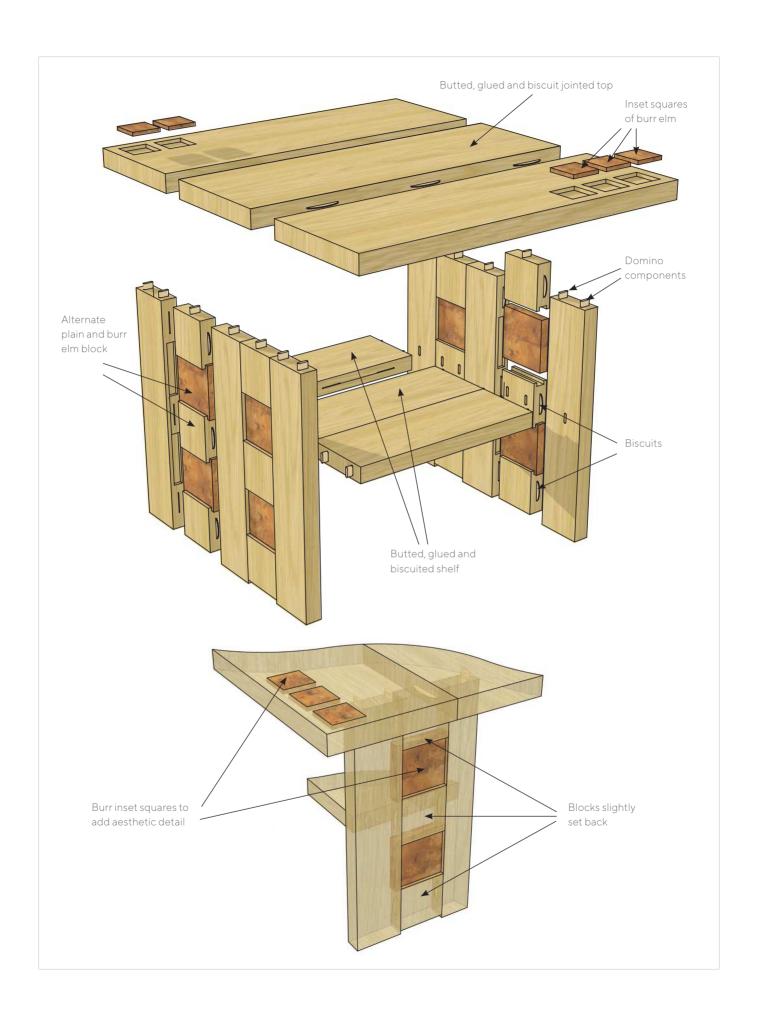


KEVIN LEY BUILDS AN OCCASIONAL TABLE WITH BURR ELM INSERTS

My client commissioned this table to go in their music room. There was little furniture in the room other than the audio equipment, seating and a storage unit I had made previously. This storage unit is a substantial piece made from elm, with burr elm drawer fronts, holding several hundred LPs and a similar number of CDs. It was constructed from thick cross-section timber to take the weight, and the new table needed to conform to this simple, chunky look. The table would be placed between the carefully positioned listening chairs, so that space dictated its overall size.

My client wanted the table to be made in elm with burr detail to match the storage unit, with a square top at 'drinks' height and a shelf. I found the most suitable top size for the space available to be 609sq mm and we agreed the height to be between 432mm and 458mm.

I went to my CAD program and, starting with the square top, carried the square theme through the design. I was able to incorporate square burr panels into the sides and, with a nod to Charles Rennie Macintosh, placed some square burr inlays into the top face. The client was pleased with the final design and I started the construction.











- $\textbf{1} \ \mathsf{The} \ \mathsf{elm} \ \mathsf{storage} \ \mathsf{unit} \ \mathsf{that} \ \mathsf{inspired} \ \mathsf{the} \ \mathsf{design} \ \mathsf{for} \ \mathsf{the} \ \mathsf{occasional} \ \mathsf{table} \ \textbf{2} \ \mathsf{Rough} \ \mathsf{cutting} \ \mathsf{timber} \ \mathsf{to} \ \mathsf{size} \ \mathsf{for} \ \mathsf{the} \ \mathsf{table} \ \mathsf{using} \ \mathsf{a} \ \mathsf{jigsaw} \ \mathsf{a} \ \mathsf{a} \ \mathsf{jigsaw} \ \mathsf{a} \ \mathsf{a}$
- 3 Cutting the rebates for the burr panels. The biscuit slot can be seen too
- 4 Liberon wax retouch crayons being used to fill any blemishes in the burr panels

PREPARING THE TIMBER

Good elm is pretty scarce these days; I had considerable trouble sourcing enough of it when I made the storage unit. Eventually I was fortunate enough to find a stack of beautiful, top-quality, clean, wide boards in a local wood yard. Luckily, the yard still had some elm from the same stack so I selected a suitable board for the table.

By now the stack had been outside for a long time and in the absence of a convenient load going through the wood yard kiln, I decided to re-kiln it myself in the workshop. I had some burr pieces in my wood store for the panels and inlays that would go in with it. For my makeshift kilning, I use a suitable container and either stand the dehumidifier inside it or duct the dry output air from the dehumidifier into the container. Other methods for small pieces include a few days in the airing cupboard, or even a few minutes in the microwave.

I had decided to use biscuits to join the pieces of the sides together for speed and convenience – the grain was running in the correct direction for strong joints. All the components for the sides were trimmed to size and the slots cut for the biscuit joints. The rebates for the burr panels were cut on the router table.

A few small blemishes in the burr panels were filled using wax sticks,

and the panels sanded to a finish and oiled. As these loose panels would be set in rebates, any shrinkage would show pale unfinished wood if the whole panel was not oiled before fitting it into the housings.

The inside edges of the framing pieces around the burr panels were sanded down to 240 grit before assembly while they were easy to access. All the components of each side were checkfitted dry and the clamps set to size.

Glue was applied to all the slots and biscuits and the sides clamped up, checked for square, adjusted and left to cure. Once cured, the glue ooze was scraped off and the sides were trimmed,









5 The panels were finished before assembly to prevent any pale unfinished surfaces showing due to timber shrinkage6 The burr panel framing pieces were sanded before assembly 7 The table sides being dry-fitted before gluing and clamping

8 A table side is glued and clamped, then checked for square before being left to cure

sanded down to 150 grit and placed to one side.

The top and shelf were both made up of three narrower pieces, butt-jointed with reinforcing biscuits. The edges were planed on the jointer then the ripples were hand-planed out for a perfect fit.

An extra stroke or two with the hand plane hollowed the centre of the joint, increasing the pressure on the ends. This helps to counter any tendency for shrinkage in the ends caused by extra loss of moisture through end grain.

The top and shelf were clamped up and left to set, then trimmed to exact size and sanded down to 150 grit with belt and orbital sanders.

I used Festool Dominos to join the top and shelf to the sides, the thickness of the timber allowing the Dominos to be fitted into long grain both ways, again making a strong joint. The Domino slots were cut in the relevant places in the sides, top and shelf. The Domino jointer fences and a clear view of the cutting area make accurate placing of the slots a relatively simple job. Dominos tend to loosen up each time they are inserted and removed so I don't press them fully home on a check fit, instead going for a partial fit to ensure the slots all line up.

The shelf edges were sanded with sanding blocks, and the clamps and battens prepared. To ensure the table

surfaces were protected while clamping, I prepared strips of carpet to go under the battens. The table was then clamped together, checked for square and left.

TABLE TOP INLAYS

Some strips of burr 6mm thick and just over 50mm wide had been prepared and conditioned. I put them in the airing cupboard for a few days to dry them out even more, then accurately cut six (one spare) 50mm squares. A slight chamfer was put on the bottom edge so that when the recess was marked around them, it would be slightly under size. The inlay could then be driven home, forming a compression fit in the recess.













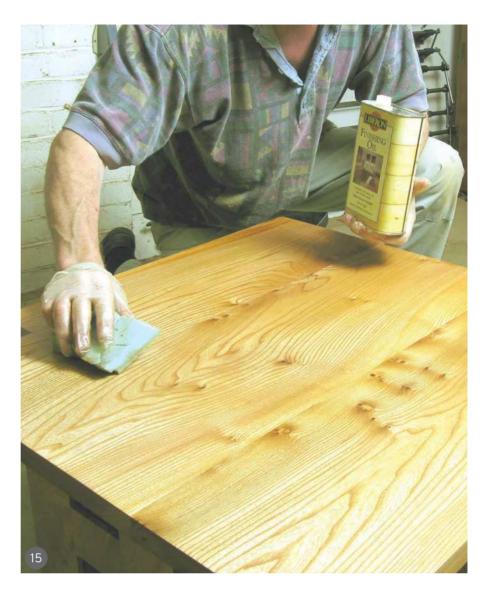
The edges of the top were rounded over with a ¼in radius cutter on a hand-held router and the top sanded with belt and orbital sanders down to 240 grit.

Most sanding of the other components had already been done so all that remained was to hand-sand the whole piece, ensuring any blemishes were removed. An oiled finish was required to match the storage unit. The burr and elm can be quite porous and oil penetrates into the wood, helping stabilise it by slowing down any moisture take-up and loss.

FINISHING

The first coat of oil was liberally applied, left to soak in and then refreshed every 15 to 20 minutes until it would take no more – in all about four to six coats. It was then wiped off with a soft cloth to prevent any oil build-up on the surface, and left to harden for 24 hours.

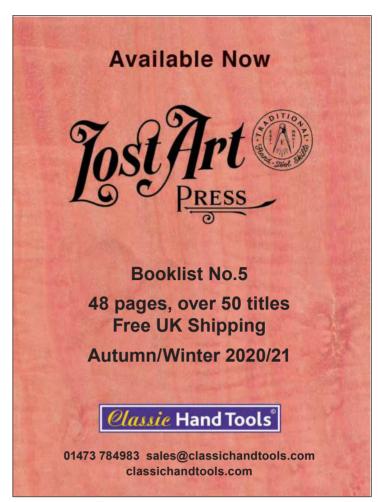
The surface was cut back with a Scotchbrite grey pad and three further light coats of oil were applied at 24-hour intervals. The last coat was cut back with the Scotchbrite grey pad and buffed off. I like an oiled finish on elm and burr because it brings out the stunning figure and colour in the burr and the lovely golden colour of the elm. The table was kept in the workshop for 10 days to let the oil harden fully, then delivered to my client.



- **9** Cutting the biscuit joints for the top and shelf
- 10 Cutting slots with the Domino Joiner
- **11** Cutting the Domino slots in the sides, using a clamped metal rule as a guide
- 12 Checking the Dominos for fit with a partial check fit
- 13 Sanding off the shelf edges
- 14 The table top, sides and shelf are finally all assembled, and glued and clamped together
- 15 Applying Liberon Finishing Oil
- **16** An oil finish brings out the beautiful grain on both the elm and burr elm







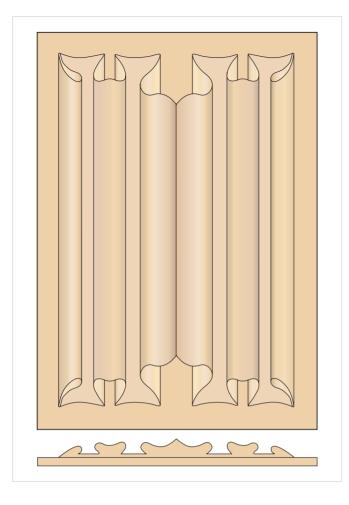


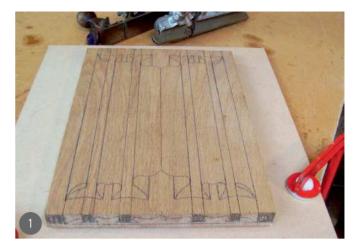


CARVING LINENFOLD PANELS

STEVE BISCO CARVES A TRADITIONALLY DECORATED OAK PANEL

The linenfold pattern, as the name suggests, represents the folds of a piece of linen fabric. It developed in late medieval times, probably as a more permanent alternative to the fabrics with which chamber walls were draped to make them more comfortable. It was used extensively as 'wainscot' to panel walls, as well as on doors and chests. It is the quintessential decorative feature of the Tudor period, enjoying a renaissance during Victorian and Edwardian times.







Although linenfold panels are not made exclusively from oak, it is the traditional material for them. Oak is durable, attractive and it carves well. It also has the advantage that it can be aged to look more ancient than it is by the process of 'fuming' with ammonia. Fuming is simple and I will show you how to do it in this project.

You may not want to go so far as panelling a room with wainscot, but linenfold is ideal for panelling a wooden chest or for enhancing doors (why not Tudor kitchen cupboards or wardrobes?). Or, as in this case, it makes an attractive decorative panel to hang on a wall.

MAKING THE CARVING

1 Make a full-size copy of the pattern and trace it on to a piece of oak about 22mm thick. The example here is 343 x 240mm overall. There is a 19mm flat border round the edge, giving an area of pattern 305 x 200mm. If the panel is to be inserted into a chest, door or wainscot framework, the outer 6mm of the border

will be covered by the framework. When making your drawing the panel size can be adjusted in width if you need it to fit a specific frame, and its length can be adjusted simply by extending the lengthways lines as required. Mark the face and end patterns on to the wood and highlight the 'channels' between the folds. It is easier to work on if you fix it to a backing board which you can clamp to the bench. I attached it to the board with self-adhesive Velcro, which I found very effective.

2 Cut a rebate on each of the long sides with a rebate plane. Take it down to a 6mm thickness at the edges (we will call this the base level). Next, use a plough plane to cut the channels between the folds. Take these down to 3mm above the base level to form the 'ground' for the linenfold (we will call this the ground level to avoid confusion with the base level). Cutting the channels is easier if you use a tenon saw to cut down to depth just inside the guide lines, then chisel out

some of the waste before bringing the plough plane into use.

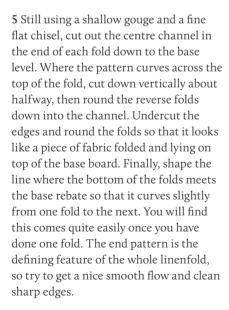
3 Use convex and concave moulding planes to form the 'folds'. Make sure you form a sharp 'crease' in the central fold. If you can't get moulding planes you can do the job by careful use of gouges, or if you are skilled with a router try it with that. To undercut the folds where they meet the ground in the channels, lay a tenon saw on its side and run it along the edge, then round off the underside with a gouge.

4 With the lengthways pattern formed it is time to tackle the ends. First cut across the folds 19mm from the ends and plane down to the base level as for the sides. Now draw the end pattern back on (it was planed off when making the folds). We now switch from planes to carving tools. Use a shallow gouge and a fine flat chisel to cut away the corners at the ends of the folds down to the ground of the linen, which should be about 3mm above the base level.





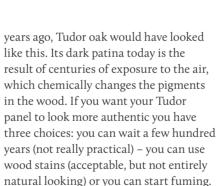




6 To keep the piece looking crisp, avoid using abrasives. A good tooled finish will give it more life and have more of a period look. However, you may have noticed that our oak is looking a little pale compared to the dark brown colour we are used to seeing on Tudor linenfold. Five hundred







FUMING

7 Fuming with ammonia is the traditional way of darkening oak. It looks more natural than stains because it causes the same chemical changes in the wood's natural pigments as ageing does. It effectively compresses the chemical changes of centuries into a few hours. Fuming is easy – you just need some sort of tent or container that you can make airtight with the wood inside it, such as this plastic tub. I am using a polythene sheet to cover the top, sealed round the edges with double-sided tape. Pour a few tablespoons of ammonia into a saucer





or into the bottom of the tub. Place the panel clear of the bottom on a couple of non-metallic supports, allowing the fumes to flow freely around the wood. Cover and seal the tub.

8 After about 12 hours, remove the panel from the fuming box. It should be a nice deep brown. The time taken for fuming depends on a number of variables (strength and volume of ammonia, temperature and the darkness you want to achieve) so it is more of an art than a science. Check the colour every few hours and take it out when it looks about right. If it is too slow to darken, add more ammonia and leave it a few hours more.

FINISHING

9 When it is fumed, the panel will have aged centuries in a day and will look like the real thing. Give it a rub over with a good wax furniture polish like Antiquax. Now you can hang your panel on the wall as a decoration, or make some more like it to panel a door, a chest or even a room!



GENERAL PRACTICE

DUTCH DESIGNER **PIET HEIN EEK** HAS CREATED A COMPLETE,

IDEA-TO-CONSUMER WORKSHOP AND VISITOR CENTRE IN EINDHOVEN.

F&C TAKES THE TOUR

'I have never believed in the specialist approach,' says Dutch designer Piet Hein Eek. Instead, he has created a furniture and design studio which takes concepts from the initial idea through design, production and finishing to selling. The space, in a 10,000sq m 1950s-built former Philips factory the Dutch city of Eindhoven, even includes a showroom, restaurant and café and is set to open a hotel once the Coronavirus pandemic permits.

'My original approach was to start with a more generic than specialist mindset,' Piet tells *Furniture & Cabinetmaking*. Since the 1970s and 80s he has seen society focus more and more on specialist production, with students in education trained to see themselves as small parts in a big overall machine. But Piet says: 'A designer has to think about everything:

how it is produced, how it is transported, how it feels, how it sits – you have to take care of every part of the process from the design to the consumer. As a generalist I would like to have everything in my own hands, which is logical and natural.'

His workshop is made up of a factory floor and a number of individual ateliers for craftspeople of all types, working separately and together to create an overall holistic product. 'We really need a generalist approach,' Piet explains. 'We also need specialism but without a generalist specialism is nothing. On the other hand, a generalist is fine without a specialist.

'The essence of the way we work is that the whole process, from idea to consumer, is under one roof. It is a complete world and a holistic approach, and now we have a place where everything is under one roof and visible, which means people like to visit the company, and so slowly it became a more and more consumer-oriented organisation, apart from the fact that we have lots of dealers all over the world. People love to come here – it is a place where the whole process is covered and you can see it.'

The ground floor holds the office and the factory, the first the showroom and ateliers including metalworking workshops, cartonnage, printing and cutting and upholstery. 'While strolling around you can look at how products in the showroom are made,' Piet says. 'The heart of the company is the production facility, and as a customer you are everywhere aware of all the processes, which I think is amazing. The whole company is focused on making stuff.'

'The heart of the company is the production facility, and as a customer you are everywhere aware of all the processes, which I think is amazing.

The whole company is focused on making stuff.'



































A PLACE TO STAY

Piet's philosophy is embodied in the hotel project his company is currently working on. 'We have made everything ourselves: plugs, plinths, door handles, sinks, switches, beds, carpets – everything,' he says. The hotel is on the top floor of the workshop complex and each room is themed around an artist, with works on display in the room and colours, textures and furniture inspired by that artist. 'The rooms are located in the old factory, and you can really feel it because of the old windows and the concrete ceilings that are almost 4m high,' he says.

Piet has been a maker and a completist since his earliest days. 'When I was a really young child, 10, 11 or 12, I started making models from matchsticks – 1:100-scale models of churches and houses from my own fantasy, and in those buildings I also made furniture. I still have one rocking chair and one cabinet which are smaller than a thumbnail. When I was really young I also made cabins and huts in the garden and in the fields. I have always been making things – I don't know any better!'

He started making furniture when he was at high school, originally thinking

'We have made everything ourselves: plugs, plinths, door handles, sinks, switches, bed, carpets – everything.'

he would go on to become an architect. But on the advice of an architect friend he decided to become a designer instead, and trained at the Design Academy in Eindhoven. Straight after school he started his own company, designing, producing and selling furniture and objects with one employee, then joined forces with long-term business partner Nob Ruijgrok. The pair split five years ago after working together for nearly 30 years.

Piet recalls: 'I started the company designing, producing and selling furniture. We had to do everything, so I have always been occupied with each part of this process. I slowly grew out of production and for years haven't worked on that side, but in the beginning I did everything: designed, handled invoices and sold but also produced furniture myself.'











INSPIRATION ALL AROUND

Piet is perhaps best known for his cabinets made from scrap wood - each made in exactly the same way, but each unique because the materials will always be different. These were the first pieces in his collection and were inspired by the materials Piet saw lying around as waste in a lumberyard. 'I was intrigued by it both the beauty and the availability - so I designed a serial product made of unique scrap wood, because the wood is always different but the way it is produced is always the same,' he explains. 'Since then I always designed starting with the material, the technique, the craft and what is available. It is very important to me that I use what is around, which is a very ecological way of working.

'In our world you have a lot of designs and architecture where materials are transported all over the world. We have created a world where it seems everything is possible, but I don't think that's true: in reality we should consider whether it is available around us.' Even now, 99% of Piet's inspiration comes from the available materials around him, but client

demands also spark new ideas for him.

Once his scrap wood cabinets had found a market, Piet moved on to working with a wide range of other materials, starting with sheet metal and wool. 'I was a little bit afraid that if I did too much scrap wood people would only ask for me for that, so I deliberately started with very different materials.' Nowadays his favourite material to work with himself is metal. 'I like metal welding and cutting, partly because if you fail you just put it back and weld it together,' he says.

In 2016 Piet teamed up with Swedish furniture giant Ikea and has designed two ranges for the retailer, including textiles, accessories and chairs which celebrate roughness, imperfection and human input, and challenge the idea of mass-produced products spat out by machines. One of Piet's favourite projects to have worked on was designing furniture for the University of Mostar in Bosnia. 'I really like working for students and educational institutions – I hope it will be a benefit for the world, so it gives huge satisfaction.'

PANDEMIC PLANS

His company should have been celebrating its 10th anniversary in 2020, but wasn't able to because of the Coronavirus pandemic. Restrictions in the Netherlands have meant its restaurant has had to close its doors, and has prompted a number of other changes to the business. Government support has helped with some of the resulting shortfalls, as have uplifts in sales in other areas. 'I hope we will come out of the crisis better than we went in, because of the hotel which is turning out really beautiful – so when it is over, instead of having the same offering we will have an additional experience,' Piet says.

Having found that the restaurant side of the business was vulnerable in the Cornavirus pandemic, the company plans to build extra studios. 'With more spaces we are less vulnerable – we spread the risk,' he says. When he's not working, Piet loves to cook, listen to music and read. But he admits: 'I don't read that much – I'm always thinking about solving practical problems around the hotel. I'm always working.'

pietheineek.nl















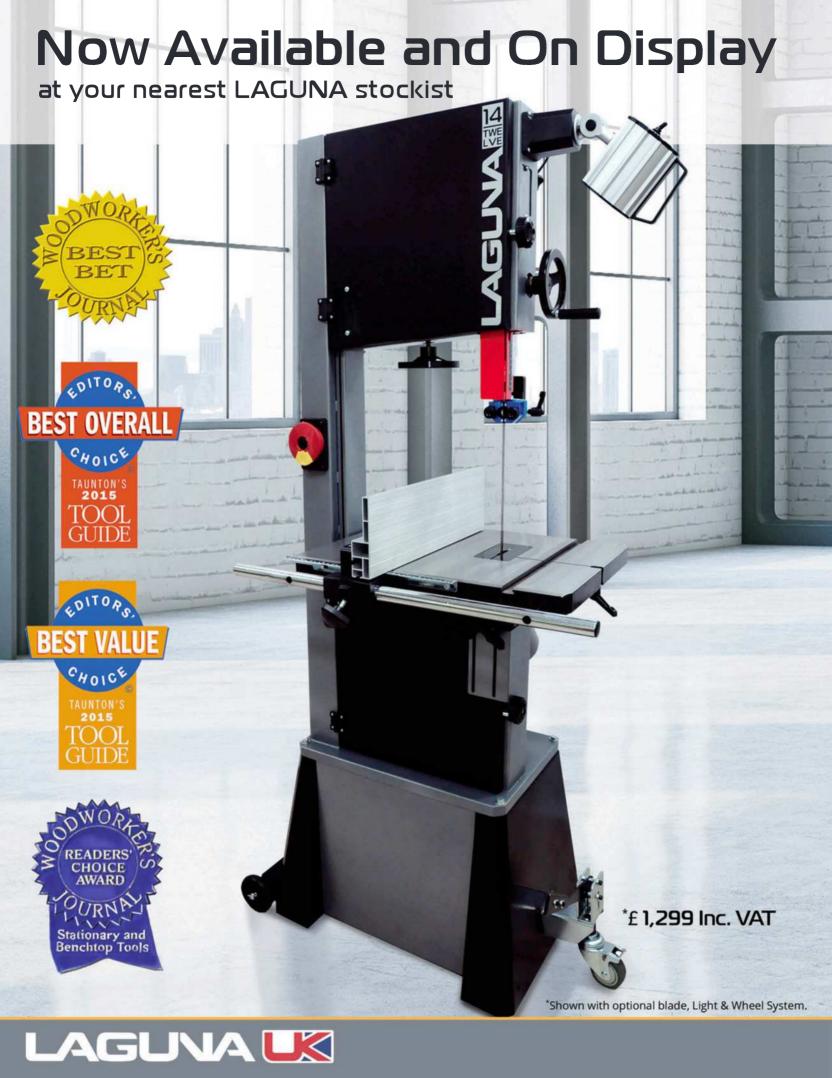












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> Yandle & Sons Ltd. Martock www.yandles.co.uk

WALES

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Data Power Tools Cardiff www.datapowertools.co.uk

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SCOTLAND

Just Wood Ayr www.justwoodonline.com

Macgregor Industrial Supplies Inverness www.macgregorsupplies.co.uk

The Saw Centre Glasgow www.thesawcentre.co.uk

UNDER THE HAMMER -PRIVATE COLLECTIONS

BONHAMS' 'COLLECTIONS' SALE INCLUDED SELECT CONTENTS FROM THE ESTATES OF SEVERAL PRIVATE COLLECTORS. HERE, WE TAKE A LOOK AT THE TOP-SELLING FURNITURE LOTS



▲ LOT 59 · PRICE £2,805

A walnut, fruitwood, oyster veneered and boxwood-strung chest of drawers, made during the time of William and Mary. The chest has two short and three long drawers and is set on bun-style feet.

▼ LOT 241 • £2,805

A Regency mahogany sofa table with a hinged top above two opposing frieze and dummy drawers. The scrolled legs are united by a waisted lower tier enclosed by a pierced brass gallery. The table is in the manner of Gillows & Co, one of the 18th century's leading cabinetmakers.





▲ LOT 325 · £27,750

A French late 19th-century gilt bronze gueridon (side table), made in the Louis VI style by Henry Dasson. It has a circular green marble top above a moulded foliate edge and panelled frieze with floral and musical trophies, raised on alternating terms of Hercules and classical maidens. The table is signed and dated 'Henry Dasson 1879'. Dasson was one of the most celebrated Parisian bronzier ébénistes whose work is renowned for the fine quality of the metalwork, ormolu and gilding. Specialising in the reproduction of the period styles of Louis XIV, XV and XVI furniture, Dasson often used to copy items while incorporating his own style in the designs.







■ LOT 254 · £14,000

A George III mahogany, harewood and fruitwood marquetry demi-lune table, attributed to William Moore. The top is inlaid with a shaded fan and bellflowers design, enclosed by a ribbon-tied garland of shamrocks above a fluted inlaid frieze. The square, tapering legs are inlaid with trailing bellflowers. William Moore was a London cabinetmaker who served his apprenticeship with the celebrated London firm of Ince and Mayhew where he specialised as a marqueteur. His apprenticeship provided him not only with the finest skills as a cabinetmaker and marquetry specialist but also with an education in contemporary taste and design that enabled him to set up on his own in 1782. Keen to open his own business and with the high end of the London market saturated with firms, Moore moved to Dublin. This proved to be a well timed and profitable move due to the birth of Dublin's Georgian New Town and the massive increase in demand for fashionable cabinetmakers.

▼ LOT 448 • £6,120

A French late 19th-century ormolu-mounted tulipwood, sycamore, stained and fruitwood parquetry *table* à *transformations*, made by Edmond Poteau. The rectangular sliding top sits above a frieze of ormolu swags with goat head corner mounts and a parquetry front with a single drawer enclosing a hinged mirror and fitted drawers. Edmond Poteau was a leading ébéniste working in Paris during the second half of the 19th century. He was known for his cabinetry that reflected Transitional and Louis XVI aesthetics, with an emphasis on fine marquetry and parquetry inlay.





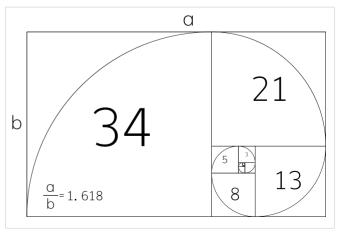
GOLDEN RATIO COFFEE TABLE

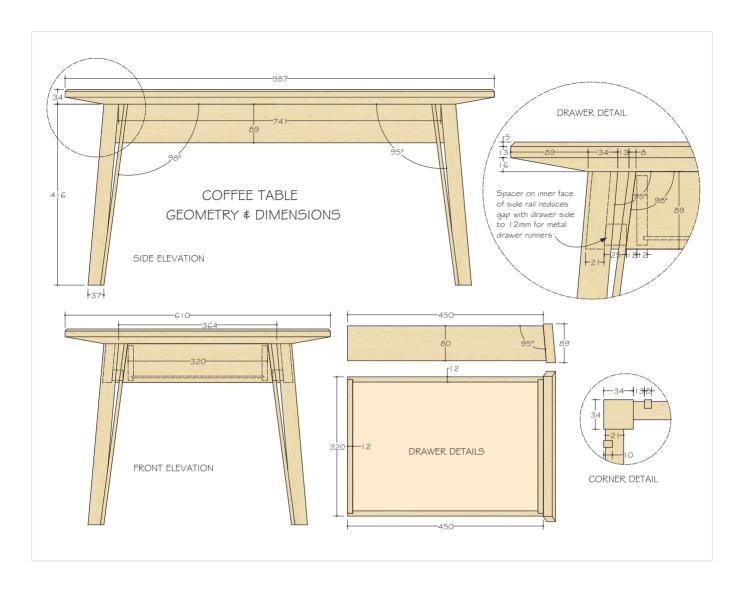
DAVE CLEMENT SHOWS HOW A GOOD DESIGN CAN BE GREATER

THAN THE SUM OF ITS PARTS

The idea for this piece started off fairly basic and evolved as it went along. I'd read about the use of the Golden Ratio and the Fibonacci sequence in design and thought it would be interesting to see how much of this I could use for a table. I ended up deriving most of the dimensions from the Fibonacci sequence, where each number is the sum of the two preceding ones (5, 8, 13, 21, 34, etc.), and when I drew out a full-sized plan I was pleased with the results. You can find plenty of resources online about the Golden Ratio and the Fibonacci sequence.

RIGHT: The Golden Ratio formed the basis of the design





THE TOP

I wanted to keep the top quite thick without it looking too rustic, and decided the best way to achieve this was with quite a deep bevel on the underside. The material I had to work with was 40mm sawn, and ended up at 34mm when jointed and planed to thickness. I had some really nice-sized slabs of oak, and had to choose between using a whole one for the top, or jointing smaller pieces together. For the sake of stability I opted for the latter, and I actually think it adds something aesthetically too, as the timber had such variations in colour.

With the Fibonacci idea stuck in my head, I made the total size a 'golden rectangle' of 610 x 987mm, comprising smaller pieces using dimensions from the Fibonacci sequence. The pieces were cut and planed to size and biscuited together, and the breadboard ends attached with mortise and tenon joints. At this stage I had to think about placement of the biscuits and the mortise and tenon as I didn't want to uncover any when applying the bevel.

The bulk of the bevel on the underside of the top was removed on the tablesaw before being finished off by hand with various planes. I then ran a smaller, 5mm chamfer around the top using a router.

THE LEGS

Originally I'd wanted to make the legs of this table solid and thicker (55mm tapering to 34mm), but as the material I had was only 40mm and too good not to use, I had two options:

- **1.** Laminate two pieces together to achieve that thickness and try my best not to make it too obvious.
- 2. Make it really obvious so it becomes a feature.

I decided to go with option two, and this ended up being the 'split-leg' feature you see on the finished piece. The main challenge with this new design was working out what angles I needed and then figuring out how to cut them in my somewhat limited workshop. I drew up a full-sized diagram and measured the angles using a digital protractor, and the angles on the bottom of the legs were made using a sled that went through my thicknesser. It took some test pieces to set up, but the result was flat, smooth, consistent cuts on all four legs.

Having decided I wanted the legs splayed slightly to compensate for the large overhang of the top, I angled the bed of my pillar drill, in the absence of a mortiser, to 5° and cut the mortises using Forstner bits. The extra pieces to be laminated on to the legs were cut to shape and planed to thickness, and these would be glued in place when the frame was assembled.















- ${\bf 1} \, \hbox{The highly figured boards glued up for the top } {\bf 2} \, \hbox{The unusual leg detail } {\bf 3} \, \hbox{View with the drawer closed}$
- 4 The sash clamps joints were closed tightly 5 The centre boards are unusually figured
- $\textbf{6} \ \text{Working on the drawer installation} \ \textbf{7} \ \text{There's plenty of storage in the discreet drawer}$

THE RAILS

As the legs are splayed outwards by 5°, the tenons on the rails had to be cut at the same angle. Further to this, I wanted to cut a shallow rebate to accommodate the additional pieces for the split-leg design. Again, I referred back to my full-sized drawing to work out the angles of the rebates (I made it 97.5°) before carefully cutting them. The tops and bottoms of the rails were also angled by 5°, and I cut these on my tablesaw before finishing with a hand plane.

I knew one of the end rails would end up being a drawer front, so I decided to assemble the frame completely before cutting the drawer front out. For this reason I made one of the end rails approximately 3mm too long, to compensate for the saw cuts. This discrepancy meant the frame was slightly out of square, but I planned to compensate for this when attaching the frame to the top.

I also cut two long strips to fix inside of the side rails, which I would ultimately screw the drawer runners into. These again needed one edge angled at 5° to ensure the runners would end up parallel. I made these pieces over-length, and used offcuts as screw blocks to secure the frame to the top.

THE DRAWER

Having assembled the underframe of the table and carefully removed what would end up as the drawer front with my most reliable Japanese saw, I made a simple drawer carcass, assembled with rebate joints. I wanted to make sure the drawer front lined up with the rest of the rails, almost so you wouldn't know it was there, and for this reason I fitted the drawer carcass before attaching the front with screws from the inside. I had some drawer runners that I bought for a project years ago but never used, so I made my drawer carcass to suit these, at 450mm in length. I'm sure longer runners are available, but this seems like a sensible size for storing the usual pens, magazines, coasters, old buttons, long-forgotten bills and suchlike. The width of your carcass may also vary according to the runners you use. In my case I had to leave a 12mm gap either side to accommodate them.

THE FINISH

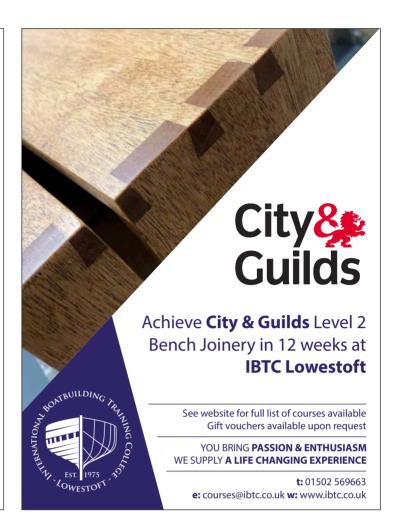
I wanted to keep the colour of the timber as natural as possible, and experimented with a few different finishes on some offcuts before settling on the one I had most experience with – clear sanding sealer and wax polish. I cleaned up the surfaces with a cabinet scraper to remove any small defects and excess glue, and applied a thin coat of sanding sealer with a brush. After leaving it to dry overnight I de-nibbed it with some fine wire wool before applying the first layer of wax and buffing to a shine. I ended up applying two further coats of clear wax to achieve the final finish. I had finally made a great coffee table – by numbers.





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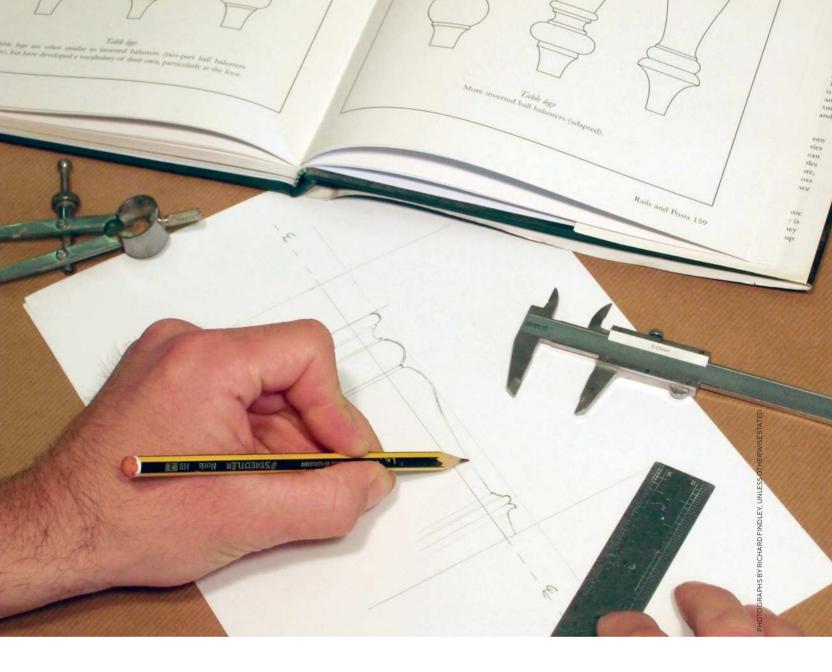


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DESIGNING SPINDLES

RICHARD FINDLEY SUGGESTS WAYS TO IMPROVE YOUR TURNED SPINDLE SHAPES

Design is a huge subject, too big to fully cover in the limited space of this article; however, I hope to be able to use this space to give you some tips and guidance to help improve and develop your own spindle designs.

As a professional woodturner, I see a wide range of different spindle work – some designed and executed well, others less so. The majority of my work involves working from plans or copying from

samples sent to me, so l do not often have to produce a design from scratch, although l can have input into designs if the customer is open to suggestions.

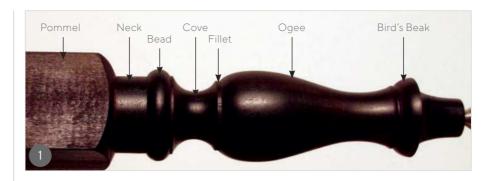
Although the majority of spindle designs have roots in ancient Greece or Rome, it is how the forms are put together that makes the difference between a good turning or a poor one, and between a Victorian style or a contemporary piece.

When researching spindle shapes in books or online, take a close look at the shapes, line drawings and the details. Ask yourself why one shape appeals to you and another doesn't. Don't be afraid to take elements of a design that you like and combine them with other parts that you like from other spindles.

STANDARD SPINDLE SHAPES

1 This photo shows a spindle that features most of the important shapes you will come across in spindle turning. To keep it simple, I have referred to the shapes by their common rather than Latin names in the annotations in photo 1 and in the list below it.

- 2 There are variations on the above and of course they can all be made bigger or smaller, wider or narrower. In some cases, a change to a basic shape can also alter its name:
- 1 A narrow bead is known as a ring
- 2 A standard bead
- **3** A ball is self-explanatory
- **4** A stretched ball shape is known as a bobbin
- **5** A long flat cove is called a reel, shown here with a quirk
- **6** Quirks are V grooves used, like fillets, to add definition between other details.



- 1 Pommel the square top of a spindle
- 2 Neck a wide flat area, usually near the top of a spindle
- 3 Bead a raised semi-circular detail
- 4 Cove the opposite of a bead, a hollow semi-circular detail
- 5 Fillet a small straight detail used to add definition to other parts of a spindle
- 6 Ogee an S-shaped part of the design (these can be big or small)
- 7 Bird's beak a kind of half bead that flows into a half cove, looking a little like a bird's beak.





CRITIQUE

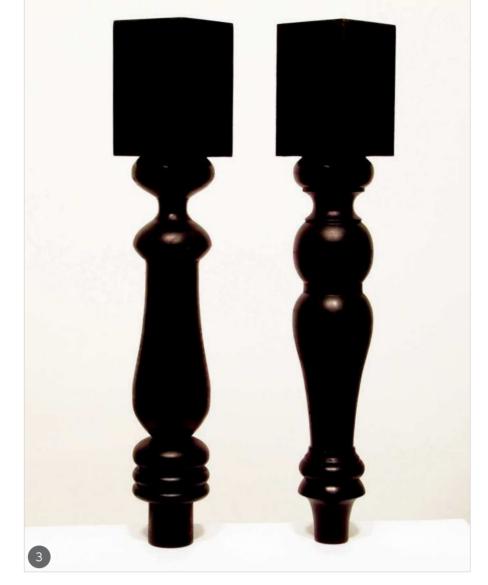
3 I have found that comparing a good and a poor spindle can be invaluable. Here are two spindles, the one on the left features many common mistakes, the other is more refined.

A The left spindle has poorly shaped beads with a cove that is too narrow and badly shaped. I have also deliberately used two different shapes, a bead and a ball, as two beads this close together will be compared.

B The long ogee on the left spindle is too chunky and, when used this way round, makes the spindle look a little dumpy; reversing the shape and refining it for the spindle on the right, makes it more elegant.

C At each end of the ogee on the righthand spindle is a small detail to separate and tie together all the parts of the design.

D The three beads on the left are poorly shaped and random sizes and have no flow down to the base of the foot. The right leg has a small bead and a bird's beak that flows to the base.









TIPS FOR BETTER SPINDLE DESIGN

- It is amazing the difference the use of a small detail like a fillet or quirk can make; they are the difference between a wishy-washy shape and a crisp, well balanced spindle.
- It can be tempting to put as many shapes as possible into a design but more often than not, less is more.
- It is possible to design yourself in and out of trouble, depending upon your tool skills; certain details require the use of a skew chisel, for example. If you are not too confident it is possible to tweak a design to make life a little easier for yourself.
- For this article I have sprayed the wood black to highlight the forms and not to confuse the eye with the grain of the wood. Select your timber with care; highly figured timber does not need fussy design.





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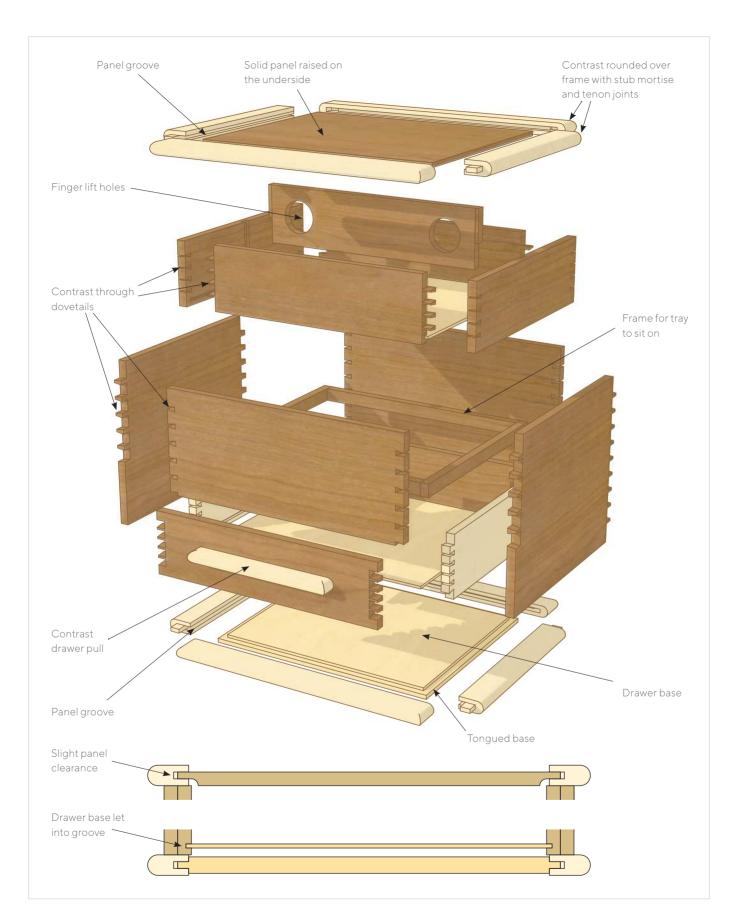
A Spindle Moulder with great versatility for many tasks



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This jewellery box is a fine dovetailed case with lower drawer, lifting lid and a lift-out internal tray. It is made from richly contrasting walnut and maple with a sumptuous padded lining of red velvet.









MAKING THE CASE

1 The construction uses the bandsawn dovetail technique, making the build surprisingly quick and straightforward. You can, of course, vary the dimensions or borrow some of the features of this box to design and make your own cases for jewellery, cufflinks or valuables.

2 Walnut is a beautiful wood to look at – and to work with too. Although it is expensive, the amount used by this project is small. I recommend laying out the boards after planing and thicknessing to examine the colour and figure, that way you will be able to 'compose' the best pattern of the wood for the outer faces of the box before cutting pieces to length.

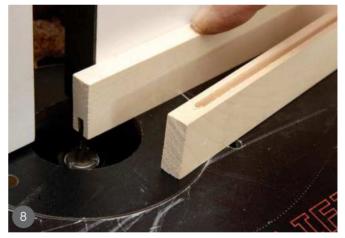
3 Mark out the dimensions a fraction of a millimetre oversize then plane up the faces and edges and mark the positions of the dovetail joints.

4 Next, lay out all the boards edge-to-edge in the way they will join together. By doing so you can check the finished dimensions directly off each other, which is far more accurate than measuring twice with a ruler. This also provides another chance to check that the figuring of the different pieces of wood look good together. The box is made with visible fine dovetails all around the outside corners as well as on the drawer and internal tray. This means you need to use a quick and reliable way to make the joints, and I highly recommend using the bandsaw









method. Alternatively, hand-sawn dovetails could be used, but I think routed joints would be too coarse. Check out your technique on scrap before cutting into prime walnut.

5 The wood is laid flat on the bandsaw table and pressed against a side wedge slid against the bandsaw fence. This enables the bandsaw to cut the correct angles on the sides of the sockets between the tails. The board and the wedge move together as one, while the blade chomps into socket waste.

6 The platform wedge is used to support boards at an angle while the side of the pins are cut on them at angles and positions corresponding to the tails. The boards are placed flat on the

bandsaw table to nibble into the waste between pins, which is finally chopped away on the bench using a chisel.

7 All the joints of the carcass are trial fitted before final assembly. It is not necessary to fully engage the joints, just press them halfway for the trial. This avoids the risk of jammed joints and broken pins.

8 The top and bottom of the chest are framed in narrow pieces of pale maple. These first have to be grooved on the inside edge to receive the edges of the top and bottom boards. I did all this on the router table but it could be done with a hand-held router and guide fence provided everything was well supported.











9 Next we come to the grooves in the front and back rails which are stopped at the ends, and also act as mortises to receive tenons on the ends of the side rails. The top panel, being made from solid walnut, is fielded at the edges to permit some movement in the frame. The end grain of the panel is glued for a few millimetres either side of the centre, which by so doing, will prevent the possibility of the panel developing a rattle.

10 The bottom panel, which is plywood, has no risk of movement and so can be glued in place.

11 The carcass is assembled, first by gluing up the dovetail joints and then, carefully checking that everything is square, gluing the walnut sides directly to the lower sycamore frame.

12 The upper sycamore frame is fitted with brassware – a set of

solid brass drawn hinges and a box-lock. The frame around the top is shallow and so required short stubby screws to fix without risk of showing through.

13 The drawers are made from contrasting walnut and maple so the appearance of joints on these is emphasised. They are dovetailed using the same bandsaw system as for the carcass, but with the tails adapted in size and spacing to the scale of the wood. The drawers were originally made 1mm overwidth so there is just over 0.5mm to be planed off each side for a snug sliding fit.

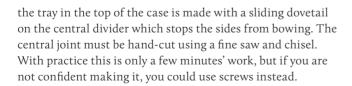
14 It is important that the sides of the carcass are parallel: otherwise, however carefully it is fitted, the drawer is likely to jam.

15 As well as the dovetailed corners cut on the bandsaw,





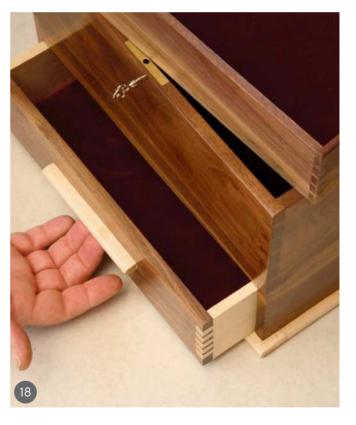




16 As with the drawer, the tray is made very slightly oversize and then planed to a sliding fit. It is good to make trays like this with very small clearances so they drop slowly into the box, supported on a cushion of air.

17 The internal floors of the drawer and tray are lined with padded red velvet. This is cut from a thin sheet of stiff foam, then the velvet is applied with flexible impact adhesive. Keep the glue on the underside of the foam so there is no danger of it showing through the velvet.





18 The jewellery case with lid open, tray removed and drawer pulled out, has several rubbings of shellac to seal it, and then beeswax paste, which also lubricates the moving parts. Boxes like this tend to be examined closely so it is particularly important that all details are well finished. The drawer has a slightly undercut handle so it can be opened by the fingertips.

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With the recent uptick in the live edge furniture trend there are thousands of people who have realised that making a live edge piece really isn't that difficult. Anyone with a skill saw and a sander could jump in and start building furniture. More recent variations have included adding coloured glass and epoxy to create some truly wild tables, shelves and the like.

No matter what the add-ons are though, all the pieces rely largely on a wood slab to make them look good. And if you were to browse through online images of other people's projects there are some truly stunning slabs being used. Which makes it even more impressive that there are so many pieces out there that

don't look very good. This is almost exclusively due to being laid out without the proper adjustments and visual balance.

Many excellent craftspeople don't have a natural eye for design. A couple of quick tips and tricks though can help make sure that the piece you build stands out from the rest.

There are a lot of proportions that naturally are pleasing to the eye. I won't go too much into that, as that information is easily found with an internet search and often the best size for a coffee table or a shelf is more dependent on the space it is going in than if it follows the 'golden ratio' of proportions.







DESIGN TIPS

1 The first step comes at the lumberyard. Analyse the selection of slabs available not only for their grain but also for their overall shape. Pass up that amazing burl if the perimeter has an unattractive shape. Remember, it's not hard to put a tree stump in a living room – what you want is a beautiful piece of furniture that also happens to be a tree stump!

The shape is particularly important if you are using a single slab, as you get what you get. Look for a well-balanced piece that is of similar dimensions on both ends. There are a lot more options, however, when you buy two pieces (ideally bookmatched) and this will be the focus for the rest of the article.

For illustrative purposes I've used a bookmatched set as an example and shown several different ways it could be joined into a table top. There are certainly more ways to do this, but these few variations are easy to remember and try out the next time you are doing a layout.

2 Print and cut out the photo of your slabs. Print several copies so you can try out multiple options.

Lay your pieces together in different ways and configurations, trying to balance the final width of each end to be as close as possible to each other. If there is a curve, try to centre it in the middle of the table. Inward curves will look more graceful than a bulbous convex curve. While you ideally want the most attractive grain to be in the top of the table, it is even more important that your piece have a good overall shape.

3 The slab shown here has a tricky protrusion that makes visual balance difficult. The slab on the left shows what is typically built as it showcases the best grain and edge of the slab. However, doing this creates a very tapered top that will not work well for most spaces.

The centre slab shows a much more balanced version using a slip match. This puts the protrusion on both ends and balances very nicely. The right slab shows a bookmatch using the less interesting live edge. Cutting away the better part of the slab may at first seem counterintuitive, but the final result is a very attractive and balanced top.



4 If you want to make an epoxy or glass table with central negative space, slip matching becomes a great option to balance your top. The left slab again shows a very visually one-sided table. If you were making an epoxy table with embedded items this might actually work OK as the items would fill the large centre space and create balance. With just a clear epoxy or an applied piece of glass, however, the right slab shows again how using a slip match can balance your slabs out for you.

Further consideration should be given to slab choice when you create a waterfall leg to the top. When laying out your slab, choose an area where the waterfall leg will not taper inwards. This is also a common visual mistake as it makes the top appear too heavy and also functionally makes the piece less stable as it can be prone to tipping. Instead, choose an area that will come down close to vertical or even slightly taper out.



Live edge design can be a fun and easy way to make cool furniture pieces, and chances are whether you are a professional or hobbyist woodworker you'll probably build or be asked to build one in your career. Before you start cutting, spend some extra time with your layout, (maybe using these paper print-out techniques) and make sure your slab maximises its potential. You can see more of Brian's work on Instagram @spadewerks

BRANDING INTERIORS

INTERIOR DESIGN CAN PLAY A VITAL ROLE
IN EXPRESSING A COMPANY'S BRAND







Successful brands take a holistic approach to design, with interior spaces playing an important part in communicating a company's product range, history and ethos. Architects and designers can combine branding and interior design to reinforce the character of a brand. Through these two disciplines, a connection can be made with the target audience and the idea behind a brand can be communicated.

This approach is exemplified by the work Mexican design agency Anagrama undertook for furniture maker Maderista, which covered everything from the company's logo and stationery to its showroom interior.

MADERISTA

Maderista is a carpentry boutique based in Mexico that makes custom-made furniture using only the finest wood.

With more than 30 years of experience, Maderista approached Anagrama with the need to consolidate its brand with a stronger and more sophisticated design, a rebranding that would express its proficiency and expertise in a modern and all-embracing way.

The brand's name, Maderista, is a witty made-up word consisting of two parts: 'madera', or 'wood' in Spanish, and 'ista', a designation of profession, conviction



and character. So the name Maderista, or 'one who works with wood', explains the brand's custom services.

Anagrama's design for the logo was complex, including a typographical palette meant to portray timelessness, a coalescence of modern and traditional, and two iconic symbols: a bear and a nail. The bear embodies the natural strength and robustness of wood, Maderista's primary material,

while the nail exemplifies the skilled craftsmanship and thoughtful attention put into each custom-made piece of furniture produced.

The choice of paper for the stationery – porous, off-white, crafty but with touches of hot-stamped gold – conveys the crafty nature of the brand while embracing its guaranteed high-end quality and class.

The showroom is aspirational and inviting, designed to inspire and

encourage the imagination on the endless possibilities that can be attained from wood.

In addition, Anagrama designed a small branding element to be added to Maderista's work: a small, engraved, orange diagonal line in the left-hand corner, that would set apart every piece of furniture made by Maderista.

anagrama.com





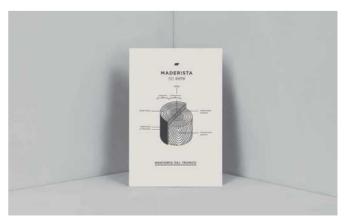
Branding & Spaces
Design by Miquel
Abellán, published by
Monsa, RRP £20.99, is
available online and from
all good bookshops

The choice of paper for the stationery – porous, off-white, crafty but with touches of hot-stamped gold – conveys the crafty nature of the brand while embracing its guaranteed high-end quality and class.











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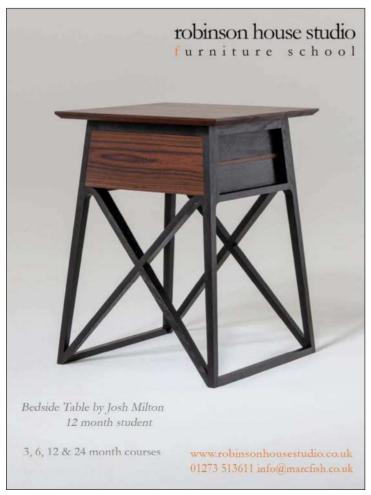
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GEORGE NAKASHIMA ON FILM

A NEW DOCUMENTARY CELEBRATES THE LIFE AND CRAFT OF THE LEGENDARY AMERICAN WOODWORKER

George Nakashima is widely acknowledged as one of the 20th century's leading woodworkers and furniture makers, and a key figure in the American craft movement. His pieces were always finely crafted from solid hardwoods. His work fell into two categories – his perfected but simple nuanced forms, and his explorations of the endless complexities found inside centuries-old trees. Now a new documentary, made by his nephew John Nakashima, offers a unique perspective on his life's work.

LIFE AND INFLUENCES

Nakashima was born in 1905 in Spokane, Washington; his parents had immigrated from Japan. After studying architecture at university in the US, he won a scholarship at the École Américaine des Beaux Arts in Fontainebleau, France. In 1934, he was employed by Antonin Raymond's architecture firm based in Tokyo, where he learnt about traditional Japanese design. As part of his work for Raymond, Nakashima was sent to Pondicherry, India. While working on the design and construction of a dormitory building in an ashram, he became a disciple of the guru Sri Aurobindo and was given the Sanskrit name Sundarananda, which means 'one who delights in beauty'.

In 1941, he returned to the US and began making furniture but this new career path was disrupted when he and his wife Marion and daughter Mira were were imprisoned in a camp in an Idaho desert. While at the camp a fellow internee taught him how to use traditional Japanese tools and carpentry and joinery techniques.

Eventually, Raymond arranged for Nakashima and his family to be released from the camp by offering George employment on his farm in New Hope, Pennsylvania. Here, Nakashima set up his workshop and began making the furniture that would define his signature style, using live edges, large slabs and boards of wood with knots, burls and figured grain, joined together with butterfly joints. Nakashima embraced these natural elements of wood, rather than trying to hide them or discard them; he believed they revealed 'the soul of the tree'.

He received major commissions from Knoll Associates and Nelson Rockefeller, who commissioned 200 pieces of furniture for his New York house. His business continued to grow and he became one of the most influential furniture makers of the 20th century. In 2014 his home, studio and workshop in New Hope was designated a US National Historic Landmark and a World Monument.

George Nakashima in his studio, taken in the 1980s

and the spirit in man'



'There must be a union between the spirit in wood

OPPOSITE George Nakashima in the workshop



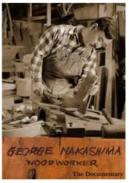


George Nakashima died in 1990, leaving the business in the hands of his daughter, Mira, who now heads up the business and is the designer of new woodworking.

THE DOCUMENTARY

George Nakashima, Woodworker is the only film to cover his life, work and legacy in depth. The film's unique insight is possible because of the family's collaboration: George's offspring, Mira and Kevin, allowed their cousin, John, complete access to their huge collection of photographs from George's lifetime. John Nakashima is a PBS producer in West Virginia and an independent filmmaker. John explains, 'I believe George had a good sense that he would have a significant life. He seems to have never thrown out a photograph. Once he could afford it, he constantly brought in the great photographers that lived in the Philadelphia/New York area, especially legendary architectural photographer, Ezra Stoller. George's sister, Mary Hokari, had a collection of letters from George to his parents. And George himself kept several file cabinets full of letters, speeches, drafts, autobiography drafts and notes.'

nakashimafoundation.org

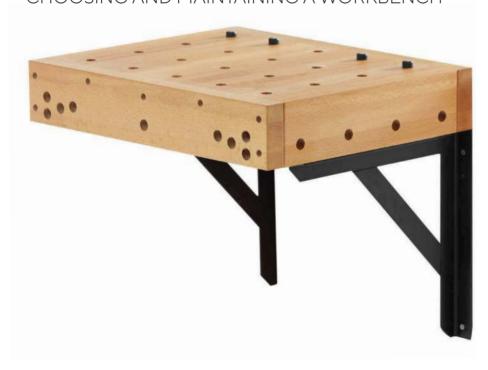


WATCHING THE FILM The two-hour documentary is available for streaming at nakashima documentary.com, alternatively you can order a DVD at the same site.





THE TEAM AT **SJÖBERGS** SHARE THEIR TIPS FOR CHOOSING AND MAINTAINING A WORKBENCH



Sjöbergs is one of the world's leading manufacturers of professional workbenches. We make them by hand at our factory in Stockaryd, Sweden, just as we have done for almost 100 years. Today, we produce woodworking benches for the woodwork classroom, woodworking benches and workbenches for the professional and DIY enthusiast. Our priorities in all areas are ergonomics, quality and sustainability.

The company was founded in 1922 by master carpenter Axel Sjöberg. Originally his workshop just made furniture but in 1932 he began making woodworking benches, and the company expanded from there. Today's modern factory uses the latest CNC technology but holds to traditional values of quality, durability, sustainability and service.



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At our production plant, we control the entire process from the timber to the finished workbench. We use FSC-certified beech wood, and we believe that quality requires both time and attention to detail. That's why it takes three months and over 360 hand-fitted details to make a truly great workbench that ages with a beautiful patina, and that can be handed down from generation to generation.

Our workbenches will accompany you throughout your life: from your first class in the school's workshop to those small DIY projects at home and the really big projects at work, there is a Sjöberg workbench to suit your needs. And all our workbenches are made with the highest quality – so that they can be at your side for a lifetime of use.

HOW TO CHOOSE THE RIGHT WORKBENCH

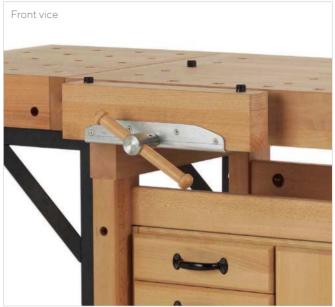
- **1.** The bench top should be at least 55mm thick when you buy a bench with a shoulder vice. This is necessary to ensure a sturdy vice construction.
- **2.** The cabinetmaker's bench should be made of a hard wood such as beech, oak or ash.
- **3.** Use jaw cushions in both the front and rear vice. This will extend the product life and increase the grip on the workpiece.
- **4.** Choose a bench size based on the intended use. Make sure there is enough space between bench groups, cabinets and machines.
- **5.** Vertically adjustable stands are available. If required, choose gas springs or a hydraulic lift set for simpler height adjustment (available on our school benches).

- **6.** Lubricate and adjust regularly. This is important to ensure good bench function, and to safeguard the guarantee.
- 7. Buy the cabinetmaker's bench from a well-established company to ensure access to spare parts and servicing.
- **8.** Quality is important when making a long-term investment.
- **9.** High-quality accessories enhance the bench's function.
- **10.** A quality bench can be inherited and enjoyed by future generations.

MAINTENANCE AND UPKEEP

For the guarantee to be valid and for a longer life of your workbench, all movable parts must be greased with tallow and adjusted regularly. Melt the tallow in a pan or use an immersion heater. Use a brush for greasing.





Your workbench must not be handled abnormally or stored in damp surroundings.

A bench with a shoulder vice is equipped on the underside with two adjustment options. One can be used to prevent too much play at the shoulder vice mounting point and the other is for vertical adjustments of the shoulder vice slide. Use these when applicable.

Providing the bench with jaw protectors to both shoulder and front vice protects the bench. Check that all bolts have been tightened. A bolt which isn't tight can in time cause fractures of the glued sections.

WORKBENCH WITH SHOULDER VICE

- 1. The wooden screw used to mount the shoulder vice on to the bench as well as the crew threading must be greased regularly.
- **2.** Grease the washer on the inner side of the vice with tallow.
- **3.** Grease the sliding wooden surfaces. Open the vice screw and grease the thread.
- 4. Grease the guide bar.

WORKBENCH WITH A FRONT VICE

Lubricate all moveable parts with oil or grease. Adjust the vice when necessary.

HUMIDITY

Our recommendation for the humidity in your workshop is between 40–55%.

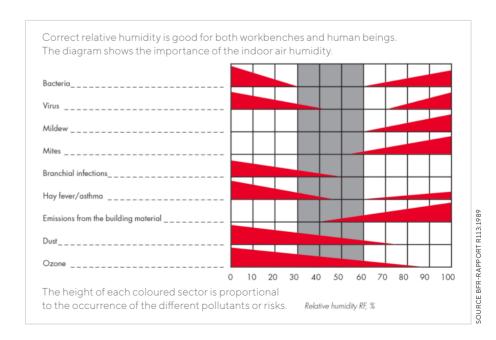
Wood is a hygroscopic material with the ability to emit and absorb moisture from the surrounding air and materials. As a result, the wood swells or shrinks, depending on the atmospheric humidity. The moisture content of the wood strives to maintain equilibrium with the surrounding climate. During dry periods, gaps might arise between boards, and 'dishing' occurs. During moist periods, on the other hand, the boards press tightly together and a slight 'cupping' can occur.

Therefore, it's important that you keep your workbench where the relative humidity (RH) can be kept between 40 and

55% all year around. If you exceed those limits, the wood can react as described above. You can measure the RH with a hygrometer. If the RH is lower than 40% you should add moisture to the room and if it's more than 55%, you need to dehumidify.

You will find a hygro-meter as well as a dehumidifier at the hardware dealer. We humans also prefer our indoor air to have a relative humidity within these limits. This prevents bacteria, viruses, bronchial infections, etc from flourishing.

For more information and woodworking inspiration visit **sjobergs.se/en**



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PRIZE-WINNING PLANE

THE 2020 DEZEEN AWARDS TROPHIES CELEBRATE REPURPOSED LONDON PLANE TIMBER

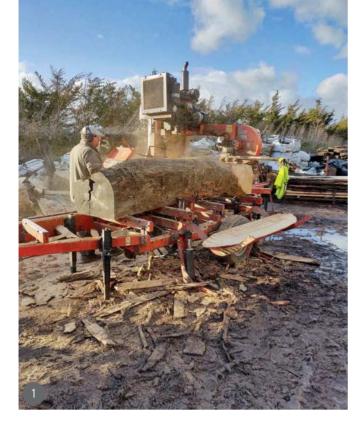
The trophies for the prestigious Dezeen Awards 2020 have been expertly crafted from beautiful London plane timber, repurposed from old trees felled in London.

The wood was provided by Saunders Seasonings, a Londonbased timber company which supplies UK-grown repurposed hardwood to furniture makers and designers.

The 45 trophies were designed by Dutch design studio Atelier NL and crafted in London by design and maker studio Azmy

Anything in collaboration with Saunders Seasonings. The wooden trophies are hand-sawn and finished, with the Dezeen Awards logo milled using a CNC machine and the details of the winners engraved by laser.

The Dezeen Awards, which took place in November 2020, celebrate the world's best architecture, interiors and design projects. In just their third year, the awards attracted over 4,500 entries from more than 80 countries.





GIVING TIMBER A SECOND LIFE

Whereas some 90% of hardwood used in the UK is imported, Saunders Seasonings sources most of its timber from old trees felled in and around London which would otherwise be chipped and burned. The company mills and seasons traditional English hardwoods including London plane, oak, ash and elm. The company recycles and repurposes them to give them a second life, ensuring the carbon stays in the wood, and providing customers with a viable alternative to imported hardwood.

'By choosing to make the Dezeen Awards 2020 trophies from repurposed locally sourced timber, Dezeen is demonstrating the importance of sustainability in great design,' says Bruce Saunders, managing director of Saunders Seasoning.

'Thousands of old trees are felled every year in London, and most of them are simply chipped and burned. We believe the wood from these trees should be put to better use. In the hands of designers and makers, we give fallen trees a chance to be reborn as something beautiful, useful, locally relevant and long lived.'

Aísling Cowley, head of Dezeen Awards, commented: 'For [the 2020] trophies we chose to use London timber after using London clay in previous years. As London is Dezeen's hometown it made perfect sense to work with local materials and suppliers. We love the redesigned awards Saunders Seasonings and Azmy Anything have crafted together with the designers at Atelier NL.'

A video about the making of awards is at youtu.be/8pa1-gEYmN8 Find out more at: saunders-seasonings.co.uk, dezeen.com, azmyanything.com, ateliernl.com

1 & 2 The trophies were made from felled London plane trees3 The Dezeen Awards logo was milled on to the trophies byCNC machine







DESIGN FOR LIFE

NEW YORK-BASED DESIGN STUDIO **VONNEGUT/KRAFT** IS RUN BY A COUPLE WHO ARE PARTNERS IN LIFE AS WELL AS BUSINESS. *F&C* MFFTS KATRINA VONNEGUT

Katrina Vonnegut met Brian Kraft when the pair lived across the street from each other in Brooklyn, New York. Katrina recalls: 'He once saw me on the G train and then again at a bar, where he realised we had a friend in common. It then took a year for him to introduce himself. We started dating and working together on projects.'

Brian is a self-taught furniture designer and maker who graduated from New York University in 2000 with a BA in Fine Arts and English Literature, and had been making custom furniture and millwork in the city for 15 years before he met Katrina. He came from several generations of builders and craftsmen, including master woodcarvers and cabinetmakers, who had emigrated from Germany, and a father who was an ironworker and homebuilder. Katrina says: 'Brian had been encouraged to build from an early age. After a hiatus during which he studied English literature at NYU, he fell back into the trade by default, starting a custom millwork business with a friend. All of his advanced shop experience in wood furniture and cabinetmaking is self-taught.'

Katrina originally hoped to go into documentary filmmaking, and applied to the Rhode Island School of Design to study the art. She recalls: 'I had a mentor that worked with me and a friend of mine on a short documentary film about a cult in Northern Vermont that we had spent time with. It was a wonderful feeling to observe and be fully present watching, listening and engaging with a person in an environment. It really requires a certain presence of mind to observe and react in the moment. I think woodworking and physically making in a woodworking environment is similar, especially when it comes to safety and attention to details. Your mind has to be completely focused on

the task at hand. I'm very drawn to this practice and it's taken a lot of discipline to be in one place mentally.

'In filmmaking the collaboration and engagement was like nothing I had ever experienced. At RISD, I quickly realised that the film department wasn't fulfilling aspects of the filmmaking process that I appreciated most. I had taken a wood bending class and realised that at that point in my life, I craved the physical, tactile experience of making three-dimensional work. I wanted discipline and to learn a craft in woodworking. Making art can feel like a very lonely exploration at times, and this is in part why Vonnegut/Kraft collaborates with other designers, architects and artists. This process forces you to confront your own individual way of working and expand your understanding of materials and forms. Now more than ever, we crave that contact that reinvigorates our own passions for creating.'

When the pair got together they were working on some big millwork jobs. 'One of the first jobs was outfitting a house with custom doors and windows in the Bahamas,' Katrina says. 'It was the most intense learning experience for me. That job really made me a better woodworker. It was something I had never done before or even thought of, and it expanded my understanding of functional and architectural details. It was such an intense learning curve. It really taught me to appreciate all built elements in the world around us, not just the furniture or elements that we considered to be "designed". This might be obvious to a lot of people, but I think I really compartmentalised what is "design" and what is "craft". I don't see any separation now, and these early jobs really moulded how we approach our design work now as makers.'

The pair's early work ranged from one-off furniture pieces to larger built-in millwork projects, and it took a few years before











they started to sell a small line of original designs under the name Vonnegut/Kraft. The first project they completed under the name was a walnut bed for themselves. 'It was a fairly labour-intensive piece with a patterned head and foot board, and quite a learning experience, Katrina recalls. 'We're not very excited about the design any more, but fortunately, my mother and father love it and use it as their guest bed.' Their business is rooted in a curiosity to explore new forms - 'we just wanted to create beautiful pieces together, with a focus on sculptural details', she explains. But she notes: 'We find that our real everyday priority is fostering good relationships with our clients, vendors and the trade in general. Everything we do now also considers how our designs can lead to better relationships and have a positive impact in the world and in the lives of those who receive them into their homes.' The business itself grew organically - 'exactly what they tell you not to do', Katrina admits. 'For a long time we were frustrated by the rate of our growth, but now we're so proud of what we are able to achieve at our small scale,' she says. 'Everything is really considered and we don't answer to anybody but ourselves. Growth isn't always necessary or positive, and it is important for us to always be reflecting on the reasoning for our growth and how it will impact our work, relationships and environment.'

RINGING THE CHANGES

The Covid-19 pandemic prompted the pair and their young son Clemens to move out of New York City to Ghent, in the Hudson Valley some two-and-a-half hours north of the metropolis. Katrina says: 'Our business has changed as much as we have and we're trying to figure out how this will affect us in our new location. We had been dreaming about leaving the city for years, but there never seemed to be a good time. Our

lease was up on both our apartment and studio in the middle of the shutdown. It was actually perfect timing, alongside the slowdown of production.

'This chaotic and tragic time has truly opened our eyes to the inequities so many people in our country face. We're looking much more inward these days to consider how our actions affect others and how we as a small business can contribute to the change we want to see. This pandemic has already affected our trajectory and has changed the way we perceive time and the most valuable things in our lives.'

One of the changes the studio is making is to try and bring more inclusivity to the furniture-making world, which can appear to be dominated by white men. Katrina says: 'When I first graduated from college, I felt I did not quite fit in in this world. Most of my furniture peers who self-manufacture are men, although that's arguably changing. I think it took longer for some older men in this industry to take me seriously and I think that inevitably in this context, women are conditioned to second-guess themselves. It has taken years of going against the grain to feel like I've arrived in a comfortable place in this field, but these issues can be echoed in any male-dominated industry.

'I also think that the galleries who represent designers' work contribute to this imbalance of women being underrepresented, but even more so for women of colour. I wish that I had had a mentor, male or female, in this industry – it was very much trial and error. It is important for Brian and me to be inclusive in our practice and offer opportunities to women and women of colour. I want to be able to offer others the mentorship and guidance that I didn't have, that would have made this journey easier. There are now organisations in New York that directly deal with these issues, so it does seem like we've come a long way since I started working in this industry.'







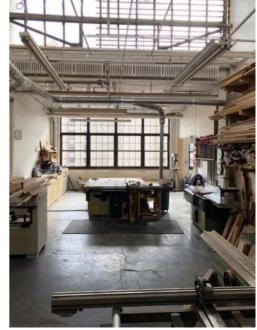












IN TRANSITION

The pair are still building their new workshop in Ghent, which will be nearly three times as big as their former space in New York. 'Before the Covid quarantine, we had designed and begun the planning stages of our dream workshop building and were looking for land on which to build,' Katrina explains. 'We hadn't been planning on making the move quite so soon, but decided in the midst of the pandemic lockdown that we should expedite the relocation of our family, first and foremost. Our current shop will be an interim studio until we find land and build, which we're loosely planning for about three years out. In the meantime, our new space is wonderful in that the additional space allows for more efficiency in production for all of our building processes down to a dedicated finishing room, whereas in our old space we needed to operate in a much more fluid and flexible way.

'We're taking the time out to create an overall space that allows for a more functional workflow. It feels good to be able to organise according to a natural studio flow in terms of machine and bench location, rather than simply responding to the limitations of our former space. On the studio, office and showroom side, which is still under construction, we'll have plenty of space to reflect, read, draw and explore new ideas. We'll have a dedicated photography room as well. And it feels really great to open up our loading dock right outside our shop door to view the rolling hills and farmland of the Hudson Valley countryside.'

Vonnegut/Kraft's work is rooted in woodworking - mainly locally sourced hardwoods including a lot of oak - but the studio is also exploring other materials such as glass, metal, stone and upholstery, and working with other local artisans for these processes. The pair's own workshop set-up is fairly standard tablesaws, a jointer, planer, drill press, shaper and hand tools. In terms of finishes, they use harder, durable spray finishes for pieces in high traffic contexts such as dining tables, but favour a hand-applied oil or wax finish. 'We love that it provides the satisfying final physical interaction with each piece, is fairly forgiving and can be reapplied with age if necessary,' Katrina says. She adds: 'We're always trying to gain more knowledge about new finishing techniques or tools we don't have as much experience with. We have lots of curves and organic shapes in our collection, so the shaper and routers are used really frequently. We're both interested in mastering the lathe and have plans to take an intensive course next summer. We're always looking to develop our skills on any and all tools in the workshop, especially those that might go neglected for some time, and to find fresh methods of implementation.'

NATURE'S CHILDREN

Nature, and the new, more rural life they are leading as a family, provide constant inspiration for Vonnegut/Kraft's furniture. 'We find ideas for connections, joinery and colours from our explorations in the outdoors. Of course, we're also heavily inspired by the work of our forebears in design, by how quality materials

and joinery can truly be timeless, and the notion of how we might adapt certain elements of historical examples of joinery and craftsmanship into our contemporary context,' Katrina says.

She goes on: 'We go through peaks of discovery and then years of trying to understand how those discoveries can be applied to our work. We use a lot of curves and rounded forms in our work. I'm always looking to a lot of figurative organic forms as inspiration. I think it immediately imbues a human quality and softness that we want to live with. After having a child, I also appreciated rounded corners for his sake.

'Right now I've been interested in "tramp art" in woodworking that became common during the Great Depression. Making beautiful things with few resources – usually just a knife and cheap readily available materials like cigar boxes and matchsticks. I admire the approach, the alchemy that an artist can bring to garbage or waste materials that are overlooked. These works feel very democratic and embody the true spirit of making. I would love to try and channel some of these concepts into our own work, as I feel like we really need to explore our own materiality and accessibility in the work that we're currently making. It's something that I'm still at odds with in the system which we create.'

The most challenging project the studio has worked on so far was a series of bent seat back benches in oak with woven leather seating for a fashion showroom in New York. 'The challenge was to match our bends to specific curves of the laboriously cast concrete interior walls,' Katrina explains. 'It took a lot of back and forth to get this detail right, in combination with prototyping many different versions and working with weaving leather. In the end it was absolutely beautiful and we achieved the collaboration while working alongside a few of our most creative designer peers.' Although she always loves the project she is currently working on best, her current favourite piece in the collection is the Releve Dining Table. 'The piece just hits all the right notes and feels sculptural and enduring in its details and form,' she explains.

Current projects include designing some upholstered pieces for the collection. 'We're also in contract on our first home, which will provide lots of opportunity to experiment with space and architectural details,' Katrina says. 'We're not sure how this will feed into our Vonnegut/Kraft plans, but we're really excited to contextualise our furniture pieces and work on details on this scale.' Looking ahead, the couple want to extend their vision to architectural environments and experiences. 'While we'd been exploring ideas in these realms for a while now, in moving both our home and studio to places with a lot more workable space, this seems like a much more reasonable plan. Our aim will be to envision and create more integrated spatial projects and interiors, where we see our furniture existing alongside the art and designs of our peers and friends. We're not entirely sure where this will take us, but creating objects and space that create connection and possibility is a longstanding dream of ours.'

vonnegutkraft.com



ALL IN ONE PIECE

NICOLA TESSARI MAKES A CHEST OF DRAWERS WITH A VERTICAL GRAIN FRONT

The idea for this chest of drawers came when I cut down a large lime tree: its considerable diameter made me want to keep a couple of pieces to try to make a piece of furniture with particular shapes. I chose the parts with the least pronounced curve and, with the help of my father-in-law and a good chainsaw, obtained the necessary pieces, which were then left to season for a couple of years without removing the bark.

While the boards were seasoning, I was able to observe their shapes and come up with a form that would highlight them. The only decision that remained was to choose what type of furniture to make and a chest of drawers seemed to me the best solution. The strong aesthetic impact of the trunk section on the front had to be the dominant element so it seemed logical that the rest of the piece should have clean and discreet lines. I allowed myself a slightly more elaborate shape for the four legs, playing with their section to lighten the entire composition and to create a contrasting element that would enhance the natural texture of the trunk.

Once the seasoning was complete, I removed the bark and cleaned the trunk with a nylon brush. I could then begin constructing the chest of drawers.

MAKING THE DRAWERS

The first step was levelling the back. My surface planer reaches 400mm, not enough for the width of the trunk, so I roughed it by hand with an electric planer – a rather snubbed tool in traditional carpentry, but which I find very handy if used in a 'creative' way. I finished with hand planes, from No.8 to $5\frac{1}{2}$. Once the piece was flattened, I squared it on the saw bench, completing the cuts across the grain, where the blade did not reach in height, using a dozuki saw without a back.

- 1 Finishing the back of the trunk was done with a series of hand planes, ending with a vintage Stanley No.5%
- **2** The only crack in the timber was reinforced with four 'butterflies' in a contrasting wood
- **3** Here you can see the tracing of the drawer fronts, done by hand following the profile of the trunk until reaching the side cuts

















- **4** After cutting the reference walls for the inside of the drawers, the bulk of the wood was eliminated with the bandsaw
- **5** The drawer fronts have almost taken their final shape
- 6 Slot cutters like this are supplied with a standard size copying bearing. The only way to make a groove on curved pieces with a depth other than that allowed by the bearing is to create a visual mark on the slot cutter at the required depth of cut
- ${\bf 7}$ This slot was made with an end cutter by sliding the external side of the front against the fence of the router table
- 8 The drawer was placed on the table to mark the curve; when cut it was increased in size by the depth of the slot







9 The bottom of the drawer was thicker than the groove that holds it, so some material was removed along the perimeter using a special bearing 10 The bonding between the drawer front and bottom is limited to the short side portions. The bottom acts as a spacer between the sides without preventing seasonal wood movements on the front 11 All the drawer pieces were finished with a hand plane before assembly

Seasoning part of a trunk of this size is definitely the most delicate part of the whole construction process, and requires a good dose of luck, beyond all the precautions that can be taken. After two years the piece was practically intact, with only one big crack to fix before cutting out the individual drawers.

I chose a contrasting cherry wood to repair the crack. I cut four butterflies into the crack, with an inclination of a couple of degrees, in order to have a wedge shape to make them adhere perfectly to the hole in the trunk and eliminate unsightly joints. Once placed in their blind holes, I removed the excess material with a chisel and a curved carving gouge, then lightly brushed the surface with a nylon brush mounted on the drill.

Once the crack had been consolidated, I was able to cut the slices for the drawer fronts. This was done entirely on the bandsaw, but not before having squared the side walls of the fronts on the planer, so as to have exactly the same distance from the side of the fence on each single piece. I knew that after cutting, there would be a problem with the fronts shrinking (the arch that they form naturally tends to close), so I prepared spacers that allowed me to keep the pieces apart during the subsequent phases. I measured the length of the spacers before 'debarking' the fronts by measuring the distance between the outermost walls of the cuts made with the planer.

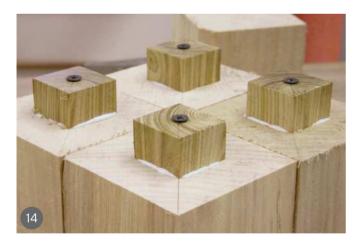
An important detail will not have escaped the most experienced among you. The construction of this chest of drawers did not follow the normal path as I made the drawers first and then the cabinet carcass, instead of making the cabinet first, then its contents. In fact, this was a design choice: the reversal of the traditional approach was due to the greater degree of uncertainty in defining the width of the drawers themselves, and the impossibility of planing them to adjust them as is usually done. Added to this was the extra variable linked to the aesthetic choice of making the front protrude on the sides to cover the side walls of the cabinet.

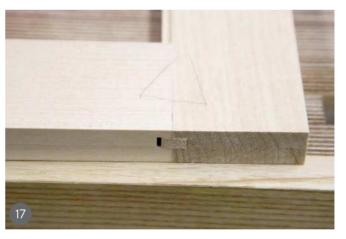










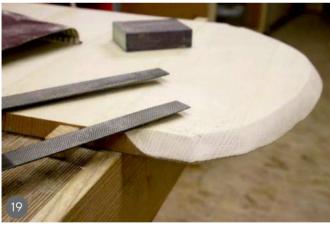


- 12 At this stage, the front has already received a coat of shellac and the rag in the centre of the crosspiece avoids unwanted marks on the wood. Note the reduced height of the sides compared to the front, which leaves space for the drawer guides
- 13 The back-fixing system uses simple pins while the bevel on the end of the side helps insert the drawer
- 14 The tips of the legs are made of laburnum. After gluing, the screws were replaced by wooden pins
- $\textbf{15} \ \text{After machine roughing the pyramid shape, the cut was cleaned with a hand plane.} The \textit{grain direction allows an almost perfect surface}$
- 16 To determine the internal size of the chest, the drawers were stacked with their guides in between. The overall height provided the exact measurement 17 The frame has no particular joints. A single cut creates the slot for the panel and also the mortises for the insertion of a connecting strip between rails and stiles 18 The infill on the back of a piece of furniture is generally the least cared for. In reality, it is a detail not to be overlooked 19 The bevel of the face was done on the top and base
- 20 The legs were placed into position. A large central pin and two small ones on the sides reinforced the join
- 21 The drawer supports are simple ash strips fixed to the internal wall. The tolerance for sliding is obtained by interposing thicknesses of approximately 1mm between the guide and the lower drawer 22 Connecting the front and top was made more complex by the irregular shape of the drawer. It took patience, a couple of good rasps and a lot of precision





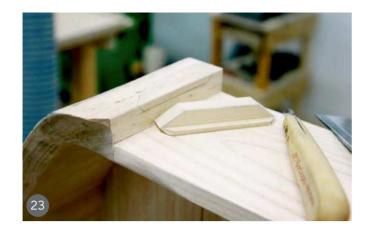






Furthermore, since these are vertical grain fronts, seasonal movement had to be taken into consideration, as this could seriously compromise the sliding of the drawers. What could solve this? I assessed that the curved front would show seasonal movements through the variation of the curvature of the front itself, allowing me to insert a movement constraint in order to guarantee that at least the width of the drawer would stay consistent in every period of the year. In practical terms, this was achieved by dividing the bottom of the drawer into two parts: a traditional one between the side walls of the drawer, and one shaped to follow the profile of the front, free in the curved part, and glued only to the short parallel sides of the fronts.

The operations to achieve the required result took place according to a specific process in which it was also necessary to 'interpret' the potential of the equipment available. Due to the shape of the profile and the irregular thickness of the drawer front, the fence of the router table could not be used, therefore the cutting of the slot for the bottom was carried out freehand. To do this, it was necessary to make sure the bed of the router table was perfectly flat and clean. A further precaution I took was to work by placing the piece between me and the cutter. Still on the router table, I cut the slot to fix the side walls of the drawers, I chose the slot cutter solution because the vertical vein of the front does not allow the cutting of traditional dovetails (in this













23 The drawer pulls consist of a simple hole in the side. A template allowed me to create the same design on each piece 24 The chest's front grabs all the attention. The butterflies have a visual impact that will change over time due to the maturation of the colour of the different wood species 25 On the side, I particularly appreciated the continuity of the grain between the wall and the square part of the fronts 26 The detail of a handle on the opposite side to photo 25. From this side the continuity of the grain with the side is much less noticeable 27 The drawers in a line. The opening gives a view of the lime tree's growth rings 28 Lastly, the top, almost all striped, with two centre pieces that, thanks also to the lines of the bark inclusions, introduce a little movement and colour

case they would have come on the inside of the drawer) which would in fact be very weak precisely because of the course of the vein itself. After cutting the slot, I squared off the round profile left by the end cutter with a chisel.

I then moved on to working on the drawer bottoms. As already mentioned, the bottoms are composed of two parts, the first of which serves to ensure the dimensional stability of the front of the drawers. Having prepared the necessary pieces, I placed every single front on them and obtained the outline of the internal wall. I then increased it by a width equal to the depth of the cut of the slots. The cut was then performed freehand with a bandsaw. At the router table I then performed a cut to adjust the thickness of the bottom to the thickness of the slot that will receive it. The gluing was carried out only on the two short straight sections of the front: this is an extremely important detail that technologically marks this type of drawer. The price to pay is the difficulty of removing the first part of the bottom of the drawer if necessary, while the remaining part can be easily removed by taking out the brass screw that holds it at the bottom.

With the front-bottom assembly finished, the most significant part of the work on the drawers had been completed. The result is a front which, thanks to the first glued bottom part, behaves as in a normal horizontal grain drawer. The construction of the drawers then continued on more traditional tracks with the creation of the sides and backs. For the sides, I chose to use ash, the same wood used for the drawer guides, while the backs were made in lime like the rest of the carcass.

After preparing the pieces, I began the assembly, which was complicated by the curved shape of the front. Clamps could not be used in the traditional way, so I had to use a little trick to be able to exert the right pressure and clamp everything without damaging the soft lime of the fronts. To create more squared structures, I glued everything together with the bottom inserted. To fix the back of the drawer, I opted for a simple and effective solution using pins.

MAKING THE LEGS

The chest's legs have laburnum tips, I often add this to my furniture as it is a particularly hard and resistant wood. To attach the tips to the legs with the grain running in the same direction I used screws as clamps, which I then removed and replaced with a peg. Having decided on a simple pyramid shape for the legs, I was able to rough them on the saw bench with a goniometric guide. I then finished them with a hand plane on the workbench. This work is quick and easy because the inclination of the cut and the consistent grain of the pieces do not create any surprises. The pieces can be perfectly finished in just a few steps and without any tearing.

MAKING THE CHEST

Once the legs were completed, I started to determine the size of the chest, in particular the internal measurements to adapt them perfectly in regard to the width of the drawers. I checked the internal height using the drawer guides as shims and 0.5mm-thick aluminium sheets as spacers, which I then also used to fix the guides to the internal walls of the chest. This simulation allowed me to perfectly determine the correct height.

Once the internal measurements were determined, I prepared and assembled the pieces for the chest. This was done in the standard way: I made the back of the piece using a panel and frame construction. Since it was an exhibition piece, I paid particular attention to aesthetics, even on the back. I inserted the rear panel so that it was flush with its frame, trusting that subsequent seasonal movements would not create problems.

Before the final assembly, I had to focus on different shaping processes. The first was to transfer the shape, in plan, of the drawer fronts on to the front of the top and base panels of the cabinet. This didn't take long because I was able to do a fairly precise roughing with the bandsaw. The second shaping, made entirely by hand, consisted of creating a bevel on the front of the same panels; both were machined at approximately 45°. The chamfer on the bottom panel is located on the outside of the cabinet, while the top one remains inside. The latter was only roughed up while waiting the final assembly of the drawers. The tallest of the four matches with the top, through an inclined cut – a trick I used to eliminate any break between the front and the top of the cabinet. The bevel on the base is there for aesthetic reasons and serves to make its presence on the front of the cabinet more discreet.

After the shaping work I was able to assemble everything. First, I glued the legs to the bottom panel and then I finally closed the cabinet.

MAKING THE DRAWER GUIDES

With the assembly complete, I could focus on the drawer guides. I mounted them starting from the bottom, inserting one drawer after the other and interposing the same aluminium shims used previously. The guides were pre-drilled before insertion to facilitate their fixing on the internal walls. Also, I used screws for the initial gluing then replaced them with the pins.

At this point I could finish the connection between the top and the upper edge of the first drawer. The latter was also roughed out at 45° but the real work was in the finishing. I proceeded roughly, detecting the contact points and removing a little material at a time. A torch helped me to highlight the most obvious places and allowed me to shave more where needed. In the end, after quite a lot of rasp work, I got the two parts to fit together perfectly.

The last step was to carve the drawer handles. After so much work, adding metal knobs or pulls was absolutely out of the question. I took advantage of the fact that on the sides the fronts of the drawers had a fair thickness, so I prepared a template to make the same hole on each one and, with knives and a chisel, I proceeded to make them. I finished it all off with a coat of raw linseed oil and three coats of shellac.

THE FINISHED PIECE

I usually spend a lot of time looking at my pieces once they are finished, not only for the obvious satisfaction of seeing the physical item created from what was originally just an idea, but also to check how the object corresponds to the image that was in my head and that guided me in the construction. These are moments that I define as 'self-training' and I think they are a useful part of a furniture maker's development.









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