AUSTRALIAN
Wood
REVIEW
113

HOW TO TUNE YOUR SLIDING TABLESAW

THE RIVER TABLE

Greg Klassen's iconic design

Maker OF THE YEAR AWARDS

- All the winners, runners-up and finalists revealed
- 16 pages of stunning projects

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Australian Wood Review 113

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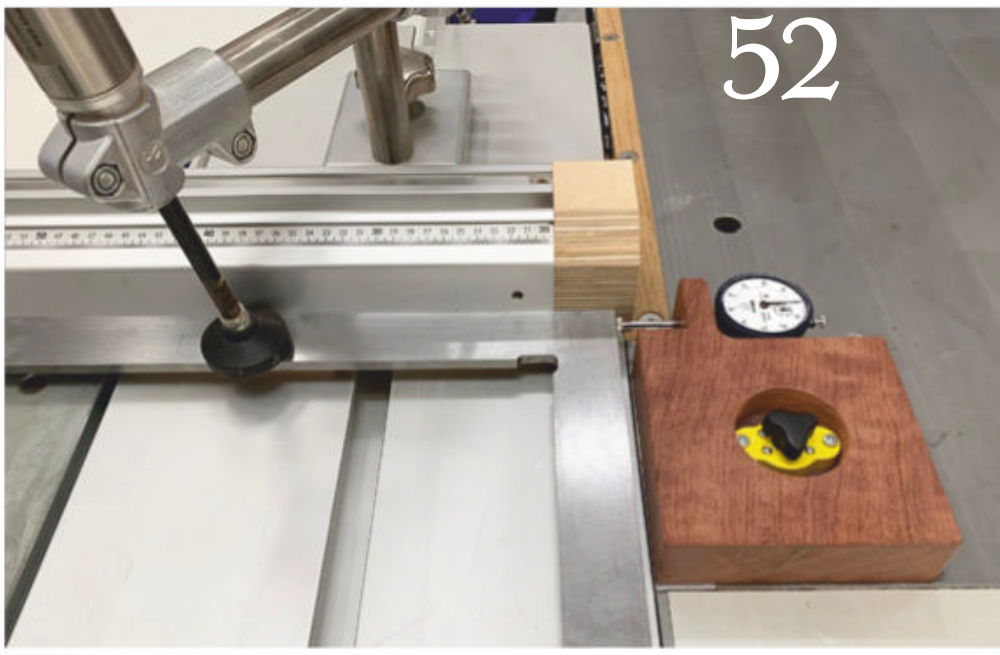

TOOLS & EQUIPMENT

Editor's Letter

Point of origin

The 'river table' is arguably the biggest woodworking trend of our generation. In simple terms, you take two slabs of live-edged timber and create an infill between them. Social media is awash with videos of brightly coloured resin pours as well as furniture where glass has been cut to fit curves. But once an idea or a design becomes popular, its point of origin may be lost – all of sudden that design becomes 'generic' and supposedly common property.

When US furniture designer maker Greg Klassen decided to trademark his River Table design it became a hot button topic. He was decried for it, and yet how should designers and artists safeguard their intellectual property? Is it even possible in a digital world fuelled by downloads and 'shares'?

'For a sense of the scale of this trend, entering "river table" in Google returns 2,290,000,000 results and a quick search on Instagram shows the river and resin table hashtags account for at least 460,000 posts, all in the past 10 years since my work went public', explained Greg Klassen to me via email. Following that, I phoned Greg to ask him about his experience, and the result is the interview you can read from p.30. In fact the interview is much more than a discussion of the river table concept. Within his replies, Greg gives us a virtual masterclass on achieving a sustainable career in fine woodworking, that is, how to make your operation financially viable.

Living in lockdown

The effects of the pandemic and associated lockdowns have affected many readers, and many whose work appears in this issue. These include Maker of the Year entrants who still managed to complete and enter work, sometimes without being able to have their work professionally photographed as planned. For many secondary students, it's been another tough year without free access to school workshop facilities and face-to-face teaching. For the makers of the Future Remains exhibition (see p.68), it's meant having their work in a public venue that was locked off for all but a very limited period of time. It has to be said though, that for many people, creative pursuits such as woodworking have been a sanity saver, even if within lockdown limitations.

Maker of the Year 2021

This issue we're thrilled to present the award winners and finalists for Maker of the Year 2021, presented by Carbatec. Opening up the awards with a World category has brought us into contact with makers from the USA, UK, Europe and Asia. As an online collection, the 371 entries received now stand as a unique showcase of our times.

Viewing the entries as they came in has been the highlight of my woodworking year! I am in awe of the creativity, the skills, the problem solving and the extreme amounts of patience and devotion required to make the body of work that now exists as a tribute to 2021. And in these times, amidst the zoom and gloom, we certainly have needed to latch on to some positivity.

Initiatives like Maker of the Year don't happen without support and we thank our amazing sponsors Carbatec, Felder Group Australia and Whittle Waxes for making it happen. We also thank our judges for the care and consideration they applied; and last but not least, we thank everyone who put their work out there for all of us to appreciate and enjoy.

Wishing you all the best for 2022.

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COVER:
Greg Klassen in his studio, Pacific Northwest, USA

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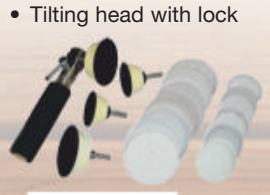

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Perfect Cast, Eye Candy, Kustom Grit

Reviewed by Andrew Potocnik

This review involves three products that sell individually but work well together in the process of resin casting: resin, pigment and a polish.

The base material is Clear Cast, a two-part epoxy resin which can be used as either a clear filler, or coloured with additives. Eye Candy is a metallic pigment that does not dissolve into resin, but is suspended, creating a metallic effect similar to that seen in automotive finishes. The final product, Kustom Creations, is a two-step polish that promises a glass-like finish on resin.

To trial the three products I needed to begin with the base material, the resin. Perfect Cast has some basic information on the two containers, however you need to check the website to get information on mixing ratios, application, clean up and health and safety.

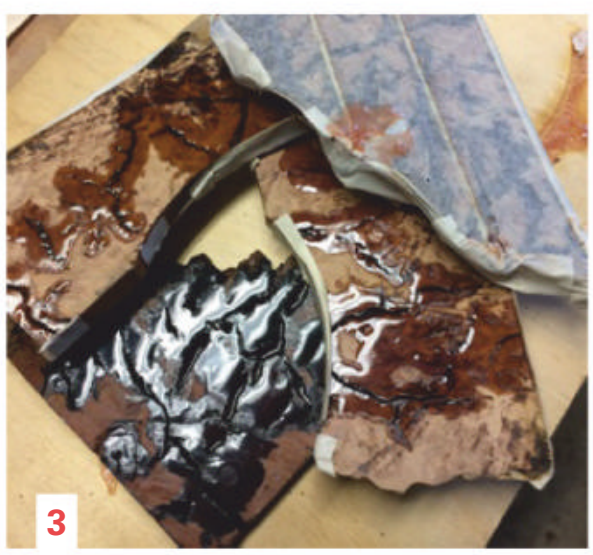
The resin

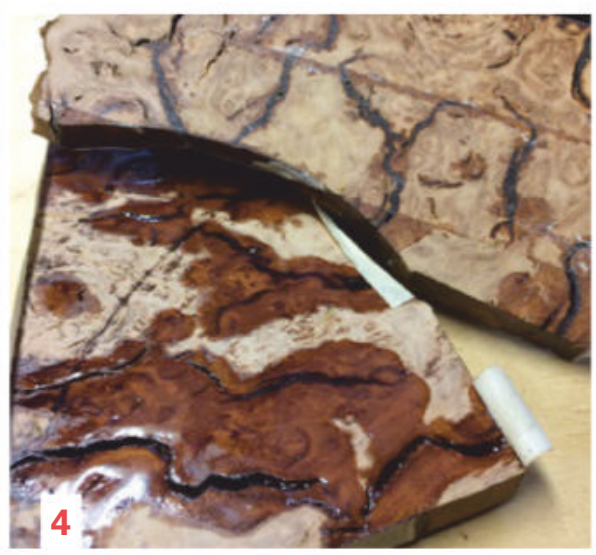
The website indicates that Perfect Cast is a solvent-free, liquid epoxy system designed to create ultra-clear castings to which pigments or tints can be added to create translucent colours, and special effects can be created by embedding. It can handle a single pour of 20mm depth which at 25° and under 85% humidity will cure in 24 hours. No doubt, depending on your environment, you ought to do some trials to ensure the product will work at its best before embarking on a major project.

I received two bottles, one of 1L, the other of 500 ml, which made me think it's a 2:1 mixing ratio, but I had to revert to the website to confirm that in terms of volume. Yes, the ratio was correct, however in weight ratio it is 100 parts resin to 43 parts hardener. I opted for the 2:1 ratio using small medical cups.

Perfect Cast opens up a variety of casting options, of which I trialled two: as a filler in voids found in burls and as a resin bed containing other materials.

Cutting a series of burl slices, two of a light eucalypt and two of a dark redgum burl, I mixed a clear resin and one with Eye Candy pigment added to the resin





1. Earrings with coloured (left) and clear resin (right).

2. Another set of earrings using coloured and clear resin.

3. Endgrain redgum samples after first pour.

4. Showing penetration of resin in the samples.

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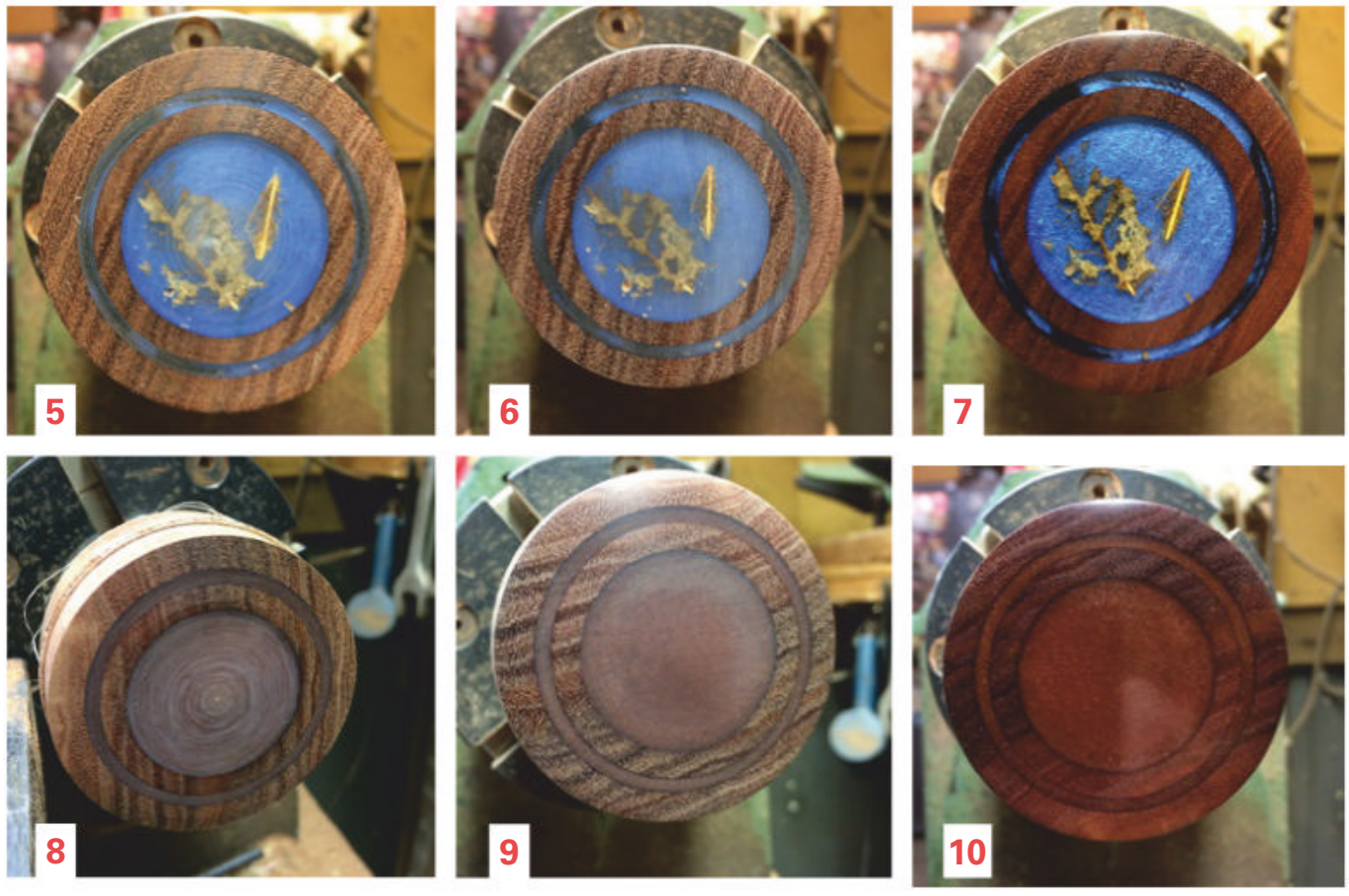

5. Clear resin pendant, surface off the tool.

6. Surface once sanded to 1200 grit.

7. Surface after polishing with Kustom Grit.

8. Pendant with resin, pigment and inlay off the tool.

9. Coloured pendant sanded to 1200 grit.

10. Coloured pendant polished with Kustom Grit.

11. The finished pendants with clear resin and found objects (left) and Eye Candy pigment (right).

mixture. Sealing the underside of each slice and its edges with masking tape, each mixture was poured into voids and allowed to seep into extremities before adding extra resin to fill in the voids. After 24 hours curing time, the tape was removed to show how well the resin had permeated voids and filled cracks without leaving bubbles.

As with any resin pour, it is advised to not to mix the two parts too vigorously to reduce the possibility of creating bubbles in the mix, which can be 'popped' by gently waving a heat gun over the poured surface, but you need to mix the two parts for four minutes… that's how long it took Roger Bannister to run the mile last century! And mixing time feels the same.

The pigment

Although I received five small packets of Eye Candy pigment, I only used two of the Japanese inspired colours (Sushi Roll, Sumo Wrestler, Haiku, Kabuki, Shinto shrine), which range from bronze to metallic pinks and reds. As mentioned before, these colours are suspended in the resin and in my trials had mixed results, so with more experimentation better results could be achieved.

Now back to how the burl fills went… With resin seeping well into all parts of the voids, I needed to do a second pour to top up a level surface which I sanded back on a belt sander once all samples had cured (after 24 hours) then cut to shape and sanded mechanically and by hand through to 320 grit before polishing with the third product, Kustom Grit.

The polish

Instructions supplied on the tin state that the two-part product will produce a 'glass-like' finish if buffed at 400–800rpm. The buffing wheel fitted to my grinder runs at 3000rpm, which didn't result in the spectacular results achieved when applied on the lathe running at about 400rpm.

Experimenting

To trial another aspect of these products I turned two pendants, one using clear resin and the other with pigmented resin, both polished with Kustom Grit, and this is where each product really shone.

Cutting a couple of recesses into endgrain redgum, one sample was filled with resin mixed with Eye Candy and filled well over the turned recesses, which ensured a single pour would suffice.

The recesses in the second blank were painted with iridescent blue paint before some found objects were inserted and a clear resin mix poured into place.

Turning away excess material was easy with both cutting and scraping tools and after sanding through to 1200 grit application of the two-part Kustom Grit polish did result in a glass-like finish, as promised! The coloured resin mix had a sparkle similar to that seen in automotive paint, but would stand out more if paired with a contrasting timber colour. The clear cast was exactly that, as clear as glass!

I've only scratched the surface, no pun intended, with these trials, so with more experiments I'm sure that even better results will be achieved. In the mean time, I'm satisfied that each of these products works very well.

Review products supplied by Carbatec, www.carbatec.com.au

Andrew Potocnik is a wood artist and woodwork teacher who lives in Melbourne.
See www.andrewpotocnik.com

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Felder FD250 Mortiser

Reviewed by Damion Fauser

This is a versatile machine that packs a real punch in such a small unit. Billed as a horizontal slot mortising unit, with some optional accessories and alternate tooling it is capable of so much more. I've had one for five years and find myself using it for more tasks every year.

With a 2.6kw, 3x400 volt, 3000rpm, reversible motor that caters for left and right cutting bits and a solid quad-jaw chuck with clamping range from 0–20mm, this machine is able to securely hold and operate some significant tooling, ranging from 1/4" shank router bits, mortising cutters, hollow chisel mortising bits and even large plug cutters and forstner bits. There is an optional upgrade of a two-speed motor – I chose this option to allow for the slower speeds that larger hollow chisel mortising and larger plug cutters etc require.

The cast iron table is fixed in the horizontal plane and is large enough to hold substantial workpieces. Further workpiece support can be added with proprietary Felder table extensions to either side and to the front. The table has pre-bored holes for accepting the precisely machined lugs on the included end stop, with a number of options at 0, 45 and 90° to the cutter. This creates a solid and extremely accurate foundation for registering workpieces and jigs for cutting.

The motor and chuck move the cutter forward and back and laterally in relation to the workpiece. All movements are on the Felder roller-bearing system, creating an extremely smooth action. Movement can be driven by one of two handles – one is for simple forward and back (for boring or square mortising) and the other is omni-directional for slot-cutting. The lateral range of motion is 250mm, cut depth is 160mm, available height adjustment is 130mm and there are solid locking stops in all three directions for setting precise stops.

Dust control is good and is ported via a collection tray below the cutter out to an 80mm outlet. Controls are solid and easily accessible. There is an enormous range of accessories that can be used with this machine. The marquis option is the accessory chuck to accept hollow chisel mortising cutters, making this two machines in one with an easy five minute changeover. Included in the cost is one of the Felder eccentric cam clamps for solidly securing workpieces and jigs. There are two threaded ports in the table that the clamp shaft screws into.

I've also begun using this machine for many drilling and boring processes, particularly those that require cutting into the end of longer billets. As the table is horizontal, this cut is not limited by the range between the table and quill as on a traditional pedestal drill.

This is a machine that many shops would find extremely useful, requires very little floor space and is very well priced for the capability and versatility it offers the imaginative user.

Available from Felder Australia
www.felder-group.com/en-au

Damion Fauser is a Brisbane based furniture designer/maker who also teaches woodwork classes.
See damionfauser.com

Above: Showing the FD250 mortiser in action. This is a versatile machine which can also be used for many drilling and boring processes.

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3M P2 Half Face Respirator Kit

Reviewed by Raf Nathan

We work in an industry where dust is inevitable, which is why every woodworker needs good dust protection. Machine sawing, sanding, routing or lathe turning will produce hazardous dust levels that we need to avoid.

You can use a quality valved paper mask (which is acceptable), or go to the next level and use something like this 3M 6500QL series half face mask with filter cartridges. The benefit of the latter is much greater protection, as this sort of mask will give a better seal around your face, and the filter cartridges are far superior to paper style masks for filtering air.

$119

This particular mask is supplied as a kit that includes two sets of P2 filter cartridges which are rated for wood dust, masonry dust and even lead paint type fumes. I appreciated the fact it comes with a plastic container to store the unit and keep it clean.

The latch mechanism makes the mask easy to put on and take off, and I found it comfortable to wear. I found I was able to breathe freely while machining.

For polishing jobs where you are using lacquers, French polish or the new hardwax oils (which all give off fumes), I suggest you purchase organic vapour filter cartridges which will also fit this mask.

From my experience though, only get good quality cartridges and beware of fakes! I once bought vapour cartridges from eBay which worked well, however the fit on the mask was not quite perfect to the point of them falling off half-way through a polishing job. Bona fide 3M replacement cartridges are available for particles at around $25 a pair, and $30 for nuisance level organic vapours.

I recommend you consider buying a mask kit like this one, keep it clean and sealed in a container when not in use, and have spare cartridges on hand to suit your type of work.

Raf Nathan is a wood designer maker based in Australia.

Review mask supplied by Carbatec, www.carbatec.com.au

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Redsail 130W RSX130-1390 Laser Cutter

Reviewed by Ash Vaughan

CNC laser cutting machines are now found in many workshops and used for cutting and engraving signage, templates and components in wood, plywood, acrylic, rubber, leather and paper. I initially purchased the RSX503050 Redsail laser cutter which has a 500 x 300mm bed size to cut costs for my business, Perth Cake Collective.

I wanted to make my own cake toppers from acrylic and wood for a fraction of the cost I was purchasing them for. I knew the machine would pay itself off in no time, however it wasn't long before I realised all the extra products I could create with it. The need for a larger machine was soon evident – I never imagined it would take a mere 10 months for me to upgrade to the larger model.

With its 1300 x 900mm bed size, the RSX130-1390 is the largest of Redsail's laser cutting machines and has opened many more doors for not only our new business Cut & Co., but also for my partner's carpentry-based business, Blu Builders, which is now able to offer extra services to clients.

Blu Builder's most popular requests are detailed MDF or ply images and signs that are used for a number of events and businesses around Perth. We have even cut opal acrylic to be used with neon-lit signage for events and boats with such ease. And evermore popular are the round and arched acrylic signs we make for events which are cut and engraved within a matter of minutes on the laser machine. Every day we find more ways in which this machine can help with all three of our businesses.

I have Apple Mac computers and use LightBurn software for the machine. It does take time to get used to the program, but when you get the hang of it, it becomes as easy as a couple of clicks. These machines really do all the work for you.

The installation and learning process was made easy with Beyond Tool's exceptional customer service. I wouldn't have discovered my original laser machine if it weren't for this family owned company.

Redsail laser cutting machines are available from www.beyondtools.com.au

Ash Vaughan uses a laser cutter to create a variety of signage and display items for her cake business, and for her partner's carpentry job needs.

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Take-Away Tablesaw

Compact and cordless, Bosch's GTS 18V-216 Professional BITURBO brushless tablesaw offers 70mm cutting height and 635mm rip capacity. Weighing in at 21.6kg with battery, it's light enough to take wherever you need to go. The blade has a diameter of 216mm and the unit has a 'soft start' feature as well as 'restart protection'. The tablesaw is compatible with Bosch Professional 18 volt batteries and chargers, however their ProCORE batteries are recommended for maximum power. The unit mounts on Bosch stands GTA 560 and GTA 60W. A six year warranty tops off the package.

www.bosch-pt.com.au/au/en

Product News

A round-up of tools and equipment to take notice of.

Smoother Operator

The 2022 model AUK router features industrial grade ER20 collets which nests into a perfectly machined, matching taper on the router shaft, thus minimising run-out and noise. The ER collets feature eight clamping segments vs the four on most routers on the market. The AUK router is supplied with both 1/4" and 1/2" collets with 8mm and a range of other sizes readily available. The router has a 106mm (4.2") diameter body that suits Jessem and Incra Mast-R-Lifts, while the infinitely variable speed control ranges from 10,000 to 22,000rpm to deliver gutsy routing power.

www.woodworksupplies.com.au
www.gregmach.com

Compact Combos

For space and dollar saving value, planer/thicknesser combinations are a good solution. Three options are available from Gregory Machinery in the Woodman range – 10, 12 and 16" – and all with helical heads. Shear cut helical heads are quieter and produce a superior result. Another aspect the Woodman machines claim to star in is in their quick change-over of planing to thicknessing modes, said to be a mere five seconds. Some handy accessories are available and the mobile bases in particular are a boon.

www.gregmach.com

Sharp New Tools

The sharpest tool in your kit needs to be the one in your hand. Ukrainian-made Stryi tools are a new locally available offering for spooncarvers and whittlers to take a look at. The tools come sharp out of the box with nicely shaped oak handles. The 80mm and 58mm whittling knives are double bevel and there are 30, 35, 50mm rounded spoon tools. Highly affordable, the range sells for $49 to $69.
www.carbatec.com.au

For Your Tool Kit

Kakuri rabbet planes are designed to efficiently work the bottom of rebates and trenches. The laminated blades are made from high carbon steel blade. They sharpen to a very keen edge, and are no more difficult to sharpen than any other Japanese woodworking tool. Setting up and tuning a Japanese joinery plane requires careful attention to the even protrusion of the blade from the mouth while ensuring the sole remains square to the sides. As the body of the plane is Japanese white oak, the woodworker has a lot of control over these adjustments. There are three sizes – 15 x 180mm, 18 x 180mm, 21 x 180mm and currently the planes cost $68, $70 and $75. Available from Japanese Tools Australia.
www.japanesetools.com.au

Well Balanced

This versatile Chesser mallet from Professional Woodwork Supplies has great credentials – both environmental and ergonomic. It's made from plantation grown rubberwood that was harvested 25 to 30 years after the tree had stopped producing latex. The curved face is used when carving and the flat faces when using joinery chisels. It was designed to be well balanced and swing easily. It weighs in at 450grams is 280mm tall, measures 86mm across mallet head and sells for around $75.
www.woodworksupplies.com.au

Entry Level Slider

Sliding tablesaws are more accurate and safer. SCM Australia's entry level option is designed to give the desired precision and functionality within a compact footprint. The minimax sc 2c comes complete with scoring unit and accommodates a 315mm tilting blade. The 1660mm crosscut capacity is ideal for processing panels and is the perfect machine for smaller joinery shops. Conveniently, the scoring unit adjusts easily from outside the machine. Parallel cut accuracy is via the anodised aluminium parallel fence with support, quick locking device and micrometric adjustment.
www.shopscm.com.au

Clamps Unlimited

Clamps and more clamps, what a choice we now have. Adding to the selection are a new range from Wolfcraft which is available from Carbatec. These are squeeze-operated and available in various steel bar lengths. The heads and tails are ruggedly made from a virtually indestructible composite material. The clamps can also be joined together which then gives almost unlimited clamping length. To do this you use a simple coupling fitting that snaps in place on the bar of the clamp. They are quite quick to operate, and easy to locate in a messy workshop with their bright colouring. These clamps are very competitively priced, for example a 300mm long piece is only $40. At that price you will be able to afford a few for your gluing-up tool collection.
www.carbatec.com.au

How to Weave a Chair

Design is a dynamic process with discoveries to be made, and details to determine. And, seeking to challenge himself, Henrik Tjaerby piled on the processes.

In any woodworking project several processes are involved – typically sawing, joining, sanding and finishing. In this project however, I wanted to include as many woodworking processes as possible – traditional as well as modern technology. Also, I wanted to challenge the design to be as thin and light as possible in order to use the wood to its full potential.

I had to build a steam bender, two moulds and several jigs. I used 3D printing, CAD drawing and sketching to reach the final result – a woven chair.

Dynamic design

The design process is as complicated and important as the making itself. I rarely doodle down a chair on a napkin, model it in 3D and follow the drawings. Instead, it's a dynamic process that moves between sketching, detail models, ergonomic rigs, mock-ups, CAD modelling, 3D printing, back to sketching, and so on. As an example, for this chair I followed the ergonomics of similar chairs I had done in the past, yet still I had to adjust the angles and proportions a few times to get the ergonomics spot-on.

In the making, you also discover the 'mistakes' the design may have, and you may have to go back to the drawing board to make it suit your machines (or your own limitations as a woodworker).

Lots of decisions will be made for you as well. This particular chair was part of a family of furniture with a related design. When I worked on the stool and bench I had sleepless nights about what leg profile to use, but when I got to the chair I realised the only profile that worked was the round one – job done.

Another fun fact was that I initially had a traditional stacking frame with an offset rear leg. But while playing around with some 3D printed models I found it stacked in a rotating manner – something I would never have understood on paper.

All around views

It's all about proportions. Getting the proportions right is *so* important for achieving an object which is nice to look at from all angles. A side view is *not* the way to do this, but for the purpose of this article I'll try to explain it with one. In my opinion, the thinner the legs, the better the chair looked (**fig.1**). On the other hand I liked the untraditional high seat frame, which also added enough stability to avoid the traditional cross-bars underneath.

Another thing I worked a lot on were the angles in this side view. Some are obviously defined by ergonomics, others are purely visual where I found the 90° between front leg and seat frame was the neatest at avoiding having angles all over the shop. Again, this is not something you evaluate in a pure side view; but something you see in 3D after mocking the first prototype together.

Details that matter

Another (not so) fun fact: I like to keep things minimal, and make sure all details are there for a 'reason', so initially I made the slats on seat and back the same width. On paper, in CAD and even with 3D printed models, this looked correct, but when I finally got to the 1:1 model I realised it was wrong.

The woven slats are 3.5mm thick and the backrest is 8mm – both with fully rounded edges. Even though they were the same width, the backrest looked narrower than the woven slats, so I ended up making the 'flat' surface the same width, effectively making the backrest wider.

1

2

Main: Henrik Tjaerby with the finished chair. It took a myriad of processes, but the result was light, elegant and stackable.

1. The seat of the chair is 'woven' from 3.5mm sections of wood.
2. Showing the steam box, jigs and formers that were created to shape the legs and backrest.

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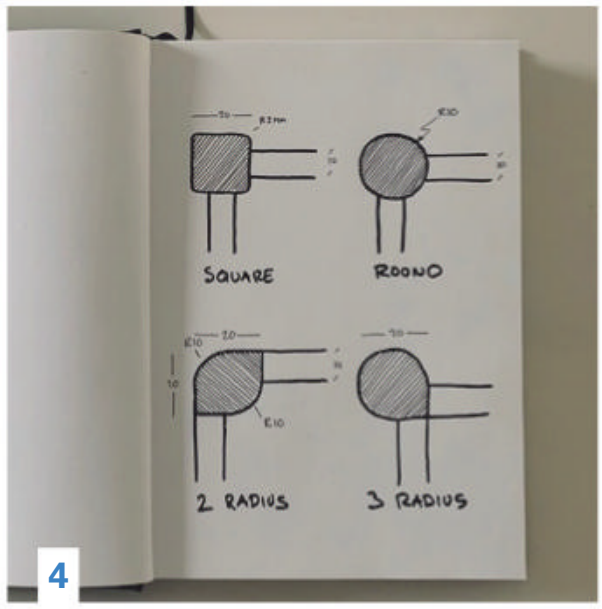

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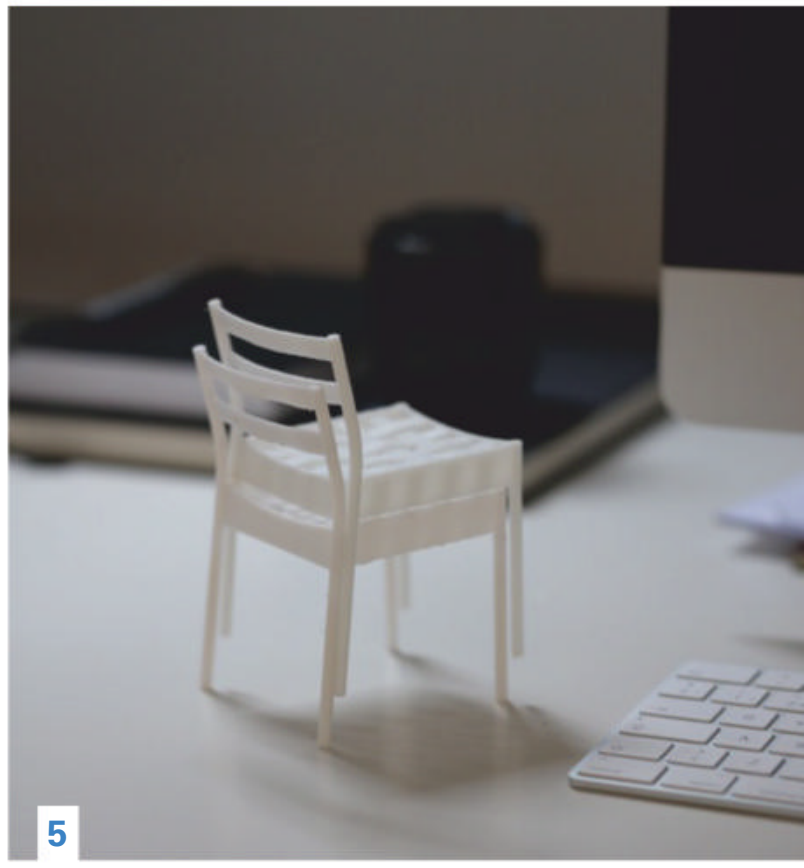

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3, 4, 5. The design process moves between sketches, detail models, mock-ups, CAD and so on.

6. The steam box was made from plywood off-cuts and 'powered' by a storm kettle.

7. After steaming, the legs were clamped two at a time to the double-sided former.

8. The formers are edge profiled to receive the steamed leg components.

9. Bandsawing thin sections for the woven seats.

10. A carrier was used to thickness the 3.5mm slats for the seat.

Processes plus

Now, onto the making. As I said in the beginning – this was really a challenge to myself to incorporate as many processes as possible. In my article in *AWR#107*, I described the complexity of the woven bench, and this chair is pretty similar – only worse!

Make a steam box

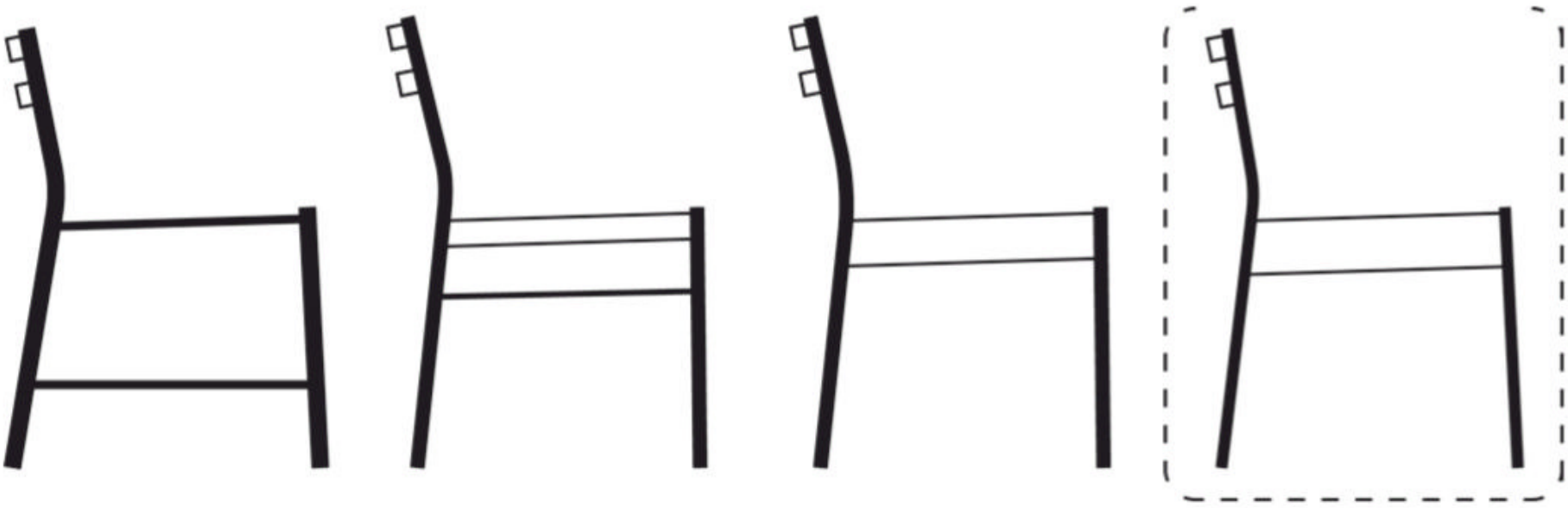
The rear leg is steambent, so first up – make a steam bender! It's pretty easy – you can use a PVC drainpipe, metal chimney, or as I did, build one in wood. I used plywood off-cuts (I always keep those narrow leftover strips, and they finally became useful).

Stick a hinged door in one end and seal the gap with self-adhesive foam. I used some pulling clasps to make a tight fit, and added a few wooden dowels inside for resting the wood on. Mine was 1200 x 200 x 200mm, but any size will do – I would suggest making it as small as possible as you will need less steam. I used my storm kettle to create the steam, but it's a nightmare to use as you have to refill the water and keep the fire going – I guess that's why it's meant for boiling water! You can buy dedicated steamers which are great but expensive, but I actually just bought a wallpaper steamer for about $80 that does the job.

Make a mould

Make your mould *oversized*! With steam bending it's impossible to calculate the spring-back. It's pretty much trial and error, and for this reason make the mould oversized so you have enough material to change the angles until you get it spot-on. I did a double-sided mould so I could clamp and dry two legs at a time. I shaped the legs round before bending, but you can also bend square stock and machine it afterwards – this way

Fig.1 Chair side views



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I could make several metres of round leg stock and cut to length. I guess it's also easier bending less material.

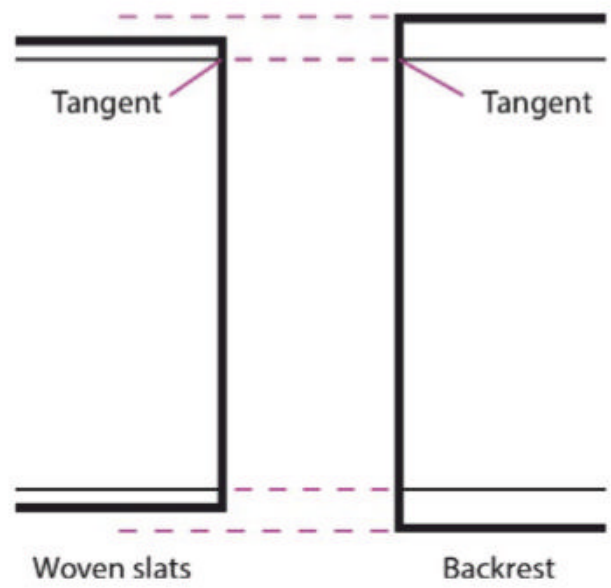
Researching the web suggests steaming one hour per inch of material, and leaving it to dry in the mould for double that. I ended up steaming for two hours (for one inch legs) and leaving them to dry overnight to avoid too much spring-back. For better support I made half round grooves in the mould. As your clamps will leave marks in the wood, I made matching rails with the same groove to support the wood.

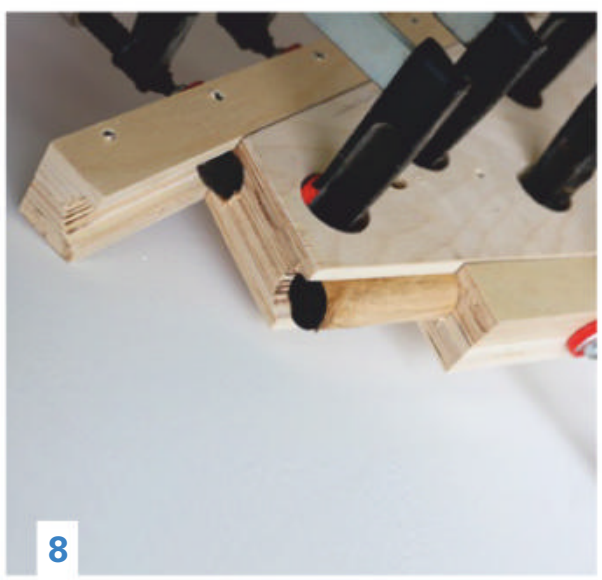
Make the slats

Preparing all the woven slats is a lot of work, to say the least. At only 3.5mm I had to make a small insert for my thicknesser. After a few horrible kickbacks, you get better at reading the grain pattern – cutting against the grains is like stroking a dog from tail to head. Each slat has a fully rounded edge to fit the grooves in the seat frame.

The backrest is laminated with even thinner slats that are approximately 2.7mm. As it's only three layers I expected a lot of spring-back, but surprisingly it was pretty stable, so I only adjusted the mould once. I made the mould from sheets of plywood, only 15mm wider than what I needed the width of the back to be. If you want to get really 'industrial' you could obviously make a much wider mould and press five or more backrests in one go.

Fig.2 Backrest angles





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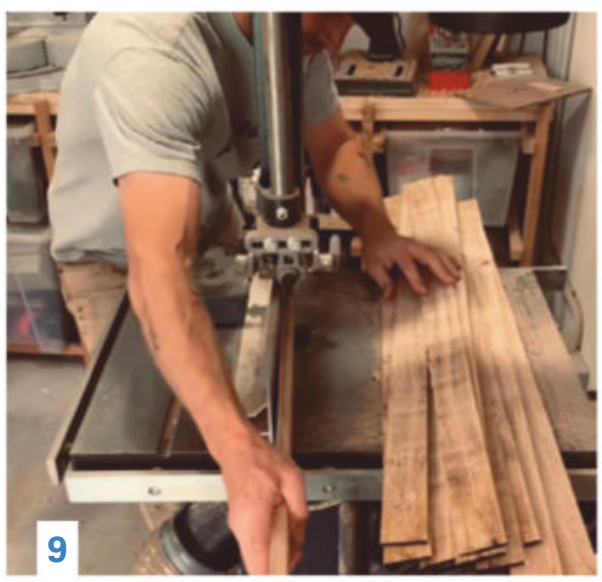

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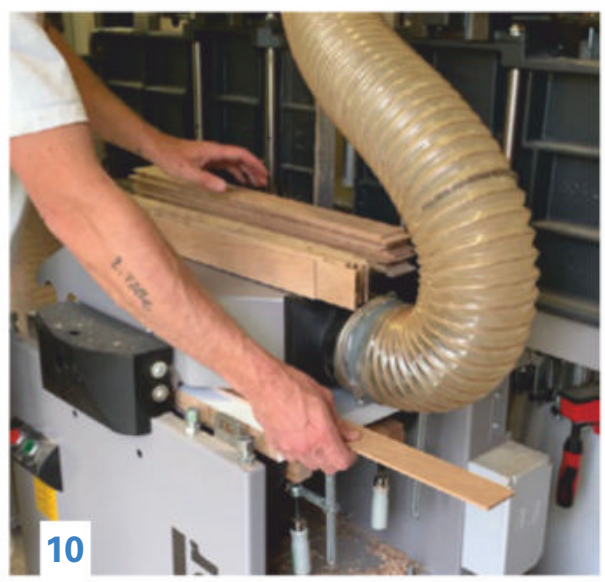

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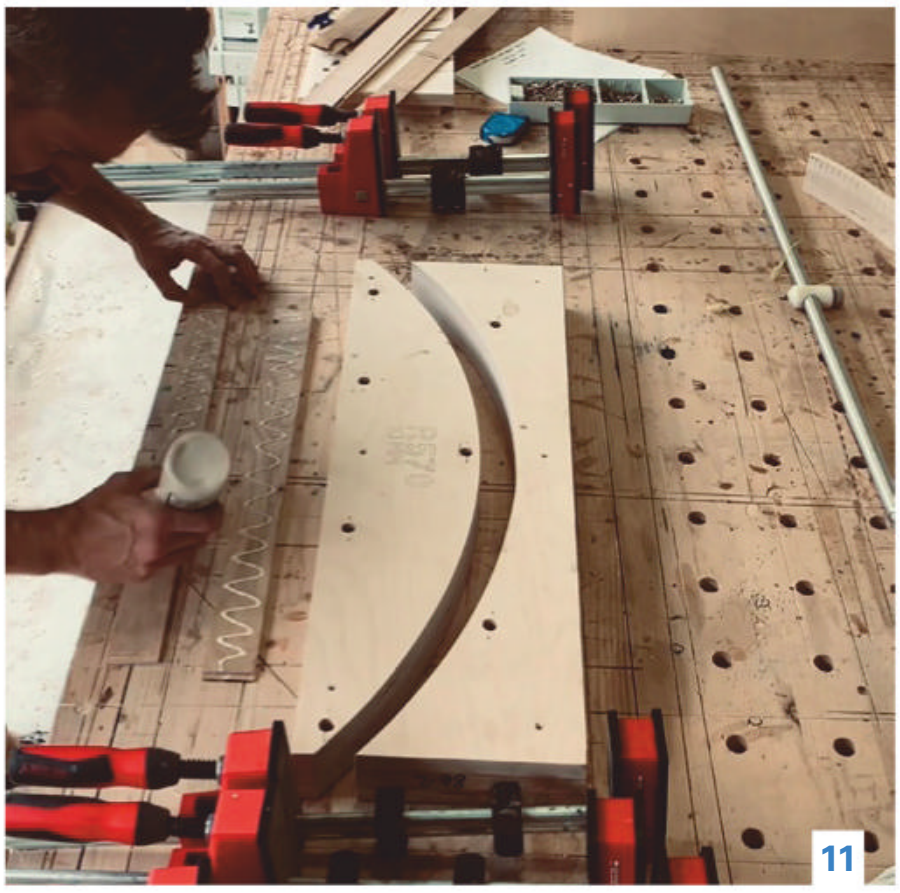

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11 Gluing up laminates for the backrest.

12. The author using his supersize compass to scribe the radius of the backrest.

13. Slots for the seat slats were cut with the domino machine.

14. Rounding the shoulders of the seat frame where it meets the leg.

15. The legs were temporarily glued to triangular sections of ply which could be rotated as each mortise was dominoed.

16. Repeat applications of steel wool and vinegar solution create an ebonised surface.

17. The ends of the slats were sawn to increase the gluing surface for better bonding.

18 'Standing on the seat with one foot is not exactly the European (or Australian) standard for testing, but it's still in one piece!'

The front and back of the seat frame are curved to make them more comfortable – again this is one of those things that looks fine in CAD. But in reality this curve has to be much shallower than you would think. I had it about R1000mm in CAD, and ended up making it R2350mm on my supersized compass!

Each slot for the woven seat is cut with the domino machine, but you could cut these with a small router or a CNC router (like the one which I won in the Felder Challenge for this very chair – whoop!).

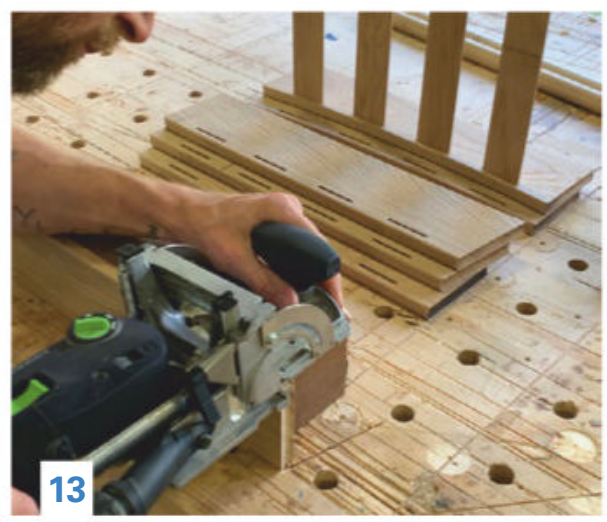
The seat frame has a rounded cut on the shoulders where it meets the leg. I didn't have time to buy a round nose cutter in the same diameter as the legs, but with a bit of fine-tuning I managed to cut this with a radius cove cutter on a weird and unstable jig.

The seat frame is joined to the legs at a 90° angle. So, how do you ensure the holes are at the right angle? I superglued (or super sticky glued as my daughter calls it) these 90° corners to the end of each leg. This way I could rotate them exactly 90° with the table top as reference.

How to ebonise

The last technique I threw at these chairs was ebonising. This technique works on various woods – especially oak and woods high in tannin content. For those who don't know, it's a process that creates a natural reaction in the wood.

First, dissolve steel wool in vinegar for a couple of weeks. The wool has



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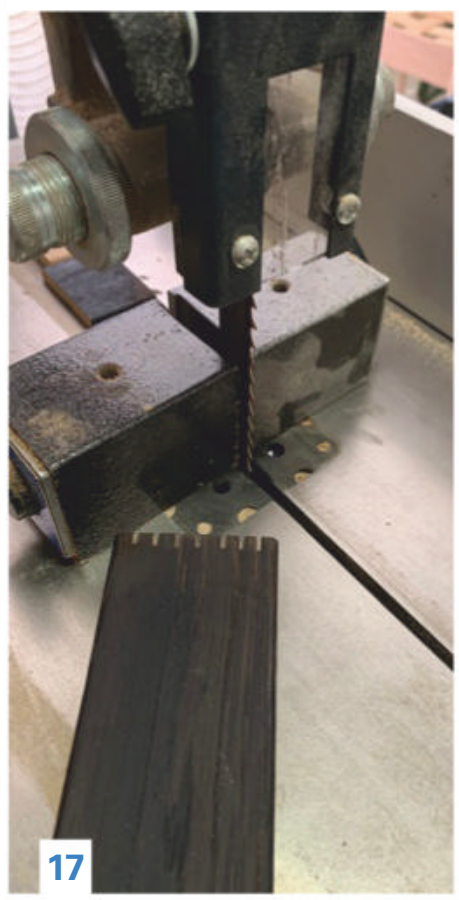
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to be clean and oil free so wash it in detergent (or thinners) beforehand. Secondly, brush it onto the untreated wood, sanded at no finer than 150 grit. If it's not dark enough you can brush on black tea and repeat the vinegar solution as many times as you like. Finally, I applied an oil finish to the surface.

Normally you would ebonise and apply oil after glue-up. However, as the woven slats overlap I had to do this beforehand, which was a bit of a challenge. I masked each end from the oil so the glue would be able to bond. For better adhesion I sliced up the ends for the glue to really get in there.

Stress levels

Saving the worst for the end – it's time for glue-up! Most glue ups are pretty stressful but *this* glue-up is at a whole new level.

As the seat is woven before glue-up, the ends of the slats stick out in two directions. Forcing 16 ends into the dedicated slots on the seat frame is nearly impossible so I built a frame to clamp them into roughly the correct position. Now, doing this, as well as locating the 16 dominos joining the seat frame to the legs before the glue sets is a horrible experience. Make sure you put the kids to bed, have your coffee and turn off the phone before you start.

I tried reducing the stress by gluing up each side and some of the slats first. However this reduces the flexibility in the woven seat and ends up making the second glue-up even more stressful.

All this stress is released when you finally remove the last clamp and see all the joints are solid and with no gaps. It's such a surprise picking up the chair without 12 clamps on it as you realise how light it is – 3.2kg to be exact which is pretty light for a solid wooden chair! Standing on the seat with one foot is not exactly the European (or Australian) standard for testing, but it's still in one piece!

Photos and diagrams: Henrik Tjaerby

Danish born, Henrik Tjærby completed his MA in furniture and industrial design in 2002 while also focusing heavily on traditional and modern woodworking techniques. He has worked as a designer for a number of internationally renowned studios in Denmark, the UK, China, and Japan including George Jensen, Tom Dixon, Fritz Hansen, Artek, Zara Home and Virgin Atlantic. He lives in Northern Spain and has a workshop on the edge of a eucalyptus forest. See Instagram @henriktjaerby


RIVER

Point of Origin

How can makers safeguard ownership of their designs in a world that thrives on broadscale digital 'sharing', often without due credit to its originators? The success of Greg Klassen's widely lauded and much imitated River Table design has helped him create a sustainable career as a designer maker, but there have also been unexpected consequences. Interview by Linda Nathan.

Main: Greg Klassen with two of his *River Tables* in his Pacific Northwest, USA studio. *Photo: Ben Bender.*

Above: *River Coffee Table* top in spalted maple and handcut glass by Greg Klassen. *Photo: Matthew Bergsma*

The 'river table' has become the biggest woodworking trend of our times. Many woodworkers regard it as such a 'generic' furniture form they don't appreciate its origins stem from the designs of US maker Greg Klassen.

Seeing the flood of lookalikes that appeared after he first 'went public' with his design some ten years ago, Greg sought to protect his intellectual property by trademarking his 'River Tables'. The backlash of criticism he subsequently received was unexpected, and raised larger questions about the rights of artists to claim acknowledgement for and ownership of their designs. I spoke to Greg about the river table phenomenon and asked him how the concept came about, and the impact it's had on his life.

Who is Greg Klassen, and how did he become a furniture designer maker? Were you always going to be a woodworker?

I am a husband and father of three kids – my wife Barb and I have two daughters, 11 and 13, and a son, 8. We live in the Pacific Northwest of the USA, where we home school our children from our 108-year-old farmhouse on a small acreage. I opened my fine woodworking studio in 2008 after studying at the College of the Redwoods (now called the Krenov School) in California and Capellagården School in Sweden. Before becoming a woodworker, I studied theology in college with plans to go into pastoral ministry but during my studies I discovered the joy of working with my hands and chose instead to follow my passion for craft.

You are famous for your River tables (and now also wall art and cabinets) that feature glass inserts that highlight natural edges? Is this your idea, and if so, what inspired this design and how did you develop it?

Yes the River design is mine. I was inspired by the rivers, lakes and glaciers that exist where I live in the Pacific Northwest. And I was also inspired by my introduction to live edge wood slabs around the time I opened my studio. What really fascinated me about live edges was the negative space between two pieces brought together. I immediately felt that this space evoked the feeling of a river, and in some cases a lake, a canyon or waterfall, so I learned to marry the live edges with handcut blue glass. From this experimentation, the River concept was born. I quickly fell in love with the design and chose to create a body of work from it that included many types of furniture but primarily tables and wall-hangings. I always let the wood speak for itself and try to not force my ideas into the design.

As you pointed out to me, the 'river table' trend has become the biggest woodworking trend of our generation. Why do you think it has ignited the imagination of so many others who have imitated it and possibly even added their own twists?

Live edge furniture was very popular before I started working with it, but I thinks my simple decision to turn the live edges inward sparked a whole new appreciation for live edge wood. With the live edges on the inside, I use straight edges on the outside as a visual frame around the middle. For those who may have been turned off by the sometimes rustic feel of live edges, this usage brought a modern refinement to the material. And for those with concerns about sitting near the sharp edges of a live edge tabletop, they became more comfortable with the textured surfaces that were now turned inward. I never could have imagined my work becoming this popular.

What made you trademark the River Table design/concept? How did people find out about the trademark?

I am a one-man woodworking studio and the sole breadwinner for my family. I have worked extremely hard to build my business from nothing. I started it with $15,000 in student loan debt, a few hand tools and a cheap imported bandsaw. For the first six years of being self-employed, my family lived below the poverty line and I worked out of a small unheated garage. Through perseverance, risk-taking and a continual sharpening of my skills, I've built a studio that ships its work all around the world. At one point, I had a two-year waiting list and many of my customers have now turned into collectors.

I am still a one-man shop and my desire remains to quietly work with my hands, creating my own designs and to make a living for my family through my craft. I try to live a simple life and work under the assumption of honesty and integrity. When I put my work on the internet (via my website and social media pages), I do so to share it with people who appreciate what I do.

I have encountered many woodworkers who do not share the same idea of integrity and have taken my designs for themselves. I will add that I do not have a problem with a hobbyist wanting to make a 'river table' to enjoy in their home. Where it crosses the line is when a person takes another person's design, gives no credit to the original artist and then profits from the design. This is dishonest and wrong.

The nature of my work is that each piece is one-of-a-kind and a design that is always changing cannot be copyrighted, so since I created and own the term 'River Table' I trademarked the name. This was the one small thing I could do to protect my original work. Because so many of my social media followers and others were imitating my work they formed a sort of mob when they heard that I had tried to protect my original design. Many of them coordinated a series of posts that were misleading and encouraged hate towards me.

It was a really sad, shocking experience to be a part of and left me jaded towards social media and this sect of the woodworking 'community'. This was very hard for me and, to be very frank and honest with you,

my heart is still very hurt from this experience. But I keep going. Since then I've continued to expand my *River Collection*, now into over 250 one-of-a-kind pieces. Enthusiasm for my work continues to grow and with each new piece I create, I have ideas for four more. I can't wait to make the 30-second walk to my woodshop each morning and keep creating.

So what do you do, when your concept goes viral? How can artists protect their IP? And is this possible in an online world with news and social media platforms hat thrive on 'sharing' work, often without credit to makers or designers?

Once you put your work on the internet, you can't control what happens next. You can put your energy into fighting people who wrong you or you can put your energy into creating and sharing beautiful work. Be accountable for your own actions and show the respect to other artists that you hope they'll show to you.

One more thing: artists need to be prepared for their success should it ever come. Even if you haven't tasted success yet, keep working towards it and be ready for it. If you have created something new and noteworthy, people will want to see it, share it and maybe even own it.

Here's how you can be prepared: 1) Have the foundation built underneath you. Build a beautiful website and have beautiful images of your work. Invest in really good photography.

Opposite top: *Meander*, a wall art piece by Greg Klassen with a sculptural rendition of the river theme. *Photo: Ben Bender*

Opposite below: *Round Confluence River Table* in Claro walnut and handcut glass. *Photo: Matthew Bergsma*

Above: Greg Klassen's *Flower Table* features a large cross-section cedar slab. *Photo: Matthew Bergsma*

Below: Detail view of *River Table* in maple. *Photo: Matthew Bergsma*

Above: *Lake Table,* western red cedar, inspired by lakes and topography. *Photo: Matthew Bergsma*

Below: *Round Pedestal River Table* in maple. *Photo: Greg Klassen*

River Cabinet in big leaf maple and handcut glass. *Photo: Greg Klassen*

2) Become a student of marketing and learn how to get your work shared or published. Read marketing books, listen to marketing podcasts, take actions, experiment, try things and see what works. Your work is not going to be seen unless you make it seen.

3) Share your work as a collection, not just as a stand-alone piece. A collection of pieces in your unique design language speaks much more loudly than a single voice. This doesn't mean you hide your work from people until you think it's ready (a big part of knowing if your design is any good, is to get lots of feedback). It just means that when you formally launch your collection, to have your work together so it can really 'wow' people and make a stronger impression.

4) Make it easy for people to purchase your work. It used to be that artists had to sell through a third party – a gallery, a shop, a designer, or an event – nowadays we all have direct access to each other. Build an e-commerce shop into your website and make it easy for people to buy from you once they find you.

5) Build a mailing list. To depend on your social media presence for success, is to build your house on sand. Your access to your fans is controlled by the platforms you are using and eventually they are going to make you pay for access. Instead, collect email addresses for direct access and build your house on solid ground.

It has to be said that when a concept/ design approaches the level of 'generic', or so widely aped, it is hard for makers, especially younger ones to realise that they may be appropriating other people's designs and concepts. What's the responsibility of other makers here? How can makers guard against plagiarising other people's designs?

Creating an original design is hard work. Developing your own artistic voice and making lots of original designs is even harder. Makers need to open a blank page on a sketchbook and start drawing. They need to stop pinning or bookmarking other people's designs, put their phone down, sketch their own ideas and bring them to life. Many of your designs will be bad but

River Mural by Greg Klassen.
Photo: Matthew Bergsma

one might be good. If you're unsure about a design, build a simple mock-up from cheap materials, invite some friends over for feedback and talk about ways to improve it.

People know when they are appropriating another artist's designs – there's no mystery to this – if it didn't come from your own brain, it's not yours. Pay your dues, put in the time to experiment and create. Don't take the easy road. It might bring you some quick money or likes or attention, but in the long run you are selling yourself short and robbing yourself of the satisfaction of creating your own success.

Your River concept has of late become infused with resin: what do you think of this trend?

I am a purist and love wood. Watching people pouring epoxy over and around wood from these big plastic buckets, while wearing chemical masks because of the toxic fumes they're creating, is sad. They're taking beautiful pieces of live edge wood and trapping them in plastic. There are some people who have been using resin before this new trend that I consider artists, but much of what I see feels lazy. And do you know what happens when wood is trapped and not allowed to 'breathe' and acclimate to changes in humidity? It breaks free, and most of these resin tables are not going to age well.

How has the river phenomenon impacted on you? Are you a victim of your own success, or has it been a good thing professionally and personally? Where do you see yourself in 5 or 10 years?

I am not a victim but instead see myself as a huge success. I am blessed to make a living for my family doing what I love and am grateful for each day I get to create. Where will I be in 5–10 years? I am very excited about what the future holds. Hopefully I'll be right where I am now, with kids running down to my shop to say hi, sawdust all over my clothes and a smile on my face.

Greg, what's your message to woodworkers who have a dream of turning pro? Is it worth it? What's important to keep in mind?

I would share the same advice that was given to me by one of my favourite woodworking instructors: you may not become rich but you will have a rich life. Those of us who make a living creating beautiful objects are living the dream of many. Keep your needs small so you can do what you love. Reach out to those who have come before if you need advice. Stay true to your vision, take risks and don't give up.

Learn more about Greg Klassen at www.gregklassen.com and Instagram @gregklassenfurniture.

Overall Maker of the Year, William Bayliss: *Bunyjul Occasional Table*, jarrah, rock maple. 'Meaning frillneck lizard in the Nugal-warra language, *Bunyjul* explores organic shapes and textures to create a form that is both sculptural and whimsical. There's an obvious nod to Alan Peters' *Fan Table* in this design, but I've taken Peters' basic form in a more organic direction. "Through others, we become ourselves." – Lev Vygotsky '

Maker of the Year 2021

Presenting the winners, runners-up and finalists.

It's not easy comparing 371 beautiful items of fine woodwork, all made with heartfelt intent. However our judges were tasked with choosing this year's Overall Winner, along with winners and runners-up for the six entry categories for Maker of the Year 2021 presented by Carbatec. Their selections are presented here, along with the finalists. We thank our judging team for the consideration they brought to a difficult task.

The introduction of a World category has brought a new perspective, with around a fifth of entries coming from the UK, USA, Europe and Asia. This year's entries now make up an extraordinary collection of work and stand as a testament to creativity and skill, perhaps in spite of the challenge of our times.

A huge thanks go to our highly valued sponsors Carbatec, Felder Group Australia and Whittle Waxes! With their industry presence and a $20,000 prize pool, these companies have laid their support on the line for the communities they serve.

Most of all we thank those who chose to support this initiative by entering – we hope to present your work again next year. Details for Maker of the Year 2022 will be announced in February.

Lastly, we congratulate the award winners and especially our Overall Winner 2021, William Bayliss!

See all the entries at www.woodreview.com.au/moty

Note: photos shown without image credits were taken by the maker.

OVERALL MAKER OF THE YEAR & TABLES, CHAIRS, DESKS – WINNER

William Bayliss, Bunyjul Occasional Table, jarrah, rock maple

William Bayliss's submission is a playful and beautifully executed sculpture disguised as a table. The surface detailing is reminiscent of a piece made by Alan Peters many years ago, while introducing a contemporary fluidity and personality that encourages the viewer to explore every detail of this magnificent piece. When the tables are separated, Bayliss's pieces will create visual rhythms and shadows that will change with the placement of the tables.
– Michael Fortune

William's *Bunyjul Occasional Table* is inspiring. Complex and engaging, I wanted to view it in person to appreciate the multi dimensional aspects. Challenging curves and tapers throughout demonstrate great knowledge and skill, while the eye-catching design shows a well imagined piece that is nicely resolved. It is incredibly well executed. Very nice work.
– Simeon Dux

Above: Evan Dunstone, *Mutawintji 1*, raindrop blackwood, wenge details, rock maple drawer internals. Designed by Evan Dunstone and made by William Bayliss. *Photos: Adam McGrath*

TABLES, CHAIRS, DESKS – RUNNER-UP

Evan Dunstone, Mutawintji 1
Evan Dunstone's submission is structured, yet encourages the viewer to explore the exquisite detailing throughout. Long lines and surfaces that might become tedious are broken with controlled introduction of coves that create wonderful textures and shadows as the light passes over the piece. The sinuous curves underneath are a wonderful counterpoint to the rectilinear frame that supports the top.
– Michael Fortune

Evan's side table is well balanced and nicely proportioned with slight curves and sharp lines. It appears delicate and lightweight without looking fragile, and the flowing lines add an organic touch. The timber selection is harmonious, and the shaped pulls and contoured legs are nicely considered.
– Simeon Dux

THE JUDGES

Michael Fortune (Canada), furniture designer maker and educator. www.michaelfortune.com

David Haig, New Zealand, furniture designer and maker and educator. www.davidhaig.co.nz

Leslie Webb, USA, furniture designer maker www.lesliewebbdesign.com

Melissa Ward, NSW, architect, designer, maker, teacher. www.melissawardarchitect.com

Phoebe Everill, Vic, designer maker, teacher www.phoebeeverill.com

Simeon Dux, Vic, designer maker and 2020 Maker of the Year. www.simeondux.com

TABLES, CHAIRS, DESKS

1. Stephen Ziguras, *Walnut and brass desk.* 'A study desk with polished brass highlights, incorporating a design which was organic and sculptural as well as functional.' *Photo: Northside Studio*
2. Bryan Cush, *Dja Dja Table*, spotted gum, blackbutt. 'This piece explores the landscape of the Macedon Ranges – the traditional land of the Dja Dja Wurrung and other groups. The contours of various volcanoes are engraved into the timber and the rivers and creeks inlaid in brass. *Photo: Northside Studio*
3. Kaspian Kan, *Thanks Hipparchus*, 'A small table with an easily manoeuvred shape for multifunctional use. Named for the trigonometry required, the design evolved through naive daydreams, experiments in joinery, and exploration of the diversity of a small stack of kauri.' *Photo: Gary Fevreau*
4. Zach Danoy, *Occasional Flower Table*, London plane, macadamia, purple gidgee. 'Curiosity brought me to the final piece, the same curiosity which drives me as a maker.'
5. Robert Godoy, NZ, *Textura Bench*, sapele, Danish cord. 'An entryway bench with a tray for holding everyday items.'
6. Nick Pedulla, *Copper Leaf Desk*, Vic ash, gilded copper foil. Hand textured rails give visual and sensory appeal. The shadow line allows for seasonal movement.
7. Ross Williamson, *Wodalla Dining Suite*, Tas blackwood with custom extension dining table.
8. Rhys Jones, *Wannan Desk & Chair*, American cherry, rock maple, stainless steel, nylon, fibreglass, Danish paper cord. 'The intention was to create a dynamic and transparent suite of furniture that would support the user in their work, and in repose. *Photo: Anthony Tosello*
9. Samuel Burns, *Arc bench*, American white oak. The nesting curved forms create a dynamic dialogue through their ability to move across the base.
10. Richard Coles, *Elevation.* 'Elevate: bring to a higher position, hold up for adoration, raise, lift, exalt.' *Photo: Lars Laug*
11. Denni Maroudas: 'The *Sinuous Bench Seat* came to life through my interest in the nature of growth.' *Photo: Daniel Mulheran*
12. Marinos Drakopoulos, *Round Desk*, 'Designed for a client who wanted a desk to last their daughter's lifetime.' *Photo: Penny Katopodis*


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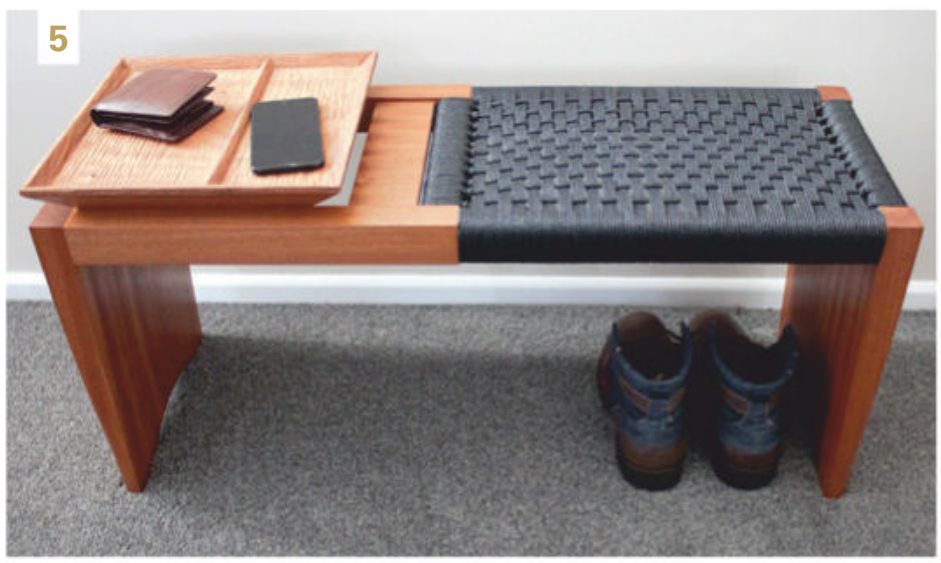
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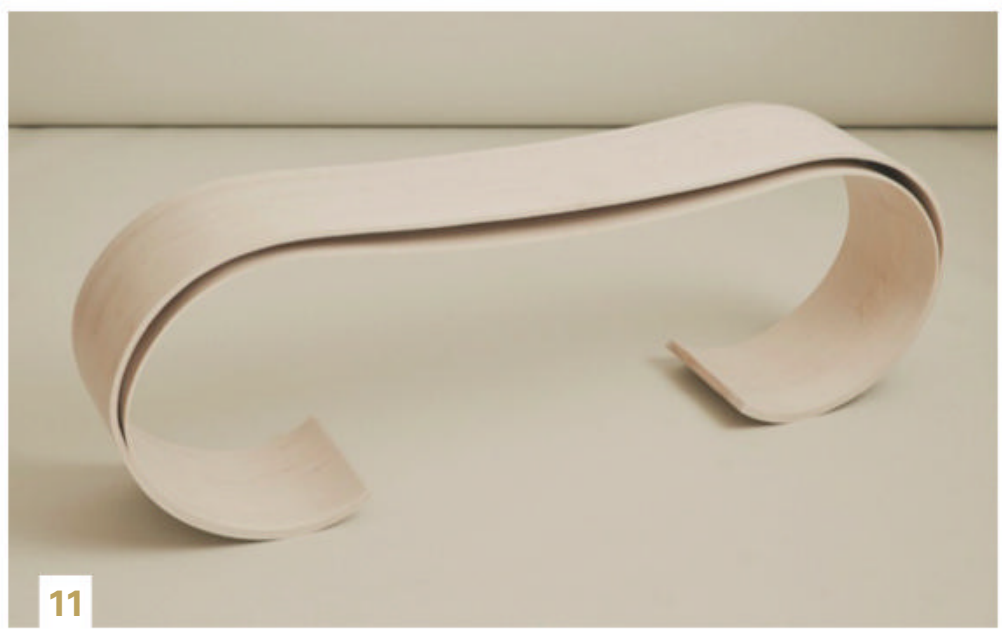
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JUDGES TIPS

ON PHOTOGRAPHY

For a competition judged on photos, it is critical these sing the praises of your hard work. If you can afford it, use a professional – they are worth every cent. If not, use good lighting, clear the background of distractions, and get angles that highlight focal points. Stylised images can be helpful for context, but don't overdo the props. **– Simeon Dux**

Get great photographs, it's all we have to go on! **– David Haig**

Consider having your piece professionally photographed if you do not have any skill in this area. If that is not an option, ask a friend who is knowledgeable, or invest some time in online tutorials (there are plenty of free resources out there). Use a plain background that will not distract from your piece. Another object in the photograph can add context and scale, but do not overwhelm or detract from your work. **– Leslie Webb**


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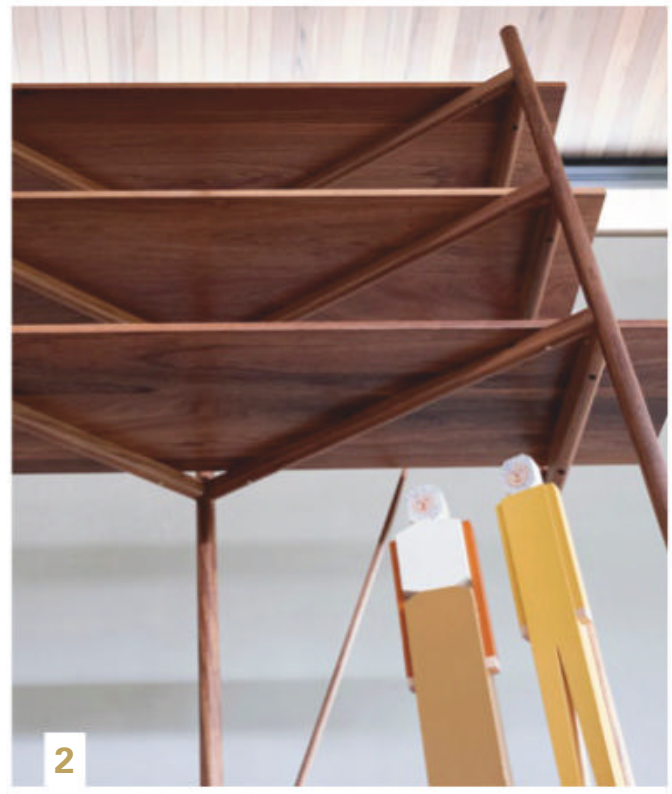
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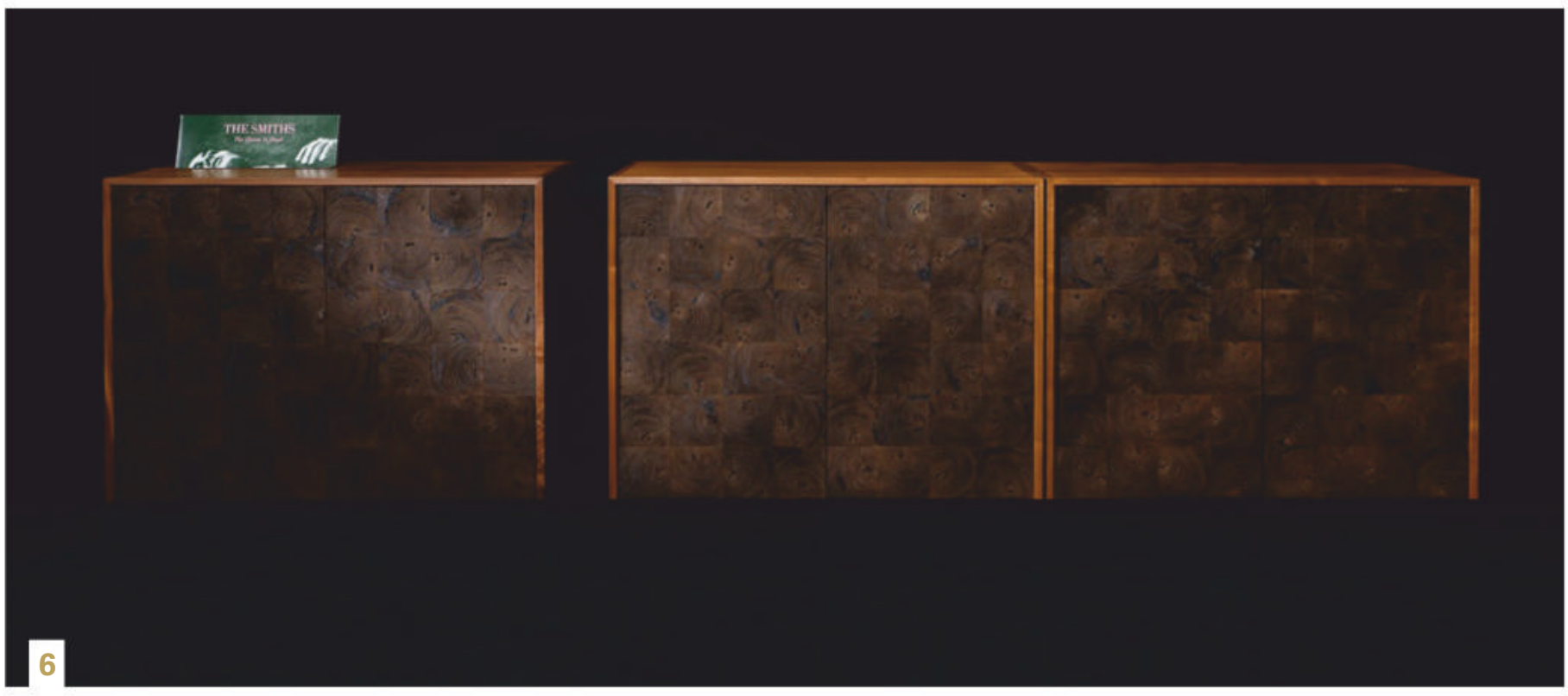

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CHESTS, CABINETS & SHELVING – WINNER

Alexsandra Pontonio, Boxkite

Aptly named, little more is needed to explain this piece. There were many variations of sideboard/shelving in this competition, but this piece stood out at once for its sheer brilliance and unity of composition. Each element, proportionally and rhythmically, relates to the whole. The shelf supports, the slender angled bracing elements, the cupboards with linen panels...it could indeed be airborne, an uplifting presence to make any space sing. **– David Haig**

It's quite the achievement to make a piece of this scale seem airy and light. Impeccably designed and made, every little detail supports the overall vision. *Boxkite* is a very functional piece, yet it has not compromised on aesthetics. **– Leslie Webb**

CHESTS, CABINETS & SHELVING – RUNNER-UP

Andrew Ness,
Record Collection Cabinets

Andrew Ness's *Record Collection Cabinets* was a close runner-up. Brilliant material choice can be seen throughout, as well as the highest level of craftsmanship. The end result is a gorgeous marriage of function and beauty. **– Leslie Webb**

So many qualities combine here; the concentric endgrain tiles are elemental, seemingly eroded by natural forces of fire and wind; but they are encased in traditional casework of crispest dovetails, and then an up-to-the-minute drawer slide action to animate them. The quirky open slot at one end is just enough to break-up the slightly uncompromising rectilinearity and hint at the quotidian function of the piece. Brilliantly encapsulates the best elements of contemporary design. **– David Haig**

1, 2, 3. Alexsandra Pontonio, *Boxkite*, Tasmanian blackwood, linen. 'I was looking for a certain feeling of lightness. This piece was designed whilst delving into images of box kites and biplanes.'

4, 5, 6. Andrew Ness, *Record Collection Cabinets,* American black walnut, wenge. 'With concentric circles and deeply textured grooves, the 144 burnt and burnished timber endgrain tiles that grace the drawer fronts of these three cabinets hint at the contents within. The tiles were laid down sequentially, capturing the history of the tree across all three cabinets. Inserted into the end cabinet is a deep sleeve of mitred wenge, a 'now playing' display space.' *Photos: Cathy Taylor*

7. Dave Nesbit, *The Bridge Sideboard*, reclaimed jarrah, white acrylic. 'A sleek, minimalist look is created thanks to the recessed handles and the bevelled edge of the drawers.' *Photo: Kash photography*

8. Jack Howard, *Burl Myrtle Chest of Drawers*, salvaged Tas myrtle veneer.

9. David Cummins, *Innisfree Sideboard*, 'In memory of my father's love of poetry and his favourite poem, *The Lake Isle of Innisfree* by WB Yeats'.'


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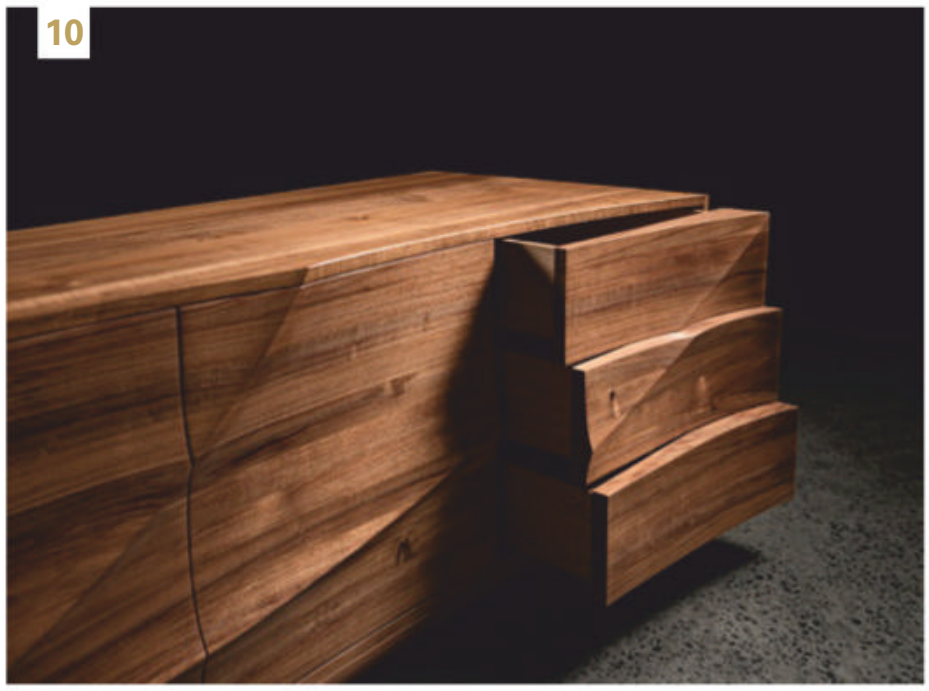

10. Nick Pedulla, *Sculpted Cabinet*, Tas blackwood. Boards from the same tree are stack laminated, roughly carved using power tools, then glued together and carved by hand to refine the flowing shapes.

11. Cameron Ferstl, *Entertainment Unit*, walnut, beech. Designed for practicality with an asymmetrical, yet balanced design. *Photo: Greg Desiatov*

12. Liam McCallion, *Fort Kingsley Audio Console*. Bringing back 'the nostalgia of the audio consoles that once took pride of place amongst living rooms in the 60s and 70s while integrating modern technology'.

13. Daniel Spielman, *Credenza 1*, white oak and walnut. *Photo: Pier Carthew*

14. Gregory Allan, *Te Whanau Marama* (family of light), stained American oak inlaid with maple. 'These hanging cabinets represent the Maori mythology which describes the celestial bodies and their deities. Open, their secret identities of waxing and waning forms are revealed. *Photo: Northside Studio*

15. Arthur Seigneur, *Stalactite*, substrate with rye straw marquetry. Design and straw marquetry by Arthur Seigneur, structure by Melbourne company Mortise and Tenon. Inspired by childhood memories of glistening caves in France.

16. Nick Pedulla, *Black Oak Record Cabinet*. A tambour gives more room for equipment to hide behind the brass grille doors.

WORLD – WINNER

Evan Berding, Wellborn chair

Evan Berding's chair speaks eloquently to the history of chairs, from early bodger techniques to Scandinavian style. Viewing this chair is like wandering through the history of chairs in the Decorative Arts wing of the Louvre in Paris. Every line and the negative spaces between them are part of a beautiful and satisfying composition.
– Michael Fortune

It is rare to see a contemporary chair today that instantly stands out as a classic. There are so many links back to earlier chair makers in this piece, from Charles Rennie Mackintosh and the English Arts and Crafts, to Hans Wegner and the Danish modernists. But, though it references many traditions, it has a special quality and presence of its own, a beautifully composed and elegant masterpiece.
– David Haig

WORLD – RUNNER-UP

Seth Rolland, Wave Desk

Seth Rolland's desk is a wonderful blend of the wind sculptured terrain found in the American Southwest with an acknowledgement to the late Wendell Castle. While massive it expresses an energetic fluidity that presents each dynamic element within the piece. Every hard edge and smooth surface expresses the control and skill required to complete the piece. Form and Function are at peace in this very successful sculptural form.
– Michael Fortune

The dramatic wind and water sculpted rock formations of the American Southwest are instantly recognisable in this piece. It pulls off a rare feat in reproducing this effect without overplaying it, and then successfully incorporates all the features of a classic desk without interrupting the form at all. The little sculpted up-stand is a brilliantly executed and characterful detail.
– David Haig

1. Evan Berding, USA, *Wellborn chair,* European beech, black-over-red milk paint, round and half-round reed. 'I wanted to create the appearance of a woven seat suspended in the architecture of the frame. And, wanting to keep that frame airy, I designed the chair to provide strength not through bulky parts, but a structural lattice, which, in turn, opened up the opportunity for a more visually engaging composition.' *Photo: Annemie Tonken*
2. Seth Rolland, USA, *Wave Desk*. Inspired by water, wind and sandstone canyons, the desk is sculpted from over a hundred pieces of solid, sustainably harvested cherry wood. The raised platform supports a monitor (with provision for wires) or a vase of flowers. There are two drawers for supplies and a compartment to hide your keyboard or laptop.' *Photo: Myron Gauger*
3. Daniel Rickey, USA, *Entertainment Unit*, walnut, beech. Designed for practicality with an asymmetrical, yet balanced design. *Photo: Greg Desiatov*
4. Jeff Miller, USA, *Toccata Dining Chair*. 'The result of a quick sketch in wood of a chair leg made up of thin slats. I had no idea how to turn this idea into a chair at the time, but 20 years later, it came to me. The trigger was a comb-back Windsor chair.' *Photo: Jeff Miller*

1. Jannik Grage, Denmark, *The Dovetail Cabinet*, oregon, maple, tagua nut. 'Designed in the classic Danish furniture tradition, with simple lines and delicate details. Handcut dovetails as both joinery and decoration.

2. Ronnie Rozenga, Ne*therlands, Marquetry Jay-bird Whiskey Cabinet*, cherry, beech, birdseye maple with various veneers for marquery. *Photo: Otto Kalkhoven*

3. Austin Heitzman, USA, *Liquor Armoire*, walnut burl doors. 'Natural edge is used for maximum dramatic effect and also evokes a classical swan neck pediment.' *Photo: Day in the Life Gallery*

4. Ray Jones, *Moonscape*, maple burl, Spanish cedar, black palm *Photo: Tim Barnwell*

5. Dallas Gara, Canada, *Sculpted Rocking Chair*, curly walnut, curly maple. I wanted the legs and rockers to flow from one to the other, and the seat to have a floating sensation inspired by favourite makers, Sam Maloof and Hal Taylor.

6. Konstantinos Chadoulos, Greece, *Oak Bar Cabinet*, solid and veneered oak . Japanese, art deco, minimal and mid-century modern styles combined.

7. Kristian Frandsen, Denmark, *Beneath The Surface*, French walnut, bog oak dated 4,700 years old. 'The title hints at the saying "more than meets the eye", which in my experience counts for most humans, animals and last but not least, the trees we have the great privilege of refining.'

8. Craig Thibodeau, USA, *Aspen Puzzle Cabinet*, walnut, curly maple, various veneers. 'The puzzles inside lead the user through a series of steps that reveal compartments and secrets along the way.' *Photo: Darren Thibodeau*

9. Joseph Nemeth, USA, *Silhouette Desk*, Clean lines, simple geometries, and complementary materials were the guiding design principles. The legs, inspired by shiplap techniques used in boat construction, are adorned on the outside with mortised copper bar.

10. Patrick Kana, USA, *Keystone Writing Desk*, English walnut, maple. 'A petite writing design inspired by the work of Emile-Jacques Ruhlmann designed with custom inlaid logo.'

11. Evan Berding, USA, *Hinson Desk*, walnut, maple burl, wenge, poplar. The client requested curves and for it to function in a corner...' then it was a matter of defining the structure and detail to echo and complement that shape. *Photo: Annemie Tonken*

12. Ryan Feldthouse, USA, *The Woven Box*, black walnut, Bolivian rosewood, maple, purpleheart with copper accents. *Photo: Chantal Schoenherz*

13. Snorre Dyhr, Denmark, *Krum dining table*, bleached ash, soap finish. The top is made from steambent ash glued up in four mitred sections. The legs and frame were made with CNC. Inspired by Sam Maloof and Scandinavian design.

14. Philip Morley, USA, *Record Console*, sapele. 'Designed to echo the classic mid-century modern consoles. *Photo: Philip Morley*

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ART & OBJECTS – WINNER

Hamish Southcott, NZ, First Light

This is a striking sculptural piece, very unique and full of movement. I particularly like the way the light plays in the sculpted fins. I can imagine enjoying this light every time I turned it on, stellar work! **– Phoebe Everill**

A highly innovative design that could be installed in a variety of locations, both residential and commercial. Consideration for timber as a precious resource is evident by the utilisation of recycled timber and would appeal to the conscious consumer. Lifecycle of the light has been considered by allowing for possible future repairs and/or relocation. A beautiful piece that could be imagined into a range based on this design theme.
– Melissa Ward

ART & OBJECTS – RUNNER-UP

Vince Rush, Remembering Neil

A high level of skill is required to make an object of such great beauty. Great thought was given to the selection of timbers, the jacaranda lending an ethereal quality to the container. The delicacy and sensitivity of this design reveals the respect for the person this is dedicated to, and the heart that went into the realisation of this project. **– Melissa Ward**

This piece for me has a very ethereal feel to it, beautifully designed and planned and then exquisitely executed. The timber choice of jacaranda is pivotal to the success of this piece as there is a ghostly feel about it. **– Phoebe Everill**


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JUDGES' TIPS

ON ENTRY DESCRIPTIONS

This is the time for you as a maker to tell the story of your piece and fill in the gaps that even the most professionally presented images can't show. **– Phoebe Everill**

Furniture pieces should largely speak for themselves, so long-winded explanations and extravagant metaphors do not necessarily add anything…it is better to just have the back-story if it's interesting and relevant. **– David Haig**

Your piece should speak for itself. The descriptions are helpful in drawing attention to particular aspects of your piece but don't write an essay. The competition is judged on the strength of the design, quality of execution, and originality. **– Simeon Dux**

Don't overlook the written part of your submission. Explain your design concept and describe how the details support your design. Outline some of the technical aspects, which can often not be seen after assembly. This does not need to be an exhaustive how-to, but a simple description of how the piece is constructed. **– Leslie Webb**

1. Hamish Southcott, NZ, *First Light*, recycled rimu. 'New Zealand is one of the first places to see the sun rise each day, inspiring the name. The vertical slats were clamped together and carved with a disc grinder to reflect the landscape's valleys and ridges.'
2. Vince Rush, *Remembering Neil,* jacaranda. 'A friend and mentor, Neil, died from cancer a few years ago and I wanted to dedicate a piece to him.'
3. Brian Davey, *Kumiko Lamp*, recycled pallet timber.
4. Francis Jerome, *Nullarbor Guitar*, various timbers.
5. Andrew Rankin, *Still life of mass and void*, kauri, 1250 x 990 x 490mm. 'Explores the relationship between object and image.
6. Andrew Tatnell, *Handmade Mandolin*, western red cedar, blackwood, gidgee. 'It has the aesthetic quality that I aspire to, and it sounds very loud and full of overtones.'
7. Geoffrey Marshall, *Plywood Twin Fin Surfboard*. 'A passion project devised to utilise leftover and scrap plywood from a home renovation. *Photo: Bruce Moyle*
8. Paul Duff, *Style O Archtop Guitar*, Adirondack spruce, sugar maple, ebony and mahogany. 'A modern interpretation of a classic, discontinued design.'
9. Warwick Jones, *Halo Light*, solid Tas blackwood. *Photo: Carmen Glenn*
10. Anthony Drabsch, *Jigsaw Clock*, reclaimed fence posts, floorboards and an old tank stand. 'With any at-hand material the dimensions are predetermined.' Many of the joints are a press fit, not glued – much like a jigsaw.'

BOWLS & BOXES – WINNER

Martin Burgoyne, Incense Box

All three entries by Martin were absolute standouts in the category. His work demonstrates a meticulous attention to the details and beautiful timber choices. The decision to pick his *Incense Box* was for me about the extraordinary planning involved for all the included items to be housed, and then the whole work to be brought together cohesively. This body of work is testament to the incredible skills and patience of its maker. **– Phoebe Everill**

Of the three brilliant boxes Martin entered into the category the *Incense Box* stood out to me the most. It is incredibly detailed, and displays multiple techniques while still maintaining uniformity. It shows a clear understanding of process and design intent. The complexity of the piece is amazing and Martin has executed it with outstanding precision. **– Simeon Dux**

BOWLS & BOXES – RUNNER-UP

Benjamin Reddan, Love her like you are going to lose her

When I first saw this work I was struck by the cleanliness of the design, super crisp, awesome timber selections and beautifully presented. Then I took in the dimensions and realised how tiny the components were, my great respect for this maker's skills and talent to bring it to life only continue to grow. **– Phoebe Everill**

Benjamin's entry clearly shows years of dedication. Multiple skills are on display specifically with the accuracy achieved at such a fine scale. His unique design approach shows a high level of attention to detail, a knowledge of timber and a love for the craft. **– Simeon Dux**

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1. Martin Burgoyne, *Incense Box*, walnut veneered plywood, teak parquetry, shell detailing. 'A nest of boxes and trays that holds all the tools and equipment used in Japanese incense appreciation games.'
2. Hugh Mackay, *Aita*, blackwood. 'From the swirl of sarongs to Buddhist temple oil lights, this is accumulative work of the absorbed cultures, sights and experiences.' *Photo: Ben Mackay*
3. Ken Fisher, *Rosewood Memory Box*, 'my most recent and fifth in series for our lovely grandchildren'. *Photo: Amandine Durrant*
4. Martin Burgoyne, *Starry, Starry Night*, jarrah, walnut, lacewood, opal, various veneers.
5. Benjamin Reddan, *Love her like you are going to lose her*, American black walnut, jarrah, American white ash and Tas oak, birch ply substrate. 'An engagement ring box for my best friend. I wanted to challenge myself with the smallest box that I had ever made.
6. Joseph Degeling, *Jewellery Box*, 'marango', birdseye maple, brass. 'A gift to my wife for her 40th birthday.'
7. Bryan Cush, *Cache Box*, white mahogany, redgum. 'An inlaid brass star-map matches the birth time, date and location of the client's daughter. On the underside, a concealed time-capsule tray will be revealed when she turns 21.'
8. Robin Cromer, *Desert Treasures*, sapele, messmate and silvertop veneers. 'A waterfall veneered box in the style of Craig Thibodeau.'
9. Robyn Mauger, *Textured Lid Box*, recycled kauri. Inspired by photos of the surface of Mars.

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JUDGES' TIPS

ON DESIGN

Observing your environment and then interpreting and morphing what you see into useable furniture forms is a wonderful way of developing your own design vocabulary. 'Your environment' could be the vegetation just outside your door, interesting buildings you drive by, cartoons on television, car tyre tracks in the sand or even looking at architectural books upside down. Freehand sketching is a very important part of this creative process. Volume of sketches is key here, rarely is your first idea the best. Next might be a series of quarter-size models, then a full-size drawing, and then a mock-up.
– Michael Fortune

Be Original. Copied designs are easily identified. Many designs are derivative of a maker or style and that is common, but there is a difference between being derivative/influenced by and producing a replica. If the piece has been designed in the style of a renowned maker or style it is important to acknowledge the design precedence or influence in the design statement. **– Melissa Ward**

A design with a clear overall vision is essential. Pieces can be complex and detailed, or sleek and minimal but be sure the elements work together rather than compete with each other for attention. Spend time drawing, rendering or making mock-ups of your piece to make sure you're happy with proportions and timber selection, so that all the work you're about to put in is worth the effort, and results in a unified piece. **– Simeon Dux**

Look closely at the work of your fellow entrants. Studying your peer group's pieces with a real impartial interest is the best way to develop a critical eye for your own work. You have to become your own hardest critic. **– David Haig**

Individual flair is always going to stand out in the pack, something new and different will always make the viewer want to explore further. Personally, I am less interested in looking at a piece that has an obvious CAD look, which often presents as too perfect and lacking in energy. **– Phoebe Everill**

Pieces that are thoughtfully designed and executed to the highest level of craft while maintaining the maker's own perspective will do the best in judging.
– Leslie Webb

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STUDENT – WINNER

Anthony Yang, 7 Tear Drops

7 Tear Drops is an original vision of what a coffee table can be. The final piece is true to the concept and has many lovely details. A beautiful table that is a joy to look at. **– Leslie Webb**

A piece that bridges the divide between furniture and art. The design statement reveals a sophistication of the design theory and a high level of skills required to produce this piece. It is a design that can be further developed to produce a range of furniture pieces that work together and shows great promise for this young designer maker. **– Melissa Ward**

STUDENT – RUNNER-UP

Nae-Tanakorn Pongpaew, Haute, Nested Occasional Table

Haute is a beautiful interpretation of nested tables. The way the two fit together is clever and innovative. The individual tables are as lovely separately as they are nested together. **– Leslie Webb**

The nested table is a furniture typology that has been reinterpreted many times throughout the decades, however this piece exhibits a fresh ingenuity. There is much to admire in this work, from the clever stacking design to the selection of materials and the delicacy of the curved forms which are very 'on trend'. This work is not only a beautiful art piece, but wonderfully practical for apartment and smaller home living.
– Melissa Ward

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JUDGES' TIPS

ON WINNING, AND NOT WINNING

Ensure whatever you choose to enter highlights your proficiency as a maker. Handwork will always elevate a piece over obviously machined only. The point to creating a competition or exhibition piece is to push ourselves as makers, to explore new techniques and extend or hone our skills. **– Phoebe Everill**

Do not take non-inclusion too hard – it does not mean you have not made a good piece. The standards are incredibly high. **– David Haig**

Don't lose confidence if your piece did not win. There were so many good entries and choosing among those felt like splitting hairs at times. Try to analyse why the winning pieces won, and what you can learn from them to take your work to the next level. **– Leslie Webb**

Make what you enjoy. All the great designer makers work out what it is they enjoy producing. Some have a preference for working with certain timbers, size of piece or function. Experiment to find what your range is and work toward refining your skills in these areas. **– Melissa Ward**


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1. Anthony Yang, Holmesglen TAFE, Vic, *7 Tear Drops*. 'The idea for my coffee table came from Greek mythology. The Pleiades were the seven daughters of Atlas who, forced to hold up the sky for eternity, was unable to protect them. I further imagined seven drops of tears as raindrops falling from the sky.'

2, 3. Nae-Tanakorn Pongpaew, RMIT, *Haute Nested Occasional Table*. 'A tubular silhouette inspired nested table maximises usability within a small footprint.

4. Ned Collins, Sturt School for Wood, *C5 Bench*, American walnut, rock maple. The box and drawer can be repositioned or removed. *Photo: Daniel Mulherran*

5. Liam Starcevich, Sturt School for Wood, *Velara Hall Table*, walnut torsion box body. 'An exercise in applying automotive design principles to the medium of fine furniture.'

6. Mitchell Francis, Coffs Harbour Senior College, *Grand Auditorium Acoustic Guitar*, Tasmanian blackheart sassafras, Sitka spruce.

7. Rehan Monnanda, The King's Schoo*l, NSW, Circular Resin Coffee Table*, Tas blackwood, resin.

8. Dave McFall, Centre for Fine Woodworking, NZ, *Manu tuku-tuku*, sycamore, matai. Inspired by Maori kite designs. *Photo: Daniel Allen*

9. Amy Short, Centre for Fine Woodworking, NZ, *Cadillac Rocking Chair*, steambent American white oak. *Photo: Daniel Allen*

10. Mia Migyeong Kang, Holmesglen TAFE Vic, *Narsha Coffee Table No.1*, reclaimed materials, 'An Art Nouveau style centrepiece designed to up-cycle construction waste and use modern technology for production. *Photo: Jobin*

11. Patrick Connell, Holmesglen Institute, *Utility Table*, American and English oak. 'Inspired by the Arts and Craft period with design cues from the side profile of the iconic Seiko Samurai watch.'

12. Tom Robinson, The King's School, NSW, *Executive Desk*. 'Inspired by Brutalist architecture and traditional Nordic design.'

Calibrating a Sliding Tablesaw

Sliding tablesaws offer a range of cutting capabilities. David Luckensmeyer explains how using a series of alignment checks will reward you with accuracy.

Why a slider?

I made the transition from a cabinet tablesaw to a sliding tablesaw (or 'slider') and never looked back. Everything a conventional saw can do – whether contractor, hybrid, or cabinet saw – a slider can do. In fact, many cutting operations are easier, more accurate, and safer on a slider. The only drawbacks are the footprint size and the cost of purchase.

The advice given in this article is general in nature, and I cannot stress enough that sliders are complex machines. Hopefully the calibration process for your machine will consist mostly of alignment verifications. But if you uncover some serious calibration issues, you should involve the technical support representative for your make and model of slider.

Verification tools

Photo 1 shows the tools that I like to use when verifying the calibration of my sliding tablesaw. You may be surprised not to see a precision straightedge and feeler gauges. Straightedges are expensive, and the verification methods shared below are easier to employ. The tools discussed may be difficult to source but they are all available online in metric or

imperial, hence measurements are given in both systems.

Before starting, make sure your saw is disabled (e.g. activate the emergency stop). In the photos the guard has been removed for photo clarity.

Starting from flat

The starting reference is the main cast-iron machine table. The sliding table, blade, and rip fence are all aligned in relation to that surface. And the easiest way to check a milled surface for flat is by using a precision level.

The gold standard is the LS Starrett master precision level, but it is priced accordingly. Less expensive models are available but check the accuracy standard before purchase. The sensitivity of the level should be 0.025mm per 300mm or better. I have a US-made Lamb Tool Works precision level that, at around 400mm, is the perfect length for checking cast-iron tables. It is accurate to 0.001" (one thousandth of an inch) per foot, or about 0.025mm per 300mm.

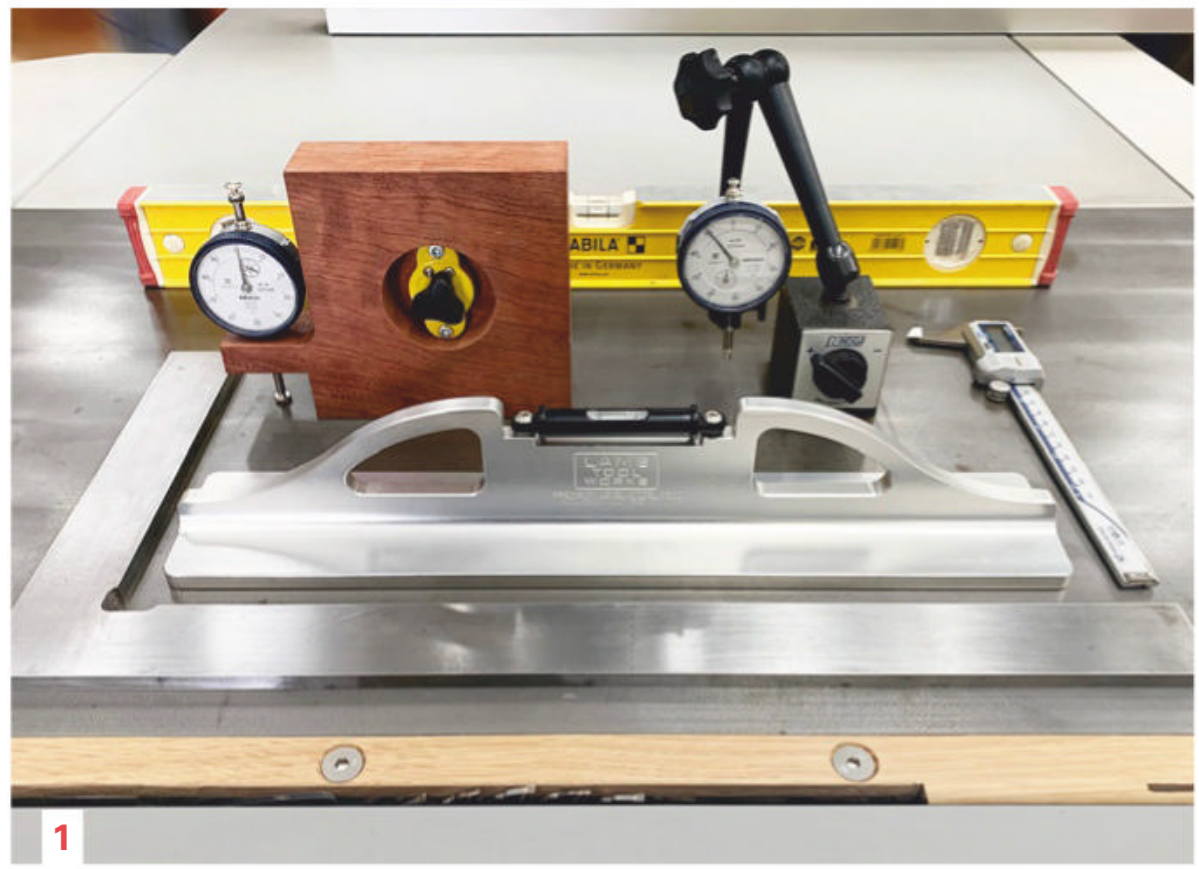
If the readings of the level at the front and back edges of the cast-iron table agree, then the casting is flat and has no twist. Similarly, when the level is placed across the width of the sliding table itself, and the level reading is the same, then we know that the sliding table is coplanar (parallel) with the cast-iron table (**photo 2**).

Verifying the sliding table alignment

Adjustment procedures will differ according to brands and models, but put simply, the sliding table must be slightly higher than the cast-iron table. If the slider dips below at any point along its movement, then material held or clamped onto the sliding table will drag on the casting.

Many saw makers aim for a calibration height of 0.20–0.25mm (0.008–0.010"), which is fine for kitchen manufacturers, but for fine furniture makers the relative height of the sliding table should be about 0.10mm (0.004") above the cast-iron table. Such a tolerance is important for non-through cuts, like grooves and trenches, sliding dovetails, narrow rip cuts to the right of the blade, and so forth.

A simple and accurate way to check the sliding table alignment involves using three dial indicators on stands for a dynamic verification of slider



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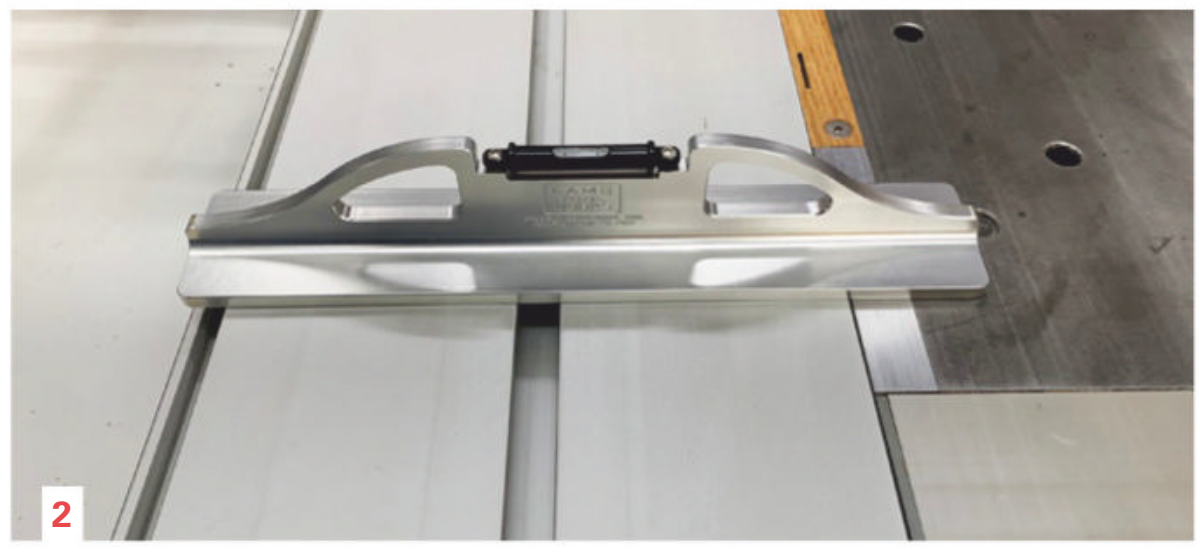
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Main: For this and subsequent photos, the saw guard has been moved away for clarity.

1. Calibration tools from front: precision machinist square, Lamb Tool Works precision level, Canadian-made Oneway multi-gauge fitted to shopmade holder, dial indicator and magnetic stand, digital calipers, standard short level with machined edges.
2. Both sliding and cast-iron tables need checking for level. On my saw, the precision level shows an acceptable difference of 0.05mm (0.002"). The ground and graduated vial in a precision level is so sensitive that it takes several seconds for the bubble to stop moving.
3. Dial indicators come with different ranges and sensitivities, with or without a lug on the back and with interchangeable tips. A standard indicator accurate to 0.01mm, and with a range of around 20mm, is ideal.


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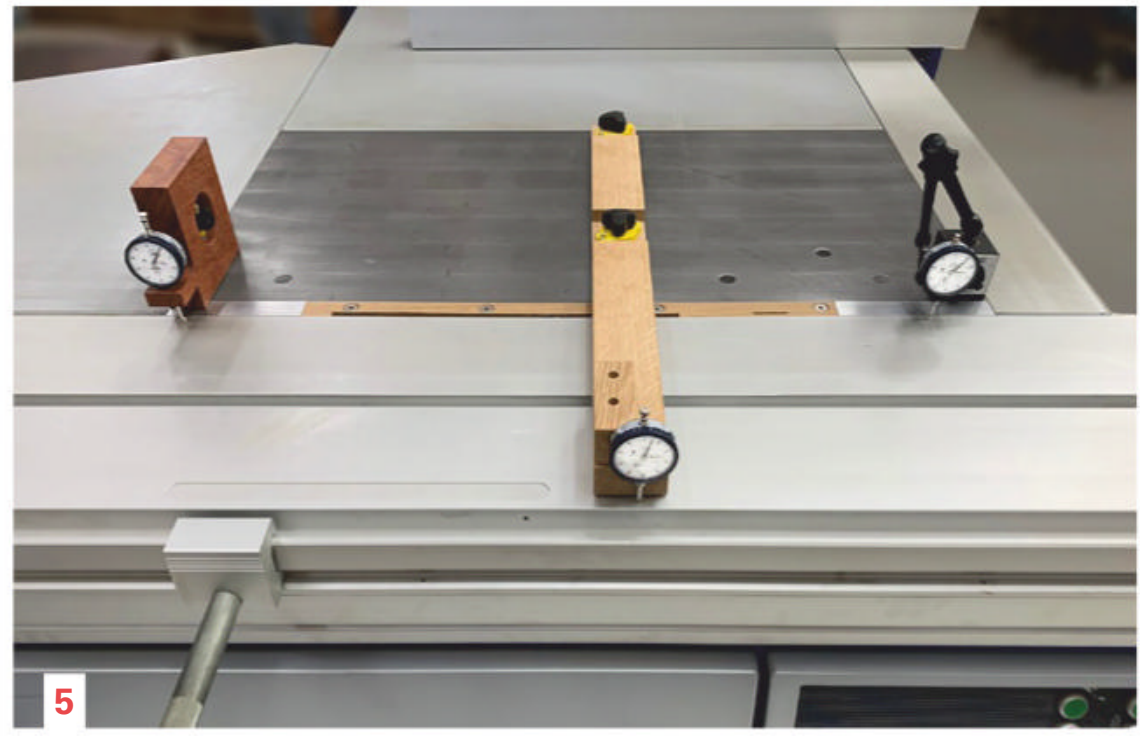
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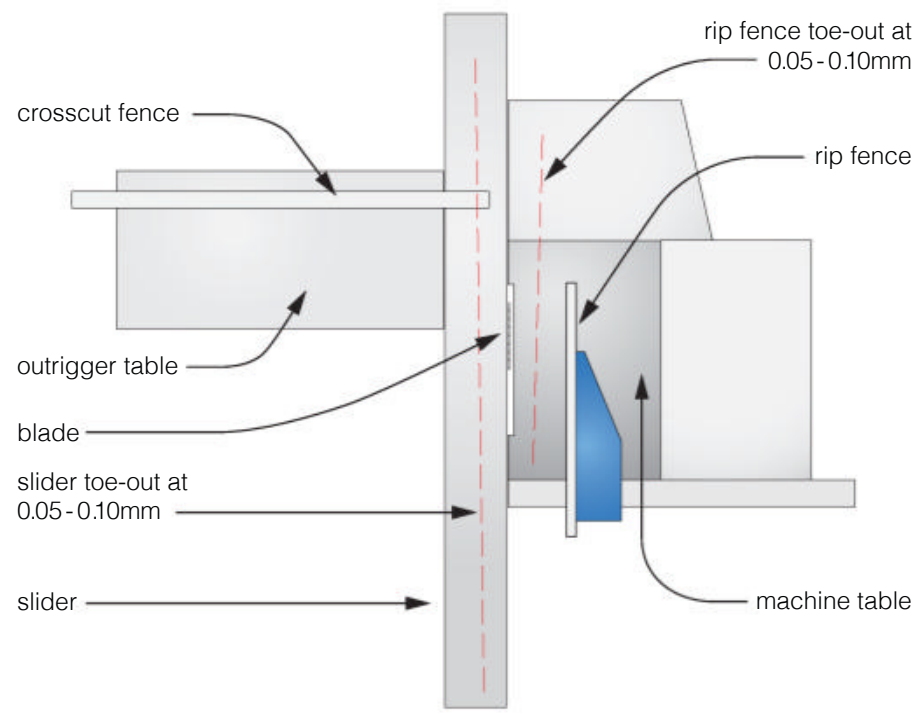
Fig 1. Top view showing toe-out (exaggerated)



4. After the dial indicator has been zeroed out on the cast-iron table, it may be employed to verify that the sliding table is higher by 0.10mm (0.004").
5. For the dynamic verification, it is not uncommon to see height readings beyond 0.10mm (0.004"). Readings of 0.15–0.20mm (0.006–0.008") are acceptable; beyond that, ask your dealer.
6. The ideal sliding table toe-out is 0.05–0.10mm (0.002–0.004") over a distance of 250–300mm. It does not have to be exact. Make sure to use light pressure when clamping to avoid distorting the blade.
7. Here I'm using a standard level to support the precision level. A straight piece of timber would also be acceptable.
8. Dynamic adjustments are tricky and should not be attempted lightly. Go slowly, and move the slider throughout its stroke repeatedly, watching how minute adjustments change the outrigger table's height.
9. I am using a Noga magnetic stand to hold the dial indicator. The single adjustment knob tightens all the knuckle joints simultaneously making it very easy to adjust the indicator's position.
10. Keep in mind that blades have slightly different diameters, and this calibration process should be carried out after blade changes and sharpening.

behaviour through its full stroke. Each indicator is zeroed out on a known flat surface, and then carefully moved to indicate from the cast-iron table to the surface of the slider (**photo 5**).

Sliding table toe-out

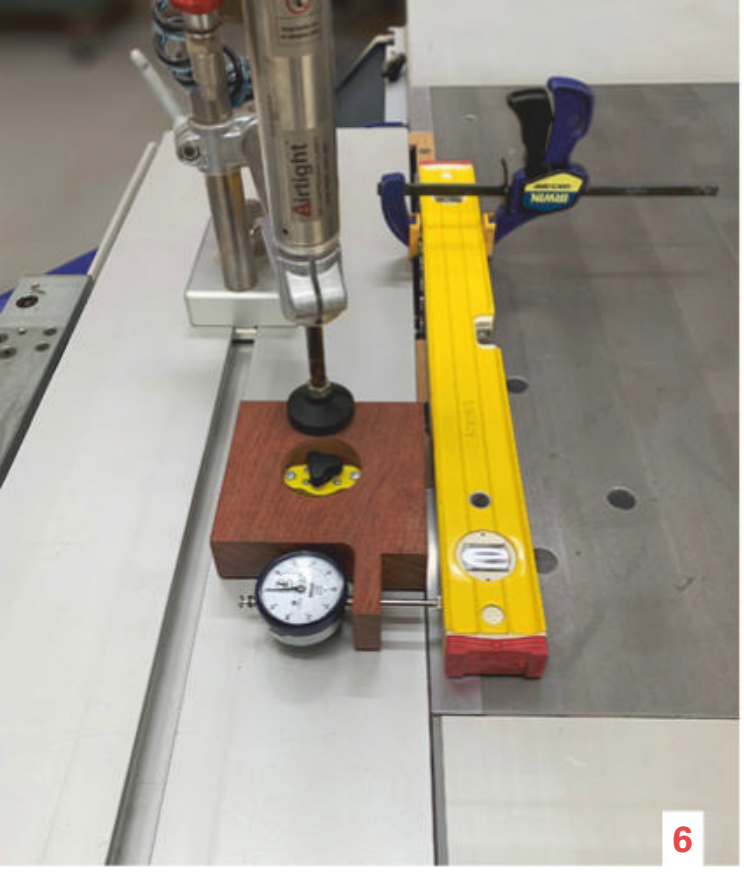
It is also important to check the sliding table toe-out relative to the blade. The trajectory of the sliding table should drift away from the sawblade (**fig.1**). If the toe-out is inadequate or excessive, the trailing edge of the sawblade will cut or burn the material as it passes by (**photo 6**).

Using a dial indicator to indicate to the same tooth on the blade, first at the front and then at the back will yield a relative measurement. But using a machinist square or a standard short level with machined edges to average out all the teeth into a flat registration will yield more accurate results. We can verify toe-out by indicating from the sliding table to the reference surface of the square/level, while moving the sliding table.

Outrigger table verification

An outrigger table provides a marvellous way of supporting large items for sizing. It also provides extensive support for crosscutting long stock. Here is the verification process:

1. With the outrigger support arm perpendicular to the slider, make sure the outrigger is level and coplanar with the sliding table. This can be verified using a precision level suitably supported across the outrigger and sliding table (**photo 7**). Adjustments are machine specific and involve changing the height of the vertical support arm, or the connection to the sliding table, or both.



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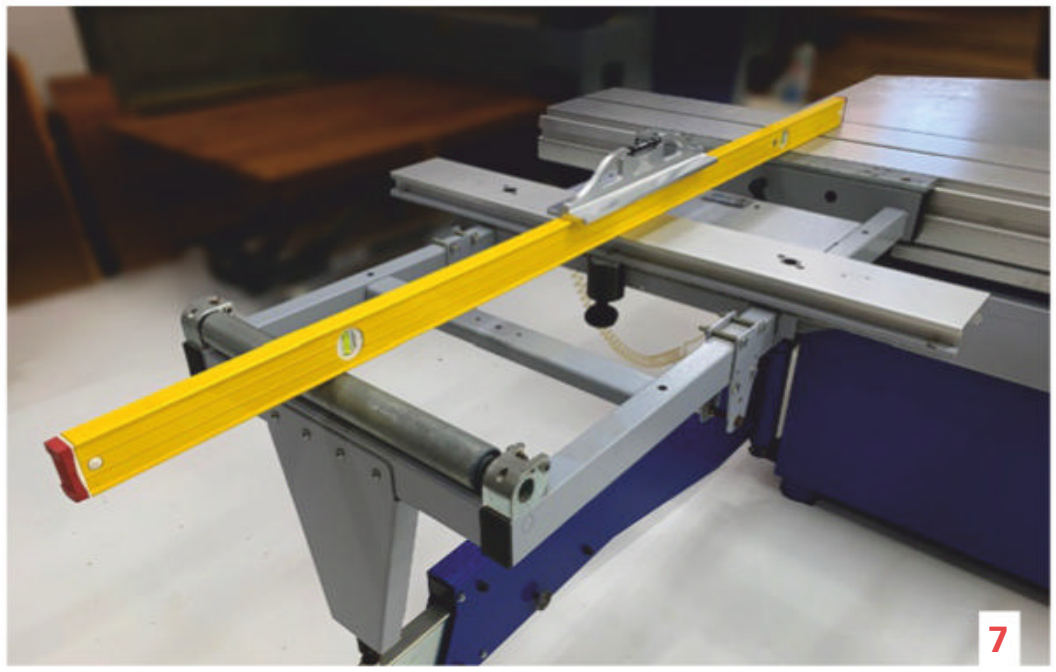
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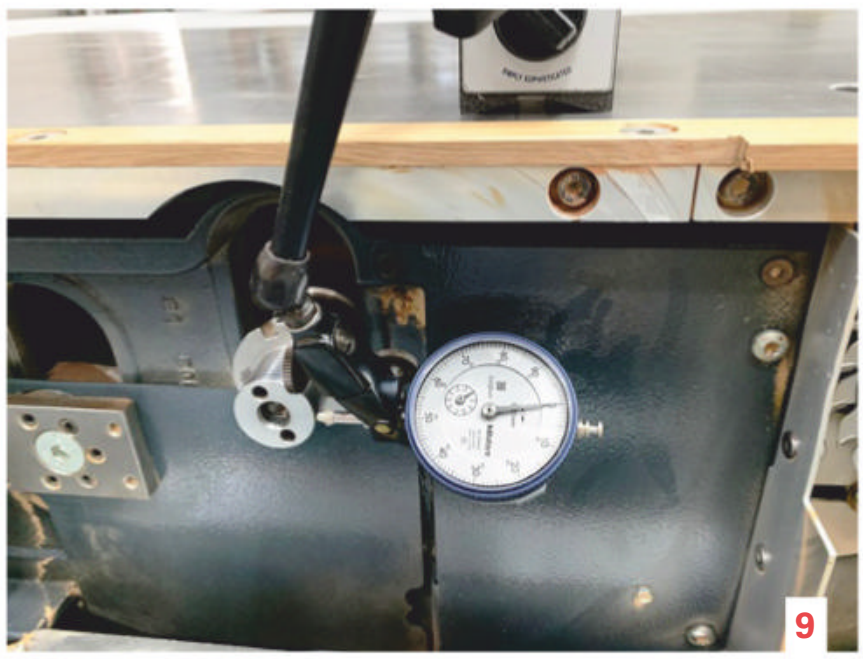
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2. A dynamic verification is required to check that the outrigger remains level throughout the stroke of the sliding table. If it doesn't, the support arm pivot point will need to be adjusted. The axle must be exactly perpendicular to the sliding table, in both axes (**photo 8**). Otherwise, the outrigger will not remain coplanar through the slider stroke. Again, the adjustments are machine specific, but usually involve loosening and tightening grub screws that hold the axle in position.

Arbor run-out

A dial indicator and an adjustable indicator holder with a magnetic base are required to check for run-out (which is the rotation of the arbor in an eccentric manner). Position and lock the holder, adjust and zero out the dial indicator, and rotate the arbor by hand (**photo 9**). Any eccentricity should be 0.025mm (0.001") or less – if the arbor is out by more than 0.025mm, you need to seek assistance.

Blade height and angle

Sawblades are notoriously difficult to check for height and angle: the irregularly shaped carbide teeth often get in the way of squares, and some sawblade bodies are hollow ground and thus not flat. Consequently, it is usually better to measure the results rather than the blades themselves.

A combination of methods first involves lowering the blade level with the cast-iron table. A piece of timber can be positioned over the blade slot and the blade adjusted until its teeth are barely touching the timber. Or the piece of timber can be swapped for a dial indicator (**photo 10**). Once satisfied, the height readout, whether analogue or digital, can be zeroed out. Then verify the depth of cut by making a groove in a piece of scrap, and measuring with digital calipers.

For 90° calibration, cut a piece of timber in half, turn over one half, and put the cut faces together and check the results. One edge of a machinist square or straightedge will reveal if the two pieces form a perfect straight (**photo 11**). For 45°, use a similar procedure of cutting two pieces of timber at 45°, and putting the cut faces together. This time instead of checking for straight, we're checking for square (**photo 12**).

Rip fence calibration

When it comes to rip fences, the calibration for width comes to mind. But first the rip fence needs to have a toe-out of approximately 0.05–0.10mm (0.002–0.004") over 250–300mm (**photos 13, 14**); otherwise the back of the blade will drag on the material being ripped.

Once the correct toe-out is verified, a square can be used to check the face of the fence in relation to the cast-iron table, and a piece of scrap material can


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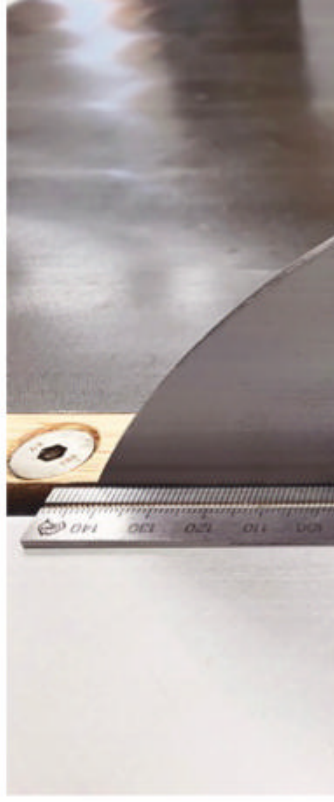

be ripped, and the results measured with digital calipers for width. All adjustments for the rip fence are machine specific.

Riving knife set-up

A riving knife is important for safe work because a closing kerf on a rip cut is dangerous. Unlike many conventional saws, most sliding tablesaws have a riving knife that is adjustable for height and moves in line with the blade for all angled cuts.

The body of the riving knife must be narrower than the kerf width, but wider than the blade body. For example, for a typical blade with a 3.2mm kerf, and a 2.2mm blade body, a 2.8–3mm thick riving knife is perfect. A 4mm riving knife would bind in the kerf, and a 2mm riving knife would fail to keep a closing kerf from binding on the blade.

It takes time to get a riving knife properly aligned behind the blade (**photo 15**). Raise the blade all the way and use a small ruler to verify the alignment down low (near the slider) and up high (at the top of the blade). While making adjustments, ensure the riving knife is in the same plane as the blade, and is not twisted one way or the other.

Calibration for square

The five-sided method for checking for square is prone to inaccuracy and takes too long. Using a precision machinist square and dial indicator is easier, faster, and a more accurate way to square crosscut fences.

With your square registered against the crosscut fence, position a dial indicator


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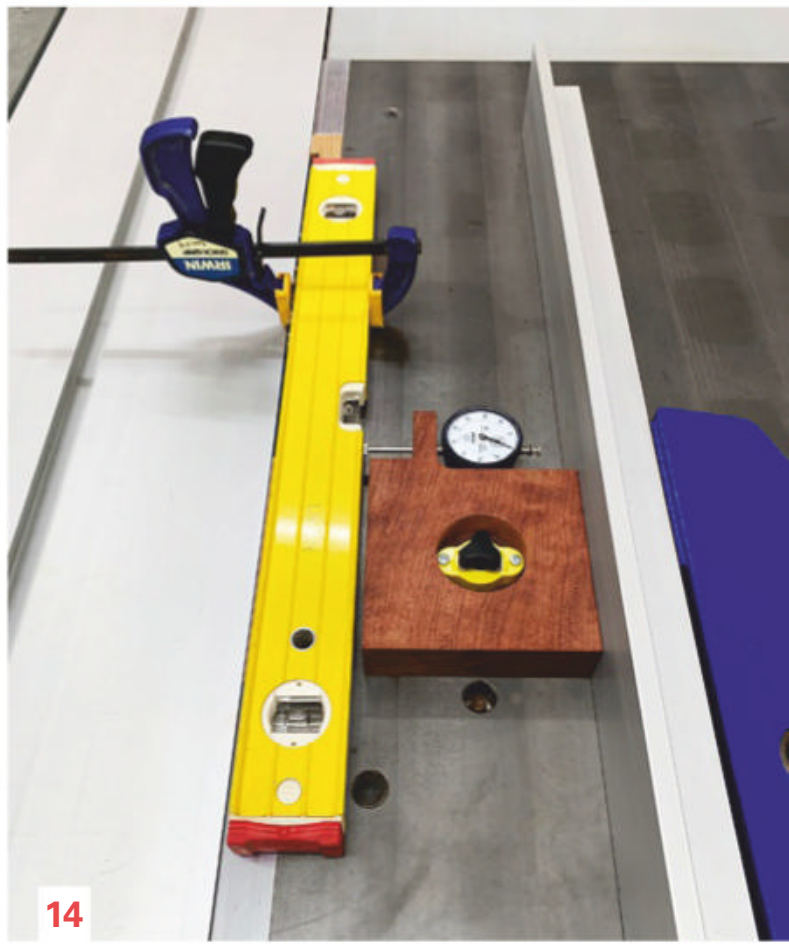
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near the blade, and secure it to the cast-iron table. Now indicate to the edge of the square and move the sliding table. The fence will yield square cuts when the indicator stays the same along the edge of the square (**photos 16, 17**). Unlike mitre gauges, the crosscut fence registration is usually located on the end of the outrigger and therefore capable of very accurate calibration.

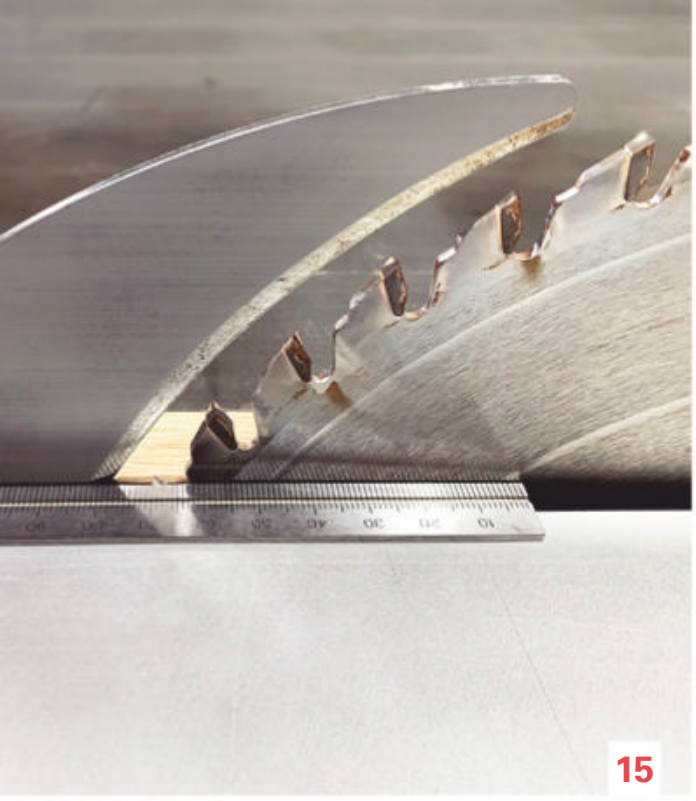
Crosscut stop calibration

Sliding tablesaws come with at least one stop, and some have two or more. The first stop is best calibrated using digital calipers. Move the stop as close to the blade as possible. If the stop does not come within 150mm of the blade, use a machinist block (e.g. 25–50–100mm) to get closer, or invest in larger digital calipers.

Take a piece of scrap and cut one end square and then cut to length (e.g. 140mm) using the crosscut stop (and block if required). Measure precisely with digital calipers and calibrate the stop using the method appropriate for your saw (analogue or digital) (**photo 18**).

If your machine has a second stop, first clamp a longer piece of scrap to the slider and cut to a precise length using the first stop (say 600mm). Then move the first stop out of the way without disturbing the clamped piece of wood you just cut. Finally, move the second stop against the end of the piece of wood, and calibrate to 600mm.

For telescoping stops, we may need to use two pieces of timber of known length. For my machine, the telescoping stop is beyond 1800mm, so I use two pieces of material precisely cut to one metre each, and then calibrate my final stop at two metres.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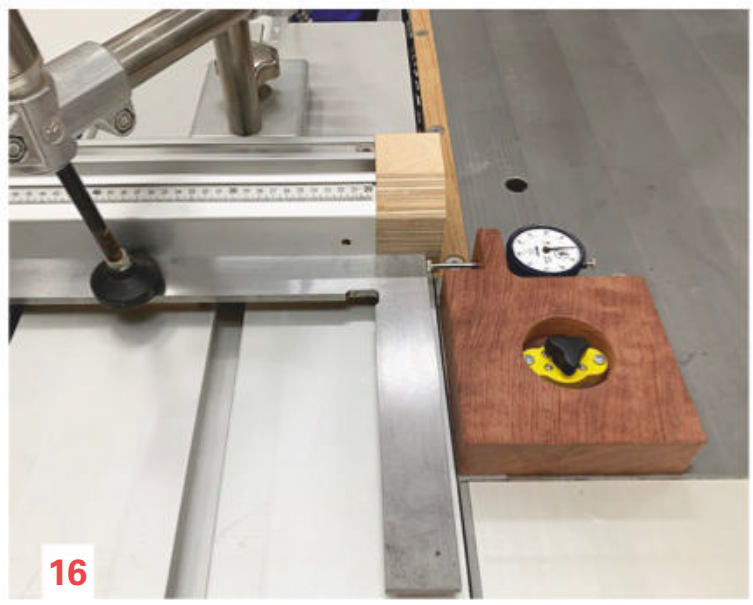
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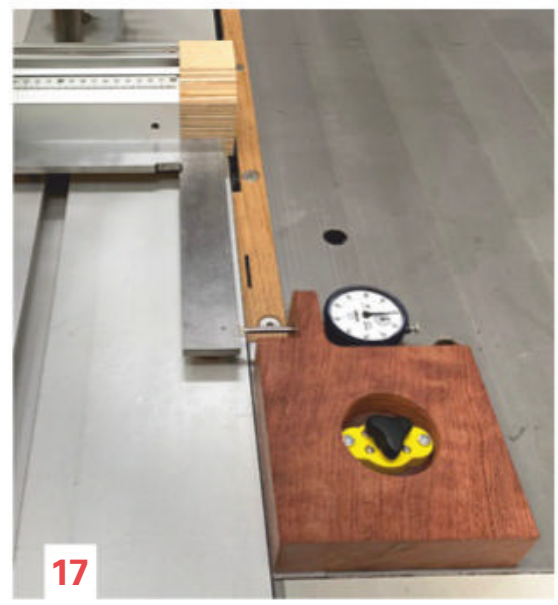
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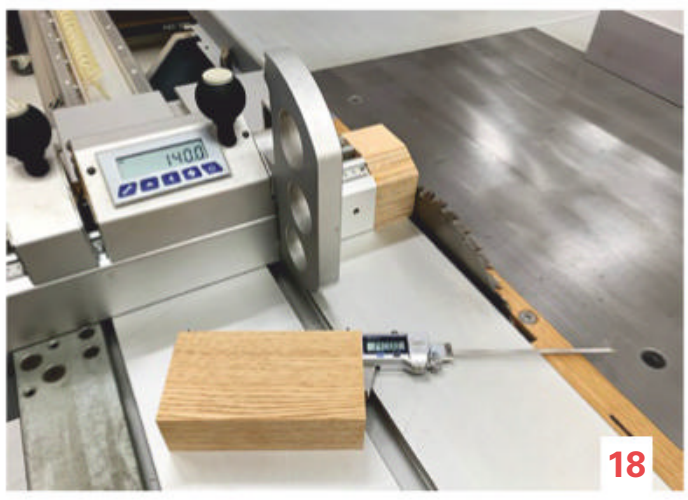
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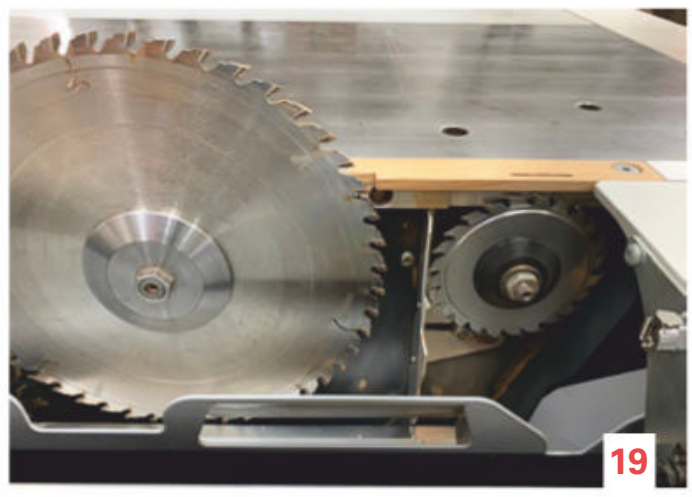
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Scoring blade adjustment

The scoring blade is a small, secondary blade directly in front of the main blade and fitted to most (but not all) sliding tablesaws (**photo 19**). Its purpose is to reduce or eliminate chip-out (on the underneath side) which often accompanies cutting manufactured materials. I also find it useful for cutting hardwood species prone to splintering. I prefer to adjust my scorer exactly to the width of my main blade.

Scoring blade assemblies can be one-piece non-adjustable, or two-piece with various adjustment mechanisms for width (screw, spring, shims), and may come with different teeth shape options and blade diameters. The blade or blades rotate at much greater speeds (often in excess of 20,000rpm) and in the opposite direction of the main blade, which means they can unexpectedly pull the material forward into the main blade. Beware!

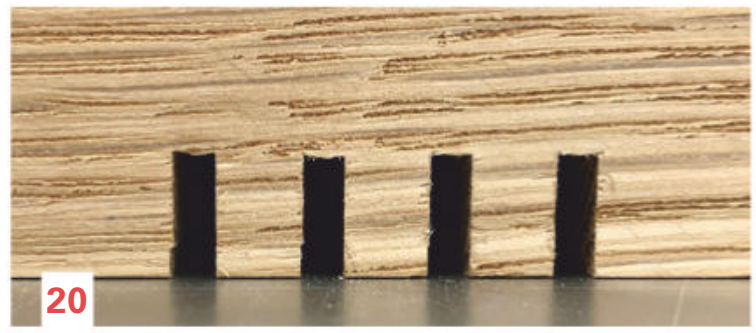
If your machine is fully motorised in all three axes – blade height, width, and lateral position – then calibrating involves making a series of test cuts and electronic adjustments until everything is aligned (**photo 20**). Otherwise, use digital calipers to measure the kerf produced by the scoring blade and adjust as necessary to match the main blade. Once that's done, the lateral adjustment is by trial and error. Finally, set the height to approximately 2mm.

Next issue we'll look at different methods of work that apply to sliders and especially how they compare to working with a conventional saw.

With thanks to David P. Best, a master woodworker whose expertise in machinery is unparalleled. Much of what appears here is due to his inspiration, see his album at flickr.com

Photos: David Luckensmeyer

David Luckensmeyer is a Brisbane based woodworker and furniture maker, see www.luckensmeyer.com.au and Instagram @luckensmeyer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11. Thicker timber cross-sections are easier to register together for visual checks of the blade angle. Using a clamp is a helpful tip.

12. Longer pieces of timber are helpful here since they magnify any error.

13, 14. The ideal rip fence toe-out is the same as for the slider: approximately 0.05–0.10mm (0.002–0.004") over 250–300mm.

15. The riving knife should be adjusted just below the top of the blade, with a gap of 10mm between the riving knife and the back of the blade.

16, 17. When the indicator stays the same, the crosscut fence is calibrated square to the direction of the sliding table and will yield accurate 90° cuts. Square to the direction of the slider is what's important here, not square to the blade, since this compensates for slider toe-out.

18. Digital calipers are essential measurement tools even if your saw does not have DRO. Using precise dimensions will usually lead to more accurate work.

19. Scoring blades can be difficult to see when running, so extra care is required. The scoring blade pictured here is parked below table.

20. Pictured below is a progression of cuts showing the relative thickness and lateral position of main and scoring blades, from misaligned (left) to perfectly calibrated (right).

In Praise of Tung Oil

A little goes a very long way, and with good results, explains Peter Spaulding.

The author in his workshop, shown applying tung oil to a test board.

Shortly after moving from Tennessee to Southern California, I needed to resupply on my favourite finish. The closest store to carry it was an hour and a half away, but off I went. It was only upon arrival that I made a horrible discovery – some clean-air legislation enacted by my new state had removed it (and almost every other finish I'd ever used) from the shelves.

I was displeased, to say the least, and not just because of the wasted drive. However, I wound up buying a bottle of tung oil – sans the also recommended citrus solvent– and thus began an entirely new finishing journey.

Misconceptions

Problems with tung oil mainly arise from poor technique, worsened by what you see on the internet. Pour on, mop around, wait an hour or two and then assess whether to do a second coat...right? Not at all. If it ever cures, it won't be pretty. Additional coats will compound the problem. No matter how gorgeous and 'grain popping' it seems at first, a poor tung oil job only looks good while it's still wet.

Product confusion is partly to blame here – tung oil and 'tung oil finish' are not the same thing. In fact, if not specifically labelled 'pure' or '100%', it's likely the supposed tung oil has been chemically modified or is altogether absent, and will therefore not behave as tung oil.

Why use it?

In the realm of eco- and health-friendly finishing, tung oil is a champ – few other finishes perform so well in so many ways. Even when set against synthetic finishes, in my opinion tung oil holds its own. This performance superiority arises from its unique fatty acid composition – uniquely high in alpha-eleostearic acid, and uniquely low in the fatty acids that make up other drying oils – giving it a combination of properties few finishes have.

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It doesn't mould, turn amber, or go rancid. Natural or synthetic, food-safe or not, most finishes face one or more of these issues. Most oil-based and synthetic finishes increasingly discolour as they age, while many pure oil finishes run the risk of becoming rancid before use. Worst of all, some finishes allow mould to grow where damp or wet conditions exist, however tung resists this. Even linseed oil, unless of the highest quality Swedish origin variety, faces all three problems – in my experience, tung oil does not.

1. The finish on this small wall cabinet was achieved with 8–9 very lights coats of tung oil applied over a week or so. The sheen on its surfaces changes when light hits it in different ways.

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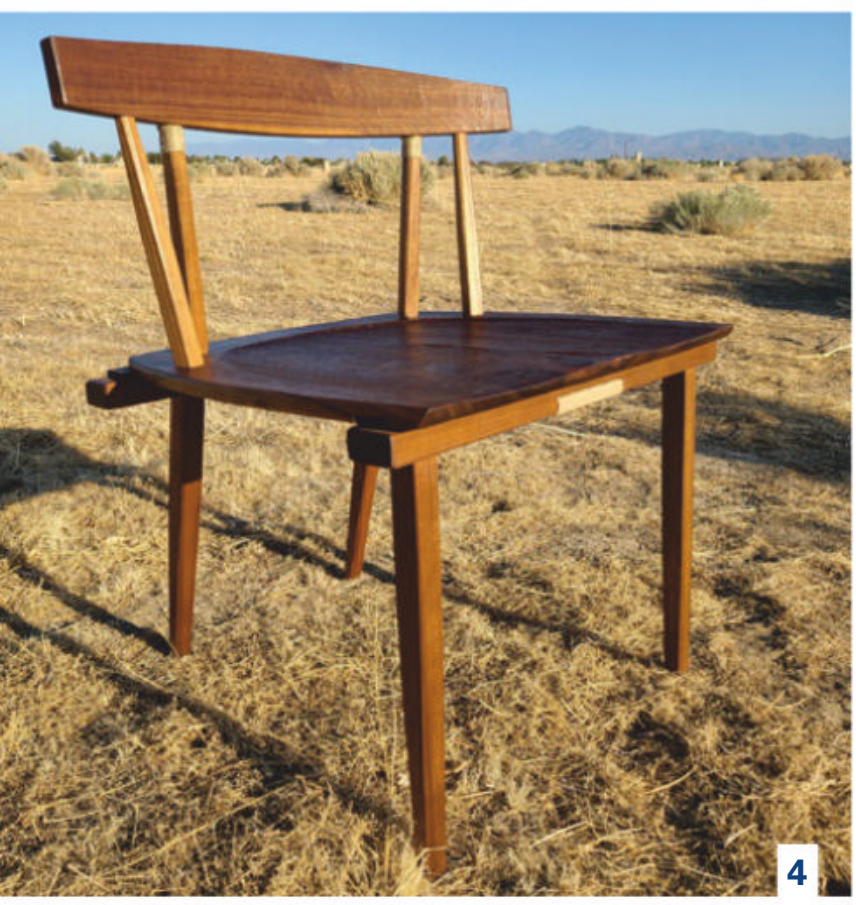

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2. Any good finish begins with good surface prep. Tung oil will highlight rather than hide, so surface prep is important.

3. Small squares cut from an old cotton T-shirt do the trick. A small rag is best, because it helps to prevent over-saturating the workpiece with oil.

4. Tung oil doesn't discolour with time, allowing the character of the wood to shine through. The tung oil finish on this chair is satin and gloss at the same time, capable of reflecting the image of the back spindles off the seat.

5. Tung oil imparts a warmth and shine difficult to replicate with even the most modern finishes. Because it's both waterproof and food safe, woodenware is a great candidate for a tung oil finish.

It's waterproof. It may seem like all furniture oils and oil/wax blends are too (after all, oil and water don't mix), but they're not really. The thing is, drying oils don't actually dry and they don't remain as oil. They polymerise. There's no such thing as 'dry oil', but there is 'cured' or 'polymerised' oil.

In simple terms, polymerisation causes these oils to form irreversible bonds, converting them from oil to a cross-linked solid (think of it as a microscopic chain-link fence). Some link tighter than others though, and none link tightly enough to stop water molecules from popping through – except for tung oil. With enough coats to fill the pores and scratches left in the wood, liquid water doesn't get through. Tung does this so well it was used for centuries in China to waterproof the hulls of boats. Nowadays, you can still use tung oil on a boat, but it's particularly useful on woodenware and outdoor furniture too.

It's non-allergenic. Speaking of China, 'China nut' or tung oil actually comes from the seeds of a berry. Though this berry of the *Vernicia fordii* tree outwardly resembles a nut, tung oil is said to be safe for people with nut allergies.

It's safe. You shouldn't drink it or cook with it, but it isn't bad for the environment, or unhealthy for you to apply. It's safe for the people using your woodenware, safe for the children chewing the edge of the table, and safe for the dog eating the legs of the bed. And while I'm thinking of those awful scratches in that beautiful bed.

It's repairable. Unlike those inevitable scratches in a hard film finish, scratches in most oil finishes are less visible and far easier to repair. This is partly because oil cures a little softer by comparison. But, again setting it above its companions, tung oil isn't too soft either. It's the Goldilocks of hardness; most cases will rarely require more than rubbing a tiny bit of oil into the affected area. Only rare circumstances will call for the need to strip or sand away a well-done tung oil finish – and that brings me to one of the most commonly misunderstood things about it.

You don't need to sand. Not before, between or after coats. A lot of sources will say you do, but I've found it's just not the case. Because I prep most surfaces these days with a blade, sanding has become rare in my shop. Tung oil doesn't require it for adhesion, smoothness, clarity, or gloss (tung can be built to a gloss/semi-gloss too).

That said, if your sheared surface isn't where you want it to be (or if you just prefer sanding), I recommend bringing the base surface to 600 grit or higher. This is again contrary to many claims, but the more sheared, polished, or burnished the surface, the better it is for tung. However you get there, once the first coat goes on, you don't need to sand again.

Thin, not thinned

With surface-prep paving the way, the biggest key to success is to apply tung oil *thinly*, not thinned. Remember I'm still using the same bottle from two years ago? And I've already mentioned you don't need solvent either, because tung oil doesn't cure through evaporation but instead depends on heat, UV light and oxygen to cure.

You only need a small rag to be just wet enough without being able to squeeze oil from it. That's it. Nothing else. I prefer to use roughly sized 60mm squares cut from an old cotton T-shirt.

As well as being careful not to over-saturate the rag or the wood, it's best to wipe on, wipe off, as previously unnoticed fingerprints and splotches can cure cloudy if you don't. A gentle wipe with a dry cloth of the same material will do.

To give a better idea of how little oil is needed, take a recently completed wall cabinet as example. With 8–9 coats applied over 7–8 days, I dabbed the oil bottle against my tiny rag no more than 5–6 times, using less than an ounce of oil in total. The cabinet now has a satin glow in indirect light, and a diffuse reflectivity when the light shines directly on any plane.

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Some of you may wonder how 8–9 coats can be applied with 5–6 dabs of oil. The simple answer is that I don't wash or toss my rags between projects. Instead, I keep them sealed in a glass jar in the refrigerator until needed again. Though unlikely, should a fire start, it would soon starve of oxygen in the jar and go out without causing damage. In this way, I'm able to use the same rag for a month or two at a time. There's often enough oil left in it to do repeat coats without recharging the rag.

For a faster cure

The second key to a great pure tung finish is probably my favourite – we can make it cure faster. By keeping those coats thin and supplying more of what it needs, it can cure harder and brighter too.

With the right conditions – I like 50–75°C, low humidity, and the UV equivalent of a bright, sunny day – tung oil can be sufficiently ready for recoat or service in as little as five or six hours. You can take advantage of naturally hot, dry, sunny days, or make an oil-curing kiln to successfully and quickly cure tung oil no matter what the weather is.

Beyond tung

That failed trip to buy my former favourite finish eventually led me to discover other natural finishes. Tung oil is unique, but it's not alone. From an incredible natural lacquer made of sap, to paint made with milk and ink made from natural glue, to a fermented juice that weatherproofs wood and can make paper strong enough to be used for clothes, the natural world of finishing is ancient, wide, and astoundingly relevant. I'd say it was worth the trip.

Photos: Peter Spaulding

Peter Spaulding is a self-taught designer maker, working from his small home workshop in the desert of southern California. He began his career in woodwork building houses, but now spends most of his time making unique and varied pieces ranging from furniture and boxes to small sculptures, vases, vessels, platters, and spoons. Learn more at Instagram @Iwao_wood.and.art

Hollow turning the mango vessel. 'I produced two wheelbarrows full of shavings to mulch my garden.'

From Log to Lathe

Knowing how to process the raw material takes experience. Many beginners think they have to get the biggest, as opposed to the best blank possible, explains Terry Martin.

I have written many woodturning stories and they usually begin with mounting the blank on a lathe to begin the turning. However, an important, but often forgotten part of the story of turning is how the blank was created and how that affects the final product. Many turners buy their blanks already cut and that means the decisions about what they can make have already largely been made by a stranger, and that person may have only a vague idea of how to turn wood, or what features of the wood are important.

Recently I obtained a number of freshly cut logs and I was planning how to cut each of them to get the best results. The decisions I made at this stage would irrevocably define what I could make, so I decided to record how I broke down a particular log and what considerations are important to the final product. The only guides you have when cutting a log are its visible outside features and accumulated experience, which includes an understanding of how different trees grow. This story is not about the turning itself, it is an example of what I did to create a successful turning blank from a quirky log.


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1. I began with a large section of mango trunk, 850mm long and 450–500mm dia. It was freshly cut and very wet, and I estimate it weighed at least 200kg. There were three branch stubs that had either never fully grown, or had been lopped and grown over, and I knew this would mean multiple piths in the wood. The pith is the centre point around which growth rings form in trunks and branches.

2. Looking at the end of the log, the pith in the trunk was not central, as is often the case. Because of this offset, if the wood is left to dry it will split differently around its circumference and this tendency will affect whatever I turn. I would have to consider this when cutting. The reasonably circular inner rings made me think this might be suitable for a wide-mouthed hollow vessel, but I needed to move quickly because splits were already appearing around the central pith.

3. I removed the branch stubs and could see that the branch growth rings were quite developed, so it would be better to remove them from the final turning blank as they would create further tensions within the piece as it dried. I decided to make a cut across the log in the middle of the branch stubs. I marked the cut with chalk and that cut would establish the bottom of the turning blank – at the base of the vessel. The branch remnants would mostly be turned away when I shaped the spigot for holding the blank.

4. After the cut I could see that I had only two branch piths to deal with and they were close enough to the central pith of the log that I would be able to turn them away. I put the other half of the log aside to be cut into bowl blanks.

5. After marking out a rough circle at the top of the blank, I made a series of rip cuts to remove the corners, progressively taking smaller cuts till it was roughly round. This is to reduce vibration once it is on the lathe.

6. Even after removing about 50% of the wood, the blank was still very heavy. I mounted it between centres, positioning my largest drive dog in the centre pith at the headstock end, or the top of the vessel. I then moved the bottom of the blank around the live centre at the tailstock end until I found a compromise position that roughly balanced the wood, but was not so far off centre that it would affect how it dried.

Before turning on the lathe I turned the speed to zero, then gradually brought it up to the fastest I could go without the lathe shaking. You do need a heavy lathe for this kind of work, and I have a Vicmarc VL300. A very large blank like this is safe between centres, as long as you regularly wind in the tailstock, because with wet wood the drive dog and live centre may penetrate as the wood spins.


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7. I cut from right to left, standing to the right so the spray of wet sap didn't soak me. I stopped cutting deeper as soon as each section of the wood was fully round. This stage is not about shaping the vessel, but about creating the round shape within which I could work.

8. This is the rounded blank, ready to be turned at full speed.

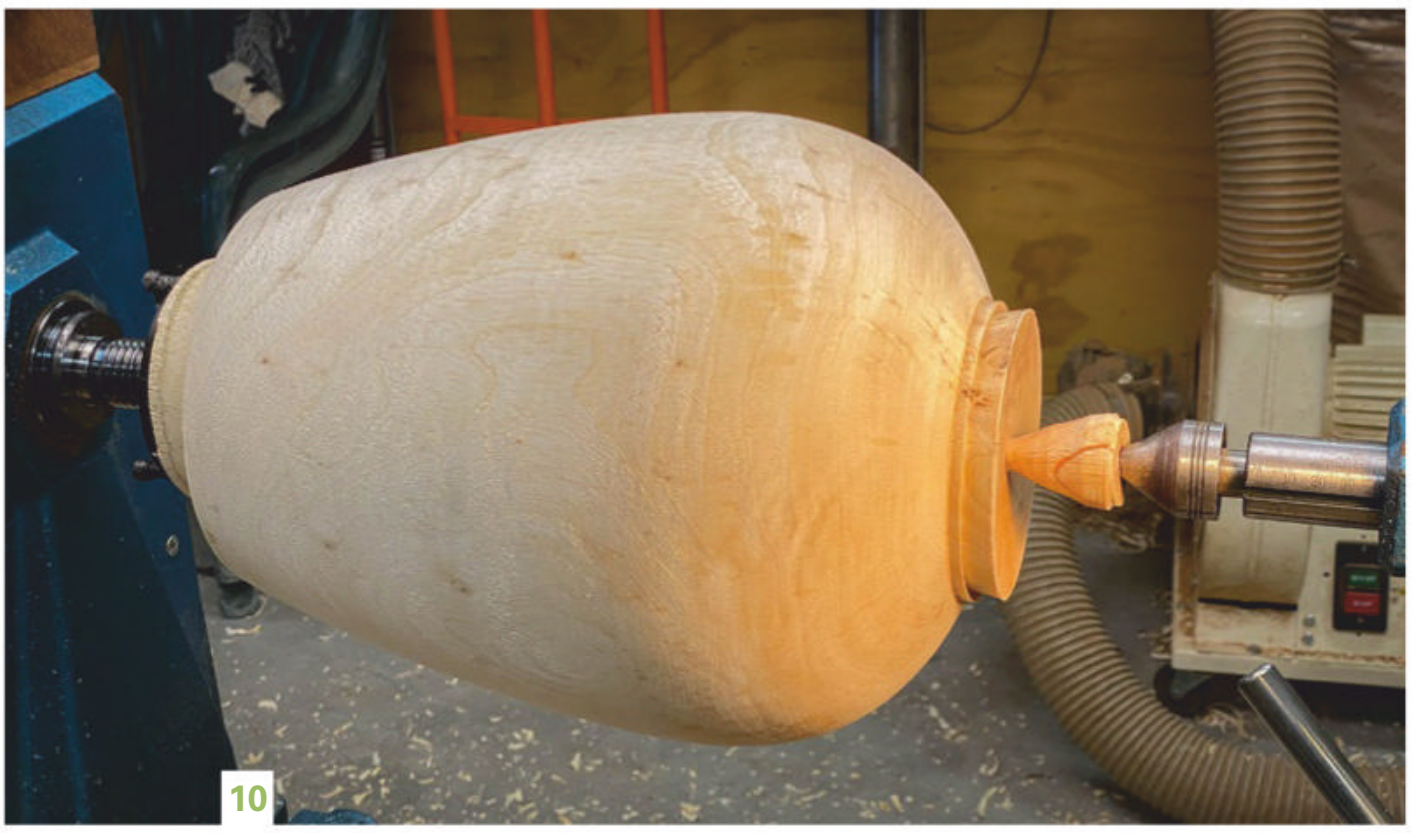
9. The form of the vessel is established. This was not very different to what I envisaged at the start when I was looking at the whole log. Here you can see that with a gradual curve the tight growth rings are transformed into soft, wavy patterns.

10. As I narrowed the base, the pith remnants moved closer to the centre and I knew I could remove them later when I turned off the spigot. I cut the spigot to 110mm dia for my biggest chuck, large enough to support the weight of such a big piece. Finally, I removed the excess underneath the spigot to the stage where I could take it off the lathe and snap the stub off.

11. Once I mounted it in the chuck I could clean up the top. As I had predicted, the growth rings were wonderfully arranged around the centre. The splits in the centre didn't reach the rim, so I knew the vessel wall probably wouldn't split as it dried.

12. I bored out the centre with a large sawtooth bit and then set up my hollowing system to finish the hollowing.

13. This is the final form, ready to dry. From log to finish it took me about 4 hours. The walls are 35m thick, all the way to the bottom. If I had rough-turned a salad bowl, for example, it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would need to be thicker because it would tend to curl as it dried, but this vessel will contract uniformly and is unlikely to split or warp much.

The drying is controlled at first by placing the piece in a plastic bag, then turning the bag inside-out each day. Once the bag doesn't collect any more moisture, it can be dried in the open air in a cool place. Mango dries quickly because it is very open-pored, so it will be ready to finish-turn in a few months.

The piece is now 300mm high and 240mm in diameter. It might not seem much to get from such a large log, but one of the mistakes that many beginners make is to think they have to get the biggest blank possible from a piece of wood. I wanted to get the best blank possible, and I think I have done that. When it is dried, refinished and sanded, the growth rings will show as wavy lines around the diameter.

My final decision will be whether to sand and apply a finish, or to char the surface and rub back to create a black vessel with a white heart – but that decision is for another day.

Photos: Terry Martin

Terry Martin is a Brisbane-based wood artist, author and curator. Learn more at terrymartinwoodartist.com

Future Remains

Seven women designer makers showed work at Craft Victoria's gallery space in an exhibition defined by an exploration of style and processes. Reviewed by Adam Markowitz.

Future Remains is an exhibition of furniture and objects made by seven women designer makers all working with the medium of wood, curated by Craft Victoria and shown at their gallery in Melbourne CBD during the height of Melbourne's (sixth) strict lockdown*. It was a strange feeling walking alone through that exhibition to write this article. There was a feeling of coiled energy – demanding attention, but to an empty room. I will do my best to convey some of that sense as I walked through the space.

Future Remains exhibition at Craft Victoria, Melbourne. Clockwise from above: Makiko Ryujin, *LOOP #1, #2, #3*; Alexsandra Pontonio, *Biplane Sideboard*, American white ash, dyed canvas; Linda Fredheim, *Red, Green, Orange* and *Blue Bags* in timber, rubber and neoprene; Chi Yusuf, *Vanity Desk with Mirror*, American walnut, leather, ebony. Centre: Laura McCusker, *Overpass*, Tas oak; foreground: *Kilcarnup Coffee Table*, salvaged river marri. *Photo: Michael Pham*

On arrival you are immediately greeted by Olive Gill-Hille's *Kilcarnup Coffee Table* breaking out of the defined gallery space into Craft's retail area with an animal dynamism. WA-based, and originally trained as a sculptor before studying furniture design, Olive sculpts what she describes as 'road kill timber' – salvaged timbers sourced from a range of different non-commercially harvested sources – in this case marri from the Margaret River region.

The intense physicality of the carving process is legible on the surface, laying into such dense eucalypts with all manner of carving tools. The lines of the piece, in some areas flowing and homogenous and in others clearly controlled to discretely incise elements, evoke the time-carved forms of the WA coastline. The latter is reinforced by the physical bleaching of the timber, giving the object an aged, weather-beaten quality.

Immediately to my right and entirely different in scale and tone is the work of Anke Kindle. Anke studied at the UTAS Furniture Design school in Hobart before later training as a jeweller. Her *Nipple Brush Brooches* explore this subtle interplay of different mediums, allowing the turned timbers to sing whilst balanced carefully with the fine horsehair and silver.

Anke has the attention to fine detail of a jeweller, and it is a scale rarely explored by woodworkers. I am reminded of the presence of a netsuke. She speaks of the work as 'playing with the idea of the brush as a political object symbolising women's work'. She has used Huon pine, salvaged *Macrocarpa* ('the poor man's Huon'), river redgum and native-grown Buckland walnut – each timber selected for its specific provenance and 'story as precious as jewels'.

Adjacent to Anke is the work of Makiko Ryujin. Makiko's work featured centrally in the recent NGV Triennial – she is forging a name for

herself within Melbourne's design and art community. Her *LOOP* sculptures are presented in series – a stacked assemblage of geometric volumes, a second suspended element and a third element scattered on the ground.

Makiko's forms are turned from salvaged river redgum, and then set alight. She notes the burning is not intended to achieve the *shou sugi ban* finish familiar to woodworkers, but rather to put the object through the transformative, consuming quality of the fire. The work for her evokes the *Toro* – traditional Japanese lanterns found in Buddhist temples that she describes as 'guiding the souls of the deceased towards peace'. From afar the charcoal black of the work silhouettes against the white walls of the gallery, and read almost like voids in space, while the scorching of the fire creates a deeply etched and cracked textural surface.

Central to the space, and in some ways the fulcrum of the exhibition is *Overpass*, a table by Laura McCusker. A key figure in contemporary Australian woodworking, Laura's work has a shoot from the hip, no-bullshit style that she has in the past ascribed to *Mingei* philosophy. But there is always an underlying elegance, consideration and mastery that can sail over your head unless you're really paying attention. Her table may initially appear as an iteration of the 'table leg coming through the top' detail that was explored in the mid-century period and has come roaring back with that revival.

Opposite: Alexsandra Pontonio, *Biplane Sideboard*, American white ash, dyed canvas. *Photo: Michael Pham*

Laura McCusker, *Overpass*, Tas oak. *Photo: Peter Whyte*

Above: Chi Yusuf, *Vanity Desk with Mirror*, American walnut, leather, ebony. *Photo: Michael Pham*

Right: Laura McCusker, detail of leg joinery, *Overpass*, Tas oak. *Photo: Peter Whyte*

Right: Linda Fredheim, *Green Bag, Red Bag* in timber, rubber and neoprene. *Photo: Michael Pham*

Below: Anke Kindle, *Nipple Brush Brooches*, river redgum, Huon pine, *Macrocarpa*, Buckland walnut, sterling silver, white horsehair. *Photo: Michael Pham*

However, looking closer one realises it's not a visual flourish but rather an expressed structural system – the legs form a dovetail that locks the tabletop in place. The bold taper in the expressed edge beam, which has been integrally laminated with the tabletop is a powerful element. The boldness to express this laminated edge beam together with such thick sections of Tas oak boards in the end profile, and yet still have the piece come off feeling light and poised, speaks to the confidence in decision making of someone in mastery of their craft.

If Laura is leading the way in terms of how woodworking can be relevant in both a contemporary design and commercial context, whilst still drawing on the richness and skill of the craft, Alexsandra Pontonio is one of the strongest voices of the next generation to pick up this mantle. The *Biplane Sideboard* reiterates for me why Alex was the runner-up for the Furniture category award in last year's AWR Maker of the Year out of an incredibly competitive field.

The lightness of this piece has unabashed mid-century origins, but is not drowned in those references. The integration of the pulls for the sliding doors into the strong rectilinear grid language of the piece demonstrates an assertiveness in proportion and cohesiveness of design intent. This, combined with both the fabric for the door faces and the boldness in choice of colour further gives this piece a vitality that makes the work not just good, but exciting. It's progressive and fresh whilst remaining firmly rooted in foundations of craft.

Opposing Alex's work is *The Daily Rituals* collection of table, stool and mirror by Chi Yusuf. Chi discusses how her work uses a furniture form traditionally associated with women (the vanity table) to 'break the traditional expectations placed upon a woman's hands'. The sequence of objects are united by the rigorous application of a formal approach with a consistent language of a semicircle on a linear plane which waterfalls over a mitre, and a cylindrical turned pillar located at the centrepoint of the circle. It's a compelling rhythmic meter that gives the work a strong graphic quality. Subtle details such as a leather-lined drawer runner to set off the seat and an inlaid ebony strip give further depth to this work.

Finally we come to Linda Fredheim's *Bags* whose strong elevational geometries sit silhouetted against the far wall. An established figure in the Tasmanian woodworking world, Linda was lecturing at the UTAS Furniture School in Hobart when I was there a decade ago. Linda describes how these forms evolved from design exercises undertaken by Bauhaus students, and the strong lines and geometries of the Bauhaus are clearly legible (I immediately thought of a teapot by Marianne Brandt).

There's a strength and assertiveness of fine detail that echoes Anke's jewellery. The incredibly fine hinges open via a cleverly integrated clasp to reveal bright bursts of colour – something which I rarely have the confidence to use in my own work but wish I did. The bold geometries of the work belie an intricate construction, with shopmade plywood assembled from a single origin to control the tones of notoriously variable Tasmanian blackwood, which has been carefully grain-matched across the hinge face. The handles create the strong graphic quality and are the element that shift these objects from box to bag. They are made from neoprene, which moves in the most unexpected and surprising way – perhaps playing with that other Bauhaus tenet – exploration of new materials and techniques.

Surveying the exhibition as a whole I am struck by the sheer diversity of the work and practice. Each of the pieces is exploring vastly different territory. In many ways that is the primary unity of the work – the vitality and energy of exploration of these seven women, their commitment to skill in craft and the role of the hand in the generative creative practice. I think again of that sense of crackling energy in the gallery space, like a compressed spring, or the inhale of breath before the first blow of the mallet on a chisel. The future remains to be seen.

**Melbourne went into its fifth extended covid lockdown just prior to the exhibition opening date of July 24, 2021. At time of writing, a limited one week viewing was planned for early November.*

Learn more at Craft Victoria https://craft.org.au

Adam Markowitz is a Melbourne architect and designer maker who was profiled in AWR#98. He has written several stories for Australian Wood Review magazine. See www.markowitzdesign.com

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UNTIL MAY 2022
Eucalpytusdom:
Celebrating Australia's gum trees
Exhibition includes historical and newly commissioned works, performances, talks and masterclasses
Powerhouse Museum, 500 Harris St, Ultimo, Sydney
www.maas.museum/event/eucalyptusdom

Oct 29–14 DECEMBER
Transformation: Craft ACT: Craft + Design Centre Annual Members exhibition
Showcasing contemporary expressions of craft and design
www.craftact.org.au

5–6 NOVEMBER
Cooroora Woodcraft Show
Cooroora Woodworkers Club Inc
Cooroy Memorial Hall
Steve Chapman: 0419 611 565
www.cooroorawoodworkersclub.com

20 NOVEMBER–5 DECEMBER
FLOW: 2021 Graduating Exhibition Sturt School For Wood
Cnr Range Road & Waverley Parade, Mittagong, NSW
www.sturt.nsw.edu.au

9 DECEMBER–22 JANUARY
Centre for Fine Woodworking
Graduate exhibition 2021
Refinery Artspace, 114 Hardy St, Nelson, New Zealand
www.cfw.co.nz

2022

5 FEBRUARY–18 APRIL
New Works by Terry Martin
Ipswich Art Gallery, d'Arcy Doyle Place, Ipswich, Qld
www.ipswichartgallery.qld.gov.au

5 FEBRUARY
The Art of Making
Studio Woodworkers Australia
Gallery 1, Australian Design Centre
Cnr William & Palmer Streets
https://studiowoodworkers.org.au

20 FEBRUARY
Sydney Tool Sale
Traditional Tools Group
The Brick Pit Sports Stadium
1A Dartford Rd, Thornleigh, NSW
http://tttg.org.au

12–13 FEBRUARY
Tools & Techniques Weekend
Demonstrations, tool and timber sales
Sturt School For Wood, Mittagong, NSW
www.sturt.nsw.edu.au

13 FEBRUARY–3 APRIL
Beyond Ordinary
Contemporary Women Makers Exhibition curated exhibition of new works
Sturt Gallery, Mittagong, NSW
www.sturt.nsw.edu.au

19–20 MARCH
Lost Trades Fair
Bendigo Racecourse, Ascot, Bendigo, Victoria
www.losttrades.info

17 MARCH
Australian Furniture Design Award
Design practitioners submit new furniture or lighting design concepts for a $20,000 furniture design prize. Winner announced at exhibition opening in Melbourne.
www.ngv.vic.gov.au/ australian-furniture-design-award-2022

17–27 MARCH
Melbourne Design Week
Theme: 'Design the world you want' and celebrating the diverse ways design can work towards a better future.
https://designweek.melbourne

31 APRIL–2 MAY
Maleny Wood Expo: From seed to fine furniture
Includes Sunshine Coast Wootha Prize exhibition
Maleny Showgrounds, Qld
www.malenywoodexpo.com

14–15 MAY
Lost Trades Fair
Cobb & Co Museum, Toowoomba, Qld
www.losttrades.info

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Screen Play

For accuracy's sake – it's all about the joy of jigs, explains Richard Vaughan.

This commission was a delight and very much an expression of a decision made at the start of my woodworking career almost 40 years ago. I wanted each piece to require techniques that were new for me, and I only wanted to make work for people who got how much heart went into each piece.

My client had the idea of a folding screen that would display his wife's paintings and be a surprise gift for her 80th birthday. She is a respected artist with particular skill in depicting Australian flora. He wanted the paintings to be easily changed, alternated as the mood and more recent work determined.

Design decisions

I immediately decided on the frames to be rounded to allude to plant stems, and then thought to char them as a reference to the fires that are characteristic of the Australian bush. The 9mm plywood central panels give a secure base for mounting the pictures on both faces, and provide rigidity.

Sketches, scale drawings and then full size drawings on 3mm MDF, along with full size mock-ups in pine, determined dimensions and proportions. Then it was just a matter of making it!

I chose Qld maple as it is a manageable weight and machines well. Getting hold of a stash of 65mm square maple meant I could get the required 45mm diameter in the straight 1850mm lengths I needed.

Without a lathe

I don't have a lathe capable of handling that length so I turned to the router table. The wood was machined to an exact 45 x 41mm so there would be a flat for cutting slots, and to have a neat junction with the surround. This did leave a flat after the rounding but that was addressed with grafts.

A router bit with 22.5mm radius gave a satisfactory result with changes of router bit height for the different dimensions (**photos 1, 2**). Sanding blended in imperfections at the junctions of the router passes (**photo 3**).

Starting with the finish

I did the charring first but found that handling the charred surfaces caused bruises and marks that couldn't be simply dealt with (**photo 4**). After that it was back to the router table to cut grooves for the ply. The flat side that enabled the rounding and slot cutting was eliminated from the post ends by grafts applied and shaped (**photo 5**), which meant more charring was needed.

Despite a few practice runs, the burning effect was not quite right. Cut back and try again, and again. It had to be uniform but still have a sheen. Finally, using an abrasive (about 600 grit) impregnated sponge resulted in a satisfactory look.

My usual oil type finish was just a bit too shiny so I went for the matt look of Proofseal. But even that wasn't quite right as the occasional tide mark from the brushing-on was a problem. Finally, I settled on a clear spray matt finish.

Joints in the round

The junction between rails and posts was a bit of a challenge. Small wonder so many woodworkers choose to design with flat and square surfaces. I set up a jig for the drill press to cut the ends of the rails (**photo 6**). Careful adjustment was needed to get a snug connection all around the junctions (**photo 7**). The slight variations between joints made the clear marking of each component essential.

Centre panels

The ply centre panels were the simplest part – just cut and paste really, with reference to the full size drawing to be sure the numbers were right (**photo 8**).

The frames were then clamped to the panel and the border of 4mm thick maple fitted and fixed. This served to locate the picture frames and tidy up the junction between post and panel. I used my olde worlde mitre saw and a guillotine for efficient and very tight mitres (**photo 9**). The panels were then painted.

Picture frames

My clients had land in the Bunya mountains which they had spent much of their lives weeding and regenerating with native timbers, so silky oak, bunya pine and blackwood were used in memory of their work together.

The wood was dressed to 50 x 18mm and then moulded on the router table. Each of those woods is prone to chipping out, so marking the edge first with a cutting gauge was time well spent (**photo 10**). My close-to-perfect Kapex sliding compound mitre saw gave the accuracy needed for identical frames.

Main: The author's folding screen with easy-to-change provision for displaying artworks.

1. Using the flat against the fence for the first two passes.
2. The height of cutter was reduced to give a uniform radius.
3. All components successfully rounded.
4. Charring is a delicate process as it is very easy to burn and therefore scar the surface. Practice before the real thing is essential.
5. After the slots for the ply were routed, material was 'grafted' on to round out the flat sections.


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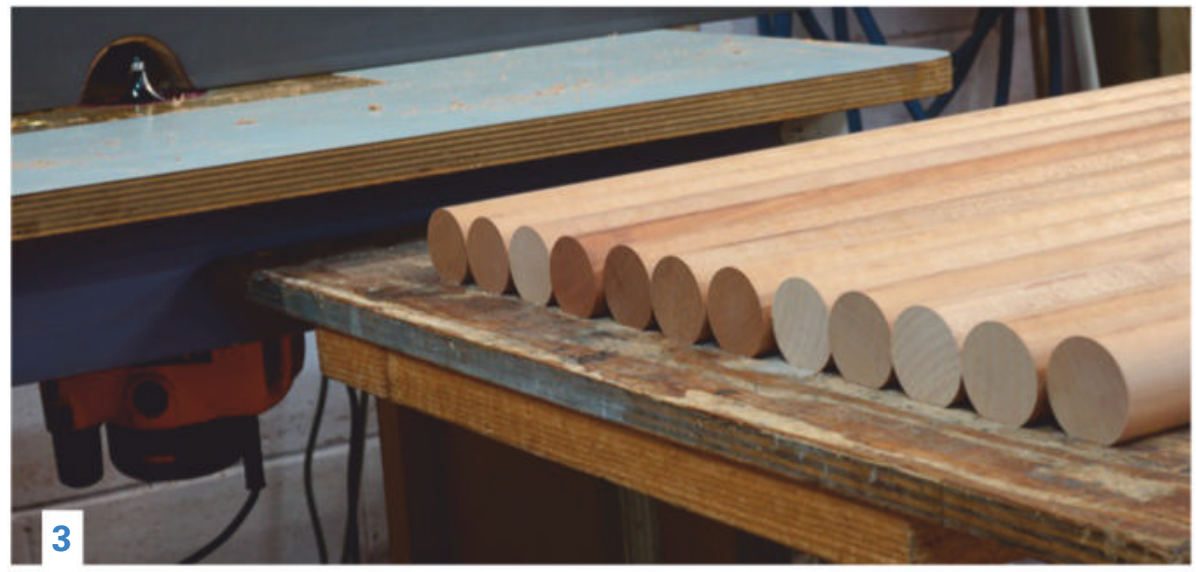
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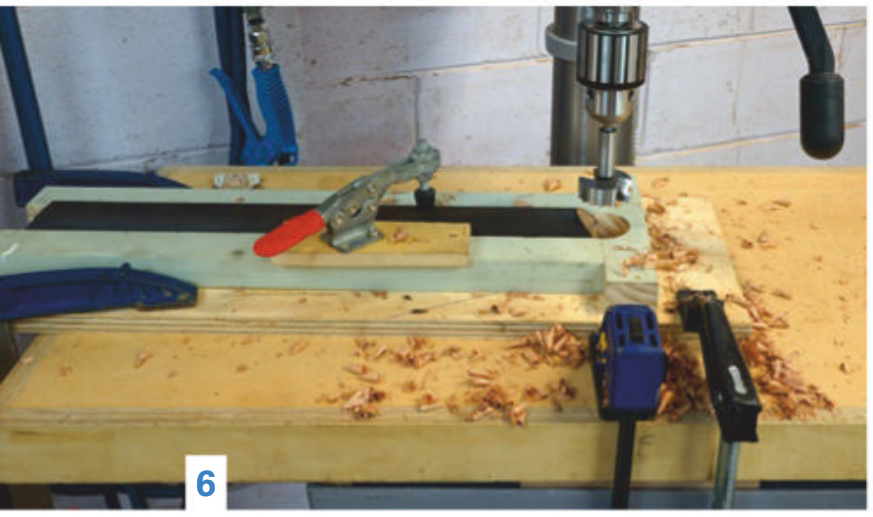
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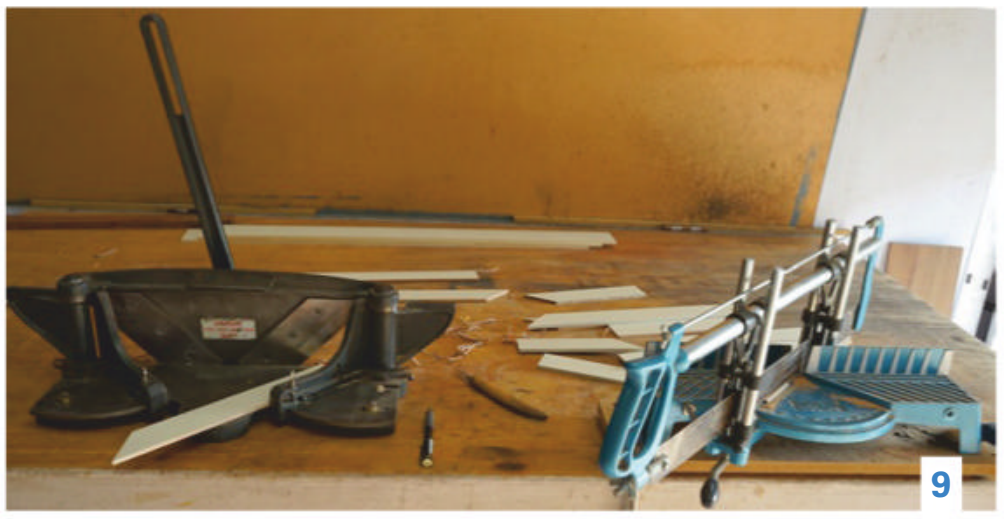
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6. The set-up for drilling the rail ends. The cutting edges on the drill were refreshed with a diamond bit in a rotary carver and tested to get a clean cut. Sandpaper glued to the bottom of the jig ensured a good grip. Toggle clamps are invaluable for jigs.

7. Adjusting the rail ends to fit the posts snugly all round was a gradual process.

8. Gluing the ply for the central panel.

9. My old school mitring set-up.

10. A cutting gauge was used to define the edge of the router cuts.

11. Jig for producing identical domino holes.

12. Another jig made gluing the picture frames fast and accurate.

13. Yet another jig was used to drill magnet locations on frames and panels. The double thickness at the locating holes on the jig ensured that the centre punch made a very precise mark for drilling, both for frames and the panel.

14. Marking out for hinge locations.

15. Set-up for gluing the first panel.

16. Showing some of the frames removed and their magnet locations.

Simply gluing endgrain mitres is strong enough, but as a belt and braces sort of bloke I wanted some reassurance so I included dominos.

Pleasure and pain

The joy of jigs is that all the holes or cuts will be identical. The anxiety is that they will all be identically not quite right. It does focus the mind, and demand thorough testing. Jigs are almost the meaning of life for woodworkers, and certainly avoid pain. Jigs are simply a matter of securing the workpiece and guiding the tool, or securing the tool and guiding the workpiece. Simplest is usually best.

This very simple jig ensured every mitre was identically cut for dominos so when I came to colour and grain match the components for each of the 21 frames (including some spares) there was no drama (**photo 11**).

To ensure each frame was glued up perfectly square I used another jig. Two melamine boards were confirmed as flat and cut square, then ply cleats were fixed on adjacent edges as reference during clamp-up. This simple jig sped the process up and guaranteed a perfect result (**photo 12**).

Twenty or so pieces of 4mm ply cut to A3 size were sealed and ready for the artist to work on. A rare earth magnet on each side of the frames and the opening in the panel would make the pictures easy to change.

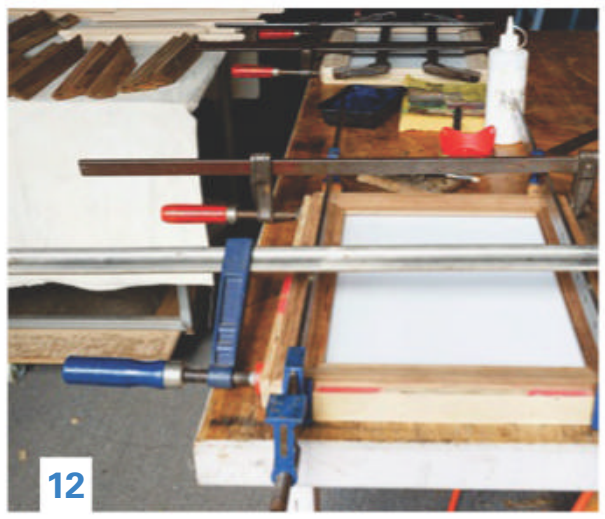
Once glued, the frames were oiled and then came the time to mark and drill for the magnets. Positions were staggered as both faces of the panel were to be used (**photo 13**).

A Forstner bit countersank the holes for the magnets with the centre tip making a location and starter hole for the screws to attach them. Superglue in each screw hole improves the hold when the magnets are pulled apart to change the paintings.

It all hinges on this

A nightmare at this stage would be to get the hinges on the wrong sides of the identical looking posts, but fitting each rail meant they were not interchangeable. The posts were laid out in the correct order and blue tape applied where the hinges were to go.

11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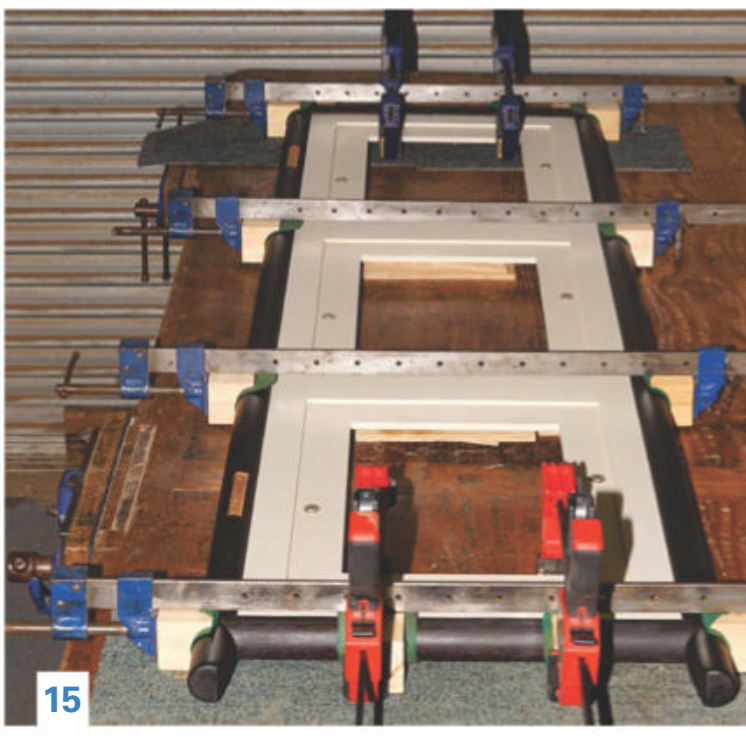
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The flat surface on each post served as a datum for locating the hinges. The 300mm length of wood shown in **photo 14** was used to measure and mark the distance of each hinge from the tops and ends of the posts. The ply served to mark the edge of each hinge.

Putting it all together

Glue-ups are often satisfying in an anxious way, and this one was. A couple of dry clamp-ups went okay, so then the real thing. Epoxy glue, tinted with black ochre just in case, gave sufficient work time. Clamping blocks were essential as flat clamping on the round surfaces was guaranteed to bruise them. Pine was drilled then sawn in half to make the half diameter matching the posts. This was faced with old billiard table baize and did the job nicely (**photo 15**).

For a job like this which relies on the accuracy of repeated processes, jigs are simply the best way.

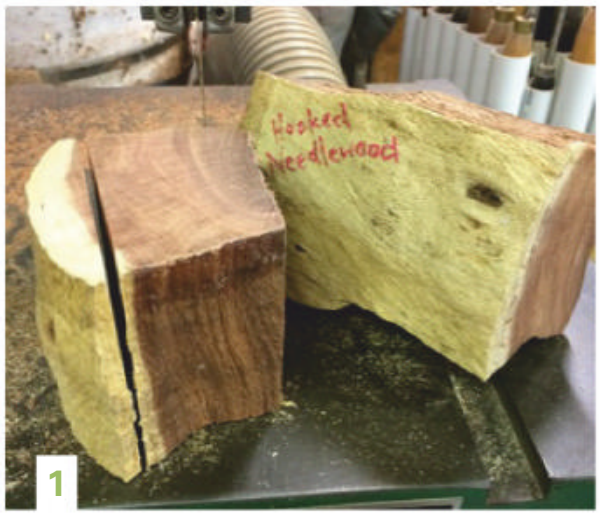
Photos: Richard Vaughan

Richard Vaughan is a furniture designer/maker in Brisbane who also runs woodwork classes. See richardvaughan.com.au


16

A Question of Scale

Sometimes ideas need to be scaled down to work with smaller sections of wood, explains Andrew Potocnik.



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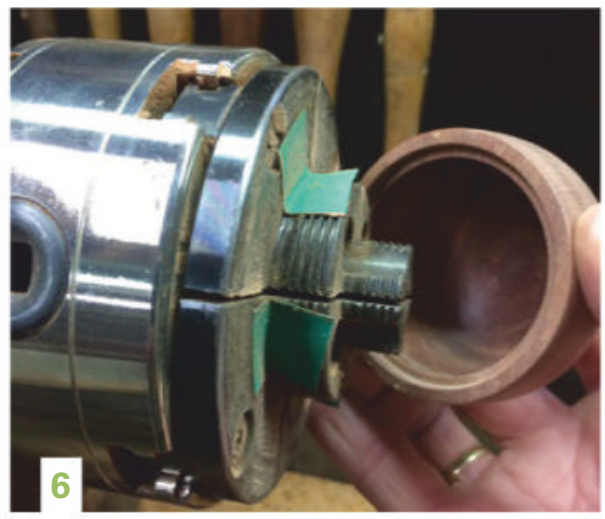
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Some of the lesser known timbers I have in my stash are too small for production runs, but too good to ignore. These are pieces of wood not processed to commercial dimensions but show fantastic character in terms of colour or grain that just screams for attention, so I adjusted the scale of my idea to suit material I had on hand.

From small things

I had some hooked needlewood (*Hakea tephrosperma*) that had been split radially from a log. With sapwood attached, the ends had been sealed and set aside for several years to season. What really attracted me to this wood were the fine flecks in its radiating grain and its pink colour.

I find it difficult to remove material from a blank as every part seems too good to waste, so removing sapwood and rough split edges on two sides (**photo 1**) challenged my thinking to finally cut a blank of about 70 x 70mm. There are many ways to mount wood on the lathe, but this time I opted to drill a 25mm diameter hole (**photo 2**) that was used to mount the blank on a scroll chuck in expansion mode (**photo 3**).

Outer and inner shaping

Aiming to extract the best possible form from wood available, combined with the shape I had in mind, I began turning away material to highlight the fine medullary rays and wonderful burgundy colours hidden within. This was highlighted during the sanding process (**photo 4**). In some projects I like to leave a small foot that is used to reverse mount the form for hollowing, which I opted to do on this occasion. The foot is not sanded as it will later be turned to eliminate marks left by jaws used to hold the form for hollowing.

Reverse chucked and held by the foot, the interior was hollowed using a deep fluted bowl gouge and round-nosed scraper to achieve a smooth flowing undercut surface travelling from the top to the base of the form. This was sanded through to 320 grit using a variety of inertia sanders and handheld sandpaper before cutting a recess for the lid to sit in (**photo 5**).

Rather than aiming for a snug fit, I wanted to create a drop-in lid that just slips into a slightly loose opening from which it can be lifted without

Main: Lidded box in hooked needlewood (*Hakea tephrosperma*) and WA myall with palm tendril handle.

1. Sapwood and split edges were removed to form a blank.
2. Using a forstner bit to cut a hole for chucking.
3. The blank was mounted on a scroll chuck in expansion mode.
4. After turning, the medullary figure of the needlewood was highlighted. A small foot was cut for reverse mounting the form for hollowing.
5. A rebate was cut for the drop-in lid.
6. Tape was used on the chuck to cushion the edge.

7. A pointed scraper worked to cut V-lines on the base.

8. The lid blank was held by a tenon in a scroll chuck.

9. A jamb-fit chuck was cut with a carbide tipped cutter to reverse mount the lid into.

10. Masking tape was insurance to easily get the lid back out.

11. Dried palm fruit tendrils can be trimmed and bound to make interesting pulls.


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11

effort. I used the front and left side of a carbide scraper to create a clean surface before easing the sharp corners with 320 grit sandpaper to make them more comfortable for exploratory fingertips.

Before reversing the form onto the stepped jaws of a chuck (to be held in place in expansion mode), I applied pieces of electrical tape to prevent compressing inner edges of the completed form (**photo 6**). Next, I trimmed the foot down, removing any marks left from the previous chucking process. A neat V-shaped intersection was cut between where the foot and outer bowl form met with a round skew, followed by hollowing of the foot and sanding of all surfaces.

I like to cut a couple of V-lines inside the bases of my pieces to either 'break' the surface as fingers explore the piece, or to provide a border where I can sign the piece and add information about the wood it is made from. A 'diamond pointed scraper' works perfectly for this process (**photo 7**).

The lid

A piece of endgrain WA myall was trimmed to size and measured with Vernier calipers to ensure it fitted not too loosely into the opening of the box. This was sanded and a couple of detail lines added to the underside (**photo 8**). This section was held by a tenon in a scroll chuck.

A carbide tipped cutter was used to cut a jamb-fit carrier to snugly hold the reversed lid. A hole was also drilled through the centre of the carrier in case it was difficult to pry the lid loose once completed (**photo 9**). And in this case the fit was a little loose, so I used masking tape to reduce the interior diameter of the opening, making sure the tape was applied evenly to reduce the chance of the lid being mounted slightly off-centre (**photo 10**). The centre point shown was enlarged on the drill press for later fitting the finial.

To break the symmetry so often witnessed in turned work, I reverted to another of my stashes – parts of a palm tree to which the fruit is attached. I'm really not sure of what they're called, but they make great finials when glued together, trimmed down with a knife to fit into the drilled hole and capped with a rubber 'o' ring (**photo 11**).

This project shows that not only is it possible to highlight wonderful timbers found in smaller sizes and not commercially available, but how other materials can provide interesting contrasts.

Andrew Potocnik is a wood artist and woodwork teacher who lives in Melbourne. See www.andrewpotocnik.com

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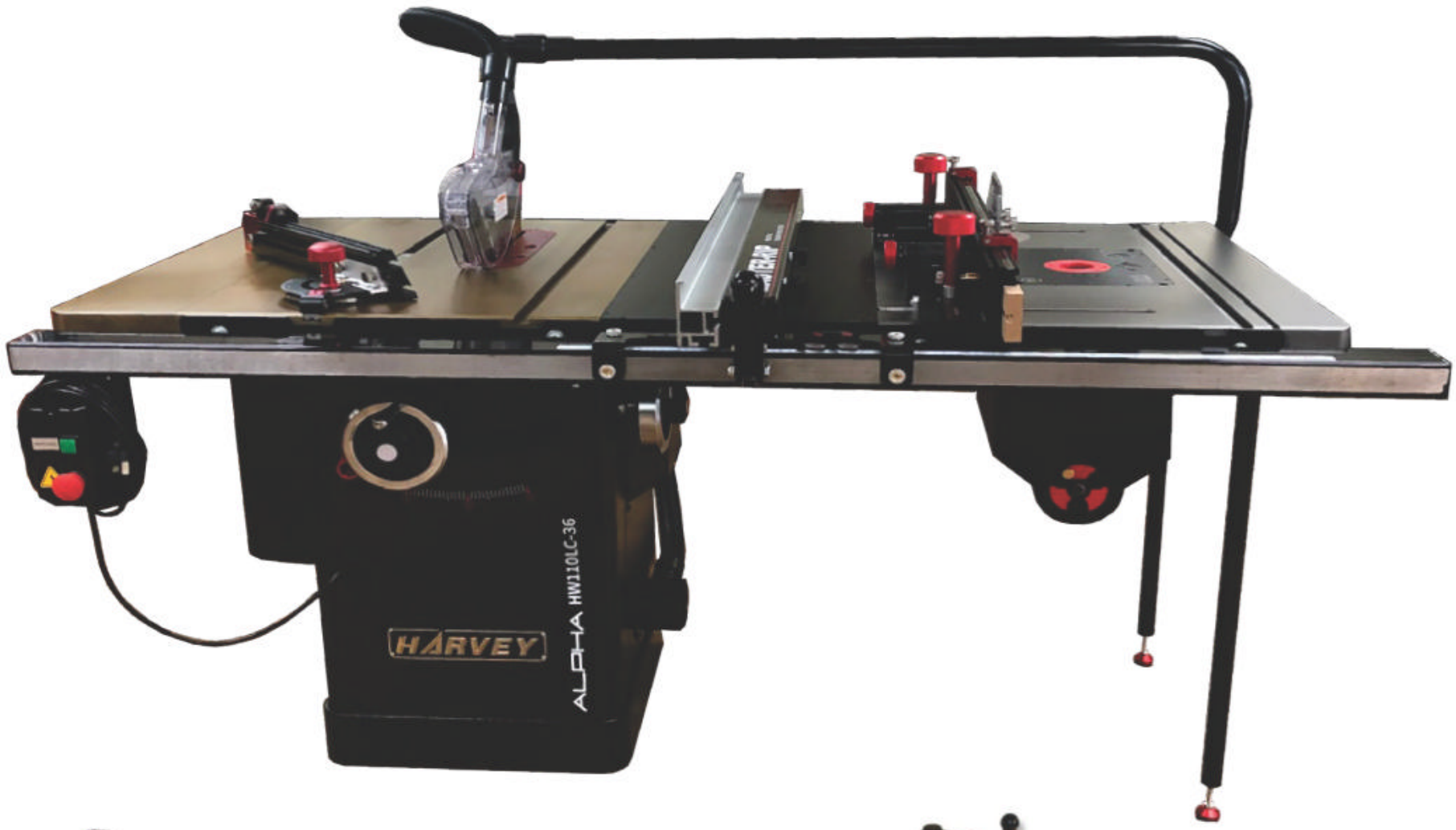

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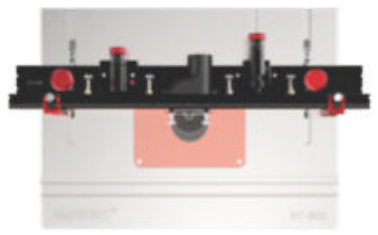

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