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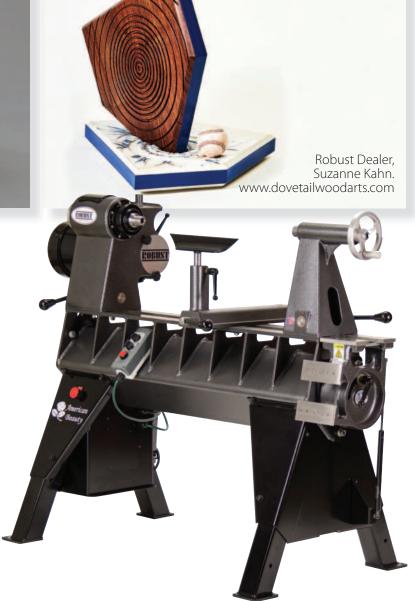
An Original American Beauty, 2005







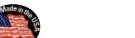
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# **Guest editor's letter – Janice Levi**

Many years ago, as a child, I was thrilled on those days when my father had to replace a broken pot handle or tool handle. He would uncover his old Sears lathe, take out some well-worn tool and begin the process of making a new handle. He would let me 'hold' the tool, with his hands firmly over mine, as we worked to create the new turning. Flash forward many years and I was watching a television programme in which a fellow was making twig vessels. 'I want to do that,' I said to my husband and off we went to buy a lathe for my birthday. That was 20 years ago, and I have been infatuated with, loved, admired, and cherished every year since then. There is no greater group of people for sharing, teaching, mentoring, helping their fellow turners than the woodturning community.



Left to Right – Linda Ferber, Ana Lappegard, Janice Levi, Sally Ault. They hold the turning Garden of Dreams.

Like the lives of everyone, the woodturning community has been greatly impacted by Covid-19. At first, we all hovered in our homes knowing, or at least hoping, that it would soon pass. But as one year melted into another, woodturners began to realise that we would have to go in a new direction if our world of connectedness was going to survive. Enter technology. Those among us with one foot in the technological world realised that we could actually do live presentations via the internet. Here and there, more and more turners began to present demonstrations to woodturning clubs whose doors were closed but whose members' televisions and computers worked very nicely.

The symposia that we all loved attending were closed, but the American Association

of Woodturners (AAW) ventured out on a limb and offered a symposium via internet. It was very successful, with even more people attending the televised demonstrations than would have attended the in-person sessions.

The AAW Women in Turning Committee took action when the WIT Exchange was unable to meet in person. Instead, the Women in Turning committee formed a Virtual Exchange. Ladies signed up, were divided into small groups, drew inspirational words for a remote experience to interpret and create. Zoom meetings were set up to plan their turnings. A new world of creative collaborative turning on a very large scale was born. Although I have only participated in one Virtual Exchange so far, the idea of doing collaborative turnings was intriguing. Four ladies from four different

US states began communicating and we decided to try our hand at our own collaborative turning. To date, we have completed four collaborations and have no intention of stopping any time soon.

New doors continue to open for the woodturning world, and Covid-19 seems to have given us a fairly forceful push into a more technological direction. For me, the fully collaborative pieces have been very fulfilling. Weekly Zoom meetings, sketching, discussing, experimenting with new concepts, new directions have been very rewarding. If you never thought about the possibility, I challenge you to give collaborative turning a try. It will lead you into a world of woodturning that you never imagined possible.

Janice Levi



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Cover image by Janice Levi



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### **HEALTH & SAFETY**

Woodturning is an inherently dangerous pursuit. Readers should not attempt the procedures described herein without seeking training and information on the safe use of tools and machines. All readers should observe current safety legislation when turning and wear appropriate personal protective equipment (PPE) and respiratory protective equipment (RPE).

# Turning a purse

Janice Levi uses the 'lost wood' method to create this attractive and functional item

This little oval-shaped purse is made using what is often called the 'lost wood' process. That means that a sacrificial piece of wood is wedged between two pieces of 'nice' wood. After turning, the sacrificial piece is discarded, leaving an oval-shaped object.



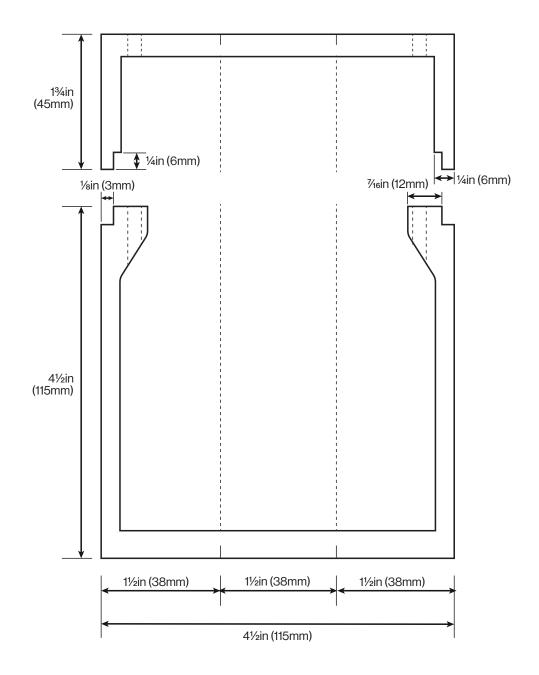
Since the purse is meant to be functional, the wood selected must be able to stand up to some abuse. Maple, pecan, mesquite, oak, and ash are all good choices. If you plan to enhance the purse with pyrography, oak and ash are not the best choices because of the open grain. The waste wood used is at the discretion of the turner, but such woods as poplar and soft maple come to mind.

### **Plans & equipment**

# Tools & equipment • PPE & RPE

- Hollowing system
- Drillpress or hand drill
- Drill bits
- Parting tool
- Spindle roughing gouge
- 12mm spindle gouge
- 12mm bowl gouge

- Round-nosed scraper
- Callipers
- 120-600 grit abrasive
- 1270mm strap material (leather, thin twisted satin rope, etc.)
- Wood glue
- White glue
- Choice of finish oil, water-based, etc.



1 Once the wood is selected, the next step is to determine the finished size of the purse. One that measures 6-7in tall by 4in wide by 3-31/2in thick is a good size.

### **Preparing the blanks**

- **2** The turning blank will consist of two pieces of quality wood and one piece of waste wood. Cut the quality wood into two sections that measure 8½ x 4½ x 1½in. For a smaller purse, cut the waste wood to also measure 81/2 x 41/2 x 11/2 in. For a larger purse, use the measurements 8½ x 4½ x 1¾in for the quality wood and 8½ x 4½ x 1in for the waste wood. Experiment with varying the dimensions to achieve a shape you prefer. Because the sections will be glued together, the surfaces need to be perfectly flat. To accomplish that, the sections can be sanded on a belt sander or run through a planer or sander. Be sure that the quality wood blanks are exactly the same thickness.
- **3** There are two workable options for how to join the three pieces of wood together. Once the surfaces are smooth and flat, one method is to use double-sided tape to stick all the pieces together. You may also choose to use the paperand-glue method, in which wood glue is applied to one side of the wood, paper is laid over it, and glue is applied to the next piece of wood and laid over the paper. I have used this method, but for me, using double-sided tape is simpler (I particularly like the brand SpecTape). Use the tape sparingly or you will never be able to separate the pieces. One strip at the bottom, one strip just below the point at which the lid will be separated from the base, and one strip on each side are all you will need.
- **4** To assure that the pieces do not separate during turning, wrap a thin strip of strapping tape ½in from each end and around the middle. The tape contains fibres and does not stretch. Tape that is ½-1in wide works well.
- **5** Use a ruler or centre finder to locate and mark the centre of both the top and bottom of the blank. NOTE: Mark where the bottom and the lid will be separated. Having a finished lid that measures about 1½in tall works well, so, mark the cut line at about 21/2 in from the top of the blank. While the blank is still square, an option is to cut it into two using the bandsaw. Now you don't have to deal with parting the lid and bottom later.

### **Turning the bottom blank**

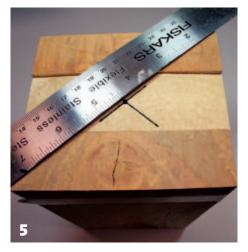
- 6 Mount the blank between centres and turn a tenon on each end. Now place the bottom blank into a scroll chuck. Turning the blank round will be tricky with the packing tape in place, so turn as much as you can then place packing tape around the area that you have turned to the final dimension.
- **7** The finished lid will be about 1½ in tall, so mark the blank to part off the lid at about 2½ in.
- **8** After parting off the lid, remove any leftover strapping tape and finish turning that section. The final diameter will be about 4in. Secure the top of the blank with strapping tape as you are getting ready to hollow the purse.



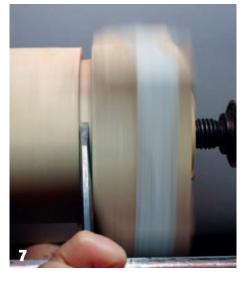






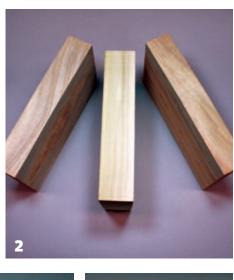




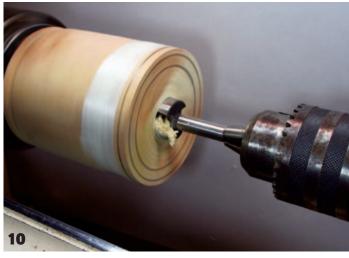






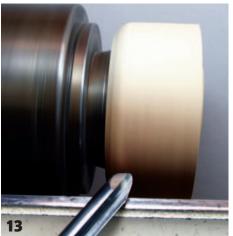


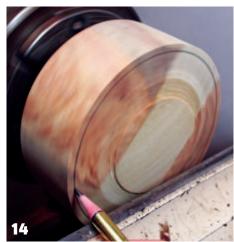
















- **9** Because the finished purse will feature a lid that slides up and down along the shoulder strap to open and close, you will be creating a small shoulder for the lid to rest on. Before starting to hollow the blank, true the top edge of the purse with a spindle gouge or parting tool. Measure in ½in from the side and ¼in down from the top. Use a parting tool to create this little shoulder.
- **10** I use a hollowing system that features a D-handle that fits into a second toolrest. It's a system that I've had for years, and it still serves me well. Begin by marking the bottom of the purse. To speed up the hollowing process, I use a 1½ in Forstner bit and drill out the centre to within about ¾ in of the bottom.
- 11 & 12 Proceed with hollowing the blank to a wall thickness of ½-5½in, leaving the bottom thickness at about ¾in. I like for the bottom edges of the purse to be rounded over and you can begin this process, but don't completely part off the bottom section from the waste wood yet. You may choose to lightly sand the sides now, but more sanding will be required later. Do not part off the bottom section from the tenon.

### **Turning the lid**

**13** Remove the bottom section from the chuck and lathe. Mount the lid section into the scroll chuck and turn the blank round.

- **14 & 15** True the edge that will fit against the bottom section before beginning the hollowing process. To create the area that will fit over the bottom of the purse, mark the diameter to match the shoulder on the bottom section. Use a parting tool to turn the lid shoulder to depth.
- **16** Hold the bottom section up to the lid to make sure they match in size. If the exterior dimensions are not exact, bring up the tailstock and use light cuts to make the bottom and lid sections fit together exactly. Remove the bottom section and mark where the top of the purse will be.

17 You may now begin hollowing the lid. The wall thickness for the rest of the lid will be ½-5½. The top of the lid will be about ¾-1½ thick. Like the bottom profile, round over the edges on the top to match the bottom but do not part off the lid yet. You certainly may use your hollowing system for this, but spindle gouges and parting tools will also work nicely. Remove the lid from the chuck.

### Removing the tenons from the top and bottom

**18** Keeping the 'lost wood' in place, jam chuck the bottom section of the purse directly on to the jaws of the scroll chuck and expand the jaws to hold it snugly but not overly tight.

**19** Use light cuts to remove the tenon and the rest of the waste wood from the bottom. Shape the bottom to be slightly curved inward or add a narrow base and a slight recess. Light sanding at this time is okay but more sanding is still to come.

**20** Repeat this process for removing the tenon and waste wood from the lid. If your chuck jaws will not expand wide enough to use in the expansion mode, you may choose to create a jam chuck from a piece of waste wood to hold the lid.

**21** You are now ready to remove the strapping tape and the bits of double-sided tape that are still left holding the 'lost wood' in place. Fit the two sides of the bottom section and the two lid sections together to check for a close match.

### Assembling the purse

**22** Now it is time to glue the two sections together. Be generous with the glue so there are no voids, but don't allow glue to stick the lid to the bottom. Remove any squeeze-out with a slightly damp cloth. Dry overnight.

23 It is finally time to do some sanding. I like to mount a 3in sanding disc holder into the drill press and start with 120 grit paper. Excess glue from the edges should be removed, as well as the sharp edges. Any little differences in the fit between the lid and the bottom can also be sanded out. Go through all the grits up to 600 to obtain a smooth finish.









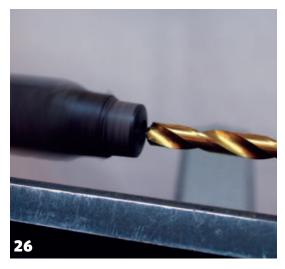








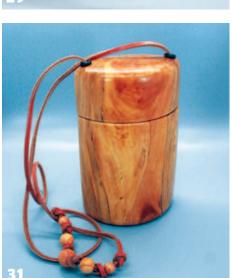














### **Finishing touches**

- **24** Use a ruler to make a mark <sup>3</sup>/<sub>8</sub>-<sup>1</sup>/<sub>2</sub>in from the glued edge on both sides of the top of the lid. Drill holes that will accommodate the strap you have chosen. Satin cords or round leather straps are both good choices.
- **25** To dress up the holes, you may choose to turn two grommets to glue over the holes. Use a spindle or detail gouge to round over the end of the blank.
- **26** Using a twist drill of a suitable size in the Jacobs chuck, drill a hole that will accommodate the diameter of the strap. Round over the inside edges with the spindle gouge.
- **27** Part off the grommet with a thin parting tool. Slightly undercut the part. Use wood glue to attach the grommets to the lid.
- **28** You will also have to drill two holes into the upper shoulder section of the base. Drill the holes all the way through the shoulder. If you are going to enhance your purse, you should do so before adding the strap. If you want the look of the wood as it is, then it is time to add the finish of your choice.
- 29 Thread the two ends of the cord through the holes in the lid and down through the holes drilled in the shoulder section of the base. Force enough of the shoulder strap material through the holes so that you can knot the cord outside the purse. Add a little dab of CA or other glue to the knot to keep it from fraying. You may choose to dress up the upper portion of the strap with beads, feathers, tassels, etc. If you choose to do so, be sure to add the attachments before threading the ends of the cord into the holes in the purse. The lid will slide up and down on the cord to open and close.

**30, 31 & 32** Decorate, as you wish. Finally, it's time to show off your new creation. ●

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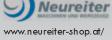


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Lexington, KY







### **Janice Levi introduces American** woodturner Marty Kaminsky

I've known Marty for almost 20 years and have always been inspired and fascinated by his many talents. Marty is certainly an outstanding woodturner whose work has been exhibited in numerous galleries and shows, but his innovative creations that make woodturning easier are numerous. In addition, Marty is a talented author and photographer, having his articles published in several magazines, while his photographic work has enhanced many brochures and advertisements.

### Tell us about your background and how you became interested in woodturning

As far back as I can remember I've been interested in woodworking. I knew I was interested long before I had an opportunity to make anything. When I was 11 years old, I joined the YMCA in my hometown, Toledo, Ohio. I played a little ping pong there, but mostly spent my time in the wood shop. Wan Jung was the shop instructor, and he became my mentor and lifelong friend. At age 15 the 'Y' hired me to be Wan's assistant in the shop. A couple of years later, when Wan transferred to another 'Y', I became the wood shop instructor.

My interest in photography was perhaps 'genetic'. My father was a professional photographer, and we had a black-and-white darkroom at home for his work. I learned to process film and make prints in my teens, and in high school I was the yearbook photographer.

While studying engineering at the University of Toledo, I continued teaching woodworking (I still had done no turning) and photography (we had a darkroom adjacent to the wood shop) at the 'Y'. About halfway through the engineering program I left the 'Y' to be a watch repairman at Toledo Jewelers.

My engineering career began in 1974 and brought me to Houston in 1981. Early in this time in Houston, I saw a turning demonstration by the Gulf Coast Woodturning Association. I was instantly hooked. I bought a lathe and all the accessories, joined GCWA and the American Association of Woodturners, found a mentor in the club (Bill Berry), and began making shavings with joyful abandon.

### As a woodturner, what did you find most helpful for improving your craft?

The two things that had the greatest impact on learning the craft were having an excellent mentor and just spending an enormous amount of time turning. I think that with any craft or art form, you only get good at it by doing a lot of it. Making lots and lots of mistakes with FOG (found on ground) wood is a great way to get better quickly. My first successful bowl (which I still have) was made from a piece of firewood. In my opinion, there are five things you can do to become a better turner: (1) find a mentor; (2) find a turning club; (3) spend a heck of a lot of time turning; (4) pay close attention to what great turners are doing to get



ideas, learn technique, and find inspiration, and (5) go to regional and national symposia like AAW – there's nothing like seeing the best on the planet demonstrating and exhibiting in the Instant Gallery.

# Like many turners, you probably experimented with all types of woodturnings. What have become your favourite forms to turn and woods to use?

I can't say that I have a favourite form. I started with the intention of developing a broad set of skills and techniques so that I can apply them to any situation. I remember when I bought my first lathe and initial set of tools, the proprietor of the store asked me what kind of turning I wanted to do. I handed him my cheque book and said: 'I want to do everything.' (He was as gentle as he could be with my cheque book.) Back then I was interested primarily in bowls and closed forms, but eventually the bowls started to stack up at home, and my friends and neighbours were pretty saturated with bowls and boxes, so I felt the need to explore other avenues.

In recent years I've become interested in carving, texturing, and colouring my work. I integrate skills from other crafts I'm involved in like jewellery design and metal smithing. The embellishment that I do to a piece after it's turned generally takes vastly longer than the initial turning. I call myself a 'sculptural woodturner'.

Usually, I make a piece then move on to something entirely different.

There's been only one design of which I've made a few. I call that design a SunBurst or MoonGlow bowl (depending on the colour scheme I use). The wide rim begs for embellishment, so I say it's a 'canvas for your creativity'. Exploring the infinite opportunities to embellish it has caused me to return to this shape again and again.

# I know that you believe in creating your own gadgets to assist in your turning. Can you describe some of those?

Like many craftspeople, I make tools, jigs, and devices to serve me in both turning and furniture making. I'm not interested in making tools that are already out there unless I can improve upon them. My shop walls are lined with cabinetry that I made. I built a drying box powered by a space heater that will dry rough-turned wet bowls in three to five days. I've found that butter knives purchased at resale shops can be made into useful special-purpose turning tools. It goes on and on; there are always improvements to be made to existing tools.

One of the things I've developed of which I'm particularly proud is an approach to sharpening my spindle, detail, and bowl gouges. I call it the Easy-Peasy Method. I've modified a conventional sharpening system to make the set-up for each gouge type take only moments and produce a perfectly repeatable grind. An article I wrote for *Woodturning* magazine (Sharpening Woodturning Tools – Part 4, January 2021, issue 353) provides the details of the Easy-Peasy Method.





I've made more devices over the years than I can remember, such as a fixture to slice a turning at an angle so that a feature ring can be installed at an angle instead of straight across. I've designed a mini photo studio to photograph my turnings. I've made fixtures to turn a 17in diameter hollow sphere.

I think Jerry Bennett once said something to the effect of: 'Don't let what you know determine what you will make.' I follow that advice — I decide what I want to make, then figure out what method, jig, or tool I need to make it happen.

# I've seen your demonstration on photographing woodturnings. Why is photography so important to every turner?

Photography is a skill that is really useful to any crafts person or artist. When entering juried shows, photographs of one's work are generally required. Providing a professional quality photograph of your work puts you head and shoulders above those submitting snapshots. With a simple lighting set-up and a little knowledge of photo editing software one can produce stunning images. I use my photos for handouts for my demonstrations and for the magazine articles I've written for *American Woodturner* and *Woodturning* magazines.

When I take photos of my turnings, I generally light them from one side and the top with white reflective surfaces surrounding the turning. This causes one side of the piece to be in shadow, enhancing the form of the

turning. The bulbs I use in my reflectors are identical because the colour spectrum produced by different types of bulbs can vary. I don't use a fancy expensive camera. The features that I think are important in a camera are manual (also called 'custom') white balance and a shutter delay timer. I take a manual white balance reading with the camera to produce accurate colour. The camera goes on a tripod to reduce vibrations and I take the picture with a shutter delay – also to eliminate camera vibration. I do a small amount of photo editing with Photoshop Elements (there are probably other applications that would also work well), such as cropping to pleasing proportions, 'auto levels,' and sharpening. This is the short version; I go into more detail in my presentation, Photography for Woodturners that I have done in various club and symposia demonstrations.

### Who has inspired you most over the years?

I'm not sure 'inspired' is the word I'd use for what impresses me the most. 'Intimidated' might be a better choice. Folks doing amazing things like Jerry Bennett, Steve Sinner, Andy Chen, Alain Mailland, and so many others who are doing extraordinary work, motivate me to keep trying new approaches in my turning. What is wonderful about the craft of woodturning that seems different to other crafts, is that everyone is so generous in sharing their techniques. Our craft advances at breakneck speed because the turners who excel share everything they know.





### Do you have a favourite piece that you've created and why?

A particular favourite is one I've named Faerie Wind. It's an 8ft tall sculptural turning that I spent over a year making. I spent a day with Jerry Bennett in his shop where he explained the details of how he makes a steel armature within his turnings. Without that generous sharing, Faerie Wind would not have been possible. A companion piece to Faerie Wind is a magic wand called the Wand of the Ske-ka-min, which opens a secret compartment in the base of Faerie Wind. Of course, the wand alone does not open the compartment; one must also know the proper incantation.

### Where do you get your ideas for new turnings?

Many of my ideas come from nature. I look at the colours, forms, and textures found in nature and apply them to my turnings. This is another place where photography is useful in capturing interesting forms and textures that may be integrated in some future project.

# You have many pieces that have been enhanced beyond turning. How did you become interested in embellishing pieces? What are some of the things you do to embellish them?

Sculpting has long been an interest. I took sculpture classes while in high school and college. I also had a custom jewellery business some years ago. Jewellery design is a sculptural process and uses many of the same tools as are used to carve wood. I had a couple of Foredom flexible shaft rotary tools long before I became a turner. I use micro motor carving tools for the bulk of my carving with some of the 'heavy lifting' done with the higher torque Foredoms. After most of the carving is done with rotary tools, I do the fine details with bladed tools.

I like experimenting with all sorts of colouring agents. It's financially dangerous for me to enter an art supply store. Coloured powders, and pencils, and chalk, and paint, and gilding materials all tug at me.

### What are the tools in your woodturning arsenal that you use most?

I'm pretty conventional in my set of turning tools. I use bowl gouges, spindle gouges, and so on, sharpened to fairly conventional shapes. I particularly like my micro motor rotary carvers for the sculptural embellishments that I do. I use an airbrush for much of my colour work.

# You are very active in your local woodturning club. How do you and the club promote interest in woodturning?

I like promoting the things that I enjoy doing. If we were all turners, the world would be a better place, right? I've demonstrated several times at the Southwestern Association of Turners (SWAT), at my home club, at other clubs, at events where my club has had demonstration booths, and at other events. I've applied several times to demonstrate at the AAW symposium, but they don't seem to recognise my wonderfulness yet. I host one of our club's monthly Open Shop Nights. At OSNs, we get together with members who live near to eat and talk and turn. This hands-on turning experience allows us to experiment with new turning tools or techniques, to give and receive opinions about an upcoming project, and to help new turners with some sage advice.

### **How will woodturning fit into your future plans?**

Being retired from engineering for quite some time now has given me a lot more time to spend in my shop and to improve the shop. Over the past couple of years, I've replaced all the open shelves with cabinets, installed a central dust collection system and, having gone digital in my photography, converted my former darkroom into a 'clean' shop where I do my air brushing and have a mini photo studio. I expect to do lots more turning as well as other woodwork, and I will always be experimenting with new materials and techniques.

### What do you do when you're not turning wood?

I'm way busier now than when I was working – there just aren't enough hours. I'm currently making the first two of eight end tables (bedside tables, couch-side tables, etc.). I recently purchased a laser engraver that I'm learning to use (there may be turning applications). I work in stained glass – every room in my home is lit by stained glass sconces that I made as well as a large stained-glass panel in my front door. I travel; this year I have plans to go to Austria, Greece, and Holland. There will be lots of photos taken on those trips requiring editing, printing, and framing. Can somebody please add a couple more hours to the day?



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Turning and image by Brad Herrington

# Trio – a family of vases

Phil Lenten shows his approach to making a set of three matching vases

I have been an amateur woodturner for eight years and learnt an enormous amount from members of a very active club in Cornwall. I have since moved and scaled down – including the size of my workshop and lathe. I now have a Record Power Coronet Herald bolted to my own bench. Although this is smaller than other lathes I have had, it is versatile and up to the requirements of this project, which can be scaled up or down depending on the size of the lathe in use.



In this article I am setting out to explain how I go about making a family of three vases designed to complement each other. They will do this because they are all turned together. The idea of turning three vases on a lathe at the same time may initially seem complicated or challenging, but with proper care and attention to detail a fascinating result is possible. This is my approach and it is based on an original design, Triplets I, by Derek Andrews, a woodturner from Nova Scotia.

I had watched a video of somebody else making a copy of the set and he started with a single wood block with dimensions that were 3:1 (width to thickness). He screwed the block to a substantial wooden backplate. After completing the early parts of the project, he used a bandsaw to cut the work into three equal profile sections. I copied that approach the first time I did this, but it then occurred to me that I could just as easily start with three square profile spindle blanks instead of a single block. That's the approach I am using here.

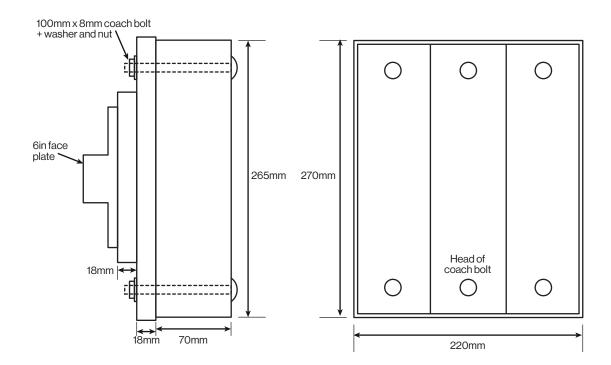
### **Plans & equipment**

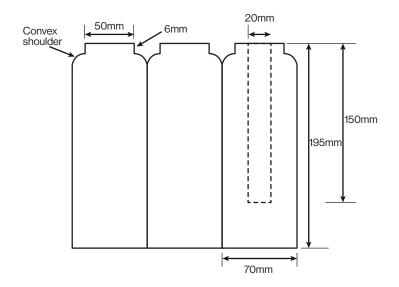
### **Materials**

- For backboard: 18mm plywood 270 x 220mm and a circular disc 83mm diameter
- For trio: 1 x 80cm long square profile spindle of ash cut into three equal lengths

### **Tools & equipment**

- PPE as appropriate
- 10mm standard spindle gouge
- 2mm parting tool
- 6mm parting and beading tool
- Texturing tool
- Sharpie pens and acrylic paint
- Jacobs chuck with 20mm wood drill
- Abrasives 180, 240 & 320 grit
- Acrylic sanding sealer and acrylic gloss lacquer





### **HEALTH & SAFETY**

Before turning on the lathe I paused to do a mental risk assessment. I had a fairly heavy block on my lathe with hard corners that would definitely hurt if I was careless. There were also the heads of coach bolts that wouldn't do my tools any good if I hit any of them. I therefore marked the boundary of my safe turning area with a clear black line and repeated this as each face was turned outwards.

### Preparation

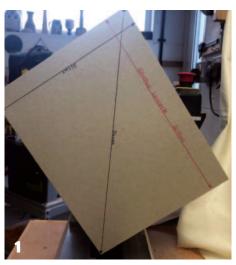
1 My lathe has a maximum swing over the bed of 35.5cm, but that doesn't mean I could cut my spindle blanks to that length. They have to be fixed to a rectangular plywood backboard which can be no more than 35.5cm across the diagonal. That required a calculation checked with a piece of cardboard.

- **2** The three spindles give no continuity of grain pattern across them as there would be with a single block. However, since this project involves shaping, texturing and colouring that outweighs any impact from the grain pattern. I used beech cut from a single long spindle, so I knew the general properties of the timber would be the same throughout.
- **3** I used M8 x 100mm coach bolts for this project. They are probably a bit heavy duty but I was using what I already had. My backboard is 18mm hardwood ply with an extra disc of the same material glued and screwed centrally at the back to give a solid base for my 6in faceplate.
- **4** I turned a short dowel the diameter of my faceplate thread with a central screw to ensure I got the faceplate absolutely central. Having already turned the disc to round on my lathe I knew the centre spot.

### Did you know?

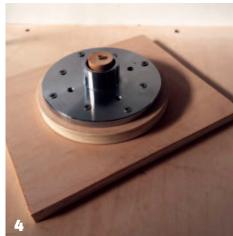
This project involved fixing the spindles through each face in turn. That required very careful measurement to get it right, which is why I used bolts through pre-drilled holes rather than long screws.

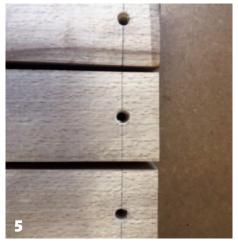
- **5** To locate the holes for the bolts I measured 2cm down from the top edge and 3cm up from the bottom using a set square. The extra distance on the bottom edge was to allow for a tenon to be added to each piece later. In retrospect, I could have drilled much closer to each edge and given myself more usable timber.
- **6** Next the midpoint along two adjacent faces was found and marked with a sprung punch to ensure accurate drilling using my pillar drill. With my cordless drill I countersunk each screw hole by 6mm to allow for the square neck on the coach bolts.
- **7** My spindles were a little over 7cm wide, which I kept in the same alignment as on the original long spindle. I labelled the top of each one, which I knew would be useful later in ensuring nothing got out of place or upside down. As well as marking the top (T), the pieces were labelled A, B and C and all the edges numbered 1 to 4.
- **8** The spindles were bolted on to the backboard.



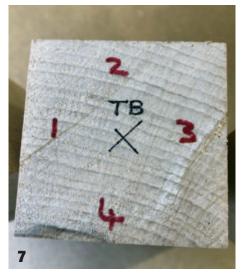
































The whole assembly was then mounted on the lathe ready for turning.

### **Decoration**

- We draw inspiration from lots of places. A few months ago, we were all standing on our doorsteps clapping for the NHS. At the time our daughter and her young children decorated their front window with a rainbow to show their support. My project included a simple nod to that gesture, which I thought they would like.
- I built up my initial speed to 700rpm and on the first face I created a central small depression with my spindle gouge. I then began to surround this with seven narrow grooves cut with a sharp 2mm parting tool.
- When completed, a little light sanding at a lower speed cleaned up a small amount of tear-out on the edges.
- Using Sharpie pens I created my rainbow, starting with red on the outside and ending with violet in the centre. I planned to add a sanding sealer and gloss lacquer to all four sides later.
- The spindles were now rotated on their own axes by 180° so that side three was outermost. It was now the only side unaffected by my first turning. I thought a gap-free surface would be easier to work on, especially as I planned to use colour again. I wanted to avoid paint spreading through any gaps. In the end it happened a little bit anyway.
- **15** After the rain comes the sun. I cut a large central disc with my spindle gouge and painted it yellow using artists' acrylic paint (two coats). This was side three, so the sun was positioned appropriately on the reverse of the rainbow.
- To give the sun more energy I used my texturing tool to create a simple semi-spiral pattern. I set the toolrest so that the cutter was on centre and, using the cutter almost vertically, I swivelled into the wood. I repeated it a couple of times, then cleaned out any loose shavings with a stiff burnishing brush.

- 17 Finally, I used my spindle gouge to add a couple of small outer circles to give the sun a halo and that removed the black boundary line at the same time.
  - **18** Side two was brought into play making sure to rotate the spindles on their own axes to keep them in the same relative position. On this side I focused on simple design. I created a series of concentric circles with my re-sharpened spindle gouge and then sanded through the grits from 180 to 320.
  - **19** Side four had much more variation in natural wood colour. Having kept the three spindles in the same orientation as the original long spindle I did expect this. To give the natural wood a bit of prominence, I cut four simple steps from the centre outwards, which I tidied up with a sharp parting tool.
  - **20** The result was quite different to the other three sides and showed off the beech to good effect.

### **Vases**

- **21** Having completed the decorating of my trio, I had reached the final stage creating three vases. At the beginning I had marked the centre of the top and bottom of each spindle. This now made correct alignment very easy and accurate. I used my Pro Drive centres to get a firm grip and turned the lathe speed up to 1400rpm.
- 22 The first task was to add a chucking point on the base of each spindle. The bolt holes had been drilled to leave plenty of room for this. I used a round skew to create a tenon and a small angled skew to cut the correct dovetail. I then removed the bolt hole from the top of each spindle using my bandsaw.
- **23** I mounted each spindle in turn in my chuck using a revolving centre in my tailstock to check correct alignment. I then drilled out each vase using a 20mm drill bit going to a depth of 16cm. I set the speed to 600rpm for this.
- **24** I had intended to create a flared neck on each vase but I now realised that would cut into my rainbow pattern. I therefore opted for a short rim to each hole instead. I supported each vase in turn with the revolving tailstock centre and used my spindle gouge to shape the shoulders and rim.

### Top tips

- Complete all three tenons at this stage to reduce time spent changing between centres and chuck. Then complete the cuts on the bandsaw, ensuring all spindles are reduced by the same amount.
- When drilling or boring using the tailstock, care needs to be taken and this was fully outlined by Andy Coates in Woodturning 364. Use a slow speed, hold on to the Jacobs chuck and remove the drill regularly to clear swarf.



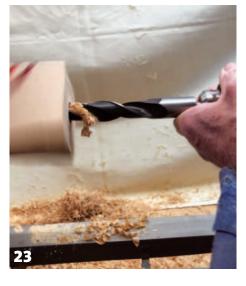




















**25** With the vases completed, the base with the bolt holes could be removed. Since the vases were a square profile, this was easily done on the bandsaw checking to keep the dimensions the same for all three vases. Each piece was sanded to clean up any minor tool marks.

**26** All that was left was adding a finish. I used a sanding sealer and gloss lacquer – both as aerosols. I had previously made a small lazy Susan and using this avoided any need to touch the vases while rotating them. I did one vase at a time. To complete this project, I made a few coloured flowers to pick up on the rainbow.

27 Side 1 – The rainbow

**28** Side 2 – Concentric circles (possibly the solar system?)

**29** Side 3 – The sun

**30** Side 4 – Stepped pattern

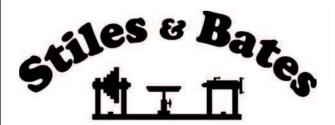
### **Conclusions**

I can see several improvements if, or when, I repeat this project. The spindles I used were a bit too wide so the vases look a little squat and the circular patterns stay within the confines of each edge. Other trios I have made on a larger lathe looked more dramatic with the patterns extending beyond the edges. For a future project I could either use slimmer spindles or rotate the lathe headstock and turn longer spindles in front of my bench. Before adding any colour in future, I need to use sanding sealer on the surrounding area to reduce the risk of colours bleeding. I will also check the timber I have bought is perfectly square – every millimetre matters with a project like this. For me though, tackling an interesting project and having fun are higher priorities than perfection. My granddaughters like their rainbow vases, so I am happy with that.







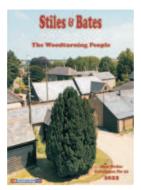


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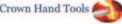






































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# Kurt's clinic

Kurt Hertzog answers readers' questions







1 I have eight CD storage racks that hold most of my pen stock. They are on top of workbenches at a convenient viewing height 2 Wood that has bark or other potential of bugs gets stored outdoors. End grain sealed, stacked off the ground, and weather covered (except to photo) 3 End grain sealing my newest stash of Norfolk Island pine. Leave everything in the longest manageable size

I've become overrun by my shop storage of wood. I'm my own worst enemy at seeing and buying or collecting wood that is too good to pass by. Do you have any storage ideas that work better than others?

I am guilty of the exact same thing. I rarely see a piece of wood that I don't like. Even when I'm turning a lot, I never seem to diminish my supply as it grows faster than usage. I store my wood in several areas and by several means depending on the current condition of the wood. Green wood that is in log form, large rounds, or barked enough to potentially contain any 'critters' is stored outdoors. I have several pads constructed from patio blocks in the back yard, so the wood stays off the ground. It is always Anchorsealed and covered by weatherproof tarps, except for photos for this article. It will continue to dry, albeit slowly being end grain sealed, and the covering only helps keep the rain and snow off. I always leave logs or pieces as large as I can manage. I have a chain fall over my large lathe but no way to move heavy stuff outside. Green wood is left as large or as long as possible, and chainsawed as needed. Wood that is dry and ready for use can be stored indoors. Larger pieces often sit on the concrete floor of the garage. That serves as a shop where my largest lathe is setup. Since it is indoors but unheated, the wood is fine being piled as neatly as possible until needed for use. I have several stainlesssteel food service racks that I store wood on, both in the garage and in my main shop in the basement. These large, roll around, floor to almost ceiling racks are capable of thousands of pounds of load. While I don't

move them, often assembling them without the casters, they offer an unimpeded view from all sides of the contents. I try to organise these racks by potential wood use, species, and size. Bowl rounds that are cut and ready for use are stacked in one area while exotic woods in waxed blocks are piled in another. I use quite a bit of African blackwood for lidded boxes, finials, stands, and accents, so there is quite a bit of storage for that. Nearly all waxed and usually in 4 by 4 by whatever length. In among all of that, I store my flat stock as best I can with the remainder leaning on the walls. I leave all wood in full length and size until I need to cut it for the final use. With all that wood, pads out back, floor storage in the garage, several floor-to-ceiling racks, there is still need for additional wood storage. Long ago I purchased CD storage racks and located a row of them on top of two workbenches butted against a shop wall. From bench top to ceiling and running the length of both benches being butted side by side provides a huge number of cubbies for sorted storage. These racks work great for storing pen blank materials whether cut or in some length. Easy to display for locating the blank(s) needed while still allowing the use of the front half of the workbench surfaces. I organise these by species, size, and stabilised or not. Having all these various storage locations and methods still hasn't solved my needs but it has reduced some of the clutter. Regardless of the storage method, it is basically a volumetric problem. Until we get to freeze-dried wood that can be rehydrated when needed, I fear the wood hoarders like myself will always have more wood than storage.

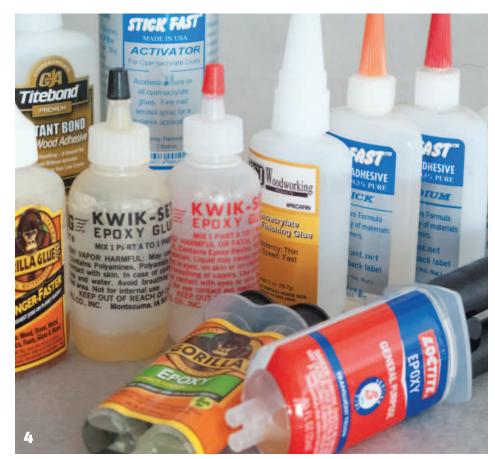
I'm having a terrible time with my adhesives curing in the bottles. I don't seem to get any real lifetime out of them even though I cap them between uses. How do you deal with your adhesives? Any tricks?

Over the years, I've learned a lot about buying and using adhesives. Usually the hard way. Two should be obvious but critical suggestions I'll share are buy as fresh as you can and buy in reasonable sizes. Buying your adhesive, any family whether Ca, polyurethane, aliphatic resins, or any other, in a location where it has been sitting for a long time, likely already hurts yourself. Buy in a place where there isn't dust covering the bottles. High turnover of the product so you are getting something fresh is your goal. If there is a use-by or factory production date that is decipherable, locate the stuff that is the newest. The other fallacy regarding adhesives is that the economies of scale are always in your best interest. Of course, you can save money by purchasing the larger sizes but what did you save if the bottle is only half gone when the rest of the unused turns to rock? Buy in sizes where you will use the entire package within a reasonable time and within its open package lifetime. With the fresh stock and reasonable sizes behind you, you are faced with maximising the open life in the shop. Depending on the curing process, you are faced with environmental issues. High humidity and high temperature are the enemy of most adhesives. Store them in a cool, dark place. Even though light, especially sunlight, doesn't cure anything except UV curing products, I try to store adhesives not currently in use on a shelf out of the sun and away from any excess heat. Help? Don't know but it can't hurt. I can't vouch for the storing of Ca adhesives in a refrigerator or freezer. There are those who espouse it, but I can't offer any firsthand experience. I'm perhaps a heretic but I often leave any open Ca bottles uncapped. I find that the adhesive in the nozzle will drain back into the container and the Ca lifetime seems to be the same, capped or uncapped, from my experience in my shop environment. Any unopened polyurethanes are stored upside down, securely factory sealed, with the air bubble at the bottom of the bottle. White and yellow glues are capped after cleaning the dispenser and stored without special concerns. This is what works best in my main shop. It is in the

basement of our home and being below ground level it is a dehumidified environment at a constant year-round temp of 60°F.

My local chapter holds elections each year and it is impossible to get members willing to be officers. Each election is like a visit to the dentist, painful in the silence until a few are shamed into 'volunteering' or the current officers are re-elected. Any suggestions?

From my years as chapters and membership chairman of the AAW, I witnessed your situation worldwide. It is the same situation as nearly all the woodturning clubs. I've seen it in the several chapters I belong to for the past 25 years or so of my membership. Those who are willing to step forward are too self-conscious to self-nominate. The others are either tired of serving for far too long or are willing to let someone else do the work while they enjoy the benefits. The key to having a robust, fresh leadership and having elections go smoothly is to plan. It behoves the current leadership to groom potential new leaders. Long before the date of the elections, have a slate of candidates who know and want to be on the ballot. Get the new and ambitious involved as well as encouraging some of the wallflowers. Have them help with events, demos, reach-out programmes, and more. They get visibility and feel involved - read less bashful. Sometimes this takes a while, so start early and make it a continuous process. Make it an ongoing, yearto-year process. It is rare that elections require ballot counting since there is not often more than one candidate. By election time, the current officers should have the others having been groomed knowing they will be nominating them. They should by then feel comfortable enough to accept. This really isn't rigging elections since the floor is always open for nominations of anyone. Remember that being a chapter leader doesn't involve being an accomplished turner and there isn't a job that can't be done by anyone willing to pay attention and learn from their predecessor. Even the treasurer requires little more than paying the bills at the direction of the executive and balancing the cheque book. It really isn't pay as such, but many clubs pay the officers dues in both the local and/or national organisations. A small token of appreciation.





4 I try to buy fresh adhesives in sizes I'll use up quickly. I try to keep them capped but don't agonise over forgetting 5 Polyurethanes have a nasty habit of hardening quickly with any storage time. I flip them over and store them upside down sealed well

# A bowl for two friends

Andy Coates creates a burr elm bowl from an iconic tree with a link to two friends

I have always like wood with a story. Knowing the provenance of the wood we use can add another level of interest, not only in the wood, but also in the finished object. I have lost count of the number of times I have been asked to make things from a felled tree that has some significance to its owner, so other people get this; trees, even those we don't own, can play a large part in our lives, and to have a memento of them when their time comes can be important to us.



For centuries the magnificent Bury Elm, named after a 500-year-old track, had stood in a meadow in Ely, Cambridgeshire. The meadow was owned by the family of a friend, Megan Fitzoliver. Sadly the elm was downed by a storm, and Megan sought the help and advice of another friend, Nigel Fleckney, of Geddington Sawmill.

Megan writes, 'So it was that, when hurricanes brought down my beautiful stag-headed elm, which like a sentinel had watched over the Isle of Ely for centuries, there was only ever going to be one place to mill it. I donned my overalls and, with Nigel's blessing, worked alongside. Every piece we cut generated ideas and we spent hours discussing what they should become and how.

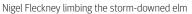
'Big Bertha came from the last log to be cut (because it was studied the longest). Its destiny – to be a monumental nest of bowls that would show the awe-inspiring beauty of nature. Nigel was always introducing me to those whose talent he admired, and held Andy Coates in very high regard (arranging for him to tutor me on the electric lathe so I didn't start off with any bad habits), so a piece as special as Big Bertha had to go to Andy.'

Very sadly, and unexpectedly, Nigel Fleckney passed away on 23 December 2021, so he won't get to see what the burrs he so carefully selected, cut, and set to season, will become, but Nigel's passing spurred

Megan on, and she brought some of the burrs to my workshop. We spent a long time looking at, measuring, musing, and finally coming up with a list of possibilities for the burrs. Big Bertha would provide a nest of bowls — all being well — and a number of smaller bowls and objects. The smaller burrs would be used to make whatever I felt most appropriate. All the solid waste was to be saved for making little keepsakes such as keyrings, paintbrush handles, or anything else Megan could conceive of. Already, Megan has made tables and other pieces from the elm, and she fully intends to use as much of this wonderful material as possible. It may be lost to the landscape of Ely, but its parts will return in one guise or another.

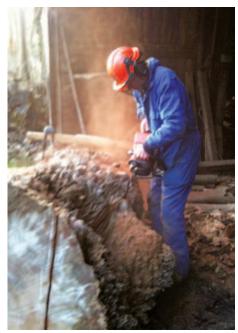
Turning it was going to be quite stressful in unusual ways, I knew I would feel Nigel's breath on my neck: 'Are you sure that's the best thing to do with it?' And I would be very conscious of wanting to not only fulfil Megan's brief, but also ensuring that Nigel's vision for the burr was brought to fruition. There would be far less of me and much more of these two friends in these objects. And that's as it should be. While there was no specific brief for any of the objects that would ultimately be produced, I think I know Megan's style and what would appeal to her, so all I needed to do was to try to work to that. And so I decided to document one small object in an article, as a tribute to a tree and two friends... and this is it.





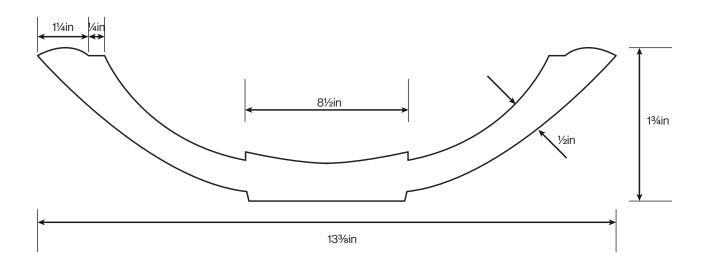


Nigel setting a portion of the tree on the mill bed



Nigel cutting 'Big Bertha' from the butt

### **Plans & equipment**



### **Materials**

- Blank cut from elm burr
- Scrap wood for sacrificial tenon
- Wood glue

# **Tools & equipment**• PPE as appropriate

- 25mm long-ground bowl gouge

- 10mm long-ground bowl gouge
- 6mm parting and beading tool
- 10mm spindle gouge
- Heavy duty negative rake scraper
- Abrasives 80-400 grit
- Cellulose sealer
- Danish oil

### Assessing the burr slab

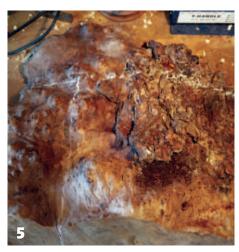
- Any wood that comes as a rough lump, as opposed to a clean board, requires close examination to determine the best way to cut it to provide a blank, or blanks, for turning. The face of the cut burr was almost flat, but there were a few steps from the sawing that would result in lost material. Otherwise the burr was pretty much throughout the face.
- **2** The outside of the burr was glorious, knobbled and irregular, and might immediately suggest a natural-edged bowl with the burr running around the top of the rim, but this can be a wasteful choice, so at this stage I couldn't decide.
- Looking at the side profile can often give a far better insight into the potential a burr holds, and with this blank that was the case. The bulk of the wood was in the bottom half of the lump, with the thickness tapering dramatically from the middle to the top of the burr. It was becoming evident that this lump was not suitable for a single object as there would be far too much waste, so I decided that the blank would be best taken from the bottom half.
- The flat face of the base revealed a significant crack, and it travelled upwards almost to the middle of the burr. This would be a problem if the blank were to include the crack. It is possible that it could be dealt with during turning, by infilling, gluing, or using butterfly inserts, but it would be a risk, and it wasn't my wood to risk wasting.
- There did not seem any point in simply cutting the burr through the split and producing two pieces, as neither would lend themselves to a single object, so I decided to cut it into three pieces. The roughly square piece to the right would be the main blank, the piece to its left would provide another, and the top thin and tapering section would go back to Megan for other uses.
- **6** I cut the burr into three on the big bandsaw, and took another close look at the largest blank. The sawn face was irregular from the cuts that removed it from the butt, and would need to be flattened. Otherwise it looked to be a good blank. Its thickness was fairly even throughout, but at roughly 14 x 14in I felt that the depth was perhaps a little too great in regard to the final proportions of whatever was produced.
- The steps left by the chainsaw needed to be dealt with before proceeding. Whenever I have this kind of job to do I invariably reach for the hand plane, but as there was a lot to remove, and time is always an important consideration, I decided that the irregularities were best dealt with by using the angle grinder and a Kutzall disc. This is a scary tool, and not to be used without full PPE and care, but it's highly efficient, and messy, and the face of the burr was soon flat.

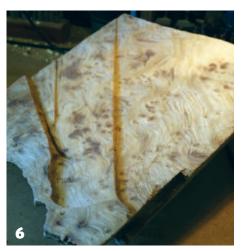


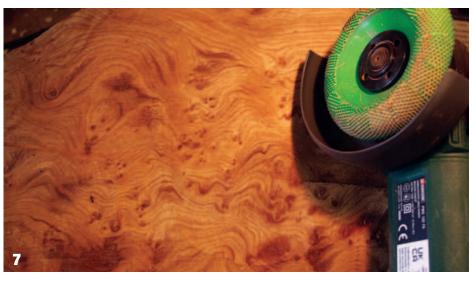








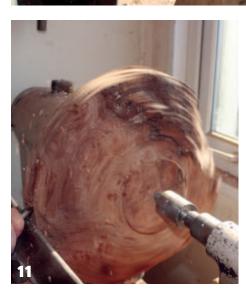














- **8** Once the face was flat I could see that a disc of somewhere around 14in was possible, but the thickness of the burr was too great for a bowl or platter of that diameter, so I decided to cut the burr into two. The chainsaw would have been my preference for this, but the kerf would have removed too much material, and I also needed more control, so I took the healthy option and cut it by hand with a Gyokucho ryoba saw.
- **9** With a nice even board I scribed the largest circle possible, around 14in, and managed to include a small area that would be naturaledged. As ever, I didn't cut this to a perfect circle on the bandsaw, I simply took straight cuts until it was roundish. I considered my mounting options, and due to the hard/soft nature of the material I opted for a faceplate as the safer option. A 4in circle was scribed from the centre to enable accurate mounting of a faceplate ring.

### Did you know?

### **Mounting burr**

Burr is wonderful to work with, but it can present problems. The hardness of the material can (will) vary across the blank. Some areas will seem like concrete while the area immediately next to them can be the firmness and texture of fresh bread. Using a screw chuck could result in a variable hold and loosening during turning. A faceplate, or faceplate ring, secured by coarsethreaded screws, gives an improved hold, but at the cost of the necessity to remove the screw holes during turning, which may limit your options. But safety should not be compromised for a design consideration.

- 10 The blank was mounted on its faceplate ring on the four-jaw chuck, and the tailstock, with a revolving ring centre fitted, brought up for support. As I would be turning the irregular, and hard, outer face of the burr, I decided to use a large bowl gouge, 25mm and long-ground. Lathe speed was set by raising it from 90rpm upwards until the blank vibrated, and then backed off until it stopped. In this case that was at 800rpm.
- 11 A full-face mask should be obligatory when turning this kind of material the chips are small, hard, and sharp, and the softer material can come off as coarse dust, so an air-fed hood is even better. Initial waste removal and shaping is slow due to the irregular surface and the hardness of the wood. Initially I aimed for a true edge and a rough platter/bowl shape until the surface improved.
- **12** It quickly became apparent that re-mounting on a tenon would be unwise. I have never been a fan of the recess hold. It's inherently weaker than a tenon in any wood species, but in burr it would be even worse, so I decided to create a flat area to glue on a sacrificial tenon. This area should be perfectly flat.

- **13** I always have scrap with a tenon already cut, so one of a suitable diameter was retrieved and the front face trued perfectly flat. These waste blocks invariably have a mark from the revolving centre which aids positioning for glueing up. I used white wood glue and left it to cure overnight, with the tailstock applying pressure. I also applied glue to a crack that had appeared during roughing.
- **14** Experience (and stupidity) has taught me to write 'true the tenon!' on a piece of masking tape and stick it over the sacrificial tenon before leaving the workpiece overnight. Forgetting to do this and it's easily forgotten can result in an adrenaline rush of epic proportions when you reverse the project and turn the lathe on for the first time, only to find that it runs on the original tenon's rotation and not the anticipated rotation of the turned object. So, true up the tenon.
- **15** At this point the real shaping can begin. I was aiming for a shallow bowl/platter, and the exterior shaping was relatively straightforward. I allowed for a base about a third of the finished diameter of the bowl, to ensure it would be stable on a table. Most of the exterior knobbles of burr now removed, I could use a smaller long-ground bowl gouge and take shearing cuts on the wing.
- 16 The amount of dust coming off the shear cut was a telltale of the softness of some of the surface, and stopping the lathe confirmed that the soft areas were considerable and, where present, the tool was leaving a poor surface. I had already accepted that remedial action would be required If I was to achieve a good finished surface. Shaping was taken to the point at which a series of finishing cuts would usually be taken freshly sharpened gouge and gentle cuts and then I stopped the lathe before taking them.
- 17 The whole surface was painted with cellulose sealer. I have never been an advocate of thinning sealer, assuming that the manufacturers know best, but in this case I decided to compromise and prepared a can of sealer diluted with another 10% of cellulose thinners, to try to encourage the sealer to penetrate even deeper into the burr. I'm not entirely convinced that this helps, but it couldn't actually do any harm.
- **18** I left the bowl overnight to ensure that the cellulose had wicked as far into the wood as possible, and dried out properly. The sealer binds the fibres of the wood, stiffening them, which theoretically improves the quality of the subsequent cuts, so it was important that it was fully dry before proceeding. The next day I decided to use a freshly honed negative rake scraper to take the final shaping and finishing cuts, and I was pleased to see a much improved, though not perfect, surface emerge.
- **19** The time had come to abrade the outside shape, and due to the included area of natural surface I decided that an inertia-driven arbor was safer than one on a cordless drill. The piece was abraded from 80 grit through to 400 grit. I did not re-seal the surface at this stage.













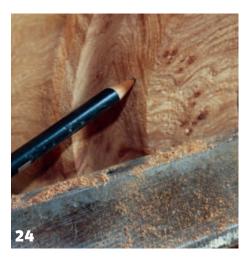
















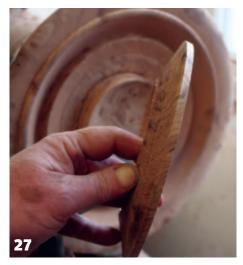
- **20** The bowl was re-mounted on the sacrificial tenon and checked for running true. The first job was to remove the faceplate ring. Had the blank been much deeper, and indicated that a core could be taken, I would have left it in place for re-mounting the core, but in this case I had no intention of coring the blank due to its thickness.
- 21 The first thing I did after removing the faceplate ring was to dish out the centre to remove the screw holes, which would give me an idea of what the burr looked like inside the blank, and give me a feel for what wall thickness the bowl should have. The raised waste areas also gave me an idea, so these two distinct faces were cleaned up to be flat surfaces.
- **22** I wanted a wide rim on the bowl to really show off the burr and the lovely differentiation in the colouring of the wood. A domed, or rolled, rim is ideal on a piece like this because once abraded and oiled it catches the light and highlights the wood. I cut a convex surface on the rim, dipping down into what would be the bowl's interior.
- 23 I left a small upstanding portion between the convex rim and what would be the sweep into the bowl. I like this kind of feature because it produces a shadow after the rim, which helps to give the bowl depth. Working close to the upstand I removed a little waste to produce a shallow cove, essentially setting the wall thickness in the first inch or so of the bowl.
- **24** You can see here that this cove created a face on the more central waste, and this was the intention of taking these cuts. I hate wasting wood, and if that wood is heavily featured I hate it even more. While this bowl couldn't be cored to produce a second bowl, that didn't mean that some of the material couldn't be harvested for another project, and that's what I intended to do.
- 25 By eyeballing a diagonal line from just below the edge of the face created towards a point above the ultimate centre of the base of the interior bowl, a cut line can be imagined. I moved several inches in from the edge of the waste and made a parting cut with a 3mm tool to intersect with that imagined line. A cut taken with a thin, but strong, parting tool along the line will reach the straight parting cut and release a ring of material. This can result in the tool becoming very hot, so be careful.
- 26 The parting tool is progressed slowly into the cut, withdrawing often to remove the swarf, and eventually you hear the cutting note change and off drops a ring of waste. Keep the lathe speed much lower than for normal turning, and ensure the tool is strong enough to take the stresses. A long-handled tool provides more leverage to counter any torque experienced during the cut. In this case it was only around 2in of cut and really presented no problem.

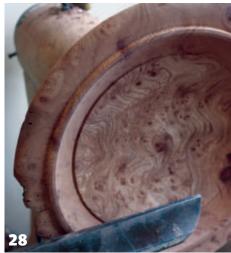
- **27** In this instance I doubt that the resulting ring will be something I will use in another project, but I know that Megan will make something wonderful from what would otherwise have become shavings and gone in the woodburner. It already suggests a picture frame, mirror frame, or even the rim of a bowl in another wood species.
- 28 The bowl was then hollowed in the usual manner. I used the 10mm bowl gouge and tried to keep the bevel rubbing through each cut to reduce the damage I knew I would find in the softer areas. As the bowl got deeper it was clear that the burred area was far better in the bottom, so I decided to leave a raised pad to frame the burred area from the lesser burred areas around it.
- **29** Before taking the finishing cuts I gave the whole bowl a coat of cellulose sealer, diluted with (10% extra by volume) cellulose thinners. Once this was virtually dry I applied a second coat and allowed this to fully dry overnight.
- **30** The following day, cellulose completely dry, the interior surfaces of the bowl were finished with a large, heavy, negative rake scraper.
- **31** Once the turning was complete the bowl was abraded. I used an arbor in a cordless drill, working through 80 grit to 400 grit. In the tight spots it was necessary to abrade by hand
- **32** After vacuuming the dust out of all the holes and fissures, another coat of cellulose sealer was applied and left to dry. Once dry the surfaces were de-nibbed one last time using 600 grit abrasive, and a coat of Danish oil was applied. Over the next few days more coats would be applied until a soft sheen was developed.
- **33** The bowl was removed from the chuck, remounted on a sponge-faced jam chuck, and the tailstock centre brought up to its witness mark. The sacrificial tenon could now be turned away, and the base finished as far as the supporting stub, which is hand carved away later. The base is then abraded and sealed before oiling.

### **Conclusions**

I think the resulting bowl/platter plays to all the pluses this wonderful burr offers, and the simple design shows it off for the best. As much of the wood has been used as is possible, and there is plenty remaining as odd chunks and offcuts, and the saved ring, so there will be even more objects made from this one piece of burr. I would hope that Nigel would have approved of this first object, and I already know that Megan likes it very much. The lump this bowl came from also provided a deeper, smaller diameter blank, and that one is up next.

You can never reproduce an item made in burr – each piece if different by its very nature, but you can reproduce a methodology of looking at a lump of wood and deciding what to do with it. Just keep in mind – bigger isn't always better. Better is better, and sometimes it pays to cut a lump of wood up into smaller blanks rather than simply aim for the largest piece you can make.

















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## Noodle bowl

Sue Harker shows how to turn a Chinese-inspired bowl

Chinese pottery has some beautiful shapes which can be recreated easily in wood. These can be decorated or left as natural timber, the possibilities are endless.



I love the profile of this noodle bowl with its tall base and curved dish. If I were to decorate this bowl, I would only colour the base and run two thin lines of the same colour around the top section of the bowl.

I have chosen to leave this undecorated and only applied several coats of food-safe oil. The bowl is a very versatile size and could be used for noodles, rice, salad, pasta etc. Often the foot on a bowl is given little thought and just has the chucking evidence turned away, creating a slight undercut. The tall foot on this project can be shaped differently and more decoratively, with a form which you would find on its ceramic counterpart.

The thrown ceramic bowl would be sat on and joined to a foot consisting of a round of thin clay, so the curve of the bowl would continue through the foot. I have recreated this style by turning the chucking recess and surplus timber on the underneath of the foot into a curve and thin upstand, which adds to the overall aesthetic.

### Did you know?

### **Refining the foot**

For reverse mounting the bowl for refining the underneath of the foot, a vacuum chuck can be used. A set of large button jaws attached to your chuck is another method for re-mounting the bowl for turning without the need for the tail drive to remain used for support. Alternatively, use a piece of wood turned into a dome and covered with a piece of router matting, the correct size for the bowl to fit over. For this method, the tail drive will need securing in place for refining the base. Remove the resulting pip where the tail drive was with a carving tool and sand the area by hand to a smooth finish.

### **Plans & equipment**

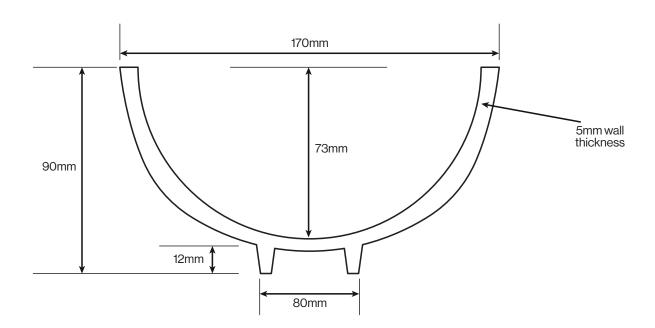
### **Materials**

 Piece of ash approx. 180mm diameter x 90mm thick

### **Tools & equipment**

- PPE & RPE as appropriate
- 1/8in parting tool

- 3/sin standard grind bowl gouge
- 3/sin long grind bowl gouge
- Flat shaft skew chisel
- Vacuum chuck or similar reverse mounting aid
- Vernier callipers
- Steel rule

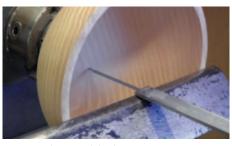


### **Top tips**

#### **Measuring**

• Measure the internal depth of the bowl and the overall height to establish the thickness of timber remaining for shaping the underneath of the base. Position the toolrest across the front face of the bowl, touching both edges. Use callipers to measure the internal depth by positioning the bottom of the callipers with the inside edge of the toolrest and opening them so the centre rod touches the bottom of the bowl. The ruler on the callipers will show the depth of the bowl.

 For the overall height of the bowl, sit it on its foot on a flat surface.
 Position a ruler on the flat surface



Measuring the internal depth

and touching the top of the bowl.
This bowl measures 90mm tall and has a depth of 73mm



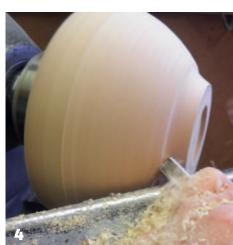
Measuring the overall height

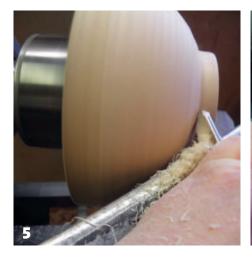
- 1 Mount a piece of ash approx. 180mm diameter x 90mm on the lathe using your preferred method. Use a standard grind ⅓sin bowl gouge to true up the outer edge and front face. Measure and make a reference mark for the size of recess required for your jaws and another reference mark for the size required for the foot. Here I have marked 80mm diameter for the foot. With an 1/sin parting tool cut the chucking recess. If the jaws being used are dovetailed, leave in the pencil line for cutting the dovetail. Next, using a parting tool presented at 45° to the work, create a hole in the centre of the recess. This will be used to remount the bowl for refining the foot.
- **2** If you are using dovetailed jaws, a flat shaft skew chisel laid on its side can be used to cut a dovetail into the recess. Lay the tool so the cutting edge is flat against the bottom of the recess, pull the tool out of the recess, and move over so the long edge of the tool is in line with the pencil mark. Push forwards, removing the pencil line and creating the dovetail.
- **3** Position the toolrest across the edge of the bowl blank. Using a <sup>3</sup>/sin standard grind bowl gouge, start to remove the excess timber working towards the 80mm reference mark and up the side of the bowl. Create a curve to the top of the bowl as you proceed.
- 4 The foot stands 12mm tall, so remove some of the timber to partially shape the height of the foot and blend it into the curve of the bowl. The transition between the foot and bowl will be refined later using a long grind bowl gouge.
- **5** Use a  $\frac{3}{\sin \log g}$  rind bowl gouge to refine the shape of the foot. Take a bevel supported cut along the height of the foot the swept back wings on the tool will allow it to remove the timber and give access to the transition between the foot and start of the bowl.
- **6** For refining the transition between foot and bowl, rotate the bevel of the tool towards the bowl and lower the handle to create a shearing cut. Use this method to refine the shape.
- **7** Hand sanding will be required for the foot and transition between the foot and the bowl. Start with 120 grit and progress through grits 180, 240, 320 and 400, checking the finish between each grit.
- **8** For the main body of the bowl, a rotary sander can be used. Start with 120 grit and sand the curve of the bowl to remove any tooling marks. Check the finish before moving on to 180 grit. This should reduce the size of scratches created by the 120 grit. Progress through 240, 320 and 400 grits, checking the finish between grits.







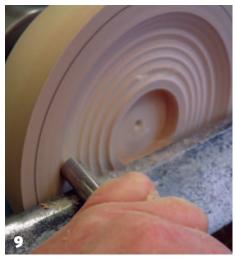








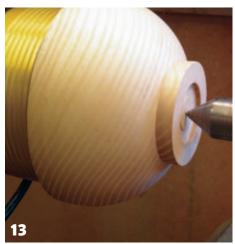


















- 9 Remove the bowl from the lathe and re-mount using the chucking recess cut earlier. Use a 3/sin standard grind bowl gouge to true up the front face. Next, begin to remove the inside of the bowl using the step cut method. Each cut taken from the edge of the bowl should be left as a step towards the centre of the bowl. Creating several of these steps makes space for the rim to be cut to an even wall thickness without removing the strength of the timber.
- **10** When enough room has been created, finish the top 1in of the bowl to the required wall thickness. Once you progress further down the bowl this area should not be re-cut as there is a strong possibility the perimeter will move when the centre strength is removed.
- **11** Continue down the bowl using the same step cut method, blending in as you progress. To assist with identifying any areas requiring further blending, stop the lathe and draw a pencil line around the beginning of the area needing attention. With the lathe running it will be more visible, making it easier to pick up and blend in.
- **12** With the bowl fully turned and a battery drill fitted with a sanding arbor, sand the inside of the bowl. Reduce the speed of the lathe to allow the abrasive to do its job 500-800rpm is a suitable speed. Start with 120 grit and progress through the same grits as previously used. Try to avoid getting the timber too hot.
- 13 Mount the bowl on the lathe to refine the underneath of the foot. Here I am using a vacuum chuck. Locate the tail drive in the hole cut in the centre of the chucking recess earlier, position the bowl over the vacuum cup and wind the tail drive to secure in place. Turn on the vacuum and remove the tail drive. Should you not have a vacuum chuck, see 'Did you know?' for other methods of remounting.
- **14** Determine the thickness of timber available for shaping the underneath of the foot. Handy hint shows the method I use to determine this. Using a <sup>3</sup>/<sub>8</sub>in long grind bowl gouge, refine the shape of the foot. Here I am creating the underside of the internal curve with a 5mm thick, 12mm long upstand. A bevel supported cut is used for the curve and a shear cut is used to refine the upstand.
- **15** Starting with 120 grit, hand sand the underneath of the foot, and continue through 180, 240, 320 to 400 grits.
- **16** Either wipe the bowl with tack cloth to remove the sanding dust or blow out with compressed air, before applying several coats of food-safe oil. If the bowl is used and washed regularly it may be necessary to re-coat with the oil. •

## Take a rest

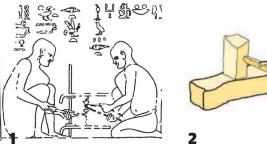
Les Symonds takes a close look at the toolrest, an often underrated item



### **History of the toolrest**

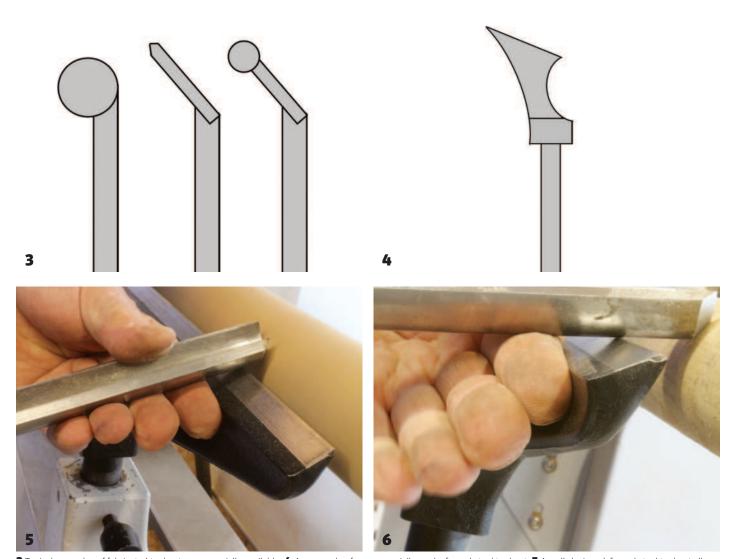
In its earliest form, like the woodturning lathe that it served, the toolrest was crude – little more than a pivot point on the lathe bed and quite unrecognisable by modern standards. But then, I am referring to an Ancient Egyptian arrangement that dated back to 1300BC and in which the workpiece was held in line with the lathe bed, but vertically. An assistant was responsible solely for providing the power to rotate the workpiece, while the woodturner presented a tool in much the same way as we do today, but for a toolrest, the turner used the lathe bed itself with the tool pivoting on a corner of the bed to support it while its cutting/ scraping edge made contact with the wood.

Eventually, and certainly by Anglo Saxon times, the lathe and its workpiece underwent the most significant change, with the bed being fixed horizontally and the power source being provided initially by the woodturner, then ultimately by an external source. However, throughout all of these horizontal bed developments, there remained one very basic form of toolrest, and this appears to have been little more than a straight, stout baton which is generally referred to as a bird's beak toolrest. This was held captive at the tailstock end, resting in a notch on a projection on the front face of the tailstock; its other end resting in any one of a series of notches cut into a shaft extending outwards from the headstock. When not in use, the toolrest could be lifted out of place and allowed to drop out



1 Early Egyptian vertical lathe with the bed itself acting as a toolrest 2 The roughly hewn Anglo Saxon horizontal lathe with its bird's beak toolrest hanging loosely

of the way — a short strip of leather attached between the tailstock and the toolrest held it in a position where it was easy for the turner to grasp when needed. When brought back into use, the tailstock end was slipped back into its notch and the headstock end simply slipped into whichever notch along the shaft afforded the toolrest its most convenient position for supporting the tool. It was crude but effective, and we can only imagine that in constant use, the toolrest would wear away (or break) and easily be replaced.



**3** Typical examples of fabricated toolrests commercially available **4** An example of a commercially made, forged steel toolrest **5** A well-designed, forged steel toolrest allows a good grip on the tool **6** An underhand grip, with the thumb on top, acts as an aid to maintaining a constant depth of cut

### Materials used and methods of manufacture

Historically, there have been four different classes of materials used to produce toolrests; timber, cast iron, forged steel and fabricated steel. Timber is still used by historians and current enthusiasts who operate basic machines such as pole lathes. Cast iron, thankfully, is no longer used due to one very serious aspect of the nature of that material; it is brittle and can crack when a sudden impact is experienced, such as the accidental contact with an irregular shape of workpiece or when a tool is poorly engaged against the workpiece, resulting in a serious catch and the tool hammering down on to the toolrest.

So, this leaves steel, a material which is available in many different types and grades of hardness. In its most basic form, steel is readily available as a 'rolled' product. That is to say that it has been taken from the furnace in which it was created, poured into a huge ingot and then beaten and rolled into continuous lengths of a range of sections, such as flat bar, half-rounds and circular, all of which have been used to varying degrees of success in the manufacture of toolrests. That level of success depends upon the tool manufacturer's specification for the dimensions of the steel used, most especially its thickness. Several decades ago, when woodturning first became a popular hobby and when some lathe manufacturers at the lower end of the quality range started to make 'hobby' lathes, toolrests were made to accompany them out of rolled steel of too thin a section, inducing vibration and failing to give the support that a good toolrest should give. Having said that, I should also point out that in such cases the lathe itself was usually made of rolled and sheet steel, fabricated by welding and prone to vibration when anything but the lightest of cuts was made, so it was generally the lathe that got the blame for vibrating, and not the toolrest.

This does not mean that toolrests made of rolled steel stock and

fabricated by welding are necessarily a poor choice. Indeed, there are many such items available today, made of high-quality steels of ample gauge and well-constructed – these hold an important place within the range of toolrests commercially available and many such items are being produced by experienced woodturners who understand the essential qualities of the item, thus either making them for themselves, for retail, or having them made commercially under licence for resale.

Larger commercial ventures making toolrests, either for lathe manufacturers or as extras for woodturners to buy, often 'forge' their tools from molten steel, and this is the type supplied from new with many modern lathes. In this process, molten steel is poured into a mould, allowed to cool and harden, then its principal surfaces, such as the top-bar of the toolrest and its shaft, are machined to the desired dimension, profile and finish.

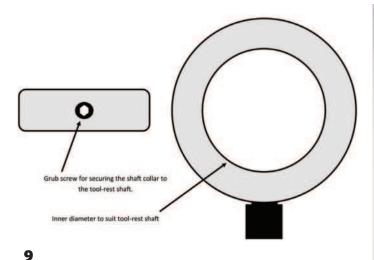
The former of these two methods of construction has one distinct advantage over the latter. In the case of the latter, forged steel has one consistency and hardness throughout, whereas a fabricated toolrest can have different grades of steel, allowing the more expensive, higher-quality steels to be used sparingly where they are most needed; that is to say on the very top edge of the rest, where the woodturning tools bear down on it.

One interesting aspect of the design of many forged toolrests and some fabricated examples is the presence of a distinct ridge running lengthways along the rest, which, for learners and novice turners, can be advantageous, especially when using the spindle roughing gouge. Viewed from above you will see that this style of toolrest affords a good underhand grip and, when viewed from the end, you will see that the index finger sits neatly below the ridge and subsequently below the gouge. Then, with the thumb resting on the gouge from above, the whole set-up becomes a depth-stop, enabling the turner to have a high degree of control over the inward/outward movement of the tool, and thus the depth of cut.













**7A & 7B** The Woodturning Shop toolrests with their stainless steel top rods **8** The radiused toolrest allows a single sweep of the gouge around many bowl shapes **9** The shaft collar with its securing grub screw **10** The extensive range of toolrests from Steve Sinner **11** A profile shot of a Sinner toolrest, showing the case-hardened top rod

### **Examples of commercially made fabricated toolrests**

A quick glance at internet auction sites reveals a wealth of new and used toolrests, but beware, there are many pitfalls associated with buying such items from untrusted sources. First, consider the shaft; while it might seem patently obvious to confirm its diameter, its length might also be critical. A cheaply bought fabricated or forged toolrest will be of no use at all if its shaft is so short that you cannot raise it in your toolrest banjo to the desired height.

There are many manufacturers in the UK and abroad supplying a wide range of shapes and sizes, and I could not hope to mention them all in an article of this length, so I will concentrate on those makes that I know well and have experience of. There's a small range of excellently engineered examples produced by The Woodturning Shop, one straight and one radiused. Each is available with either a 1in or a 30mm shaft and the feature that makes them so good is the stainless steel top rod welded along the top edge of the toolrest, allowing the tool to glide along the rest with very low levels of friction – an important feature when working the last few finishing cuts along a bowl or a complex spindle. The large, radiused model is especially helpful when rough-turning a batch of green-turned bowls as it allows almost all of the outside of a good-sized bowl to be cut without having to move the toolrest. This can also be used, with care, when setting up inside a bowl to

help to cut the convex curve, to which end the outer end of the toolrest (away from its shaft) has been deliberately shaped to allow improved access into the very centre of deeper bowls.

As an addition to these toolrests, The Woodturning Shop markets a shaft collar to lock on to the shaft of a toolrest, thus enabling repeated use with it set at a pre-determined height. A note of caution: toolrest shaft collars should not be used for general woodturning, where the toolrest height is sometimes adjusted to suit specific tools and cutting operations. Rather, this useful little piece of equipment should be reserved for those times when you repeat a specific task for which the toolrest has always been used at a precise height. This might be for shaping the outside of a bowl, for roughing spindles down from square to cylindrical or for scraping inside hollowed shapes.

Of a similar form, but offering a far greater choice of sizes and configurations, is an option from the US which is becoming increasingly popular in the UK. This is the Steve Sinner design, marketed as Advanced Lathe Tools and embracing a range of a dozen or so different configurations, although a radiused version is not available. The critical feature of this range is the use of a 3/sin (10mm) top rod made of casehardened steel, so accidental damage caused by catches is unheard of and the need to dress the surface is virtually eliminated.

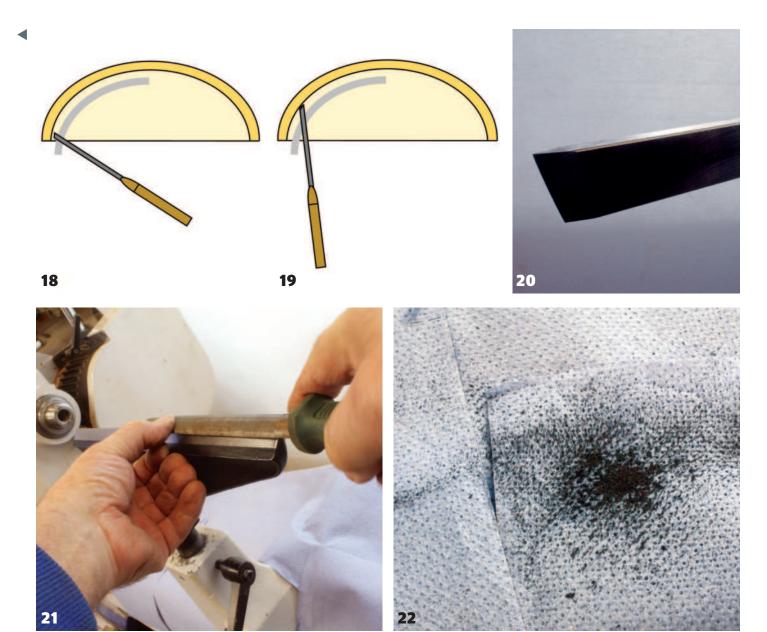
12 The Robert Sorby straight toolrest 13 The external curved rest 14 The internal curved rest 15 The box-scraper toolrest 16 The Sorby box-scraper toolrest in use. Note the excellent support for the tool 17 Centrally mounted toolrests can sometimes fail to reach as close to the workpiece as the turner might need.

### **Composite toolrests and modular systems.**

Tool manufacturer Robert Sorby markets a modular system in which the toolrest and its shaft are sold as separate items, being joined together by a sturdy male thread on the head of the shaft, and female thread in the toolrest itself. The range includes eight shaft diameters, so will fit most modern and old lathes, as well as six different rests, comprising 4in, 6in and 9in straight versions, a 9in double curve for internal curves (giving a choice of two radii to work with), a similar one for external curves and, finally, a box-scraper platform, which gives excellent support to scrapers in such confined spaces. By setting the box-scraper toolrest at the height needed, its long, flat platform extends well into the workpiece and enables the scraper to maintain good support no matter how it is moved

around the plane in which it sits. A similar, even more comprehensive range of modular toolrest components is available through the UK tool stockist, Axminster Tools.

While modular systems such as this have many advantages, there is one unfortunate aspect of their design which renders them less than ideal for some operations. You may notice from the profile drawings shown in earlier paragraphs that all the examples illustrated show that the top edge of the toolrest is canted over towards the workpiece, allowing it to extend beyond the reach of the body of the banjo which is supporting it, thus allowing the toolrest to be positioned as close as the turner needs to the work. With a centrally mounted modular system, this is not always the case.



**18** Bowl gouge held with bevel rubbing and good support from the toolrest **19** The point at which the radiused toolrest can sometimes obstruct the gouge **20** Note the toolrest-friendly edges of the Sorby skew chisel **21** Gently filing along the top edge, keeping the file at a constant angle **22** Iron filings should fall on to an appropriate barrier/paper

### A note of caution

Having just mentioned radiused and double-curved toolrests, there is a safety issue which needs to be addressed with any make of radiused toolrest. Referring to the two images, each shows a radiused toolrest set well into a hollowed bowl, with the finishing cuts about to be made. In the first image the bevel sits well against the wall of the bowl, the tool sits firmly across the toolrest and is thus well supported. However, as the gouge handle is swung through its arc, the gouge arrives at a point where, with its handle kept below the horizontal, it is likely to impact on the inner face of the toolrest, as is about to happen in the second image. It is crucial that if the dynamics of the curve of the bowl and the sweep of the gouge result in this, the turner does not continue with the cut, but repositions the toolrest such that the gouge can safely sweep through its arc. Failure to heed this advice, in the circumstances shown in the image, could result in the turner having to lift the handle to allow the shaft of the gouge to travel over the top of the toolrest. Not only is this likely to remove bevel contact, but also, the gouge could easily roll off one side or the other of the toolrest.

#### **Toolrest maintenance**

The best way to reduce surface wear and damage to your toolrests is first to examine and rectify a few issues with your tools. There are certain tools which are frequently used in such a way that a sharp long edge of the tool shaft is in direct contact with the rest's upper surface, sometimes

causing excessive wear and even creating minor scratches and impact marks. Responsible tool manufacturers are aware of this and generally provide tools with the long edges either slightly radiused of chamfered, thereby softening the contact between tool and rest. However, if you have older tools with sharp, crisp long edges, you would do well to run them gently along a bench grinder, with good support from a titled platform to relieve those edges and save your toolrest from further wear.

If you own a toolrest that has any degree of damage along its top edge, rectifying the fault should be quite simple. Set the toolrest in its normal position in the banjo and then place a few pieces of paper towel around it to protect the lathe bed. With a fine file held lengthways along the top of the toolrest, make continuous firm passes along the upper surface. When all marks are removed, you may still find it necessary to repeat the operation down on to the toolrest's front face and around its top edge, a little way on to the back face. This very worthwhile operation enables smooth, unhindered gliding of tools along the rest and is very worthwhile undertaking.

### Conclusion

I trust that I have raised awareness in you of issues related to the toolrest that you might not have been aware of. The names of suppliers that I have used represent those businesses with which I have had successful dealings; there are many more such businesses for you to choose from, but choose wisely and use the information in this article to help inform your decisions.



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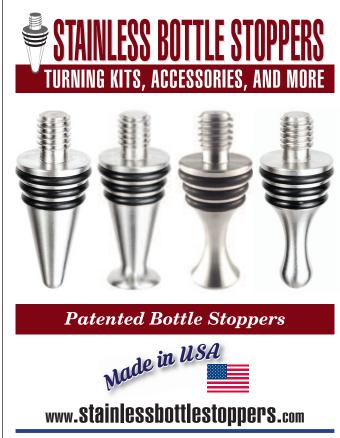
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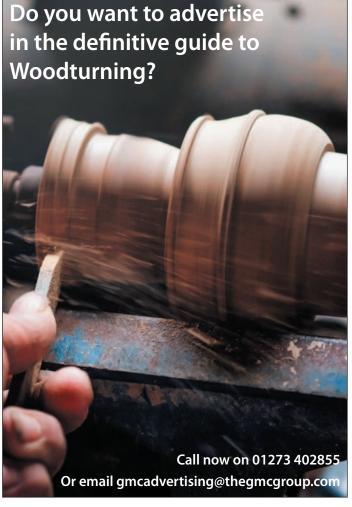
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# Burl-lidded red gum box

Andrew Potocnik scales down a previous project to create a functional item

In a previous project I experimented with creating a wall piece that appears to be a textured burl. Using solid wood with a burl insert in the centre provided two major positives: first, I wasn't wasting precious material around the perimeter that was to be textured and stained; second, I didn't have any jagged and sharp edges spinning around the outside as it was being turned.



For this project I scaled the idea down so I could use an offcut of burl, and applied it to a practical item – a lidded container. Let's be honest, most turners prefer to make functional objects rather than artistic pieces.

Although the concept is quite simple, it's pertinent to think about how we use quality timbers as they become harder to access when we can give existing timbers a second life by recycling them. I used red gum,

which is freely available in my area and snapped up as firewood once suburban fences reach their use-by date. I'd rather make something that will live on for many years than see it used to provide a few hours of warmth in a fireplace.

But there was also a twist in this project when I realised a texture that had captured my attention years ago popped up, but more about this later.

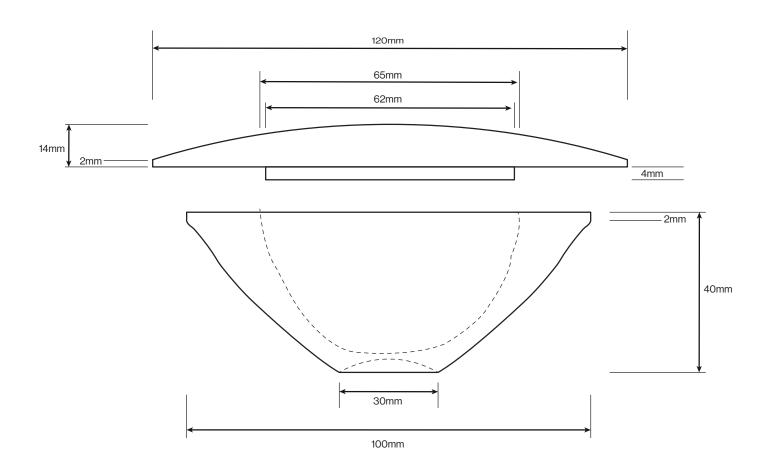
### **Plans & equipment**

### **Tools & equipment**

- PPE as appropriate
- 12mm bowl gouge
- Round-nosed scraper
- Flat curved scraper
- Narrow parting tool Diamond pointed scraper
- Carbide square scraper
- Vernier callipers
- Micro motor/Dremel and various burrs

### **Materials**

• Red gum fence posts







### The making

**1** Material for this project was sourced from red gum fence posts, which are found in abundance in my area. Apart from being free, they are air dried and stable, making them great to turn, but you can use any material you wish.

I began by pushing my blank up to a scroll chuck with the tailstock holding it firmly and allowing me to rough it down and turn a tenon at one end.

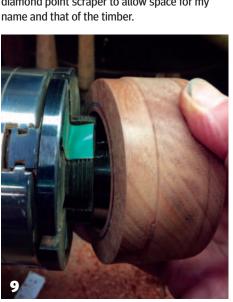
2 Reversed and gripped in the chuck, I could remove all remaining waste material.





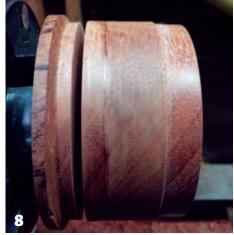


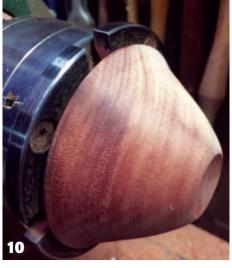
- 3 The interior was hollowed to about 50mm and about 60mm opening using a bowl gouge, then cleaned up with a round-nosed scraper.
- **4** A groove of about 2mm width and similar depth was cut with a parting tool in preparation for filling with Easy Inlay mother of pearl and cyanoacrylate glue.
- **5** Making sure ample glue has filled the groove, there is always overflow...
- 6 ...which I find is best trimmed down with a flat curved scraper or a carbide scraper.
- **7** The inner and rim was sanded through to 320 grit, completing this part of the box.
- 8 Adding about 8mm to the depth of the inside, I made a pencil mark on the outside and then parted the container free of waste wood.
- **9** To complete the outside, the container was reversed on to a set of stepped jaws to which thick electrical tape was applied to prevent damage to the completed surface.
- **10** The outside was turned to shape, the base hollowed about 4mm and sanded to 320 grit.
- **11** A couple of detail lines were made with a diamond point scraper to allow space for my













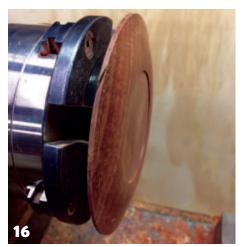








- **12** To begin the lid, another piece of red gum was mounted in a scroll chuck and a tenon turned to a whisker less than the opening of the box as the fit is intended to be just a little loose but not sloppy. Vernier callipers were used to check the size while a square-ended scraper was used to 'sneak' up on the right diameter.
- **13** The same scraper was used to flatten the outer section of the lid, and a round-nosed scraper enabled a hollowed section a little deeper than the height of the tenon to be shaped. Once sanded, a couple of V-lines were made just to break the surface and provide a bit of visual interest. You could, of course, sign in this band and add the timber type.





- **14** The lid was reversed and gripped by the tenon, waste material removed and shaped to a gentle curve. Two pencil lines were used to indicate the diameter of the box and the diameter of the burl section. A rough profile shape was drawn to see whether proportions were appropriate.
- 15 A recess was made for the burl insert...
- **16** ...and the border shaped and sanded.
- **17** Texture this section with the edge of a burr.

### Did you know?

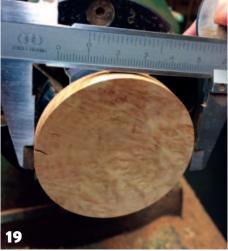
### The inspiration

As I began texturing, I realised the lid was beginning to resemble some light shades that had caught my attention in a Bali shopping arcade way back in 2011. It's funny how the shape appealed to me but I had no idea of how to apply it to my work, until now when it just happened! Some types of inspiration can lay dormant in what I call the 'cranial computer' for many years.











Any rough edges were smoothed with a wire brush before black stain was applied with a cloth.

- **19** An offcut of ironbark was glued to a carrier with heat-sensitive glue and trimmed to fit the recess turned in the top of the lid. I used Vernier callipers to ensure an accurate measurement was achieved, but you could also use dividers or a number of other methods.
- Although the disc fitted neatly into the recess, I used my tailstock as a clamp to hold it in place while the glue bonded the two together.
- Once dry, the burl was turned to shape with V-lines cut on either side of the bead to create definition via a shadow line.
- After further observation I felt there was need for another V-line, which was cut with my diamond pointed scraper. You could use a skew laid on its side or make two cuts in the traditional manner.
- Masking tape was applied to the lid, a border line matching the outside diameter of the box marked and a potential outer shape drawn, ready for power carving.
- A straight burr removed material quickly before edges were textured with a diamond-shaped burr.















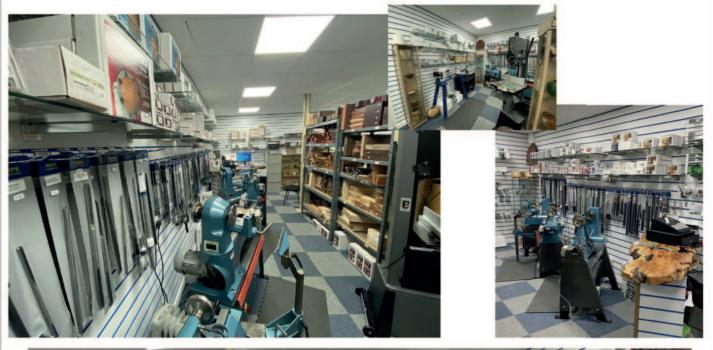
- Edges were stained carefully, making sure no colour was applied to the underside of the lid. Once dry, an oil finish was applied to all surfaces and the box was complete.
- 26 I have a confession to make. Looking at the completed project side on, I felt that the bottom part of the box was too tall and narrow for the lid, so I made another one that corrected the problem. In this photo you can see that the difference between the two was just a few millimetres in height and diameter, but it was worth the effort.
- The finished piece with the new lid.
- 28 .... & with the inlay on display.





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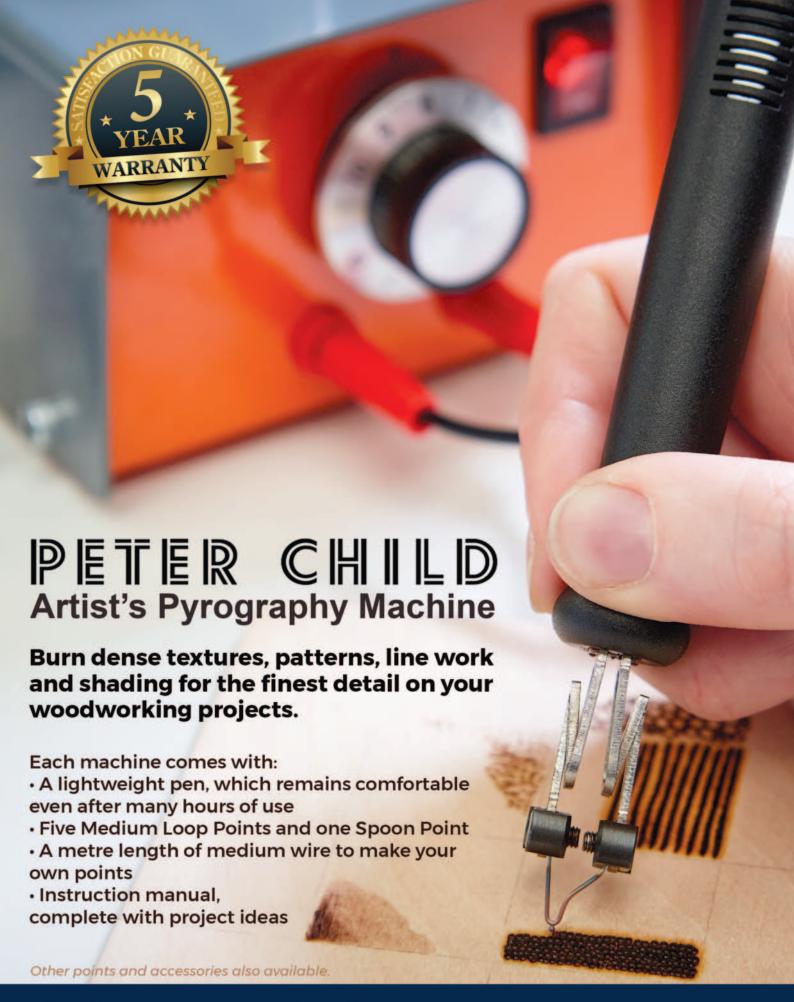






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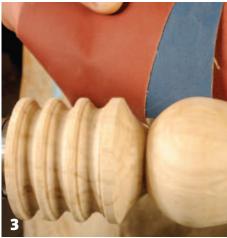




















### **Abrasives**

1 Abrasives are used to refine the surface of the work prior to the application of a final finish. A good range of abrasives is typically from a coarse 100 grit to a fine 400 grit. Abrasives come in various types: aluminium oxide, diamond, silicon carbide... and the list goes on.

The abrasive most commonly used by turners is aluminium oxide, which is often resin-bonded to a backing which can be cloth, or a form of paper. You can buy abrasives as precut sheets or as rolls, or parts of rolls in various widths.

**2** When sanding, the primary problem is wood dust – sanding on the lathe produces more dust than any other process, so dust precautions are essential. Ideally, have localised and ambient dust removal, and also wear a personal filtration system. Eye protection is also a must.

Removing the toolrest from the turret is important too – first, the toolrest gets in the way and it is easy for your hand to become trapped between the workpiece and the rest. Also, removing the rest creates a mounting point for local extraction.

- **3** When sanding, start with the coarsest grade you have usually 80-100 grit in order to remove marks and blemishes left from turning, then move through the grits. For example, if you started at 100 grit you would then go to 120, then 140, and so on. Each subsequent application removes the scratches left from the previous one, and you work down until the scratches are so small and fine that you can't see them. Sanding down to 400 grit is usually more than enough for most work you will encounter.
- **4** Here, you can see tool marks and ripped out end grain. Your first grade of abrasive needs to remove all these turning marks.
- **5** Abrasives are best used in strips between 30-50mm wide. This means they can be folded or bent to the required shape.
- **6** When sanding gently curving forms, your strip can be looped around the workpiece and held at both ends. Never let the abrasive loop stay still on the workpiece! Always keep it moving, or else hollows may form also, this prevents the abrasive causing striations that are too deep.
- **7** When sanding coves, bend the folding paper along its length, with your finger along the back of the abrasive. And when sanding, always keep the paper moving. When using abrasive like this, always sand in the bottom quadrant of the workpiece. This means your hand cannot be snapped back towards you, and also that the sanding dust is ejected away from you, towards your extraction point.







- When sanding beads, or any convex curve, fold the paper in the opposite direction, so it bends with the shape of the curve, and follow the same procedure as before.
- For tight spaces, say between beads, just fold the abrasive along its length and use this edge to get into the corners of forms.
- For very small details, such as fillets, again use the edge of the abrasive, with a very light touch, and don't touch the sharp edge of the timber. It is so easy to lose small details with over-enthusiastic sanding.
- For very small coves you can fold the paper over, leaving it curved along its edge. This then fits nicely into the cove.
- Alternatively, wrap the abrasive around a small dowel to reach into those small coves. This method has the advantage of preserving the coves' roundness assuming you've turned a perfectly round cove and want to keep it that way!
- After sanding with 80 grit, the spindle here has had the original tool marks and tear-out removed, but if you look closely, you can still see the striations from the abrasive. Now you have to work through the grits to remove these marks, until the abrasive striations are too small to see.



















# **14** Follow the same procedure as previously outlined, but with progressively finer grades of abrasive, reducing the striations from each previous grit of abrasive. This can seem tedious, but is essential to getting a good finish. Any imperfections here will be highlighted, not hidden, by the subsequent finish.

- **15** When getting towards the finer grits, it is worth reversing the lathe direction, either by hand, or with the lathe gears if it has that facility. The abrasive tends to lay any exposed grain down in one direction. Reversing lifts and abrades this grain, removing the chance of it lifting later. Also, with the workpiece stationary, you can sand with the grain, turning the workpiece by hand.
- **16** After following the above steps through all the grades, you should produce a surface with no visible striations, and which is ready for finishing, which we'll cover later in the article.

### **Bowls and platters**

Here we'll cover sanding bowls and platters by hand and with power tools. In many ways, getting a perfect finish on a bowl is harder than on a spindle, as you will always be dealing with large areas of end grain, which tend to be effected by grain tear-out. It's usual when bowl turning to sand, and even finish, the outside of your bowl while it is still mounted in the chuck, before you've turned the inside of your bowl, and that is the process we will assume is happening. With both hand and power sanding, it is still important to sand through the grits - the lowest grit to remove surface imperfections, and subsequent abrasives to reduce the striations.

### **Hand sanding**

17 It's a good idea to use a similar size strip of abrasive as used when sanding spindles, when hand sanding bowls. For safety, always sand in the lower quadrant of the bowl, again to prevent the abrasive catching and snapping back your hand.

- **18** Mould the shape of the abrasive to suit the feature a convex curve for convex shapes, etc. And use the edge of the paper to pick out fine details.
- **19** Always start sanding from the centre of the bowl, moving towards the outside. With the broad sweep of the bowl, keep as much abrasive as possible in contact with the bowl side and keep moving. Then simply work through the grits again.

### Top tip



When sanding very fragile pieces such as thin finials, it is always worth supporting the piece with your finger while sanding, to get enough pressure on the workpiece to sand, but ensuring it doesn't snap.

If you have a difficult area of end grain that has experienced tear-out etc, you can dampen the timber surface to show up the full extent of the damage. This also raises the grain, which then won't be so prevalent when a finish is applied.



- **20** Having sanded and finished the bowl's outside, the inside is turned, and now needs finishing. To start with, sand the outer rim. Again, only work in the lower quadrant of the bowl, so the abrasive is pulled away from you, and keep the abrasive moving. Then move the abrasive over the rim on to the inside of the bowl. Be careful not to ruin the shape of the edge of the bowl.
- **21** Once you've moved the abrasive over the rim, move it slowly and steadily towards the bowl centre, again, never stopping in one place.
- **22** Finally, stop in the bowl centre. Remember, the bowl turns progressively more slowly as you move towards the centre, so you will need to pass the abrasive more slowly over the timber as you move towards it to achieve the same level of sanding.
- 23 Hand sanding like this produces concentric striations, which will need very careful sanding to remove completely. As you finish with each grit, it is worth reversing the bowl, and also sanding up and down the bowl side with the lathe's spindle lock engaged to reduce these striations as much as possible

### **Power sanding**

- 24 One way to avoid this problem, and to speed the whole sanding process up, is with power sanding. Here you need a drill/driver and an arbor with a hook-and-loop face, which is soft enough to deform, on to which the abrasive is fixed. The revolving arbors come in sizes from 12-150mm diameter, with the most common being 50mm and 75mm. When power sanding, traverse the abrasive across the surface of the revolving work with the drill running. Best results are achieved by having the arbor running against the rotation of the lathe. This method is devilishly quick, and a light touch is required.
- **25 & 26** As with hand sanding on the bowl's outside, start from the centre and work outwards. Do not attempt to sand fine features, as you will dull their edges. You should always try to keep as much of the abrasive on the bowl as possible. In practice, this means having the sander slightly canted to one side, so that only one side of the abrasive is in contact. Then work through the grits.

### **HEALTH & SAFETY**

When using rags or kitchen towels to apply oils, it is essential you heed the risk of the used rags catching fire. If you scrumple up a rag with oil finish on it, there is a danger it can spontaneously combust, therefore you must always dispose of the rags safely. You can either lay them flat to dry in a place where there is nothing combustible about, or, to be completely safe, soak them in water and then leave them to dry.





















- **27** To power sand the inside of the bowl, you need an arbor with an even more deformable face, to mould to the inside of the bowl.
- **28** Start from the edge of the bowl and work inwards, and then back out again. As you move out you will see a pleasing clean line where the sander clears its own dust.

### **Finishing**

29 We'll show you how to apply four basic finishes: two on the spindle and two on the bowl, one inside and one out. Each can be used on any form of turning. In practice, there are myriad types of finishes, but these basic four will allow you to finish most projects.

Here, we are applying sanding sealer to the tailstock end of the project with a brush. Simply apply while the workpiece is still – don't use too much – and leave to dry.

**30** For the other side of the spindle, we are spraying a clear lacquer undercoat. We had the lathe on its lowest speed to apply the spray. Again, don't go crazy and build up too much lacquer, as it will build up too heavily in all the tight corners and dull your fine details.



### Finishes can be broken down into three main groups:

- **1.** Penetrative finishes such as oils which soak into the wood, seal and depending on the type form a protective barrier against marking, staining and water. They can be used to create a matte, satin or gloss lustre.
- **2.** Surface finishes such as sanding sealers, lacquers and varnishes, many of which can be wiped, brushed or sprayed on. Sanding sealer is used as a base coat, and seals the wood prior to, or after, sanding. This forms a protective base coat over which you can apply oil, lacquers, varnishes and waxes. Many of these form
- a hard, protective surface and are available in matte, satin, eggshell or gloss lustres.
- **3.** The third type are hybrids of the other types, as they penetrate the surface and form a definite film the best example of these are waxes.

As you progress and experiment with your turnings and finishes, you will find various types and mixes of finishes that suit your work, and ways in which you can manipulate them to create a given effect. Be patient, develop your skill set on the basic finishes first, and progress from there.



Penetrative finishes

29



Surface finishes



Waxes are a good combination of both





- **31** After the lacquer/sealer has dried, it needs de-nibbing. You can either use a very fine abrasive around 320-400 grit or, as we've done here, use a Scotch-Brite hand abrasive pad. The de-nibbing process basically removes any grain that has been lifted when you applied your lacquer or sanding sealer. When you apply any liquid to wood, the grain tends to be raised. The de-nibbing is a fairly gentle process, so just rub enough until you can feel the surface is very flat.
- **32** Next, with the lathe again spinning slowly, a coat of wax is applied sparingly with a foldedup kitchen paper towel – this is ideal as it is disposable and tough enough not to shred. Once the wax is applied, leave it a few minutes to harden off, and then burnish it. Turn the lathe speed up high and press a small pad of kitchen towel on to the surface and slowly move it along. The idea is that the friction melts the top surface of the wax. As you can see in the picture, as you move along the timber, a lovely sheen is produced. Note also that the part of the spindle with the lacquer undercoat produces a higher sheen. You can, of course, apply more than one coat of wax before you burnish, to produce a deeper-looking finish.
- **33** On the bowl outside, we're using a hard wax oil and a normal oil finish. The hard wax oil has carnauba and other waxes in it, which, when polished, produce a hard surface with a sheen. In this image, the first coat of hard wax oil is being applied with the lathe not turning.
- **34** Once the first coat has dried off, a second coat is applied and left to dry. You will find the second coat goes a lot further. You can apply up to four coats, which will produce a deeper finish.
- **35** Once the hard wax oil has dried, it's time to polish it. As with the spindle earlier, hold your kitchen towel to the fast-spinning bowl, allowing heat to build up. This melts the wax in the oil, producing the high shine finish.
- **36** For the inside of the bowl, we applied just two coats of ordinary finishing oil there are many different varieties which are a blend of oils, solvents and other ingredients. Then it's simply a case of polishing the oil, as earlier. Because the oil doesn't have the hard wax, it produces more of a matte finish.











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Telephone: 01233 613992 E-Mail: sales@oliverswoodturning.co.uk

Shop: www.oliverswoodturning.co.uk

The shop in Great Chart is open by appointment only, please call ahead.

The Online store is open 24 hours a day, 365 days a year with home delivery as normal.

### Tools and Supplies at www.oliverswoodturning.co.uk

























## Small desk clock

Ian Woodford turns a simple, yet stylish timepiece

I've made many clocks over the years and this one is relatively easy and quick to make and sells well at craft events. I tend to use a wood that is close grained and holds detail well. My preference is yew, mainly because it's attractive, holds detail well and is easy to work, but the choice is yours.

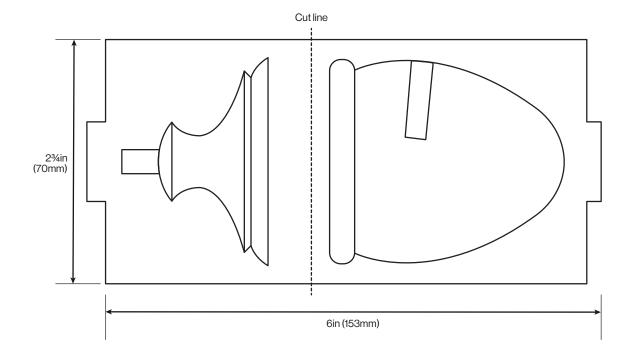


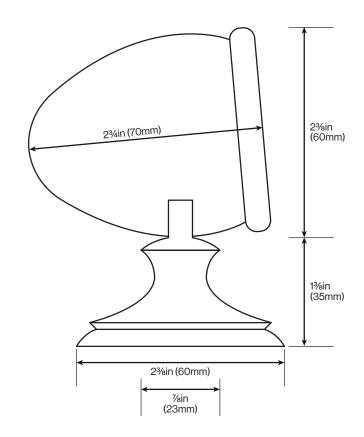
## **Plans & equipment**

## Tools & equipment • PPE & RPE

- Spindle roughing gouge
- Fingernail profile spindle gouge
- Small skew
- Thin parting tool
- 5/16in or 8mm drill bit
- Burning wire

- Callipers
- Grits to 600
- Sanding sealer
- Carnauba wax
- Wood glue
- Chuck with small O'Donnell jaws or equivalent
- 50mm/2in clock insert





- 1 The first job is to cut an accurate spindle blank 6in long and 23/4in square and mark the centrelines and ends. The photo shows a 3/8in hole already drilled that will take a spigot from the base section when assembled.
  - I prefer to drill this hole at an angle so that the clock body is tilted slightly upwards when assembled. To do this on the pillar drill, I place a ½in drill bit or piece of wood under the end of the blank when drilling. The angle is not critical but about 7° is my preference.
  - The blank is mounted between centres and the cross line is where it will be cut through to make the body and stand sections.
  - Using a spindle roughing gouge, turn to round and make spigots at each end to suite your chuck. Use a thin parting tool to cut a slot where the blank is to be divided. This can be done on the lathe (when mounted in you chuck) or taken off and done on the bandsaw with a suitable jig to hold the blank securely.
  - With the body section mounted, start to form the recess where the clock will be mounted. I'm using a clock insert that is 50mm in diameter but with a back insert section that is 47mm diameter, including the rubber gripping band that holds the mechanism in place when inserted in the recess. I use a fingernail spindle gouge and a skew to form the recess. It is most important to keep trying the clock in the recess so that a good fit is made, but also one that the clock can be removed by using your fingernail under the clock rim. Be patient to get the fit correct.
  - The main recess is formed and another smaller one deeper inside. My O'Donnell jaws will fit in this more securely when the blank is reversed for final shaping.
  - A bead has been formed at the front edge and shaping has been started before reversing the body to finish the shape. The clock has also been inserted to test the front proportions are as intended. Remove the clock and sand down to 600 grit. Seal this whole front area with sanding sealer.
  - Reverse the blank on to the chuck and finish shaping the form. Turn it carefully with your spindle gouge and then sand down and apply sealer. At this stage I don't apply any further finish, although you could spray with a lacquer if desired.























- I also burn a line between the front bead and the main body as shown in this photo. This adds more definition and clarity.
- The body is now complete apart from the final finish, which is done on a buffing wheel when all turning of the clock is finished.
- 11 Remove the clock body and mount the stand blank. I start with the bottom of the base and make this attractive by turning a bead as in the photo. Although it can't be seen when the clock is finished and standing, it does show attention is given to an overall impression and detail. All this work is done with a spindle gouge then sanded and sealed.
- The basic shape is finished apart from the spigot that will fit into the clock body. I don't take the spigot down to the final diameter until all sanding and sealing is finished as it needs good support for this.
- Sanding and sealing is finished and also a line has been burnt as shown. Now take the spigot down to a 3/sin diameter and part off.
- Both pieces have now been buffed on a buffing wheel using carnauba wax. Place a drop of good wood glue into the hole, insert the stand section and allow to set. I prefer to align the stand grain across (left to right) the body as this again shows attention to detail.











## Community news

What have you been turning? Please email your images to WTEditorial@thegmcgroup.com

#### **Super-sized**





With reference to your Arun Radysh Wadkin RU lathe article last summer. I too purchased a Wadkin RS lathe from a retiring pattern maker in Bromwich, after being very impressed by talking to Richard Findley when he demonstrated at our local woodturning club some three years ago and viewing his website.

Unlike Arun's flatbed truck, I hired a Luton van with a tail lift. Luckily, the owner had stripped the lathe down for me. The main part of the lathe he had on a pallet and pallet truck. We got said item on the tail lift but it would not lift it, to the embarrassment of my son. We began having thoughts of returning home without the lathe.

The owner's workshop was behind a car repair garage and the owner of the garage and his staff came to our rescue with his breakdown lorry. The lorry's back lowered to ground level to enable the pallet truck to be loaded. He then raised the bed and directed it at the Luton van, lining it up with the floor. Without any effort, the lathe loaded. All the rest of the lathe parts were loaded by the tail lift.

What wonderful people there are about – they certainly saved the day.

The owner of the lathe had a remarkable workshop with all Wadkin machines, a sea of green. Sadly, technology has overtaken his skills and machinery with computerised machines.

The main reason for writing is to show the size of the rear faceplate, which I have not yet come to grips with. I have used the centre drive with a makeshift larger wooden disc attached to turn a 24in plate which won me second price at our Woodbury Turners Club event in the summer in my class as a beginner.

I am still trying to work out how to attach work to the large drive plate, it has very small screws holding the outer plywood disc. I have spotted an 18in drive plate for sale, which is quite expensive. Perhaps I should go for that as it is a more conventional-type drive plate.

Regards, Roger Upchurch



#### Windfall

- **1.** On 18 February, the storm blows down our back fence. It has to be replaced and Bucks C.C. charges to dump wood at recycling centres.
- **2.** Four new students join my woodwork evening class at the Queens Park Arts Centre in Aylesbury to try their hand at woodturning, so the posts are cut up so that the students can gain the experience of turning between centres. Win-win.
- **3**. I turn some vases to give them an idea of what is possible.
- **4.** The pine is darkened with a blowtorch and finished with sanding sealer, melamine and wax.
- **5.** The vases are topped off with some tulips made from offcuts and diffuser sticks.

Phil Francis











#### 'Super' glue

With reference to the gluing woes experienced by Richard Findley, I would agree that Cascamite is not the same.

I grew up in the 60s and tins of Cascamite were all we used in woodworking at school. As a consequence I continued to use it for all my furniture needs and got through many 1kg tins – until a change of ownership and plastic tubs came along and I could never get a good bond.

So I looked around and settled on Titebond, which so far has never let me down.

About 15 years ago I thought I'd try Cascamite again, but I was again disappointed and I'm back to Titebond.

Regards, B J Greatrix

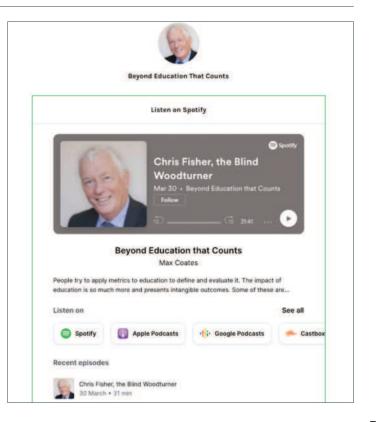
#### **Beyond education**

I am a professor of education, but more importantly I am a keen woodturner and naturally a reader of *Woodturning*.

I publish a monthly podcast entitled Beyond Education that Counts. I was looking at resilience and I recorded what I think is a very moving one with Chris Fisher – the Blind Woodturner. He really is a great guy and incredibly open.

I have just published the podcast. This is the link. https://linktr.ee/beyond\_education

Many thanks and best wishes Max Coates



Community news

# Turning for Ukraine

John Hewes shares a fundraising project

In around 1993 our daughter did a school exchange with Ulyana from Lviv and we have kept in touch with visits both ways. It is a beautiful country and the people are friendly and welcoming.

I wanted to do something to help at this terrible time for the country and felt helpless beyond sending some medicines, tinned food and a donation to the British Red Cross.

I had seen a demonstration somewhere years ago and decided to make some wooden flowers in blue and yellow to sell to raise money as a small contribution to help Ukrainian refugees. I had some old building timber and stains and started turning.

It is not difficult, does not need special equipment or tooling and results are quick and satisfying.



When I had used up my stocks of timber, I asked around the village and not only was I given more wood, but I also got lots of orders for the flowers from people who wanted to put them in their windows to show their support for the country, and I was soon turning most days.

All the sales money, without any deductions, will be sent to the Red Cross quickly as it is desperately needed.

I hope that, by showing how simple this is, lots of the woodturning fraternity around the world will also support Ukraine and show what we can do to help in times of need.

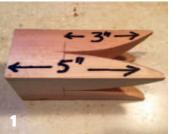
In fact, if you let me know how much you have raised, I will collate the numbers and report back!

#### Timber

The only two considerations are: does it produce a decent finish, and is it free? I have used some hardwoods, but mostly building-quality pine, which is perfect.

These are not going to win prizes at the international exhibitions, that's not the intention, but are a quick and enjoyable way for woodturners to help people in dire need. Please get going and let me know how you get on.

I ran out of suitable wood but my local Buildbase store in Thrapston (thanks Rory) let me clear up in its store providing



I ripped the timber down to 2in square and cut it into 5in lengths (50  $\times$  50  $\times$ 125mm for you young people). 1½in square also works well. I then marked it up freehand on two adjacent sides. Subsequently I made a template.



These were cut on the bandsaw.





... before moving around to bore some wood out of the centre about 21/2in deep with the same gouge. You just need to be deeper than the petals, if too deep you may break through later. Don't ask how I know this.



I finished off the inside of the flower with a hollowing tool...

50-60mm chuck loosely and squared

up by pressing a revolving centre

for all operations.

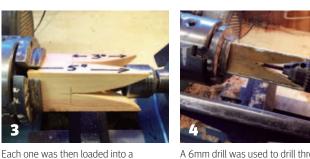
into the petals, then the chuck was

tightened. Lathe speed was 1000rpm

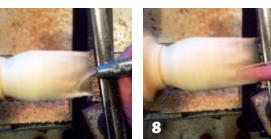


a lot of scrap wood and also gave me some lengths of dowelling. Axminster Tools has also been generous in its support (thanks Natalie), with some free abrasive and lacquer.

John Hewes, member of Ise & Nene Valley Woodturning Club



A 6mm drill was used to drill through from the tailstock, or as far as possible. I started it off with the tailstock clamped to centre the hole, then released the clamp and pushed the drill bit through in two passes, as it is a deep hole.



...and sanded with grade 80 wrapped around a slotted dowel,



Then I part turned the outside shape

with a 10mm spindle gouge, leaving

plenty of meat at the chuck end...

I returned to the chuck end and shaped that almost to a finish with a fingernail grind spindle gouge, leaving enough support for sanding and remembering there was a hole through.



I then sanded with 80, 120, 180 & 240, which gave a good finish. The bandsaw's edges I sanded with the lathe turned off. I parted off with the same gouge trying to avoid too much more sanding.



I worked in batches and checked each one, then coloured with one coat of Liberon water-soluble stain, finished with a spray lacquer, and superglued to a length of 6mm dowel.



I later made up a template, and a spacer to bring the spindle gouge to centre height for hollowing. Both helped to make life easier.

## **Turning** tradeshow heaven



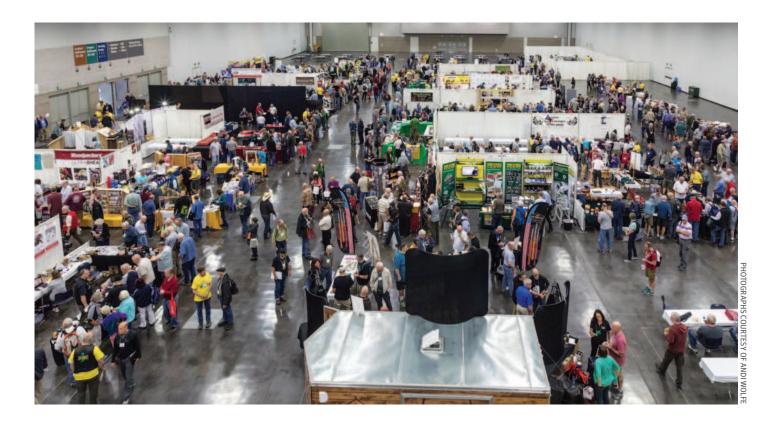
#### **Details and Registration**

For more details and to register for the event, visit our Chattanooga Symposium webpage, tiny.cc/AAW2022!



AAW's 36th Annual International Symposium, Chattanooga, Tennessee, 23-26 June, 2022

Shop at the largest woodturning trade show experience in the world, featuring state-of-theart lathes, tools, accessories, finishing supplies, and wood. Take in a range of ongoing live demonstrations and take new tools home. Bring an empty suitcase or even an empty truck.



#### **Exhibitors**

Advanced Lathe Tool Airbrushing Wood **Alumilite Corporation** Arrowmont

**Axminister Woodturning** 

Barbara Dill Beaver Badger

**Big Monk Lumber Company** Carter & Son Toolworks

**Carter Products Chefware Kits** ChromaCraft

Cindy Drozda Woodturning Tools

**Curt Theobald Studios** Designs by Gjovaag

Easy Inlay **Easy Wood Tools** First Wave 3D Corp

Hannes Tool LLC **Hunter Tool Systems** John Jordan Woodturning JPW Industries: Powermatic/JET Klingspor's Woodworking Shop Lami-Lube, LLC Lyle Jamieson Woodturning LLC **MDI Woodcarvers Supply** Peke Safety

Frugal Vacuum Chuck

**Premier Gauges** Real Milk Paint Co Robert Sorby **Robust Tools** 

Rockler Woodworking & Hardware

**Rotary Chisel** Spiracraft

Stainless Bottle Stoppers

Starbond Stockroom Supply Teknatool USA The Walnut Log LLC **Thompson Lathe Tools** Tom's Tools Trent Bosch Studios Inc **U C Coatings** Vince's WoodNWonders Woodcraft of Chattanooga **Woodturning Tool Store Woodturners Wonders** Woodturning with Tim Yoder

(as of 28 March, 2022, see woodturner.org for updates)



In addition to more than 100 demonstrations by world-class turners, the AAW Symposium in Chattanooga will also feature...

#### **Instant Gallery**

- Don't miss the 'oohs and aahs' from the Instant Gallery, the largest display of turned-wood objects under one roof.
- Attendees may bring up to three pieces to display (items can be for sale).
- Awards given in Youth, Collegian, and Adult categories. Awarded pieces will be featured in American Woodturner.

#### **Exhibitions**

## 2022 AAW Member Exhibition – Bridging the Gap: The Craft and Art of Turning

This year's theme draws from Chattanooga's many bridges as well as the continuum of work being created by our members, from primarily functional to completely sculptural and all points in between.

#### **2022 POP Exhibition and Auction – The Space Between**

The POP's annual exhibition and auction features small-scale work by an international roster of emerging and established artists. All work will be auctioned live during the Symposium. Can't make it in person? Bid online. To sign up to be notified via email when the online preview is available, visit tinyurl.com/notifymeAAW2O22. Proceeds support POP

programmes, including discussion panels, Instant Gallery awards, grants, and the Artist Showcase.

#### **Youth Woodturning Experience**

AAW invites the next generation of woodturners to learn from some of our best instructors. Youths aged 10-18 attending the Symposium with a registered adult are welcome to sign up for hands-on turning classes free of charge. Expert instructors include Sally Ault, Nick Cook, Katie Stofel, Kailee Bosch and Andi Sullivan. Visit tiny.cc/YouthTurning to register your youth participant.

#### **Panel Discussions**

- Photography for Woodturners: John Beaver, Rudolph Lopez
- Remote Demonstrations: Rebecca DeGroot, Alan Zenreich, Cindy Drozda
- Finding Your Voice: Kimberly Winkle, Donna Zils Banfield, Roberto Ferrer, Rebecca DeGroot
- Selling your Work Online: Keith Gotschall, Carol Vander Dussen Hall, Mark Hall, Greg Gallegos
- It All Adds Up Making a Living as a Woodturner: Mike Mahoney, Cindy Drozda, Ashley Harwood
- Who Says? Asking for, Accepting, and Evaluating a Critique of Your Work: Betty Scarpino, Kimberly Winkle, Melissa Engler
- Ask Us Anything: David Ellsworth, John Jordan, Merryll Saylan, John Beaver





## Full steam ahead

#### Woodturning Weekender is returning



#### YOUR DEMONSTRATORS

#### **Saturday morning: DARREN BREEZE**

Darren is a full-time woodturner, he is on the Register of Professional Turners, he's on the demonstration circuit, and has a shop on the Historic High Street in Lowestoft where he sells his work alongside a range of tools, finishes and timber. He has exhibited his work and demonstrated all over the country, won various competitions and accolades including a 1st prize at Wizardry in Wood in 2016, and been featured in *Woodturning* magazine. His passion is for coloured and textured work, most notably his large-scale wall-hanging pieces.

#### Saturday afternoon: RICHARD FINDLEY

Richard is a production turner based in Leicestershire. His background is in woodworking, coming from a long line of professional woodworkers. It is the variety that he enjoys, undertaking a wide range of commissions for furniture makers, restorers, architects, designers and joiners.

Richard is a well known and popular demonstrator, having written for *Woodturning* magazine for more than 11 years and demonstrated all over the UK, Ireland and USA.

#### **Sunday morning: JOEY RICHARDSON**

Joey is an English artist/woodturner/wood sculptor known for her delicate and richly hued wood forms. She grew up in the heart of Twigmoor Woods on a small farm. Here, the magnificent trees subliminally rooted within her a deep love for the woodland and she began turning and carving reclaimed local timber.

Her MA in Fine Art (University of Lincoln 2018) augmented her craft skills with a theoretical depth. Her sculptures are held in numerous permanent and private collections across the globe.

Inspiring others, Joey lecturers and demonstrates her techniques world-wide.

#### **Sunday afternoon: NATHANAEL GRIFFITHS**

Nathanael is an 18-year-old woodturner from Chester. He started woodworking aged 13 after being introduced to the lathe by his DT

teacher at school. At 15 he won the Axminster-sponsored Young British Woodturner of the Year 2019. In 2020 and 2021 exhibited at the Royal Academy of Art, Young Artists Summer Show. In October 2021 he had a prize-winning piece in the AWGB's Under 21 Ray Key competition at the Worshipful Company of Turners' Wizardry in Wood exhibition.

Plus: Our wonderful demonstrators will be at the show all weekend, ready to offer advice and information during breaks etc.

#### **ALSO, IN THE HALL**

There will be plenty to see when the headline stage isn't in use, with the following displays and demos:

#### **BERKSHIRE WOODTURNING ASSOCIATION**

Local club demo and displays.

#### **TURN AND BURN**

Bee and Andy Matthews will be on hand with tips, advice and demos on turning and pyrography.

#### **GLOUCESTERSHIRE ASSOCIATION OF WOODTURNERS**

Local club demo and displays.

#### **ZEBRANO WOODCRAFT**

Following a triumphant debut at the Northern Invasion, Dan Rees will be returning to show his ring-making skills.

#### **NORTH WILTSHIRE WOODTURNERS ASSOCIATION**

Local club demo and displays

#### THE MINIATURE WORLD OF ALAN CRAMER

Bring your magnifying glass to see the exquisitely tiny turnings of Alan Cramer, and watch him in action.

#### **AXMINSTER TOOL CENTRE**

As well as supporting us again with lathes, this year Axminster



will be bringing along a selection of tools, chucks and various accessories for sale.

#### **KENNET & AVON WOODTURNING CLUB**

Local club demo and displays.

#### SIMPLY WOODWORKING

Timber sales, specialising in native hardwoods.

#### **KIRSTY DALTON**

Following her hugely popular demo for us on Conkers LIVE, we are really excited to have tempted Kirsty down from Scotland to the Week3nder. Come and meet her in person.

#### **DAN SMITH OF TAYLORS MIRFIELD**

For all you pen makers out there, Dan Smith will be on hand to talk pens and how to make them, and will have a selection of accessories available for sale.

#### **THE DEMONSTRATORS**

There's no rest for the wicked. Our demonstrators will also be on hand to give extra advice and mini-demos.

#### **CHESTNUT PRODUCTS**

We'll have our stand there as well, so you can ask questions and top up on all your favourite finishes!

#### AND, LAST BUT NOT LEAST... YOU!

We're inviting all attendees to bring in an item or two to display in our instant gallery. Come and be an extra star of the show.

#### **GOOD TO KNOW**

Your ticket price gives you access to discounted parking a minute's walk away from the venue. Reasonably priced food and drink will be available before the show opens and during breaks. If we are

forced to cancel the event, FULL REFUNDS will be offered for tickets. (Does not include other costs, sorry.)

#### **AND THAT'S NOT ALL!**

The Woodturning Weekender is one of the friendliest events you'll attend. There are no cliques, no groups and no egos.

When the turning finishes on Saturday, it's time for our evening extravaganza. Join us for a sit-down meal with plenty of chat and fun, and a few surprises. Your evening meal ticket includes a two-course meal and there will be a bar available too.

PLUS: Your meal ticket will also grant you access to the rail museum after it has closed to the public. STEAM has some superb exhibits — lose yourself in them for an hour or two while we get the tables ready for the food, wander around in peace and quiet in this exclusive viewing opportunity.

#### **ONE MORE THING**

At Chestnut Products, the weekend starts early, on Friday evening. Join us in the cafe on site at STEAM for a very informal get together. Food and drink will be available to purchase at the bar, come and meet friends old and new and break the ice for the weekend. There's no need to book, just drop in (and out) as you please.

This is the LOOONG WEEKENDER!

The third Woodturning Weekender will be held on 30 & 31 July 2022 at:

#### STEAN

The Museum of the Great Western Railway Fire Fly Avenue Swindon SN2 2EY

www.steam-museum.org.uk

## Tools for Mozambique

#### We share Dalmann UK's appeal for donations of unwanted woodworking tools

In our cosy and so often over-equipped workshops, sheds and garages, many of us are still on a quest to acquire the latest tool to make life easier or help us develop a new skill, despite having at our disposal an array of machines, tools and accessories.



Local people are taught woodturning skills as a way to earn extra income

Craftspeople working with timber to eke out a living in the more disadvantaged countries of the world would surely be agog to see what even modest hobby craft workers in the UK have at their disposal, so hopefully, this appeal will strike a chord and enable us all to contribute to a worthy call for charity which will benefit the recipients directly.

#### Teaching woodturning in Mozambique

At a time when obtaining a truly responsible and sustainable supply of 'exotic' timbers from Africa has become increasingly difficult, Dalmann UK has emerged in recent years as one of the main importers of timber from Mozambique.

Dalmann UK's principal supplier, TCT-Dalmann, is located in remote Sofala Province. It is an area of rural wilderness with virtually no development of any kind.

The local inhabitants are basically subsistence farmers who eke out an existence by growing a few crops and supplementing their diets by foraging in the bush around them. Employment opportunities are non-existent, except for a few forest concessions in the Gorongosa National Game Park, which is being rehabilitated by The Carr Foundation from America, which is working with strong emphasis on environmental

preservation and social upliftment programmes for the local communities.

TCT Dalmann are a part of the conservation company Produto Naturias, whose forestry concession is on the periphery of the Gorongosa National Park. Ant White at the sawmill has started to set up a woodturning school offering free training to any interested locals. With this training he is hoping to create self-employment opportunities for the students and a market for their turnings. This will enable them to enjoy a cash income from their efforts. Currently all turnings done at the sawmill are made with handmade tools and chisels, as there are no commercially made tools available to them. The same goes for the lathes, chucks, accessories, etc.

The driving motivation is to show that, with a little ingenuity and some help, local people can be trained to convert what might otherwise be firewood into a commercial product that can become a reliable source of income.

The current tools in use are hand-forged from confiscated poaching traps using local charcoal and used on their only woodturning lathe. In an effort to assist Ant, Rob Wilson of Dalmann UK sent out a plea to the major UK suppliers to turners and woodworkers to ask customers to donate any redundant tools to this cause. The quality of the tools is not important as 'something is certainly better than nothing'.



The students learn to make products that they can sell



The furnace uses locally made charcoal

In this scenario even old carbon steel tools (which most of us have eschewed in favour of high-speed steel and other fancy steels) would be gratefully accepted.

## The initial list of suppliers who have signed up to support this worthy cause are:

- Stiles & Bates
- Charnwood
- Exotic Hardwoods UK
- Reid Timbers
- Snainton Woodworking
- Surrey Timbers
- Turners Retreat
- WP Hardwoods
- Yandles & Son

These suppliers will install a box for the tools to be dropped in and when there is an adequate amount, Dalmann will arrange and fund the collections and export to Mozambique.





Animal traps like this are confiscated and recycled into woodturning tools



A range of the tools made from recycled traps  $% \left( t\right) =\left( t\right) +\left( t\right) \left( t\right)$ 



The woodturning school currently only has one lathe

## Turning a burr oak finial box

John Hawkswell makes a handsome piece from two wood types



#### The design challenge

Once I had planed the surface off the piece and saw the glorious burr on offer, I decided that the shape would have to incorporate as much of that burr as possible, hence the relatively large box diameter. Also, for the same reason, the hole through which I was hollowing out would be relatively small. The smallest hole size I could manage was determined by the hollowing tool available. Unfortunately, having decided on a relatively large diameter for the bowl, the wood was not quite thick enough to accommodate the shape I had in mind. To disguise this somewhat, the foot component would be shaped to suggest a continuation of the curve. I am pleased to say I managed to resist the temptation to turn a really

exuberant finial, standing tall and fancy. This would be fun to turn but might have been difficult to live with.

I suppose that finials are very much down to personal taste, which is fair enough, and I must confess I prefer to view relatively delicate ones.

I have tried to incorporate a foot that is shaped to present a reverse image of the shape of the box (see arrows on the plan). This foot also performs the task of allowing one to see the curve of the entire box.

Apart from the burr, the material used for the rim, the finial and the foot were walnut. These days I feel uncomfortable using scarce timbers such as ebony or African blackwood. However, as black looks very effective as a contrast to the colour of the burr, the walnut was ebonised.

#### **Plans & equipment**

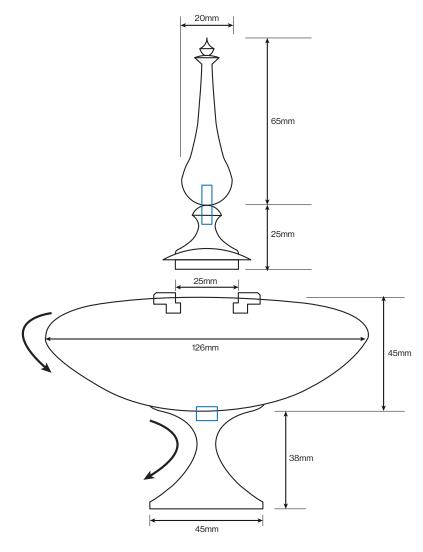
#### **Materials**

- A piece of burr, 150 x 60mm
- Walnut for the foot, 50 x 50mm
- Rim, 50 x 30mm
- Finial 40 x 100mm
- Abrasives 120 grit down to 4000 grit
- Micro mesh sanding pads were used for the finer grits
- Homemade sanding aid to sand inside
- the vessel (see photos)
- Piece of dome-shaped polystyrene to provide support without marking the wood

#### **Tools & equipment**

- PPE as appropriate
- Bowl gouge
- Sorby multi-point hollowing tool

- 6 mm spindle gouge
- 13mm spindle gouge
- 13mm round skew
- Beading and parting tool
- Narrow parting tool
- Diamond parting tool
- 4mm and 25mm drill bits
- 15mm Forstner bit
- Vernier callipers







#### **Bowl**

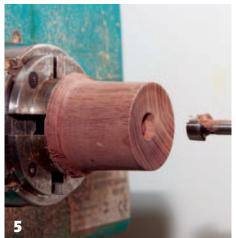
**1** Decide which part of the blank to use to show the burrs off to best effect. You might need to lightly plane the area to reveal the best part of the wood to use.

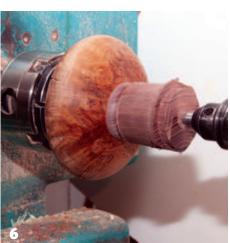
**2** Mount the selected blank on the lathe and start to shape the outside of the box. The photo shows the blank attached to some sacrificial softwood by means of hot-melt glue. This method of holding the work was chosen to enable the full thickness of the burr to be utilised. Once you are happy with the shape of the top of the box and with the blank still on the sacrificial chuck, drill a hole and fit a screw chuck. You can now proceed to the next stage.

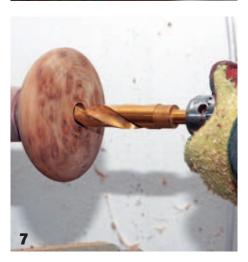
- **3** With the work mounted in the screw chuck and with the tailstock located in the original centre mark on the pine chuck, which is still attached with hot-melt glue, shape the underside of the box. Once the softwood chuck has been turned away, check for an even curve. It is sometimes helpful to use a flexible guide such as this hot-melt glue stick to reveal flat areas that will need to be dealt with.
  - 4 Drill a shallow hole, 15mm diameter, no more than 4mm deep. This will help to locate the foot.
  - **5** This piece of hardwood (walnut in this case) will be used to form the foot. A 15mm hole is drilled. The surface is shaped to match the curvature of the box so that the surfaces will fit snugly together. The two components are glued together using a walnut dowel 15mm in diameter.
  - **6** Glue the piece that will form the foot to the body using the dowel connector. Line up the tailstock using the witness mark already formed when the wood for the foot was turned between centres. Make sure there is no gap where the foot meets the box. Once the glue is dry, true up the tenon so that the work will run true once reversed.
  - **7** Reverse the work in the chuck and drill a 25mm diameter hole. This type of drill leaves a mark that is easier to deal with than the indentation left by a Forstner bit.
  - **8** Commence hollowing out. The photo shows a Sorby multi-tip hollowing tool about to be deployed. It is ideal for small hollowing jobs. By adjusting the position of the cutting tip, the inside of the front of the box can be undercut. This job is best done first while there is plenty of support from the wood left at the bottom of the box. Do not make the top of the vessel wall too thin because we need to cut a recess for the rim. Gradually hollow the rest of the box, remembering to check the depth periodically so you don't go through the bottom, as it is all too easy to do this.
  - **9** Once you are happy with the hollowing, move on to the next stage. If you are going to sand the inside, now is the time to do it, before you refine the opening. Do not be tempted to put your fingers inside the opening with the lathe turning. These homemade sanding gadgets work quite well and keep the digits clear of the revolving work. Stick some Velcro to some shirt hanger wire. Drill holes for the wire ends and push them into a handle. Velcro-backed abrasives can be attached directly to the Velcro.
  - **10** The finish is a matter of personal choice. I decided not to apply an oil finish but to simply burnish the work with fine abrasive and leave it without any finish. I started with 120 grit and finished with 4000. Now, with the sanding out of the way, use a parting tool to cut a recess. This is why it was a good idea to leave a reasonably thick wall.

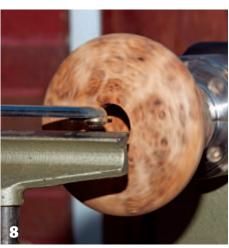






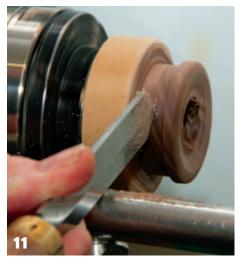




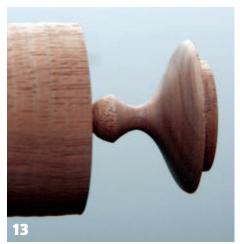






















- Now we can turn the rim that will fit into the recess you have just created. A detail spindle gouge and parting tool complete the job. A hole is drilled through the centre. Once this rim has been glued in position final adjustments will be made to the diameter of this hole.
- Here is the finished rim insert, which should be a firm fit into the recess cut in the box. Once you are happy with the rim, glue it into position. With the glue dry, create a recess in the rim that will accommodate the finial base. Once you have reached this stage it is time to work on the finial.

#### **Finial**

- 13 This method of producing a finial may not suit everyone but, as they say, it works for me. The base is made separately from the top using, in the main, a detail spindle gouge. The top section of the finial is then attached to it by means of a small pin made in the same material. The first task is to make a spigot which is a tight fit in the recess you have created in the rim. Once you are happy with the design, sand and part off.
- The base section of the finial that you have just made is fitted on the finial box and a 4mm hole is drilled in the top of the base section to take the pin.
- We can now move on to the top section of the finial. Before turning commences, a 4mm hole is drilled at the headstock end of this blank to allow a pin to connect this section to the finial base. The procedure here is to start with the top and turn and sand each section before moving down to a lower section. In this way, the turning is supported by a good mass of timber. In theory, you should not need to return to a completed section. With this approach, vibration in the workpiece is generally avoided.
- **16** As you near completion of the finial you may need to steady the end. A piece of polystyrene at the tailstock end often suffices. The advantage of this method over steadying the work with one hand is that you can continue to use two hands to turn.
- It is now time to turn the foot. This same polystyrene attached to the live centre supports the operation nicely. A spindle gouge with a long bevel gets into this tight curve.
- The finished article. With the main body masked off, the foot and finial were ebonised using ebonising lacquer. •

## Turned butter moulds

Kevin Alviti combines his love of turning, carving and butter in these traditional moulds

When I think of some of my favourite foods there are not many that couldn't be enhanced by the addition of some extra butter. Don't get me wrong, sweetcorn harvested fresh from the garden at the tail end of summer and boiled within minutes of being picked is heavenly, but add a knob of butter to it and suddenly it's divine.



Our love of butter in the northern parts of Europe has been around for an estimated 9000 years or more. No doubt discovered by accident, maybe milk being carried a long distance, churning itself into butter and whey, but however it happened it became a staple rapidly. The ancient Greeks, who had climates suited to olives, looked down on those who lived further north and called them 'butter eaters' as a derogatory term, but that didn't stop us.

In the not-so-distant past, there were whole industries around dairy and butter in particular. A while back I was fascinated to read about butter moulds — wooden forms to shape and mark butter were essential when selling at market so customers knew which farm they were buying their butter from. There were whole workshops dedicated to making these moulds in America (although they'd be called 'molds' in the US), which seems hard to believe now, but every holding would have had its own stamp when the small farm was king.

I looked a little deeper and found there was a host of different types and styles of butter moulds out there, varying by country or region. Some were huge, for shaping a pound or more of butter, others were smaller for single servings. The shapes varied as well, and the one I instantly focused on was the turned one, which must have been popular as there were so many examples. These had a cup-like shape with a carved pattern at one end that pushed out to release the butter.

In my mind, it was the perfect turning project – some between centres, some in the chuck and a little bit of carving to finish. It would make an ideal butter mould for flavoured butters if having guests round to dinner or if you just wanted to try your hand at making a small amount of butter.

In my research into the subject, there were a few timbers used for the moulds, but the most popular was sycamore. It's a food-safe wood that turns easily on the lathe and takes carving detail well. Any food-safe wood would be fine for this, like beech or fruitwood (pear, apple). I had some 50mm planks of sycamore that were perfect for this project.

I'm not making a high-gloss, perfect-finish vase — this project is supposed to be utilitarian. I'm not going to sand the pieces much, a smooth finish that's easy to clean is what I'm after. In the past, these moulds would probably have been fresh from the tool with very little sanding.

### **Plans & equipment**

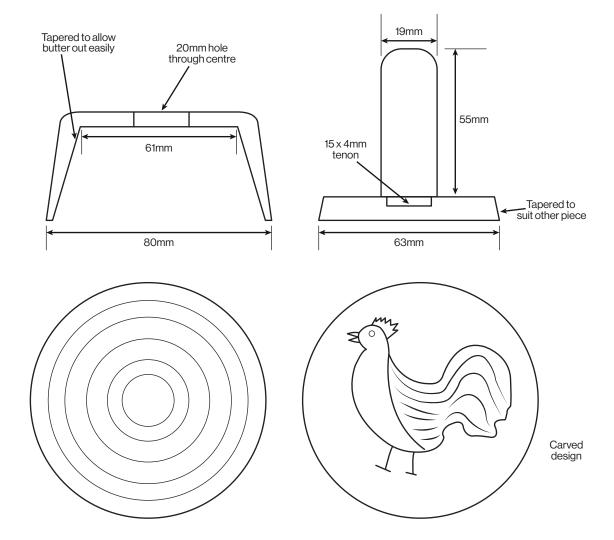
#### **Materials**

• 50mm planks of sycamore

#### **Tools & equipment**

- PPE & RPE
- Bandsaw
- Lathe
- 19mm spindle roughing gouge
- 9mm bowl gouge

- Skew chisel
- Scraper chisel
- 9mm spindle gouge
- 6mm parting tool
- 2mm parting tool
- 15mm Forstner (or sawtooth) bit
- 20mm Forstner (or sawtooth) bit
- Jacobs drill chuck to mount on the tailstock (mine is a 2MT)
- 4-jaw self-centring chuck
- Lightweight carving mallet
- No.6, 13mm gouge
- No.6, 9mm gouge
- No.6, 6mm gouge
- 60° 13mm V-tool
- 3mm veining gouge



#### **Top tips**

#### **Template for chuck jaws**

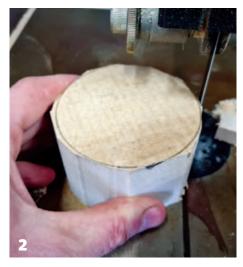
If you use your chuck a lot it's worth having templates for the different jaws so it's easy to make the tenon to hold the work. Having these makes the job quick and efficient.



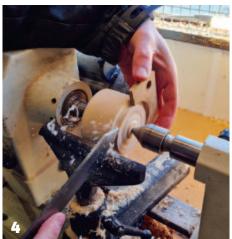


**1** Select some clean-grained wood with no knots for this piece. I cut mine from a 50mm thick slab of sycamore, marking out enough blanks for the number I wanted to turn. I cut two discs for making one mould (and a spare as things occasionally don't go to plan) which left enough at the end to be the handle.

- Cut the blanks on the bandsaw. It's never worth being too fussy when doing this, they don't need to be round that's what the lathe is for. But take care when cutting, it's all too easy to feel complacent when using a bandsaw as it doesn't seem as dangerous as a tablesaw, but they still bite.
  - Mount it between the centres of the lathe. I knock the drive centre into the blank with the sharp blow of a mallet to get it seated firmly before mounting. I'd recommend starting at a speed you're comfortable with to rough this blank down. Make sure it doesn't foul the toolrest before starting the lathe. Use a bowl gouge to true up the blank. I have a terrible habit of approaching everything at high speed, but it's better to start slow and build up.
  - 4 Using a parting tool, turn down one end to fit the jaws on your chuck. Mine is 56mm diameter and I have a ply template cut to make sizing this quick and easy. I just remove wood steadily until the ply template slips over it. When measuring the jaws on your chuck make sure you take into account the fact that many are not a perfect circle when fully closed up and work better to allow for this.
  - Taper and shape the outside of the mould. It doesn't have to be perfect at this stage but it's good to get somewhere near the shape you want to finish with. A slight taper looks nice, but straight sides will work equally well. Soften the corner that will be against the chuck as well.
  - Remove your drive centre, fit your chuck on the lathe and tighten the blank in there.
  - Lower the toolrest slightly so the bowl gouge can go in dead centre. I marked up my 9mm bowl gouge with the depth I'm after. I want to remove enough material to house the eventual butter and the plunging base, so down to about 35mm. Put the bowl gouge on a 45° angle, hold firm and slowly push it into the wood, clearing often careful as the gouge can get warm doing this. Alternatively, you can use a drill chuck mounted in the tailstock end.
  - Working from the outside in towards the centre, hollow out the mould. With sycamore you should produce some good long shavings.
  - **9** Try to get a good finish straight off the tool. Use sandpaper if you need to though, working up through the grits, but no more than 220 is needed. The transition from the sides to the bottom might need a square-ended scraper to prevent too much of a curve. The inside of the mould of the bowl part should now measure 75mm, which is the outside diameter for the jaws I have on my chuck.

































- Turn the piece round on the chuck. I used some tissue wrapped around the jaws to protect the inside, but again, slight marks won't affect its use.
- Start the lathe at a slow speed, then turn away any evidence of how you mounted the piece in the chuck before. Round over where the sides change to the bottom. Sand and finish this now.
- In the tailstock, set up a drill chuck and a 20mm Forstner bit. Slowly wind this into the workpiece and drill all the way through, clearing the bit as often as you need to. It shouldn't be more than about 8mm thick, so it won't take much.
- Remove this from the chuck and take internal measurements for the base of the plunging part of this build. If it tapers try to take the measurement 5mm up from the bottom and the measurement tight to the deepest part.
- I used another blank for this like I did in steps 3-5. Once it was mounted in the lathe I took a 6mm parting tool and gauge and turned it down to the required diameter.
- With the drill chuck in the tailstock again, change the bit over to a 15mm Forstner and create a mortise around 4mm deep to accept the handle we're going to turn.
- Use a narrow parting tool to take the disc off the lathe. It should be around 10mm thick. Because you are cutting so deep, make the cut in stages, wider than you need for the tool to allow some clearance for the waste to come out. Catch the piece as it comes off the lathe.
- The last part to make on the lathe is the handle for the plunger. Take a 25 x 25mm square of the sycamore and turn it to round with the spindle roughing gouge.
- **18** Set a gauge to 20mm and use a parting tool to turn down to this diameter at either side of the blank. Then use a skew chisel to turn it down to just under that diameter, aiming to have the shaft slip easily in and out of the hole (easy, this is a family magazine), take it off the lathe and test if you're in any doubt, it's easy to re-mount it.



- 19 Turn the one end down to 15mm to form the tenon for the piece we drilled in Step 16. Round over the other end to create a nicely-shaped handle.
  - **20** Test it all fits together how it should. There should be no resistance between the pieces and the base should sit nicely inside the bowl part.
  - 21 Time to think about decorating the bit that will stamp the carving. This is inverse carving, so what you see isn't exactly what you'll get on the butter. I went for a cockerel design. Wedge the piece up so it won't move while carving. I have a waste piece of plywood for this where I can screw different stops to hold it in place.
  - **22** With the design drawn, start at the deepest part, working with the grain. Go deeper by coming from each end downwards and try to leave the transition where depth changes back the other way as smooth as possible.
  - **23** Take a slightly smaller gouge and work up the neck and head of the animal, make them plumper than you think is necessary as it's too easy for shapes to get lost on a mould like this.
  - **24** With a sharp V-tool, add in lots of detail. With sweep cuts, working with the grain, it's easy to create the effect of feathers on the bird, as well as simple legs.
  - **25** I used a nail punch to create the eye. You could also add tufts of grass or more detail at this stage, but I've found it best not to add too much.
  - **26** I tested mine using some dough as I went along. This gave me a good idea of the finish I'd be getting.

























- **27** If you don't fancy carving you can also re-mount the piece on the lathe using a jam chuck where you hollow a piece of scrap wood to wedge the workpiece in place, away from being marked by the jaws of the chuck. Then turn geometric designs on there, using a parting tool or similar.
- **28** Glue the handle on to the base. You should have a good tight fit, so it might need some gentle persuasion to go together (hit it lightly).
- **29** Treat all the wood with a food-safe finish. I went for pure tung oil, although I'm sure the fact it's used with butter will build its only natural finish and patina over time.

#### **Butter mould in use**

**30** To use the mould took me a few attempts to get right. Put the mould in the fridge and get it cold. Do the opposite to the butter – leave it out on the side until it's a nice, spreadable consistency. Don't microwave or try to melt it with heat. Then simply push the butter into the mould, making sure it gets right down to the bottom, level off the top with the back of a butter knife and pop the whole thing in the fridge for a few hours. It should come easily out of the mould and be ready to use. Washing with cold water also helps.

#### Did you know?

#### The tale of two forms

My plan for this article was to turn two of these moulds to look the same and show one with a carved inside and one that was more geometric in design. I turned the outside to look different to show that they can be different shapes and finishes. Variety is the spice of life and all that.



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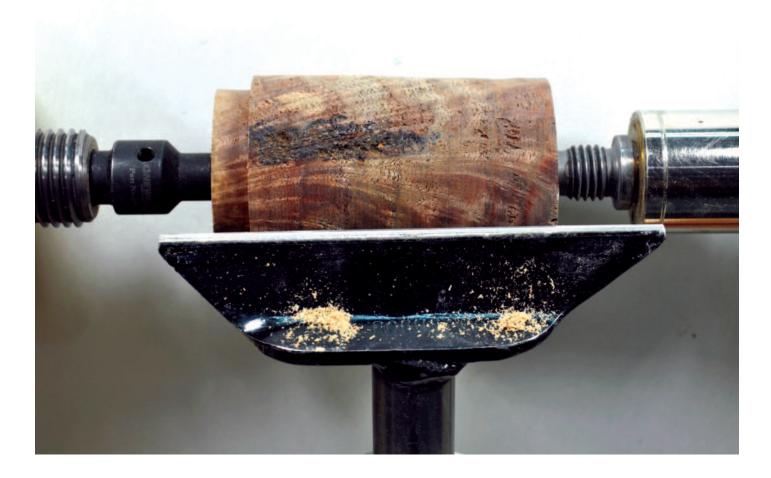
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## Tune up your drive centre

Mark Palma puts you in the driving seat for a high-performance lathe

We pay no attention to the four-prong drive centre that came with our lathe. In fact, it came with no instructions or use suggestions, one is just supposed to 'know' what to do. So let us spend five minutes with this overlooked workhorse of the lathe and make it perform better than new.



#### Sharpen the drive spurs

Your drive centre is comprised of a centre spur, two or four wedgeshaped spurs, and a metal shank with a morse taper. Examine the centre point to see if is straight. The centre point need not be overly sharp, just able to index into the centre mark you put into your blank to locate it on the lathe.

The wedge-shaped drive spurs are what engage the wood blank and secure it for turning between-centre works. The sharper the spurs, the better the bite into the blank. Although some pound the blank into the drive, this seems to be a practice that does the drive bearings in your headstock no favours. A better practice seems to be to have sharp spurs that bite without brutality. A few minutes with a file laying on the flat of each side of the wedge will put a nice sharp edge on them. Perform this step off the lathe so you do not drop metal filings on to your lathe ways.

#### **Inspect and clean the morse taper**

Look at the shank of the morse taper for nicks, scratches, rust or oxidation, or any other irregularities. As this is inserted on to the corresponding taper in your headstock you do not want to accidentally damage the internal taper on your lathe. A little 400 or 600 grit silicon carbide abrasive will remove minor nicks and scratches. A file may be needed for major problems. Finally, polish the taper with some 0000 steel wool (or a corresponding abrasive pad) to return the shaft to a

mirror finish. If you cannot achieve this due to damage to the drive centre, toss it in the recycling bin and buy a new one. A drive centre is far less expensive than a damaged headstock.

#### Clean the internal taper on the headstock

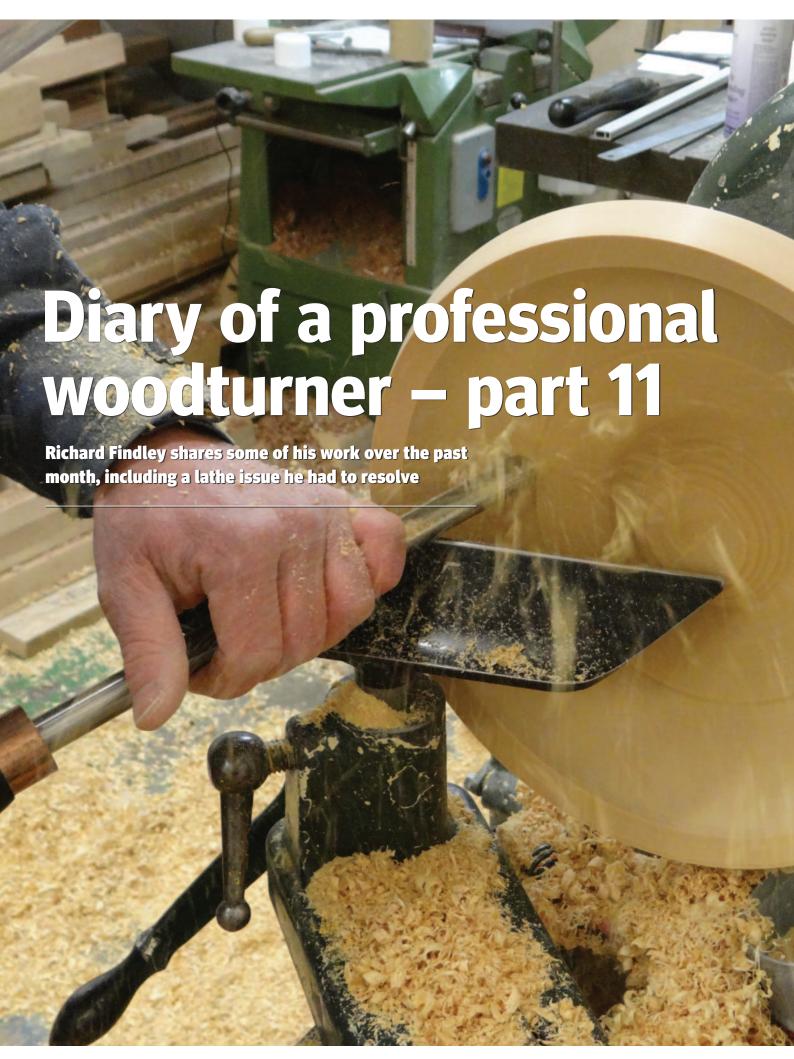
It makes no sense to spend time cleaning the morse taper only to insert it into a shaft that has debris in it. Although a rag will do the job, a morse taper cleaner is a tool that seems worth the investment. With the lathe off, insert the tool, or rag, spin the headstock with your hand (DO NOT turn on the lathe) and rotate one or two revolutions. That will remove the debris that accumulates within the shaft. It's good practice to do this before you insert anything into the headstock (especially after you remove a chuck).

## Make sure your headstock and tailstock are in alignment

Unless your goal is to learn off-centre turning, the point of your drive centre and your tailstock must be in perfect alignment. So from time to time test your lathe to ensure things are set up properly. If you experience a problem, first try a different drive centre and then tailstock centre to see if it is the lathe or the accessories. If it is the lathe, read your lathe's instructions to determine if there are adjustments that can be made to remedy the situation.



1 Four-prong drive centre 2 The drive centre and diamond sharpening paddle 3 Polish the drive shaft with a non-abrasive pad 4 A little oil or wax protects the tool 5 Clean out spindle taper 6 Check alignment of headstock and tailstock







**1** My little yellow Perform lathe was well used as a demo lathe, here in 2011 **2** My Jet lathe in my workshop back in 2009

Arguably, a lathe is the most important piece of equipment for a woodturner, so keeping it running in good order is vital. When I had a problem with mine this month, I had to roll up my sleeves and put on my mechanical engineer's hat to get it back in working order. In the meantime, I had plenty of turning work to keep me busy, as usual.

#### Lathes

You will be familiar with my old Wadkin RS8 lathe from seeing it in the pictures that support my articles. Those of you who have been reading the magazine for some years may remember me writing about buying it back in 2011 when I was writing my original diary series. I'll recap the story for those who haven't been reading *Woodturning* magazine for quite that long.

My first proper lathe was a Perform CCSL, a cheap yellow lathe that Axminster used to sell. It had the standard castings familiar to a lot of bench-top sized lathes, but came with a bed extension, making it over a metre between centres. I still have 'the little yellow lathe' and used to use it for demos in the early days. It still occasionally gets a run out, but mostly it lives under my bench, just in case. It was my main lathe for the first year or two of my hobby that would turn into an obsession, and then into a career. As is often the case, I soon found I wanted more capacity and more power. I upgraded it to a Jet 1442 in around 2005. This was a floor-standing lathe with cast iron legs and a rotating headstock, allowing me to turn much larger work. I later added a bed extension so I could turn up to 1500mm between centres.

The Jet took me from being a very keen hobbyist to a full-time professional turner. Despite it being rated as 'industrial', it couldn't keep up with the rigours of being a full-time production lathe, so I needed to upgrade again. The problem was that I was about a year into running my business full time, I had a wife, a young son and a mortgage and so money was quite tight. The Jet had good capacity on paper and to buy a new lathe that matched, or ideally exceeded this would have cost me somewhere north of £3,000 or £4,000, money I simply didn't have. After talking to a few professional turner friends, the idea of an older lathe seemed like it might be worth considering. These older industrial lathes were designed to run all day long in professional pattern shops and compared to modern lathes, you get a lot of lathe for your money. I'd had experience using traditional cast iron Wadkin machinery at my dad's factory, although never a lathe, so was familiar with the build quality.

The Wadkin RS range of lathes were made from the 1930s up to the 1970s, originally designed as a patternmaker's lathe, they were large, heavy and powerful and available in three models. From reading an old brochure I found online, I could see that the RS8 would fit in my workshop perfectly and would give me a slight increase to the capacity of the Jet, with the added benefit of an extra 600kg in weight. It was just a case of finding one...









- 3 The speed-change lever and part of the internal mechanism, removed from the lathe 4The lathe with the arm removed 5 The offending tapered pin with the replacement
- **6** Reassembled, the lathe is running better than it has in years

#### **New lathe**

I had been scouring machinery sales websites and eBay for a while when one came up. RS8s seem rarer than the smaller RS6 and even the larger RS10. When this one was listed on eBay, it was not only an RS8, but it had eight speeds, another rarity, as most only had four speeds.

The listing ended before I could do much about it. When it was relisted for a second time I thought long and hard about it and discussed it with my wife, and we decided maybe now wasn't the best time, and the listing ended. When it came back on for a third time it seemed someone was trying to tell me something. After another chat with my wife, I spoke to my dad and he offered to lend me the money to buy it. We arranged a visit to see it in place and dad and I drove up to Lancashire to take a look. Apart from having been severely underused for many years, it seemed in pretty good condition, so the deal was done and we arranged for it to be delivered to my workshop. I can't remember exactly, but I think it was around £1600.

It was delivered on the back of a small flatbed truck, fitted with a crane. Dad and I had spent the morning clearing the workshop so we could get it in. After much shuffling, manhandling and not a little bit of swearing, my 'new' lathe was in place.

I say 'new' in inverted commas because a small amount of research showed it had been made in June 1950, so was 30 years older than me. After having some new bearings fitted and a new belt and giving it a good clean, oil and grease, it has been my daily user for all items, big or small ever since.

#### **Problems**

That was back in 2011, so for more than 10 years it has coped with all of my work without a single hiccup – these old machines thrive on being worked. In the last couple of years, I had noticed a slight misalignment develop between the position of the speed adjustment arm and the internal mechanism that shifts the belt between pullies. The speed change is somewhat old-fashioned but works easily and reliably. There is a foot pedal, a little like a clutch, that lifts the motor, taking tension off of the belt, the big lever on the front of the machine is lifted or pushed down into the new speed position, which moves the belt to a different pulley, the foot pedal is released, and the lathe runs at its new speed. There is a spring-loaded locator on the arm, so at each speed point there is a set position for the arm to sit, but recently the arm has had to sit a little

out of its locator for the belt to run in the centre of the pulley. This was obviously wrong, but I could never get to the bottom of the problem and none of my Instagram Wadkin friends could pinpoint the problem either. It was never really an issue though, so I largely ignored it until earlier this month when I went to change speed and the arm suddenly moved without moving the internal mechanism!

Now, woodworking I am comfortable with, but machines are a slight mystery to me. I can work them all very well and do day-to-day maintenance, but when things go wrong, I'm a little out of my depth. My initial instinct was to ring a local woodworking machinery repairs and servicing company. The eye-watering quote I received spurred me on to have a go at fixing it myself! After a chat with an Instagram friend who knows far more than I do about the workings of machinery, I found the issue.

As with anything like this, actually getting to the problem was almost as difficult as fixing it. There are two access holes in the back of the headstock casting through which I had to work. Squeezing myself between the lathe and the wall it sits against, then twisting and contorting myself into a position that wasn't too uncomfortable and in which I could work, I set about undoing a couple of bolts that hold the mechanism in place.

The problem revealed itself as a simple tapered locking pin that links the outside speed control arm to the mechanism that had snapped. After removing the internal mechanism and the speed control arm I was able to tap out the remains of the pin and measure the size of a new one. It was quite a mission to find a replacement tapered pin that would fit. With the machine being from the 1950s, the original was imperial, but imperial tapered pins are somewhat like hen's teeth, so I found a metric one (I say one, but I had to buy a box of 25, so if you need a tapered pin, you know where to come) and ordered online.

With the replacement in hand, I cleaned and oiled the moving parts and slotted everything back together again. With a little help from a neighbour (when you work alone, friendly neighbours are essential, and we all help each other out from time to time) I was able to get the holes lined up and hammer the pin into place.

The mechanism is now working better than it has in years. Everything lines up as it was originally intended and because I cleaned and oiled it, the action is as smooth as silk. Despite losing about a day and a half of work, I felt rather proud of myself for having fixed it and thankful for having friends who can give me a hand when I need it.









7 The pile of bowl blanks supplied by my customer 8 Action shot of hollowing one of the bowls 9 The finished stack of bowls and pendant lights 10 Cutting corners on the circular saw bench

#### **Bowl turning**

All of that happened in the middle of a production job I had to turn bowls. I'm best known as a spindle turner, but as a professional 'jobbing' turner, I will generally turn anything that anyone will pay me to make, so on this occasion, I was asked to make some bowls and pendant lights to my customer's design, in their own timber.

The blanks were delivered on a pallet along with a 1:1 drawing of the bowls, so everything was lovely and clear as to what exactly I would be making. The hardest part was the wood that I was to use: Siberian larch. I've never turned larch before but have turned Douglas fir, which is quite similar, being a good quality softwood. Good quality or not though, softwood is just more difficult to turn cleanly than most hardwoods, which meant there was rather more sanding than I would have liked, but the job went well. It's amazing how your technique improves when you are repeating the same actions day after day. There were 42 bowls in three sizes and eight light pendants, all from the same laminated larch. I scheduled a week to make them and had it not been for the time lost repairing the lathe, I would have hit my target. Thankfully I had a little extra time in my schedule later in the month, so I was able to catch up with myself without it causing me too much stress. I have learned to try to keep a few days clear each month for those jobs that take longer than they should, or in case something should go wrong.

I follow several bowl turners on Instagram, and I have to say, I don't envy them. As much as I enjoyed getting stuck into a large batch of bowls, I don't think I could do it day after, day, after day. One of the turners I follow is my friend Glenn Lucas who makes something like 1000 bowls a year and has perfected his process down to a fine art. After hearing how he selects, cuts and dries his timber, part of which is to get the most out

of the wood, both in terms of the most bowls from a log and in terms of the best appearance of each bowl, but also by carefully cutting and orientating his blanks he makes turning easier for himself by working with how the wood cuts best, I can't help feeling that my laminated larch blanks were something of a battle in comparison.

Having said that, after making 48 of anything, you learn how best to cut the wood to be as efficient as possible and leave the surface as clean as it possibly can be before the final sanding, and all of the bowls left me looking pristine and smoothly sanded, ready for the customer to apply his finish to them. As always, regular sharpening was the key to success as the soft larch needed a razor-sharp gouge to cut it cleanly.

#### **Wood waste**

The large pallet that arrived wasn't needed for the return journey as the bowls, now neatly wrapped and stacked into just five cardboard boxes, the rest of what had been delivered 10 days earlier was swept into countless black bags and disposed of.

I am often asked what I do with my shavings and unfortunately my answer is that they go in the bin and eventually go to landfill. In this day and age, you would think that there would be companies queuing up to take my clean wood waste away for biofuel or to produce green energy in some way, but I have scoured the internet and can find no one who wants it. I have the occasional gardener or chicken owner who takes a bag, but I can't give it to anyone with horses because I use quite a lot of walnut, which is poisonous to them, so it goes into landfill and costs me plenty each month to be taken away. Without the bags of wood shavings, I would have only a tiny fraction of the waste that I currently have.









11 The laminated sapele columns, ready for turning 12 Turning one of the columns 13 The finished columns, showing the entasis 14 The sapele table legs

#### **Columns**

Probably my favourite job this month was for a pair of small columns. When I say small, I mean small for columns, but they were still a fair size to turn.

They were laminated from five layers of ex50mm sapele and were 220mm at their largest diameter, so they just – and I mean just – fitted in my press. With the combination of my new glue and the press I was confident that the laminations wouldn't be a problem and even after turning, they were perfect. The columns stood just shy of 1100mm tall, the square ends that you can see in the picture were separate, the columns having turned tenons on each end and the blocks being drilled to house them.

The laminated blocks were heavy but manageable. To make the turning easier I took advantage of the tilting blade on my circular saw bench to remove the corners of the blanks, making them lighter and speeding up the turning process. Removing corners like this on spindles isn't something I do as a matter of course, but on larger work like this, it definitely makes things easier.

The turning progressed well, and the columns were soon ready to slot into the square ends and have the customer collect them.

My favourite thing about these columns was the use of entasis. Entasis is the gentle curve that you can see on the long central portion. These were designed by an architect who obviously understood the principle, where most people would just have that as a straight or slightly tapered section. Entasis is something seen in ancient Greek and Roman columns. Some say it is to counter the optical illusion that a very long

straight column would look as if the sides were slightly curving inwards, however, there are examples where these columns have massively exaggerated entasis, so it was clearly more than just countering this trick of the eye and most likely a conscious design decision. Personally, I think they simply liked the look of it. I think most people who see entasis on a column would agree that it certainly has visual appeal.

#### More sapele

Sapele is one of those woods that I can go for ages without using, then I'll get several jobs at the same time that need it. Sapele is a versatile timber, it is often used for outdoor work, including doors and window frames, because it has some natural resistance to the elements but takes paint well. For this reason, I will often use it for external finials and porch posts. Oak and accoya both have better resistance but are considerably more expensive options, so cost is also a factor in its favour. For indoor work, it looks quite similar to mahogany and takes stain well, so can be used to give a traditional mahogany look at a reasonable price. The columns were in sapele because they were outside. I also had a commission for a set of four table legs to make from it, to the customer's own design, for that mahogany look. Finished at 92mm square, I laminated these from two pieces of ex50mm. My press was already in use on another project, so I sandwiched all four legs together into a series of sash cramps to achieve good tight joins. The design was quite minimal, so the turning wasn't too difficult, with a cove, a bead and a bird's beak detail, all broken up with fillets. I'm sure they will look very elegant in place on a 'mahogany' dining table.





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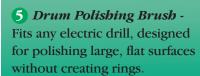


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# We welcome Jay Heryet, chair of The Register of Professional Turners, as guest editor of WT371



Andrew Potocnik's hairy oak box features an unusual 'fascinator' topped lid





Turn Matt Long's simple yet stylish light pull

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## Before and after

Pete Moncrieff-Jury sets out to reduce the cost and carbon footprint of timber

Following on with the basic idea of ethical turning, once again the morality of using imported woods arose recently online. Personally, I believe that there is enough beautiful wood available to any turner - what it is depends on where you are of course. Those who live in Australia and the US have a much wider variety obviously than those of us in the UK, but there is still a lot that can be done to restrict the import of timber.

Lately the cost of timber has, like everything else gone through the roof, perhaps giving even more incentive to use wood that is grown locally. There is, however, an alternative to consider, this is perhaps especially of value to those readers who are new to the craft. The price of timber is a major factor in making an already potentially expensive hobby even more costly.

One thing I rarely say is 'no thank you' to the offer of any wood as experience has taught me that there is little that is of no use. Certain woods are (in my opinion) not worth bothering with, but I can count those on the fingers of one hand.

In the one image there are some sapele spindles from a staircase someone was dismantling, a couple of reject pieces of oak, tulipwood that had been cut to a wrong size in a furniture factory and a piece of walnut that was also not the right size. The other image shows some of the things I made from these pieces of wood.

Many turners, especially those just starting out, begin by deciding they want to make a bowl, a pen, a candlestick and then go and buy wood that will suit. I tend often to work the other way and look at what wood I have and decide what I can make from it. Because of the sort of things that I make there is very little wood that can't be used. Over the years I have had ebony and ivory from a dismantled piano, all sorts of other exotics from old furniture and leftovers from other crafters. Personally, I would hesitate to buy imported timber from a dealer but have no problem using wood that has already been bought and used. I suppose it all boils down to our own personal attitude and how strongly we feel about conservation and the ecological impact we have. With so many trees now on the endangered list and so much wood getting thrown out or burned, it doesn't really make ecological sense to just keep cutting down and importing timber, especially when you add the carbon footprint of carrying it from one country to another.

I love the burrs that you get in Australia and the various rosewoods there are, but even if the tree isn't endangered yet, the environmental cost of importing is phenomenal. So, what am I trying to say? Basically, take up the challenge of using local or responsibly sourced materials instead of perhaps relying on a beautiful imported timber to make something. Wherever we live there are going to be amazing woods available grown locally and if we are prepared to put a bit of effort in, we can all find sources of woods, including some that are no longer easily or even legally available. I have found rosewoods, south American mahogany, ebony and parana pine, all listed as endangered and illegal to purchase in the UK. I learned to turn on many of these woods in school with no thought for the future, let's hope our children are left with a better legacy than we have.







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