Woodturning

THE WORLD'S MAGAZINE FOR WOODTURNERS

EMILIANO ACHAVAL
GUEST EDITOR

- Introduces the issue
- Turns a secret box
- Profiles turner Matias Castro

PROJECTS Maple and red gum container • Chinese jar • Platter • Applied and stitched bowl rim • Paint pouring

TECHNICAL Deep hollowing • Pole lathes • Tailstocks

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THE HEART OF THE TURNER

Why do we turn? To many, it is as much about the process as the result. Some find a thrill throwing wet chips through the air. Others find reward in the meticulous arrangement of segments. The meditative qualities of sanding and finishing should not be ignored. Adding layers of color, carving and texturing further add to the creative experience. The results vary: perhaps an elegant utility piece to be enjoyed in the kitchen, or a shelf bound heirloom that passes through the generations. In all cases, the final result is a record of the turner's process.

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Guest editor's letter
Emiliano Achaval

My son is turning 25 this July. I remember I was already turning when he was born. I can't call it turning; I was trying to turn. The turning point was when my wife saw my frustration and remembered that her cousin was a woodturner. He was almost retired then but had a full-on shop, two lathes, and many tools. He had brought David Ellsworth to Maui in the early '80s. I then got to know Cole Warren, a gallery owner in my small town of Makawao, Maui. He had a lathe in his basement. He shared everything he knew with me and guided me along for a few years. The help I got from them was invaluable. I remember heading back home after spending some time in the shop with Cole and thinking that I learned more in one day than a year by myself. It always stayed with me how generous they were. This was in the days before YouTube, computers, and IRDs.

I can't stress enough how important it is to find a club, a mentor, to help you get started with a solid foundation.

After two-plus years of the worldwide pandemic, we finally get back to normal. At Maui Woodturners, we have begun our in-person meetings. Some will be 'hybrid', meaning that club members come to watch an IRD. The Covid-19 silver lining – just trying to find something positive – is the proliferation of excellent-quality IRDs by some of the world's best woodturners. It is easy to find just what you are looking for: a segmenter, hollow forms, simple bowls, boxes, and the list goes on. The fact that you are reading this lets me know that you are interested in growing as an artist and improving your skills. One of the challenges of club officers is to keep an exciting line-up of presenters in person, IRDs, challenges, and more. As president, I love it when someone approaches me with an idea, when they get involved. You will get a lot more out of your club if you help.

My editor's letter would not be complete without mentioning our late editor, Mark Baker. Ever since I started writing for *Woodturning* magazine, I have always felt Mark's presence over my shoulder as I write my articles. Tonight, I can hear him say: 'Bear with me,' and then: 'Brilliant!' Now, more than ever, he's here with me. I know he would be happy with the direction the magazine is going, and I can't help but feel that he would have been proud of my turn as a guest editor.

Aloha O'e Mark, till we meet again. ***Emiliano Achaval***

Find us on Instagram and follow us on @woodturning__magazine and share your work with us using #woodturningmagazine or email us on WTEditorial@thegmcgroup.com

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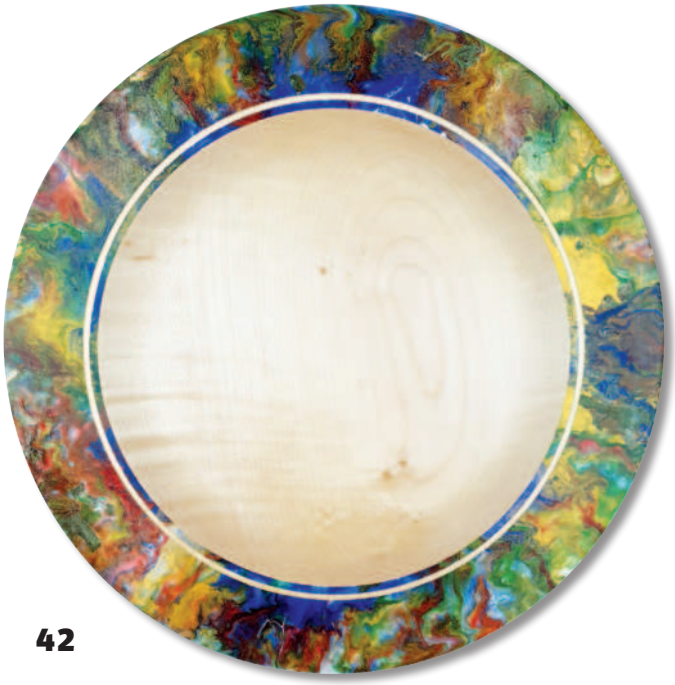
Cover image by Emiliano Achaval



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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).

Secret compartment box

Emiliano Achaval uses traditional thread-chasing techniques to create a box with a hidden section

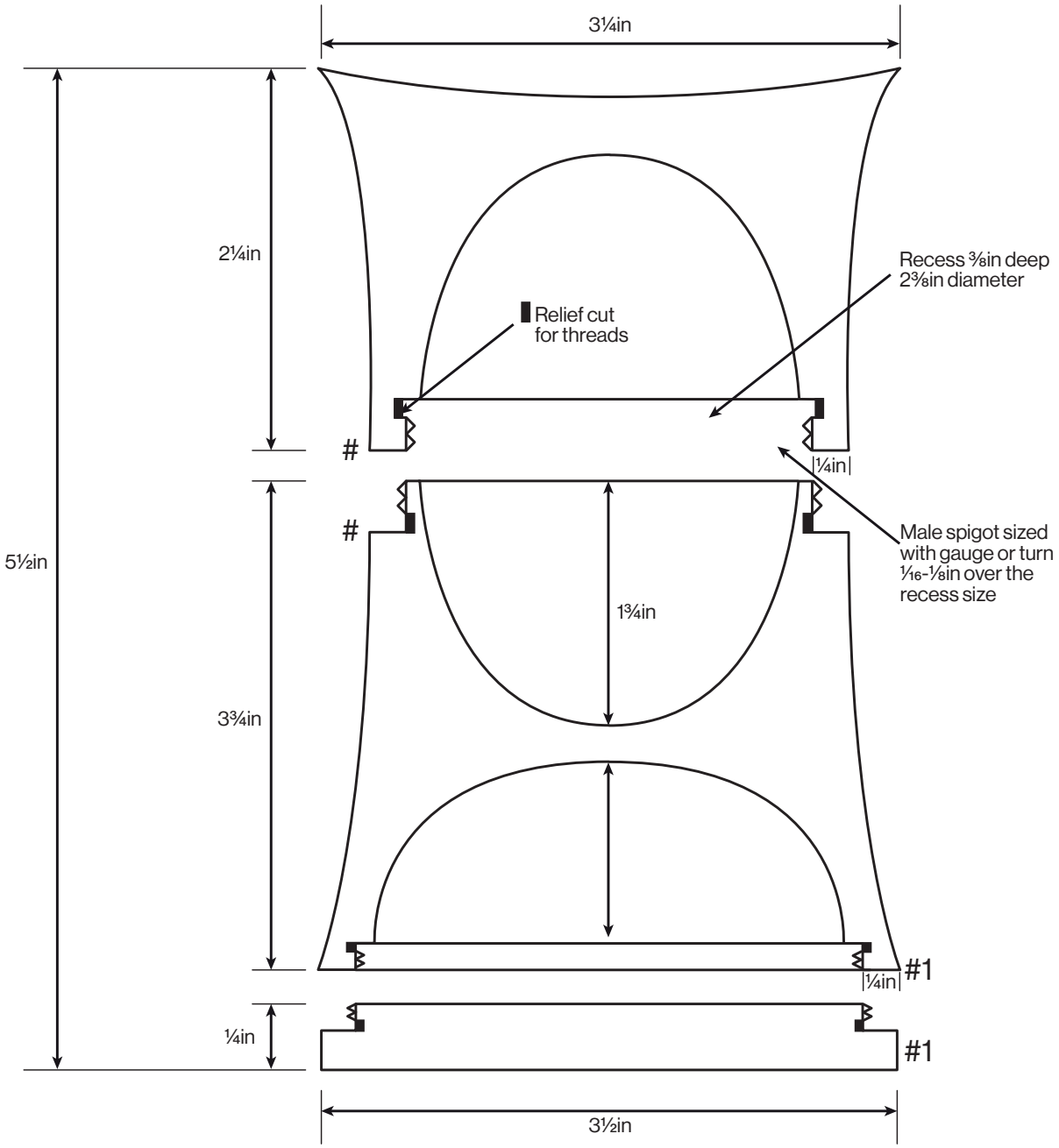
I got the idea for this article by accident. I was using some scrap pieces to make a box and because what was going to be the main body was too narrow to give me any design opportunities, I decided to add an African blackwood bottom. As I was reaching for the glue, I realised I could make it like one of the late Bill Jones's chess pieces – all threaded. After I finished, I concluded that the box could be improved by adding a tiny secret compartment.

The hard part of this article was choosing what timber to use. I have been chasing threads for years now and have amassed a vast collection of some of the densest timbers from all over the world. My favourite wood of them all won again – palo santo. It is similar in density to lignum vitae and just as oily. When I make my yearly trip to Argentina to visit family and friends and teach woodturning, my good friend Leitoo Martinez always has 50lb of the most beautiful palo santo for me. If you have tried chasing threads and gave up in frustration, most of the time the problem wasn't you – it was that you had the wrong timber. Chasing threads is easy with the right kind of wood. In England, what comes to mind is the king of woods for thread chasing – boxwood. I pride myself that I do my thread chasing the old-fashioned way, the way Bill Jones wrote about it in this magazine decades ago. I use an armrest, an inside tool, a point tool, and hand chasers. I hope this article motivates you to give chasing threads a try or to dust off those chasers you bought a few years ago. Aloha from Maui.

Plans & equipment

Tools & equipment

- PPE & RPE as appropriate
- Spindle roughing gouge
- Thin parting tool
- Inside tool
- Recess tool
- Point or pyramid tool
- Male and female thread chasers, 16TPI
- Sorby thread-chasing sizing gauge
- 5/8in spindle gouge
- 1/2in bowl gouge
- Beading tool
- No.5 badger tool by Hunter Tools
- Measuring device, pencil
- Abrasives to 400 grit
- Liquid wax for wet sanding



#: Diameter at join 2⅞in

#1: Diameter at join 3½in

PHOTOGRAPHS BY EMILIANO ACHAVAL

1 No matter what timber you choose, make sure it is dense enough to chase threads. This is an end-grain project. Start by bringing the blank to round – the preferred tool for this would be a spindle roughing gouge. You could also use a bowl gouge. The blank should be a minimum of 6in long. Make a spigot for your chuck on each end.

2 Now you have a roughly shaped blank on your chuck, measure and mark where the lid and the bottom cover will be – the secret compartment. You would typically start with the female threads of the lid. Today you will begin with the female threads of the bottom. With a thin parting tool, cut the bottom piece.

3 In this step, open, prepare and finish the secret compartment at the bottom of the box. The tool of choice would be an inside tool with an armrest. I started with it and finished it with a small curved NRS to have a nice inside curve that makes it easier to sand and gives it an excellent design. You could also use a spindle gouge – I prefer at least a ½in one to avoid any vibration.

4 In preparation for chasing some threads, cut a recess 2⅜in diameter, leaving a ¼in wall. Ensure the female recess is perfectly parallel. The diameter of the male spigot will be determined by using a threading gauge later. It will be harder to fit the male threads if the recess is a little conical. At the bottom of the recess you need to make a small relief cut that will allow the front tooth of the chaser to escape, avoiding hitting the shoulder. If you do not have a recess tool, you can make one by repurposing a medium Allen wrench. You can see a commercially made one being used with the armrest in the picture.

5 The last thing you need to do before you start chasing threads is to make a small chamfer at about 45° to the recess. That's where you will 'strike' the threads. The tool of choice for that would be a point tool. You could also use an inside tool or a small skew on its side.

Did you know?

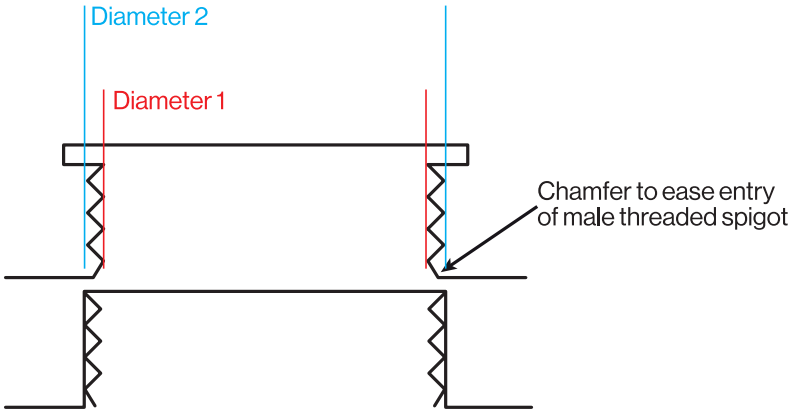
One of my favourite tools in thread chasing, the 'inside tool', has been in use since the 1700s. The earliest mention of the tool is in the book *Hand or Simple Turning*, written by John Jacob Holtzapffel in 1881. That's 141 years ago! It was mainly used then by the ivory turners. Master woodturner Bill Jones made it well known by writing about it in this magazine and through his demonstrations all over England and in the US. The primary function of this tool is to hollow out the inside of a box or any piece where you need the female threads. It works in conjunction with a small drill bit that you use to drill to depth and open up the centre. It is the fastest and cleanest way to open a piece with a bit of practice. Because I already have it in my hand, I sometimes use it to make the chamfer where I will strike the first few threads. My favourite inside tool is one I made from a Doug Thompson thin parting tool. This tool is strong enough to be used on its side. It is good to have a few with different angles. The angle is not all that important, but 45° is the one I would choose if I could only have one.

Top tips

Sizing the male spigot to suit the female recess

The Robert Sorby chasing gauge is a useful tool. The sharp-ended legs measure the diameter of the recess to the top of the thread peaks, and the opposing legs provide a gauge for the appropriate male spigot diameter. On one leg there is an adjustable tab that should be set for the TPI size of the chasing tool you are using.

In effect, the male spigot is the diameter of the female recess at the base of the thread troughs. Slight adjustments if the fit is too tight are possible in the manner explained in the step-by-step project.



Diameter 2
The Sorby gauge measures diameter 1 and provides a dimension to produce a diameter suitable for chasing threads that are of diameter 2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6 Check the lathe's speed – 400rpm is a good starting point. With lower speeds you might end up with some 'drunken' threads. Check the height of the toolrest – you want to have the chaser slightly above centre. Finally, check the distance of the toolrest to the work – you want to be able to fit your hand in between. Strike the first threads on the chamfer with the middle of the teeth, holding the chaser at 45°. Stop and check. If the threads on the chamfer are drunken, take them out with the point tool and start again. If they look good, keep chasing, slowly moving the chaser parallel. Clean the threads with a toothbrush and apply some liquid wax. Before moving on, double-check the walls are parallel and re-establish the chamfer to make the male fit right.

7 Take the main part of the box off the chuck. Put the parted piece in the jaws – this will become the cover for the secret compartment, the male threads. With a small skew, start cutting the male spigot. Patience pays off here. Stop and measure often. You have two ways of measuring the size needed to match the female. One would be to use the commercially available Sorby gauge, the gauge I used to measure the diameter inside the female threaded recess, and the opposing arms of the gauge are used to cut the correct diameter of male spigot. Note that the gauge has an adjustable calibration for the TPI of the thread chaser you are using. I also use it to check if the walls are parallel. The other way is to friction test the female threads on to the spigot. If you apply some liquid wax that would leave an excellent mark, letting you know the correct size.

8 Start by making a chamfer with the point tool, again at 45°. Like with the female threads, you will use it to strike the first few threads. With a thin parting tool or a point tool, make a recess next to the shoulder of the spigot to allow the main front cutting tooth to escape to avoid hitting it and stripping the threads. Check the lathe's speed, 400rpm, and the height of the toolrest. Check the distance to the work. Pinch the male chaser between your thumb and forefinger. You are holding it gently but firmly. Do not hesitate – go for it, strike the first few, then slowly go parallel. Patience here is the key. It will take you anywhere from three to six tries to get a good fit. Bring the threads down with the point tool or the skew, then chase again and test for fit. You can't use the chaser to bring them down.

9 In this step, you will match the grain. A box with matched grain looks nicer and stands out from the crowd. The easiest way to achieve this is to, little by little, bring down the shoulder on the male spigot with a point tool. Here is another chance for you to learn to be patient. Do not go all the way – stop when the match is about 3/4in away. When you work on the bottom, taking the tenon out will move the rest of the way. They are easy to make if you don't have a point tool. You can repurpose an old screwdriver, or you could use a parting tool. But be careful not to hit the threads.

10 You now have the secret compartment done and in this step, you will part the lid. Using a thin parting tool will give you a closer-matched grain. Most thin parting tools have a very short handle, making them dangerous. They commonly bind and can become airborne. I prefer one with a long handle to control the leverage. If you only have one with a short handle, make one entry cut, then open the kerf enough so the blade won't bind.

11 You are now back to making a regular threaded box. The procedure will be the same as making the female threads for the secret compartment, as seen in Steps 3, 4, and 5. I will take the opportunity to give you some extra tips here. Another tool you can use to hollow the lid is a spindle gouge. I'm using a stout ⅝in gouge that lets me hollow deeper with less vibration.

12 In the last step, you made the female threads. Before moving to make the male ones, make sure they are parallel. Repeat the process I described in Steps 7, 8, and 9. The threads should fit snug but not tight. You should be able to unscrew them with just two fingers. This also allows for some movement due to humidity and/or heat and cold. Take the top of the crest of the threads slightly down – this will help keep them intact. A sharp, pointy tip is easier to crumble.

13 The lid is now on. The grain was matched to within ¾ of an inch. In this step, finish shaping the entire body and lid. A spindle gouge would do the job nicely, as well as a ½in bowl gouge.

14 Something that I like about making boxes – and I have made hundreds of them – is that they require a fraction of abrasives to finish them. Wet sanding helps keep the dust down, and with oily woods like this palo santo, it is the only way to do it. The oil in the wood otherwise clogs the abrasives almost instantly. There are many options when it comes to choosing a product – I'm using a mix of beeswax and oils, which are very inexpensive.

Top tips

When box-making, there is always a possibility that you will have to put the work back on the chuck. For example, to make the recess perfectly parallel because you forgot to check (don't ask me how I know that one), it is essential to have it back precisely in the same position. Before removing the box, mark both edges of jaw number one and the centre with a pencil.

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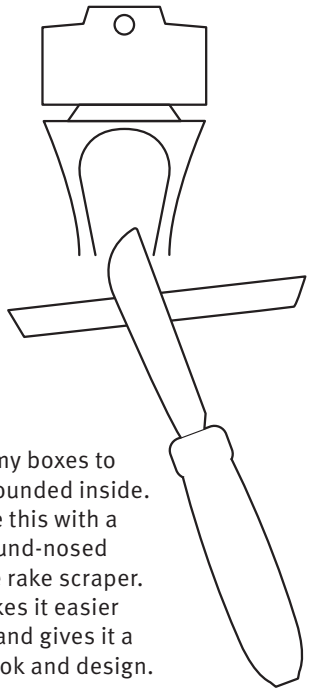
Top tips



I prefer my boxes to have a rounded inside. I achieve this with a small round-nosed negative rake scraper. This makes it easier to sand and gives it a better look and design.

15 When someone picks up your box, you want them to have to guess where the joints are. To help disguise them, a small beading tool is just perfect. If you don't have one, another excellent option would be a point tool. An odd number of beads works well on the main joint. Cut the beads before the last sanding grit and only lightly sand them with your finer abrasive. I always do three beads, or cut some grooves with the point tool.

16 Take the lid off. Leave the main body in the chuck, pre-drilled to depth with a regular drill bit or a small Forstner bit. You will now hollow the box. Remember to measure how deep you can go. You have the compartment at the bottom. A spindle gouge would be an obvious choice here. I have been using a No.5 Badger tool from Hunter Tools. These tools have a 'cupped' carbide, so they are cutters, not scrapers. Finish with a round-nosed scraper or negative rake scraper – sand to 400 or 600 grit. Apply your choice of wax.

17 The final job is take the spigot off the bottom. Make a threaded female reverse chuck. This one will be your third time chasing female threads for the project. You will notice it is easier. It is not because of the practice – you are more relaxed, and you do not care if you make a mistake with a scrap piece of wood.

18 The nice thing about threaded boxes is that you have a secure hold with the threaded reverse chuck. Cut the spigot with a spindle or bowl gouge towards the centre. Take any tool marks off with a light pass of an NRS. Finally, to dazzle your friends, cut two grooves with the point tool on the bottom. The toe of the skew works just as well. This will completely have non-turners guessing how you were holding the piece on the lathe. Congratulations! I hope you have as much fun as I did with this project. Aloha. ●

Matias in action

The Turner's House

Guest editor Emiliano Achaval introduces Argentinian woodturning school owner, Matias Castro

Choosing just one woodturner for the introductory bio wasn't an easy task. I know a lot of turners, and I keep meeting more all over the world. There are a lot of them deserving of this honour. I decide to go with one pouring his heart and soul into his new business and passing his knowledge on through the first woodturning school in Argentina.

I met Matias four years ago, during one of my yearly trips to visit family in Buenos Aires. I wanted to give back and pass on some of the things I have learned these past 25 years. I was impressed by his enthusiasm and his willingness to learn. About two years ago, he wanted to know what I thought about opening a school. Knowing him, I knew it would be a smashing success and, most importantly, a significant boost to turning in Argentina. Many have helped make the school what it is today, the AAW and Turners Without Borders, some of my sponsors: Doug Thompson and Michael Hunter. Several others have donated tools. It has been a group effort, well worth it. There is now a waiting list for classes. His introductory turning seminars are fully booked. I'm happy to be one of many helping a slow but indeed new woodturning revolution, with Matias Castro at the centre.

Tell us about your background and training. What led you to woodturning?

In 1995, I started working as an apprentice at a staircase factory. One day, I was asked to help turn balustrades for a large order that had come in. That was the beginning of my love for the lathe. In the year 2000, I enlisted in the Army and was sent to a carpentry shop. There I kept learning from some of the older guys. After the Army, I was the manager for another furniture factory where I incorporated woodturning as much as I could in a lot of projects.

In 2016 I met Humberto Dacal, a master woodturner and an amazing engineer fabricator, and Emiliano Achaval. Both helped me learn more, specifically better cutting techniques and more traditional woodturning with modern tools.

PHOTOGRAPHS BY MATIAS CASTRO

1 The team at the school: From left to right: Ezequiel Carreño, Matias Castro, and his son Fran Castro. Notice the 100-year Lapacho wood bed on the antique lathe **2** A traditional Mate cup, the staple of all turners in South America. Algarrobo wood (*Prosopis nigra*) **3** Algarrobo Goblet

How do you like to work, what are your favourite tools and why?
I enjoy every aspect of my work. Like most of us, I do not enjoy sanding as much as turning, but it is a vital part of the finishing process. To achieve less sanding I use my favourite tool, a 5/8in deep V-bowl gouge made by Doug Thompson with a 40/40 grind. Incidentally, the tool was one of many donated by Doug Thomson to the school. Emiliano has been teaching my son and I the 40/40 technique, I'm implementing it in all of my classes and my personal work. I also enjoy using the Viceroy tool, donated by Mike Hunter – it is an excellent tool for first-time turners, by far the safest tool to get someone hooked on turning. Another tool is one that is an enormous milestone, the first high-speed steel 1/2in bowl gouge manufactured in Argentina, H Tools by Emiliano Paredes.

Tell us about your woodturning school
The school was a big gamble in my life. It has become successful beyond everyone's expectations. It is a much-needed resource in Argentina. We are completely booked, with a long waiting list for classes and the weekend-turning seminars. The main room, named Emiliano Achaval Classroom, has three full-sized lathes. It is used for daily classes and seminars. Another large space is named Humberto Dacal and we use it for daily production and classes. It has two large lathes and other woodworking equipment.

How does your design process work?
My projects are a mix of design ideas limited by what the wood tells me, or allows me to do. That being said, we in Argentina, and South America in general, are in the very early stages of trying to bring woodturning to the mainstream. The market dictates somewhat what I produce. Turning mostly utilitarian items is what pays the bills. I like to decorate some of my work on a rose engine given to me by Mr Dacal. We are working on having the first woodturning art exhibit. We will have it right here at the school. One of the rooms will be a gallery. That is also where we have some art on permanent display.

Tell us about your number one helper, artist in residence, your son Fran Castro.
Ever since I brought my first lathe home, my son Fran kept me company and watched me work. He was fascinated by everything in my little shop. Under my supervision, he started turning when he was 14 years old. He is now my number one helper at the school. Juggling school and work. He is a senior in high-school and will be attending engineering school next. He helps with one-on-one classes and with seminars. Completing the team is Ezequiel Carreño, a woodturning instructor, and my wife Liliana. She is in charge of all the administrative aspects of the school, keeping up with schedules, orders, billing, and more.

4 Paraiso burl bowl (*Melia azedarach*) **5** Hand-chased threads salt shaker, 10 cm tall. Quebracho wood (*Schinopsis lorentzii*) **6** Spalted lemon wood and Itin (*Prosopis kuntzei*) finial, 22cm tall **7** Olive wood natural-edge bowl with stand

Which woods do you most like working with and why?
We are blessed in Argentina with some beautiful timber. Some are the densest in the world, perfect for thread chasing. I really like viraro (*Ruprechtia salicifolia*).

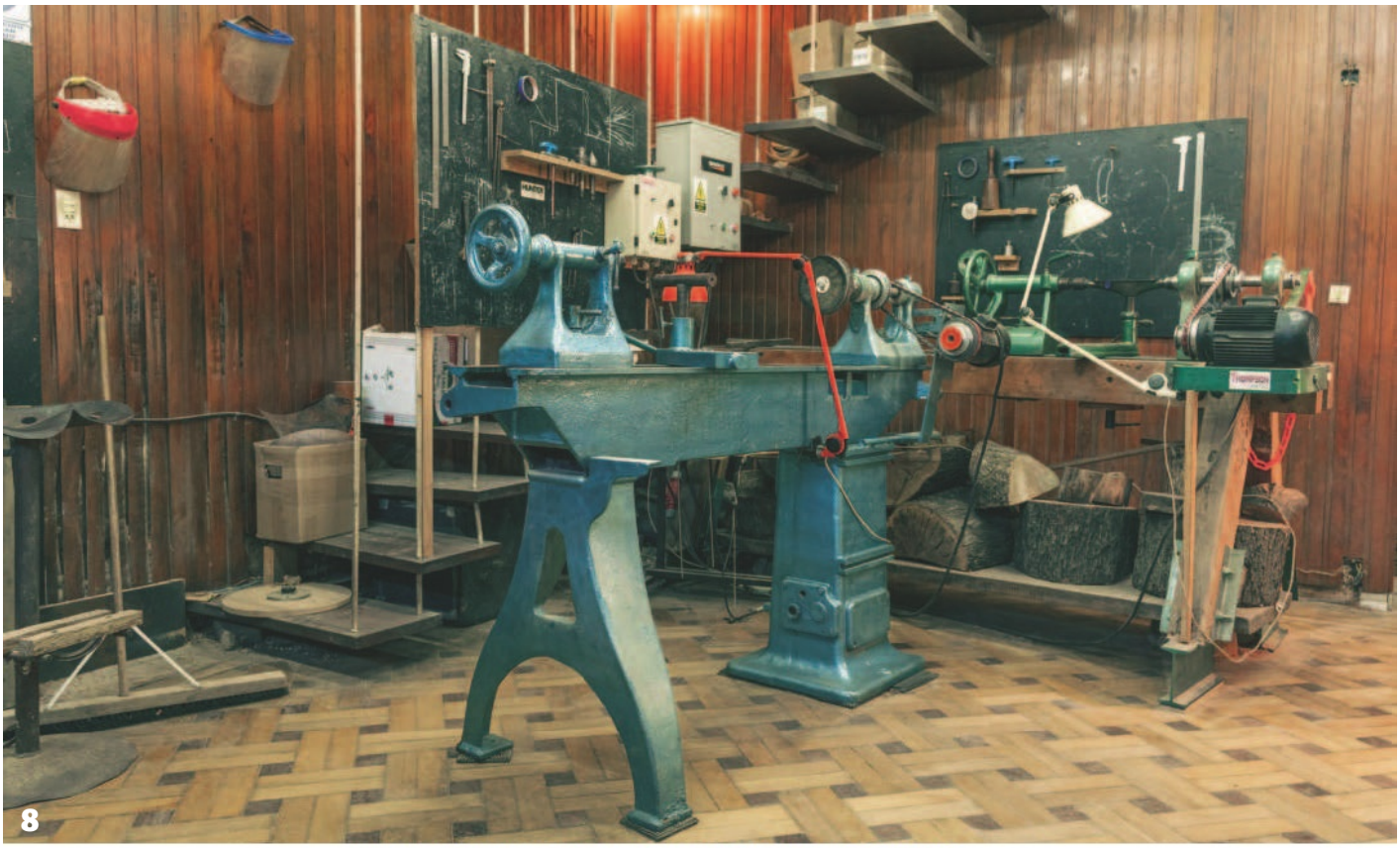
Quebracho (*Schinopsis lorentzii*) – which literally means axe breaker – and palo santo (*Bursera graveolens*) are by far my favourite two for thread chasing. For production turning you can't beat black algarrobo (*Prosopis nigra*) It is dense and doesn't move even if turned green. It hardly cracks when drying either, giving you extra peace of mind. It takes the NRS beautifully, leaving a nice surface that requires little sanding.

What sort of finishes do you prefer and why?
Remember that in Argentina we do not have many of the commonly available finishes found in other parts of the world. You can't just go to the woodworking store, we do not have one. I make my own carnauba wax and liquid Vaseline mix for some of the utilitarian pieces. This polishes to a nice gloss and it is completely food safe. Plates for the famous Argentinian barbecue are among the staples we turn at the school. I also use grape oil and I make my own mix of Danish oil. I like it because it polymerises on the inside, protecting the wood.

What inspires you?
Inspiration is all around us in our daily life. A desire to get better, and to keep on learning motivates me. I admire and get inspired by some well known turners, such as Stuart Batty, David Ellsworth, Dale Larson, Phil Irons and many others. I try not to 'copy' – I give my pieces my personal touch. Everything I turn, I make it thinking of my wife Liliana – she's my best critic and adviser.

What is your favourite piece you have worked on and why?
I would say it is not a piece but a technique overall: thread chasing. It was a challenge to learn it. Nothing gives you more satisfaction than a well-chased thread. Currently, I'm working on an olive wood natural-edge bowl with carved feet. I will then try to decorate it on the rose engine lathe. I'm doing this one in my spare time after classes and production turning. I would say that whatever it is I'm working on is my favourite piece, as I give 100% to it.

How have the Covid-19 pandemic and lockdowns affected your work, and do you think any of the impact will be long term?
The school was founded on 1 January, 2020. Just two months later we had to shut down. We also had to cancel our annual turning symposium that we were going to host. I was able to continue production turning. Internet



8 One of the rooms at the school **9** Box with hand chased threads. Quebracho wood **10** Matias Castro in front of one of his antique restored lathes

sales kept me busier than ever. It seems that people were at home, in front of a computer, looking for those items that they never had time to order before. Luckily, in 2022 we were able to restart classes and seminars. The sound of all the lathes running and the camaraderie and laughter are back between the walls of this old house. Long term, I will continue with production turning and internet sales, a welcome extra source of income.

What are your aspirations for the future?

My main objective is to expand woodturning overall in Argentina. The tool for that is my school. I have a great team with my wife Liliana, my son Fran and my apprentice Ezequiel Carreño. Together we are focused on teaching those who want to start in this great art/craft.

On a personal level, Spanish woodturner Fran Ferrer and I, have started interviewing Spanish-speaking woodturners from all over the world through my Instagram account. Once a month we choose someone who is making a difference.

I also would like to keep expanding the school. We have the room, but we need to acquire more lathes, more tools.

What do you do when you are not turning?

With my son, we not only share our passion for woodturning, we both love fishing. We like do to go down the coast and do shoreline sea fishing. We also go to the river Paraná to fish for the famous giant of the river: El Dorado. Fishing also means family quality time, and unwinding from the hectic schedule of a big city, Buenos Aires.

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Bowl with applied and stitched rim

Les Symonds makes a yew bowl with an olive-ash applied rim, stitched in place with leather cord

In this project I will be concentrating mostly on the making of the applied rim and the precise marking-out of the layout of the stitching on the bowl, with just a brief description of the process for making the bowl itself. It is a project which requires intermediate skills, so I'll assume you are fairly confident in basic bowl turning. If you are not, you might be advised to keep the project for when your general turning skills develop.

When it comes to making the rim, you can either use a shallow bowl blank, as has been done here, or you could cut it from the waste material of a large bowl blank which you later use the remainder of to make an ogee-curve bowl. Similarly, with the main bowl itself, choose what timber you use according to what you have in stock. This bowl requires quite a large piece and the whole concept of stitching can work well if you use a bowl blank which has the occasional small crack in it; just so long as such a piece of timber can be safely turned.

If you do manage to source a piece of yew of this size, you will need to consider the health and safety implications of working with this timber, so please read the H&S notes.

HEALTH & SAFETY

If you are using yew, there are H&S implications. Use dust extraction if you have it and wear a face mask, especially when sanding. Dispose of the shavings considerately – they should not be used as a garden mulch if you have pets in the garden which might nibble at them, but they can be composted.

Take care when parting off the ring of timber which forms the applied rim. This is best done by following the suggestions in Step 26, ending with the lathe stopped for the final parting. While smaller rings of just a few centimetres diameter can sometimes be safely parted off with the lathe in motion, a ring of this size poses a risk to you should it be parted in this way.

Equipment

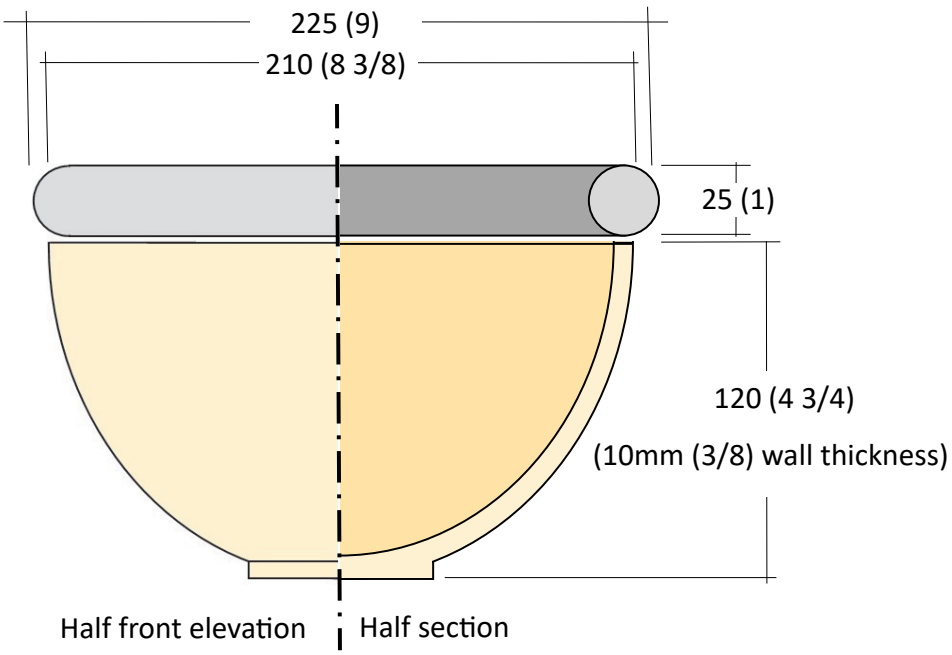
Tools & equipment

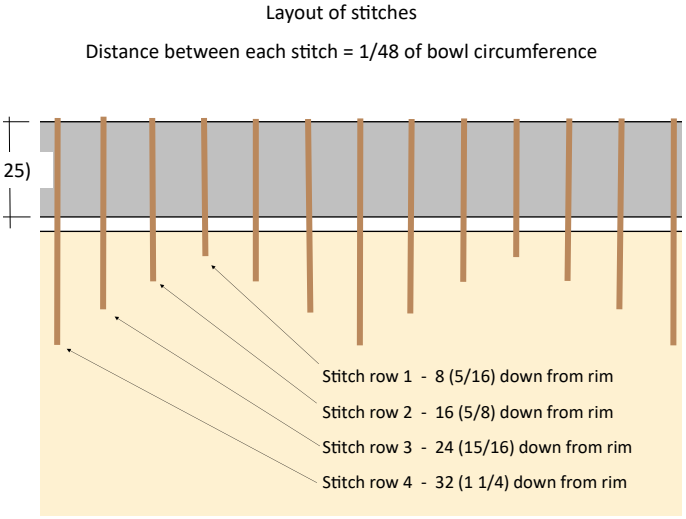
- PPE & RPE as appropriate
- Lathe with indexing facility
- Faceplate
- Chuck with 50mm jaws
- Bowl gouge
- Spindle gouge
- Parting tool
- Bowl-depth gauge
- Craft knife
- Steel rules
- Drill with 4.5mm drill-bit and 4mm round file
- Bowl reversing pad or jaws
- Buffing system (not essential)

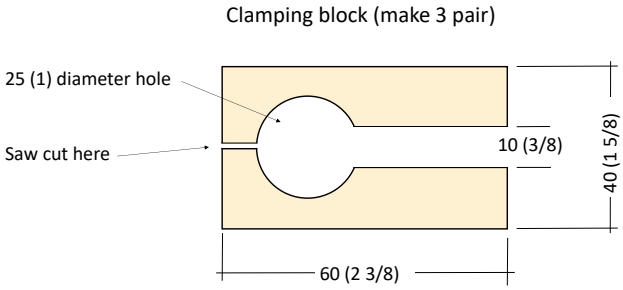
Materials

- **Bowl** – yew 225mm diameter x 125mm deep
- **Rim** – ash 240mm diameter x 30mm thick
- Clamp blocks, one piece 200 x 60 x 25mm
- Scrap timber for jam chuck
- 10m leather cord, 4mm diameter
- Abrasives
- CA adhesive
- Masking tape
- Cellulose sanding sealer
- Microcrystaline wax

Plans







The bowl

1 Commence work on the bowl in the usual manner, mounting it on a faceplate and turning the outer edge to a true cylinder, then use a parting tool to make a cut across what is to become the top of the bowl, establishing a clean rim. With the parting tool making a plunge-cut, clean up just the first centimetre or so towards the faceplate.

2 Skim a clean surface on the underside (facing the tailstock) before cutting a recess for a set of 50mm chuck jaws. As this is a fairly deep bowl in dense timber, pay particular attention to ensuring a good fit between the chuck tenon and your chuck jaws.

3 Cut the basic shape of the outside curve of the bowl, then use a parting tool to establish the foot of the bowl, ensuring you retain a small shoulder alongside the chuck tenon for your chuck jaws to locate with. Cutting the foot rim so it is about one-third of the outer diameter of the bowl will create attractive proportions.

4 Complete the shaping of the outside of the bowl, using fine shearing cuts to achieve a good finish, especially if you are using yew as this timber does not respond well to harsh sanding. Note from the drawings that the upper part of the bowl's wall does not need a distinct curve to it – 32mm of it is going to be incorporated into the panel of stitching, so keep the shape simple.

5 Abrade the outside of the bowl and apply sanding sealer, then remove from the lathe, remove the faceplate and set the bowl into your chuck, ensuring it is running true before firmly tightening the chuck jaws.

6 Hollow the inside according to your own preferred method for hollowing bowls, checking regularly to achieve a wall thickness and bottom thickness of 10mm. When complete, abrade and apply sanding sealer.

The stitching grid

7 Wrap the upper part of the bowl wall with masking tape – there is going to be an extensive grid of lines involved in the stitch panel, so avoid marking this out directly on to the surface of the timber. Commence marking the grid by drawing four pencil lines around the bowl, measuring 32, 24, 16 and 8mm down from the rim.

8 Set your toolrest at centre height and make a pencil mark on ring number 1, the nearest ring to the rim. Note the angle at which the pencil is held, ensuring that the mark is at the correct height. From this point, the four pencil rings will be referred to as numbers 1, 2, 3 and 4, working down from the rim.

9 Use you indexing facility to establish 24 pencil marks on ring 1, then measure a midway point between any two of the marks and reset the height of the toolrest so it lies alongside this new mark when the lathe spindle is locked. Many lathes have 24 steps in their indexing head; if yours has 48, this part of the process will be a little more straightforward.

10 Once again, use the indexing facility to establish a second set of marks on ring 1, resulting in 48 equally spaced marks, then, using a drawing pen or sharp pencil, number the 48 marks in the following sequence: 1–2–3–4–3–2–1–2–3–4–3, and so on, until you have numbered every mark on the bowl. At the end of the numbering, the sequence should flow through into the start; if it doesn't, go back around the bowl, checking the numbers, as this would indicate an error somewhere.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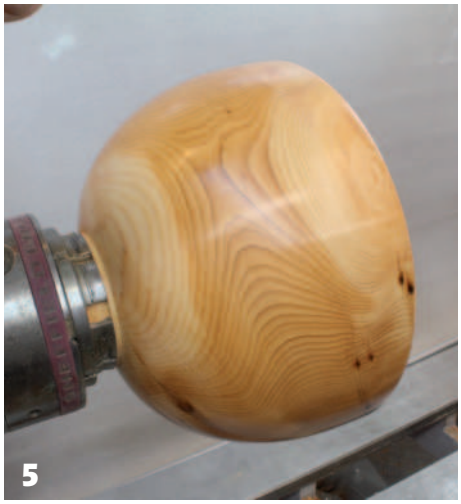
PHOTOGRAPHS BY LES SYMONDS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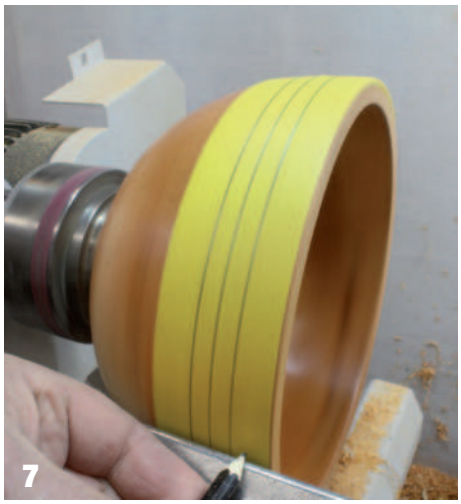
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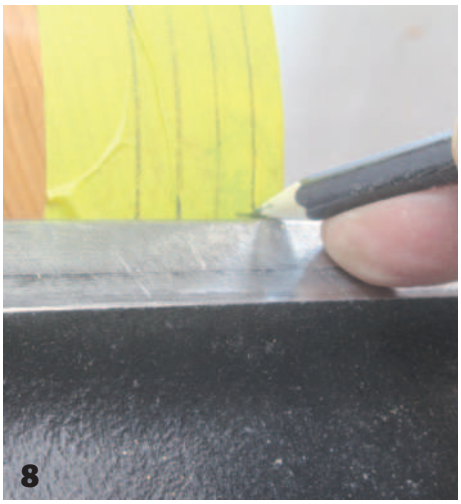
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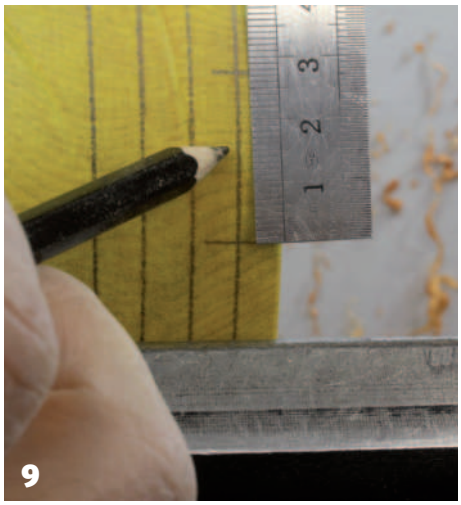

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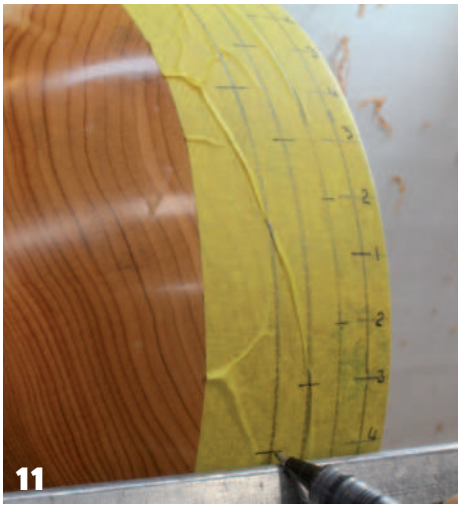

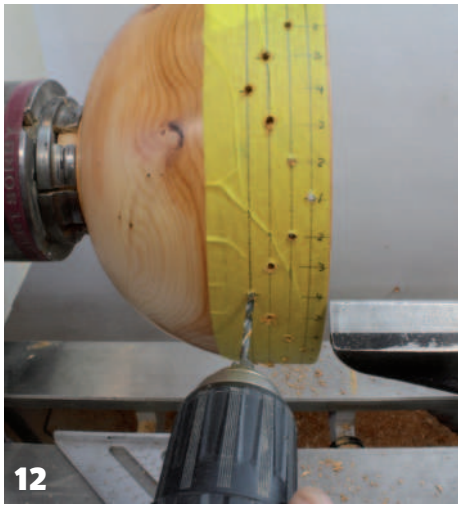

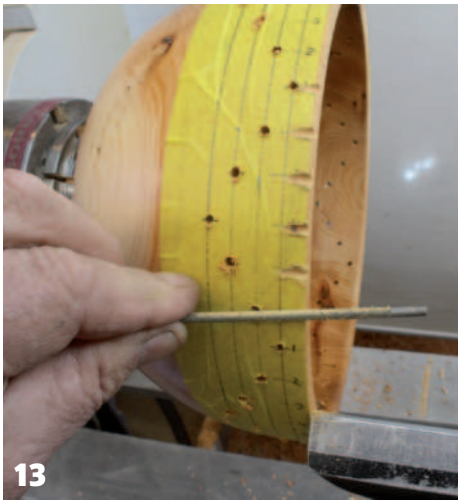

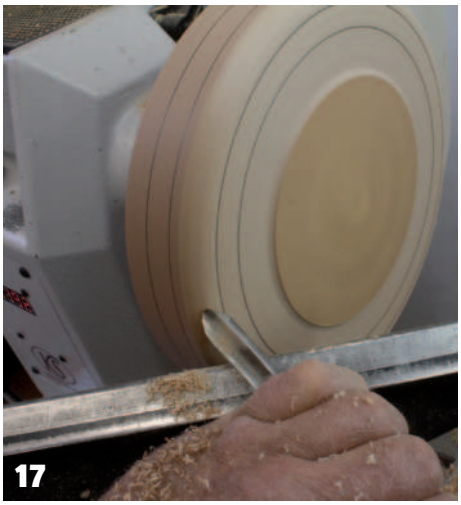

11 A drawing pen is best for this next task as its marks are distinct and cannot be confused with earlier pencil marks. With the toolrest in place across the bowl and lined up with any one mark on line 1, transfer all the number 4s to line 4, the 3s to line 3, the 2s to line 2 and ink-in the marks for the 1s on line 1. You should now have drawn the layout for the chevron pattern that the leather stitching will create.

12 Use a sharp centre-punch or awl to mark each of the 48 stitch holes, then drill them with a 4.5mm drill. It is important that the drill is held squarely to the lathe axis, so place a set-square or similar item on the lathe bed as a visual guide to this. Drill at toolrest height for every hole by rotating the bowl as each hole is made, and keep the drill as close to level as you can.

13 The final task is to take a 4mm round file and create a small notch between line 1 and the rim, for each of the 48 positions around the bowl. This will help to keep the leather cord in position, maintaining a consistent appearance to the stitching. When complete, remove the masking tape, lightly abrade the inner and outer surfaces then reapply sanding sealer. If you don't have a buffing system, you will need to wax the bowl before the next step.

14 Remove the bowl from the chuck and reverse turn it against a suitable pressure pad (or use reversing jaws), establishing a foot rim for the bowl. The final central cone can be cleaned away in the normal manner before sanding and applying wax using a buffing system.

The applied rim

15 Set the blank for the applied rim on to a faceplate, skim its outer edge, reducing it to 225mm diameter, then skim the first few centimetres of the outer face (facing the tailstock).

16 Make two pairs of pencil lines around the rim, one pair on the edge and the other on the outer face. The first line will be 12.5mm away from the corner, the second needs to be 25mm away. This is in preparation for turning the round section of the applied rim, so each 12.5mm line represents the centre of what is effectively a 25mm bead on each of the two surfaces just marked.

17 Take a spindle gouge and create a radius, running from the 12.5mm line on the outer face to the same line on the edge. This is the first of the four radii which will reduce this workpiece to a round-section ring.

18 Use a parting tool to cut a groove to 12mm deep (no deeper), immediately to the right of the 25mm pencil ring on the outer face of the workpiece. This establishes the overall thickness of the applied rim.

19 Create the second of the four radii using a spindle gouge, cutting down from the 12.5mm line into the groove just cut. You will have to remove some material from the right-hand side of the groove to make room for your gouge to make this cut, just be sure not to cut below 12mm depth.

20 Move the toolrest around to the face of the blank adjacent to the headstock and remove the corner of the blank, leaving 25mm thickness for the ring and working to a depth sufficient to allow work to continue forming the third of the four radii of the ring – 30mm down into the blank should suffice. Make the 12.5mm and 25mm marks (as before) as a guide to cutting the third radius.

21 Cut the third radius as you did the first and second, then abrade all three down to 400 grit.

22 Take a 4.5mm drill and drill a hole right through the blank. Place the tip of the drill into the groove on the outer face and the side of the drill as close to the second radius as you can, without the drill marking it, then drill through to the other side.

23 Back on the face adjacent to the headstock, use a parting tool to start cutting a groove immediately to the left of the 25mm line. Cut to no more than 10mm deep (for now), opening up the groove by cutting to its left as well to avoid the tool binding and to make room for using your spindle gouge to form the final radius. You will now be able to see the hole drilled in the previous step. This hole gives you a precise indication of where radius number 2 terminates and also a good indication of how much more timber needs to be cleaned away before the ring parts company with the blank.

24 Cut the fourth radius down to the depth of the groove (10mm). As you cannot yet cut right down to the 12.5mm needed, this will not be a full quarter of a circle, but can be completed in a later step. Abrade as much as possible, ensuring a good blend into the rest of the ring.

25 Place the toolrest on the tailstock side of the blank and, with a sharp parting tool, slowly cut away more and more of the timber remaining between the ring and the rest of the workpiece. Stop frequently, looking into the 4.5mm hole to see how much timber is left to cut away and listen carefully to the sound your turning makes – this will act as confirmation that you are almost through to the other side. Finally, use a craft knife with the lathe stopped to cut through the final web of fibres.

26 We are now going to make a jam chuck to hold the ring so the final radius can be finished. This jam chuck can easily be cut into a new, large bowl blank so the blank can still be used to create another bowl. Set the blank on to the lathe (on a faceplate) and cut a groove so the outer edge of the ring is a slightly loose fit into it. For the inner edge, you will need room to get a gouge into place and the jam chuck needs to be about 15mm deep to safely trap the ring.


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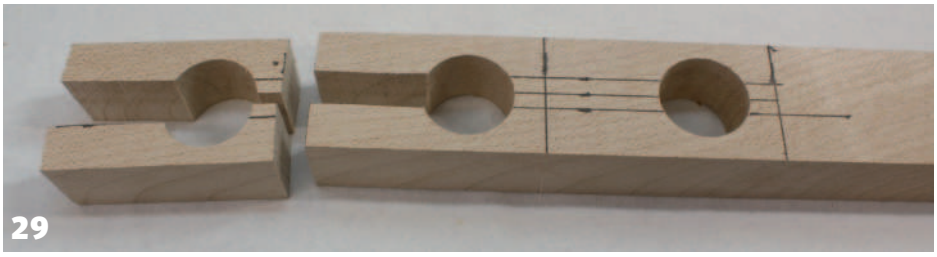
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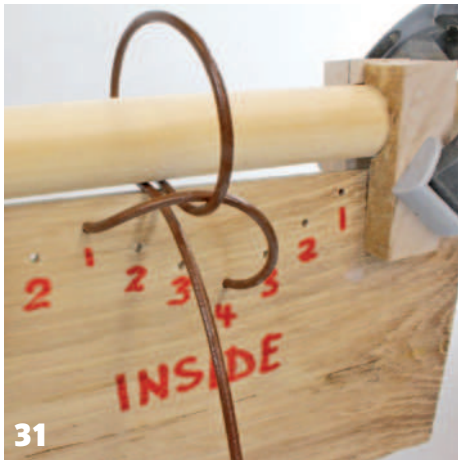

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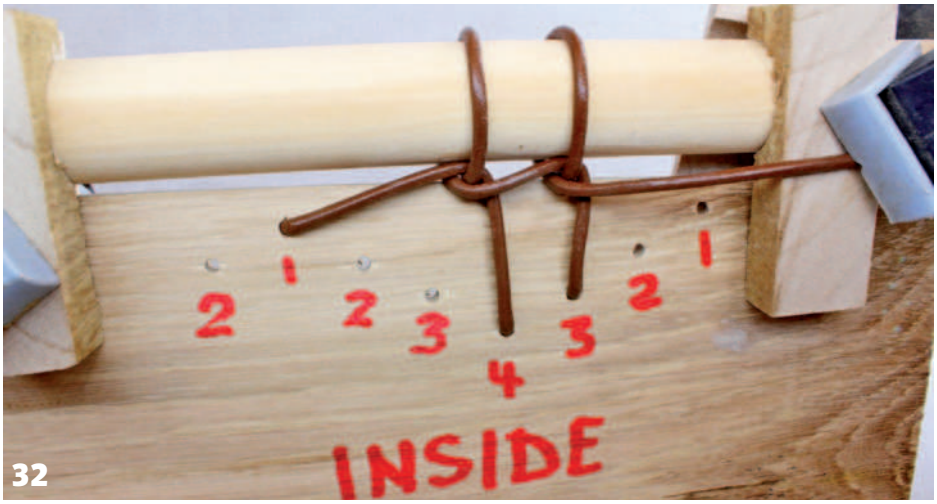
Sourcing the leather

Leather cord of this size is widely available through internet auction/sales sites. Choose a colour which suits you and ensure that it is of round, not flat, section – the latter distorts badly when the stitches are pulled tight inside the bowl where the various lengths cross over each other. You will need a continuous 10m length; in my case, the leather cost under £10 and there was a little less than a metre left over.



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27 Wind a couple of layers of masking tape around the ring and press it into place. It must not be a very hard, tight fit as this could cause the ring to snap when you remove it, so just apply enough tape to make it a comfortable press-fit into place.

28 With the ring pressed into the jam chuck, complete the fourth radius and abrade. You may also need to remove the ring, flip it over and abrade from the other side. Apply sanding sealer and wax to finish.

29 To keep the ring in place over the bowl while the leather cord is being stitched into place, make three pairs of clamp blocks out of a single length of a suitable material, about 40 x 20mm section and about 200mm long. Note and work to the dimension on the drawings.

30 Clamp the ring on to the bowl, ensuring a gap of about 5mm between the two. If you have difficulty maintaining this gap, simply cut a few 5mm-thick pieces of timber and put them in place, removing the first one as soon as your first stitch has been made, so that the ring can be pulled down on to the leather. The other two pieces can be removed as you progress.

31 Now comes the laborious bit. Feed about 20cm of leather through any number 4 hole, from the outside, into the bowl, then back out through the nearest number 1 hole off to its left (viewed from inside). Take the other end of the whole length of leather on the outside of the bowl and pass it under the loose ring into the inside, slipping it underneath the length of leather you had just put in there (between holes 1 and 4). Bring the whole of the length up and over the ring, then back under the ring, once again passing under the length of leather between holes 4 and 1 on the inside.

32 Tighten up this first stitch, ensuring that the leather rises from hole 4 and sits in the notch at the rim. Once tight, commence the next stitch. The end of the leather is then passed from the inside, back out through the number 3 hole immediately to the left of the first stitch (viewed from outside – do not pull it tight yet), then up to the rim and under the ring where it is essential that you feed the end under the short length of leather on the inside between the first stitch and this stitch, then up over the ring and back under it, once again passing under the length of leather between the first stitch and this stitch. This completes the second stitch, which can then be pulled tight. At the very end, tie the two ends together (inside the bowl) with a reef knot and apply a few spots of CA adhesive. ●

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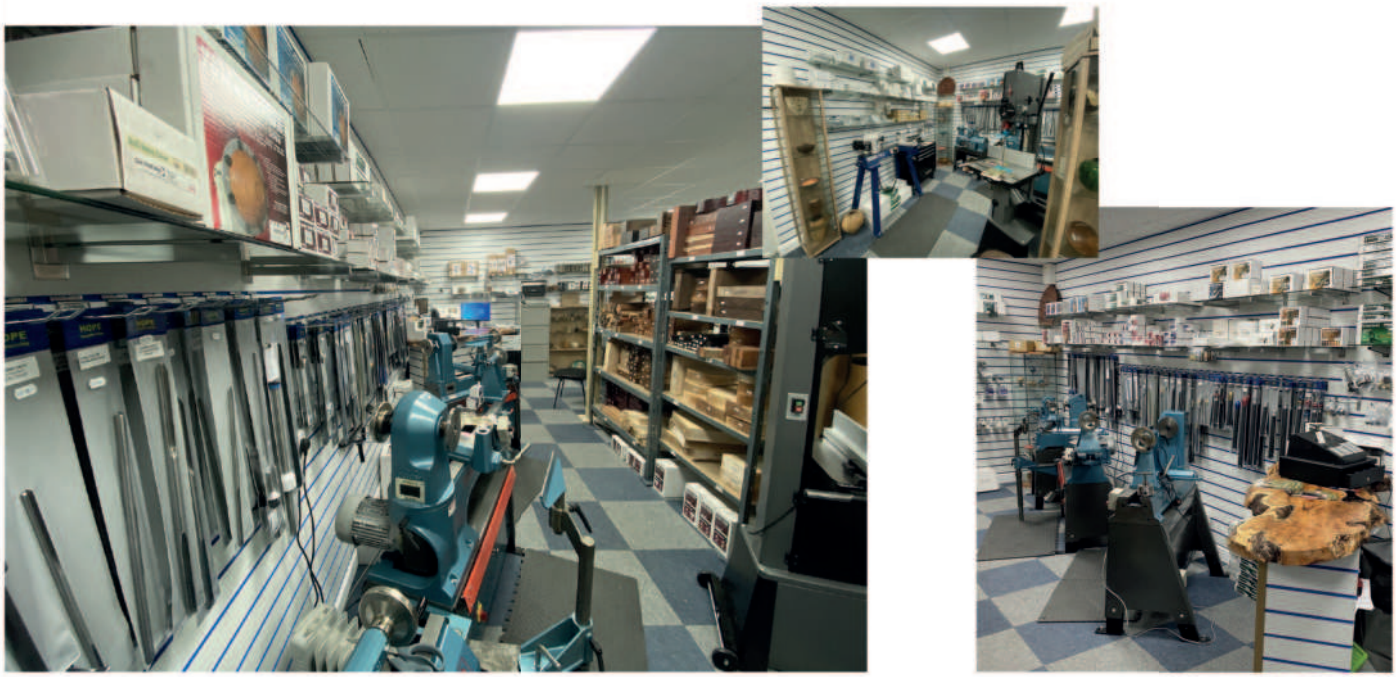

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Deep hollowing tools

Andy Coates looks at hollowing as a refresher

PHOTOGRAPHS BY ANDY COATES

Social media has become part and parcel of modern life – some of it is awful and some of it is not. I only use one SM platform regularly (too regularly, according to some people), and on the whole it is an asset. I sell a lot of work through it, I receive commissions from all over the world from contacts made there, and have a group of, mostly, like-minded people to chat with. One of the regular functions it seems to provide is as a conduit for people to contact you through, and the most common topic of queries is woodturning.

If I ever post an image of a hollow form, of any description, there will invariably be a raft of queries on hollowing. If I can answer within the confines of a 280 character reply, all is well and I don't mind that at all. If it requires a lengthy email reply then it can become a chore for which I am not paid, and it can become a little frustrating. My usual response to this type is query is to direct the correspondent to a suitable book or magazine article covering the subject of their query, and in most situations this is acceptable, but there are many questions that, for matters of space and other considerations, are not answered anywhere I can readily direct them to.

Some very recent queries on deep hollowing come under that category, and I realised that my article last month skips over some aspects of deep hollowing tools (DHTs) that might be more fully explored in a separate article that focuses on the tools rather than simply mentioning them in a project.

Deep hollowing: what is it?

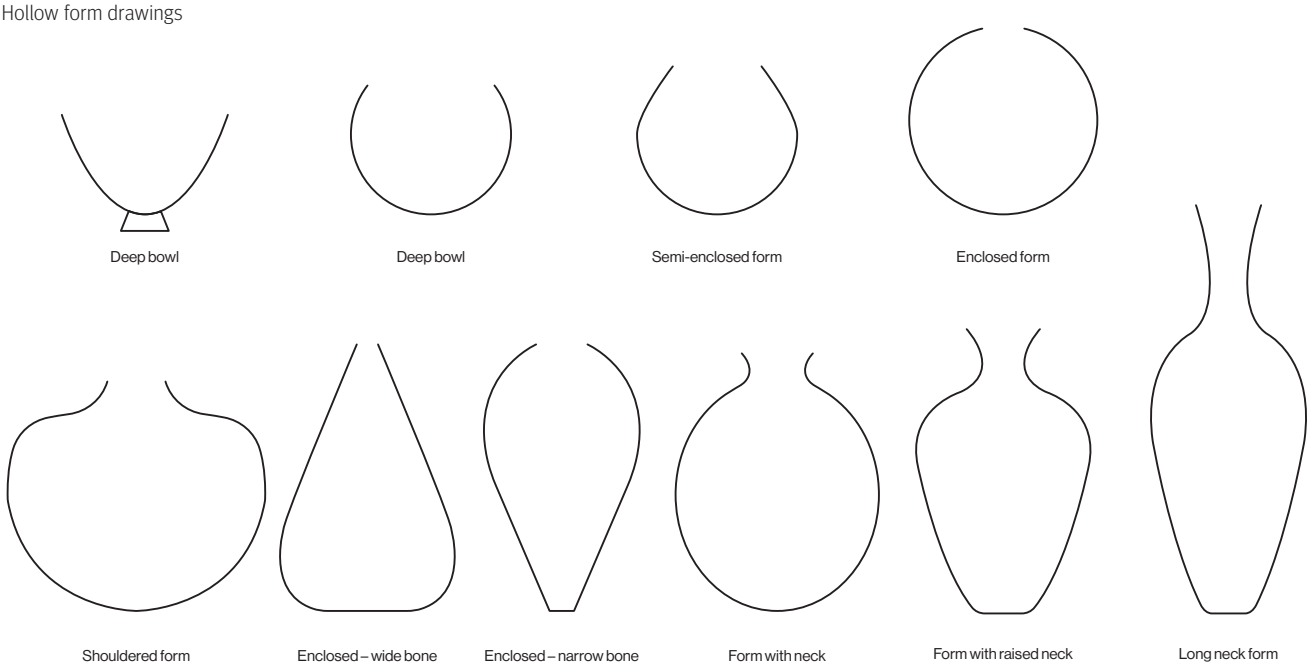
Whenever people talk about hollowing I think they have in mind the type of hollow form that David Ellsworth gave to the world of woodturning – a spherical form with a tiny hole in the top. And they are not wrong, this is a hollow form, but it is not the only hollow form, there are styles and I cannot hope to cover every variant, but will make a start with the most common.

The types and styles can usefully be stated as being:

- **Deep** – this could simply a large, deep bowl
- **Open** – calabash-type form
- **Semi-enclosed** – calabash-type form with smaller entry
- **Enclosed** – classic small-holed form
- **Shouldered** – form where the top is undercut
- **Necked** – form with a long neck as opposed to just an entry hole
- Variants on each of the above

I consider anything over 4in deep to be deep hollowing, so even a bowl can be considered deep hollowing. If you begin hollowing a bowl with a 10mm gouge and need to swap over to a 19mm gouge of heavier gauge to finish the hollowing then that is a sure sign you are hollowing deeply. But bowls are open forms in as much as the opening is wider than the widest diameter of the vessel. If you turn a bowl with an in-curving interior shape, where the opening is smaller than the maximum diameter of the bowl, you are beginning to move towards what we might call true hollow forms, from what we might call 'open' hollow forms.

Hollow form drawings



If we make another vessel and bring the rim in even more, we start to enter the area of the semi-enclosed hollow form, and the access to remove the interior material reduces. This is where deep hollowing can begin to get difficult, but we will look at why this is later on.

As we reduce the opening even more we enter enclosed hollow form territory, and the difficulty level increases exponentially. Once we add shoulders, or a neck, things begin to reach the peak of difficulty. If we then exaggerate the degree to which the opening is constrained, to 1in and under, we reach the pinnacle of difficulty. So there is a quite clear and obvious route that you might take in the journey to producing deep hollow forms; start open, develop your skills, broaden your experience, and progress slowly.

Tools

In my last article, which was a project for a tall open form, I pictured and detailed a wide range of tools from Easy Wood Tools, Record Power, Crown Tools, Robert Sorby, Hook Tools, Crown Tools, Hamlet, and Roly Monro, but I could have added a number of other manufacturers – Hope, John Jordan and Woodcut spring to mind. The fact is that you will be spoilt for choice when investigating DHTs, and the trick is finding which one is right for you, your abilities, and your pocket. And there is the question of appropriate finishing tools, such as DHT scrapers, to consider.

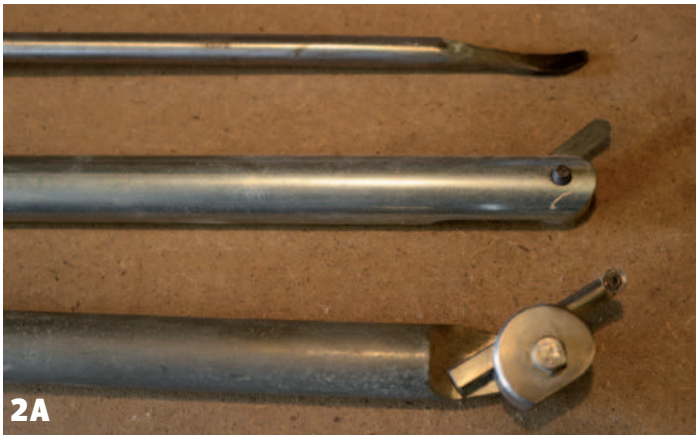
As I mentioned in the previous article, all these tools will do what they are designed to do and remove wood, but it is a fact that, no matter

1 A selection of deep hollowing tools

how well a tool is designed, the minute you introduce it to a human being problems can arise, and one user will shout to anybody who will listen about how good a particular tool is, while another will immediately log on to an internet forum to declare the same tool to be useless. It probably is not the fault of the tool. That is not to say that you will not develop a fondness for one over another, that's just human nature. I quite like the Edsel car despite it being widely unpopular in its day.

So, the key is to try before you buy, if you can do so. By all means ask other turners what they use, ask if you can try them out, but keep in mind that in use its suitability may prove to be a very personal thing. Hook tools can remove wood at a prodigious rate but many people struggle to come to terms with them. Those who persevere and master them would not use anything else. Be prepared for that learning curve.

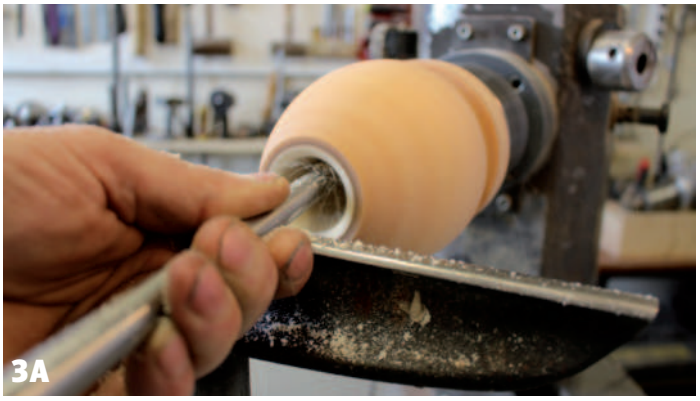
DHT types



2A Evolution of the toothpick-type tool, **2B** Evolution of the hook tool to the shielded cutter

DHTs are available in a range of types: toothpick, scraper, carbide-tipped, carbide disc, shielded carbide disc, ring tool, hook tool, shielded ring and hook tool, captivated and laser-guided. Then there are shaft variants: straight, curved, swan-neck, tapered, round, square, fixed, articulated... and on it goes in the whirling kaleidoscope of a tool fanatic's dreams. All of the various types and styles available will have a prescribed safe working depth, and this needs to be understood and adhered to.

Essentially, all DHTs derive from probably just two types: the hook tool and the toothpick. The hook tool has its history in pole lathe turning, and they tended to be made in the forge by the pole lathe turner, and hammered and ground for the production of bowls. The modern take on them simply continues the hook to form a complete ring, leading to the humble ring tool, which itself leads to the shielded ring tools, and from there to carbide disc cutters.



3 Above images show a shop-made toothpick DHT and the tool in use

The toothpick tools can probably reach back into David Ellsworth's studio, where he had no option but to make his own tools, often from old flat-head Stanley chrome vanadium screwdrivers, to achieve his vision of a vessel blindly hollowed out through a small hole. The toothpick is simply a small piece of tool steel, shaped or not, fitted straight or at an angle to a shaft, that has a bevel ground on to it, and cuts on the burr like a scraper, but the simplicity of them should not put you off. They are very effective tools; those made by John Jordan being notable among the throng.

4 Three types of shielded cutter DHTs

Even within the different categories there are different types of tool. The shield cutter DHTs, which are probably the most common, come in a range of designs. At their simplest they have a ring cutter with a curved cover that acts as a chip deflector, forcing the wood shavings way from the hole in the cutter to stop it clogging up. This does not always work, and some patience is required from time to time. There is usually a degree of articulation possible with these tools to enable reaching under a short shoulder, or altering the angle at which the cutter addresses the wood.

After these come those that utilise a carbide disc, itself shielded, and with a more considered design to the shield. This type also has articulation, and may even come with optional extensions to increase articulation. Keep in mind though, that the further away from the centreline of the shaft the cutting head is, the more difficult it is to control the tool.

A more recent variant is also essentially a shielded ring cutter, but the hole is filled with an adjustable tapered brass micro-bevel that controls the depth of cut and prevents the cutter from becoming clogged. This is a clever solution to an irritating problem, and one I am particularly fond of.

You tried a tool and you like it: what next?

Maybe you have not tried and chosen a tool yet, but at some point you will have, so how do you progress and learn to use it? The best option, as ever, would be to be taught how to use it. Look for somebody who teaches deep hollowing, which can be a great way to actually test drive a range of hollowing tools (that is the reason I have so many), and you will save yourself climbing some of that learning curve alone.

Failing that, get to know the tool: how do you keep it sharp, how does it cut, what height and angle does it cut best at? Keeping tools sharp depends which type have, and it should come with instructions for that. Read them and make sure you know how to achieve it. The assumption here is that you fully understand the techniques for mounting, truing, and preparing a blank for further turning.

If you are trying a hollow form vessel for the first time, start small. Choose a larger entry hole, perhaps 50-80mm, and choose a shape and form that presents no extreme angles to hollow. The semi-enclosed form in the diagram is a good starting point, but even a deep bowl can serve well as a training exercise for deep hollowing. Remember, it should be safe and enjoyable, not risky and scary.

Which blanks can you hollow?

5A End-grain green wood log mounted between centres
5B Roughing down a green wood log blank

With experience you can use almost any blank for hollowing, but to begin with a small piece of end-grain log, preferably green, is best. Green wood turns easier, and end grain is easier to hollow than side grain, which has its own peculiarities for hollowing.

6A End grain marked to show faster and slower running wood
6B Using a twist drill to bore out the slower-running centre wood

No matter what speed you have the lathe set on, and 600-800rpm is probably a sensible speed for a small log blank, the wood at the centre of the log will be running at the lathe's set speed and as you move out towards the circumference the speed of the wood increases. This matters to you because the slower wood is more difficult to cut relative to the remainder.

You can remove this difficult wood and give yourself a benefit at the same time. Using a twist drill, Morse taper or held in a Jacobs chuck, drill out the centre to just shy of the final interior depth of the form. Withdraw the bit frequently to remove the swarf to prevent the bit binding in the hole. If you use a Jacobs chuck hold the chuck body in one hand and wind the quill with the other. A remote kill switch for the lathe is a real boon just in case the bit binds.

7 White marking made on top of shaft to show when cutter is at 45° to the wall of the vessel

18+

WHAT IS AVAXHOME?

When learning to hollow there is always a lot to think about. Keeping the tool at the appropriate angle is fundamental to cutting the wood and achieving your aims, but this is often difficult because you cannot see the head of the tool, and the round shaft gives no indication. Most cutters are most effective when the tool edge addresses the wood at an angle, 45° or thereabouts, to the wood. It is very easy for the tool head to get twisted around from this. So, there is something you can do to reduce the attention you have to give to this problem. Before beginning, angle the tool against the wood and mark the top of the bar with a permanent marker, or piece of decorator's tape. (You can just see the white arrow on the tool in image 7 on previous page.) Providing that mark is always uppermost the tool head will be at 45° to the vessel wall.

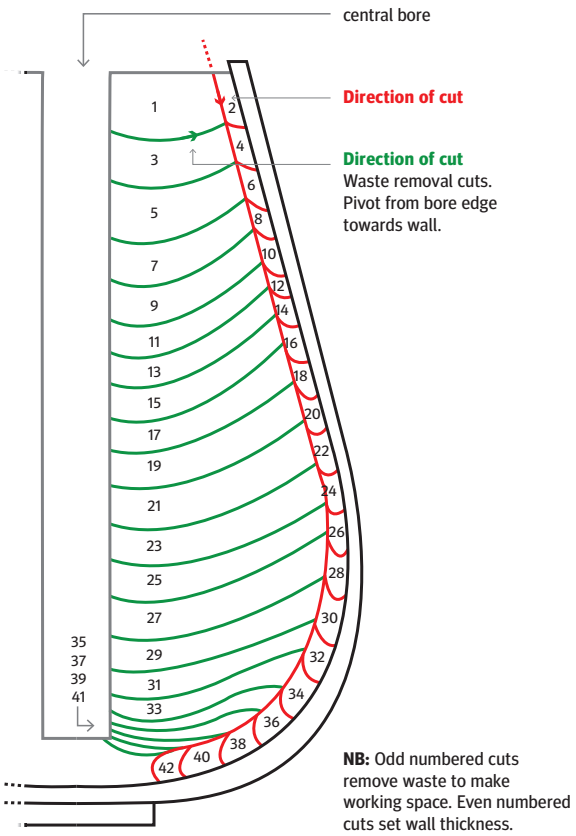
8 Range of shielded cutters in use

Cutting on the centreline is the optimum position to work at, but as you get deeper into it, the tool will want to drop under the centreline, so you may need to adjust the toolrest height, holding the tool handle at a higher angle. A longer-handled tool can help relieve the torque on the tool head that deeper hollowing results in.

When beginning to hollow, the cutting head is brought to the edge of the pre-drilled hole at the appropriate angle, and the tool handle is gently pushed away from the body and the tool shaft slowly pulled backwards, and a hollow will begin to appear.

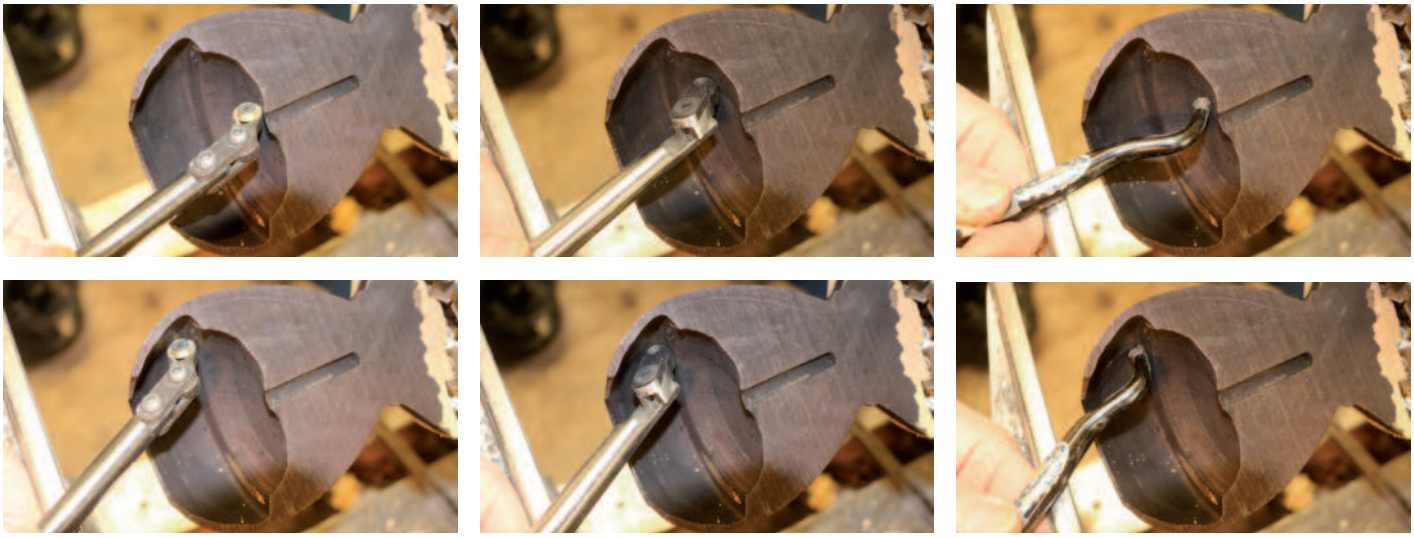
On this blank, which was used for illustration only, there is no external shape to conform the interior to, but the principles are the same – work from the edge of the bore outwards towards the wall. This removes waste wood and makes room for the tool to cut the final wall thickness in. So the process is, remove waste to make space, set wall thickness, remove waste to make space, set wall thickness – repeat until hollowing complete.

I am not a big fan of prescriptive diagrams for deep hollowing; trying to follow one precisely is virtually impossible, and can cause stress and confusion, but this diagram (below) gives an idea of what you will most likely end up doing. Just remember that the tool needs space to work close into the wall, and anything that is in the way needs to be removed in order to achieve that, and you should get on just fine.



Working through a small entry hole

Many newcomers to deep hollowing, or hollow form making, make the mistake of trying to achieve it through too small an entry hole. The difficulties of this should not be dismissed; the smaller the entry hole the more difficult it is for various reasons. Not only can it restrict the tool head, but it can dictate a different type of DHT with a smaller head. There is less room to manoeuvre the tool shaft, less room for shavings to eject, and a shoulder is naturally formed which makes the process even more difficult. Beginning with a 50-80mm entry hole as a starting point makes more sense. You can develop your technique with dramatically reduced risk of a catch 'n' bang. As your technique improves you can reduce the size of the entry hole.

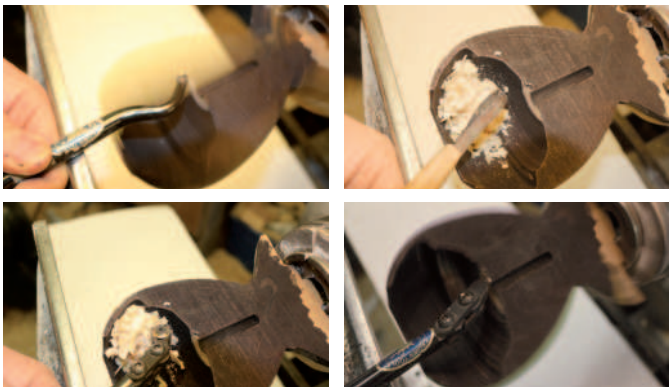


9 From left to right: three DHTs showing waste removal position (at top) and wall-setting cut (bottom)

Shielded cutters in action

As stated, one of the main issues you will face is knowing where the tool head is, and what it is doing. On this prepared example the form has been cut in two so you can see inside.

In the above pairs of images, showing three DHTs, two shielded DHTs and a carbide-tipped cranked DHT, the waste removal position is in the first image, and the wall thickness cut is in the second. As room is made by removing waste, the next cut sets the wall thickness, and the cuts progress in this manner, deepening the vessel as you go. Once the wall thickness is set you should not return to it again except to clean the surface with a scraper after the actual hollowing is completed.



10 Cutaway hollow pot showing tool positions and attitude during cutting, and shavings build up that requires the lathe to be stopped to clear them

Deep hollowing is all about knowing where the head of the tool is, and what it is doing, even though you can't see it. First forays in deep hollowing are likely to cause anxiety, and this can cause problems in itself. The tool needs to be manipulated with confidence, held firmly, but not imparting tension from the body, and movements need to be controlled and fluid. In the first image above, a small carbide-tipped tool is used on the cutaway example, this serves to illustrate where the rim of the entry hole would be, and how you also need to consider where the tool shaft is in relation to it. There is a lot to think about.

As you begin to increase the interior diameter, another thing rears its head to cause concern – shavings. Because the interior diameter is greater than the entry diameter, shavings begin to compact due to centrifugal force driving them against the vessel wall. This mass of shavings can knock the cutting head off the surface of the wood, sometimes violently enough to lead to a catch. The only mitigation against this is to frequently stop the lathe and remove the shavings. You could vacuum them out, but a simple shop-made hook can serve just as well to scoop them out with the lathe stopped. Do this frequently.

When the hollowing is eventually completed, you may wish to finish the surface by scraping with a suitably sized scraper tip. Keep the cuts light, gentle, and work from the base up to the entry hole, cutting with the tip at an angle to the surface to make a shear cut.

Conclusions

I have no personal preference between toothpick and shielded cutter DHTs – both work well. Shielded cutters do cut more wood more quickly, but that means there's the possibility of taking too much wood, and the shavings fill the vessel very quickly, so it really is just a choice between two types of tool that work. It would have been impossible to cover every individual tool, or even types, in such a short article, but I believe the two types I chose are the most useful. Understanding how the tools work, and why, can be a real help in understanding how to achieve the success you want, so take the time to assess, try, and practise with the tools before you rush out to grab a large log from the woodpile.

Top tips for first forays into deep hollowing

Tips for making hollow vessels for the first time:

1. Start small
2. Avoid fissured, cracked, or 'character' wood with voids
3. Start with a larger entry hole – 50-80mm
4. Do not overburden your lathe or available tools
5. Stick to the recommended workable depth for the tools used
6. Check work hold repeatedly throughout the process
7. Remember that the tool needs space to work in. Make clearing cuts and then refine towards the wall
8. Clear the shaving frequently with the lathe stopped
9. Stand back and look at the shape often. Aim for flowing curves and good proportion
10. As abilities improve you can increase the size of the forms you turn and reduce the diameter of the entry hole if required. But remember... only woodturners care about this element
11. Be prepared for failure. Accept it. Learn from it. Start again. It will come in the end

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Turning and image by Brad Herrington

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Maple and textured red gum lidded container

Andrew Potocnik turns to the world of ceramics for inspiration

There are many things I see that spark my mind and set it off on a journey of development, which can sometimes happen in a fairly short period of time. Then there are images that capture my attention but linger in the back of my mind and don't lead to a development I feel comfortable making and calling my own.

I've had a few pages photocopied from a ceramicist friend's exhibition catalogue which I've used in demonstrations to turning groups when I show attendees where I draw inspiration from. However, this idea still has not evolved into something that has kickstarted my mind to get to work on evolution of the original inspiration. I've kept the photocopy where I see it almost daily, so it has continued to catch my eye and niggle away.

The original piece had a dark base and textured, mottled upper section. What caught my attention was the drop-in lid held in place by a horizontal handle that stopped the central lid disc from falling into the opening of the box.

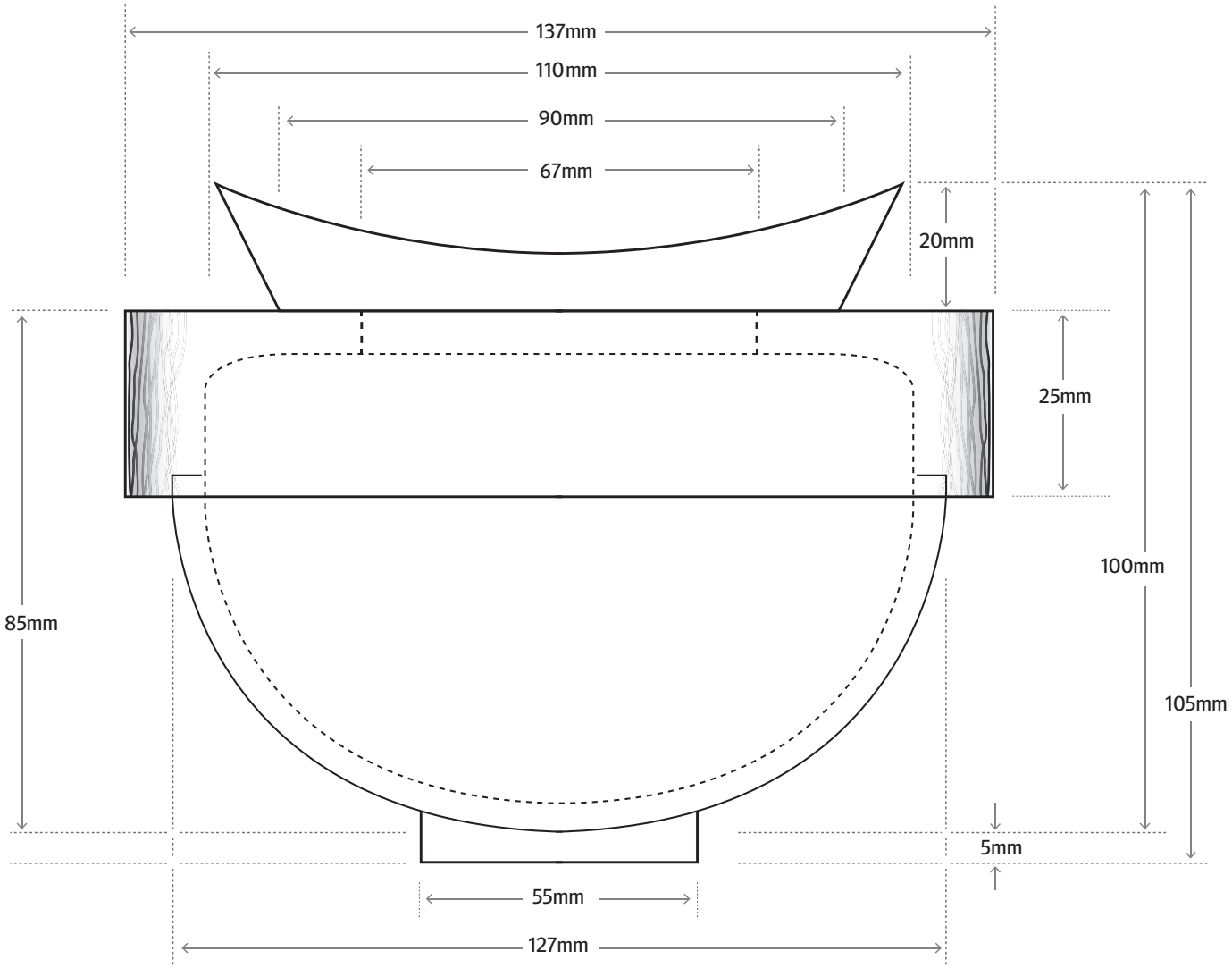
As a turner, my concept of a lid is a component that fits neatly into the opening of a container. A disc held in suspension without a rebate or snug fit? Well, really it was texture and colour contrast that drew me to this piece in the first place.

Ceramicists don't care about 'suction fits' or whether the grain of a clay form will move according to the weather, so I needed to let go of some of my technical concerns and make way for timber movement that would allow this idea to work in wood.

Plans & equipment

Tools & equipment

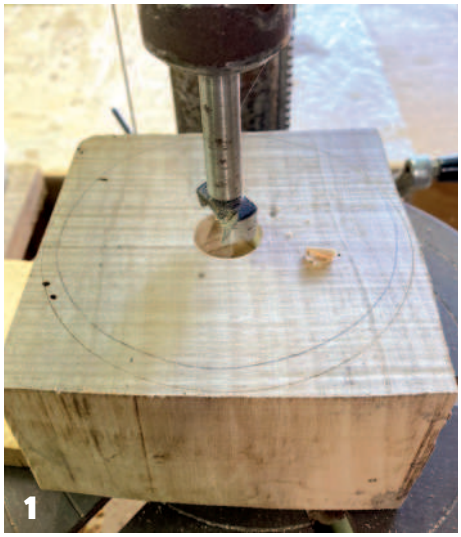
- PPE & RPE as appropriate
- 12mm bowl gouge
- 12mm fingernail-shaped scraper
- 12mm spindle gouge
- Flat curved scraper
- Round skew
- Diamond pointed scraper
- Parting tool
- Square-tipped carbide cutter
- Figure eight callipers
- Dremel and burr
- Inertia sander



The making

1 Having decided what type of texture and colour the collar would be, I needed to begin with the bowl section, for which I decided on a light-coloured wood. So searching through my stash of treasured timber I found some maple which I brought home from Philadelphia in 2004 after my residence at the International Turning Exchange. To mount the blank, I drilled a 25mm (1in) hole about 15mm deep and then cut it into a circle.

2 I use a variety of chucks and methods of mounting material on the lathe, and in this case, I gripped it on stepped jaws held firmly in expansion mode. By using the smallest step, the shoulder of the adjoining step ensures the blank will run true.



3 When turning a bowl, you can see the full profile and adjust it until it is balanced, but in this case I had to keep in mind that the collar forms a vital part of the box's profile. The pencil line marks roughly how much of the bowl section the collar would cover, so I needed to imagine how it would blend with the curve of the base. Placing a piece of cardboard behind the wood took away visual distractions so I could evaluate the curve with ease and imagine the extra 4mm of collar thickness that would be added later.

4 The wood was sanded through to 320 grit without touching the tenon as it would be used and marked when the bowl was reversed for hollowing. You can see that my maple has holes, made by what I assume to be ambrosia beetles, whose secretions cause the wood to take on a subtle pink colour. I don't see these holes as imperfections but part of the character of the wood, just like the slight fiddle-back pattern.

5 Reversed and held in compression mode with standard jaws, the bowl was hollowed. Being air dried, the maple turned with ease, allowing waste material to be removed quickly, but scraping the surface in final shaping, fine, fluffy shavings floated from the tip of the tool.

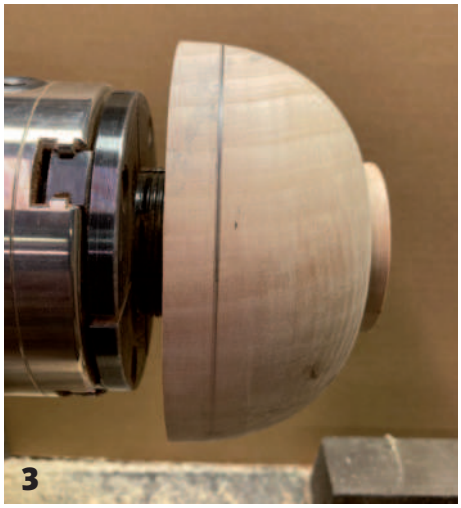
6 Using an inertia sander, the wood sanded quickly. I find these sanders work very well on inside and outside curves.

7 On areas that need to be flat, like the rim in this photo, I use sandpaper folded twice so the edges don't accidentally round over. I wanted the corners to be crisp so ample gluing area would be available when attaching the collar later.

8 I now needed to move on to making the collar, which brought up the question of what type of wood to use. I had already decided it would be stained, so selection was driven by what I had in stock that was broad enough and not too precious to be coloured. It also needed to be solid enough to allow texturing. Some red gum suited the purpose and was cut to a circular form, however it was not the same thickness from edge to edge, so I opted for the same method of mounting as I had for the maple blank, this time using a 50mm (2in) Forstner-style bit to create a flat base which could fit on to a set of long-nosed jaws. The base of the hole would allow the jaws to fit snugly against the surface and ensure the timber's other face to run truly.

9 Trimmed almost to the final diameter, a recess of about 5mm was cut using a square carbide-tipped scraper. The interior diameter was checked frequently with Vernier callipers as I 'snuck up' on the final measurement, which needed to fit neatly over the rim of the bowl.

10 A quick test fit allowed me to evaluate how well the collar suited the bowl and whether I needed to alter the shape and dimensions. The diameter needed to be reduced slightly and a cut was made with a parting tool about 30mm from the bottom edge of the collar as a rough indicator of collar height.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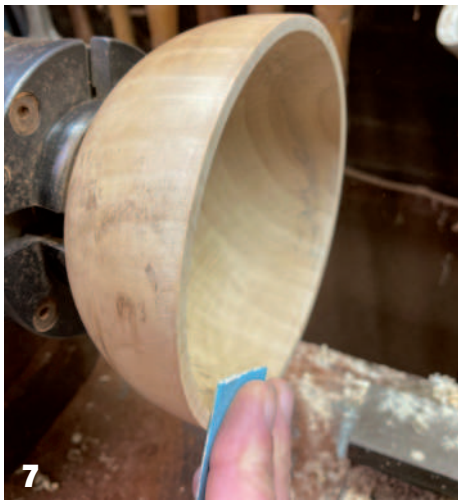
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PHOTOGRAPHS BY ANDREW POTOCNIK

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11 The collar also needed to taper slightly towards its top. A square laid across the bottom rim shows just how little was removed to prevent the collar from looking like a top hat but to blend in with the curved profile of the bowl.

12 The interior of the collar was hollowed with a gently curved transition from wall to underside of the top. A narrow parting tool was used to cut about 7mm deep at what would later be the opening of the container, but sanding was also still to be completed.

13 Some of the tools used to complete this stage of shaping, but I did not include my narrow parting tool as it is a homemade item.

14 The collar was parted free from excess material, leaving about 7mm thickness, which could be trimmed down once it was remounted. I prefer to leave just a bit extra material in case I decide that more height is needed.

15 Reversed on to another set of jaws and held in expansion mode just inside the recess of the collar, the top was trimmed and levelled. Furniture makers say you can never have too many clamps, but I think a turner can never have too many chucks, especially if they're set up with a variety of jaws, ready for whatever task is at hand.

16 Removed from the chuck and fitted to the bowl section, I could evaluate proportions and size of the collar to see whether any adjustments were needed. Again, the blank piece of cardboard eliminated visual distractions. At this point I usually take several steps back from the work and squat down so it's at eye level and I can have a really close look. It's also worth walking away from the piece for a few minutes and returning with a fresh eye.

17 I decided the top rim needed to taper in a few millimetres more and the opening be enlarged about 10mm, so revised dimensions were marked before remounting the collar, making the changes and sanding all surfaces. Oh, and another check to see whether the changes were sufficient.

18 Time to texture. I used a Dremel micro-motor and a burr I've had for years, so I can't remember who manufactures this particular shape. It was a long session of light strokes over the surface, followed by many more, deeper strokes, along with a strong side light to see where there were any spots that I might have missed.

19 The same followed around the side and bottom of the collar. Be warned, excessive work of this nature can lead to wrist or hand injuries. Although all of the outer surfaces were textured, the inner edge of the opening was left smooth.

20 The resulting surface was quite clean, with little torn grain, so I was able to progress to the colouring stage. If grain had torn, I would have needed to remove stray fibres by lightly rubbing them with a stiff nylon brush or a brass brush. For colour, I opted for a spirit stain which is thin enough to get into all parts of the texturing with ease. A soft artist's brush worked perfectly.

21 To complete the bottom of the bowl section, it was transferred to a chuck fitted with Cole jaws and gripped firmly by its outer surface. Be sure to not tighten the chuck so far that the rubbed 'buttons' mark the surface of your work. It's also a good idea to make sure the 'buttons' are clean to prevent damage. The foot was cleaned up to remove marks left by the previous chuck jaws using a long, pointed spindle gouge.

22 This groove was neatened with a round skew before hollowing the base, sanding and then cutting two V-grooves with a diamond pointed scraper. These grooves create a band on to which I write my name and the timber species. Another light sand and a quick touch of the sharp edge of the base, and the bowl was complete.

23 Another piece of maple was cut and fitted between my chuck and tailstock centre. This was some commercially processed timber which I bought because of its wonderful blister-patterned grain on the same 2004 trip. I wanted the lid to match the bowl section, but it needed to have visual intrigue. A parting tool was used to create a tenon by which the wood would be held when reversed into the chuck.

24 The underside of the lid was turned with a slightly curved surface, a couple of V-grooves cut to break the surface visually after sanding the face and edges, and the piece could be parted free with a narrow parting tool. I had ensured the diameter was just smaller than the opening in the collar with Vernier callipers, but keeping in mind that sanding would reduce it marginally.

25 A jam-fit carrier was turned from some scrap material and a hole drilled through it in case the fit was too tight. The hole allows for a piece of dowel to be inserted from the bottom of the chuck and the lid to be gently pushed free. The pencil marks were to guide me while the top was being trimmed to its final thickness.

26 After a check to see whether I'd trimmed away the right amount of wood, the lid was returned to the carrier and sanded flat. It was important for the surface to be as flat as possible so the handle would fit neatly without any gaps. A sanding block and some hand sanding while the wood was stationary ensured this, and the process was repeated with each grade of sandpaper.


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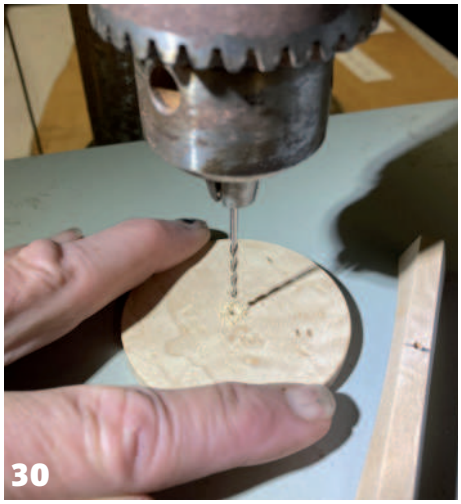


27 The sharp edge was eased with a touch of 320 grit sandpaper, a centre point marked with a pencil and this stage of turning was complete. The centre would be drilled later so the lid and handle could be pinned.

28 A handle was cut from another piece of maple and shaped on my belt sander. The grain orientation was important because, even though I wanted some interesting grain, I didn't want it to compete with that of the lid. By using wood that had growth rings running horizontally along the sides of the handle, the curved portion would cut through them revealing the equivalent of a cathedral-patterned grain.

29 Hand sanding followed using a flat board to which I attached sandpaper held in place with spray adhesive. I have two boards set up for this method of sanding, one fitted with 120 grit, the other with 320. Shapes such as this handle can be difficult enough to hold when hand sanding, and to achieve a flat surface is even harder. A sanding board makes the process easier.

30 The lid was transferred to my drill press and a 2mm hole was drilled in the middle, along with another in the centre of the handle. Apart from acting as a place to insert a pin for strength, this would allow me to centre the handle with ease when gluing the two together.

31 A quick check to make sure the two surfaces met without gaps, however, I did ease the lower edges of the handle enough to create a shadow line. This was done to create a visual break and to disguise any potential glue squeeze-out.

32 I frequently use pins for a variety of purposes. In this case it was just to help keep the two parts in place when glued, but other times I use them to join items but leave a space between. You can turn pins or use sections of nails, but my preferred option is stainless steel bicycle spokes which are exactly 2mm in diameter and will not rust. A narrow bead of glue was applied to the handle which was then pressed into place and a rubber-faced clamp applied. The handle was aligned with grain direction of the lid for visual balance.

33 Finally, I had decided to soften the black of the collar by mixing a dark shade of grey and lightly dabbling it on with a small piece of sea sponge. This was followed by a few more dabs with a slightly lighter grey and allowed to dry.

34 You can see that the grey was only applied to the high spots of the texture, which helps to highlight the radiating grooves and gives them visual depth. All that was left was to glue it to the bowl, fit the lid and the piece was complete.

Conclusion

I could have cut a recess for the lid to rest on, which would have allowed the opportunity for the handle to be connected to the lid via two pins and a space left between the two. A space of as little as 1-2mm can make it look lighter, but it wasn't in the spirit of this piece. ●

Decorated rim bowl

Sue Harker applies a paint-pouring technique to the rim of a shallow bowl

Decorating turnings is a topic of great discussion. I did not decorate any of mine when I first started hobby turning, however, when I became a professional and started to demonstrate at clubs across the country that soon changed. First I explored open-segment turning before I started to add colour, resin inserts, texture, paints and stains, to name a few. This enabled me to offer a larger variety of demonstration subjects.

For this project I am using a technique that I saw being used on artists' canvases and recognised the potential for adapting it to use on my turnings. I researched the products required to thin the paints for ease of pouring. There is a dedicated pouring medium, which can be quite expensive but produces excellent results. As this was a learning curve for me, I decided to go down the less-expensive route of PVA glue or water.

To experiment with the paints I turned several small bowls for use with tealights so I could practise a few alternatives. First I tried PVA glue. The resulting mix was not successful – the paint and glue I used cannot have been compatible and created a very lumpy mess. The second method was adding water from the tap which worked well, and the resulting pours delivered interesting patterns.

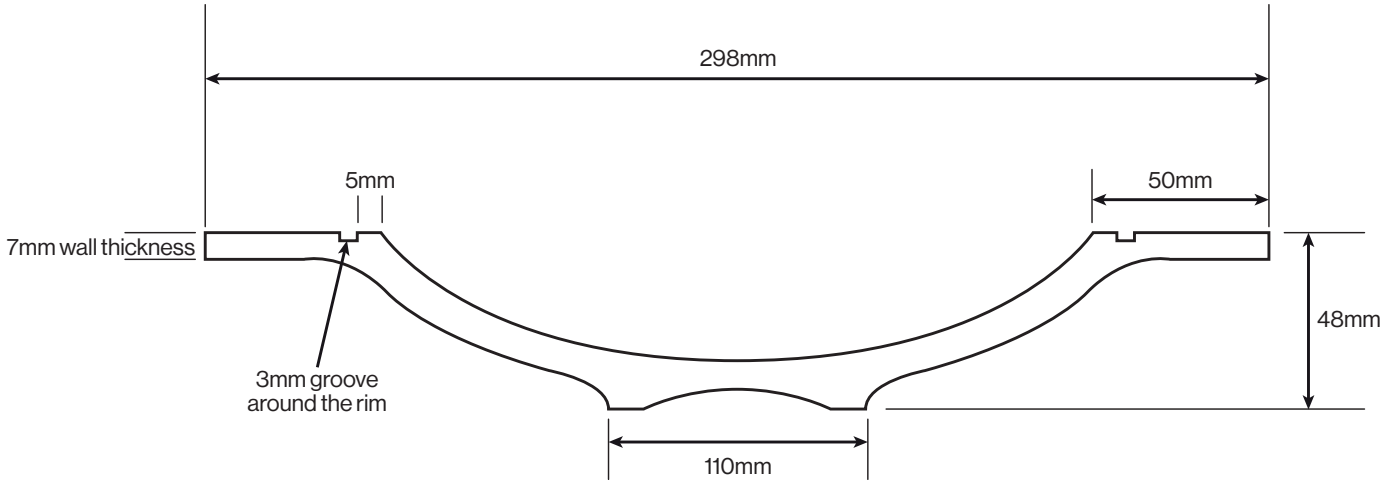
Plans & equipment

Materials

- Sycamore bowl blank 300mm x 50mm thick
- Acrylic paints, thinned with tap water
- Cellulose sanding sealer
- Cut and polish
- Microcrystalline wax
- Acrylic sanding sealer spray can
- Acrylic gloss lacquer spray can
- High-gloss hard wax oil
- Disposable cups
- Craft blowtorch
- Masking tape, cling film (saran wrap) and newspaper
- Abrasives 120, 180, 240, 320, 400 grits

Tools & equipment

- PPE & RPE as appropriate
- ⅜in standard grind bowl gouge
- ⅜in long grind bowl gouge
- ⅛in parting tool
- 1/16in fluted parting tool
- Vacuum chuck or similar
- Sanding arbor
- Battery drill
- Rotary sander
- Hair dryer or similar



Top tips

- If the paint is not thinned sufficiently, it will not move very well when being blown with the hairdryer, so I would suggest a thinner paint is better than a thicker one.
- Gather all the items required for the paint pour before you start.
- All the paints being used, i.e. a base coat, white in this instance, and four colours already thinned to the required consistency.
- A hobby blowtorch, which is used to run above the surface of the paints to burst any air bubbles.
- A hair dryer, preferably one that blows cool air, but a normal one will suffice.
- Gloves to keep your hands clean.
- Once the base coat has been applied to the rim, the colours need to be drizzled immediately so they flow more easily.
- By using a fluted parting tool to cut the groove through the painted rim, the two points at the tip of the tool cut crisply into the timber, preventing torn fibres.
- A compressed air gun can be used to blow the paints; however, this is a more powerful air flow than a hair dryer so the paints would need to be thicker, and the air gun would need to be held further away from the paint to reduce the force.

The making

1 Mount a piece of sycamore, 300mm diameter x 50mm thick, on the lathe with your usual mounting method. True up the edge and front face with a ⅜in standard grind bowl gouge. Mark the diameter of chucking tenon required for your large jaws and use a ⅛in parting tool to cut the tenon. Here I have cut an 86mm diameter tenon to fit my large jaws.

2 Draw a reference mark at approx. 110mm diameter, this will be the foot of the bowl. Using a standard grind bowl gouge and starting from the reference mark, form a cove leading into the underneath shape of the bowl.

3 Still using the ⅜in standard grind bowl gouge, create an ogee shape to remove some of the excess timber from where the underneath of the rim will be. On the outer edge, mark the required thickness of the rim and work towards removing as much wood as possible.

4 Next, using a ⅜in long grind bowl gouge and a bevel-supported cut, refine the shape of the bowl towards the underneath of the rim to create a 40mm-wide flat surface. Turn the tool flute towards the underneath of the rim and use a pull cut to reduce the thickness. Using the same tool with the handle lowered and the flute rotated towards the underneath of the rim, shear scape the surface to refine the shape and finish.

5 With the underneath of the bowl shaped, sand from 120 grit through 180, 240, 320 and 400. The transition between the bowl and the underneath of the rim will require sanding by hand, whereas the remainder can be sanded with a rotary sander.

6 Coat the underneath of the bowl with cellulose sanding sealer and allow to dry before applying some cut and polish. Buff the cut and polish to a sheen with the lathe rotating. Apply some microcrystalline wax and leave for 20 minutes before buffing to a glossy shine.

7 Remove the bowl from the lathe and remount, using a set of large jaws attached to your chuck. True up the front face and outer edge. Mark approx. 55mm in from the edge and cut the surface flat. Sand this area and the edge of the bowl using the same abrasive grits as previously used. Apply a coat of acrylic sanding sealer over the sanded area and allow to dry.

8 Cover the edge of the bowl with some masking tape. The tape is easier to apply while the bowl is still on the lathe. Make sure that all the edge of the bowl is covered, leaving the face of the rim free from tape. Rub the masking tape on to the edge to ensure there is a seal between the tape and timber, reducing the risk of paint seepage.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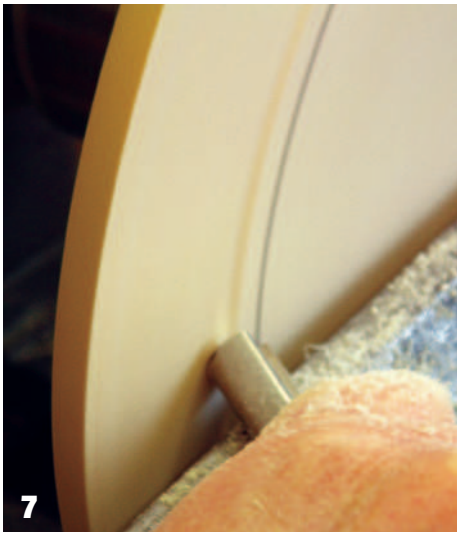
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PHOTOGRAPHS COURTESY OF SUE AND GRAHAM HARKER


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9 Remove from the chuck and cut a piece of cling film large enough to cover the underneath of the bowl. Lay over the bowl and stick the masking tape to it, ensuring all the timber is covered.

10 Prepare the paints for pouring by adding small amounts of your chosen colours into clear disposable cups or similar. The paints need to be thin enough to be able to drizzle on the wood, so add small amounts of water until this consistency is achieved. Here I have chosen white for the base and a mixture of four colours, each in a separate cup.

11 Sit the bowl on some newspaper to protect the surface you are using. Apply a thick layer of the base colour, white in this instance, to the rim of the bowl. Smooth out and run a blowtorch across the surface of the paint to remove any air bubbles. Avoid getting the paint too hot as it will start to dry.

12 Drizzle small quantities of the chosen colours around the inner diameter of the rim, starting with the darkest and working through to the lightest colour. Each colour needs to be poured over the top of the previous colour.

13 With all the colours poured, run a blowtorch over the surface of the paint to remove any air bubbles. Again, do not apply too much heat as this will start to dry the paints which will prevent them from moving easily to create the desired effect.

14 Using a hairdryer, or something similar, blow the paints towards the outer edge of the rim. Start with the lower setting on the hairdryer and if that does not blow the paint sufficiently, increase the setting. The paints will run off the edge of the bowl – this is normal and the reason for protecting the underneath of the bowl. Blow the paints around until you are happy with the results. Again, avoid using too much heat. When the desired paint effect has been achieved, leave to dry before continuing – usually, overnight will suffice.

15 Remove the cling film from the underneath of the bowl and mount the bowl on the large jaws. Apply a coat of acrylic spray sanding sealer to the painted area and allow to dry. Next, apply several thin coats of acrylic gloss lacquer spray, allowing each coat to dry before applying the next coat. Let the surface completely dry before proceeding with shaping the inside of the bowl.

16 With the acrylic lacquer dry, remove the masking tape from around the outer edge and check for paint seepage. If there is any, lightly sand the paint away with 400 grit abrasive. Try to avoid scratching the front face and the finished underneath. Apply another coat of sanding sealer to the edge and, when dry, apply some cut and polish, buff to a shine before coating with Microcrystalline wax and, after 20 minutes, buff to a gloss shine with some kitchen towel.

17 Measure 50mm in from the outer edge and draw a pencil reference mark over the paint. This reference mark should be a larger diameter than that of the finished diameter of the underneath of the bowl, allowing for the wall thickness of the bowl. Next, from this reference mark and using a ⅜in standard grind bowl gouge, start to take out the inside of the bowl, creating step cuts as you progress.

18 When the finished diameter of the internal bowl has been defined, check that the rim of the bowl is running true before cutting a groove through the painted area approx. 8mm in from the edge of the internal bowl. A 1/16in fluted parting tool is used for this. This groove creates a picture-framing effect, adding another element to the finished piece.

19 Continue to remove the inside of the bowl as before, still using the ⅜in standard grind bowl gouge, checking the wall thickness as you progress. Here I am removing the remaining step cuts to create a curve to the bottom of the bowl.

20 Sand the inside of the bowl, taking care not to catch and damage the painted rim with the abrasive. A sanding arbor fitted into a battery drill can be used for this. Work through the same grits as previously used, checking the finish in between each grit, before moving to the next grit.

21 Using the abrasives discs, bent in half, carefully sand the groove cut through the painted area on the rim of the bowl. Work through all the abrasive grits, taking particular care not to catch the painted areas.

22 Remove the bowl from the lathe and to remove evidence of chucking, remount using your preferred method of reverse mounting. Here I am using my vacuum chuck to hold the bowl, so the tail drive can be removed. Use a ⅜in standard grind bowl gouge to remove the chucking tenon, creating a slight concave to the foot. With a ⅛in parting tool presented at approx. 45° to the timber, cut a V-groove near the centre of the foot; this is for decoration only.

23 Using a sanding arbor mounted into a drill, sand the underside of the foot starting with 120 grit and working through 180, 240, 320 and 400 grit abrasives. Using abrasive discs folded in half, sand the V-groove.

24 Remove the bowl from the lathe and remove dust from the surface. Compressed air can be used for this or, alternatively, a tack cloth. Apply a coat of hard wax oil to the centre of the bowl and the groove around the edge and leave to dry. More coats of hard wax oil can be applied as required, leaving each coat to dry before applying the next. ●


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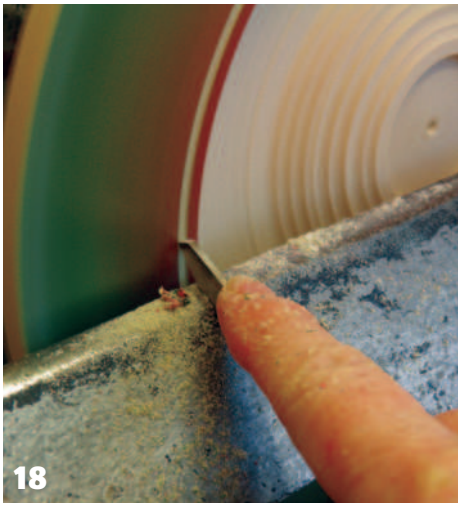
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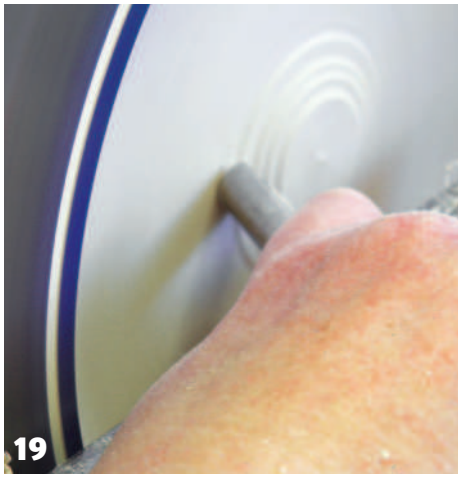
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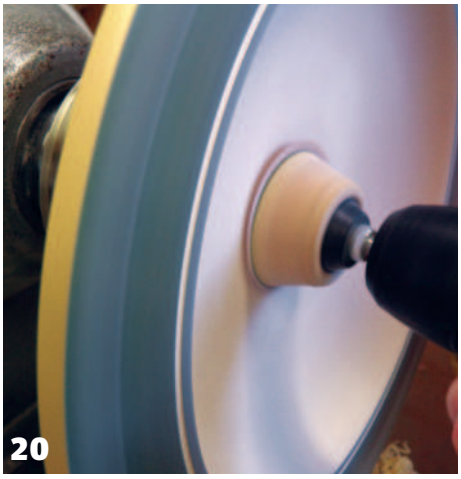
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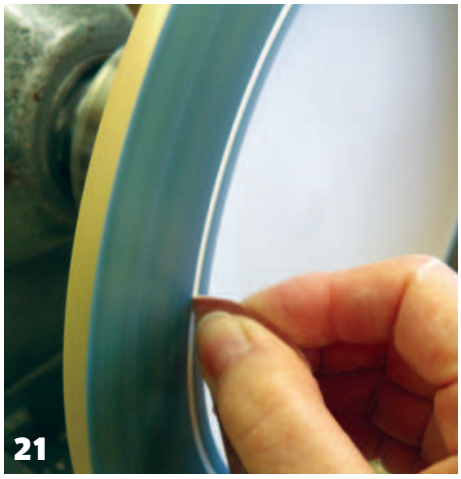
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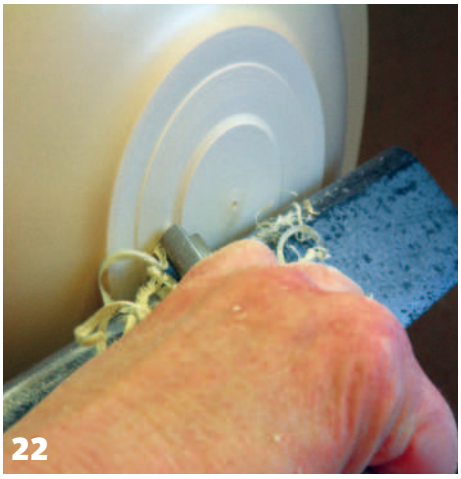
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Olivers Woodturning

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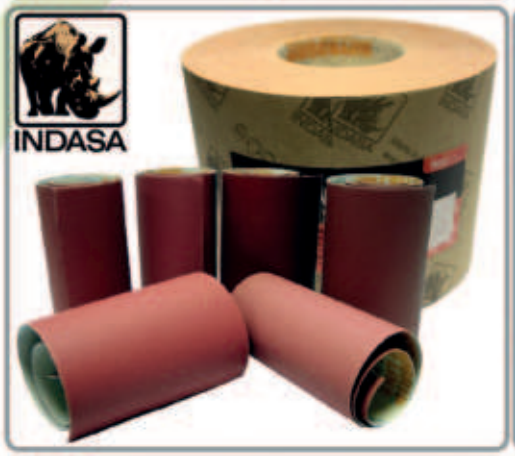
Shop: www.oliverswoodturning.co.uk

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



Community news

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

AWGB International Woodturning Seminar 7-9 Oct 2022

Where Inspiration meets Creation

Come and celebrate the process of creation with a world-class line-up of demonstrators. The 17th Woodturning Seminar will take place at **Yarnfield Park**, **Staffordshire**. Join experts from around the world to improve your skills to the next level of expertise. Whether you're new to turning or an old hand, there will be something to inspire, educate and entertain you. Over the three days there will be more than 50 professional demos, masterclasses, and several demonstrations where attendees can learn specific techniques. It will start with lunch on the 7th and finish at 3:30pm on the 9th.

- Spheres
- German smoking figure
- Colouring, airbrushing, texturing, and applying metal leaf
- Carving & power carving
- Hollow forms
- Boxes
- Thin-wall turning and piercing
- Trembleurs
- Multiaxis

Friday night will include a free fun event for attendees, followed by an opportunity to chat in the comfortable bar area. On Saturday evening there will be an informal dinner followed by presentations and the auction which raises funds for AWGB development and grant activities. It's a fantastic opportunity for fellow enthusiasts to come together, learn, share their skills, and just enjoy. The seminar is open to AWGB members and non-members alike. We look forward to seeing you there.

Pay a 50% deposit and the balance four weeks before the seminar, or pay in full when booking. Bookings are guaranteed and will be refunded in full if the event is cancelled.

1+**2** – **Bob Rotche** is a Virginia based woodturner/carver/sculptor. It was exposure to the lathe combined with woodcarving that captured his imagination. He is recognised more for his work with carving, colour, and texture. He tries to keep a very open and curious mind in his attitude towards wood art. There are so many approaches and techniques to tell a story with wood.

Presentations: Turning spheres, embellishment techniques, carving, colour, and creativity.
Masterclass: Power carving and painting leaves.

3+**4** – **Colwin Way**'s journey started in 1983 during work experience at school. The reason for choosing to attend a production woodturning workshop was laziness as it was at the end of his road. Little did he know how much it would ultimately shape his life. His involvement with Axminster tools as an advisor on everything woodturning includes teaching, demonstrating, and writing.

Presentations: Taming the skew, turning a German smoking figure and a Christmas pyramid.
Masterclass: Mastering the skew.

5+**6** – **Alain Mailland** studied at the National Art School of Cergy-Pontoise, France, and took up woodturning aged 28. He began his own shop specialising in interior woodworking while turning as an amateur. In the early 1990s, Mailland slowly changed his focus from interior carpentry to turning. He developed his own style and techniques, particularly in hollowing. He designed the tools to turn and carve wooden flowers and animals. He has quickly gained a reputation for his very distinctive work and has been exhibiting and demonstrating internationally. He displays his work in many museums in France and the US, along with major collections.

Slide presentations: Turning a wood flower using his own 'flower tools', turning and carving a small tree, turning and carving a carnivore plant using the Escoulen chuck No.3, off-centre turning, hollowing, steam bending, and carving.
Masterclass: Slide show explaining and demonstrating my turning and carving methods for vegetables and marine shapes, techniques for producing off-centred pieces, steam bending.

7+**8** – A chance encounter at a Sorby demo led **Eugene Grimley** to join the Ulster Chapter of the Irish Woodturners' Guild. He likes to use demonstrations to teach and inspire the audience to try something that little bit different in their woodturning journey. Since his retirement in 2005 he has taught in senior citizens' clubs, youth clubs, Men's Shed and art venues.

Presentations: Tri-corner oil lamp, easy hollow forms, and multi-axis bowl with handles.
Masterclass: Tri-corner turning – different ways to turn a cube.

9+**10** – **Gary Lowe**, the Tartan Turner from Speyside, was introduced to turning in the early '90s and self-taught. A few years later he caught the 'bug' and hasn't looked back since. The addition of colour and texture has opened many more avenues. In 2016 he became an AWGB-accredited instructor, and in 2017 was accepted on to The Register of Professional Turners.

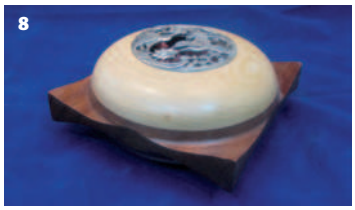
Presentations: Decorated rice bowl, flower pod, textured and leafed box, stepped open H/F, wobble box.
Masterclass: Laced open hollow form using different materials.

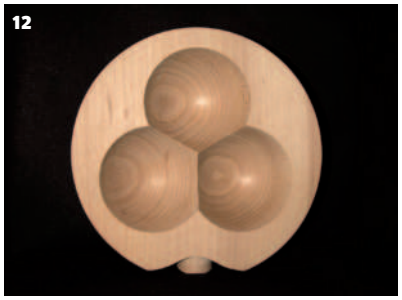
11+**12** – **Joe Laird**, from Dublin, became professional 16 years ago, with his time spent teaching and demonstrating overseas and at home. He is the first international turner, from outside the UK, to be accepted on to the Register of Professional Turners. Joe developed and perfected the amazing Irish Oak Whiskey Tumbler which now holds its own with whiskey enthusiasts.

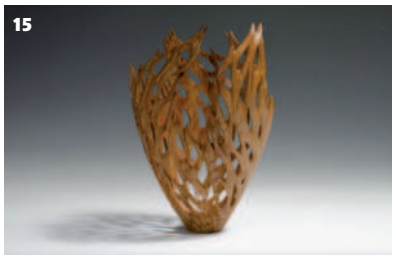
Presentations: Square bowl, shamrock bowl, Celtic bowl.
Masterclass: Off-centre figure with texture and colour.

13+**14** – **Nathalie Groeneweg** will take you into the wonderful world of fine turning. She will demonstrate how to turn, sand, and finish a 30cm trembleur using traditional and specialist tools. She will also demonstrate two ways of making wooden tubes with any kind of wood. These tubes can be fitted into ball joints to create articulated arms used in many constructions or pieces. This requires fine turning, and precise and efficient use of the tools.

Presentations: 30cm standing trembleur, tubes and ball joints.
Masterclass: Trembleur.







15+**16** – Woven through all of **Neil Turner**'s artwork is a deep respect for the material and the natural forces that have acted upon it. He looks for the quiet ripples eroded in soil by wind, the delicate eddies left by water, and the swirling lick of flames. Neil works in negative, observing the subtle interplay of light and shadow, creating fluid forms from solid wood. The destination is a piece that will inspire close inspection.

Presentations: Coral embellishment on open form, Jack de Vos seed pod, sea urchin box, vase with fire form.
Masterclass: Sphere with multi-embellishment.

17+**18** – **Joey Richardson** is an English woodturner known for her delicate, pierced and richly hued wood forms. There is often an autobiographical element in her work which has strong links to the history of the place and origin of material. By adding new, innovative techniques – piercing, colour, and texture for originality – Joey developed her philosophical view of her work. She has been awarded both a Worshipful Company of Turners bursary and a Queen Elizabeth QEST/Carpenters' Company scholarship, which funded her development studies in America with the late Binh Pho. Joey demonstrates nationally and internationally, and her sculptures are held in numerous permanent and private collections worldwide.

Presentations: Thin-walled turning and piercing, airbrushing, colouring, carving, texturing, pyrography.
Masterclass: Air brushing, piercing, and texturing.

19+**20** – **Nikos Siragas** is based on the island of Crete has more than 40 years of experience and specialises in combining turning and carving to create sculptural art. Nikos also has 20 years of experience

demonstrating and teaching nationally and internationally, writing articles for craft magazines, and has run many courses at his workshop in Rethymno.

Presentations: Three strand vase, tagliatelle goblet, footed vase, lady with a hat.
Masterclass: Winged bowl with a carved top edge using various rasps to create the impressive 'winged' element of the design.

In addition to the wonderful demos and masterclasses there will be some other interesting events, including:

Instant Gallery

Delegates and presenters are invited to bring their latest and greatest work for display in our instant gallery, resulting in an impressive collection of art showcasing what's possible both on and off the lathe. One lucky delegate will be awarded the Tony Boase Tribute Award and, for the first time, there will be the Ray Key People's choice award where the delegates will vote for their favourite piece.

One-slot demonstrations

There will be a number of one-slot demonstrations running alongside the main presentations and masterclasses where attendees can learn specific techniques.

Woodturning Seminar Top 50

At each seminar, we choose around 50 pieces from the Instant Gallery to populate our Travelling Exhibition. The chosen pieces will be displayed at several venues over the next year or two and are then returned to their owners. All delegates are invited to bring up to three exhibits for inclusion in the Travelling Exhibition. Entry forms will be sent out following registration to allow pieces to register their exhibits in advance.

Trade Show

There will be an assortment of tools, timber and equipment on view (and for sale) from selected trade exhibitors. The trade area will be open to all visitors free of charge. There's always one more essential tool needed.

AWGB INTERNATIONAL WOODTURNING SEMINAR
Your turn to be inspired

AWGB International Woodturning Seminar 7–9th Oct 2022** | **awgbwoodturningseminar.co.uk

West Sussex Woodturners awards evening

At long last WSWT was able to hold its annual awards and competition evening on Friday 13 May after being delayed from 2020 due to Covid. The awards were for the 2019 competition year. Nine cups and shields are awarded for beginners, intermediate and advanced turners, with three in each group. In addition, on the evening an open competition is held for all members irrespective of their skill level as the invited judge is not a woodturner and chooses the pieces they would theoretically like to take home. This year our judge was Mrs Wendy Knight, who had a difficult task due to the high standard and good number of entries presented. The winners were Stan Wright, Jim Harris and Terry Hooper.

A two-course hot meal and coffee was also served, and a good evening was had by all.

Regards, Ian Rudge, Chairman WSWT

Question for the guest editor – Reg

In Reg Hawthorne's article in WT369, the quick comment in Step 3 of 'using the drill press' is a little vague if you don't know this tip. What exactly do you mean by this? I'm handy and intelligent, but this is a new one for me – I'd have liked to have learnt this tip, but don't understand from this brief mention of it.

Reply from Reg – Sorry if what I was doing was not clear. This is a pillar drill used to compress two pieces of wood. Looking at the photograph the jaws of the chuck are wound into the body of the chuck, the piece to be glued is then set central on the table, which is then wound up to compress and hold the two pieces together.

Lockdown vacuum blues

As you know, every woodturner did something different through the lockdowns and I was no exception. First, I decided to remake every non-moving bench into a moveable one on wheels, six in total, using more than 80m of wood at pre-Covid prices and this ended up as over 120 pieces and 450 joints. I marked them up in our back room, and when the spring sun started to come through the windows then out into workshop they went.

I wrote down problems I was having when making things and extraction was at the top. The problems I had were that the 32mm vacuum pipes all had different fittings on the ends, including my workshop Numatic one, so using a pipe from one side of the workshop to the other was not possible and extending pipes to work outside was nigh-on impossible, without a lot of fiddling and duct tape.

I saw an advert on Facebook displaying a company called Central Technology and it looked like my dreams had been answered. All you had to do was get rigid non-crush vacuum pipe and screw the coupler on to it and the adaptors would click into portable machinery, like my rail saw.

Central Technology Quick Click System

I adapted all the pipes in my workshop

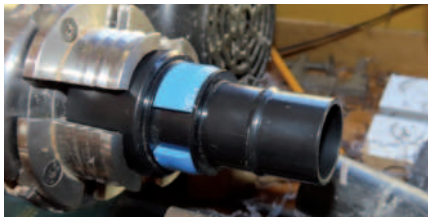
But there was a problem. You still could not join vacuum pipes together to make an extension pipe to work outside and, after contacting CT, they stated they did not make one. Thinking cap on, I came up with a solution by using two of the click-fit accessory nozzles at each end and a steel piece of tubing joining them in the middle. This became a joiner and now I could safely work outside while routing MDF. I had one piece of rigid vacuum pipe with a CT collar at each end and this was the extension hose – 20ft could now be maintained without loss of suction.

Rail saw with extension hose

My stand-alone sander

Stand-alone machines, like sanders and a home-made bench fitted router, have a short pipe with a click-fit collar at the end and the vacuum pipe just clicks on to the joiner. The router connects into the Dyson system, then changes to the CT system. Then, with all portable or stand-alone machines, the vacuum pipe goes into the Axminster 65mm extraction piping.

All the adapted pipes fit into the 65mm blast gates of the Axminster extraction system



CT Vacuum attachment (minus the rubber hose end) being turned down to fit the stainless pipe to make the joiner

I decided there must be a better way than to have a huge, long joiner in the middle. I stripped the rubber attachments off both the Dyson and CT attachments, fitted the collar in my Rutlands chuck fitted with Shark jaws, turned the collars flat on the lathe and shortened the tube.

Smaller, lighter and smarter

I slid a stainless steel metal tube over the top so now the joiner was a lot smaller, lighter and smarter looking. The system was almost complete but lacked the hands-free option when drilling or sawing on a workbench.

Two CT collars sandwiched between a sheet of acrylic

So, I used two CT collars fitted on to a hollow wooden tube, sandwiched between a sheet of acrylic. This was then held by a phone holder on a flexible steel bar and clamped to the bench, and you could position it anywhere you needed for direct extraction.

Now things are so much easier, dust and debris no longer escape from machines. Finally, my latest invention was to transform a bag of Dyson spares, pipes and brush attachments from a car boot sale to fit the CT system, thus allowing any vacuum cleaner with the standard pipework to use all Dyson attachments, with the joiner attached.

Ready to go

This system they invented was a game-changer for the workshop vacuum but with the addition of my joiner, it opened up a new world of endless possibilities.

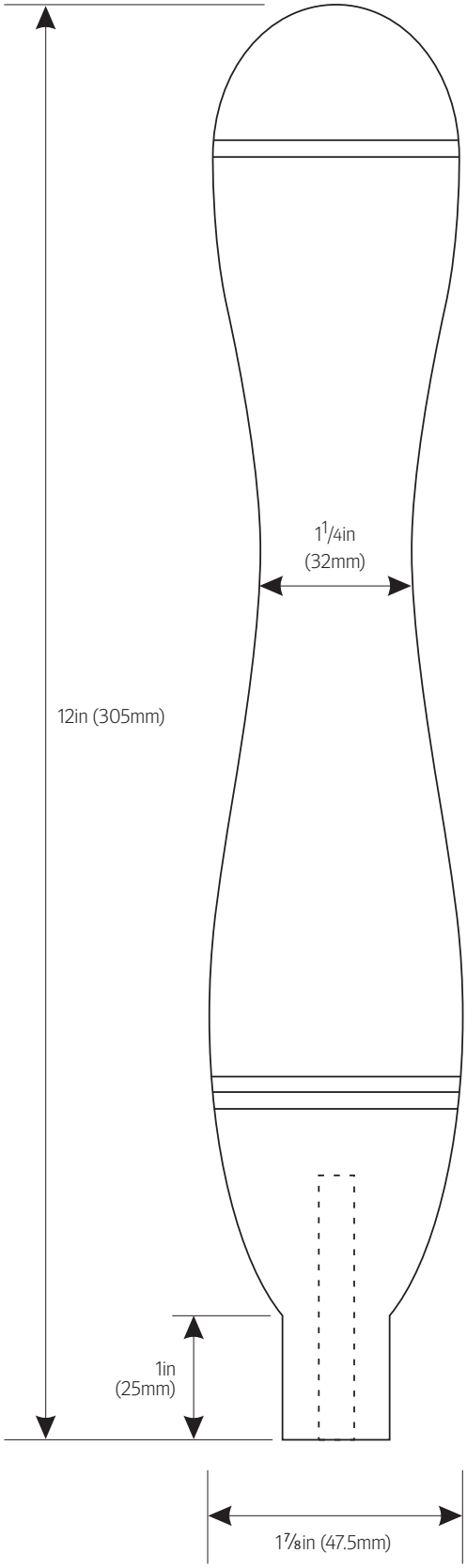
Simon Crutchley

Tool handle

Alan Holtham explains how customising your turning tools by making your own handles is a simple project and requires the bare minimum of tools

As a woodturner you have no excuse for not buying your tools unhandled and then turning your own!

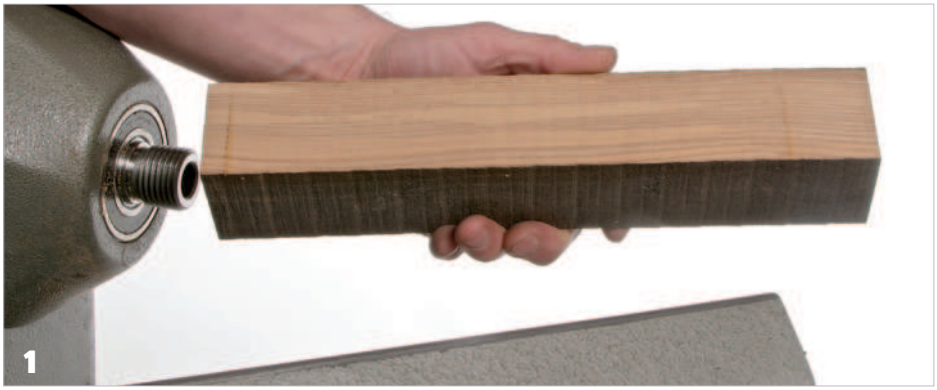
In reality, there is often not much difference in cost, as the handle represents a very minor part of the expense. However, making your own does allow you to customise them to a shape that suits you, and also to code them in some way with different shapes or timber species to make them more instantly recognisable under the piles of shavings. There is also a quiet satisfaction to be gained from using a tool with a handle that you have fashioned yourself; somehow it always feels more personable as well as being more comfortable.

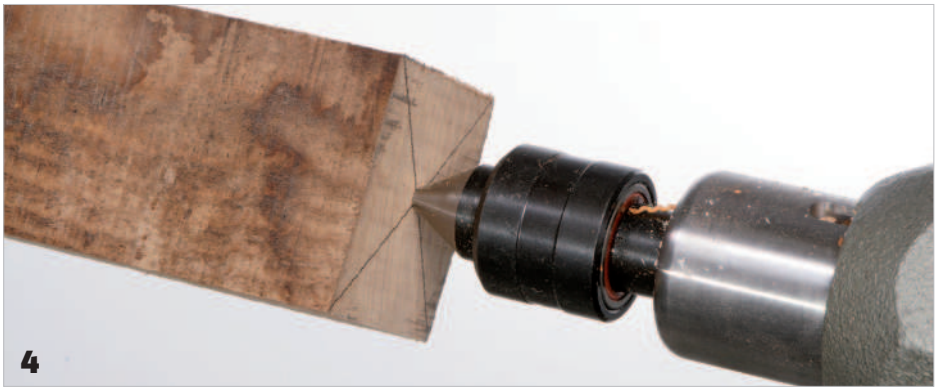


Plans & equipment

Tools used

- PPE & RPE as appropriate
- ¾in (19mm) skew chisel
- ¾in (19mm) roughing gouge
- Parting tool
- Wire ring burner





The making

1 Select a suitable blank for the size of handle that you want. I used a piece of ash 12 x 2 x 2in (305 x 51 x 51mm) for the handle profile I prefer. You don't need to allow much for wastage, just ½in (13mm) or so on the length.

Top tip

Pick out the centre point with a bradawl as a starter for the point of the drive centre. This helps the drive centre to penetrate, and stops it moving off line when you knock it in.

2 Find the centre of each end by drawing in the diagonals with a rule, or use a centre finder.

3 Use a wooden or soft-faced mallet to knock the centre into the blank. It doesn't need to penetrate far, but the wings must penetrate about 1/12 in (about 2mm). Don't use a metal hammer or you will burr over the end of the centre.

4 Ideally, use a revolving centre in the tailstock to reduce the risk of burning if you over-tighten. If you only have a dead centre, apply a little wax as a lubricant or it will scorch.

5 With the blank mounted between centres, check everything is tight and then spin the lathe by hand to make sure the toolrest is clear.

6 Use the roughing gouge to remove the corners, presenting the tool with the handle down and the tool angled to the right and also rolled slightly on its side.

7 With the lathe spinning at about 1500rpm, start working from left to right, working off the end of the blank, never on to it, or you might split off a complete corner, which could fly off at you.

8 Keep working a bit further to the left with each cut, using your finger rubbing along the bottom of the toolrest as a guide to help you get a parallel cylinder.

9 When you get towards the left-hand end, stop the lathe and move the rest sideways. Never move the rest with the lathe spinning when there are still corners on the blank.

10 Now work off the end of the blank again, so move the tool from right to left for this section.

11 Use the finger-along-the-rest technique to make sure the two cuts end up meeting in the middle.

12 As the corners are removed, a wide gap opens up between the rest and the work. You can move the toolrest in closer without stopping the lathe, if you want. Increase the lathe speed to about 2000rpm.

13 Mark off the length of the ferrule allowing approx. $^{5}/_{64}$in (2mm) of extra, to be trimmed off when the ferrule is in place.

14 Use a pair of callipers to reduce the diameter to just a fraction over the inside diameter of the ferrule.

15 To get the final fit using the ferrule itself as a gauge, fit it over your tailstock centre. If the centre is too big, temporarily replace it with a smaller dead one.

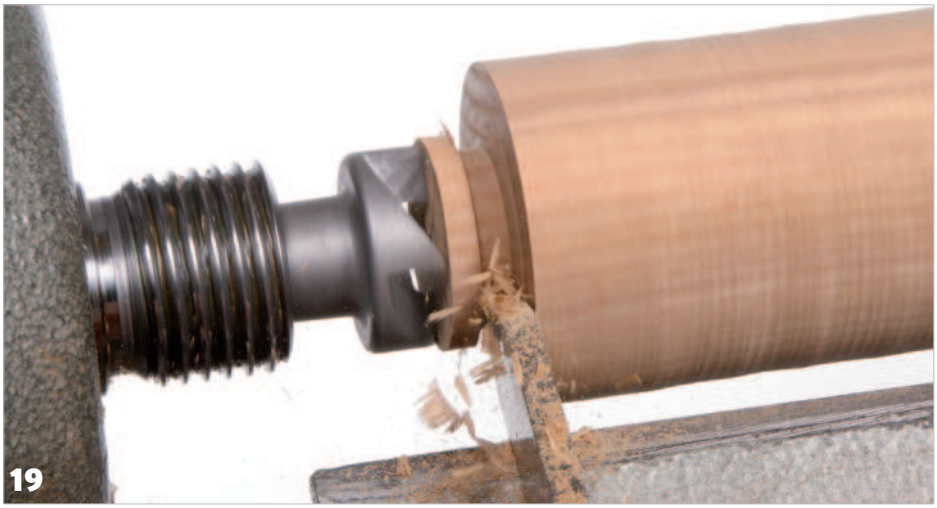
16 Now reduce the diameter with the parting tool, until the ferrule just slips on. Reduce the diameter with the parting tool, until the ferrule just slips on.

17 Don't worry about getting it tight, it just needs to be a sliding fit as any sloppiness will be lost later as you knock the tool tang in. However, if you make it too tight, the ferrule may split.

18 Once it is fitted tight up against the shoulder, slice off any excess length with the skew chisel on edge.

19 Turn your attention to the headstock end and turn down a small waste spigot the same diameter as the drive centre.

20 The bulk of the shaping can be carried out with the roughing gouge, using it well on its side to get a nice clean slicing cut.



21 Fine tune the shape using the skew chisel to make a planing cut, radiusing down the tailstock end to meet the ferrule.

22 Repeat the procedure at the headstock end, rolling round the radius with the skew chisel and reducing the drive spigot diameter by about half.

23 Traditionally handles are decorated with incised lines. If you want to do this, use the skew on its side again to incise in from either side of the V. Make the lines fairly deep at this stage, as the handle is yet to be sanded and they will then lose some depth.

HEALTH & SAFETY

I like to highlight the lines by burning them with a thin wire. Don't wrap the wire round your fingers when you do this, or the heat will travel back and burn you. Fit proper handles on either end of the wire.

24 Sand the handle thoroughly, working down the grades of paper to 400 grit. Finish off by rubbing along the length of the grain with the lathe stopped.

25 I use three or four coats of cellulose as a finish, flatting back each coat with fine abrasive, then burnishing with wire wool and paste wax.

26 The finished handle is now ready for drilling. Note that the waste drive spigot is still in place at this stage.

27 Drill a hole fractionally less than the tang size, using a combination of drill sizes if the tang is tapered. For accuracy, I always start the hole with an engineer's centre drill, but this is not strictly necessary.

28 Fit the drill in a chuck in the headstock and wind the handle on to it with the tailstock, starting with the smallest diameter drill you are going to use.

29 Repeat this step using the next largest diameter drill bit, keeping a firm grip on the handle to stop it spinning.

30 Use the skew to slice down and separate the driving spigot waste. You should be able to cut down from either side until the handle is parted off with a clean end.

31 If you are not confident using the skew for this, use the parting tool to cut right through, catching the handle as it falls free. The small unpolished area can be sanded and finished off by hand.

32 Fit the tool in the handle; push it in as far as it will go and then bang the handle vertically down on to a block of softwood on a hard surface. If you have drilled the right-sized holes, it should gradually work its way in, hopefully without splitting the timber or the ferrule.

33 The finished made-to-measure tool, ready to go. ●

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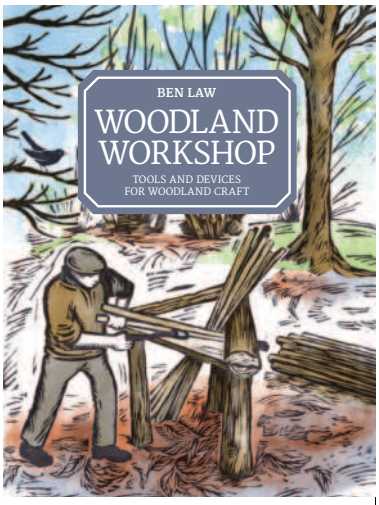
Woodland Workshop

In an extract from his book, *Woodland Workshop*, Ben Law builds a traditional pole lathe and portable and space-saving alternatives



***Woodland Workshop* by Ben Law, GMC Publications, RRP £25, available online & from all good bookshops**

My first lathe was based on an early design of Mike Abbott's and is still serviceable after over 20 years. For this project, I have gone for a similar design but with a traditional bed fixed in position in the woods using a long pole but I will give dimensions for making the lathe transportable by creating a softwood triangulated frame for fixing the bed to and options for a spring conversion. I have made the bed from oak for longevity out in the woods.

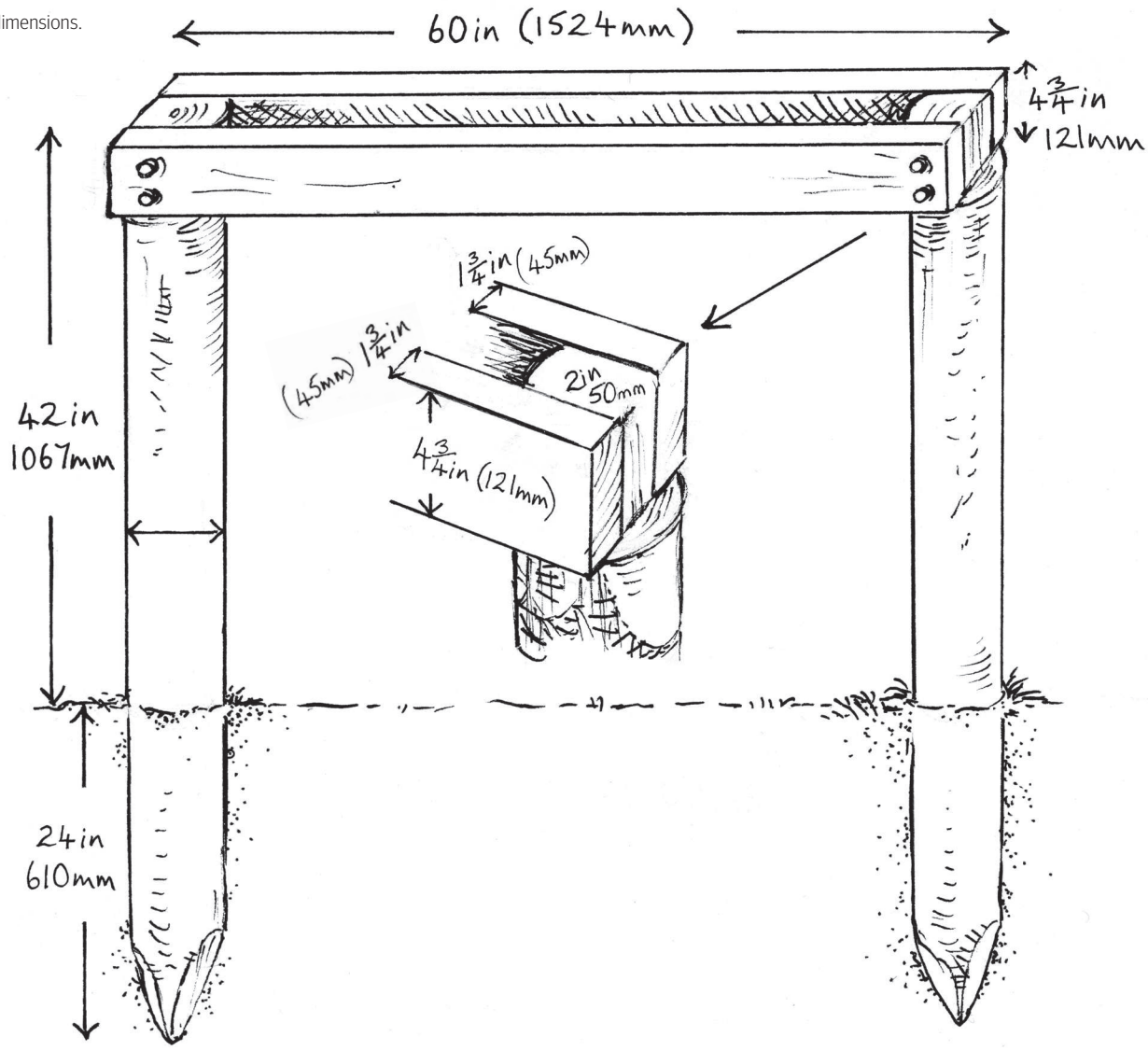
Recommended tools

Panel saw, Japanese saw, chisel, maul, twybil, draw knife, drill, auger bits 1 in (25mm), ⅝in (15mm), plane, impact driver, post rammer, sledge hammer, spirit level, clamps, string line, carpenters square, welding equipment

Materials

- **2 lengths of sawn timber for the bed:** 60in (1524mm) long x 4¾in (121mm) wide x 1¾in (44mm) deep
- **1 length of timber for the poppets:** 40in (1016mm) long x 5in (125mm) wide x 2in (50mm) deep
- **1 length of timber for poppet rests:** 30in (762mm) long x 5in (125mm) wide x ¾in (19mm)
- **1 length of timber for the poppet keys:** 24in (600mm) long x 3in (75mm) wide x 1in (25mm) deep
- **2 poles for the leg posts** (I used chestnut): 66in (1676mm) long x 5in (125mm) diameter
- **4 poles for the braces:** 36in (914mm) long x 3½in (89mm) diameter
- **1 length of timber for the tool rest:** 2in (50mm) wide x 1½in (38mm) deep
- **1 pole for the pole:** 216in (5486mm) long x 2–3in (50–75mm) diameter
- **2 poles for the pole supports:** 36in (914mm) long x 2in (50mm) diameter
- **2 poles for the pole supports:** 72in (1828mm) long x 2in (50mm) diameter
- **Threaded bar, washers and nuts:** 30in (762mm) of 1in (25mm) diameter
- **6 screws:** 1½in (38mm) (stainless if using oak or chestnut)
- **Threaded bar:** 12in (300mm) long x ½in (12mm) diameter
- **Steel bar:** 12in (300mm) long x ½in (12mm) diameter
- **3 nuts:** ½in (12mm) diameter thread
- **Steel plate:** 9in (228mm) x 1½in (38mm)
- **Paracord:** 96in (2438mm) long x ⅛in (3mm) diameter

1 Bed dimensions.



Leg posts

Point the two 5in (125mm) diameter leg posts and, using the post rammer, hammer them firmly into the ground. The distance from the outside of one post to the outside of the other should be 60in (1524mm) **[1]**. The height of the top of these posts will vary depending on your height and, in relation to your height, the working height you wish the bed to be at. I have set the height for the top of my bed – the posts will be 42in (1066mm) high out of the ground.

Brace the legs by fixing the angled support braces to the legs **[2]**. These should be knocked into the ground with a sledgehammer at about 45 degrees and then offered across the legs, marked and sawn off, then pre-drilled and fixed with an impact driver and 6in (150mm) timber lock or coach screw. If setting your pole lathe up in the woods you could use two similar diameter coppice poles and cut them off at your chosen working height and fix the bed between them.

Preparing the bed

With the help of another person, or by using two clamps to rest the bed plank on, offer one of the bed planks across the two poles with a spirit level on top and mark on each pole the top and bottom positions of the bed. Saw the top off each post and, using a string line stretched between the posts, mark two parallel lines on top of the posts 2in (50mm) apart.

Saw 2in (50mm) into each side of both posts where you have marked the position for the bottom of the bed and chisel down from the two parallel lines on top of the post to remove the waste and leave you with the centre 2in (50mm) of the post standing proud with a right-angled ledge each side, upon which the planks of the bed will sit **[3]**. Check the bed planks are level in both directions and adjust the ledges if necessary **[4]**.

2 Braced legs

3 Creating the right-angled ledge for the bed

4 Checking the bed is level in both planes

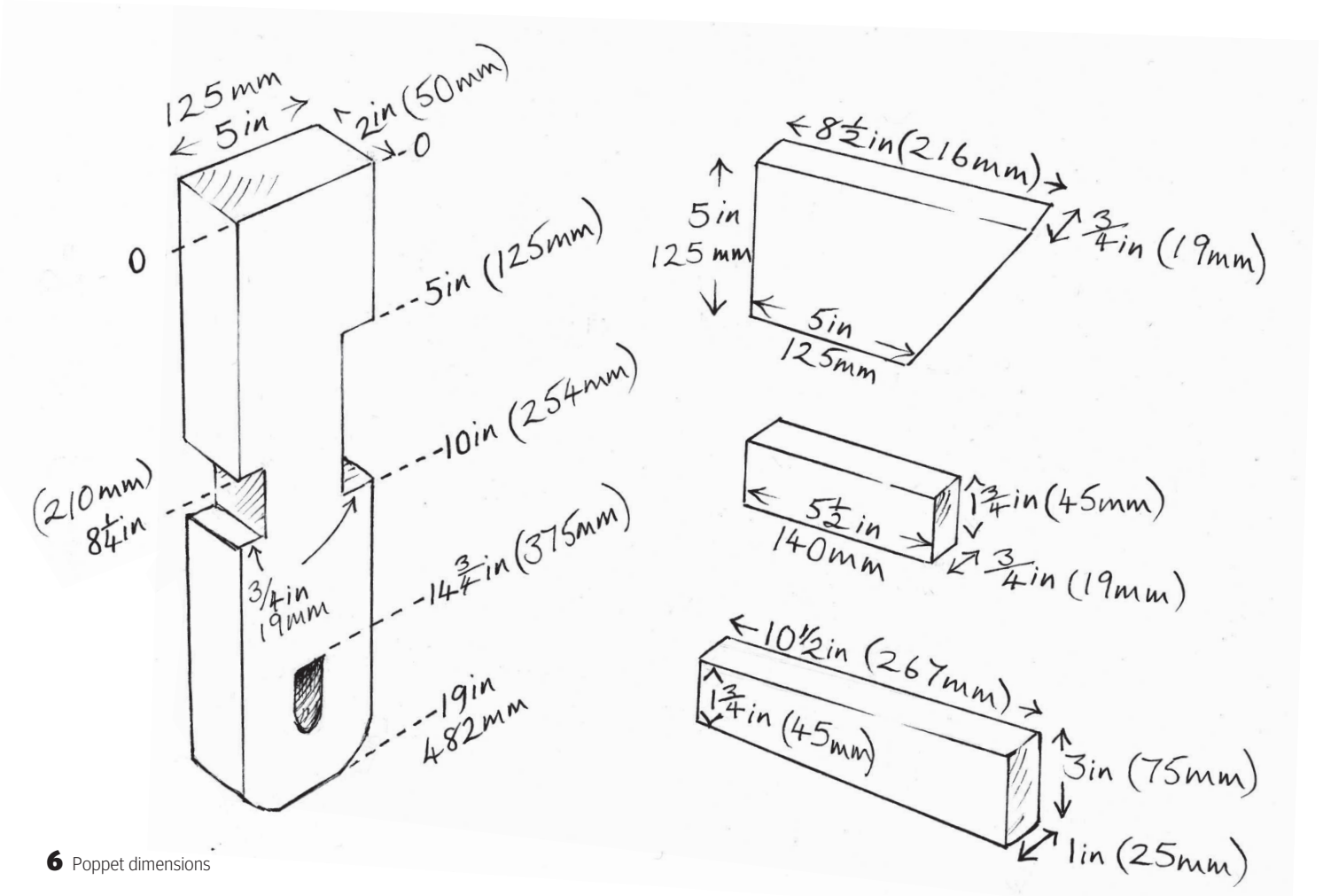
5 Completed bed

Clamp the bed planks to the post and drill two 1in (25mm) holes through each end of the bed and secure the bed to the posts with the 1in (25mm) threaded bar, washers and nuts **[5]**. I have reused some old studded bar, which, after some lubrication, has worked out fine. As my lathe will live outside with a cover over it, I have made sure to give it a good coat of linseed oil to help protect it.

Poppets

The poppets are designed to slide along the bed and are tightened by the tapered key under the bed, which can be hammered tight. Having two moveable poppets gives you a choice of position of where to work and allows you the full length of the bed for larger pieces.

First cut out the poppet shape from the 5 x 2in (125 x 50mm) using drawing **[6]**. Then lay one section of the bed across the poppet blank



6 Poppet dimensions

7 Laying the bed plank over the poppet to mark the top and bottom lines

8 Using the twybil to cut the mortice edges

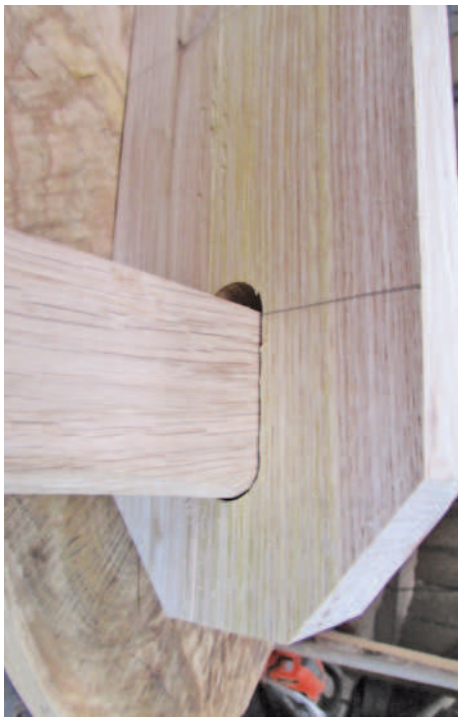
9 The completed mortice

at right angles to it and draw lines to mark the top and bottom of the bed on each poppet **[7]**. Using a 1in (25mm) auger bit, drill three holes in the centre of the poppet, with the first hole overlapping above the line marking the position of the bottom of the bed by ½in (12mm), the second and third holes directly below the first.

Use the twybil to cut out the mortices **[8] [9]**. Saw the poppet keys to size as in drawing **[6]** and curve off the tapered edge using a draw knife **[10]**. Check that the key is a good fit into the poppet mortice and adjust if necessary **[11]**.

Saw out the poppet rests and cut rebates into the poppets for the rests with a panel saw and chisel. These can be pre-drilled and fixed with screws (stainless steel screws if using oak or chestnut) **[12]**.

10 Creating a curve on the tapered edge of the key with a draw knife



11 Fitting the key to the poppet mortice

12 Fixing the poppet rests to the poppets using stainless steel screws. Always pilot the hole prior to screwing through the wood with a drill bit slightly smaller than the diameter of the screw to avoid splitting the wood

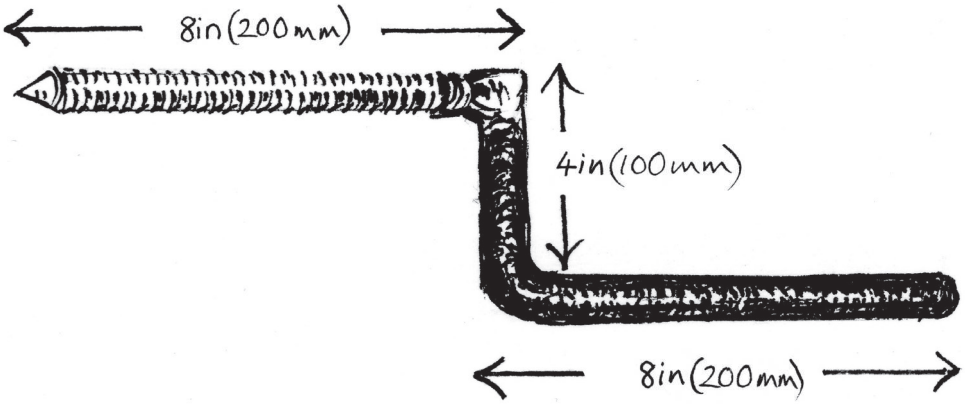
Fit the ironwork

The ironwork creates the two centre points that hold the wood centrally while the lathe is in operation. For this you will need to weld, or find a welder to weld three ½in (12mm) nuts to a strip of thin steel, each pre-drilled with a pair of screw holes, and create a crank handle from threaded bar and non-threaded steel bar **[13] [14]**.

I had a set made up about 25 years ago. They have lived outside but with a good amount of lubrication they are still working and I have reused them for this lathe. As I am building an outside lathe, I have used oak and chestnut for durability. Oak and chestnut will corrode steel if they are in contact. I get around this by drilling a larger diameter hole through the poppet than the diameter of the threaded bar, so that the handle is turning independently on the pair of welded nuts at each end of the poppet.

Drill a ⅝in (15mm) hole through the poppet 2in (50mm) from the top **[15]**. Screw the steel plate with welded nuts to each side of the poppet over the hole you have drilled and wind the crank handle through. It should turn easily on the two nuts and should run parallel through the poppet. For the other poppet, a short piece of threaded bar can be welded to the nut as this centre point is fixed. Make sure that it lines up with the crank handle in the other poppet. The poppets can now be fitted to the bed using the wooden keys **[16] [17]**.

13 Ironwork for the centre points



14 Cranked handle dimensions

15 Drilling through the poppet for the cranked handle threaded bar

16 Hammering in the key to secure the poppet to the bed

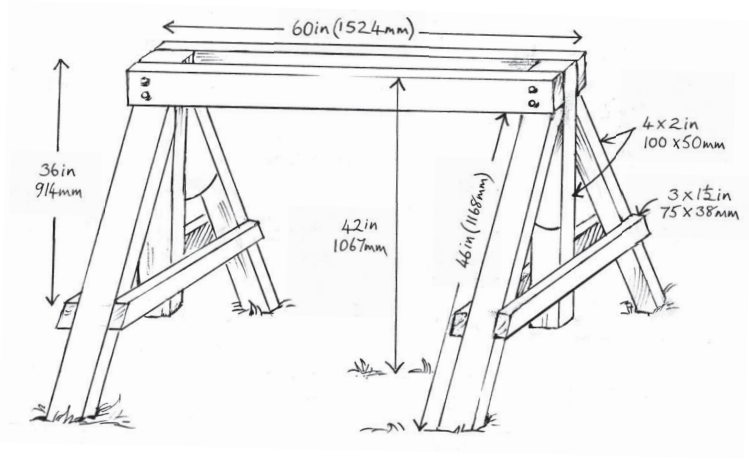
17 Poppets set up on the bed

Alternative frame for a portable lathe

To make the portable 'A' frame you will need approximately 300in (7620mm) of 4 x 2in (100 x 50mm) of good-quality softwood. Douglas fir would be my preferred choice, and approximately 150in (3810mm) of 3 x 1½in (75mm x 38mm) for the horizontals.

The frame can be secured well by using timber locks but screws would also be fine. The 2in (50mm) width of the 4 x 2in (100 x 50mm) will create the space between the bed planks for the poppets. I have shown the length to be 36in (914mm) but this can be shortened or extended depending upon your chosen working height. Make the 'A' frames up on a level surface and aim to have the diagonals at 45 degrees.

This design makes your pole lathe quite portable and easy to break down into components for transportation.



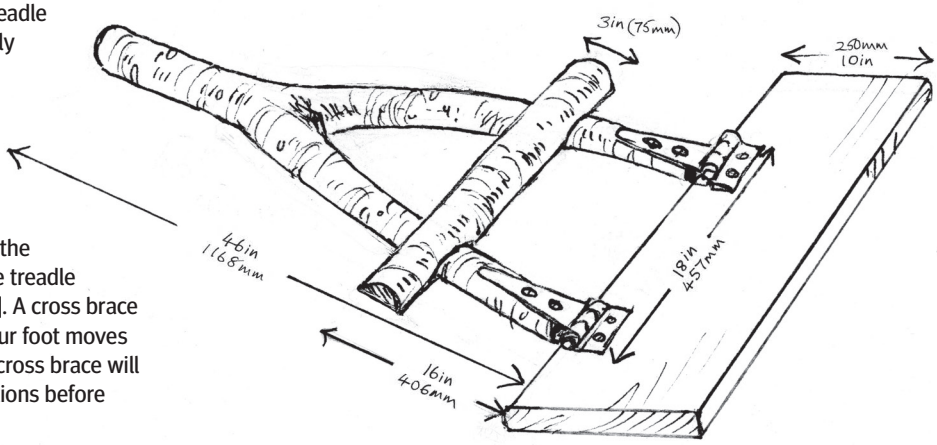
'A' frame design for pole lathe

Treadle

The treadle can be made from sawn wood – roofing baton works well but I prefer a traditional forked treadle with all the strength grown into the one piece of wood. My treadle is from chestnut but any forked piece of approximately 3in (75mm) diameter will work fine **[18]**. The treadle needs to be attached to a footplate. This is a plank about 10in (250mm) wide and at least 24in (600mm) long.

The treadle is attached to the plank using 'T'-hinges. I chiselled a flat face onto each of the forked parts of the treadle branch **[19]** and screwed the 'T'-hinge into the treadle and then screwed the other part to the footplate **[20]**. A cross brace is then fixed across the treadle. This will be where your foot moves up and down to turn the lathe, so the position of the cross brace will be a personal choice and you may try it in a few positions before deciding which one works best for you **[21]**.

18 Treadle dimensions



19 Chiselling the flats on the treadle for the 'T'-hinges.

20 A 'T'-hinge joining the treadle branch to the footplate

21 Completed treadle

Pole

This can be any wood that has a good amount of spring in it. I have used ash, birch and rowan but many other woods will suffice. The pole needs to be about 216in (5486mm) long and about 2–3in (50–75mm) diameter at the base tapering towards the tip. It will need supporting at the base and again further up. I hammered two 36in (914mm) long x 2in (50mm) diameter poles into the ground so they formed an 'X' shape. I lashed them together and then slid the base of the pole beneath them and lashed that to them.

The support that is further up the pole is of a similar construction but from 72in (1828mm) long poles. The position of this support will vary depending upon the thickness of the pole. Try it in one position and if the pole is not flexible enough, move the support further towards the base **[22]**. Attach the cord from the end of the treadle to the end of your pole. The cord should wrap twice around your workpiece. Try the treadle and check the rotation is even. Lay a tool rest across the poppets so that it supports your chisel and brings it close to the workpiece. You are now ready to start turning **[23] [24]**.

22 Setting up the pole: the support can be moved backwards or forwards to find the right amount of spring in the pole

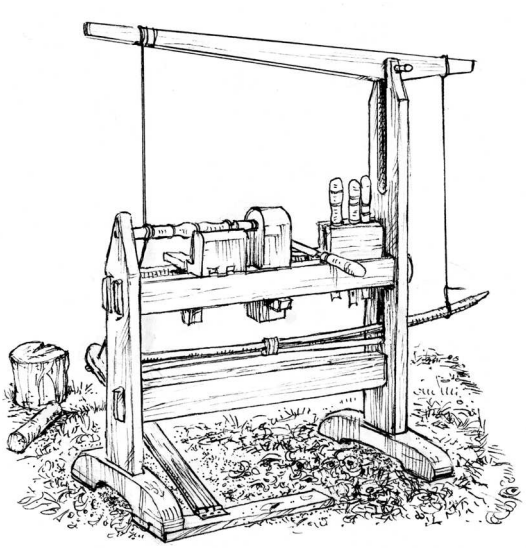
23 Ready to go: notice the tool rest across the poppets

24 Lathe in action

Adapting the lathe

You may not have the space to set up your lathe with a long pole. Adapting it to a spring-style lathe saves space and, for me, creates a preferable lathe to the traditional pole style.

Attach two poles 72in (1828mm) long x 1½in (38mm) diameter, one to each side of the frame. Stretch a bicycle inner tube across the two poles so that it sits above the bed of the lathe. Attach your cord from the inner tube to the treadle and wrap twice around your workpiece as usual.



Right, traditional spring lathe, **far right**, adapted spring lathe

Diary of a professional woodturner – part 13

Richard Findley shares his thoughts on large production work, talks demos and describes a set of gavels he made this month

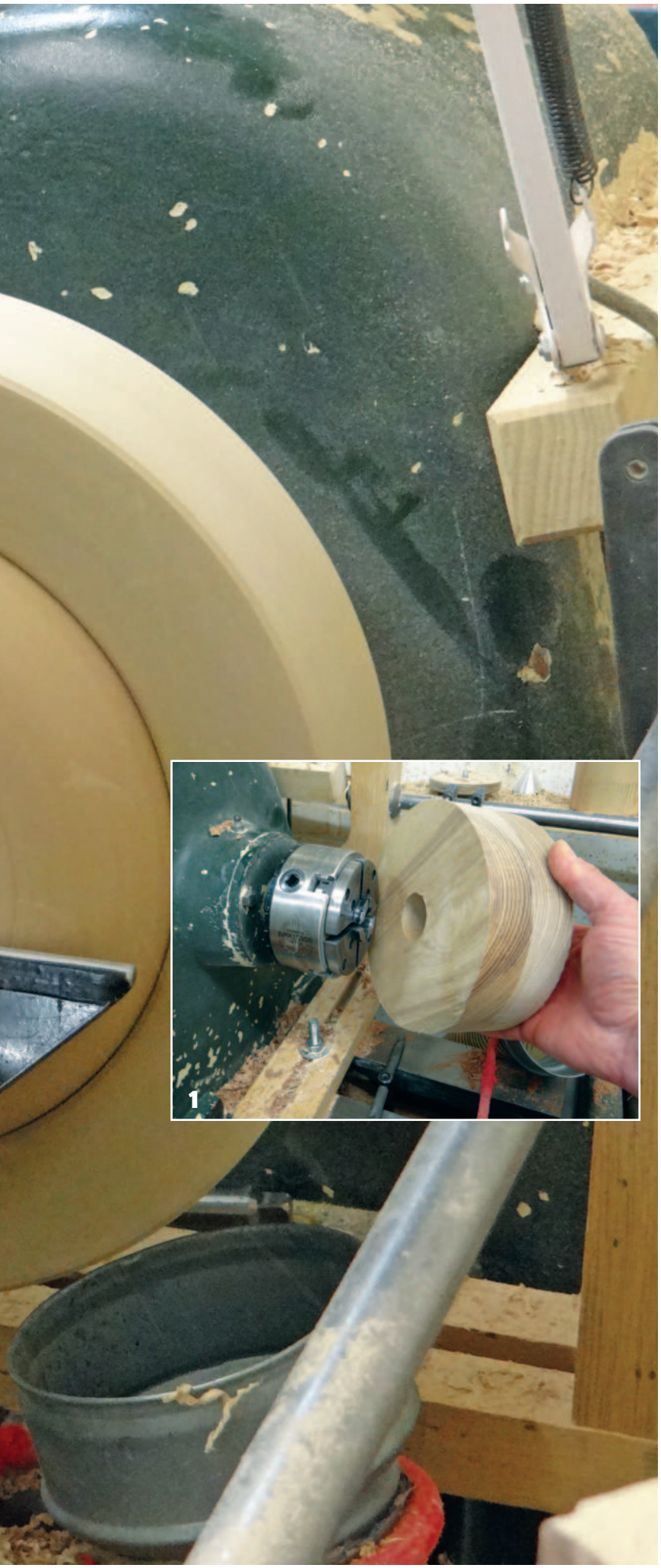
It has been a strange month in the workshop, a large proportion of it being taken up by one job, but there have been other jobs in the works too, some being finished off, others being squeezed in between the main job of the month, along with a good bit of travelling around the country now that demonstrations are well and truly back up and running.

Doughnuts

I was approached by a customer I have worked for previously to make more doughnuts. Over the past couple of years I have made two or three batches of these hardwood toruses, perhaps that should be tori, but who knows or cares? The customer refers to them as doughnuts, so I'll stick with that here. They have been commissioned to make some kind of totem sculptures from, although I haven't yet seen a picture of the finished item. They must have been well received because they needed another 200 doughnuts in various timbers. I have written about these before so will only briefly outline the turning process, but I wanted to write about the pros and cons of undertaking such a large job.

Turning the doughnuts

The turning process is relatively simple for the doughnuts. They are supplied roughed out into slightly oversized discs with a central hole, along with some templates for me to work to. I initially hold them on my small dovetail jaws expanded into the hole and turn the outer radius and the inner radius of the visible side, so ¾ of the doughnut is complete and sanded. I then make up some wooden jaws, mounted on my Axminster jaw plates, to hold the doughnuts by the completed outside, allowing me access to turn the final portion. Throughout the process, I use a combination of bevel rubbing push cuts to remove the bulk and light shearing cuts to refine the shape to match the templates.



1 Mounting the rough-cut doughnut onto my chuck **2** Holding in my wooden jaws to finish the final section **3** The first 100 finished doughnuts

Planning a production job

The previous batches of doughnuts had been reasonable-sized orders but this time 200 were needed. The first thing I need to do when a large order like this comes in is to try to organise it into my schedule. Once upon a time, this would have caused me serious scheduling issues, but now I use my diary system, I have far more control over this. Even with a diary though, I need to allow the correct amount of time to do the work, or more problems follow. By my recollection, they take about half an hour each to turn, which gives me a good idea about how long I need to allow.

It is important to realise that, just because I work roughly an eight-hour day, this doesn't mean I have eight hours at the lathe. My average day involves me arriving at the workshop around 8:30am and my first job is always to reply to any emails I received the previous day or overnight, including quotations, and sort out any website sales for the woodturning sundries I sell that need packing up and sending out. This will often take an hour or more, so I rarely get on to my lathe before 9:30am. I work until around midday and take 45 minutes to an hour for lunch, this includes doing my daily Instagram post, which is an important part of marketing my business. I will then work from around 1pm until 5pm. In among my lathe time, I also have interruptions if the phone rings or if a customer calls in. There are also jobs that need doing that mean I'm not at the lathe, including finishing (oiling or lacquering) and packing up jobs ready to send out on the carrier. All of which adds to the variety of my days, but means that I probably only spend up to around five hours a day at my lathe.

When calculating how many doughnuts I can make in a day, this information is vital to take into account, because if I allow for 16 per day (30 minutes each for eight hours), but can only make 10 (30 minutes each for five hours), that is a real issue as over a batch of 200 I would be seven or eight days short in my planned time, which would cause chaos in my carefully organised diary.

My first question when anyone enquires about a large job like this is whether it is helpful to split the order into two or more batches. Often, my customers are small businesses like myself, and can only work on so much at once, so it can be helpful to both parties to split it up. In this case, we agreed to split the order into two batches of 100 doughnuts. At 10 per day, this is two full weeks per 100 doughnuts. Just to be on the safe side, I allowed a couple of extra days as well, just in case a problem occurred. As it was, 10 per day was a good estimate and at the start of the batch I was just getting them done – after two weeks of the same work, I was turning closer to 15 each day.

Pros and cons

Big jobs have their pros and cons. On the upside, there is less downtime. For every small job I need to prepare (and sometimes buy) timber, set up my lathe etc. and then invoice and often pack it up and send it out. This means that there is often nearly as much non-lathe work as there is turning on a small job. Bigger jobs generally pay better too, but the downside is that they can be a bit repetitive. In this case, by breaking them down I will only be doing the same work for two weeks at a time, a month or so apart, rather than four weeks of the same thing, over and over again. Some very large jobs I will recommend the customer to use a turner with a copy lathe, but doughnuts are a hand-turning job so it may as well be me making them as someone else.

Diary

Sorry to keep writing about my diary system, but it really has been revolutionary for me and the way I work. As a job comes in I am able to book it into the diary and currently, I have a 15-week lead time. Naturally, this puts off some of my potential customers, but I am only one person and I can only do so much. To know I have all of this work in hand is somewhat reassuring for me as, on the rare occasions that I have only had a few jobs planned in, knowing where the next payment is coming from can be a real worry.

I was chatting recently to a friend who is also a production turner and when I told him how much work I had planned in, he asked what I do about my regular customers. My immediate answer was that they have to wait, but the question did stay in my mind for a while after the conversation. I certainly do have 'regulars' who come back to me time after time and, as any good business person knows, you have to look after your regulars, but for me, my regulars are somewhat intermittent. I don't have any customers that come to me for the same product each month, for example. Those that I do work for time after time come to me as they need my services. I have been making things for some of them since I set up my own workshop, but some only come to me two or three times a year. I am generally busy, so they have come to expect at least an eight-week lead time, but I will, if necessary, try to squeeze them in if a tighter deadline is at hand. The conversation did make me consider how I fill my diary though, so going forward I am trying not to cram it full of jobs and try to leave a little more flexibility in the schedule to help out my regulars and, if they don't need that time I can pull other jobs forward or maybe – just maybe – get a rare day off.

4

5

PHOTOGRAPHS BY RICHARD FINDLEY

4 The holes I received with the doughnuts **5** Testing and end cap for fit in the hole

Holes

There can't be many other trades or industries where a customer will send holes through the post. The very concept of this makes me chuckle every time it happens but it is actually very useful. Let me explain. The doughnuts are cut up and fitted back together again into these totem sculptures but need a base piece and an end cap. These are fitted by a turned dowel or tenon that needs to fit into a drilled hole. Experience tells me that just because a drill bit is labelled as 25mm, the hole it produces can easily be 0.5mm or more either side of this, so if the fit of a dowel is important then sending a sample hole means I can check all of my tenons for a good, snug fit. So, as strange as it sounds, I often get holes sent to me through the post.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6 & 7 Pictures taken at a recent demo – courtesy of Richard Shirazian of Cheam Woodturners **8 & 9** The finished robinia rugby ball gavels with laser-engraved symbols on strike blocks

Demos

In the last couple of months, I seem to have done a lot of demos, despite promising myself that I would cut down on the number I do since the pandemic. It has been great to get out to the clubs and see real people, something I'm sure we've all missed in the last couple of years. I have travelled around the UK, as far east as Suffolk and down to London and Kent, up to North Yorkshire and over to Wales, with plenty more to come. My new lidded bowl demo that I wrote about a few months ago has now been tried and tested, and slightly improved, and has been well received by the clubs that have seen it.

Back in March 2020 I bought my first ever new vehicle, which I was naturally excited to drive, I managed one weekend of demos before lockdown came and it largely sat on my drive, only making the short journey between my home and workshop for the next two years, but now, finally, I am getting to drive it.

In the early days of my demos, I used to get quite nervous beforehand but I am far more comfortable now. Sometimes, particularly in the run-up to a big symposium demo, I would get a regular anxiety dream. Some people report anxiety dreams of finding themselves standing naked in front of an audience, for me it would be that I arrive at the demo and, with everyone watching, I realise that I haven't got any wood or tools to do the demo. Just last week that anxiety dream came incredibly close to coming true...

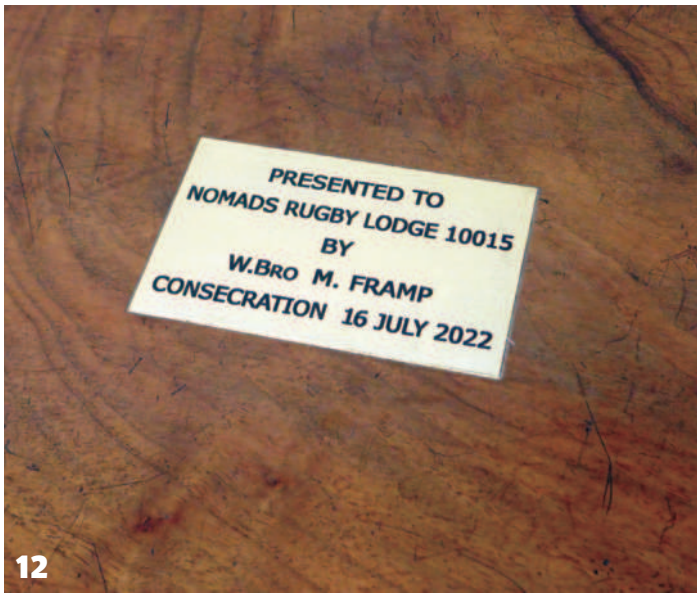
I was booked to demonstrate my spindle turning and barley twist for Huddersfield Woodturners. For this I only need one piece of wood but obviously, without it the demo would be impossible to do. As usual, I prepared everything at the workshop and loaded the van then headed home to freshen up before driving north up the motorway. As I was driving toward the motorway I had a sudden thought that I didn't remember putting my bit of wood into the van. This is a common thought I have about various bits of kit on my way to a demo, but usually I will dismiss it or sometimes I will pull over and just check, but almost always I have packed the item. This time I just couldn't shake the feeling so pulled over to check. Sure enough, I couldn't find the bit of wood so had to detour back home to get my workshop keys, before heading back to the workshop to find my bit of wood sitting on my bandsaw, ready to be put in the van. A quick double-check of everything else I might need and I was able to get back on my way. Thankfully I always leave myself plenty of time just in case of delays, so I still arrived in plenty of time and with my very important bit of wood!

Gavels

My uncle is a Freemason and is involved in setting up a new Craft Lodge. The Craft Lodges can be set up when a group of members have a shared interest and in this case, the interest is rugby. He asked me if I could make a set of gavels with a rugby ball-shaped head and possibly engraved with the symbols of office of the master and the two wardens of the new lodge. Initially, he asked if I could also make a box in which to store them, but then he remembered an antique writing slope that had belonged to his mother and was collecting dust in a cupboard, but kept for sentimental reasons. We agreed that I would see if I could restore it and add a brass plaque to commemorate the consecration of the new Lodge.

I used robinia for the gavels. It is not a wood I use often but when I have, it has always been a pleasure to work. Robinia is also known as false acacia and acacia has a symbolic significance in Freemasonry, so while it isn't actually an acacia, it is close enough to do the job.

A rugby ball is an interesting shape to turn. It took me a couple of trials to get the proportions just right – too fat or thin and it just doesn't look right – but once I was happy I made a template so I could make three the same. I then took the heads to my local friendly engraver to get the symbols laser engraved, along with the lodge number. He also engraved a brass plaque for the box and supplied me with some extra pieces of brass for the box.



10 The brass plates that neatly cover the magnetic catch **11** Gavels in place in the box **12** The engraved plaque on the box **13** The restored box, ready to serve its new purpose

The writing box had seen better days but was solid enough in its construction so would work well for this new purpose. We agreed that it is far better to put a sentimental item like this to a new good use, giving it a second life, than to keep it in a cupboard looking sad and slowly falling apart. The box originally had a lock and a fancy escutcheon, but both of these were long gone. I could have spent days unsuccessfully trying to find a suitably sized replacement, so instead decided to make a new magnetic catch. I bought two rectangular magnets and slightly enlarged the hole where the lock had been, slotting the magnet into place and covering it with a new piece of brass, and filled the untidy escutcheon hole with a square of new brass. The magnets worked perfectly to hold the box closed. I then let the brass plaque into the lid. Once the brass was epoxied into place, I cleaned the box, applying and buffing a coat of paste wax and re-fixing one of the hinges that had become loose.

The final job was to put a lining into the box to hold the gavels and strike blocks safely so they didn't roll around and get damaged. After giving it some thought, I decided that a rectangular piece of MDF as a base with strategically placed blocks would be just the job. I had some black gloss lacquer leftover from the Gothic walking canes last month so, once everything was glued and screwed into place, I could spray the liner black, which would make it less noticeable and help to show off the bright robinia gavels. The liner just sits snugly into the box, so could be removed in future if the box was ever repurposed again.

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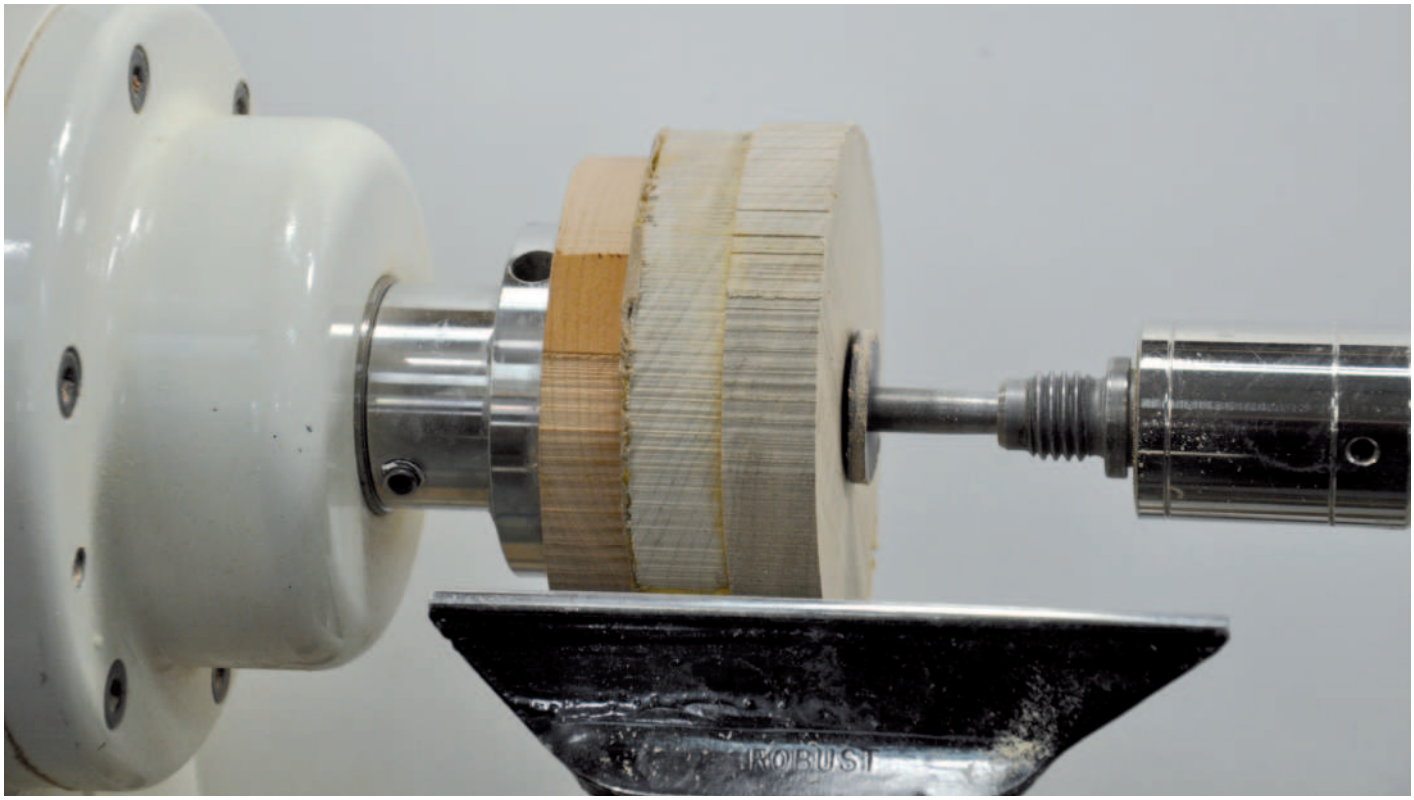
CARTER AND SON TOOLWORKS

Give your work some support

Mark Palma looks at the role of the tail centre on the lathe



PHOTOGRAPHS BY MARK PALMA

1. Dead centre

When the lathe was first invented there was only the dead centre with no bearings. It was clear that holding work from both sides was necessary to create spindles and for work that required support from both sides. The work was advanced into the centre then slightly retracted to allow it to spin, but not bind. Sometimes a drop of wax or oil was applied to the wood. It worked, but since the invention of the modern ball-bearing tail centre it is rarely found today.

2. Tail centre with flat pin

Modern tail centres are sophisticated tools with multiple bearings, threaded housings and interchangeable inserts. The bearings are sealed and lubricated for life. Larger tail centres have multiple sets of bearings within the housing, allowing them to support large loads and heavy use. The inside of the centre is hollow and many manufacturers (and third-party vendors) have products and accessories to provide various holding options. Beyond the basic point, cups, inverted cones, extended points, and flat ends allow ways to bring up tailstock support on surfaces you may not want to put a point into.


1

The dead centre was all that was available to turners for generations


2

This flat-ended pin supports the work without penetrating it

3. Tail centre options and accessories

The threaded exterior housing on several models allows larger cones, plates and many accessories to be attached to fill in openings (such as on the end of a vase or hollow form). The thread is often of standard sizes, allowing you to purchase a machine tap and thread wood and plastic to create your own accessories.

3

Modern tailstocks support a variety of accessories to increase their flexibility and what they can support

4. Golf ball

Homemade holding solutions can be as simple or sophisticated as your situation and imagination. A favourite of mine is just a golf ball with a hole drilled partially through to fit over the tail centre. There is just enough 'give' in the ball to allow it to compress slightly and provide adequate pressure on the work without it being marred or damaged.

4

Homemade accessories like this golf ball are a great help in mar-free support of turnings

5. Morse taper cleaner

Tail centres are virtually maintenance free. Keep the pins and accessories in some order to prevent them from being damaged if dropped on the floor (and getting lost in shavings). A drop of oil or a light coat of wax helps prevent oxidation and rust. A Morse taper cleaner inserted into the tailstock helps to prevent dirt and debris marring the centre's taper and the internal taper in the tailstock. There isn't much else to do to keep them in running order. If you hear a squealing sound or experience run-out or vibration, the bearings are probably damaged and the unit will need to be replaced.

5

A Morse taper cleaner helps with cleaning out the tailstock before inserting centres

6. Finger support

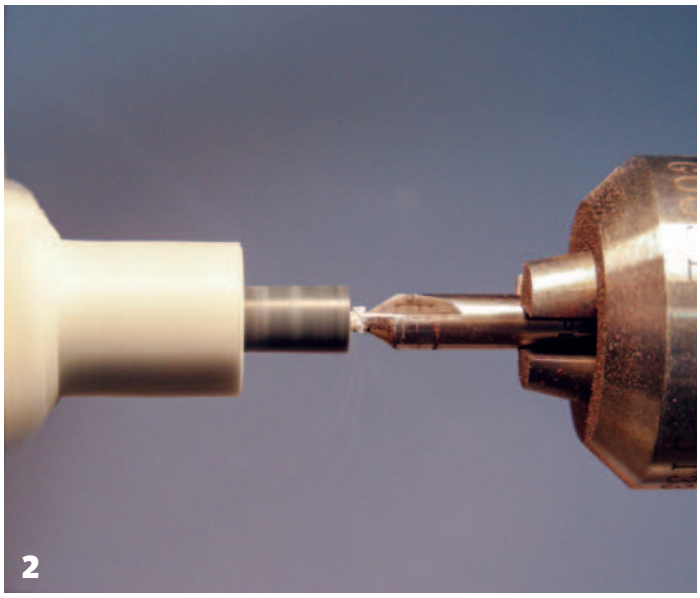
Not every situation requires an elaborate solution. Sometimes a well-placed finger can support work for a delicate cut. In this situation, the deep cut involved in making this button needs nothing more than a finger. The same may be true when working near the rim of a platter or plate. Just exercise safety so you do not burn your skin on the spinning wood.

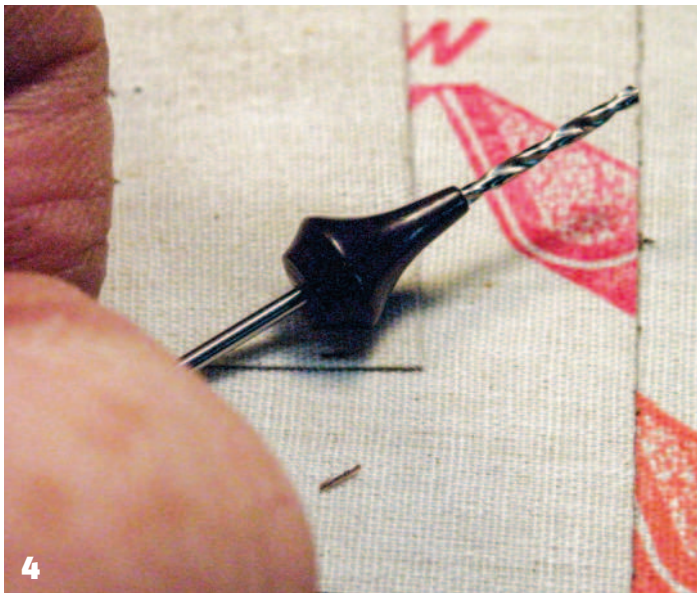
6

A carefully placed finger can provide support for delicate cuts

Kurt's clinic

Kurt Hertzog answers readers' questions





PHOTOGRAPHY BY KURT HERTZOG

1 Starter drill assortments are not expensive. With an inexpensive dedicated drill chuck, starter holes are quick and easy **2** Any location where drill starting position is important or drill size is small, a starting hole will improve your process **3** Depending on your needs, starter drills are available in sizes for even very small drills. My starter drills for holes 1mm and smaller sizes **4** Drilling dense woods, such as African blackwood, with small diameter drills can be easily done with a starter location and good technique

I'm breaking many of my small drills when drilling in my lathe. I know you do small holes. Some recommendations on drilling small holes please?

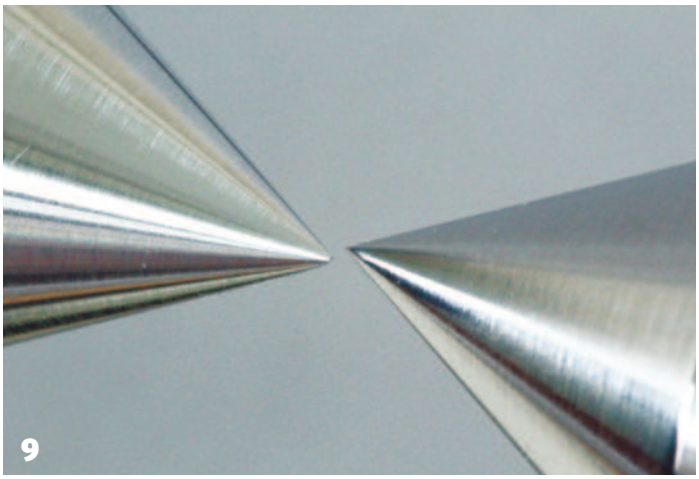
Small is relative so the advice I'll give here applies to drilling any hole using any piece of equipment. It is just good practice. First and most important is sharp drills. The most overlooked tools in the shop are drills. It is as important to keep them sharp as your turning tools. If you don't know how to sharpen drills, learn. One of my best shop investments many years ago was a Drill Doctor. If you don't want to learn, be wise enough to throw away drills that aren't sharp and replace them as needed with new sharp drills. Even sharp drills benefit from a good starting point. With larger diameters and just blasting in a hole, you can get away without creating a good starting point. If there is no flex in your system or drill, you just drill it and, for the most part, it's pretty easy to get it where you want it. The problem comes when you have a smaller diameter drill that will flex or break with any application of force to start the drilling or you need a hole in a precise location. You also run into the problem of 'wander' with any drill that is small enough in diameter to flex easily. Good practice with small drills or any drill location that is at an angle to the drilling axis is to create a drill starting location. Any work clamped at an angle in a vice in a drill press, mill, or even freehand, especially needs a starting location for the drill. On a free-floating machine such as a drill press, you might use a prick punch for a perpendicular flat surface. On your lathe, you have several methods. It can be as simple as running your tail centre up, locking it, and using the revolving centre point. Driving the point forward into the material will create a small indented location for a small diameter drill to locate and start drilling. You can also use the corner of your

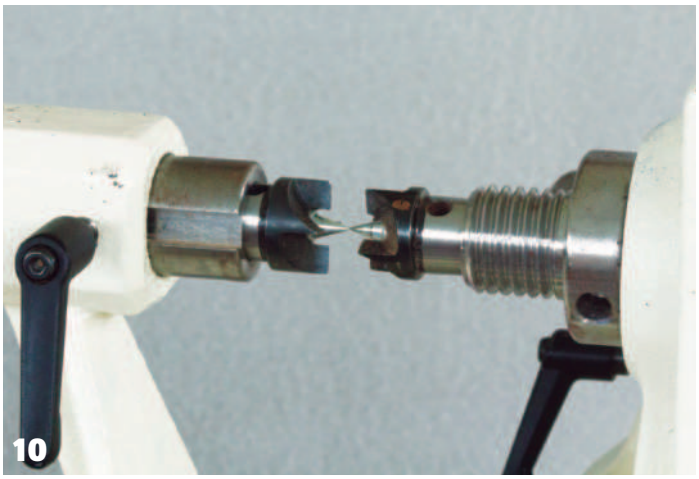
5 It is key that a starter location be created for any off-perpendicular drilling. A starter location is critical for safety and success **6** Holes for a double strand of 2 or 4lb. test fish line are in the .038in arena. You can break a lot of small drills if you don't work carefully **7** Even a perpendicular, flat surface benefits from a starter drill location. Only taking moments, this ⅛in drill will have no location or starting issues **8** With a good starter drill location, a sharp drill allowed to do the work can be hand held to drill small holes quickly.

skew or parting tool to cut a small V-pocket at the centre of rotation. I recommend using a starter drill. These drills, from the machining industry, are stubby tools designed specifically for this purpose. By design, they are virtually impervious to flexing. Use one of these to drill a starting hole, giving your following drill of the desired dimension to have a precise and no-wander place to start its process. With an effective starting location cut in one of those three manners, you can drill your hole without wander. Regardless of your starting location technique, good practices of drilling techniques, speeds, and feeds will be needed to drill a quality hole with minimal drill breakage. Obviously, small diameter drills need to be handled gingerly. Advance carefully, slip into the starting location, and let the drill do the work. Breaking the chip and retracting to clear the flutes is often necessary. Any muscling of the process usually breaks drills, often partway through the process. Then you'll have a broken drill to remove too. Some small drills really can't be easily sharpened at home. Get new ones rather than breaking dull ones off in your work. The biggest mistake I've seen with small drills is working with the same techniques as larger drills. The solution is always easy does it, let the drill do the work, and clear the flutes often. My challenging holes are the No. 62 drill (0.038in dia.) ones. I often drill up to 1in deep into African blackwood for my 2lb monofilament ornament hanging loops and the ⅛in holes that I drill 5in deep in my desk pen blanks. A problem with deep holes using smallish drills is that they will follow the path of least resistance far more readily than larger drills. If the grain orientation is running off axis to your desired path of travel, even a ⅛in drill tends to drift off path doing deep drillings. This can become a problem with an ⅛in hole drilled 5in or more deep that needs to stay within a ¼in window of the centreline at the bottom.

I see people join two pieces together with CA and then spray the glue line with accelerator. Does it really penetrate the joint, or are they just kidding themselves?

'Penetrating the joint' really isn't the issue. Accelerator helps the cross-linking process CA adhesive goes through. While the CA curing process is driven by water vapour, accelerator (usually an acetone of sorts and perhaps some magic sprinkles) will speed things along, hence the name accelerator. To function properly, accelerator needs only contact the CA adhesive and the process will be assisted for all the CA in contiguous chemical contact, even well inside the joint. Perhaps my question to your question is would they bond, or did they bond, without the accelerator? Many times, folks use accelerator to try to bond a joint that didn't bond properly initially. Sometimes successful and sometimes not. If the joint failed for good reason, accelerator really can't fix poor joints properly. Another very helpful and effective technique for using accelerator is applying the accelerator to one surface and applying Ca to the other. When brought into contact, they bond. Obviously, you can't dawdle when using this technique once contact is made.





9 Dead centres are modestly priced and work nicely to check alignment. Rarely does a lathe endure its travels from maker to you without needing some adjustment. This one needs some attention **10** You can also use a couple of spur centres to do your alignment. It is important that the tips not only meet but that the axis of both headstock and tailstock tapers are in line **11** Nearly all of the common lathes available today are held in alignment with the headstock mounting bolts. The days of pinning equipment in alignment are long gone **12** The gap in the bed usually allows sufficient adjustment for the alignment in that plane. If you need more, a file judiciously applied to the casting of the base of the headstock may help

I'm moving my lathe to a new location and I have a chance to set it up correctly. What should I plan on doing to do things properly?

My suggestions are to not lag it to the floor but rather leave it free standing. It should be set at the correct height for the main user since every user may have a different preferred height. A good starting point is having the centreline of the spindle at elbow height as you stand on any anti-fatigue mat you'll be using. Hang your arms by your side and use elbow height as your spindle centreline height as a beginning. You can tune this height up and down as you find any issues with back fatigue after extended use. Space behind the lathe for cleaning is wise from a positioning point of view. Levelling is wise but not as critical as a metal lathe would be. Metal lathes need precise levelling to remove any potential twist in the ways.

The most common problem is the lathe headstock to tailstock alignment. Using a couple of dead centres, if you have them, or a couple of spur centres with sharp points will let you quickly determine how well things align. Looking from the front and from the top should give you a feel for how things align when you bring the points in close proximity. Since the tailstock moves and needs some clearance, it will lock up slightly differently each time. Your adjustment point is the headstock mounting. Rarely pinned in location, you can loosen the mounting bolts and insert shim material underneath the appropriate corners to align things. Use whatever you have that will provide the necessary dimensional shim when clamped in place. A piece of bond paper or currency is around 0.1mm. If axis alignment is required, take a look at how the headstock casting is positioned in the lathe bed ways. You can often shim the gap as needed to adjust axis rotation issues. Also, you might have to file the machined surface of the headstock base to provide enough shift to correct things.

You can also find comprehensive five page article on lathe setup in Woodturning Knowhow Part 4 in *WT254* – June 2013. It covers tips and tricks for lathe location, setup, lighting, storage, and much more.

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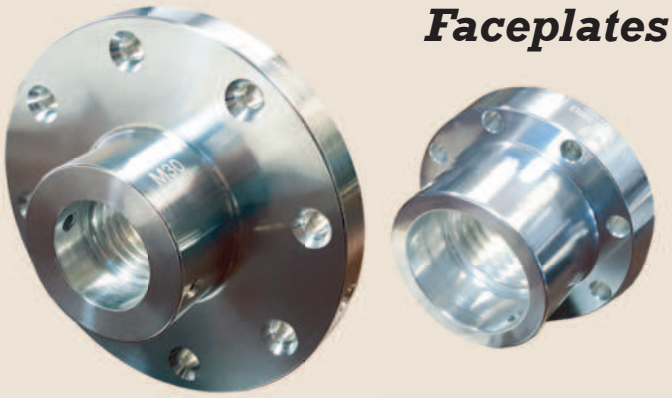

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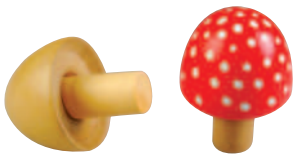


Following his sad passing in April 2022, we commemorate the man and his woodturning

David Springett has been a friend to *Woodturning* magazine since issue 8, May 1992. He first graced our pages with a watertight collapsible beaker, having impressed the then editor, Bernard Cooper, and consulting editor, Bert Marsh, both of whom have since passed away, with the unusual and innovative design.

Over the next 30 years David wrote a number of woodturning articles and books for us, inspiring and fascinating turners with his intriguing designs and practical tips. His love of turning was evident in each.

A former woodwork teacher, David became such an accomplished woodturner that in 1982 he left teaching to pursue a career doing what he loved, turning wood. Specialising at first in lace bobbins, as was his style, his work was highly decorated, using techniques he developed which made him one of the country's leading bobbin makers.

Seeking new challenges, David's interest in more experimental work grew, and he became well-known among turners around the world for his intriguing designs and puzzling turned pieces.

In 1993, he published his first book with GMC, *Woodturning Wizardry*, which inspired and fascinated readers with its 'spheres within spheres, stars within cubes, an arrow through glass and delicate lattices with no apparent means of support'.

His love for seemingly impossible puzzles and surreal shapes continued in his articles and his next GMC books, *Woodturning Trickery*, *Woodturning Full Circle* and in the fantasy creations in his collaborative book with Nick Agar in 2011, *Woodturning Evolution*.

David will be much missed but his turned work and his books will continue to inspire generations of turners.

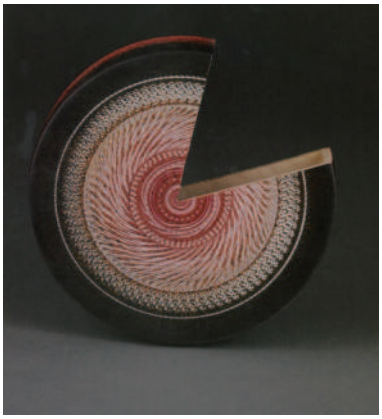
Above: Singapore Ball
Top: Puzzles from *Woodturning Trickery*

King Arthur's Puzzle

Lattice Lid

Egg & Rosebud...

Interlocking Spheres



Outside the box – a collaborative piece with Nick Agar

> *David will be much missed but his turned work and his books will continue to inspire generations of turners.*

Greek Temple

Trapped Arrow

Cockerel, Iguana and Kiwi (with Nick Agar)

...opened!

Arcs

Wall Plaque (with Nick Agar)

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1 Although it will work on bare wood the Buffing System is designed for buffing a dried coating, such as lacquers, oils, polishes and sealers.

2 Insert the mandrel into your chuck; it can be gripped on either the 18mm or 25mm section, depending on the jaws fitted. Using the 18mm section will give more clearance from the chuck.

3 The mandrel should self-centre easily, but if you're struggling with this bring up a live centre to the countersunk hole to centre it before pinching tight. Always make sure the mandrel is held firmly in the chuck before starting the lathe.

4 The Buffing Wheels are supplied ready assembled, and clearly marked for easy identification. Simply screw them into the mandrel and they are ready to apply the compound or wax to the wheel

5 Resist the temptation to start the lathe in order to screw the wheel in place; this can cause the mandrel to 'grab' the wheel and it will become very difficult to unscrew it.

See our YouTube channel for more tips!

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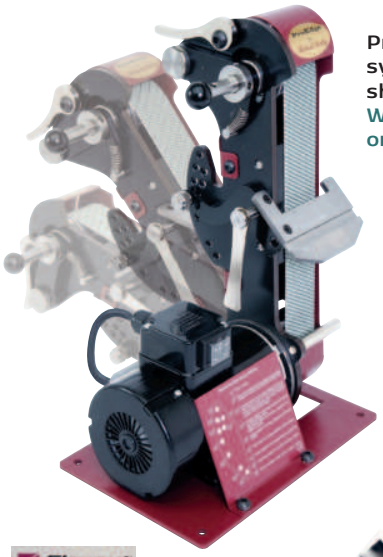

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Platter

Matt Long takes you through the steps to make this beauty of a platter

Platters must rank up there with bowls in the list of projects for new woodturners. In fact, the techniques used to turn platters are more or less the same used for bowls, as are the tools you will need.

In this article, we use two platter blanks. The reasoning for this is quite simple – moisture content and timber movement. Because a platter is so flat and thin, any movement in the timber is exaggerated, so it makes sense to rough turn a blank – even a blank prepared by a timber merchant – then leave it to dry... often as long as a year in a warmish workshop. This will prevent the worst of timber movement after the platter is turned. Of course, you may be happy for your platter to warp after turning, and why not!

The making

1 The first job is to mount your platter blank – here we've used ash – on the lathe to rough turn it, before it is left to dry. For this, use a faceplate with screws that will not penetrate beyond waste depth. Make sure you centre the faceplate properly. Once the faceplate is mounted, bring up the tailstock, with a live ring centre – this penetrates the wood less than a conical live centre – to secure the blank.

2 After you've mounted the platter blank, bring up the toolrest so it's parallel with the face of the blank. Turn the blank by hand to ensure there are no catches on the toolrest. Adjust the speed of your lathe using our guide shown on the graph opposite. Then start removing the corner of the blank with your bowl gouge – this will be the platter underside.

3 Once you've rough-shaped the form of the bowl underside, rough-shape the platter's stand. Use your beading/parting tool to define the outside, then use a pull cut to flatten the bottom of the stand.

4 And then use the beading/parting tool to define the stand's recess, before cleaning up the recess with the bowl gouge, using a push cut and leaving just a small tenon around the ring centre. This recess will become the socket into which your scroll chuck will later expand.

1

PHOTOGRAPHS BY GMC/ANTHONY BAILEY

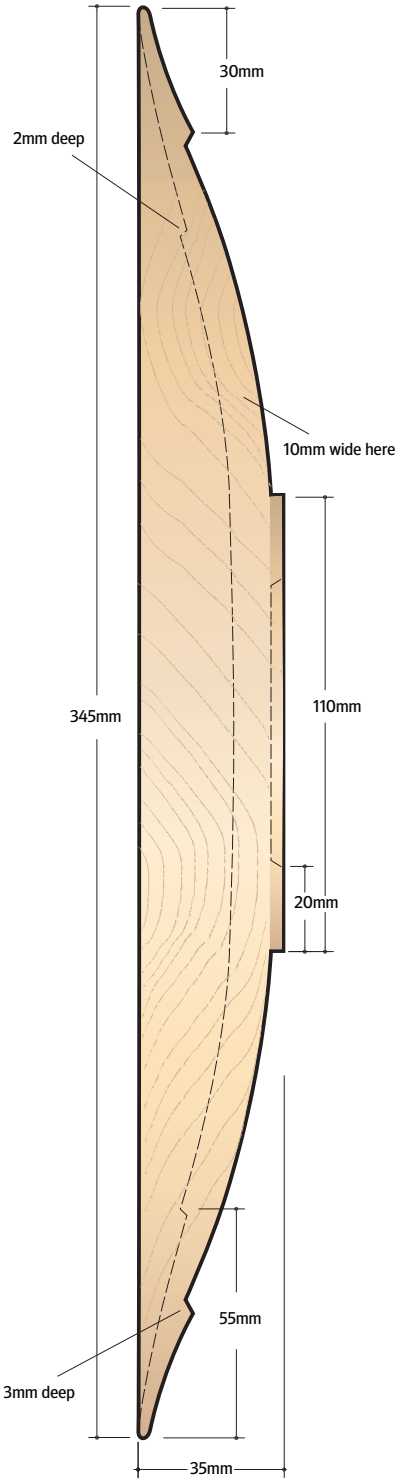
Plans & equipment

Tools & equipment

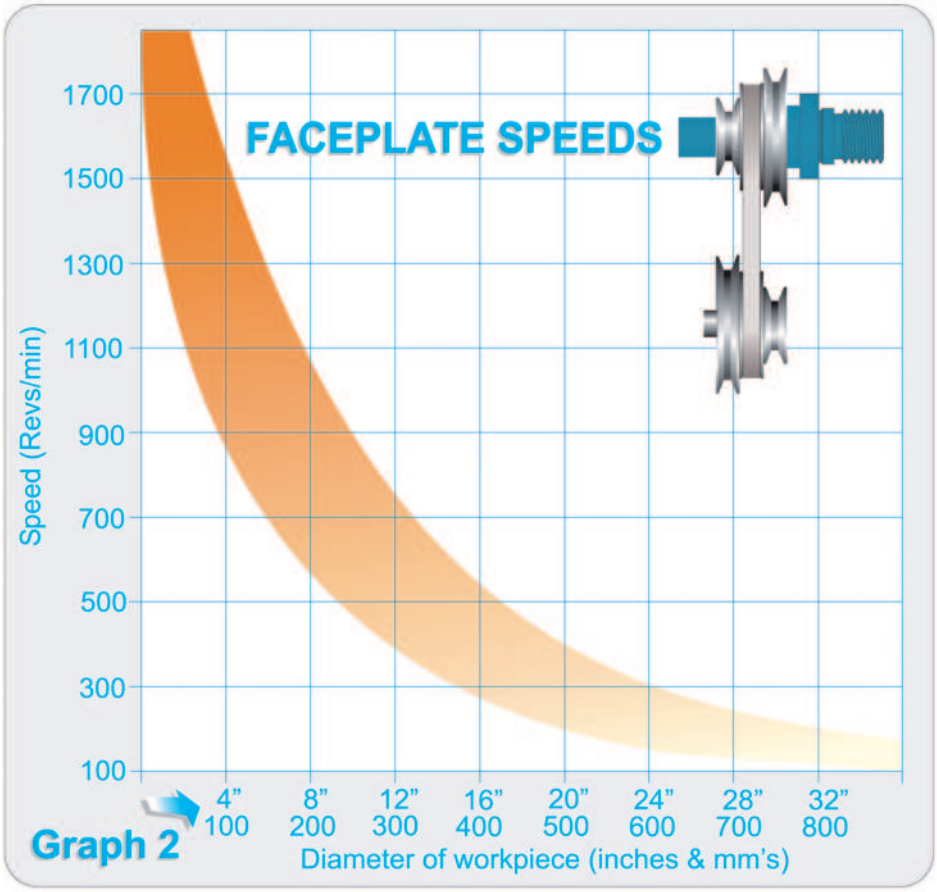
- PPE & RPE as appropriate
- 12 mm bowl gouge
- 3mm parting tool
- 10mm beading/parting tool
- 19mm French-curve scraper

Top tip

The rule of thumb for letting a rough-turned blank dry is that you leave an inch of thickness for every 12 inches of platter diameter.



Safe lathe speeds for spindle and faceplate turning



And here we have the upper and lower limits of lathe speeds for various diameters of faceplate turning work

5 Once the stand is cut and defined, finish shaping the underside of the platter, this time using a push cut which will rip out less grain.

6 Now unmount the blank, and remount it on the scroll chuck, expanding the jaws into the recess. Then bring up the live ring centre, and position your toolrest.

7 Clean up the platter edge with a pull cut, before cutting the inside face of the platter, as when turning a bowl. Leave the live centre in place for as long as possible, before removing it and turning off the tenon. Your blank is now ready for storage and drying.

8 To continue, we are using a roughed-out blank produced a few years back. Now it's time to mount your old blank. You need to use a friction drive to hold the blank in place and turn it – see issue *WT371* for how to make one. Centre your blank as closely as possible, before bringing up your tailstock. The blank can be hard to centre exactly, as it will have warped, but get it turning as smoothly as possible.

9 Next, using your parting tool, define a tenon on the bowl underside, which will be grabbed later by the scroll chuck. Then, around this, shape what will be the platter stand. A pull cut on the bowl gouge is fine.

10 Reverting to a push cut, turn the underside to an ogee shape until the final sweep of the bowl is finished, apart from the step.

11 Use your beading/parting tool to define the stand and the step, then scrape the surface between the stand and step, to remove ridges and smooth off the surface. You could use a straight-edge scraper, or the tip of the beading/parting tool, as here. The shape between the stand and step is convex – so a straight scraper is fine – but from the step to the rim it is concave, so you need a curved scraper. Don't forget, always keep the scraper handle higher than the toolrest.

12 Once you are happy with the stand edge, your step, and the surface between, change to your round-nosed scraper to refine the concave surface between curve and rim.

13 Once you are happy with your shape, it's time to sand through the grits. When working near the step and stand, it's best to work by hand. Start from around 120 grit, and work through to 320. Sand in the lower left quadrant, and keep the abrasive moving.

14 For the flat expanses of the underside, change up to power sanding for a better and quicker result.

15 Now it's time for finishing the underside. We've used a few coats of finishing oil. Apply a coat, then let it dry, denibbing and reapplying. Let the final coat almost go off before burnishing with a folded piece of kitchen towel, for a lovely deep lustre.


5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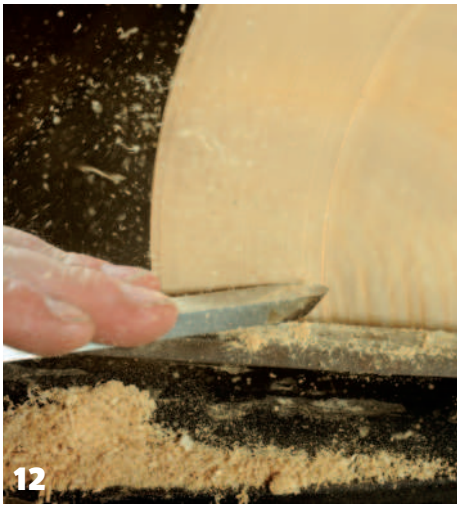
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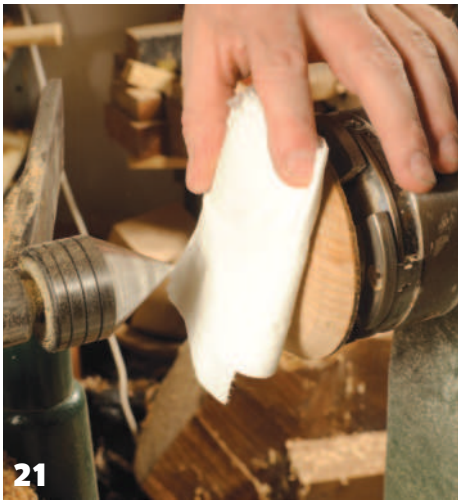
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16 Now it's time to remount the bowl with the tenon you cut on the underside of the bowl. After you've remounted, bring the toolrest up to the rim edge, and round up the bowl again with a pull cut against the bowl rim.

17 When happy the platter is round, take your edge cut all the way across the rim and down into the platter inside with a bevel-rubbing cut. Don't forget to stop where the internal step starts.

18 When satisfied with the rim shape and the position of the step, start removing the waste from the inside of the platter.

19 Eventually you will approach the final shape of the inside, and will be just removing the last waste from the centre. Remember to cut down on to the centre pip of waste. As you approach your final shape, it is worthwhile trying to get the best possible cut. Concentrate on bevel rubbing, also constantly check your platter thickness with finger and thumb.

20 Now it's down to refining and finishing. Use your round-nosed scraper for the concave inner surface, and remove any remaining ridges and ripped out grain. For the convex surface between step and rim, use your beading/parting tool as a scraper. Sand through the grits and finish in exactly the same way as the underside.

21 Nearly done, you now just have to finish the platter's stand. So remount the bowl with the inside against your friction drive, protected by a pad of kitchen paper.

Then bring up the tailstock, but this time with a conical live centre, so you can turn right into the centre of the stand recess.

Don't tighten the tailstock too hard, or else the centre will go right through.

22 Define the edge of the recess with the 6mm parting tool, here it is slightly angled to the centre. Then clean up the recess with the bowl gouge, leaving a tiny nib under the centre.

23 Lastly, dismount your platter, cut off your nib with a knife, sand the recess smooth and apply oil. ●

Line and reel

As he gradually upgrades his garden tools, Kevin Alviti finds it's time for a new method of creating his straight lines for growing crops

PHOTOGRAPHS BY KEVIN ALVITI

The outside of my vegetable garden may be organic lines and curves, with cordon apple trees, a cleft yew gate and thyme growing between cracks in the wobbly paving, but there are straight lines hidden within.

The vegetable beds themselves are all uniform, each a 3m x 750mm bed. Some years, up to 50 of these beds are in production to help feed our hungry family. The crops are often grown in straight lines. It makes things easier – easier to weed and hoe around, easier to estimate the amounts needed and easier to plant.

There's also nothing more satisfying than ruler-straight lines of carrot tops pushing their way out the earth, or earthy beetroots waiting to be made into rich borscht to have with fresh-cooked crusty bread.

Up until now, I created my lines with a bit of old twine pulled between two hazel twigs – not pretty, but it gets the job done. I seem to have got into the habit of trying not to buy anything if I can make it or repair it. In my garden, I've been slowly upgrading my garden tools: making new beech handles for trowels; carved seed boxes to store my saved seed each year; and next on the list was a new line and reel.

For this project, I decided to use ash. I think turned between centres it looks beautiful with its gorgeous grain strongly coming through.

It is often used for tool handles and, although I don't need the qualities that make it a good choice for a spade handle, it will certainly look right among my other tools. The durability of ash is fine if it is regularly looked after and maintained, normally with a yearly coating of oil and being stored in the garden shed when not in use, although it's not an ideal wood if it's left out in the rain.

Only a few bits of ash are needed for this project. Choose clean, knot-free parts – luckily it is easy to find good boards that are completely clear. You could use anything for this project though: pine, oak, beech, sycamore or walnut – it's a good project to use up some of the scrap wood you've been piling up *just in case you need it* (we all have those piles, don't we?).

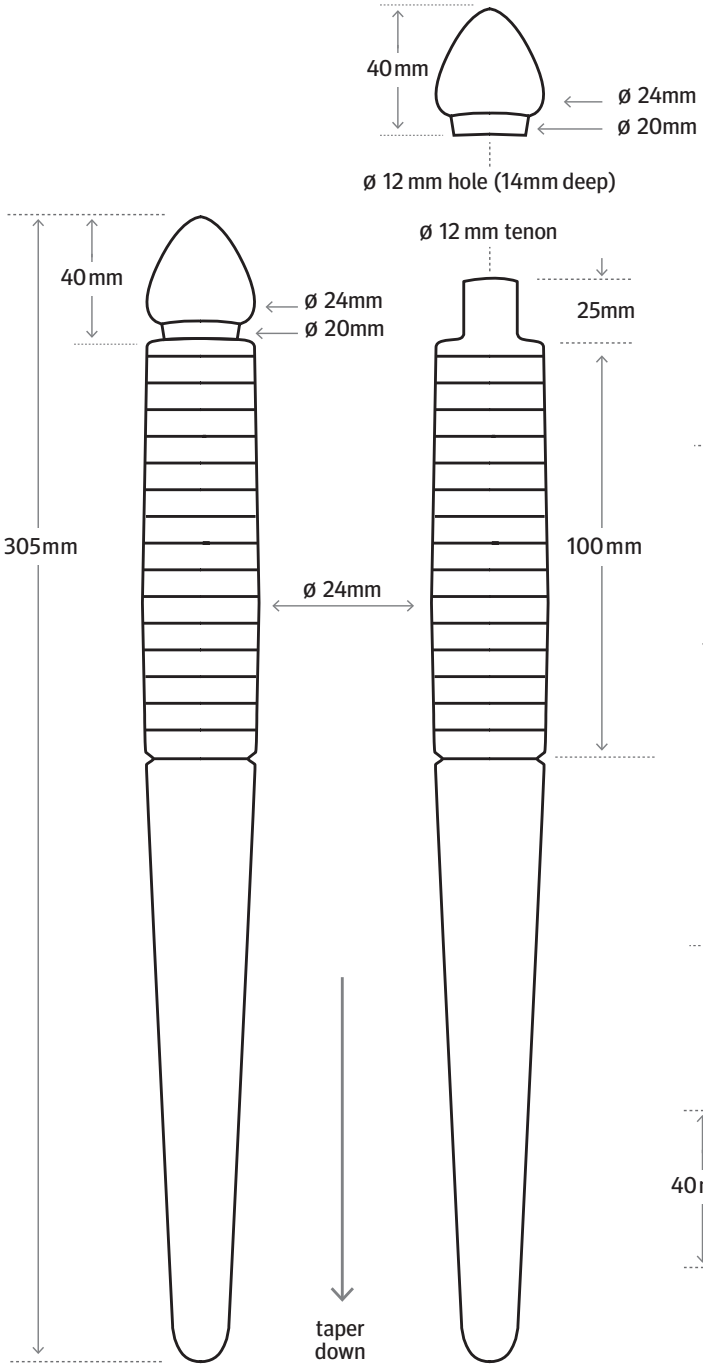
Plans & equipment

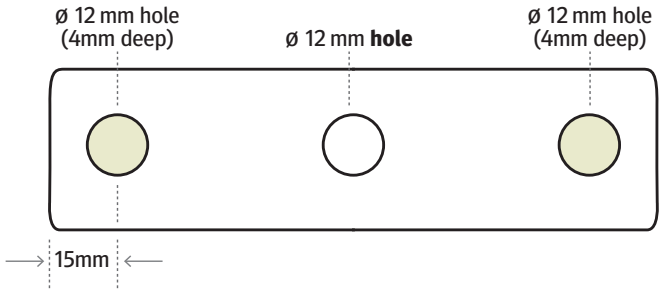
Tools & equipment

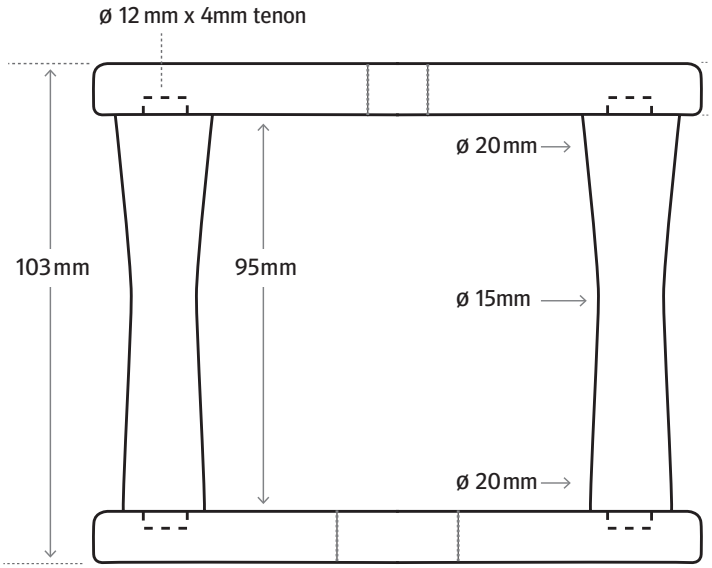
- Lathe
- 18mm (¾in) spindle roughing gouge
- 32mm (1¼in) skew chisel
- Spindle gouge
- Parting tool
- Narrow parting tool
- Four-jaw chuck to create a jam chuck
- Bandsaw (optional)
- Hand saw
- Smoothing plane
- Pillar dill
- 2 F-clamps
- 12mm (½in) Forstner bit
- 25mm (1in) Forstner bit
- Sandpaper
- Boiled linseed oil
- Weatherproof PVA glue

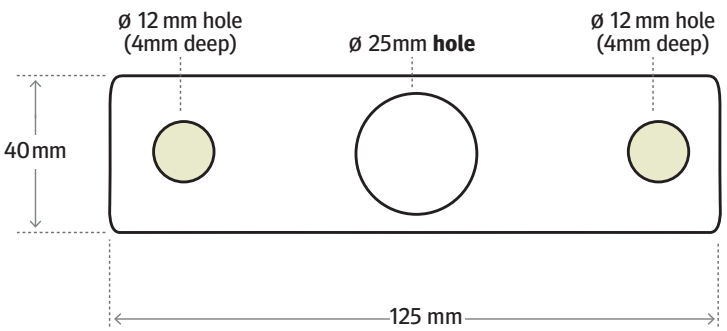
Materials

- 2 ash blanks 28mm (1⅛in) square by 350mm (14in)
- 1 ash blank 28mm (1⅛in) square by 50mm (2in)
- 2 ash blanks 22mm (⅞in) square by 115mm (5in)
- 2 pieces of ash 8mm thick by 125mm (5in) by 40mm (1½in)
- Enough scrap pine to make a jam chuck – depends on what jaws you own as to how wide this needs to be
- String to finish









The making

1 Select your timber – you want a piece free of knots, splits or shakes. I had this slab of 32mm ash that I cut some pieces from, although it must be an artist's impression of 32mm as it was well under anywhere I measured. Make sure you allow enough for the smaller pieces later in the project.

2 Rip down some blanks for the lathe. I used the tablesaw, but a bandsaw or even hand saw are all good options. This project finishes about 305mm (12in), long so give yourself an extra 25mm (1in) on either side when cutting to length. I also want the diameter to match a Forstner bit I had and finish around 25mm (1in) when turned down, so I just cut it about 29mm square.

3 Mark centre lines and mount on the lathe. I used a four-prong drive centre and a bearing-guided tailstock drive. Use the spindle roughing gouge to make it round and near to the final size you want it.

4 When you're approaching the required diameter, use a skew chisel to plane a nice cut on the wood. There is still lots of work to do, but having it smooth always makes it easier to work with. This wants to finish about 24mm so a 25mm circle will fit easily over it.

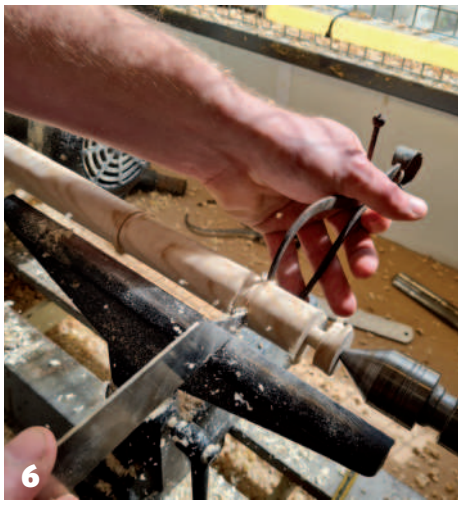
5 Mark the low and high points needed on the workpiece.

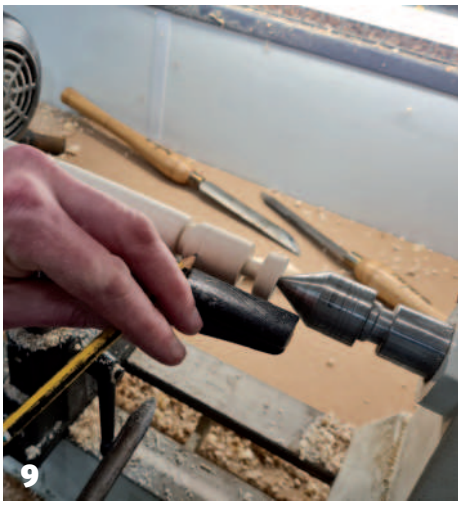
6 Using a firm, one-handed grip on a parting tool, size these low points. Remove wood until the callipers slip over – these callipers have had their sharp points rounded over (not by me).

7 Taper and shape the pointed end. Remove the bulk of the material with a roughing gouge then tidy up with the skew.

8 Radius the shoulder under the finial and create a small fillet midway down the piece. I did this with a lifting, rolling motion of a spindle gouge – some prefer to do it with a skew chisel.

9 Mark the high point of the finial, then shape it using a spindle gouge, being careful to always keep the right part of the chisel in contact with the rest to ensure it doesn't snatch.





10 To make the flat area of the marking stick look more interesting, I divided it up evenly and marked pencil lines where I was going to cut.

11 Working from one side, I use a small skew chisel to make a diagonal slicing cut into the workpiece, doing each one from the one side at about 60° to the workpiece. For this cut, I let the tip of the tool touch the wood then lift my arm so the edge engages and slices. This makes a nice clean cut.

12 Approach from the other direction and make similar angled cuts to meet the ones we've just done. Each should throw out a tiny piece of waste and leave a perfect little groove in the wood.

13 Sand the workpiece. Work your way up the grits, although you should be able to start around 120 and finish at 220. There's no need for this to be super smooth as it's a tool to be used in the garden but still stop it between grits and sand with the grain to remove any scratches. Part off from the lathe with a narrow parting tool in a one-handed grip, using the other to catch the workpiece as it comes off the lathe.

14 Turn the second piece, repeating all the steps, except for the finial on the top. Instead here there needs to be a 25mm (1in) long tenon turned at 12mm (½in) diameter.

15 Prepare the stock for the rest of the project. Rip down some strips around 10mm thick (to finish around 8mm once planed) by 125mm (5in) long by 40mm (1½in) wide. I used the bandsaw for this as I feel it's safer for narrow strips than the tablesaw. Rip some small pieces which we will turn to hold the string, 22mm by 110mm long.

16 Plane the top and bottom of the wood for the reel to get it smooth. I wanted mine to finish around 8mm thick.

17 Cut them to length, then mark the curves on the ends and cut on the bandsaw. If you have a bench-mounted sander it is also possible to sand this curve smoothly and easily.

18 Sand them all round and remove any sharp edges (the arris), then mark up the centre line of each.

19 Drill one with a 12mm hole in the centre (to sit on the top) and one with a 25mm hole. Make sure you clamp the piece and don't hold it as shown in this picture in case it snatches in the drill and spins round. The top hole will need to be enlarged slightly using a round rasp so it can spin freely on the tenon on top of the other piece.

20 Mark the holes on the ends along the halfway mark but 15mm in. Drill these with a 12mm Forstner bit and only to half the depth of the wood (4mm).

21 Put the pieces together and measure what is needed for the two tapered bits that hold the string between them. Allow enough for the 4mm tenon either end. Mine worked out at 95mm + 4mm + 4mm, so 103mm. I'd also allow enough to mount on the lathe.

22 Taper the wood to a narrower middle point. This should hold the string bunched up, but also will look nice when done. Ensure you only work down the grain to the lowest point from either side. Turn a 12mm tenon on either end, making sure they are only 4mm long. Sand it before removing it from the lathe.

23 Use a paintbrush to cover the tenons in a good exterior-grade PVA glue and push all the pieces together. Clamp and leave these to cure, making sure they are not in a twist with each other.

24 For the finial, I needed a way to hold the piece while turning it. A jam chuck would be perfect for this with the grain running along the length. Unfortunately, I had no waste wood big enough to make one to fit my smallest jaws in the chuck (57mm), so I glued two bits of pine together and roughed them round between centres on the lathe.

25 Use the parting tool to create a tenon so this piece of wood can be mounted in a four-jaw chuck. Have the grain running parallel to the bed of the lathe as you normally would when working between centres.

Also cut a piece of ash long enough for the finial, allowing waste to go against the tailstock. A piece was cut 50mm long for the 40mm finial. Then drill a 12mm hole in one end 14mm deep.

26 With the waste wood now in the jaws of the chuck, it's time to create a simple jam chuck. Taper it down leaving a shoulder the same width as the base of the finial (18mm/¾in) and then a small tenon that tapers slightly so the small piece of ash we've just cut will fit tightly on there.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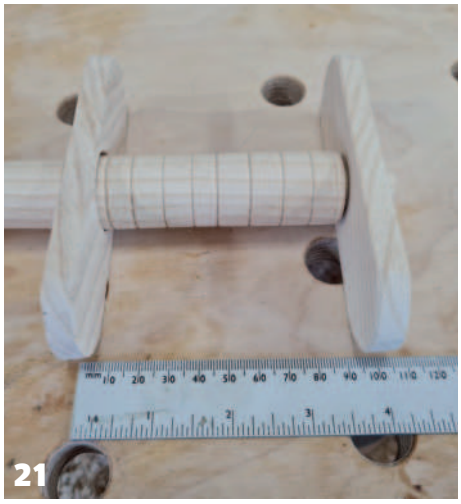
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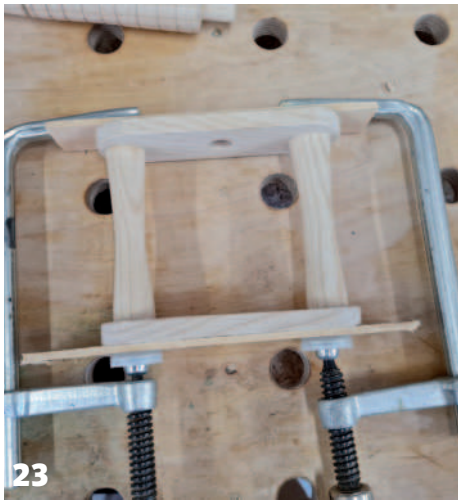
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27 Bring up the tailstock and wind it tight to apply some pressure. Then turn the finial with light cuts from a sharp tool.

28 Turn this to the same shape as the other finial, using the other one as a reference. The eye is surprisingly forgiving so it doesn't need to be perfect, but it's good practice to get it as near as possible. If I were to turn lots of these, I'd make a very quick pattern that I could lay on top to check the shape.

29 Sand up to the same grit as the other pieces and part off the lathe – the end might need touching up with a knife and some sandpaper. Then glue it on the top of the assembled line. Be careful no glue slips down to the moving parts.

30 Apply a finish – my garden tools all get two coats of boiled linseed oil.

Part of me wanted to apply the finish to this project in stages before I glued it together, but all my garden tools get a yearly coating of linseed oil and I wasn't going to take it apart again. It's easy to get a brush and slip a bit of oil around the moving parts, nothing should stick as long as thin coats are applied.

After two coats have dried and everything is moving freely add your string. ●


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Twist on a string line

This isn't a knot but a simple twist to stop the line from slipping or unravelling when you have it at the right length. We use this on string lines on building sites and often add in some of these twists as we wrap up the string – anyone who has dropped one off a scaffold will know why. Simply take the string in your hand, make a loop, twist it around and drop it back under the peg, pull it tight and it should stay still as it pulls against itself (if you twisted it the right way).

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Natural ingrediants - No Chemistry - No artificial additives - Made in Germany

König Woodcream - 120g

Order Nr. KHHWC

The most important properties at a glance.
Highly film-forming - waterproof after 3-4 layers, food safe, made from renewable raw materials, no additives, natural protection of the wood without harmful ingredients, the surface is less sensitive to slight scratches, is crack-proof and does not peel off, the wood remains open to diffusion and retains its natural character.

Application examples for König Holz und Harz wood cream
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Advantages of König's natural wood varnish
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König Sanding Sealer - 250 ml

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£ 9,00
Price incl. VAT.

Chinese jar

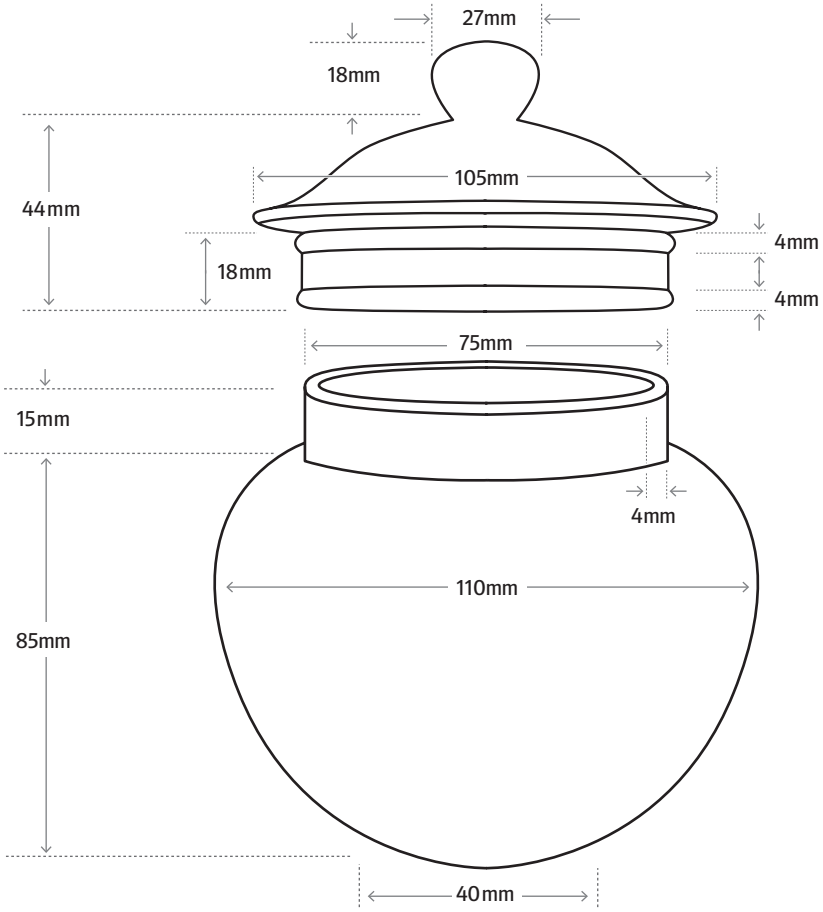
Pat Carroll makes a ‘guan’ for storing herbs

I have always been drawn to ceramics and pottery for design and shape. The piece in this article is based on a Chinese jar, known as ‘guan’ and predominantly used for storing herbs. The base varies in shape from the pieces I found in my research – some flare out and others have a beautiful curve reducing in size as it nears the base. The finished piece is simply a gathering of various shapes and designs. I had toyed with the idea of painting the jar but opted to leave the natural wood exposed.

PHOTOGRAPHS COURTESY OF PAT CARROLL

Plans and equipment

- PPE & RPE as appropriate
- 4mm parting tool
- 12mm spindle gouge
- Beading tool
- Mega Mate
- Mate undercutting tool
- Negative rake straight scraper
- Detail tool
- Callipers
- 19mm drill bit



The making

1 Before starting any project, it is important to sharpen all tools, ensure all components are working and safe and secure. And, first and foremost, that all personal protection equipment is checked and used throughout the project. The piece of beech used was turned to a cylinder and a 100mm tenon was created (see below).

Top tip

I sometimes rough down a small batch of blanks, putting a tenon on, and if they still have moisture in them, wrapping them in cling film or waxing the end grain. This way you have a supply of pre-prepared blanks already drying and stabilising. This is handy when projects like this Chinese jar come up.

2 A 19mm steb centre in the tailstock gives added security to the piece. A 12mm spindle gouge is used to true up the face of the piece in preparation for cutting the tenon.

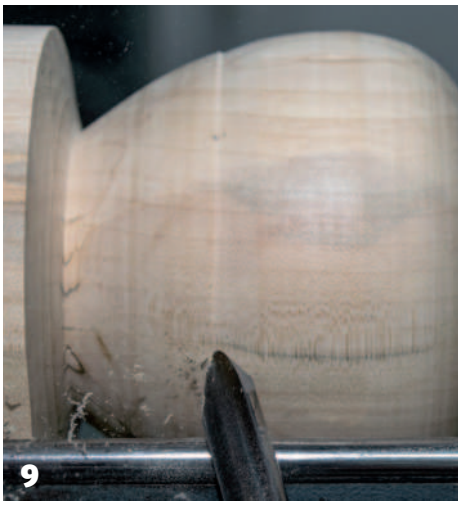
3 50mm jaws will be used to hold the lid when turning, so a suitably sized tenon is marked. This can be done with the lathe stationary and rotated by hand.

4 The 12mm spindle gouge is used to create the tenon. The jaws are straight, serrated and a 90° tenon is needed for maximum gripping power. The point of the gouge creates a crisp, clean corner when cut in from both directions.

5 The piece is divided into thirds. The top third is parted off with a 4mm parting tool, making 5mm cuts each time, widening the opening so as not to allow the wood to bind on the tool and possibly pull the piece from the lathe. The remainder in the middle can be finished with a saw.

6 With the piece parted off, the 12 mm spindle gouge cleans up the surface. Working from the outside towards the centre, bevel contact with a sharp tool helps give a clean surface on the end grain.

7 A tenon is created to accept the lid of the jar. There was no guideline measurement other than what looked good in proportion to the body of the piece.



8 The shoulder of the jar is created and, from the design in mind, it is high on the piece. A small flat area is left beside the collar so the lid will sit neatly against the body of the jar. The outer edge of the flat area is blended into a curve so as not to detract from the design.

9 The lower portion of the jar is formed, working from the highest point to the lowest point of the piece. This is the general practice in spindle-oriented work. Work in small increments until a pleasing curve is achieved.

10 A centre hole gives a starting point for the hollowing tool and provides a guide that the piece is hollowed to the correct depth. A piece of masking tape is used as a marking gauge for accurate drilling. Drilling is done at a low speed in small increments to minimise clogging and heating of the bit.

11 Hollowing of the vessel could be done with a variety of tools. I opted to start with the 12mm spindle gouge. With flute open to 45°, the tip of the tool is pulled outwards. This removes timber very quickly, but once the tool overhangs the toolrest too much, vibration increases, and a poor finish is usually one of the outcomes. Using the heavy-duty Mega Mate, the bulk was easily removed.

13 A shop vac is used to remove the shavings and dust from the interior. The temptation is to use the airline but this makes the dust particles airborne and a potential health hazard.

13 A negative rake scraper is used to true up the inside of the collar. Gentle light passes ensure a clean surface which requires minimal sanding.

14 To cut under the rim of the vessel, use an undercut tool. This allows easy access and gives a clean surface.

15 The body of the vessel is sanded through grits 120, 180, 240, 320, 400. Full dust extraction and respiratory protection must be in place.

16 The top is then secured in the 50mm jaws and the face trued up with the 12mm spindle gouge.

17 Vernier callipers are used to get the size of the collar. This measurement is transferred to the underside of the lid.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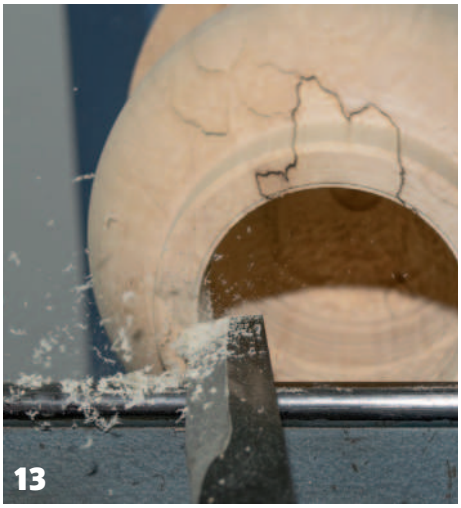
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18 The lid is hollowed about 3mm deep to get a snug fit for the base. Once the fit is established the recess is made deep enough to accept the base of the vessel, and a reference line can be placed on the lid for the diameter of the outer area.

19 While the lid is still secured in the chuck, the base is fitted to it, acting as a jam chuck, and the base is finished. When completed, sanding is carried out with 120, 180, 240, 320 and 400 grit sandpaper.

20 The collar area is reduced and the first of the beads added with a 4mm beading tool. The collar area is added to what looks right proportionally, and the second bead is added with the same 4mm beading tool.

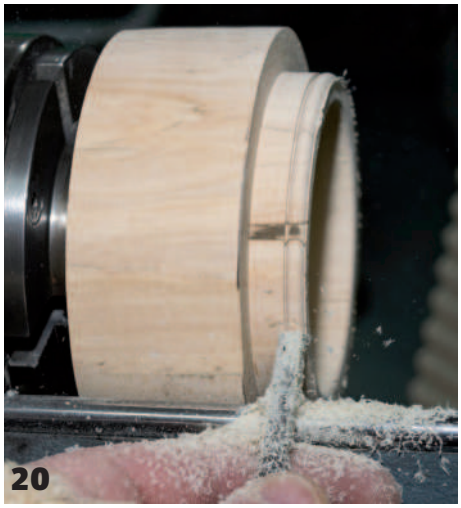
21 When I fitted the body into the lid for a visual of proportions, I decided to reduce the collar area of the lid as much as possible. I felt the lid overpowered the base with the larger neckline.

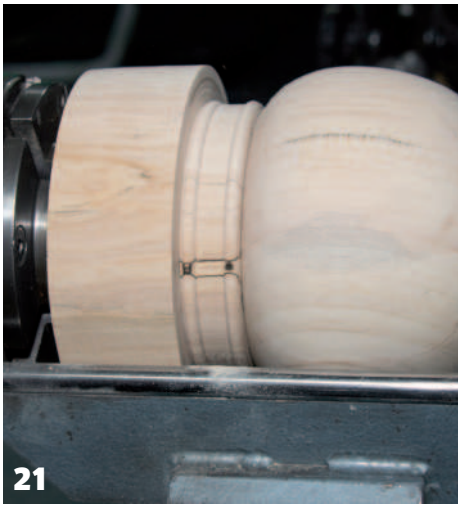
22 Once the lid was shaped on the lower area, I could then hollow the interior of the lid. No hole is drilled in the centre as this is a shallow lid. Light passes with the 12mm spindle gouge remove the bulk of the material, and the Mega Mate refines the shape of the interior of the lid.

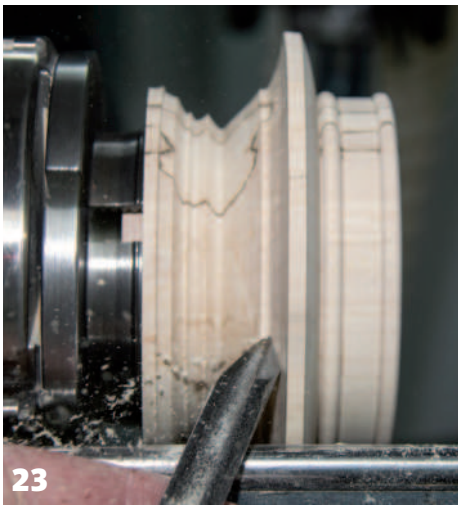
23 The final shaping is completed with the 12mm spindle gouge. Creating an upward flair to the outer part of the rim adds a characteristic of the Chinese jar design.

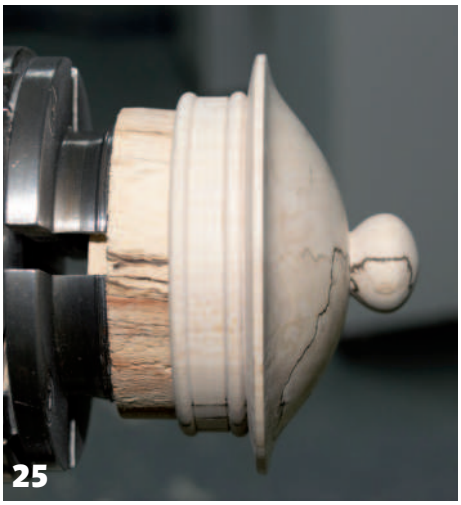
24 A scrap of beech is used to make a jam chuck to complete the lid. Tailstock support is used until the very last second, when it is in the way of completing the knob.

25 The completed lid after the sanding process from 120 to 400 grit sandpaper. Several light coats of satin lacquer are applied to the finished piece. ●









NEXT ISSUE

WT373 on sale 11th August 2022

We welcome Mark Palma as guest editor of WT373

Mark introduces us to the imaginative work of Heather Marusiak

Pat Carroll makes a beautiful elm trinket holder

Andrew Potocnik uses split turning to create a stunning blackwood box

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Am I a good turner?

Pete Moncrieff-Jury discusses traditional turning versus artistic work

PHOTOGRAPHS BY PETE MONCRIEFF-JURY

To many who enter the world of woodturning the end result needs to be round and obviously done on a lathe. When the lathes were either pole lathes or treadle lathes this was perhaps true as the power and the tools available limited what was possible. Since perhaps around the 1960s woodturning has developed as an art form in its own right and more and more turners have turned (apologies for the pun) to making things that are an expression of artistic form rather than simply a practical item. In some cases, it is true to say that the turning is merely a means to an end.

For many making something on the lathe, such as a bowl or platter, then colouring, perhaps texturing is as far as they go with enhancing their work. Nothing wrong with this, some of the work by the well-known exponents is very beautiful and takes great skill. As with all forms of art or craft, the main skill is perhaps in thinking outside the box and creating the sort of piece that makes you wonder how they did it. A lot of it takes a great deal of patience and ingenuity and the danger is that we can look at this type of work and assume we could never achieve that level of skill so are not as good a turner. We need to ask ourselves whether we actually want to though.

I am in awe of segmented work, often with up to a thousand little bits of wood all glued together to make a pattern. Same applies to the amazing pierced work we see. I have no desire, however, to do it myself. Apart from anything else, I have to be honest and admit I don't have the patience.

I learned a long time ago that if I am really keen to do something I will put myself out and persevere to achieve it. If I haven't got that desire then there is no point in me trying. A couple of turners I know make the multi-layered Chinese eggs. They make their own tools as well. Personally, while admiring their skill I simply haven't got any inclination to have a go.

Back to the original thought, turning isn't just making round things anymore. Some of the pieces I have done have little turning involved in them and the main attraction (someone bought them, so they attracted someone) was the overall effect and the turning enhanced the pieces rather than being the main focus. I have said before that beauty is in the eye of the beholder and occasionally I see a piece that, in my opinion, has too much turning and has lost the inherent natural beauty of the wood. Does a piece of woodturning have to be round? No. There are so many ways of making something that result in a piece that is not round. The skill is not so much in the turning but in manipulating the material in some way.

A good example was in the inros recently featured in this magazine. A good turner is someone who practises and whose skill level in a particular area grows. You don't have to be good at everything to be classed as skilful.

In the modern world of woodturning there are perhaps two distinct fields of work. First is the more traditional work where something is made, usually practical and useful, the second is the purely artistic. This can vary from turning a piece specifically to be decorated to making something where the turning simply enhances the piece and is almost secondary. Whichever you feel drawn to, always remember that you can't be good at everything and not wanting or being able to achieve one style does not make you any less skilful. You need to want to make something well enough to persevere and strive at. The larger natural piece is something I love doing, the other, decorated by my wife, is something I could never do. Both are turned but couldn't be more different.

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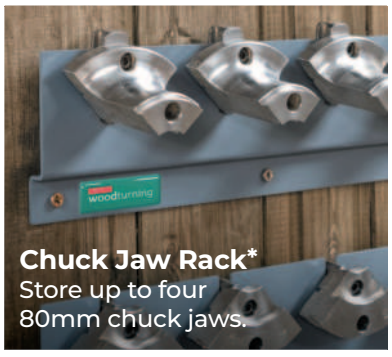

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