

Woodturning

THE WORLD'S LEADING MAGAZINE FOR WOODTURNERS

A close-up photograph of a woodturner, Emiliano Achaval, wearing a black protective helmet with a clear face shield. He is wearing a purple long-sleeved shirt with several patches, including one that says "Woodturners 50 Years" and another that says "Emiliano Achaval". He is using a chisel to shape a piece of wood on a lathe. Wood shavings are flying off the wood, creating a dynamic scene. The background is dark and out of focus.

**EMILIANO
ACHAVAL**
GUEST EDITOR

Introduces the issue
Profiles Aaron Hammer
Offset-turns a bottle stop

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• Toy submarine • Yew platter • Green wood bowl

TECHNICAL Buying wood • Layering scraps

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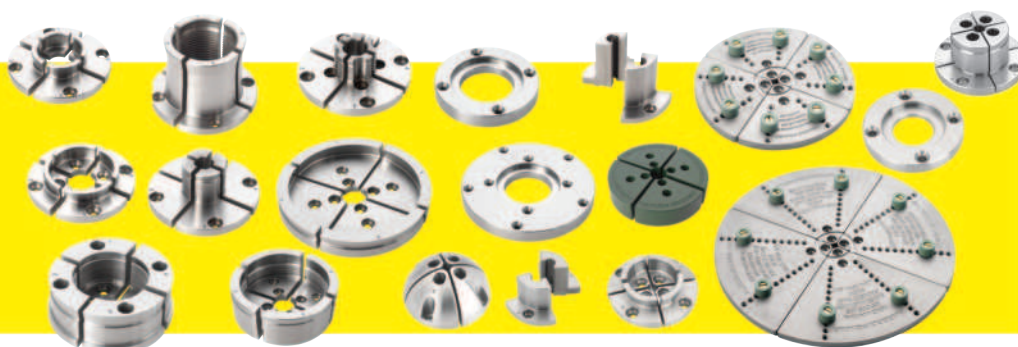
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Guest editor's letter

Emiliano Achaval

Once again, it is my pleasure to introduce this issue of the best woodturning magazine in the world.

One of the prized possessions in my library is the compilation of articles that my turning hero Bill Jones wrote for this magazine in the decades he worked here. His books are *Notes from the Turning Shop* and *Further Notes from the Turning Shop*. It is humbling to think that I have been writing for the same prestigious and well-respected magazine for about five years. Looking at old issues makes it even more impressive when you see that some of the world's best artists have come through here at one time or another. Because of you, this magazine has been so successful.

When I write an article, I think about you and the thousands of other turners worldwide who will be reading it. I try to accommodate the beginner and the experienced.

I have received excellent feedback about our 'new' format, where each issue has a guest editor.

Working on this issue has been a rewarding experience.

It was fun to visit and spend time with one of Hawaii's most prolific professional woodturners, my good friend Aaron Hammer. He has hundreds and hundreds of pieces drying. He sells his work through a gallery with stores on every Island in Hawaii. He has to supply them all. He's an all-around good guy, and I'm happy to be the one to introduce him to the world.

For my main article, I spent a fantastic week learning and having fun with the amazingly talented young artist Derek Weidman. He came to Maui to do a club demo and some hands-on classes. His work is instantly recognisable.

When you see his work,

you know it is a Weidman piece, even among thousands, like at the AAW Instant Gallery at the Chattanooga symposium.

I was delighted at the club's response to the hands-on classes. It was great seeing everyone, including me, stepping out of our comfort zone and trying something new.

Woodturning is a never-ending journey of learning experiences. Take advantage of every opportunity that your club presents you. Participate in the monthly club challenges. They will help you grow overall as a woodturner.

If you can, offer to host the travelling professional coming to demonstrate. You will get to spend more time with them than anyone else. Most, if not all, would love to see your shop, your lathe, and check your tools. I'm telling you this from personal experience. It seems that I'm the designated club host in perpetuity. I love every minute of it.

At our last meeting, we discussed how it feels that life is finally returning to normal. Even though we still have some Covid cases, it is not nearly as bad as before. We have learned to live with it. We can start scheduling ahead without fear of having to cancel.

I'm looking forward to hosting and learning from more talented artists coming through Hawaii, and you bet that I will offer to host them.

And lastly, but surely not least, I consider myself a Mark Baker apprentice. I became a better writer, turner, and person with his guidance, suggestions, and corrections. I owe Mark a lot for my success. He left us way too soon. I know he is keeping an eye on us. Wherever he is, I think he would have approved of this issue. Brilliant, that's what I hope he would have said.

A hui hou, till the next time.



Derek and Emiliano show off their goose and capabash bowl under a Hawaiian rainbow



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Contents

Issue 378



Cover image by Crystal Gibson



104



72



Guest Editor

- 3 Guest Editor's letter**
Emiliano Achaval welcomes you to this issue of *Woodturning*
- 6 Bottle stop**
Emiliano Achaval learns how to create an unusual offset-turned bottle stop from woodturning artist Derek Weidman
- 12 Living the Hawaiian dream**
Emiliano Achaval talks turning with his friend and fellow professional, Aaron Hammer
- 17 Tried & tested: threaded brass inserts from Stainless Bottle Stoppers**
Emiliano Achaval trusts one of these inserts within a deeply personal turning

Community

- 66 Subscriptions**
Discover our latest offers for subscribers
- 84 Community news**
Take a look at what *Woodturning* readers have been making and find out about the latest turning news and events
- 103 Next issue**
A sneak peek at what's in store in the next issue

Features

- 72 Unique dedication**
Journalist Victoria Lynn looks at the life and work of Doug Clark
- 74 Diary of a professional woodturner – part 19**
Richard Findley continues his diary, telling us about various jobs going through his workshop
- 104 How not to get stuck in a woodturning rut**
Pete Moncrieff-Jury shares his top tips on taking risks and trying new things



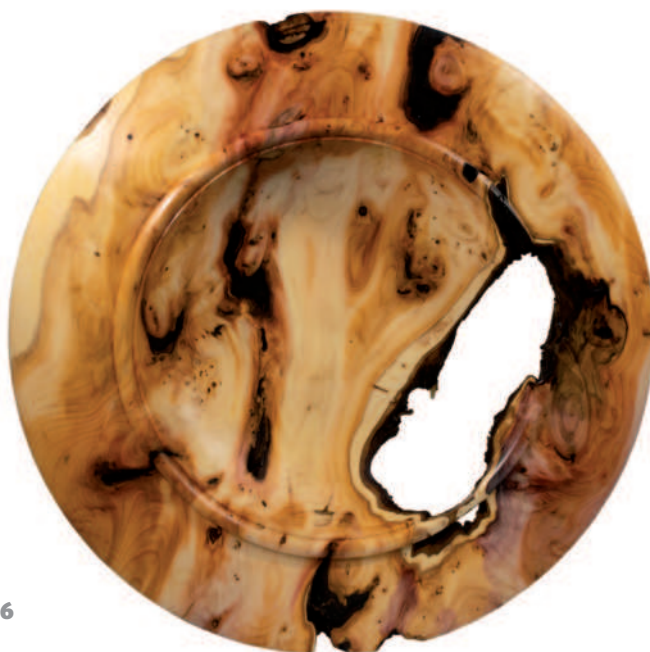
42



74 The workshop at West Dean College



96



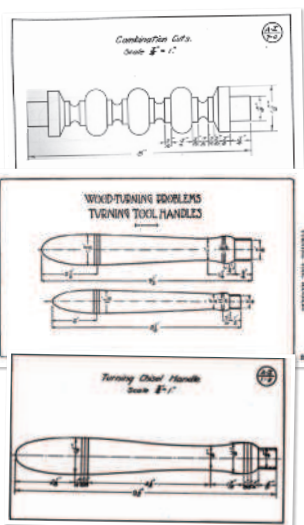
36

Techniques

- 54 Buying wood**
In Mark Baker's book *Wood for Woodturners*, he looks at different sources for your timber
- 68 Kurt's clinic**
Kurt Hertzog answers readers' questions
- 96 Layered bowls**
Mike Stafford makes the most of his good wood scraps

Projects

- 20 Testing, testing**
Andy Coates makes an acrylic pen and tests a new set of tools from Robert Sorby in the process
- 28 Turning green wood**
Andrew Potocnik lets nature take the lead with this project
- 36 Yew platter**
Pat Carroll makes a beautiful piece from Irish yew
- 42 Toy submarine**
Les Symonds turns a nautical plaything in the latest part of his toy series
- 48 Vintage spindle woodturning tools**
Rick Rich grasps an old technique for handles
- 60 Candlestick**
Alan Holtham makes an elegant holder to bathe in the soft, romantic glow of candlelight
- 80 Cake stand**
Sue Harker shows how to turn a Lazy Susan
- 88 Skittles**
Kevin Alviti makes a bar skittles set for family fun and games



48



28

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).

Bottle stop

Emiliano Achaval learns how to create an unusual offset-turned bottle stop from woodturning artist Derek Weidman

I have to be honest with you, I did not think that offset turning of mostly animals was for me. But I'm always open to trying new things, broadening my horizons, and gaining knowledge. I know I have learned from every travelling teaching professional who has come through Hawaii in the past six years. Some have more to offer, but the bottom line is that you can learn from just about everyone, even that new club member you offered to mentor.

I played my share of chess in school. I wasn't one of the top players, but I knew a bit of strategy. After spending one week with the world's most famous turned animals artist, the amazing Derek Weidman, my mind has changed how I look at an offset-turned item. Seeing Derek look at his pieces on the lathe reminded me of chess players. You do not just think about your next move; you plan ahead. You also have to compensate for your opponent's moves. You have to see how you will adjust to that. Sometimes things don't go as planned. If you can visualise several steps ahead, after turning this simple bottle stopper you will be able to branch out to other animals or people designs. In this step-by-step, you will learn the basics of Derek's thought process.

One adjustment I had to make was to forget about floating the bevel on the cut. If you try to make a regular bevel-supported cut, the wood will 'grab' the edge, and you will see the tool being pulled away from you. You will be using just the edge of your gouge. When you break it down there are simply a few off-axis changes, and suddenly the form magically starts to appear.

If you, like me, are a bit hesitant about trying this type of turning, trust me when I tell you that you will have fun. Getting out of your comfort zone will help you become a better turner. Let me know, and email me some pictures with your final piece.

Before you begin, a few safety considerations. Wearing a face shield is a must. You will need a safety drive centre. If you have a catch, it will be just a slip. Know your tailstock. Make sure that it doesn't creep at all. Put some sawdust in front of it, and keep an eye out; if it moves, you will see a clean area on the bedways. Stop immediately and re-tighten it.



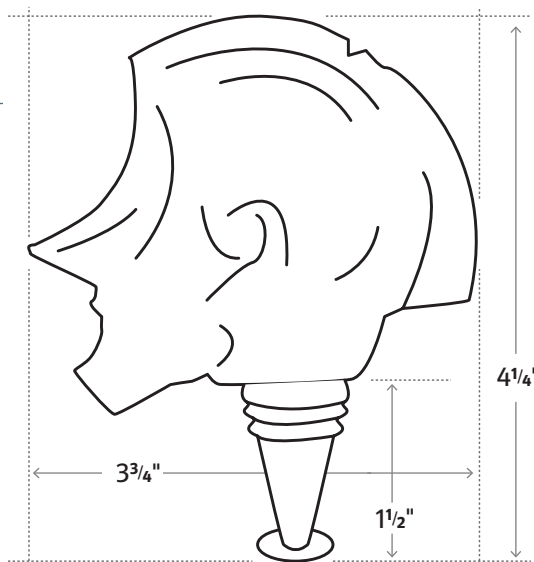
Plans & equipment

Tools & equipment

- PPE & RPE as appropriate
- 1/2in bowl gouge
- Spindle roughing gouge
- Spindle detail gouge
- Parting tool
- 1/2in drill bit
- Bottle stopper kit
- Micromotor carver with assorted carving bits
- Woodburner

Materials

- Block of fairly dense timber, 4 x 2.5in

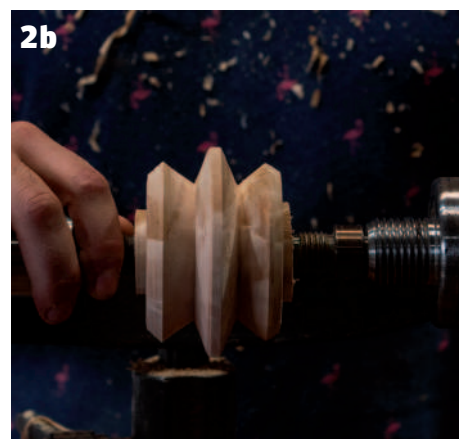
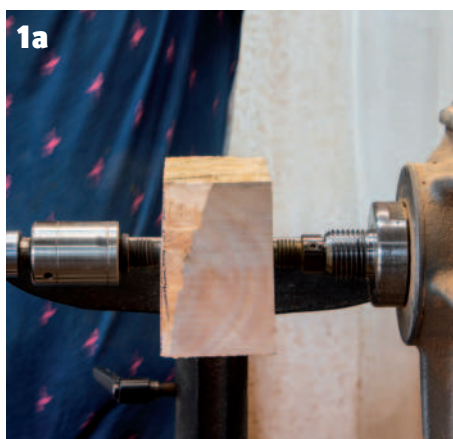


The making

1 The block of wood needed for this project is approximately 4 x 4 x 2.5in. In this first step, you need to true it up. You have the block between centres, with the safety drive on the headstock. You can use a bowl gouge as Derek did, or I would typically use a spindle roughing gouge.

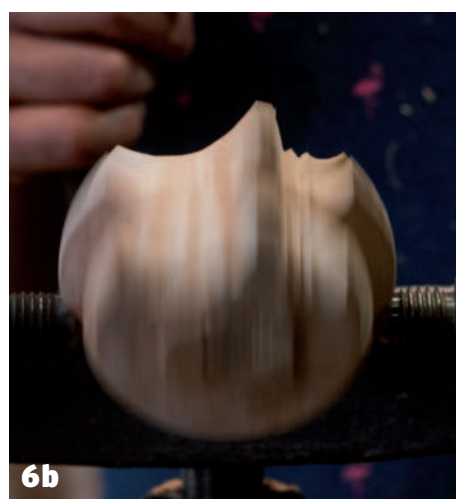
2 You will be making part of the main profile. It starts as two coves and one bead, which are symmetrical. They do not need to be perfect – you can see that in the first picture. A spindle gouge or a 1/2in bowl gouge would be an excellent option. It is essential to leave enough wood on the middle 'bead' for the centres to grab on the next step. Not leaving enough wood for the centres is the number one cause of failure in these offset projects. Before moving on, turn one small spigot on each side, like two small tenons, for a chuck. They will become carved ears later. Use picture 2b to see what you are after on this step.

3 Turn the piece 90°. Centre it a third of the way above or below the centre. Always turn the lathe to zero speed when changing the location of the centres. Remember, this is not bowl turning. Changes here happen quickly, a profile appears very fast. There is little wood to be cut. Most of it is air. You will be making most of the profile in this position.



◀ **4** If I ever wrote an article where you have to go by the visuals, this is it. You are making a cut that resembles a cove. You have to go till the cove bottoms out on the V. What you are making here are the eyes. Do not worry about the fuzzies around some edges. They will be taken care of later.

5 In the same off-axis position, you now will make some small cuts with a spindle gouge, one tiny cut at a time, to make the nose. Unlike the last cove, you do not want to bottom out on this cut. You want it a little proud. Here you will see the 'face' magically appearing.

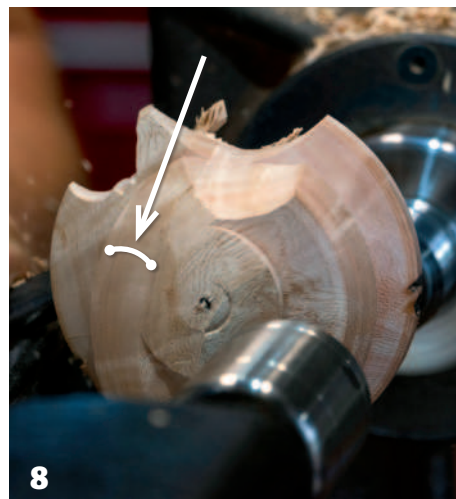


6 Now is the little detail of the mouth that you will see appear. Careful here – you have one shot at succeeding. A good choice would be a parting tool. Alternatively, a point tool could be used. Picture 6b shows a close-up of what you have done in this off-axis position: the eyes, the nose, and the mouth.

7 In this step, you will move back into the original plane but not on the actual centre holes. Look carefully at the picture. Get it as close as possible to the position shown. You are trying to 'carve' away some waste wood on the sides of the face and form the planes of the cheeks.

8 If positioned right, you will 'carve' away some waste wood on the cheeks. A spindle gouge did an excellent job on this step. You have to round them a little, almost like making a curve on a small bowl. Make sure you don't take out the spigots where the ears go. Also, avoid the middle, or you will cut off the nose.

9 Let's take a short break to see where we are in this fun project. Remove it from the lathe and compare it to what Derek is showing us in the picture. You should have something very close to what he is holding. Of course, you can make it your own by adding your design – a smaller nose, more prominent ears, etc.



10 Once more, we will move the piece to another axis. Still on the same original plane, but a little further up. You will be choosing centres basically in the 'temple' area of the head. A 1/2in spindle gouge, freshly sharpened, would be one of the best tools to use. Refer to the picture for the position of the drives. Notice that the three-axis points on this plane make a triangle. The second picture of this step shows you where you should be at the end of Step 10. This step removes more waste wood and could almost be said to be establishing something like a jawline. This is more like a cove, or concave, while the previous position was convex or like a bead.

11 You will be moving the piece very close to position two. On the headstock side, position it on the exact centre hole. On the tailstock side would be the neck. Lower it by just 1.1mm. You will be doing a concave cut to carve the neck. We will call this the 'neck cut'. A spindle gouge was once again the tool Derek chose. A small bowl gouge would also have worked.

12 Now the head is off the lathe. You will carefully and lightly torch it. Derek is using a basic propane torch from the hardware store, but a small kitchen-type crème brûlée torch would work just as well. Take the head outdoors and position and support it, with a rock or similar, on a non-flammable surface, repositioning as needed to lightly burn the full form. Burn all the fuzzies from the edges. When you start carving, the burnt edges will contrast nicely with the almost white jacaranda wood.

13 The very last step on the lathe. We probably could have done this earlier but decided to trim the ears a bit. Put it back in its original position. Remember, the spigots are what will become the carved ears.

Derek does not like to erase all signs of the lathe on his pieces. When you pick up one of his pieces, you can tell it was done on the lathe. He is an artist woodturner.

14 Now you will start the carving. The most prominent feature is the nose, so you will begin there, setting up the rest of the face. Soften up all the edges. One of Derek's favourite carving burrs is a straight, round, flat-tip burr available at most hardware stores. Its intended original use is to cut drywall. I was impressed at how well it works for carving wood.

Carving with high-speed micromotors produces a cloud of very fine dust. If possible, set up a fan to blow the dust away from you, or you could do it next to a dust extraction port if you have one. Wearing PPE is a must here.

15 After softening the nose, continue with the eyes, chin, and mouth. You can see the final product pictures and try to follow what Derek did. But you can also take the initiative and make the design your own, adding your flavour to it.



10a



10b



11a



11b



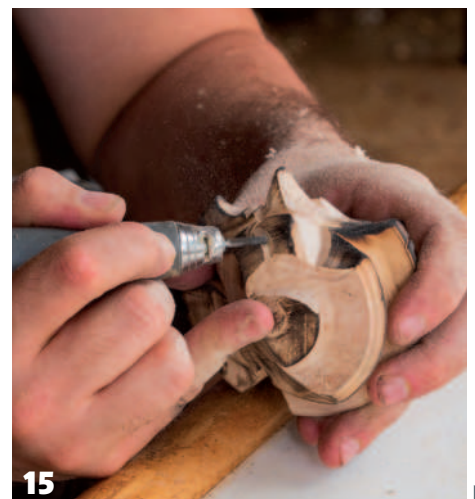
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13



14



15



16 The ears are an essential feature. I recommend you take a picture of a volunteer's ear or your own to have a reference. I was surprised that I could not picture the ear's folds in my mind. Luckily all I had to do was glance at Derek's ear, but usually, we work alone in our shops.

17 The final and essential step will be to drill for the threaded brass insert so you can screw the bottle stopper. Some brands thread directly into the wood. I prefer the insert type as I feel it is a stronger connection.

And that's it. Every day is a new day in the shop. I'm always having fun, but some days are better than others. I enjoyed working on this project and learning from such an artist as Derek Weidman. He has planted a seed of curiosity in me. A new path of discovery awaits in this never-ending learning journey of woodturning. I would love to see what you make. Email me, emiliano@hawaiiankoaturner.com, or better yet, stop by my shop on your next Hawaiian vacation. Aloha. ●

THE NENE GOOSE

I met Derek Weidman back at the AAW Chattanooga 2022 symposium. Of all the artists I invited to come to Hawaii to teach at our club, he was the one who gave me the most positive and energetic response. 'When do we leave?', he asked. I got to know him a little there, and because he follows me on social media, he knew I'm an avid bird photographer. That was, we realised, another passion we share. We took a break from the shop and went on several excursions sightseeing around this paradise of an island I call home, Maui.

I live just 20 minutes from Haleakala National Park, home to many endemic and endangered native Hawaiian birds. I go there so often that every year I purchase a pass. The most iconic and

famous bird was scarce that day, the l'i'wi, because its primary food source, the mamani bloom, is not in season.

We heard an incredible sound just as we were getting ready to hike back. Two native geese honking, coming in fast, almost straight at us. We could not believe our luck when they landed just a few yards away. I got the best pictures ever of these magnificent animals that are now making a comeback from the brink of extinction. Derek was delighted because, in preparation for his Hawaiian trip, he researched and found the nene goose to be the animal he wanted to do. On one of our trips around the island, we took a picture of his nene goose and one of my trademark Hawaiian koa calabashes by the ocean.



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Living the Hawaiian dream

Guest editor Emiliano Achaval talks turning with his friend and fellow professional, Aaron Hammer



In my second round as editor for my favourite magazine, I have the pleasure of introducing my good friend Aaron Hammer to you.

He is one of the most respected full-time professional woodturners in Hawaii and turning has been his primary source of income since the year 2000. I do not know how he finds the time to teach community woodturning classes endorsed by the Hawaii Forest Industry Association at the Laupahoehoe public charter school.

Another great accomplishment has been assisting three classes at the world-famous Arrowmont School of Arts & Crafts, and next October, he will be teaching his third class there. He has motivated me to turn even more and to apply to be an assistant at Arrowmont and perhaps some day teach a Hawaiian calabash class there. Aaron is still working on his dream of opening a small turning centre in Hawaii. We are the number one tourist destination in the US. Soon, you will be able to get your toes full of sand in the morning and turn some Hawaiian woods in the afternoon with a great instructor helping you all along.

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

I was born and raised in Kansas City, KS, US. I was not college-bound but I was curious about the world. I graduated high school and travelled abroad, living in and exploring Israel, Egypt, India and Nepal. In Kathmandu I met Casey, my future wife. She invited me to return to her island home on the North Shore of Oahu, Hawaii. This was in 1993. Casey was from a family of artists with deep roots in the folk craft fair renaissance of the 1970s, '80s and '90s. It was at these craft fairs that I came in contact with many local woodturners. At the time I was infatuated with hand drums. A friend gave me a mallet and 3in gouge and I carved my first drum. Proudly, I showed the African-style drum that I laboured on for months to Jerry Kermode, a family friend and master woodturner. He said: 'Well, that's nice and all, but you could turn that on a lathe and it would be perfect.' I told him I didn't have a lathe (which he knew). He responded with: 'You could make a lathe.' I laughed and then, with the help of a very generous friend who was a machinist, I made a lathe. It took two years and that's how my journey started. I made more than 200 drums on that lathe and, five years later, in 2000, I started turning bowls and bottle stoppers.

Describe your workshop. What is the set-up? How long have you been there?

My current workshop is a two-car garage at our home in Papaikou on the Big Island of Hawaii near the town of Hilo. I have been living and working here for seven years. It is my third shop – my first was in an old Army tent. I have three lathes – a Oneway 12/24, a Union Graduate vari-turn bowl lathe and the fixture of my business, the VB36 Master Bowlturner. I have a few thousand roughed-out bowls on shelves and loads of small bowls and orbs in seven garbage cans. I have an old trusty 12in Delta bandsaw, a big 'ole Husky chainsaw and a powerful Stihl electric chainsaw.

How do you like to work?

I used to work harder, now I prefer to work smarter. My body just doesn't recover from the abuse as easily as it used to. I only have what I use in my shop and I keep the space free of anything that I don't need. This keeps my floor space open and facilitates keeping it clean, which is safer and how I prefer it. I clean up at the end of each workday, I don't like starting a new day by cleaning up yesterday's mess. When I turn I always use a 3M positive-pressure air helmet which I have modified to pull in fresh air from outside through a shop vac hose that I secure to my waist. For me, a three to five-hour workday is perfect for not getting burned-out or overly exhausted.

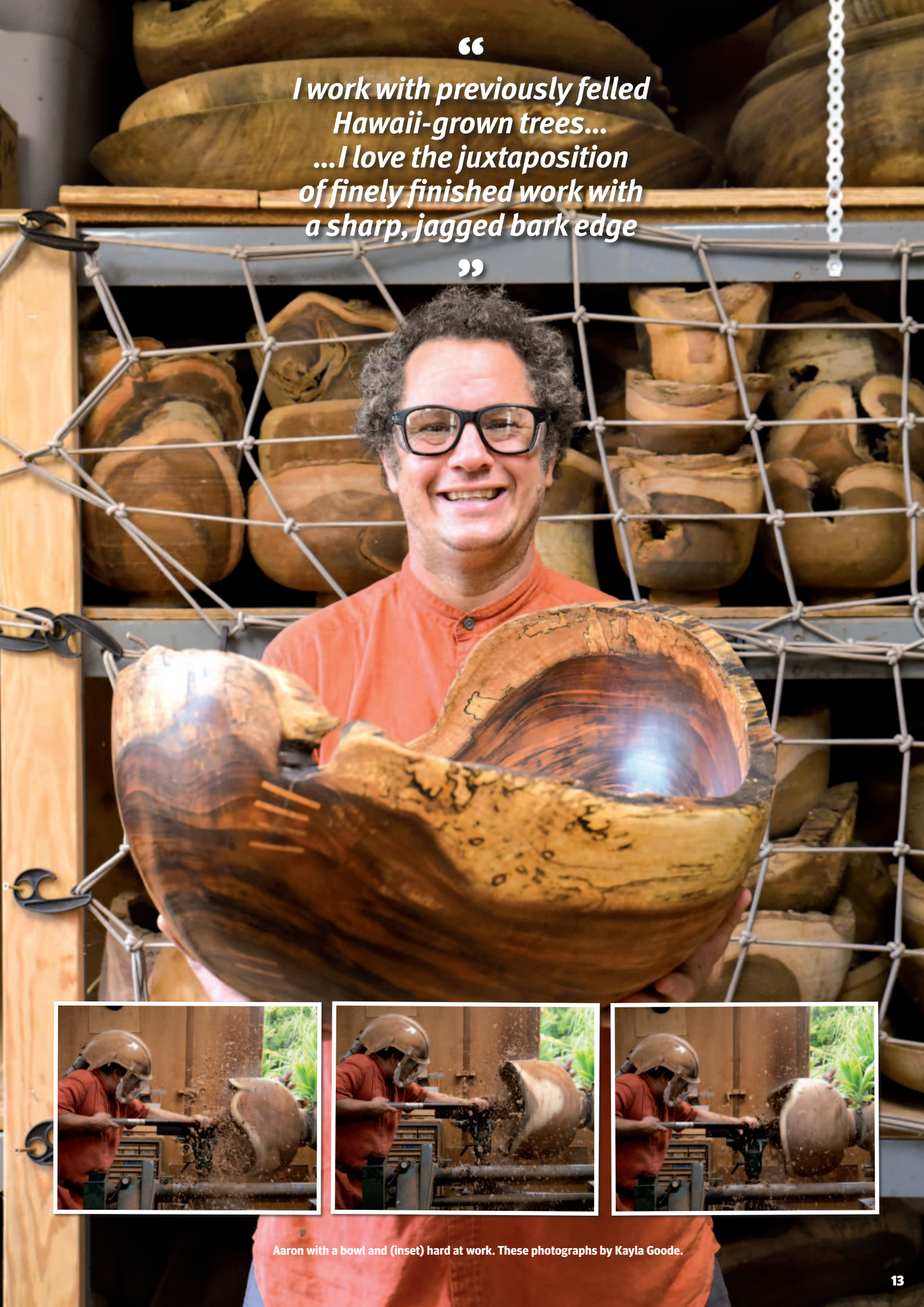
Is Hawaii a special place to be a woodturner?

Hawaii is a very special place to be a woodturner for many reasons. The island I live on, Hawaii island, often referred to as the Big Island, has over 150 years of agricultural experimentation where plantation owners planted many varieties of exotic trees, including mahogany, teak, rosewood, sugi pine, Australian red cedar, narra and pheasantwood. It is also home to vast forests of the famous and endemic acacia koa, one of the most valuable woods in the world.

“

*I work with previously felled
Hawaii-grown trees...
...I love the juxtaposition
of finely finished work with
a sharp, jagged bark edge*

”



Aaron with a bowl and (inset) hard at work. These photographs by Kayla Goode.

Wooden bowls were very important to ancient Hawaiians as, historically, there was no metal or clay to use for utilitarian vessels. The various wooden bowls each had different names and were used for specific purposes. They were repaired, cherished and passed down in families. As long as there have been people in these islands there have been bowl collectors. This is a great and special legacy to be a part of.

One of the volcanos on Hawaii island, Mauna Kea, the volcano I live on, had five glaciers on it while it was forming. In one particular area, when the hot lava flowed it quickly cooled, creating an ice-hardened and very dense basalt rock. Hawaiians and carvers from all over Polynesia travelled to this area and mined this specific rock for their adzes and wood-cutting tools. The Hawaiian carvers were highly regarded as the best bowl makers in all of Polynesia.

Which woods do you like working with? What style of work do you turn?

I work with previously felled Hawaii-grown trees that often come from a local urban wood-salvage nonprofit. All of the bowls I turn are side grained. I make many natural-edge pieces with the bark, without the bark, with soft, rounded edges and also burnt edges. I have made a lot of spindle-based gift items including bottle stoppers, corkscrews, percussion instruments, votive candles, and jewellery.

My absolute favourite local wood varieties to work with are Cuban mahogany, milo, kamani and koa.

What sort of finishes do you prefer and why?

When it comes to finishing, the most important part of my process is sanding. Everything I make I sand 150, 220, 320, 600, 1200 and 2000 grit. I like a shiny, museum-quality finish but I do not like a plastic-like glossy finish, so I use a hand-rubbed oil with beeswax finish, sometimes buffed afterwards.

On my small spindle pieces, I sand to 2000 grit, apply mineral oil and use a friction polish of my own making: 80% shellac + 15% denatured alcohol + 5% boiled linseed oil.

What are some things you've learned as a woodturner?

- Always wear safety glasses in your shop – you only get one set of eyes.
- Always protect your lungs, preferably with a positive-pressure air helmet.
- If you hold back from sharing with other turners because you're afraid they are going to 'rip you off' then you've already lost more than they could take.
- Remove a little at a time – you can't put it back.

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

I am inspired by the curviness of eggs and gourds. I like round-bottomed bowls with small, recessed flats. I love making thicker work that feels good to hold, but it's important to me that the work is balanced and does not feel heavy in the bottom. I love contrast in my work and I do a lot of elongated natural-edge pieces because it tricks the eye and shows excellent contrast in heart and sap woods. I love the juxtaposition of finely finished work with a sharp, jagged bark edge.

What has been your greatest achievement in woodturning?

I am a very prolific woodturner. I've finished over 200 hand-drums, 3000 numbered bowls and several thousand more roughed-out bowls. For years I made five dozen bottle stoppers a week, often a dozen before breakfast. But my greatest achievement has been the fact that I've made my living and supported my family as a woodturner. I've been fortunate to have spent the past 27 years (most of my adult life) working from home with my shop 20 feet outside my back door. Being with my family and daughter every day of her life has been a tremendous blessing, for both of us.

What do you do when you're not woodturning?

Making friends is a pastime that I fully embrace. I also love spending time with my family. I work on projects with my wife and we also love entertaining. We work on our 2-acre property where we are planting a food forest with exotic tropical fruits, flowers and herbs. My daughter and I love going on adventures and field trips together. We often take our Welsh Cardigan corgi, Ozzy, to explore the rugged volcanic coastline, waterfalls and magical spots.



2+4 Emptying out a 23in natural-edge koa bowl

3 Shop trick – (Aaron) using a mirror to change (his) your perspective



5 Milo natural-edge with bark **6** Koa natural-edge with koa stitches **7** Pali Platter Series 32in diameter monkey pod platter **8-11** Emptying/roughing out koa bowls



How has the covid-19 pandemic affected your work?

I love woodturning but I really love teaching woodturning. The pandemic, lockdowns and social distancing have presented challenges to the enjoyable close contact of hands-on wood turning classes. I haven't taught a class in two years. Instead, I have decided to focus on my productivity and improving my process.

On a positive note, there seems to be a newly invigorated market in art collecting. People have been traveling less and staying home more and presumably choosing to fill their homes with beautiful acquisitions. I am more than happy to be of service to them.

What are your aspirations for the future?

My dream is to create a world-class woodturning school facility here in Hawaii. This vision of this school has several components to it. I am interested in creating an apprenticeship programme that will teach a high level of woodturning skills that can offer financially viable options to a rural community in need. We will offer woodturning workshops of various lengths for complete beginners, intermediate and advanced woodturners. There will also be studio space available for woodturning sabbaticals where local and visiting turners can work autonomously. This facility will also be a space to utilise woodturning as therapy for community outreach support programmes. This could service at-risk youth, veterans and those suffering with loss and grief. I have found that the woodturning process is a perfect mechanism for teaching creative empowerment, and I believe this is a powerful and beneficial endeavour to all who engage in the journey.

12 Ozzy the shop dog 14 Chainsawing koa log 14 Aaron at home
15 Aaron Hammer with wife and daughter Casey and Helix Holaday

TRIED & TESTED

Threaded brass inserts from Stainless Bottle Stoppers

Guest editor Emiliano Achaval trusts one of these inserts within a deeply personal turning

It is not often that I get excited about a new product coming onto the market. I'm talking about a new line of threaded brass inserts that can be used in urns, boxes, vessels, and more. When Daniel Seeuwen, owner of Stainless Bottle Stoppers, approached me in Chattanooga at the AAW Symposium, I jumped at the opportunity to be one of the product testers. For years I had been using the inserts made by my friend, the late Rick Brantley. Sadly, his family could not continue with the business, and we were left without a source for such an essential component for those of us who make urns, jars, boxes, and more. I'm testing the 2.5in rings here and 1.5in, 2in, 2.5in and 3in are offered.

My first impression when I opened the first box I got was: quality. The rings are machined from solid brass in the US. I was repurposing brass drain plumbing fixtures when my source dried out. Not really what I wanted for my high-end Hawaiian acacia koa urns. The drains took a lot of testing to get a good fit. You had to make a very large tenon for the male threads, and you did not have much room for the epoxy to adhere. Epoxy failure is something you do not want on an urn or any work.

These new rings make it very simple to install. You drop them into a mortise or recess, apply epoxy, and you are done. To test these new inserts, I used some acacia koa from a tree I cut about 27

years ago. It was the tree that got me started on my lifelong woodturning journey. The tree was planted by my wife, Kathrine. Sadly, she passed peacefully at home after a long illness on my birthday, 2 October, 2022. I used the urn for her ashes. Overall, I would highly recommend these inserts. I definitely will continue to use them.

Emiliano Achaval
www.hawaiiankoaturner.com



1 Before hollowing the urn, I test-fitted the brass threads. The first reason for failure is a tight-fitting ring that leaves no room for the epoxy to get in and cure. It might appear to work, but a few contractions and expansions with humidity and the rings will come off. I like to leave a little wiggle room for the epoxy. **2** In addition to the loose-fitting, I make some grooves to allow more epoxy to adhere. A plus of these new brass threaded inserts is the knurled surface that helps with the adhesion. **3** There are a lot of options when it comes to what type of epoxy or glue to use. Through trial and error, I now use G/flex epoxy from West System. This epoxy has some flexibility allowing for the movement of the wood. I like to use a kitchen scale to measure the equal parts correctly. **4** I think the brass inserts add a touch of class to any work.

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Testing, testing

Andy Coates makes an acrylic pen and tests a new set of tools from Robert Sorby in the process

I have not reviewed any tools for a good while now. I think some of my reviews were considered, well, a little mean, perhaps. In my defence, I have always had the same view – I will not recommend something I would not use myself, and I will not say something is good if I can find fault with it. My opinion, of course, is entirely personal, and your opinion of something may differ wildly from mine. However, I think that, as a full-time turner, my opinion may be based on a wider experience of the tools available, and the practice of using them, than that of somebody who turns infrequently.

I was sent the new Robert Sorby 3 Piece Micro Resin Penturning Kit, with a request to try them and offer an honest review. I do not turn many pens, and it is no secret that I am not a big fan of resin, but a change is as good as a rest, and I have been particularly tired of late, so I said yes.

As a straight review can be a somewhat dull thing, I decided to do it as part of a project – a successful outcome would surely be a plus for a product?



Starting out

1 First, I gathered together all the various things I would need: blanks, pen kits, bushing set and drill bits, and the new tools from Robert Sorby. Finding my pen mandrels proved a quest too far (please see my introductory letter in issue 376), and after ordering one, taking delivery of it, and returning it because the mandrel was bent, a friend, Gary Renouf, jumped in and posted me one.

2 The Robert Sorby kit comprises an aluminium handle with two machine screws, an 8mm spindle roughing gouge, a tipped scraper, and two Allen keys for the handle and scraper tip. Everything is the same high quality you would expect from Robert Sorby, and the gouge and scraper are ready to use without sharpening or honing.

3 The aluminium handle will be familiar to owners of the original Robert Sorby Micro tools, as it is just a longer version of that handle. This has long been a favourite handle for me; the knurling provides for a secure yet comfortable grip. I have always thought that a full-size handle made like this would be a winner, but suspect the cost would be prohibitive. As the longer handle is interchangeable with the original, I can see me using it for the texturing tool as well.



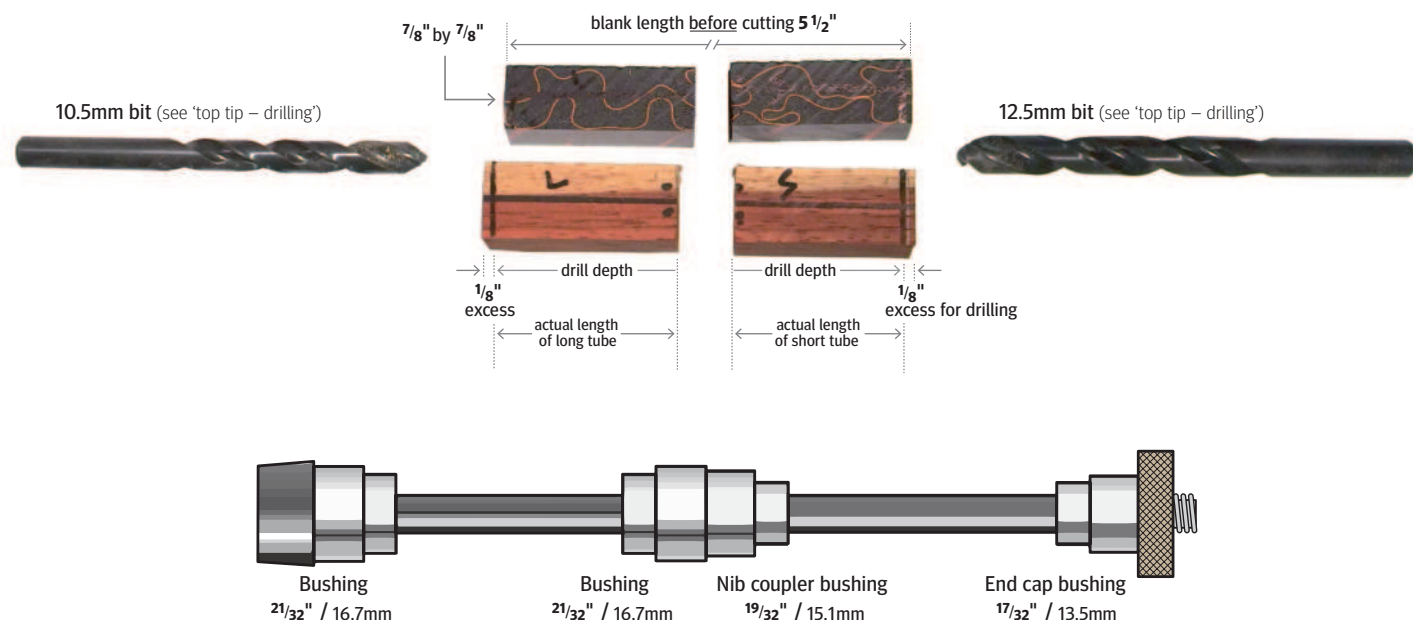
Plans & equipment

Tools & equipment

- PPE & RPE as appropriate
- Pen mandrel (suitable for a double blank)
- Robert Sorby 3 Piece Micro Resin Penturning Kit
- Abrasives 240-12000 grit
- Polishing compound
- Barrel trimmer or disc sander
- Pillar drill or battery drill and vice

Materials

- Pen kit
- Resin blank $5\frac{1}{2} \times \frac{7}{8} \times \frac{7}{8}$ in
- Cyanoacrylate glue, or expanding polyurethane glue



4 Before starting out, I opened the Gentleman's pen kit and checked the components were all present and in good shape. If you have not turned pens before, this is a worthwhile habit to help you understand how each part relates to the next, and avoid some head-scratching later on. This kit has the advantage of being a cartridge or refillable fountain pen; a handy option to have.



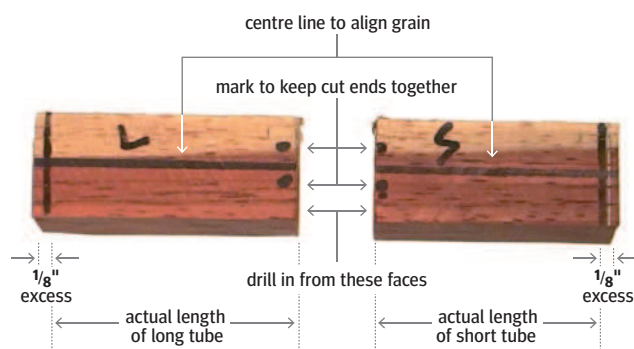
TOP TIP

See also additional **TOP TIP** on drilling

Marking and drilling blanks

Mark the length of each brass tube on the blank, adding $\frac{1}{8}$ in to each length. If using a wood blank, or acrylic with a pattern, and grain alignment is to be kept as close as possible, a fine handsaw is preferable for cutting the blank into two. Mark the two cut faces to allow for matching up. These marks can be carried on to the face to avoid losing them during turning. Mark dead centres on all end faces, and make a centre mark with an awl to help align the drill bit.

The blanks are drilled in the cut faces to the depth of the brass tube, and the excess length is not drilled. This is to prevent the material breaking out as the drill passes through. The excess is removed after drilling, usually at the disc sander, until the brass tube is just exposed. It is vital that the tube is not reduced in length as the pen fittings require the precise length in order to fit correctly.



5 The 5½in blank is marked out as two; one to the length of the short tube, and one to the length of the longer tube, with ⅛in added to each to help prevent break-out when drilling (See *Top Tip – Drilling*). The ends of the blanks are marked for dead centres. With such fine tolerances it is vital that drilling is precise, so check, by whatever means you can, that the pillar drill table is true and level in each plane. With care, the blanks could be drilled by hand, but a pillar drill is the best option.

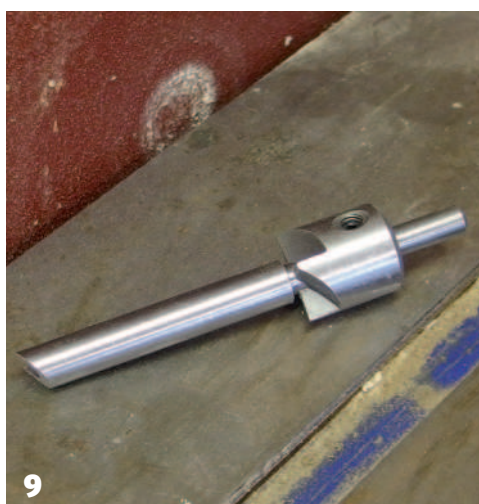
6 A dedicated vice, with V-cuts to provide optimum holding accuracy, is screwed to a secondary drill table and clamped down to the pillar drill bed to ensure there is no movement. If you have laser alignment, this is also a boon. The blank is drilled out at slow speed, removing the drill bit frequently to remove swarf. Drill to the depth of the tube, leaving the added ⅛in undrilled. This will prevent break-out. The excess is removed later. (See *Top Tip – Drilling*)

7 Next we need to prepare the tubes to be glued into the blanks. The surfaces of the brass tubes should be roughed with 240 grit abrasive, to provide a good key for the glue. Ensure all the surface is keyed and wipe the dust away with de-natured alcohol to provide a clean surface.

8 You can use medium viscosity cyano-acrylate glue, or polyurethane glue to fix the tubes. I use a cotton bud to apply an even coat to the wall of the blank – avoiding it getting on the bottom of the hole – and to completely cover the outside of the tube. Slip the brass tube into the blank, twisting it as you go to ensure the glue covers everywhere. The tube should sit flush with, or ever so slightly under, the face of the blank. Set aside to fully cure, and repeat for the second blank.

9 Once drilled, the excess needs to be removed to reveal the end of the brass tube. An endmill can be purchased to perform this task, and it will do the job perfectly, but if you do not have one then a disc sander will do. The endmill has the advantage of also guaranteeing that any excess glue is removed from the interior wall of the brass tube, but failing that it can be carefully removed with a craft knife, should any have found its way there.

10 If the disc sander is your option, proceed slowly and with extreme care; you are only removing the excess ⅛in to expose the brass tube, and the resulting surface must be clean and flat, and at 90° to the blank's length. Doing it freehand is possible, but fraught with the potential for ruining the blank.



TOP TIP

Drilling

Each pen kit will have its own drill bit and bushing sizes, often sold as an accompanying kit for specific pen kit styles. You only need to purchase these once, and they can be re-used repeatedly thereafter.

Interestingly (or not, as the case may be), the pen kit I used specified drill bits of $\frac{37}{64}$ in and $\frac{15}{32}$ in, however, upon inspecting the supplied drill bits in the bushing kit I noticed that they were 12.5mm and 10.5mm, which are not the metric equivalents of the stated sizes. After measuring the actual brass tubes supplied I found that they were 12.3mm and 10.3mm in diameter, respectively, close enough to the diameter of the drill bits supplied, but not what was specified in either the pen kit or the bushing kit. So, it may be worthwhile checking – you may find you already have the correct drill bits and only need to purchase the bushings.

11 If you do not have a fence for the disc sander, a simple 90° slide can be fashioned quite simply, using scrap wood. The slide will ensure that the blank is addressed squarely to the disc and result in a perfect result. Remember, do not abrade the brass tube, so take it very slowly. I prefer to rotate the blank to a fresh side at each quick pass. It should take only a matter of seconds to complete the job. If the tube is not precisely flush with the cut surface at the other end, then a few quick passes should bring it right.

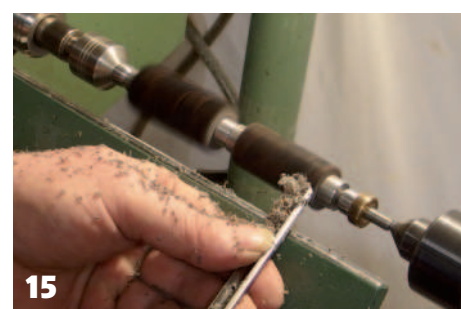
12 Now the blanks are cleaned up and squared off, they can be mounted on the pen mandrel. Pay attention here – the two marked cut ends need to face each other. I prefer to have the long tube to the left and the short to the right. The bushes you use will be specific to the pen kit you are using, and you may find, as here, that you have three different sizes, and correct placement is fundamental to a successful conclusion. And it is very easy to get it wrong. Ensure the mandrel is tightened up firmly using the knurled locking wheel (See *Top Tip – Mandrels*).

13 The mandrel is mounted in the Morse taper of the lathe, and a cone drive is brought up into the dimple in the end of the mandrel. The tailstock needs to be tight, but not so tight that it flexes the mandrel. The toolrest was set close to the blank. The Sorby micro resin spindle roughing gouge was secured into the handle and the first cuts taken. The tool was addressed on the centreline and the cut was directed off the end of the cut, as you would with a conventional spindle roughing gouge.

14 I was conscious that this was a resin blank, and likely to be more brittle than a wood blank might be, so first cuts were somewhat reticent. However, it was soon apparent that there was nothing to be concerned about – the tool handles and cuts very well, and there appeared to be no issue with chipping.

15 Once my initial concerns were dismissed I was able to use the tool exactly as I would use a conventional tool on wood. The shallow flute is specifically designed to increase control when turning acrylics, and in all honesty it does seem a very easy tool to control on an acrylic blank. Acrylic shavings were soon coming off in streams.

16 I thought it was only fair that I compared the new gouge to a conventional spindle roughing gouge, so selected one from the tool rack. It was no surprise that it cut the acrylic cleanly. It was a sharp, good-quality tool and I know how to use it, but I did feel it slightly under-performed the new tool in terms of the cleanliness of cut and ease of control. This is possibly due to the much larger size of the tool, and the deeper flute. The smaller tool is, obviously, better suited to working on such small work pieces.



TOP TIP

Mandrels

There are many types of mandrels available from a number of respected manufacturers, and many cheap imports which may tempt the unwary buyer. The cheaper types are almost guaranteed to disappoint.

Look for manufacturers with names you recognise, and perhaps already trust. Specialist pen-making supply stores are unlikely to sell poor-quality mandrels, and can usually be trusted.

The mandrel bar should be absolutely straight and true, and the locking wheel should be functional and not loose on the thread. Some are supplied as kits, including an end mill and range of sizes of popular bushings.

It should also be stated that it is not absolutely necessary to have a mandrel, pens can be turned between centres, but this is not something a novice is likely to find relaxing.

◀ **17** While there was still material to be removed before getting down to the largest diameter and the bushes, I made another few passes with the new tool on the shorter blank (right), and another with a conventional spindle roughing gouge on the longer (left) blank. I kept the rate of pass the same and, as far as possible, the angle of address. Both tools removed stock, both tools produced a shaving (as opposed to chips), and both achieved the aim.



18 Examining the two blanks after the cuts, the shorter blank did have a slightly better surface than the longer blank, where the tool marks, while not excessive, were visually more apparent. This is a small difference, but with a material such as acrylic, any time saved on abrading is a benefit, both in regard to time and in friction not producing heat in the material. All in all the specialised tool appeared to me to provide a definite advantage over the conventional.



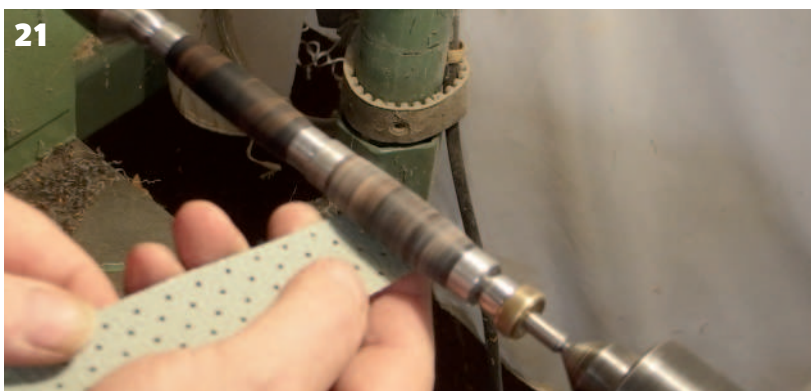
19 Returning to the project aspect of the article – the next step is to begin to shape the blanks. The short blank will form the lid of the pen, and the longer blank the body, and shaping should be in accordance with this – the lid being fatter than the body. The new Sorby kit's tipped tool is intended to be used for the shaping stage, a shear scraping cut being more appropriate for acrylics. So I fitted the scraper tool into the handle and began shaping.



20 I am already a fan of scrapers, they can be superb tools, so it was no surprise I immediately took to this one. The tip is square with rounded corners, providing four quickly changed edges to use before re-honing. Addressed at around 45° the tip cuts beautifully, producing long shavings and removing material very well. The slightly rounded corner makes it easy to nip into the tight corner where the blank needs to be cut right down to the sizing bush.



21 The two halves of the pen need to be turned down at each end to precisely match the diameter of the bushes; do not rush this, it is vital that they match. Any shape you add between the two defined diameters is largely personal choice, but please see the sidebar for further insight. Once turned, the blanks are abraded. I abraded from 220 down to 12000 grit, using micromesh abrasives for the finer grades. Wet abrading is not uncommon for acrylics, and can be very helpful, but I didn't use it here. Work slowly to avoid heat build up, and abrade parallel to the lathe bed with the lathe stopped between grades.



TOP TIP

Shaping pens

The shapes that can be applied to pens are as many as there are shapes in all turning, but a few considerations are worthy of mention.

If the pen kit has a pocket clip for the lid, the shape of the lid should not force the clip to flex when fitted, but should allow the clip to just touch the surface of the turned section of the lid. This allows the clip maximum flex for gripping when stored in a pocket, and doesn't mark the pen surface when not clipped.

The body section of the pen should be of a diameter that is comfortable to grip in use. Unfortunately people are very different, and one person's perfect width is another's unusable width. A happy medium might be around $\frac{3}{8}$ in (10mm) or slightly greater at the grip point. But unless you like straight barrels, some shaping needs to be applied that will result in suitable diameters at the gripping point and pocket clip points. And this also can be very personal, to yourself and the eventual owner.

It may be worth noting that, while people may put up with poorly considered form from a cheap disposable pen, they are far less likely to accept such a lack of care from a, presumably, much more expensive writing implement.

From a personal perspective, I have yet to find a more perfect pen than one turned and given to me by George Watkins, and I fully accept that I shamelessly copy his shaping. And treasure the pen.



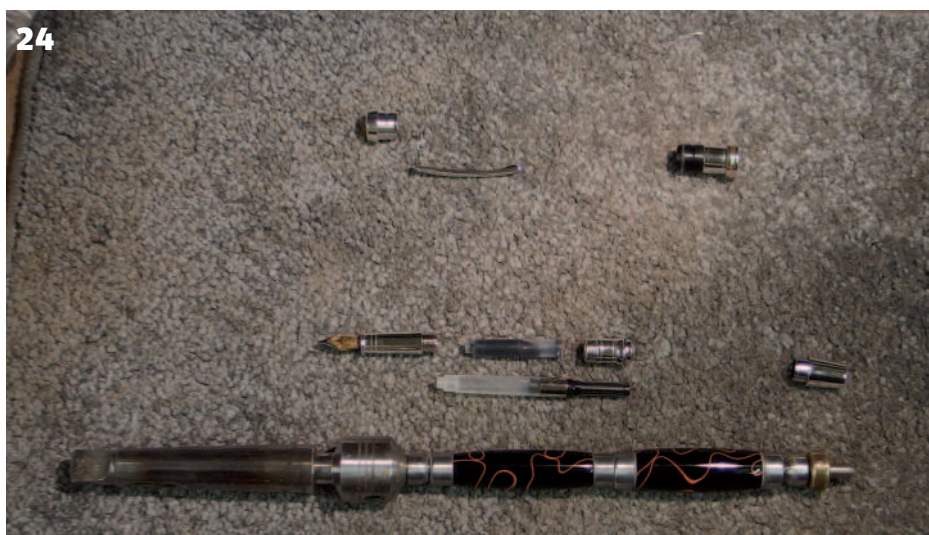
22 Finishing pens is an area where opinions fly like geese at the sound of a gun... and no one answer is the correct one. You can use cyanoacrylate to finish pens to great effect, and there are specialised plastic polishes that will raise a deep shine, but I used a polishing compound I had to hand, and raised an acceptable shine on the blanks.

23 The turning and abrading completed, and a final polish, and the blanks were done and ready for removal from the lathe. My primary concern over acrylic as a turning material, chipping, had proved an unnecessary fear; everything had gone according to plan, and the new tools did exactly what you would want them to do.



24 Remove the mandrel from the lathe and lay it down with the pen components – a good pen manufacturer/retailer will have provided detailed and illustrated assembly instructions. Make sure you understand where each part will fit before disassembling the mandrel, and follow the instructions precisely.

25 When you disassemble the mandrel make sure you keep the blanks in position relative to which parts fit in which end. An incorrectly fitted component is very difficult to remove without damaging the fitting and brass tube. With this pen kit an ink cartridge can be fitted, or a refillable ink reservoir. This is a nice touch, and adds further value to the finished pen.



26 Along with my pen mandrels, my pen assembly vice had gone away on holiday, so I reverted to the old-school method of assembly – the vice and an old rag for protecting the fittings. Apply gentle pressure, ensuring the parts are level and true, and it will be obvious when they are fully and correctly seated. Your pen kit will no doubt have come with very clear instructions for the assembly of the pen. Do follow them, there are few shortcuts worth taking with pen assembly.



◀ Beyond the parameters of project

27 I would feel I had missed something out if I did not see what the new resin tools were like for turning wood, and had planned right from the start to see that. A fresh pair of blanks in padauk was prepared. I chose padauk because it is beautiful wood, it had heart and sapwood which would present the challenge of aligning grain, and it can have interlocked grain with a coarse, open texture, which can make it tricky to turn cleanly.

28 The Sorby Micro resin spindle roughing gouge made short work of roughing the padauk down, and the surface finish was perfect. Not really what you might consider a 'roughed' surface at all.

29 A few passes with the Sorby shear scraping tool improved the surface to a more than satisfactory level of finish for moving on. The shavings were long and there was no issue to note from using the tools on wood.

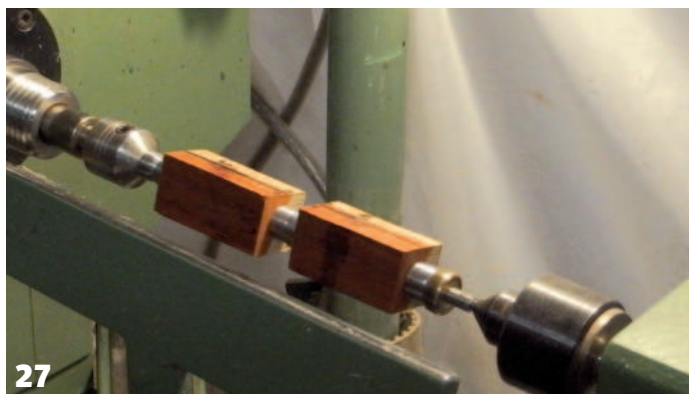
30 The shear scraper was used to shape the two halves of the blank and, while I would ordinarily have used a conventional spindle gouge, the result was neither better nor worse than I would have expected. But the advantage here was a smaller, lighter, more controllable tool, at no cost in terms of the time taken to achieve the shapes, nor in the quality of finish.

31 So, all in all, it's a versatile tool, and if you turn a lot of small items – finials, doll house components etc. – these are useful tools even if you are not turning in acrylics. Keeping the resin spindle roughing gouge sharp is no different to keeping a conventional tool sharp, and the scraper only needs a few passes with a diamond hone across the top face to be kept in tip-top shape.

Conclusions

Pen assembled, a cartridge fitted, a quick polish and there we have it – one acrylic fountain pen. I have not turned a huge amount of acrylic over the years, but enough to know I did not like it. It is not wood, it does not behave like wood, and does not look like wood – although I am certain there is wood-grain acrylic somewhere – and it produces plastic waste, which is not really something I feel should be encouraged. However, and it almost pains me to type this, I actually enjoyed the process, and rather like the results. The Sorby Micro resin pen turning tools work exactly as I am sure they were intended to work – perfectly. And I am convinced they work well enough to warrant their place on the tool rack next to the conventional tools I might have otherwise used. I already had a soft spot for the Sorby Micro tools, and these new acrylic turning tools are a useful addition to them.

But I do have one gripe... could you not have made the machine screws the same head size, so that only one Allen key was needed? ●





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Turning green wood

Andrew Potocnik lets nature take the lead with this project

For so many of us, the process of turning begins with dry wood that stays stable and ‘behaves’ as we trim away unwanted material to fashion a shape we envision in our minds – and expect it to stay just as it was when it left our lathes. However, in reality wood moves, some species more than others, especially as diameter increases and internal tension is released.

Working with ‘green’ or unseasoned wood provides a whole new adventure riddled with positives and problems, depending on how you see them.

I love the idea of salvaging a tree that was cut down in the morning, turning it in the afternoon and drying in the evening to have a completed bowl, the shape of which is determined by nature, rather by me.

There are ways of drying turned bowls. I prefer to allow the wood to dry either in the heat of a summer’s night or in the warmth of a winter’s heated interior while I sleep, ready to see what nature has determined

as I was off in slumber land. The joy of seeing what nature has added to my efforts is something to behold, providing it hasn’t taken too much control and twisted the bowl into something that is beyond use.

There is plenty of material available in books and online describing how to cut logs to get the most of your material and predict, to an extent, how it will distort as it dries. Alternatively, you could use a technique referred to as ‘twice turning’, or ‘rough turning’, where a wet blank is rough turned with over-sized wall thickness, allowed to dry and then turned again. This requires a turner to have numerous roughed blanks set aside to dry, taking up time and space.

Turning a bowl in the method described in this article will ensure you can capture the most vibrant colour available from your timber, and you’ll also have the tactile pleasure derived from running fingers over undulating growth rings and grain changes. And, depending on the species you’re working with, you may find nature has a few surprises in store.

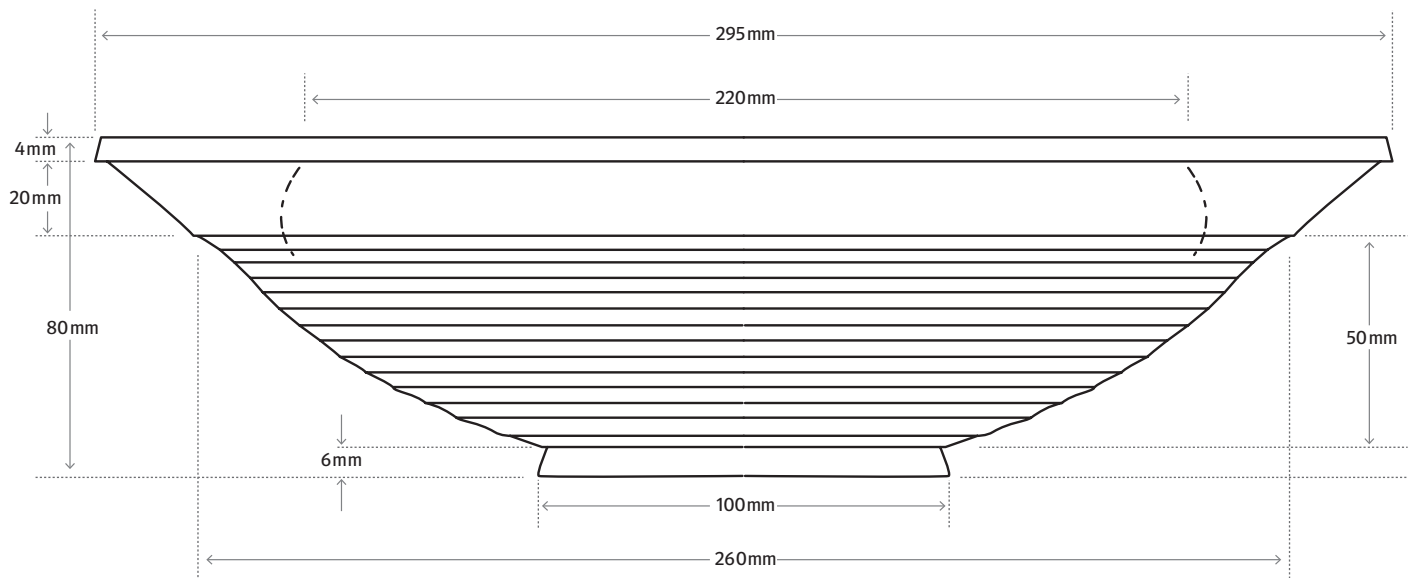


PHOTOGRAPHS BY ANDREW POTOCNIK

Plans & equipment

Tools & equipment

- PPE & RPE as appropriate
- 19mm fingernail-shaped scraper
- 25mm bowl finisher scraper
- 16mm fingernail-shaped gouge
- 16mm swept-back ground gouge
- 12mm fingernail-shaped gouge
- 9.5mm detail spindle gouge
- 9.5mm fingernail-shaped bowl gouge
- 9.5mm swept-back gouge
- 9.5mm diameter round skew
- Round-tipped carbide cutter
- Reversible electric drill
- Inertia sander
- Blow torch
- Dust extraction at the lathe



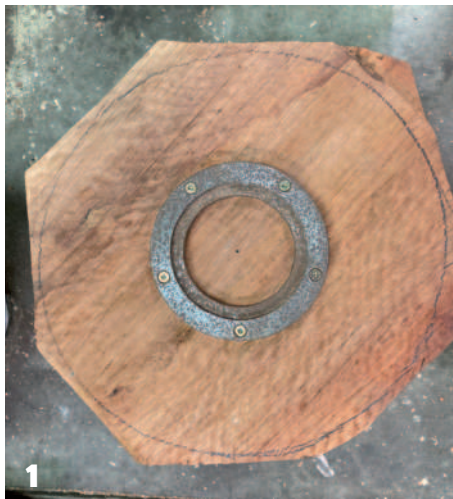
The making

1 There are many ways you can mount your blank to ensure safe turning. On this occasion I used a ring that then fits into the expanded jaws of a scroll chuck. This blank had been rough cut with a chainsaw some time ago and kept wrapped in plastic shopping bags in a shady spot for when I was ready to turn it. You could cut it into a circle on a bandsaw before mounting, or use a faceplate screwed to the blank ready for mounting on the lathe.

2 Ready to begin turning, you could add extra support by bringing up the tailstock, however I was confident the mounting method I used was sufficient and would ensure my toolrest could be brought into place with ease. You can see a ripple pattern on the blank's surface, which indicates there would be substantial movement in the wood as it dries.

3 Roughing the blank down involved both my larger bowl gouges, one with a swept-back grind, and the other with a fingernail profile. I like to trim down the face of the blank and then work my way around to the edge so the weight is more evenly balanced and I can increase the speed of the lathe slowly. You can see that these cuts disclosed some cracks and imperfections in the wood, which I'd need to take into consideration in shaping the bowl.

4 As the blank's edge was roughed, I could see just how deep the cracks were, and how much discolouration there was. I needed to



◀ true up the top of the blank and see what the wood had to offer there. I could now increase the lathe's speed again and remove unwanted material more rapidly.

5 Time to cut a tenon and begin to establish the overall shape of the bowl. The bulk of cracked material was removed by this stage, so I was confident that my imagined shape would accommodate the imperfections still left in the blank.

6 I like to use a flat curved scraper to refine the outer shape of the bowl, in this case aiming for a fairly traditional 'Roman ogee' profile.

7 Time to establish how far the burnt border will go and cut a narrow groove with a 9.5mm detail gouge. This cut is only temporary and will be refined after scorching has been completed. Its secondary role is to prevent the torch's flame from reaching too far into neighbouring wood that is not meant to be burnt.

8 You can see how the groove allows for severe scorching of the border with only mild burning of wood that will later be 'cleaned'. Depending on the effect you seek, you could leave the charred surface and seal it to retain the crackled surface, but I haven't tried this and cannot advise on the process. It is important to follow safe working procedures whenever burning wood in an environment that has many flammable materials. It is advisable to do your scorching outdoors, preferably well away from flammables and with water on hand in case anything goes wrong.

9 I use a brass wire brush to remove charred material. This, or a stiff nylon brush, will remove residue without leaving marks on the surface as a steel wire brush would. You can also see how the edges of cracks in the wood are 'softened', blending with the texture and exposed grain of the wood. Remember to use dust extraction and a face mask to protect your lungs.

10 To create a crisp definition line between charred wood and the remainder of the bowl's surface, use a fingernail-shaped spindle gouge or a round-nosed carbide cutter. This groove should be deeper than adjoining surfaces as it will later form a shadow line.

A flat curved scraper is used to remove material that was burnt to the right of the shadow line, lowering the surface for two reasons. Sometimes surface material is discoloured by the heat generated in the burning process. The second is to allow the burnt border to stand proud of the overall bowl. Surprisingly, this will not interrupt the visual flow of the ogee shape.

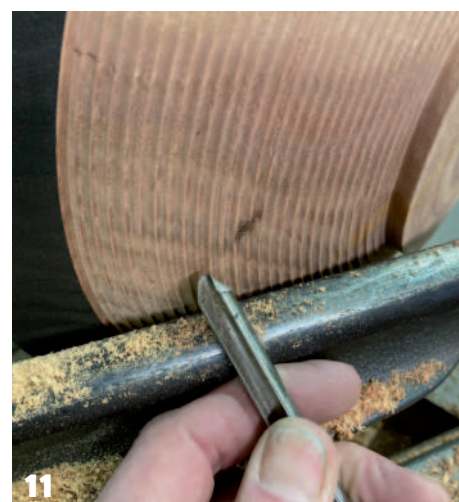
11 To reduce sanding and add an element of textural sensitivity, the area from foot to burnt rim was treated with a series of incised grooves cut with a 6mm bowl gouge held on a steep angle to create cleanly cut scallops of about 4mm width. These lines also help to accentuate movement that happens later as the wood distorts in the drying process.



FIRE SAFETY

When using a blow torch to scorch or burn work it is always advisable to do this away from the workshop, outdoors for preference, and to have a bucket of water or water fire extinguisher close to hand.

When abrading or re-turning scorched or burnt work, a suitably rated dust mask and extraction is advisable; carbon dust is a known carcinogen and, while one-off exposure/inhalation is unlikely to cause any issues, repeated exposure can prove detrimental to health. It is also worth pointing out that a suitable period should be allowed between scorching and abrading so the wood is fully cold; smouldering dust sucked into an extractor is a recipe for disaster.



12 Reversed and held in my scroll chuck, the faceplate ring was removed and the tailstock brought up to the wood to provide extra support while hollowing.

13 The top of the bowl was scraped to a true, flat surface that slopes slightly down to the centre. This also exposed a wonderful wavy grain that was evident in an earlier photo.

14 Rather than waste it, I opted to use a centre saver and removed the core for another day. You can simply hollow the inner part of the bowl, keeping the tailstock in place until left with a narrow nub which can be broken free.

15 I removed some wood from the interior to true up the surface and then power sanded the rim in preparation for burning. The same process was followed as described earlier.

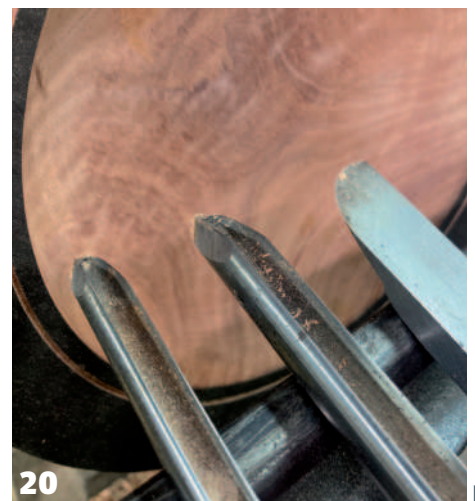
16 This time it left a lovely undulating surface, enhanced by distortion resulting from the burning process.

17 I used a 9.5mm bowl gouge to create a sharp entry point to the bowl's interior and expose the beautiful rich, red colour of the wood, then cut a V-border about 6mm in with a round skew. Definition is key in making visual impact, so make sure all cuts are crisp and precise.

18 Ready to work on the inside of the bowl; I positioned the toolrest as close as possible to the work surface to provide optimal support for the tool. Remember, the more support you have, the less likely you are to get a catch or chatter, and potentially destroy your work.

19 Figure eight callipers were used to check the thickness of both the walls and base. It is advisable to do this regularly so you don't go too thin, or leave too much wood. I aim for an overall wall thickness of about 6-7mm.

20 Tools used to complete the interior area were a fingernail profile bowl gouge for the bulk of the final cuts, a swept-back ground gouge for the lower section and a 10mm-thick finishing scraper for the centre portion of the bowl.



◀ **21** If the surface of your wood is quite moist, use a heat gun to gently dry the surface before sanding. If you don't, the moist dust will clog your sandpaper and prevent the process from going smoothly.

22 I use a variety of sanding options depending on the situation. A sanding pad fitted to a drill removes lots of wood quickly and can run either clockwise or counter-clockwise. This can be handy if you have some difficult grain to deal with. An inertia sander and hand-held sandpaper were also used as I worked my way through to 320 grit. The bowl will not be sanded after it has dried, so the surface must be perfect at this point. Don't forget to position your dust extractor chute as close to the area you're sanding as possible.

23 Having sanded to a crisp, sharp edge, a light sand with 320 grit takes just enough wood away to leave an edge that is sharp visually, but not to the feel.

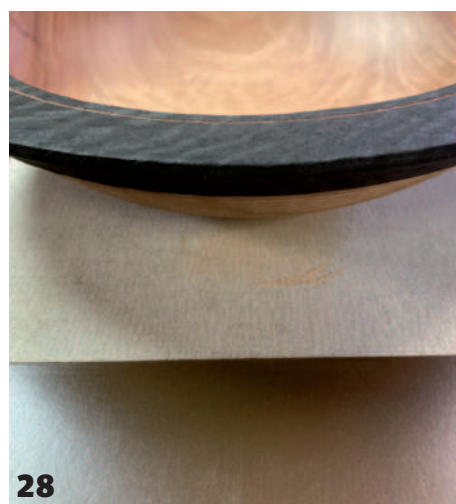
24 To complete the foot, the bowl was reversed and pressed up against a padded carrier fitted to a faceplate and held in position with the tailstock. If you have a vacuum set-up, it would work perfectly in this situation.

25 The foot was trimmed down just enough to remove chuck marks and the centre hollowed leaving just a small stub. A V-groove was cut with the detail gouge, but you could use a skew. Other tools used at this stage were the bowl gouge and round-nosed scraper, which made easy work hollowing the foot.

26 The stub was carved away and the surface sanded smooth.

27 The bowl initially weighed 750g, but after a few days of drying it over the heater indoors in winter, I decided to help the drying process on its way and gave it several zaps in the microwave. I'm not aware of any formula that determines how long to 'cook' and at what setting, so I used the medium setting for four bursts of three minutes, allowing the bowl to cool between each burst. The final weight was 670g – a loss of about 11%, but please forgive me for my mathematical inadequacies.

28 Although this bowl didn't distort as much as expected, the base need to be flattened, which only took a few passes on a sanding board fitted with 120 grit.





29 I like quick and easy finishes, so a couple of coats of a food-friendly oil were applied, allowed to soak in and residue wiped off – and that's it.

Conclusion

Turning a bowl is down to personal preferences. Do you like to turn bowls of freshly cut wood that will distort as it dries and be happy to deal with what nature provides, or do you allow the turned form to dry and then turn it down to a true circular form? The choice is yours, but you may well guess where my preference lies.

Examples of distortion

30-32 These show how some species, such as European oak, can distort extremely as they dry and introduce a wonderfully organic aspect not associated with turning.

Dimensions are 168 x 156mm, which equals about 8% shrinkage across the grain. The difference between the peak and lower edge of the rim was 13mm.

33-35 These show red gum turned from much wetter timber than that used in this article. The bowl contracted much more across its grain than along it but, contrary to the oak bowl, the sides did not pull down and stayed somewhat level. Don't expect every piece of wood, or even every species, to behave according to your desires, because nature has its own plan in place.

Dimensions are 232mm long x 209mm wide, which equals about 10% shrinkage across the grain

36 This shows how things can go wrong and distort in ways that defeat the functional aspect of the bowl and challenge what the majority of consumers see as an item they can use. Some of us can see how this form still has its own element of beauty, but the market generally says otherwise. ●



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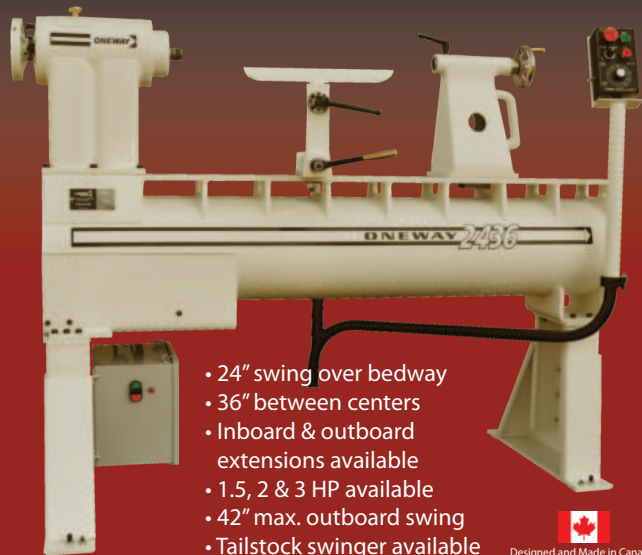
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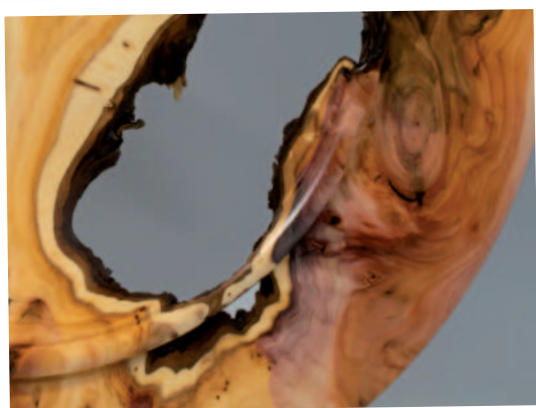
Yew platter

Pat Carroll makes a beautiful piece from Irish yew

Platters are wonderfully functional items, and a decorative piece of wood can make a functional item an artistic piece to be appreciated on many levels. Over the years I have turned many platters with inclusions or part-live edges, where the piece may not be completely intact. This creates great areas of interest and curiosity from the viewer of the piece. You will receive the comments, 'there is a piece missing', 'there is a hole in it' or maybe, 'how did you keep it together while making it?'.

The most important thing with any of our woodturning is safety first. Fully intact and structurally sound pieces of wood may create challenges for even the more experienced woodturner, but pieces of wood that have inclusions, fissures or cracks raise the bar of awareness and safety required to create them. If I have too many doubts or do not see a feasible way to turn a piece like this platter I would not proceed. Pieces with defects may seem sound on the lathe, but once high speed is introduced into the equation, centrifugal force can blow the piece apart.

On inspecting this piece of wood, I noticed there were solid areas around the rim that would help keep the piece together. I knew it would also not be a thin-wall piece. For maximum gripping power I created a large foot on the bottom. I would usually use a shallow recess in platters, but I felt that a contraction grip was far better than an expansion grip in this case. It goes without saying that a good-quality face shield is a must for this type of work. I am also very cautious of the speed I turn at. When there is a hole or negative space in a piece, I generally try to increase the speed to as high a safe working speed I can use. In this case, I try to keep as low as possible, but the consequence is that the cuts are not as clean. So, it is a balancing act on pieces that are not fully intact.

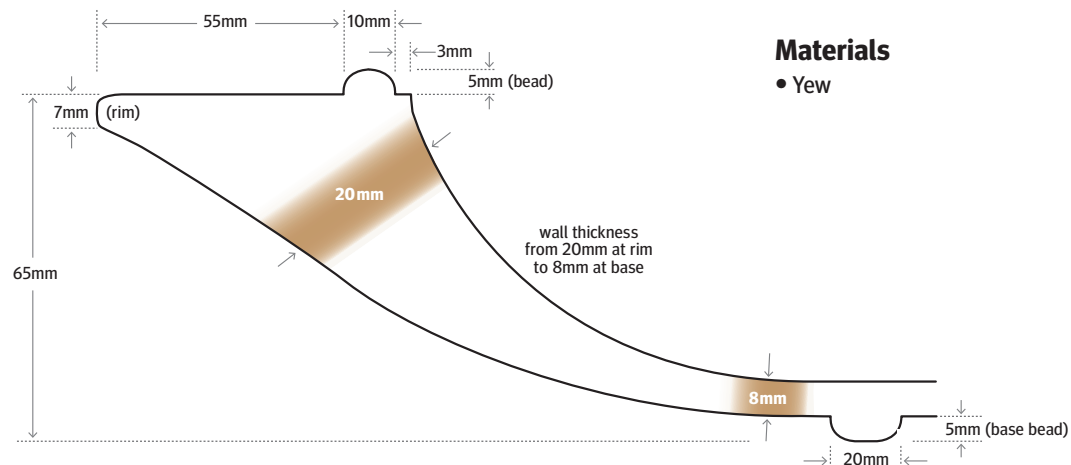


PHOTOGRAPHS BY PAT CARROLL

Plans & equipment

Tools & equipment

- PPE and RPE as appropriate
- 100mm faceplate
- 150mm chuck jaws
- 10mm revolving centre
- 10mm bowl gouge
- 25mm skew
- 12mm spindle gouge
- Ruler
- Dividers
- Callipers
- Cordless drill
- Sanding arbor
- Sandpaper
- Danish oil



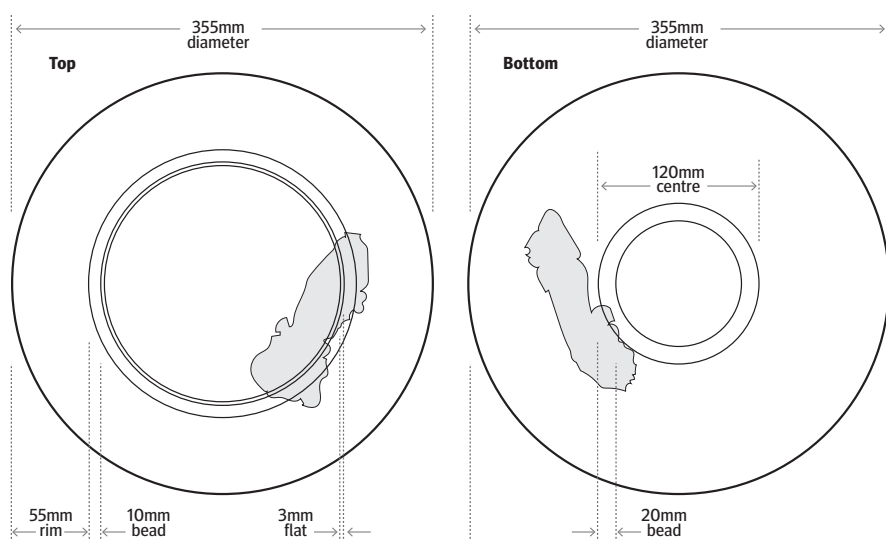
The making

1 Safety first. Check that all PPE, lathe tools and any other equipment to be used is in perfect and safe working order. The wood chosen was a piece of air-dried yew. As with any piece, the wood is checked thoroughly and, as mentioned in the introduction, the large fissure is a cause for concern from the start.

2 I secured the blank to the lathe with a 100mm faceplate. There are eight holes in my faceplate, and I use screws in all the holes to maximise my gripping power. On shallow-turned items such as platters or plates, be sure to check the screw length as it may easily be too long and leave unsightly holes in the base of the piece. This piece looked daunting with the large fissure staring back at me, but I accepted Mother Nature's challenge. I used the tailstock for additional security to help hold the piece.

3 On any turning I try not to stand directly in the line of fire for obvious reasons, and with this piece even more obvious. I start the lathe off with a slow speed and gradually ramp it up. I reached 750rpm and made my first cuts. I trued up the outside rim. I would normally start to establish the shape with a 16mm bowl gouge, which creates beautiful streams of shavings – not to be the case with this piece. I used my 10mm bowl gouge and took very light cuts. I stopped the lathe frequently to examine the surface to see how deep the inclusions were.

4 With the rim trued up, I turned my attention to forming the ogee shape on the bottom. I marked out the size of the foot I wanted to use and continued to remove wood very delicately until I had a pleasing shape. I used the lower wing of the tool to take light shearing cuts to refine the shape and the finish. At this point, I was not sure of the surface I would have to sand and how easy that would be.



HEALTH & SAFETY – TOXIC!

Yew wood is toxic and can cause a mild to severe reaction in some people, so should never be used by anybody without care. Respiratory protection should be used at all times when turning, and especially abrading. Yew is a sensitiser, so intolerance can build up over time, even if you are not initially troubled by it. If you experience any of the following symptoms, stop working it and remove it and any shavings or dust created from the workshop.

Type of reaction; irritant, direct toxin, nausea

Affected area; skin, eyes, cardiac

Frequency and strength of reaction; common

Source; dust, wood, leaves, aril (but not the fleshy part)

What are the signs we need to look for that might indicate potential problems?

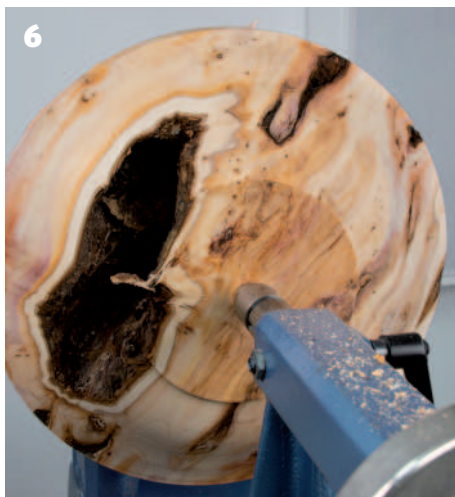
- Sneezing and an itchy, runny or blocked nose (allergic rhinitis)
- Itchy, red, watering eyes (conjunctivitis)
- Wheezing, tightness in the chest, shortness of breath, coughing
- A raised, itchy, red rash (hives)
- Swollen lips, tongue, eyes or face
- Stomach pain, feeling sick, vomiting, diarrhoea
- Dry, red and cracked skin

For a more complete understanding of the potential dangers, please see the article **Is Wood Dangerous?** in *Woodturning* issue 357

5 As the chuck I used had dovetail jaws, I needed a very crisp and sharp dovetail to complement the angle of my jaws. I used a skew which I have ground purposely for cutting dovetails. This tool also acts as a negative rake scraper if needed.



6 With the desired shape on the bottom, I can clearly see the impact the void has had on the piece. I can also see the amount of wood on the rim that is not clearly affected by the fissure. But my awareness does not turn to complacency as this weak area in the wood is always of concern.



7 When it was time to sand the exterior, I used a 75mm sanding arbor in the cordless drill. With full PPE in place, I lowered the speed. I would usually power sand at around 350rpm on a piece this size, but with the fissure I kept the speed at 600rpm to reduce the time the arbor was in negative space. As the platter rotated towards me, I offered the drill up, rotating in the opposite direction of the platter. This allows the piece to rotate on to the lower portion of the arbor to make it as safe as possible. Had the top of the arbor touched the fissure an accident would have occurred. I started sanding at 120 grit working up through 180, 240, 320, 400 and 600. Beware that yew finishes beautifully but over sanding and too much pressure on the surface causes heat cracks.



8 The base now completed, I was ready to turn the piece around and work on the interior. The tailstock support has marked my centre, and this makes it easier to realign when finishing the foot. You will notice I did not have a complete foot to hold the chuck on to, but I was confident there was a large enough surface area for a safe chucking point.



9 I also double checked the chuck jaws for their optimum size to ensure I have as much gripping power as possible. These 150mm jaws gave a very strong grip.



10 I never immediately remove the faceplate when I take the piece from the chuck. I use my cone centre in the tailstock, which fits my faceplate nicely. Once I positioned the platter in the chuck, which is not fully tightened, I brought up the tailstock and centred the drive in the faceplate. I gradually tightened the chuck until I had the piece running as true as possible. If the drive centre was to go inside the faceplate it would damage the threads. Ensure your cone drive is larger than the opening of the faceplate using this method.

11 I then turned my attention to the rim. As I remove every millimetre of wood, I was constantly checking the integrity of the piece. I checked for flexing in the piece and any hidden inclusions or fissures I may have uncovered.

12 As I progressed, I noticed some of the bark inclusions starting to come away as I cut. I did not want to use superglue on the piece. Superglue works well when easy access is available to sand away the residue, but in this case I didn't want the wood to be stained and sanding may have been too awkward to achieve in these areas.

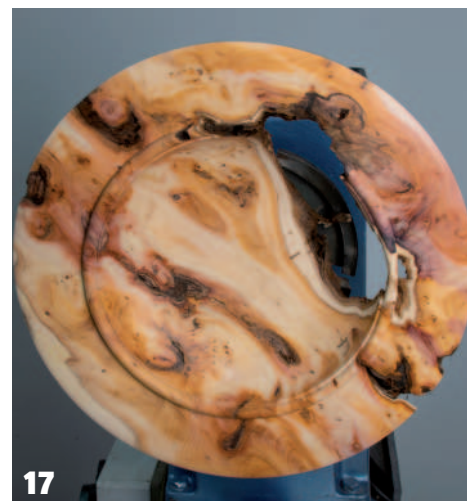
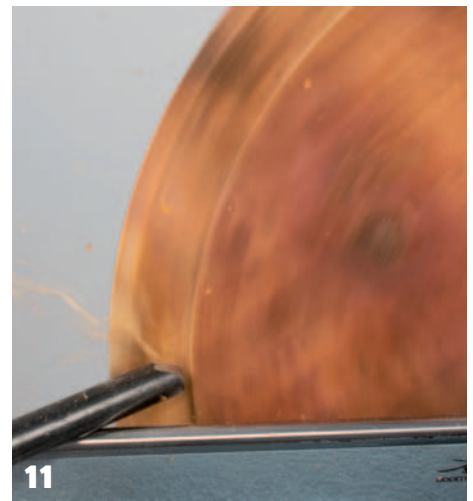
13 Once I formed the rim shape, there was a sigh of relief that it was still intact. This did not make me complacent as I knew there was still a large void to uncover. The colour of the wood at this point was really starting to pop with the sapwood, bark, and various inclusions. Mother Nature had provided me with a beautiful piece of wood and I wanted to do justice to it.

14 The design I had in mind for this piece is a shape I frequently use – a simple bead that frames the bowl area while giving definition to the rim. A small, flat area inside the bead further defines each area of the piece and creates crisp defining lines. I removed some of the interior of the bowl working my way towards the bead. Light cuts were still essential as the void opens more with each cut taken.

15 The completed bead and the flat area on the inside. It was and is essential on pieces like this to take very light cuts with very sharp tools. I worked in small increments with the 10mm bowl gouge, trying to ensure I had a flowing curve as I progressed toward the centre.

16 The large void is really the focal point of the piece now. Ironical that the part of the platter our eye is drawn to isn't there. A little care and attention to cuts and tool control has given a very good finish.

17 Sanding with such a large void can be precarious to say the least, but focusing on the rotation of the platter on to the arbor allowed me to power sand a large portion of this piece. I did do some refinement sanding by hand on areas that I would not put the arbor into due to the negative space. The sanding was carried out as in the earlier steps, starting at 120 grits working up through 180, 240, 320, 400 and 600, power and hand sanding.



18



19



20



18 The internal capacity of my lathe is 600mm. I made a vacuum plate many years ago which I still use today. It is made from two 25mm MDF discs sandwiched together. It has a 150mm faceplate on the back to secure it on the lathe. The wood was sealed and, when it was dry, I applied the neoprene to the face of it. This piece was never going to allow for vacuum assistance to finish it, but I often use it for similar situations to finish a piece.

19 To refine the tenon that was created to hold the piece in the chuck, I used a 12mm spindle gouge. The 30° bevel sat nicely as I floated the tool around the bead. Too much pressure would cause unwanted vibration on the tool and I would run the risk of the tool getting caught in the void.

20 The large diameter of the foot gave me a good footprint for this piece to easily sit on a surface and not topple over. As I view this as more of an artistic than functional piece, I was happy with the proportions of the bead, which is the area the platter will sit on. More functional pieces would most definitely have a larger footprint.

21 Danish oil is my preferred finish for pieces like this. A foam applicator and brush allow me to access all the voids and little holes in the wood.

22 Applying the first of three coats of oil to the piece. The beauty of this piece of wood made all the hesitancy and worry about what could happen soon disappear. The colours just popped as the oil soaked into the wood. I allowed the first coat to soak for 10 minutes and then, using a soft cloth, I wiped off the excess. Between each coat I lightly sanded the surface with 320 grit sandpaper to give a key for the next coat of oil. Once the oil was cured, I gave the platter a polish with a soft cloth.

23 The finished platter. ●

21



22



23 bottom



top 23

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Toy submarine

Les Symonds turns a nautical plaything in his latest series

In Part 3 of this series, I make a toy submarine which, once again, seeks to represent a caricature of the original, rather than any form of scale model. Many items of fine detail on a submarine have been omitted to keep the toy simple and uncluttered, while others have been exaggerated to make them appealing. For the propellor, given that it is situated within its cowl, there could well be an issue with a young child trapping a finger in the assembly, so the propellor has been made using a simple disc, with a spiral pattern on it to represent its spinning motion.

As with the previous toys, the entire project has been made using workshop scraps and offcuts. Indeed, the main body of the toy was made from two pieces, laminated together, of pallet timbers which had the occasional nail hole. The beauty of any project which is being fully painted lies in the fact that such timber can be used, nail holes can be filled and the cost can therefore be minimised.

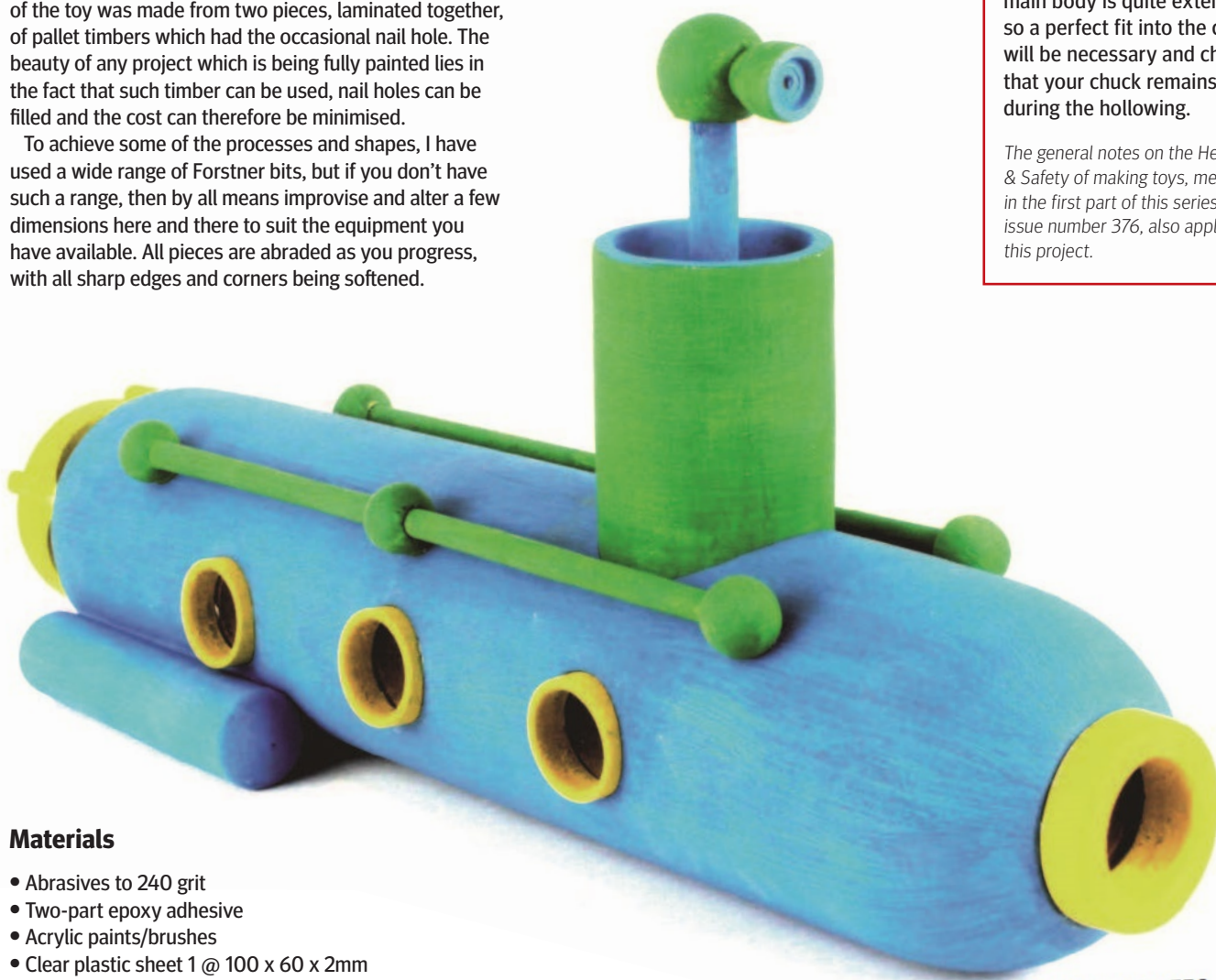
To achieve some of the processes and shapes, I have used a wide range of Forstner bits, but if you don't have such a range, then by all means improvise and alter a few dimensions here and there to suit the equipment you have available. All pieces are abraded as you progress, with all sharp edges and corners being softened.

HEALTH & SAFETY

This is a fairly simple method of construction with just a few points to be aware of.

When spindle turning such small spindles, supporting the workpiece by hand is likely to be necessary, so do this lightly and check that you don't have any baggy, open sleeves. The hollowing of the main body is quite extensive, so a perfect fit into the chuck will be necessary and check that your chuck remains tight during the hollowing.

The general notes on the Health & Safety of making toys, mentioned in the first part of this series, in issue number 376, also apply to this project.



Materials

- Abrasives to 240 grit
- Two-part epoxy adhesive
- Acrylic paints/brushes
- Clear plastic sheet 1 @ 100 x 60 x 2mm
- **Submarine body** 1 @ 400 x 80 x 80mm
- **Ballast tanks** 2 @ 150 x 25 x 25mm
- **Conning tower** 1 @ 100 x 60 x 60mm
- **Periscope** 1 @ 100 x 25 x 25mm and 1 @ 50 x 25 x 25mm
- **Prop cowl** 1 @ 250 x 15 x 15mm and 1 @ 70 x 70 x 70mm
- **Propellor** 1 @ 30 x 40 x 40mm
- **Bow porthole** 1 @ 50 x 50 x 50mm
- **Side portholes** 2 @ 100 x 30 x 30mm
- **Grab rails** 2 @ 250 x 12 x 12mm and 2 @ 100 x 25 x 25mm

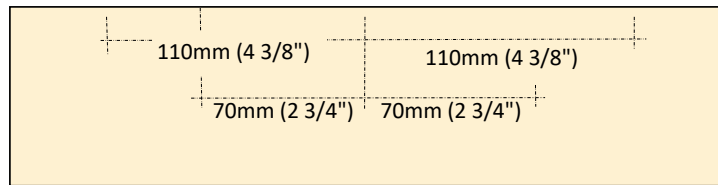
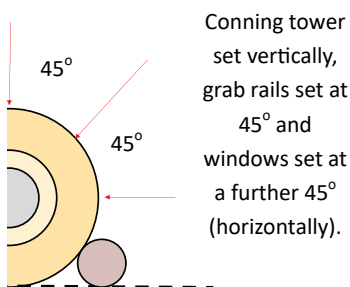
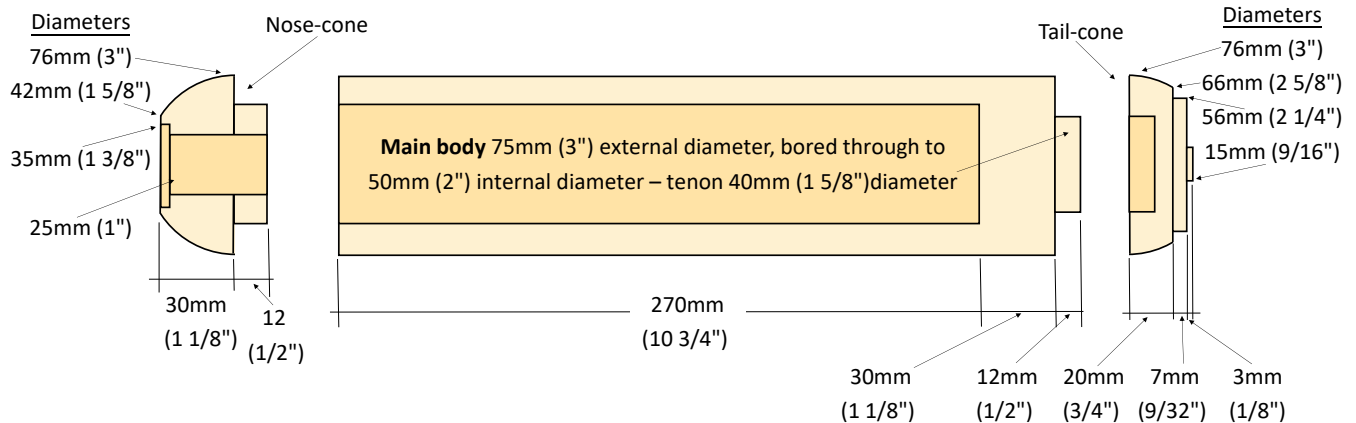
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Plans & equipment

Tools & equipment

- PPE & RPE as appropriate
- Lathe with indexing facility
- Drive and live centres
- Chuck with 40mm jaws
- Jacobs chuck to fit tailstock
- Spindle roughing gouge
- Spindle gouge
- Skew chisel
- Assortment of Forstner bits and twist drills
- Forstner drill extension rod
- Parting tool
- General bench tools
- Callipers and steel rules
- Hand drill
- Scroll saw (optional)
- Disc/belt sander (optional)
- Pillar drill (optional)
- Round Microplane
- Small sanding drum (40mm)

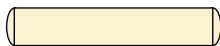


Layout grid for portholes, grab rails and conning tower

Ballast tanks – make 2

110mm (4 3/8") long
plus radiused ends.

20mm (3/4") diameter



Portholes – make 6 10mm (3/8")

long 25mm (1") ext. diameter.
22mm (7/8") int. diameter



Nose-cone porthole

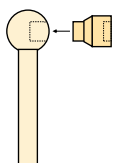
Overall length 16mm (5/8"),
with half-depth rebate.
40mm (1 5/8") ext. diameter.
25mm (1") int. diameter.
Rebated to 35 (1 3/8") diameter



Periscope (2 parts)

Main part, 10mm (3/8") stem with
22mm (7/8") sphere on top.
Overall length 80mm (3 1/4").

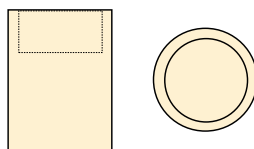
Lens – overall 16mm (5/8")
diameter x 20mm (3/4") long,
reduced to 10mm (3/8") tenon



Conning tower

70mm (2 3/4") long x 50mm (2") diameter.

Top recessed to 20mm (3/4") depth
x 40mm (1 5/8") diameter

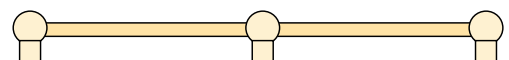


Grab-rail set – make 2 sets

Rail – 7mm (9/32") diameter x 220mm (4 3/4") long.

Buttons – 16mm (5/8") partial sphere
with 10mm x 10mm (3/8" x 3/8") stub tenon.

Rail passes through centre button,
recessed into end buttons



◀ The main body

1 Set the main blank between centres and reduce it to a cylinder of 75mm diameter, then mark a grid of four lines around it. The first two lines are at 30mm and 42mm in from the headstock end (the bow of the submarine). The second set of two lines are marked at 12mm and 42mm from the tailstock end (the stern).

2 At the tailstock end we make three main cuts. First, form a tenon of about 40mm diameter to suit your chuck jaws between the end of the timber and the 12mm line. Second, commence a parting cut immediately to the left of the 42mm line, down to about 40mm diameter. Third, immediately to the left of this parting cut, form another 40mm tenon – this will become the tenon which supports the main, central section of the submarine once its three pieces have been fully parted off.

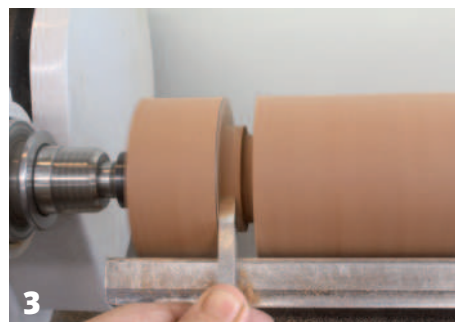
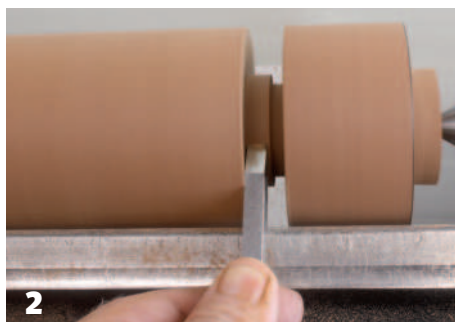
3 At the headstock end, form a tenon between the 30mm and 42mm lines, 50mm diameter and shaped as necessary to fit your chuck jaws, then commence parting off immediately to the right of the 42mm line, cutting down to about 10mm. Similarly, deepen the parting cut at the tailstock end before switching off and sawing the three pieces apart.

4 Set the central part of the body into a chuck. As there isn't a centre mark at its tailstock end, take great care to mount it accurately. Clean up the end grain and reduce the piece to length, then mark out the grid for drilling the six portholes. Note that with a 24-stop index system, the centreline along the top of the body will be at position 24/0, while the portholes will be at positions 6 and 18. Refer to the drawings for dimensions.

5 Lock the lathe spindle with a row of portholes rotated to about lathe centre height, then, with a 25mm Forstner bit, drill each porthole to a depth of 5mm. When all six are done, use a 22mm Forstner bit to extend the depth of each hole to 20mm.

6 Retract the tailstock and set a Jacobs chuck into it, with a 50mm Forstner bit then commence drilling down into the body of the submarine. Retract the cutter regularly to clear shavings (although the presence of the six portholes will help considerably). You will almost certainly need an extension rod for the Forstner bit to complete this task.

7 Take the workpiece for the bow (nose cone) which you parted off in Step 3, and try it for a fit into the end of the main body of the submarine. Make any adjustments as necessary, then apply two-part epoxy adhesive to the joint, press it into place and bring the tailstock up against it with a live centre to support it while the adhesive dries.



8 With the tailstock in place, clean up the joint (if necessary), then retract the tailstock, lightly skim the end grain then set the Jacobs chuck into the tailstock with a 35mm diameter Forstner bit in it. Drill down into the end of the workpiece to a depth of 8mm before changing the Forstner bit for a 25mm bit, then continue drilling until you drill right through into the central cavity of the submarine

9 Remove the Jacobs chuck and set a live centre in the tailstock, then bring the tailstock forward to support the workpiece before forming a gentle curve from the glue joint near the tailstock end, down towards the live centre. Note from the drawings the final shape/dimensions at this end. Remove from the lathe.

10 Take the workpiece for the tail end (stern) of the submarine and set its tenon into your chuck, then cut a recess into its end grain such that the tenon at the rear end of the submarine fits snugly into it. Remove the workpiece from the chuck but do not glue these two workpieces together yet.

11 Put a piece of scrap timber into your chuck and form a tenon on the end of it such that it becomes a jam chuck which fits tightly into the recess just cut on the workpiece in the previous step. Press the two pieces together; if the joint is not particularly tight, a piece of tissue paper or even smearing the interface with water (to swell the wood fibres) will help.

12 Form the shape on the workpiece, as shown in the drawings, then set the toolrest at centre height across the end of the workpiece. Mark four lines at equal distances around the workpiece to mark the positions for the propeller cowl legs.

Remove the workpiece and the jam chuck from the lathe. Make a distinct centre mark on the end to help centre the piece accurately when it is later returned to the lathe.

13 Set the jam chuck into a vice on your pillar drill, with a 7mm drill bit in place. Set the workpiece back on to the jam chuck and position the vice such that the drill bit comes down on to the face of the rebate, at one of the four pencil lines previously made, then securely cramp the vice on to the drill table before drilling the first hole. The following three holes can be drilled simply by rotating the workpiece appropriately.

14 Use two-part epoxy adhesive to glue the workpiece on to the main body of the submarine, holding it on the lathe between centres until the glue dries, then mark out the grid of holes for positioning the grab rails and the conning tower. Do not drill the holes yet.

The portholes

15 Set a workpiece for the portholes into a chuck and reduce it to 25mm diameter before drilling a 22mm diameter hole down into it, to a depth of 12mm, before parting the porthole off to a length of 10mm. Repeat for all six portholes.

16 Set the workpiece for the nose cone's porthole into a chuck and turn it to the shape shown in the drawings before drilling a 25mm diameter hole right down through its centre, then part off to an overall length of 16mm. Note that you will also need to cut a total of seven discs of clear plastic to glaze the windows with.



◀ The grab rails

17 Set a workpiece for the grab rail buttons into a chuck and turn the first button to shape. Note that, of the six buttons, four will need a 7mm diameter hole for the rail, drilled to partial depth, and two will need the holes drilled right through. This is done while each button is still on the lathe, before parting each one off to an overall length of about 25mm. The rails themselves require no description here, they are simply 7mm diameter spindles, turned and then cut to 220mm length.

The prop-cowl

18 The four legs for the prop-cowl are simple, 7mm diameter x 500mm long spindles. However, they need to be reduced to half thickness along one half of their length and the safest way to do this is to make a supporting block as shown in the image, then saw halfway through before using a sharp bench chisel to remove the waste. Repeat for each of the four legs.

19 Set the blank for the cowl into a chuck and reduce it to a cylinder of 60mm external diameter. Set the toolrest at centre height and make four pencil lines on it, one at the position of each of the four legs, then drill a 45mm diameter hole down into its end grain, to a depth of at least 30mm.

20 Cut a paper pattern to mark out a scalloped curve between the position of each of the four cowl legs and mark those four curves on the workpiece.

21 Cut the four curves out, using a round Microplane and finishing with a 40mm sanding drum. If you don't have these tools, use a coping saw and abrade by hand.

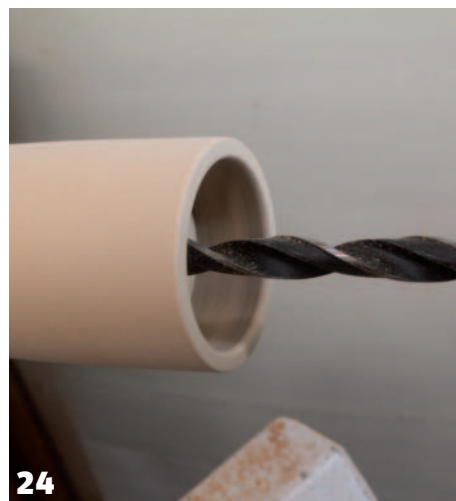
22 To assemble the prop cowl, set the four legs into position in the end of the submarine, but do not glue them into place. Use a small amount of two-part epoxy to glue the cowl on to the four legs, using a few turns of masking tape to hold it all together while the glue dries. Slide the whole assembly upwards a little to ensure that any excess adhesive does not run down and glue the legs into place. Leave to dry.

The propellor

23 Set the workpiece in a chuck and reduce it to 40mm diameter, set the toolrest across the end and clean the end grain off. To create the spiral on it, set the lathe at a slow speed (about 200 rpm), hold a suitable felt-tipped pen against the centre point of the workpiece, then slide the pen towards yourself. If you're not happy with the result, clean the end grain off and try again, then part off to an overall length of 10mm.

The conning tower

24 Set the blank for the conning tower into a chuck and reduce to a cylinder of 50mm diameter. Drill a 20mm recess into its end grain with a 40mm Forstner bit, then a 10mm hole at its centre to a depth of a further 20mm.



25 Commence parting the conning tower off to an overall length of 70mm, softening the freshly cut edge with a piece of abrasive to help ease the tower into its hole in the submarine, then fully part off.

The periscope

26 Set the blank for the main part of the periscope into a chuck, reduce it to a cylinder of 22mm diameter then form the partial sphere on the end and the 10mm diameter stem to an overall length of 80mm.

27 Drill a 10mm hole to a depth of 10mm for the lens to fit into. You will need to support the workpiece to stop it flexing too much. Do this with a suitably large piece of scrap wood/plywood held firmly against the back of it.

28 Set the workpiece for the lens into a chuck, turn to shape and then drill a shallow recess in the end of it to suggest its lens.

Drilling the remaining holes

29 Lock the lathe spindle and set the workpiece into a chuck, tightening the chuck very lightly on to the rebate where the prop cowl will be fitted. To ensure that the workpiece is truly upright, set something like a piece of tube across the body, through a pair of portholes. Gently rotate the workpiece until the tube lies horizontally, then tighten the chuck.

30 Keeping the spindle locked, the chuck tight, and the tailstock tight against the hole for the porthole at the bow, drill the 50mm recess for the conning tower to a depth of 12mm, ensuring that the drill is held vertically and square to the line of the workpiece. Unlock the lathe spindle, rotate the whole assembly by 45° (three stops on a 24-position indexer), then drill the three 10mm holes on one side for the grab rail buttons. Repeat on the other side for the other three holes.

The main assembly

31 Glue the ballast tanks into place with a smear of two-part epoxy adhesive. Note that, to ensure even placement, the piece of tube used in Step 29 can be used again with a couple of appropriately sized blocks to ensure that the submarine sits horizontally while the tanks are put in place. It will help the glue joint if the tanks can have a slight facet sanded along them to provide a flat surface for the glue to gather on to – this is easily done if you have a bench-mounted belt sander. Place a couple of weights against the tanks to keep them in place while the adhesive dries.



25



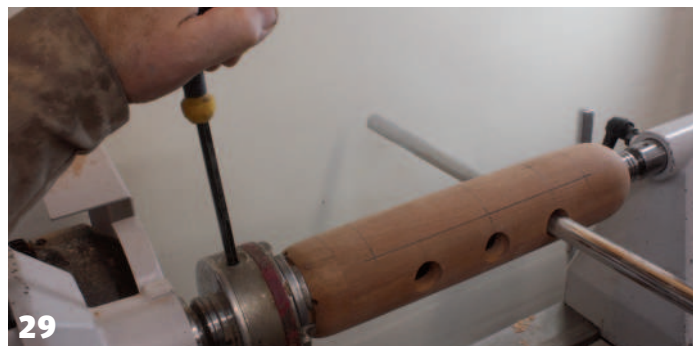
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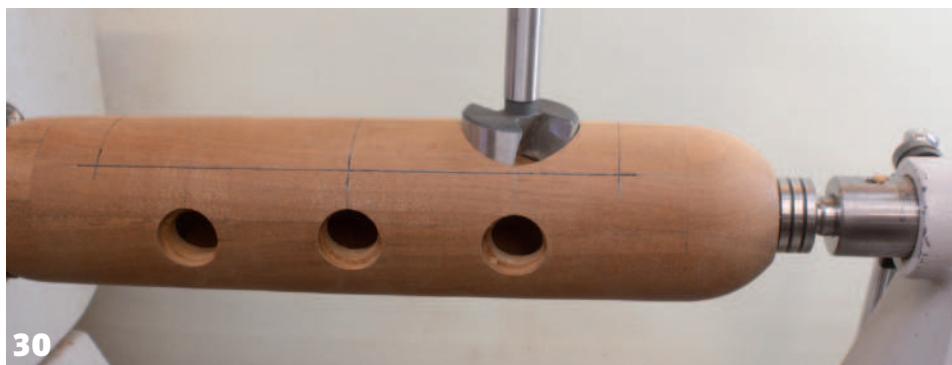
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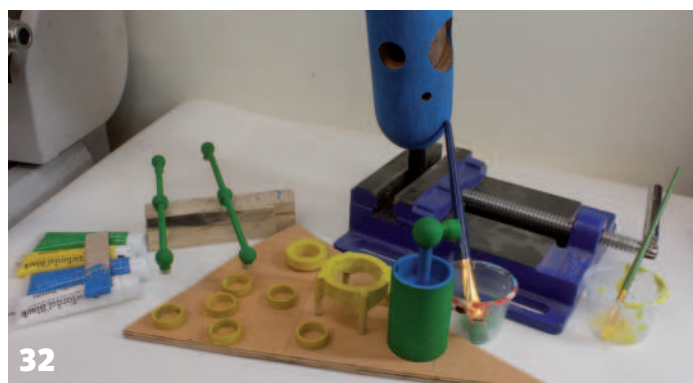


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32 Assemble the grab rails and the periscope, then paint all the components. Note that the body of the submarine is best supported by placing a suitable piece of tube, dowel or scrap timber upright in a vice for the submarine to slide down on to. When the paint is dry, carefully glue the remaining components in place, using an implement such as a dental pick, or even a thin nail, to apply the adhesive sparingly. ●



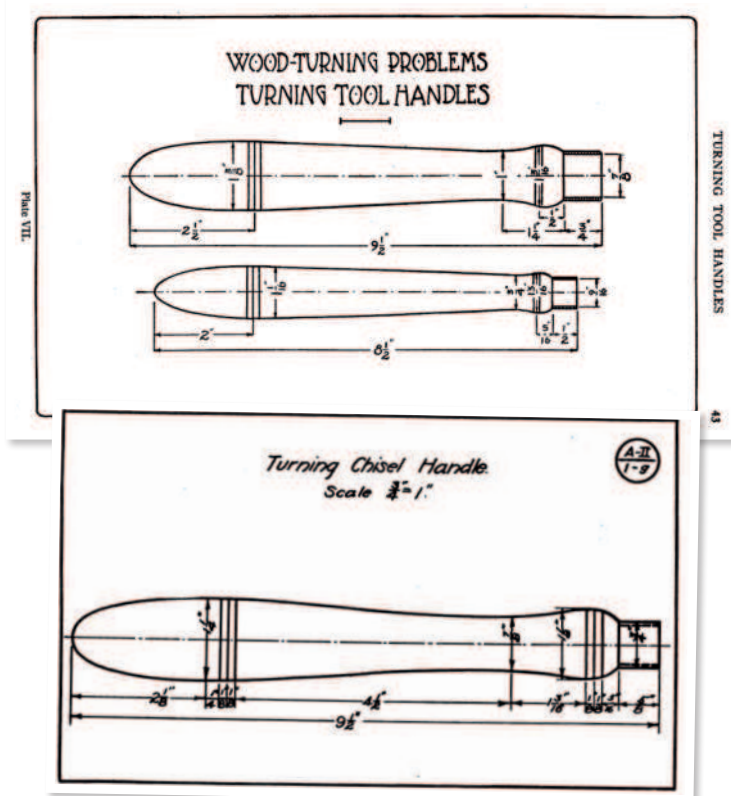
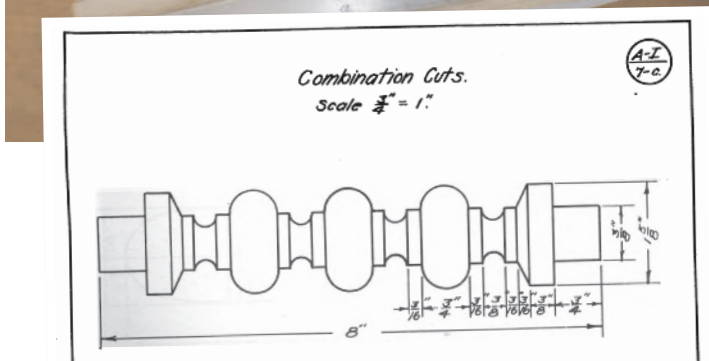
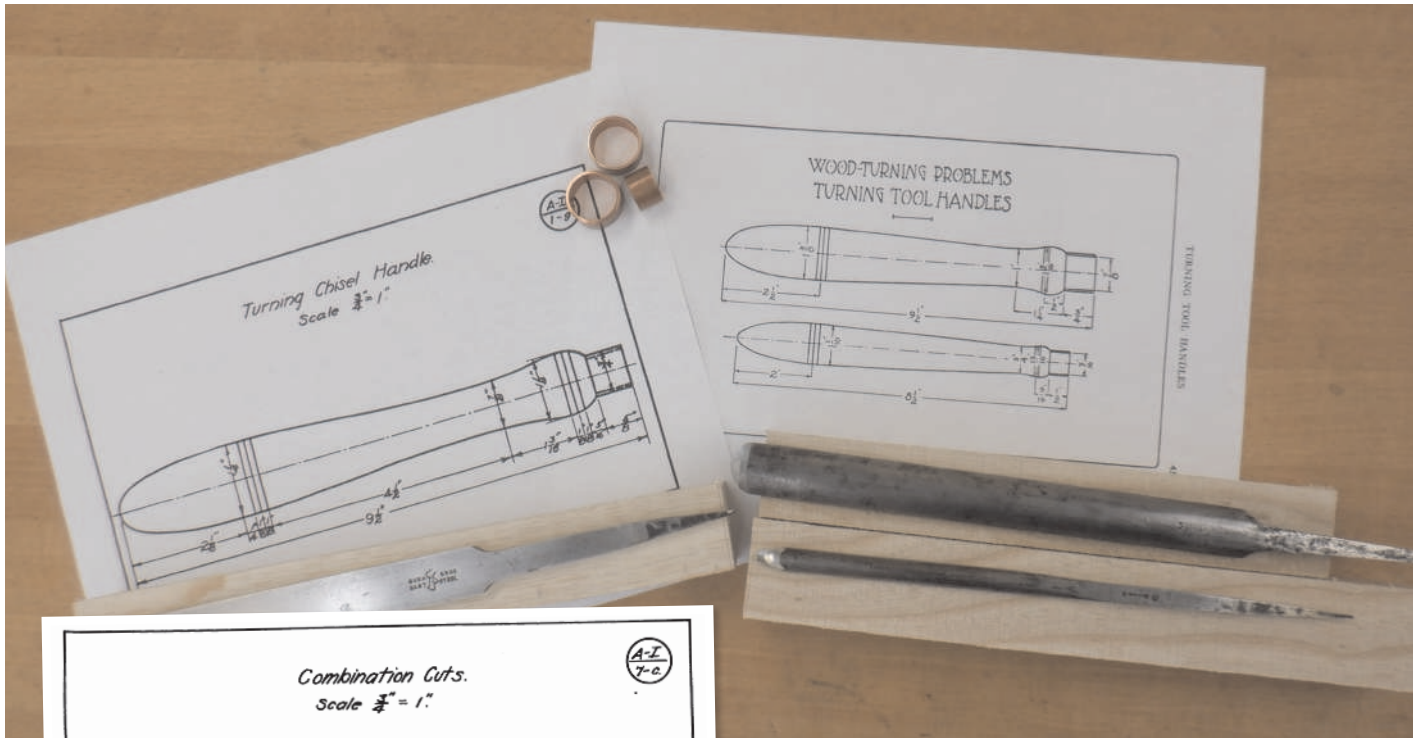
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Vintage spindle woodturning tools

Rick Rich grasps an old technique for handles



Early 1900s vintage woodturning tools look best in handle designs from the same era. If an old tool's steel is still in solid shape, it will often need a new handle. To turn handles exactly as they were designed more than 100 years ago is a relaxing way to spend an evening and using the illustrated diagrams from old woodworking manuals makes it easy.

1 A few months ago I bought an old Buck Bros. woodturning skew off an online auction site. I can't really say why I was drawn to the old tool, but I will attempt to relate the story as I explained it to the lovely Mrs Rich after the package arrived. It begins with some historical perspective, to help you understand the why. First, I enjoy using old and quality woodworking tools. Because of this, I tend to purchase a few... every now and then. More often than necessary, which explains the raised eyebrow prompting this little story.

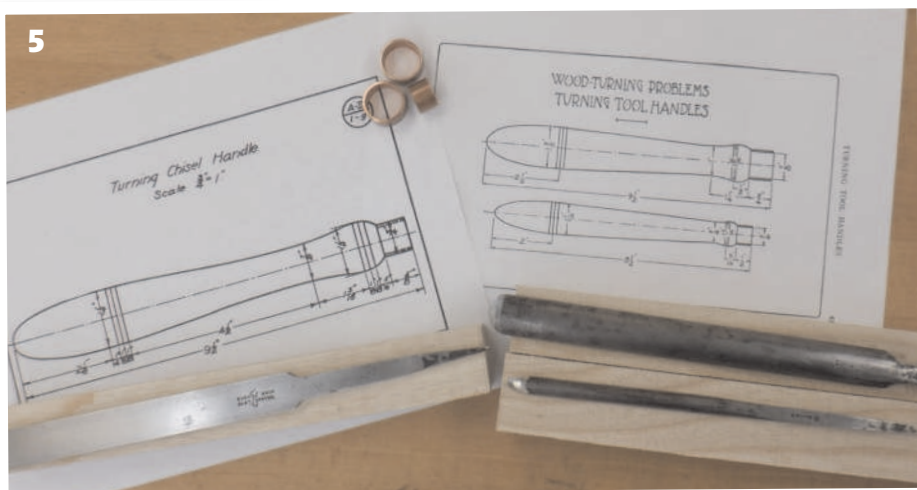
Some months ago, I attended an old tool sale. During this sale I was given two old woodturning gouges with no handles. I had rescued them from a pile of rusty tools with no prices marked. When I held them up, the owner promptly said to me 'keep 'em', muttering something about finally being rid of them.

2 Once cleaned up, the tools were, well, beautiful. If you like old tools like I do, you can understand this. The larger of the two is a shallow fluted $\frac{3}{4}$ in spindle roughing gouge. I recall years ago seeing in tool catalogues similar gouges titled 'continental gouges'. Evidently, the style was not a big seller as I have not seen them for years now. This particular gouge is stamped Greenlee on the bottom near the tang. Greenlee was an established manufacturer of woodworking tools a century ago. The company is still around and owned by the Emerson Electric Co., although I don't believe it has continued to make woodturning tools based on a look at its website.

3 The smaller tool is clearly a spindle gouge. Made into a $\frac{3}{8}$ gouge from $\frac{1}{4}$ in square stock, the flute is deep and consistent. It is stamped W Butcher and 'cast steel' at the tang and has an interesting set of symbols stamped on the other side of the tang. I'm not sure if the tool is made in England or the US, but whoever made it knew what they were doing. It's a fine old tool.

Now that I had both a spindle roughing gouge and a spindle gouge, I decided it would be nice to have a skew to round off a set of usable old spindle tools. I was also very interested in the 'cast steel' markings the manufacturers were so obviously proud of. Was it similar to the hype over tool steels today? How could I ever know the true edge-holding abilities of cast steel without getting a few and comparing them with my current turning tools?

4 This brings me to the auction search resulting in the purchase. It really wasn't expensive either, just a little over \$20 with shipping. Once it arrived, I was happy to see it required only a light cleaning and not the heavy scrubbing of the other two. The skew came with a very nice vintage file handle, which I fittingly placed on a file. Looking at the old tools, the brand stamps are a nice touch compared to the labels of today that are somehow placed on the tool shanks.



5 These tools needed handles, which sent me looking through the old woodturning manuals from the early 1900s. I found just what I needed too, a handle for the skew from *A Course in Wood Turning* by Archie Milton and Otto Wohlers, published in 1919, and a slightly thicker handle for the roughing gouge and a smaller one for the spindle gouge from *Art and Education in Wood-Turning*, by William Klenke, published in 1921.

Each handle blank I used was well-seasoned ash, which is a common handle wood for good reason. Paul Hasluck wrote about ash for handles in his 1887 *The Wood Turner's Handybook*, stating: 'Beech, elm, or hickory make very good handles. Ash is best as it does not blister the hands. The wood must be well seasoned or the ferrules will drop off.' The ferrules I used were copper plumbing pipe, $\frac{3}{4}$ in for the skew and large gouge and $\frac{1}{2}$ in for the spindle gouge.



6 I have turned many handles and my process is much simpler now than even a few years ago. I mount the blank and the $\frac{3}{4}$ in ferrule is set on the revolving centre. This allows me to turn the ferrule tenon first and size it to the ferrule itself by parting down to just the right fit.

7 I check the fit several times with the lathe off and when it is just where I can't quite push it on with finger pressure, it's good. I remove the blank and hammer on the ferrule. I use another, longer, piece of copper pipe for the installation by putting it atop the ferrule and hammering it into place.

◀ **8** With the ferrule installed, the remainder of the turning is following the diagram and making sure the sizes are correct by using a parting tool with outside callipers.

9 These diagrams call for burn lines, or at least that is how I interpreted it.

10 I use a drill chuck in the headstock. I leave the stub of waste on the end so that I can put the centre point in the revolving centre and use the tailstock quill to drive the blank into the drill bit. Since the tang is tapered, I chose the drill bit size by holding a bit up to the tang about a quarter to a third of the way down. The bit should be slightly smaller than the width of the tang. Make sure the drilled hole is deep enough. For extra credit, a stepped hole can be drilled with deeper holes being drilled by smaller bits. I did not step the holes and drilled a single deep hole.

11 Seating the tool was simple. I pushed in the tang as square and true and as far as I could with hand pressure. I then turned it upside down and hammered it in using a scrap block of wood at the tool tip. Once seated, the waste piece at the end of the handle was cut off and the whole handle coated with some paste wax.

12 All three tools were handled and my set was complete – well, mostly complete because I should have looked deeper in that box for an old parting tool. Perhaps that will be a future eBay purchase or find at an antique store or flea market sale. Meanwhile, I like the restored vintage tools in their new comfortable handles.



Putting the set to the test

My question was this: is today's HSS really better than yesterday's cast steel? I wanted to find out how much longer my HSS turning tools will hold an edge than the cast steel tools. I decided that I would conduct a turning test to answer the edge holding question and also compare the roughing gouges for ease of operation as one is quite shallower than the other.

13 I decided I would use my favourite Robert Sorby $\frac{3}{4}$ spindle roughing gouge, $\frac{3}{8}$ spindle gouge and $\frac{3}{4}$ skew, all triple tempered HSS. The vintage cast steel tools were ground to the same angles as the HSS and, although the handle designs were a little different, both styles were comfortable. Because I had no parting tool to compare, I would just use the HSS parting tool for any necessary cuts.

My test would be a bead and cove exercise which uses all three tools extensively – the roughing gouge for initial rounding of the blank, the spindle gouge for the coves and the skew for the beads and shoulders. I have turned these before and know that I do not need to sharpen any of the HSS tools to finish it. If it felt like the tool edge was no longer sharp enough to make clean cuts and I was really having to push the tool into the wood, I would sharpen it – and



make a note where in the process of turning the sharpening was needed. This test was probably more subjective and less scientific, but I would try to fairly judge the differences.

14A/B The bead and cove started with an 8in x 1¾in square of alder. Since the comparison was using the HSS tools as the standard, I started with them. Once the blank was round from the spindle roughing gouge, I used the parting tool to size fillets, and set the distance between the beads.

15A/B The skew was first used to cut the shoulder taper on each end, as in the diagram. Then the waste between the beads was removed with the parting tool to allow some room for tool movement. The beads were cut with the skew, and I did not notice any difference in the edge sharpness of either the HSS or cast steel skews.

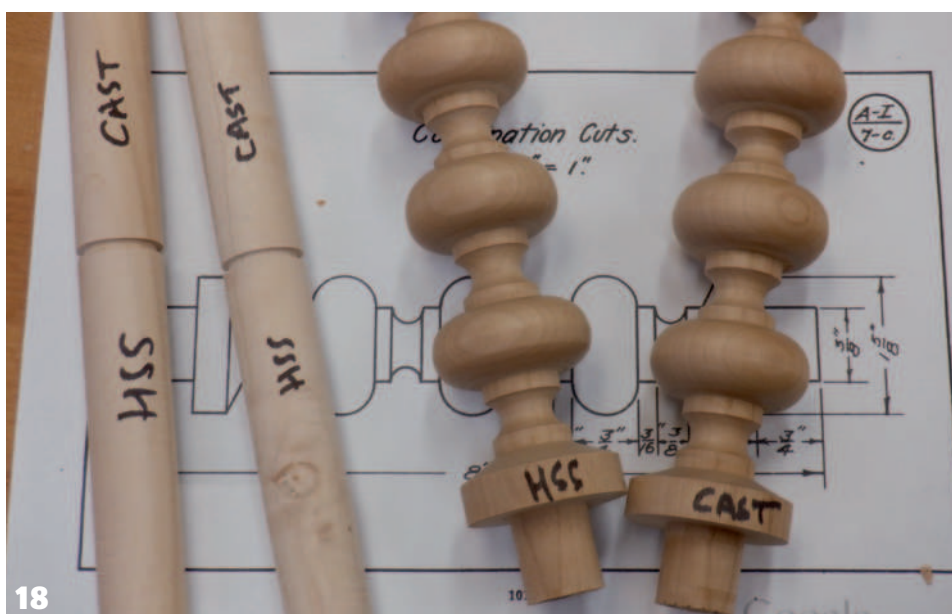
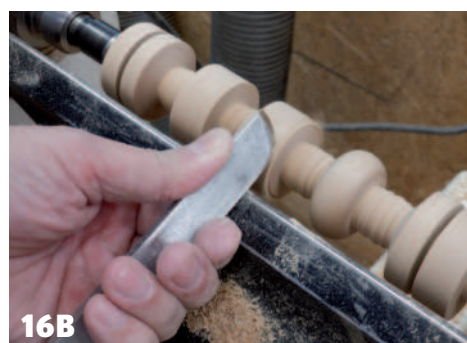
16A/B I finished with the spindle gouge to cut the coves and smooth the fillets as I didn't want to chance them with the skews.

17A/B Here is where I started to notice some difference. I definitely was pushing a bit on the vintage cast steel spindle gouge on the final two coves. Not a lot, but noticeable.

18 To work the spindle roughing gouges and skews more, I put an 8in long by 1in square blank on the lathe and made a parting tool mark in the centre. The blank was rounded smooth with the spindle roughing gouges, HSS on one side and cast steel on the other. The respective skews were then used to make the blank as smooth as possible. I didn't notice much difference, so I did it again. On the second blank, I still didn't notice much difference, however, and perhaps due to my imagination, the cast steel skew seemed to require a bit more effort than the HSS. I ended up not needing to sharpen the tools, but would have taken the cast steel tools to the grinder if I had continued.

To conclude

My conclusion is that I will be keeping the HSS tools for my everyday turning. I am a believer in modern metallurgy and am quite confident in the edge holding of my Sorby turning tools. Even though I was careful in sharpening the cast steel, I am also aware of the steel softening result of bluing the edge, which isn't a concern with the HSS. I like the handsome old vintage cast steel tools, but they will probably spend a lot of time on the rack awaiting use. ●



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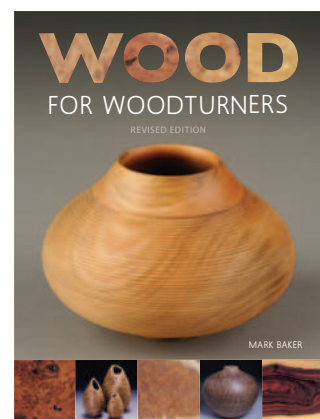
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Buying wood

In Mark Baker's book *Wood for Woodturners*, he looks at different sources for your timber

Selecting and buying wood is, for many, a daunting but fascinating experience. There are so many ways in which the unwary can be caught out and make expensive mistakes: by buying the wrong timber or sizes for the job they want to do, failing to prepare or season it properly, or simply being lured by the lovely looks of some pricey piece of wood when they are just starting out and do not yet have the skills to get the best from the timber.



Wood for Woodturners by Mark Baker, GMC Publications, RRP £16.99, available online & from all good bookshops

A selection of turned work by Mark Baker



What to bear in mind

The primary considerations when buying timber are to work out what you want to make, what the item is for, what size it will be and what other techniques, if any, you are going to use on the piece. If you want to carve, colour, pierce or rout, the wood needs to be able to be worked in such a manner. If you are creating a piece in order to show off its form and shape to the fullest, you might want a bland-looking timber so there are no visual or tactile extras to distract from the clean look. If you want to use a highly figured piece of wood for your work, consider how much fine detail you want to have – will there be clashes visually between the high figuring and the detail? If an item is totally sculptural and solely to be looked at, then select a timber that has the working qualities you need to create the desired shape, detail, appearance and feel.

If the finished piece is to hold edible items, then the choice of timber is very important, as is the finish selected. You want a strong timber that does not splinter or fracture easily on the edges, so it can withstand the rough and tumble of use, and which does not have pores or fissures in which the food can play peek-a-boo (nor will you want to place unnecessary details such as beads or coves in areas that will become food traps). You also need to choose both a wood and a finish that are not harmful, will not taint the edible items placed inside, are easy to clean and withstand staining.

You need to ask yourself a lot of questions when planning to make something, and they all have a bearing on what wood you eventually select.

“
Timber varies in its growing habits, working qualities, appearance and price. This is especially true of figured pieces such as burrs (burls), crotches and rare timbers from far-flung places, which can be expensive
”



Above: Tree surgeon cutting a tree trunk into manageable sections

Sources of wood

Woodyards and specialist timber suppliers offer a wide selection of timber, as do local park and forestry authorities. Check the Internet for suppliers near you – there are many excellent suppliers around the world.

Friendships with tree surgeons are also well worth cultivating. It is worth noting that many tree surgeons have to pay to dump or dispose of the timber they cut down. If they know that you want timber, then they may be willing to let you know what they have, and even transport it to you instead of the tip. Some of my tree surgeon friends will also cut pieces to a more manageable size for customers. This is a must for me, as I simply don't have the space for a whole tree in my front garden and I certainly don't have the equipment to break down a tree properly. Instead, I arrange an amicable payment for the wood and the time taken to cut it and get it to me.

As in most things, it is vital to get to know the people we are doing business with – many friendships develop over the years, to mutual benefit. I trust implicitly the timber suppliers I use and their knowledge is invaluable. The wood suppliers I buy from will give me a call when they get something special in. Like many woodworkers, I will happily travel many miles for something 'special' – especially when I get the call to say that the wood I have been hunting for has finally arrived.

Experience is the only way to learn how to spot faults and potential problems – just as practice is the only way to get better at turning, fishing, golf or any other activity.

If we don't practise, we don't learn and develop. It is imperative that we take the time to understand what a piece of wood is truly worth – not only monetarily, but as the raw material of our craft – and how the asking price of the wood relates to the potential value of the finished product.

How to buy

There are numerous ways to buy timber, but the first things to consider are: what do you need in order to make what you intend to make, and how frequently do you turn? There is no point in buying a tree if you only turn five projects a year – no matter how little the wood cost you.

Right: Spindle work timber sections and turnings

Below: Blanks for bowl/faceplate work, and some finished articles



Buying a felled tree or part of a trunk

Without doubt the least expensive way to buy wood is as a log or trunk – sometimes it is even free. But there are a number of problems when buying wood in this way, beginning with the cost and time factors involved in transporting it. You need space, too. And once you have it, you need access to the appropriate machinery to cut it to the required size, and the knowledge of how to convert it and season it. You also have to have the equipment, workers and strength to move potentially large sections of wood around safely, and storage space for the resulting cut wood.

What you want from your timber is going to dictate how it is sectioned up. So, are you doing mostly bowls and platters (often termed 'faceplate work') and, if so, how thick and wide will they be? Or are you mainly doing goblets, boxes, vases, chair and table legs, table lamps or similar ('spindle' or 'between centres' work?). For this work, you have to decide how thick and how long these will be.



Above: A section of a tree trunk ready for milling



Above: A log being sawn into boards

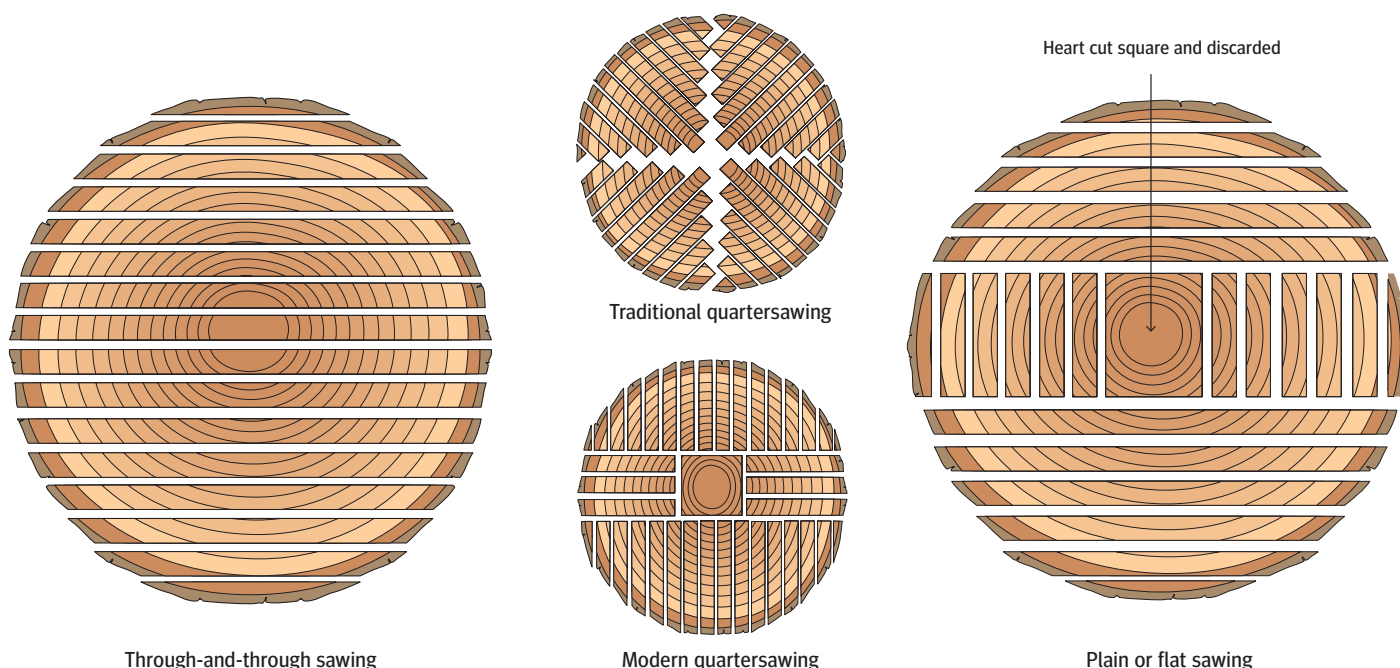
Conversion

The process of sawing trees or logs into smaller sections is called 'conversion'. Things to consider before you cut the wood are not only what you are going to be turning, but your strategy for making use of the wood: will you go for maximum yield, opt for the best cuts to yield the most stable timber, or will you cut the wood to show off any figuring to its maximum potential? Of course, all these considerations must be balanced against the need to minimise wastage – though wastage during conversion is never entirely predictable. The most common configurations for converting whole logs are illustrated below.

You must also learn how to spot potential faults and figuring so you can work out what is the best route to take. You will want to avoid splits, shakes, rot and so on, which may not be evident from the outside. You also want to recognise areas that may have attractive figuring, and to judge how extensive they are likely to be.

Then, once you have cut your tree into sections – usually into boards – you need to season them and minimise any degrade while doing so. It is a huge learning curve and a potentially costly one at the outset, in terms of both equipment and timber wastage. But if you turn a lot and possibly want to sell timber too, then this route provides you with a lot of options. It gives you total control over how the wood is cut, and there is a massive cost saving – once you have learnt the ropes and acquired the equipment – over buying converted and seasoned timber.

Having said all that, I know of only about 30 turners who do this on a regular basis. Most turners do not do enough work or have enough time or space to justify this approach.



Above: The most common configurations for converting whole logs

Buying boards

The next cheapest method is to buy sawn boards, which are available in various widths and thicknesses, depending on the species and how the board is cut. Through-and-through-cut boards are the cheapest – this is where a tree is sliced horizontally through its length. The most expensive option is planed, pre dimensioned boards of specific widths, lengths and thicknesses. Either kind can be bought partially seasoned or kiln-dried, and wastage is reduced compared to buying a tree and converting it yourself.

The downside for the turner is that because the tree has been transported, stored and then worked on at the woodyard, there is a price premium to cover the supplier's time and other costs. And because the board's surface is fully visible, the dealer will be fully aware of the extent of any special figuring and will charge you a premium accordingly.

Typically, boards are available in thicknesses of 1–4in (25–100mm), but larger sections may be cut to special order.

Many professional and hobby turners buy wood this way. Some go direct to timber suppliers and ask for boards to be cut to a given size when a tree becomes available, while others will buy a thickness of board that will suit a wide variety of projects. When you buy a whole board, make sure you like the timber and are prepared to work with it on a number of projects. Buying boards gives you maximum flexibility in how the wood is cut. Boards are also simple to store, but unless the wood is kiln-dried, further drying will be necessary once you get it home.

Buying pre-dimensioned blanks

The most expensive way of buying wood is as pre-dimensioned blanks or sections, which are available in a large array of sizes, either partially seasoned or kiln-dried. These are ideally suited for the amateur who requires only a few pieces in a year, or for those who are after a small piece of something special – a burr, perhaps – for a one-off project. The plus points to buying wood this way are that the pieces are usually planed and sealed so that you can see exactly what you are buying, faults and all. Blanks can also be bought at a size that is close to your requirements, so that storage is easier and takes little space – depending, of course, on how many blanks you keep in stock. Blanks are the most expensive option because the woodyard has converted and dimensioned the tree trunks (thereby incurring wastage), sanded the surface and possibly also seasoned the wood.

But this will save you the time and cost of doing it yourself.

Some timbers may be sold as small branches. These can be useful but be careful of the splits that can occur during drying.



Left: Boxwood and yew sold as sections of branch or small trunks. The left-hand boxwood section has split



1 Boards stacked and ready for inspection **2** Boards racked and ready for purchase
3 Racks of prepared blanks for turners and carvers **4** Boards stacked and stickered for air-drying

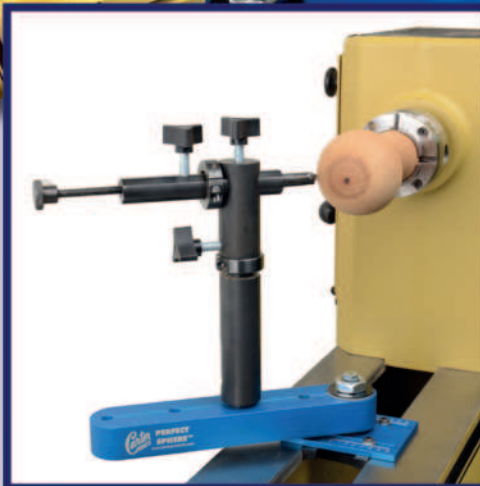
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Candlestick

Alan Holtham makes an elegant holder to bathe in the soft, romantic glow of candlelight

The modern trend of using candles seems to continue unabated and candlesticks of any form always make really acceptable gifts. They are also very popular at craft fairs, so consider turning a few for your next selling event. They can be big, small, fat or thin to match the huge range of candles that are currently available, making them an excellent way of using up some of those offcuts of timber that have been lurking under the bench for far too long.

This one-piece design is one of the simplest to make and you can amend the proportions to suit whatever timber you have available. Make it more detailed for the traditional look, or keep it really plain and simple for a more contemporary setting.

As candles come in a variety of shapes and sizes, you need to think about ways of holding them and the type of recess in the top of the candlestick. I have found that a $\frac{7}{8}$ in (22mm) hole suffices for most of the thinner styles, though I usually insert a standard tool ferrule to neaten up the hole. For bigger candles you can buy brass and steel cups that can be set into the end of the candlestick or even small saucers with a central spike to accommodate the very fat candles. All these accessories are available from woodturning and craft suppliers.



PHOTOGRAPHY BY ALAN HOLTHAM

Plans & equipment

Tools & equipment

- PPE & RPE as appropriate
- $\frac{3}{4}$ in (19mm) roughing gouge
- Parting tool
- $\frac{3}{4}$ in (19mm) skew chisel
- $\frac{1}{4}$ in (6mm) spindle gouge
- $\frac{3}{8}$ in (10mm) spindle gouge
- $\frac{7}{8}$ in (22mm) sawtooth bit

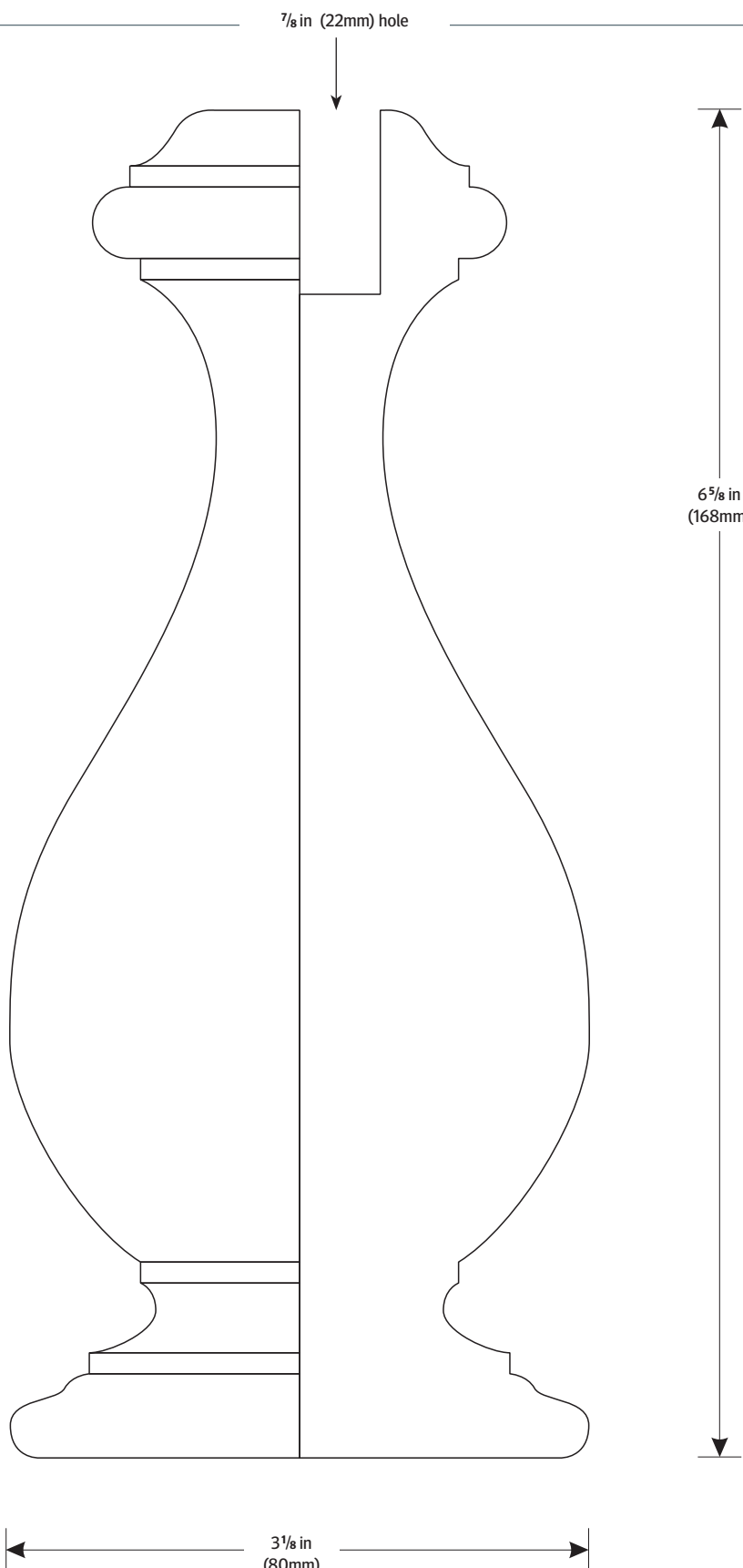
Materials

- Yew blank, $3\frac{1}{4}$ x $3\frac{1}{4}$ x 7 in (82 x 82 x 178mm)

$\frac{7}{8}$ in (22mm) hole

$6\frac{5}{8}$ in
(168mm)

$3\frac{1}{8}$ in
(80mm)



◀ The making

1 Start by marking the centres at either end of the blank by drawing in the diagonals. Do this carefully if you want to maximise the biggest diameter you can get out of the blank.

TOP TIP

See Step 1

For any piece of turning with a central hole it is essential to drill the hole first and then turn the profile with the blank centred on this hole. Turning the profile first and then trying to drill a concentric hole nearly always ends in failure, with the hole off centre. Use a drill press for maximum accuracy.



2 Don't drill the hole too deep at this stage or you will not be able to reach to the bottom with your tailstock centre; about $\frac{1}{2}$ in (13mm) should be deep enough for now.

3 With a wooden mallet, knock in the headstock drive centre on the intersection of the diagonals, making sure that the wings engage fully in the timber.

4 Mount the blank in the lathe, holding it between the centres by bringing the tailstock up into the pre-drilled hole.

5 Spin the blank a few times by hand to make sure that the toolrest is clear and set the lathe speed to about 1000rpm for the roughing-out stage on a blank of this size.

6 Use the roughing gouge with the handle well down, rolled on its side and angled slightly in the direction you're going to move it, i.e. left to right.



HEALTH & SAFETY

Candle cups absorb and displace the heat of the candle. Any wooden candlestick which does not have one may dry out, char and/or catch fire. Never leave a lit candle unattended and always make sure it is properly extinguished afterwards.



7 Start turning away at the corners at the right-hand end of the blank. Present the tool quite tentatively at first, as you cannot always see the corners when they are revolving at speed.

8 Keep working back a little further to the left with each successive cut, maintaining the same tool angle to make sure the bevel rubs and the top corners of the gouge remain clear of the work.

9 When you get near to the left-hand end, reverse the gouge position and then work from right to left, again with the handle of the gouge well down.

10 Keep reducing the whole length of the cylinder until there are no flat areas left. Practise holding the gouge and running your finger along the tool-rest as a guide, to get the cylinder as parallel as possible.

11 Use the parting tool to true up the top end and take just enough off to square it up. Present the tool with the handle well down to start with, then gradually raise the handle as the cut nears the centre.

12 Repeat the procedure at the bottom end, but this time angle the parting tool slightly inwards to form a hollow undercut on the base, so the finished candlestick will sit firm.

13 Use the parting tool again to mark in where each change of detail will be, making the cut down to somewhere near the finished diameter to give you a guide to work to with the shaping.

14 Most of the detail can be formed using the $\frac{3}{8}$ in (10mm) spindle gouge, keeping it well on its side with the bevel rubbing and always working downhill.

15 Don't be afraid to take away plenty of timber and make cuts over a wide area of detail, so you can see how the overall proportions develop.



◀ **16** Finer detail will need a $\frac{1}{4}$ in (6mm) spindle gouge, but use this in exactly the same way, rolling it down the sides on either side of the cove.

17 Beginners tend to make coves far too shallow and more V-shaped than U-shaped.

18 See how this looks much more elegant, with the sides steeper and the bottom of the candlestick more evenly rounded.

19 The main shaping of the stem is carried out very quickly and easily using the roughing gouge. I find a larger tool like this is easier to control than a spindle gouge on big areas.

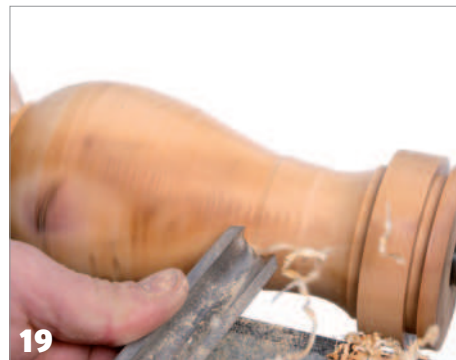
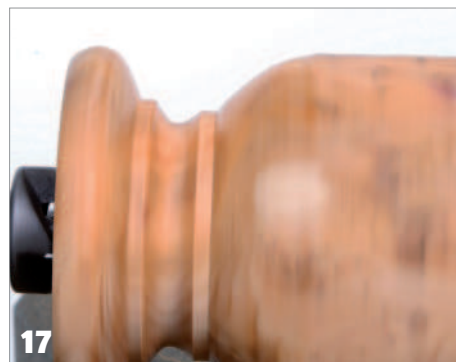
20 If you hold the gouge as I have shown, to keep the bevel in contact, the resulting finish should be really smooth with very little tearing, even on the end-grain areas.

21 Shaping a top end is another job for the $\frac{3}{8}$ in (10mm) spindle gouge, working down as close as possible to the revolving centre.

22 When access becomes too awkward because of the centre, finish off with a few slicing cuts using the skew chisel to leave a polished surface. (This is why it is important not to drill the candle hole too deep to start with.)

23 Use a skew chisel on its back to incise a tiny line at each definite change. This will sharpen up the appearance of the detail and make an amazing difference.

24 Sand carefully to avoid spoiling the detail; fold the abrasive into rolls and flats to get into all the nooks and crannies. Start at about 240 grit and then work progressively up the grades to 400 or 600.

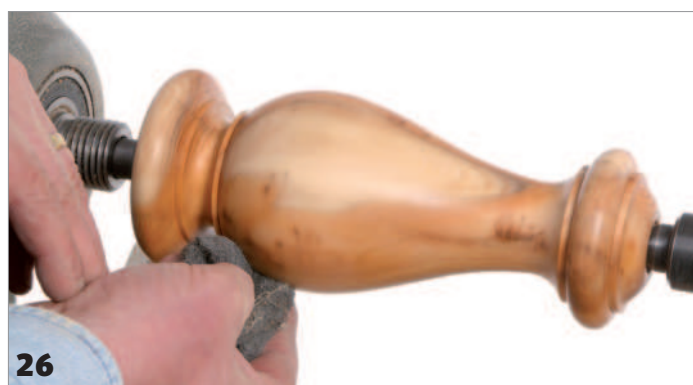


TOP TIP

Reduce the speed to about 750rpm for sanding

You risk overheating the surface and generating heat cracks in fine-grained timber like this if you spin the work too fast.





25 Start the finishing process by applying two or three coats of cellulose sanding sealer, flattening down each coat when dry with the finest abrasive paper you used previously.

26 Burnish the final coat with 0000 grade wire wool to remove any excess sealer and to leave a perfect, smooth surface for polishing.

27 Apply a coat of paste wax with the lathe spinning. Allow it to dry for about an hour, then buff with a soft cloth.

28 Remove the candlestick from the lathe and re-drill the hole deep enough to accommodate a standard candle, normally about 1in (25mm) in depth.



29 If you are going to use an inserted ferrule, tap it in gently, using a rubber mallet to avoid damaging the edges.

30 Grip a small piece of scrap timber in the combination chuck, then turn it to a very slight taper that will fit in the candle hole.

31 Use this as the drive and remount the candlestick in the lathe; bring the revolving centre up to engage in the centre mark left by the four-prong drive.



32 Finish off the undercut of the base using the parting tool, cutting down as close as possible to the point of the revolving centre.

33 Give the candlestick a final polish and then, with the lathe stopped, slice off the tiny nib that is left using a skew chisel and turning the lathe by hand.

34 The finished candlestick should now sit firm and ready for action. ●



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Kurt's clinic

Kurt Hertzog answers readers' questions

My club has a Show & Tell feature at each meeting. There are plenty of interesting items with many things to learn, but there are some presenters who drone on and on about minutia, shortchanging those later in the programme. Suggestions?

Having been a member and holding a variety of offices in four different AAW chapters, I know the feeling well. At times I was responsible for keeping meetings moving and on time. The Show & Tell items are on display ahead of time during the meeting to look at and enjoy. You can formulate questions you'd like to ask of the maker. I always believed asking when the entire group could hear the question and answer was far more valuable than you just tracking down the maker before that part of the meeting for a private explanation. I tried to encourage folks to hold their questions so all could benefit during the actual show and tell segment. As you've said, there are some who are enamoured with the sound of their own voice. For those whose lives may not have afforded them as much stage time as they wished, preventing them from monopolising too much of the time available at the expense of the rest of the attendees makes for a more enjoyable event. There are several methods that can help with this problem. It is not your place to solve this (unless you are an officer), but rather the officer responsible for the meeting operation. You can let that officer know, although I'm pretty sure they already know, that this is quite unfair and a problem in your opinion. That officer can talk to those who repeatedly exhibit this trait. This discussion should be done offline and quietly. Publicly embarrassing the individual accomplishes little positive. A simple explanation to them that sufficient time needs to be afforded to all can often help. If that doesn't work, in the future when this happens, the



PHOTOGRAPHY BY KURT HERTZOG

responsible officer can interrupt when their fair share of time has been consumed. Something as simple as: 'We need to keep moving so I suggest we move on, and you can pursue more questions/ explanations of this presenter after the meeting or offline.' Another great fix for this problem is the break-in with: 'Since this is quite popular and has a lot of questions, let's ask this presenter to prepare it as a club demonstration for a future meeting.' Setting a hard time for all of the presenters to live within defeats the purpose, since some will take only moments and other minutes, so there is wiggle room on each presenter's time allotment. Whomever is charged with trying to fix this needs to be cautious in either method lest they offend the party, and they then stop participating. That isn't the goal. The goal is to run the meeting on time, enjoy the various facets of the meeting, and not be handicapped by the time-hogs who seem to be unaware that they aren't properly sharing the time. I'm sure there are other methods but one of these always worked nicely when I needed to employ them.



1 If someone gets a bit too long winded in their portion of show and tell, try the couple of polite methods mentioned in the text to get back on track.

2 With folks having time to examine the show and tell items ahead of time, they can formulate their questions for the show and tell portion of the meeting.

Over the years, you've written a lot about tools and tool steels. What is your favourite? Why?

I have written considerably about tools over the years, including the various steels involved. Not to cop out but I don't have any real favourite. I have a few older carbon steel tools that I treasure. They accept a very keen edge and cut very nicely. They do need to be sharpened more frequently and with care lest the temper be impacted. The bulk of my tools are HSS from the various manufacturers. The rest of my tools are a smattering of everything to power metal alloy tools, along with some carbide tools. I hesitantly say there is no perfect steel. Every steel has its strengths and weaknesses. Tweaking the chemistry to enhance one performance characteristic usually comes at the expense of another one. Every alloy is a combination of the performance trade-offs made at the formulation. There are also some interesting speciality processes that claim to enhance the tool steel performance.

If there was the 'perfect' steel for our tools, everything would be made from it. By virtue of its perfection in function, it would be the norm and poured in high volume, enhancing its cost aspects too. From the many tool-making classes I've taught, we've always been successful with O1 tools steel because of the ease of heat treating. I have a batch of these that I've made that see very frequent use, along with the other commercially available tools in my kit. The production turners, especially based on their typical production run, will likely have their own favourite tools and steels based on their functional lifetime, initial cost, serviceability, edge holding characteristics, keenness, and more. For my needs, any quality tool from nearly any tool steel performs well when it is sharp. So, to close this question, I'm going to indicate that my favourite tool and tool steel is one that is properly sharpened and ready for use. A motto to live by, if you can, is to buy based on value, not on price. That should keep you out of the pot metal alloys and in quality metals that will serve you well.



3 Regardless of the size or brand, I find that if I can put a good edge on a tool and it gives me reasonable service, I'm not bound to any specific metallurgical alloy. HSS serves me well. **4** The best advice I can give turners, both new and not so new, is to get a decent sharpening system and learn how to use it. I can't think of a better investment. **5** Learn to put a quality edge on your tools that can provide a great cutting capability. This is one of the foundations of good turning. **6** Any quality tool steel that you can quickly touch up to get back into service is a winner. Of course, the hard-working production pros can have different needs than I.

Our club is reducing the number of on-site demos and classes in favour of more remote demos. Do you think this trend is going to kill off the in-person on-site demos?

I believe that the advantages of remote demos will continue to popularise them, reducing the demand for on-site demos. There are too many advantages to remotes. Let's forget the lockdown situations. In our returning to normal environment, the absence of travel costs and times for the demonstrator as well as the larger, multiple

audiences that can be simultaneously included, are key positives. The clubs can benefit from reductions in costs as well as eliminating the potential problems that can arise with demonstrators and tools travelling from afar. With many demonstrators charging by the head, the club also isn't out on a limb for the potential high cost per person that can occur with onsite demos that haven't been subscribed well. Will onsite demos and hands-on classes die? I think they will certainly be reduced but I think they will still be around in a reduced capacity.



7 Remote demos offer many cost and time advantages to the clubs and the demonstrator. They will grow in popularity, but I don't see the hands-on classes/demos going away completely. **8** Not only does the demonstrator doing remotes get to stay at their home shop, they also don't need to cart along everything that they might need during a demo. **9** While I concede that remote demos will continue to grow, I'm personally a big fan of up close and personal demos – especially the explanations to the group.

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Unique dedication

Journalist Victoria Lynn looks at the life and work of Doug Clark

Trained as a custom woodworker and cabinetmaker, Doug's career spans more than 40 years. Turning bowls is a natural outpouring of his devotion to creating unique art.

When the question arises 'are artists made or born?', Doug Clark would likely be an example of both. As a child he was making wooden gifts and creating greeting cards. He was drawn to tiling, caning, stained glass and cabinet making. While renovating Nantucket homes, he developed life-long friends who recognised his talent and encouraged his dream. The instinctive drive was always in developing his art. The dream became wanting to create a unique wooden product built in his own shop.

Doug moved across the continent to a Washington artist community where he focused on turning thin bowls. While participating in various juried venues, many people said he did not belong, insisting his works were those of fine art and should be in museums. His work has been distributed through Connecticut, Vermont, and New Hampshire Craft Galleries, as well as Nantucket Island, Massachusetts, Vancouver, BC, Washington State, Utah, Japan and England. His bowls rated him the honour of being among the top 12% of artists in the US by the Smithsonian Institute of Art.

When he suffered a serious back injury that threatened his success, he once again had friends who encouraged him to never surrender his dream of creating uniquely beautifully turned wooden treasures. In his own words, the following interview creates the rest of Doug's colourful story:

What made you want to specialise in woodworking?

Wood creations are an emotional experience. They feed my very soul with their various grains, colours, and aromas. Every section of wood challenges me to create – to literally turn them into unique masterpieces. I just need to uncover the form that best honours and preserves its beauty.

Why did you begin woodturning?

A friend wanted me to make legs for an antique table. Following research, I bought an inexpensive lathe and created 16 legs. She was



PHOTOGRAPHY BY DOUG CLARK (UNLESS STATED OTHERWISE)

elated. I wondered what to do further with the lathe and she suggested I make bowls. So I made small wooden bowls and was amazed how they sold quickly in the local exotic variety store in Nantucket.

When did you decide to specialise in bowl turning?

A wood mill owner in Vermont sold me four large planks of butternut wood for \$35. I made two bowls and gave him one. He held it to his chest, sat down in the grass and cried. I figured, if my work can cause such a reaction and bring joy, then I would continue making bowls for folks.

How long does it take you to create a vessel?

My pieces have a history even before being secured to the lathe. Researching, designing, wood-seeking, cutting, gluing, pondering, praying and refiguring time add up significantly. Plus computer time spent researching and ordering supplies along with shipping delays. Basically, my answer is: 'It takes a lifetime.'

Why did you begin to turn large vessels?

After examining several of my laminated bowls, noted fine-art collector and gallery owner Thomas Anthony invited me to make large, shiny, one-of-a-kind vessels – actual wooden sculptures, in the style of my bowls. He inspired and initiated me into the world of high-end art. Following three years of preparation, I was honoured to have my vessels displayed on pedestals in his prestigious Park City Utah gallery.



1 An aerial view of the black limba vessel **2** The rich colours in this hand-turned bowl are quite eye catching **3** Various wooden knitting bowls are an heirloom treasure **4** Alder sculpture with sapele stripes courtesy of Thomas Anthony Gallery **5** Sapele sculpture courtesy of Thomas Anthony Studio



6 Thin-walled bowl, transparent to the light **7** Studio features lathe room, kiln and spray booth **8** Bass wood, 20in thin-wall bowl **9** The butternut bowl that launched Doug's bowl-making career **10** Exotic African Padouk bowl **11** The maple stripes of this bowl add a nice contrast to the darker sapele wood

What was your speciality prior to turning large vessels?

Food-safe, thin-walled bowls. Some so thin they were transparent when held up to the light.

How did your current studio come about?

My first shop was a converted barn in Vermont. The moisture in my Washington State studio became a problem, which led me to the drier climate of a mountainous area of Utah. The desire to convert my trade to large vessels required a larger space. I remade a metal pole barn into a studio equal to the task. Everyone seems to love my well-organised studio, which includes a kiln, lathe room and spray booth.

What's your favourite timber to work with?

I love all types of wood and believe each is unique. To prove this, one of my favourite bowls is created from bass wood.

Realising you have created several of your tools, what caused you to share the lathe rest you designed?

Years ago, I needed more stability in order to concentrate on the shape rather than constant stability rest concern about the carbide

tip being level and safe. So, I had a machinist make me a wider rest I have thoroughly enjoyed. I observed how fellow woodturners struggled with their narrow rests and I recently determined to share mine. I'm happy to contribute to the safety and satisfaction of turners by providing them with a patented 'stability rest' available on my website, dougclarkfinewoodworking.com

In doing my studio tours, I try to inspire youth to dare to dream of their potential and then work toward that dream. I emphasise how, with a combination of love, labour, sweat, tears and prayers, our dreams can turn into reality.

What else makes Doug tick?

Unpretentious and inherently quiet, Doug's additional loves include his wife, family, nature, tractor, animals, humming birds, horses, archery, hunting, hot baths, gardening and eating!

To find out more about Doug and his works: dougclarkwoodworking.com
Facebook and Instagram: [dougclarkfinewoodworking](https://www.facebook.com/dougclarkfinewoodworking)



12 Black limba and black walnut sculptures (courtesy of Thomas Anthony Gallery) **13** Doug's happiest moments of fulfilling his turning passion **14** He is not one to boast. Yet, there are times when even he is amazed at the results of his labour

Diary of a professional woodturner – part 19

Richard Findley continues his diary, telling us about various jobs going through his workshop

It's been a strange month. With a few days off with my family at half term and being away for several days teaching, I have had a month of smaller jobs rather than larger production runs. I have also done some woodworking that didn't require my lathe, which made a refreshing change from the norm.

West Dean College

A couple of months ago, I wrote about a meeting I had at West Dean College concerning running a series of short woodturning courses. We arranged the first and it happened at the start of this month. I had five students booked on the course and was looking forward to it. The course began on Monday evening and I spent some time on the previous Friday preparing my tools, timber and a few other supplies for the course and loaded up on Monday morning before the three-and-a-half hour drive to West Sussex. West Dean sits in the South Downs National Park, close to the south coast of England. As such, most of the journey was on main roads, but the final 45 minutes was entirely country roads with some lovely scenery and quite a number of tight bends. The journey was uneventful once I had persuaded my sat nav that I didn't want to go on the M25 and that there was a better route (as far as I'm concerned, there is almost always a better route than going on the M25).

I had only visited West Dean for about an hour previously so, although I had seen the workshop and had a bit of a tour, it was essentially all new to me. The staff are all incredibly helpful and friendly and I was made to feel at home. I was shown around again so that I could get my bearings. I decided it wouldn't look good if the course tutor got lost on the way to the workshop.

The workshop that is used for woodturning is used for all sorts of different short courses throughout the year, so the lathes and equipment cabinets were stowed away on my last visit and the workshop was set up for another course. When I arrived on the Monday afternoon it had been set up specifically for my course with three Vicmarc VL175s and four Graduate lathes, each with a wheeled cabinet containing a chuck, a couple of sets of jaws and a set of tools, there was a large central bench and a white board. The team of helpful technicians were on hand should I have any problems or workshop-related questions.



1 The workshop at West Dean College





1

◀ I soon found my way around, got the van unloaded, the workshop set up and myself settled into my comfortable room, high up in the old manor house that is the main building of the college. The instruction was to meet my students in the bar area before having lunch with them in the canteen and then an hour-long session in the workshop. I had already decided that there wouldn't be any turning in that first session, but it would give the group a chance to choose a lathe, select their timber from the stack I took with me and familiarise themselves with the workshop. I gave a safety talk and ran through the plan for the next couple of days.

The course was titled Better Bowls and was aimed at turners with some experience who wanted to improve their turning and knowledge on the subject. The five students were all eager to learn and got stuck into the projects. Over the two days, we turned a small bowl together, with me demonstrating each stage before sending them off to complete it on their bowl. By the end of the first day everyone had a small bowl finished and had started a larger bowl which could be to a slightly more complex design from three that I suggested. By the end of the second day, I had a group of tired but happy woodturners with two bowls. They were a great group of students for my first course, they all got on well and helped each other out and conversation was easy between the group, which made the whole experience a pleasure for me.

Future courses

I will be running the same course again at the end of March 2023 and another more advanced, three-day course in June. After talking to the short course organiser, she said that if there would be this longer three-day slot in June and if there was something I thought would work well for that I should suggest it. One of the hardest things about planning a course like this is having the right amount of content. Too little and students don't feel they are getting their money's worth and get bored, too much and they feel rushed and pressurised. This was reinforced by one of the previous tutors, who told me that the students won't turn as quickly as I might expect. I had made three sample bowls for the class, one in each of the shapes I would be using as a guide, and I had spent a very easy afternoon making them the week before the course. I hoped two bowls would be enough for a two-day class and as it was, it worked out just right for them, although I did have extra blanks in case anyone worked more quickly than the others.



PHOTOGRAPHS BY RICHARD FINDLEY

2 The group of students and myself outside West Dean College

Having the option for a three-day class is exciting and opens up the opportunity for a more complex project-based course. At this early stage I am thinking of a tazza, which is a bowl on a stand and so would involve a day of bowl turning, a day of spindle turning and a day of faceplate turning for the base. I am hopeful this would be a great project for a group of more experienced turners. I am hoping to get a little time in the next couple of weeks to make a sample tazza to help plan and promote the course, which I will share with you when it's finished.



Incense burners

A regular job I have is incense burner bases. My client designed the burners to feature a spun copper rim and a walnut base. The base is drilled to hold the sticks of incense and the copper rim catches any ash that burns off it. It's quite a high-end and specialist product so I only make small batches of them but make two or three batches a year, along with a few other similar products for him.

When I first made them there was an issue with the fit between the wood and the copper. Spinning, like woodturning, is a hand craft, so, as accurate as a professional can be, over a batch there is likely to be some tiny variation in size. As the two parts need to fit tightly together, the join is important, so I suggested that the spinner send his parts to me and I would number them and make the bases specifically for each component – that way the fit is guaranteed. We've done it this way ever since and it works well. I turn the bases, oil finish them and glue a little polished disc with his logo into the base with epoxy resin and send them back to him, each paired with the copper rims.

3 The walnut incense burners with copper rims

Pedestal table base

I was asked to make a pedestal table base by an old friend earlier this month. My current lead time is into next year at this point, but as he is an old school friend, I made the effort to squeeze it in for him. He is a trained cabinet maker and makes everything from bespoke pieces of furniture to complete kitchens for high-end clients. He has some capacity for small-scale turning but couldn't handle the large base he needed for his current project. The dining table he was making was an oak folding table with a painted pedestal and oak base. At 530mm in diameter, the base was far from the biggest one I've turned and fitted easily on the Wadkin with the gap-bed removed. I can turn 400mm over the bed, but my old lathe has a feature rarely seen these days, where a section of the bed can be removed by undoing four bolts and lifting it out. This allows up to 720mm to be turned. I have a cranked banjo that bridges the gap and allows me to get my toolrest close to the work.



When I bought my lathe, it came with all the additional extras except the cranked banjo. An Instagram friend in America had an RS and was able to borrow a cranked banjo to get some cast. I jumped at the chance to get this rare, missing piece. It cost me an eye-watering amount to buy and ship over from the US, but now I have it, the pain of the expense is in the past and I can enjoy using the tool and getting the most from my lathe.

The design was drawn out in full size so I had no problems with dimensions or shapes and turning was enjoyable. He had made it in segmented rings and I found that as I turned, each segment had a small area of short grain that caused some tear-out with my gouge, but by swapping to a negative rake scraper I could achieve a very clean surface all around the base that needed very little sanding. You can see the long shavings coming off the tool in picture 5. The construction was hollow with a plywood base and I believe he planned to fill it with something heavy to give the table additional stability.



4 The table pedestal base on the lathe with the gap-bed removed and the cranked banjo in place **5** Shavings fly from my negative rake scraper as I turn the table base **6** The finished table base

Boxes

I have one customer for whom I have been making boxes for years. He makes parts for a vintage motor car called De Dion-Bouton. By vintage I mean 1900s, horseless carriages rather than what you might think of as a modern car. My customer makes parts of all sorts and I usually make little turned boxes for replacement valves that he supplies to enthusiasts. Once before, I made him some larger, rectangular boxes that house some basic electronics and I was asked to make another batch for him. He supplied me with photos of the original with dimensions and I did the rest. They are quite simple boxes but feature a comb or finger joint on the top edges. This joint needs a jig making for the router table but is fairly straightforward once set up. I have no idea how they would have been made back in the early 1900s though, as routers as we think of them now weren't a thing, so I would be fascinated to see how it was done. I had to dust off the jig I had made some years before for the last batch and scratch my head for a while as I remembered how it all worked, but after a few trial cuts I managed to make a set of joints that matched and fitted together.

I made the boxes from 10mm-thick sapele that I planed down from 25mm. This seems a little wasteful but 25mm is the thinnest commercially available. I did think about deep cutting some 40mm material but it would be a very deep cut, even for my new bandsaw, and if the cut wandered then it would be far more wasteful than planing down 25mm material, so I stuck with it.

7 Cutting the finger joints (for the boxes)



◀ The top and sides are finger jointed together, the sides then run into a rebate in the back or base board. The ends are simply screwed on with brass screws to allow access to the contents of the box. The boxes are fixed to the car with polished brass bands, so when the sapele is stained and polished they look very smart, possibly too smart for the engine of a car, but that is how things were in those days.

Once the finger joints were cut and everything dry-fitted, there was a break in production as I sent the box fronts back to my customer, who stamped a logo into them before sending them back to me for final assembly.

I glued the joints together and used a special finger joint tool, otherwise known as a piece of wood shaped to fit between the fingers of the joints, with a mallet, to knock the joints tightly together before leaving them to one side to dry. Once the glue was cured, I cleaned up the joints and added a small round-over to the finger joints on the router. The ends were then screwed on and the whole thing was given a final sand before packing and sending back to him for the last time.



8 Assembling the boxes using my special finger joint tool
9 The stamped logo on the front of the boxes **10** The finished boxes



Holdbacks

One of my jobs this month took me back to a previous life, when I used to work for my Dad. When I first left school at 16, I worked for my Dad as a joiner. When I say 'joiner', it wasn't the doors and windows that you might expect from a joinery factory, we used to make a type of wooden curtain track that my Grandpa invented just after the war. He was a cabinet maker but in the period after the war people didn't have the money for bespoke furniture, so he saw a gap in the market and started making wooden curtain tracks for windows of all shapes and sizes. This business fed my family for three generations and gave me my introduction to woodwork and a great grounding in business. By the time I worked there, we had diversified to cover a whole range of different types of curtain tracks, poles and accessories. In the late '90s and early 2000s, holdbacks were in fashion and we sold various styles. One such style was a kind of mushroom shape that stood off of the wall and the curtain would be draped over it. I haven't seen or thought about these things for years but was asked to reproduce 10 holdbacks to match a broken sample.

I thoroughly enjoyed making these holdbacks. There were 10 spindles that were a simple but flowing shape to turn and the 10 roundels for the front of the holdbacks were a joy to make, once I worked out the best process to use.

The roundels were what I refer to as faceplate turning, so essentially small bowl blanks with the grain running across the lathe bed. They were mounted on a small screw chuck rather than a faceplate. I think of faceplate turning as a hybrid of bowl turning and spindle turning, because many of the shapes used are like those on a spindle, with beads and coves and fillets, but on a bowl blank rather than a spindle. Because of this, the turning techniques fall a little between the two disciplines as well, so I used a spindle gouge and a couple of negative rake scrapers to achieve the shapes.

As I would with a spindle, I set the positions and the depth of the fillets. I used a square-ended scraper for this and then it was a case of joining the dots by shaping the central boss and the cove with a spindle gouge and refining the cove with a curved scraper. The beech turned easily and I sanded them smooth so they were ready for finishing by my customer.



11 The roundels, original on the right, my new one on the left **12** The finished batch



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Cake stand

Sue Harker shows how to turn a Lazy Susan

The cake stand featured in this article can be used for decorating cakes, having the ability to rotate for smoothing down icing etc., and for displaying the finished cake or a selection of cupcakes. I have four grandchildren and have been decorating their birthday cakes for years without the luxury of a revolving cake stand. The style of cakes the children want are becoming more and more complicated as they grow up, making this item a welcome addition to my baking cupboard.

I have not used a Lazy Susan before so I had to decide how I would secure it to the two pieces of the stand without the need to drill a hole all the way through the base for access. This hole would then need to be plugged.

The solution I chose was to secure the first side of the Lazy Susan to a sacrificial piece of timber, turned into a disc slightly larger than the diameter of the Lazy Susan. Then I drilled a hole all the way through the disc to use for locating the pre-marked screw positions on the underside of the top for securing in place. Then I cut a recess in the base, the correct size for the disc, with the Lazy Susan and top section attached to be glued into.



The making

1 For the top section of the cake stand, a piece of sycamore measuring approx. 250mm diameter and thickness to approx. 20mm is required. Mount the timber on the lathe using the wood screw supplied with your chuck. Most wood screws are too long for this thickness of timber, so to reduce the depth of hole required for mounting the timber, turn a small disc approx. 10mm thick and drill a hole, the same diameter as the screw chuck, through the centre. With the wood screw secured in place, slide on the spacer disc before screwing on the piece of timber. Next, true up the edge of the timber using a $\frac{3}{8}$ in standard grind bowl gouge.



PHOTOGRAPHS COURTESY OF SUE AND GRAHAM HARKER

Plans & equipment

Tools & equipment

- PPE and RPE as appropriate
- $\frac{3}{8}$ in standard bowl gouge
- $\frac{1}{8}$ in parting tool
- Rotary sander
- 120, 180 240, 320, 400 grit abrasive discs
- Sanding arbor fitted into a battery drill
- 9mm drill bit fitted into a drill press
- Screwdriver bit fitted into a battery drill
- 8 x M6 $\frac{1}{2}$ in long screws
- Bradawl

Materials

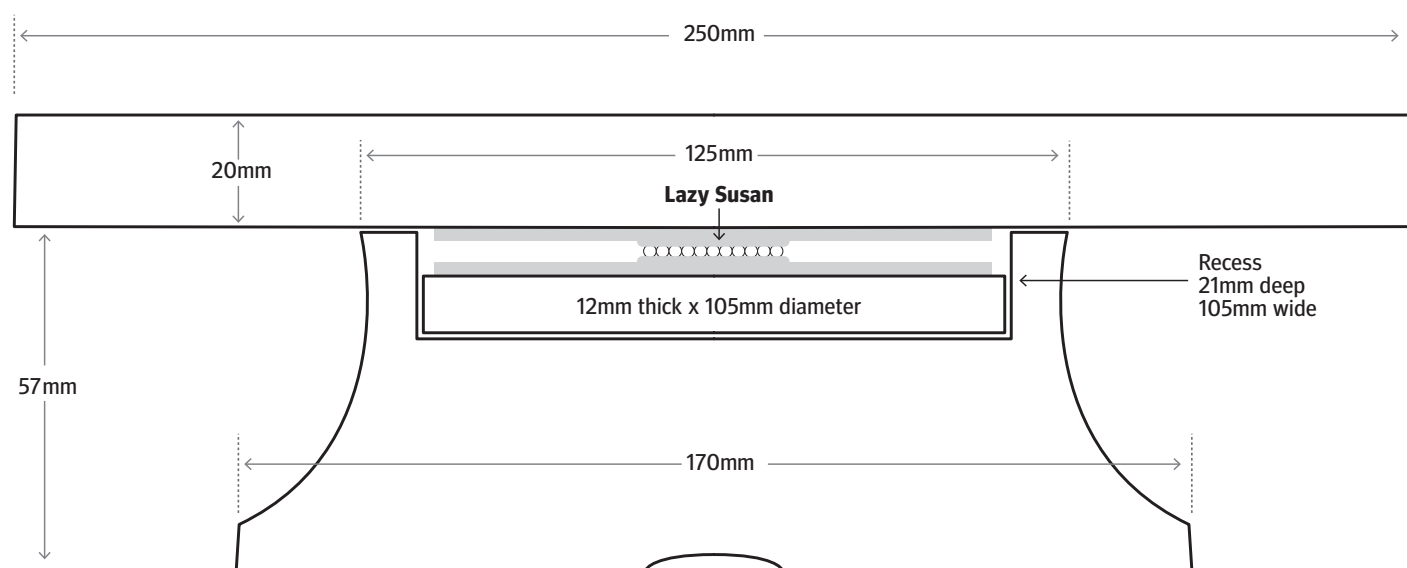
- For the top, a piece of thickened sycamore measuring approx. 250mm x 20mm
- For the base, a piece of sycamore measuring approx. 175mm x 60mm
- Piece of scrap timber measuring approx. 110 x 12mm
- Chestnut food-safe oil
- PVA adhesive

HANDY HINTS

When the wood screw supplied with your chuck is longer than the thickness of timber being used, turn a scrap piece of timber into a thin disc with a hole drilled through the centre, the same diameter as the wood screw. Secure the wood screw into the chuck and slide over the spacer disc, then mount the timber.

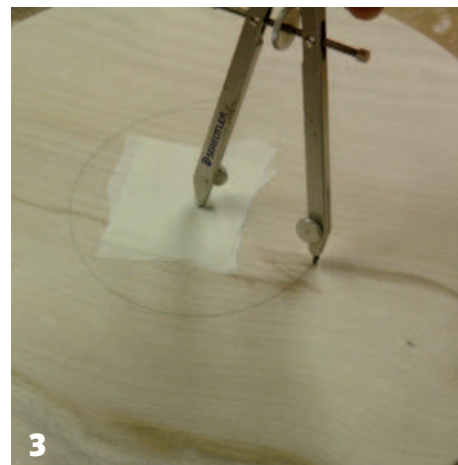
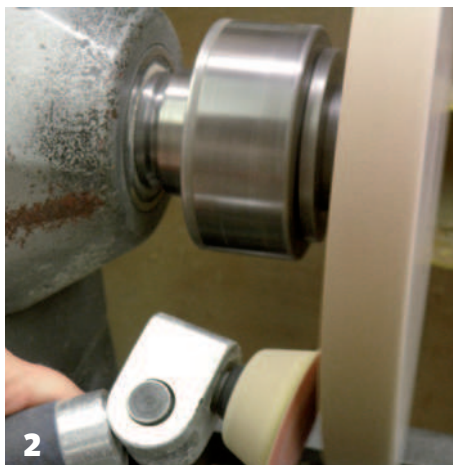
When mounting a piece of timber on the lathe that will need the bottom chucking method removing, drilling a hole with a Forstner bit the nearest size to your jaws is an ideal method. The shallow recess can then be removed by turning a concave towards the centre, thus not wasting timber.

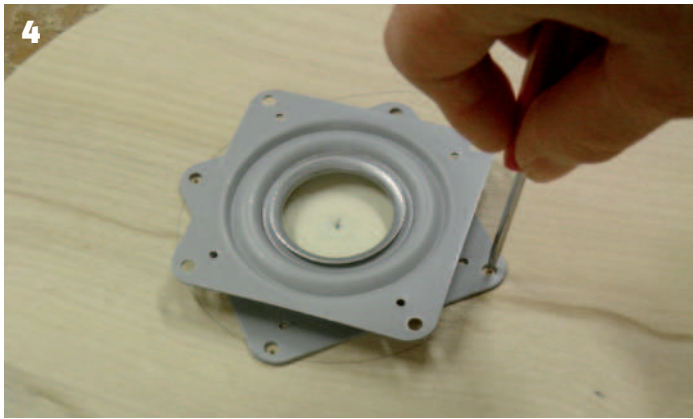
Cut a recess into the top of the base to receive a turned disc with the Lazy Susan attached. A hole drilled through this disc allows access to the screw holes on the Lazy Susan and the previously marked areas on the underneath of the top. The disc is then glued into the base.



2 Sand the edge, front face and back of the piece of wood. Here I am using a rotary sander to sand the back face, a sanding arbor fitted into a drill will be needed for the front face. Work through 120, 180, 240, 320 and 400 grit on all surfaces before removing from the lathe.

3 Next, cover the drill hole used for mounting the timber on the screw chuck; here I have used several pieces of masking tape. Find the centre of the timber and, using a compass, draw a 93mm diameter reference mark.





4 Using the reference mark, position the Lazy Susan so the screw holes line up with the pencil line. Mark the wood with the point of a bradawl for each of the four screws. At this point the Lazy Susan is not screwed in place.

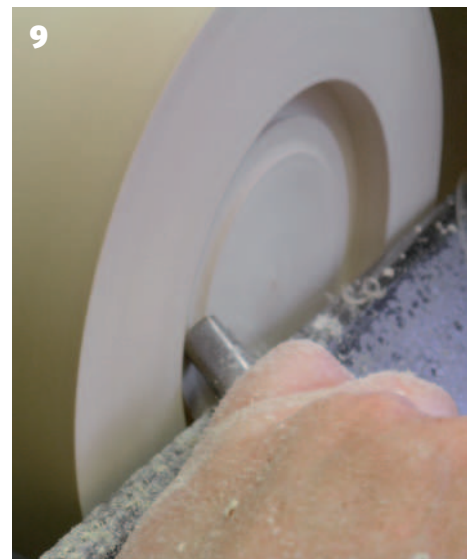
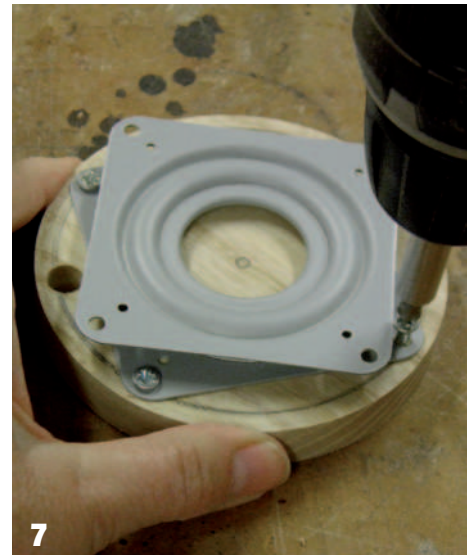
5 Mount a piece of timber measuring approx. 110mm diameter x 12mm thick on the lathe using a shallow recess drilled with the correct size Forstner bit for your jaws. Turn into a cylinder approx. 105mm diameter, true up the front face and cut a shallow recess. Next, draw a reference mark at 93mm diameter for centralising the Lazy Susan. Re-mount the timber using the shallow recess cut earlier and true up the face.

6 Remove the timber from the lathe and, using a drill bit large enough for a screwdriver to fit through, drill a hole through the timber using the reference mark as the centre point for the drill. Here I am using a 9mm drill bit fitted into a drill stand.

7 Position the Lazy Susan on the disc using the reference line marked earlier to align. With the drilled hole positioned halfway along one of the straight edges, as shown in the image, mark each screw position with the point of a bradawl and use M6 ½in-long screws to secure the Lazy Susan in place.

8 Next, drill a shallow recess, the correct diameter to fit your chuck, into the bottom of a piece of timber measuring approx. 175mm diameter x 60mm thick. Mount on to the lathe using this recess and true up the outer edge and front face using a ¾in standard grind bowl gouge. Draw a reference mark at 105mm diameter – this will be the diameter of recess required for the disc insert.

9 Using a 1/8in parting tool, start to create the 105mm-diameter recess by cutting a groove to a depth of approx. 10mm and a width of approx. 10mm, change to a ¾in standard grind bowl gouge to remove the timber from the centre. Repeat these steps until the recess is approx. 22mm deep. Try the disc insert with the Lazy Susan attached into the recess to check for fit and refine where necessary. The disc with the Lazy Susan attached needs to be 1mm taller than the recess to allow for clearance between the base and the top for ease of rotation without the Lazy Susan being visible.



CHECKING THE BASE RECESS DEPTH

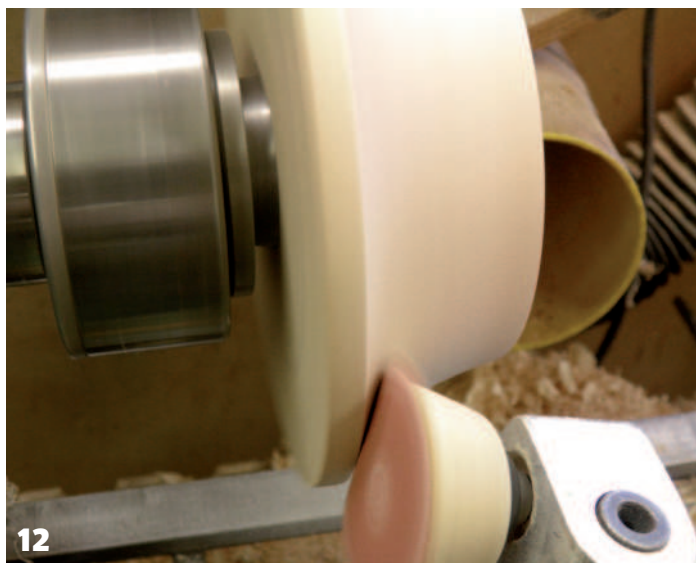
The depth of the recess in the base needs to be approx. 1mm shallower than the thickness of the disc and Lazy Susan. This allows a small clearance between the underneath of the top and base of the cake stand, enabling it to rotate easily while hiding the workings of the Lazy Susan.



10 Draw a reference mark on the front face approx. 125mm diameter. From this mark, start to shape the base by turning a concave shape, reducing the top section to 125mm diameter and the bottom section to approx. 170mm diameter. Leave approx. 10mm flat section at the bottom of the base.

11 Using a parting tool, cut a chucking recess in the bottom of the large recess. This will be used to remount the base for finishing the underneath and removing the original chucking recess.

12 With a 120 grit abrasive disc attached to a rotary sander, sand the profile of the base. Check the surface for imperfections before moving on to the next grit. Work through 180, 240, 320 and 400 grit.



13 Remove the base from the lathe and remount using the recess cut earlier. Using a $\frac{3}{8}$ in standard grind bowl gouge, true up the face and create a shallow concave towards the centre to remove the chucking recess.

14 The hand-held rotary sander tends to stall when sanding towards the centre of the underneath of the base, so a sanding arbor fitted into a battery drill, with a disc of 120 grit abrasive attached, is used. Check the surface finish before progressing on to 180, 240, 320 and 400 grit.

15 Next, secure the disc insert with the Lazy Susan attached to the underneath of the cake stand top. To do this, locate the hole in the disc over one of the marks made earlier with a bradawl. Attach a M6 $\frac{1}{2}$ in screw in that position, move the disc round to the next reference mark and attach a screw there. Continue doing this until all four screws have been secured.

16 Glue the disc insert into the recess in the base using a PVA adhesive, ensuring the grain pattern of both pieces runs in the same direction. Allow to dry before applying several coats of food-safe oil, allowing each coat to soak in before applying more. The cake stand can have oil reapplied as necessary when in use. ●



Community news

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

Doug Clark toolrest

The solid steel Clark Stability Lathe Rest provides increased turning freedom, confidence and satisfaction for every woodturner using carbide tip tools.

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- Designed so the cutting tool easily slides across the top surface
- Rounded edges allow better close access to any round bowl surfaces
- The collar allows for a single desired height-to-centre setting for the entire cutting of the bowl
- Made to work with any shape of bowl
- Usable on either side of the bowl, inside and outside
- Eliminates chatter and reduces sanding
- Made completely of solid, quality steel
- Completed with an ionized finish to help prevent rusting
- Extends the life of carbide tips

Safety features:

The additional width provides a more stable rest, there is greater security when turning inside of bowls and easier manoeuvrability. See Doug's website, dougclarkwoodworking.com. Price: US\$229
Email doug@dougclarkwoodworking.com to place orders.



Bell-ringing spiders

I was very interested to see the letter from Jim Harris in issue 376. Ringing spiders are one of the areas where my hobby of woodturning meets my life-long passion for bellringing.

The spider is a very common device for keeping bell ropes out of the way when not in use. Nowadays, the mechanism for raising them to the ceiling of the church is often kept locked to prevent unauthorised access to the potentially dangerous bells. There are over 5000 rings of bells in the UK as well as some in places such as the US and Australia. So, a potential area for turners to use their imagination. I enclose a photo of one I made for the eight bells at Berry Pomeroy in Devon. The range of designs found across the country is huge and there are some very fine examples, such as the superb one for the 14 ropes at Buckfast Abbey in Devon, a real display of craftsmanship – not mine, I hasten to add. So glad that Jim added his name to his – the majority are left anonymous, which is a shame.

When in use, the ropes add weight and the spider easily descends when required. During ringing it is hoisted out of the way and it needs to be heavy enough to descend under its own weight – the oak used by Jim would be ideal. Thanks for an interesting magazine.

Martin Mansley, Torquay, Devon



Before and after

I turned these vases from yew wood. They stand roughly 29cm tall and were fairly easy to turn as no hollowing was involved except for a 12mm drilled hole for the dry flowers. The pictures give an idea of the before and after.

Stewart Carnan, Cumbernauld, Scotland

Robert Sorby TRAC – Tool Rest Adjustment Collar

A common problem for every woodturner while turning, is that when a new height position is required, and the locking handle is released, the toolrest drops and the position is lost.

The new Robert Sorby TRAC allows the toolrest height to be easily adjusted up or down, by up to 1/2in/13mm, by just turning the outer adjustment ring.

TIP: Adjust the outer ring so around 1/4in/6mm of the inner ring is protruding to allow for easy up and down adjustment.



The TRAC ensures the toolrest stays at the personally set height, even when the toolrest locking handle is released, allowing the toolrest to be moved to a new position without the need to reset the height prior to locking into place. The acetal seating disc allows the TRAC to operate smoothly and easily.

Available in nine sizes, to suit the standard toolrest stem of virtually every lathe available in the world, as well as the full range of stems from the Robert Sorby modular tool rest system. The inner rings are colour-coded for ease of recognition to fit the required stem diameter.

See the Robert Sorby website for more information and the complete range of specialist woodworking tools, www.robert-sorby.co.uk



The Worshipful Company of Turners

Certificate in Woodturning

Introduction

The Certificate in Woodturning course is designed to provide training which develops the basic woodturning skills necessary to become competent at woodturning.

The Certificate is aimed at candidates either with some woodturning experience, or those more experienced but with no formal training in woodturning. Therefore, the Certificate is primarily a training programme of the basic skills with assessment criteria.

The Qualification comprises:

- Training units
- Multiple choice question unit end tests
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Training Units

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Unit C 105	Faceplate Work
Unit C 106	Finishing

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More information can be found at:

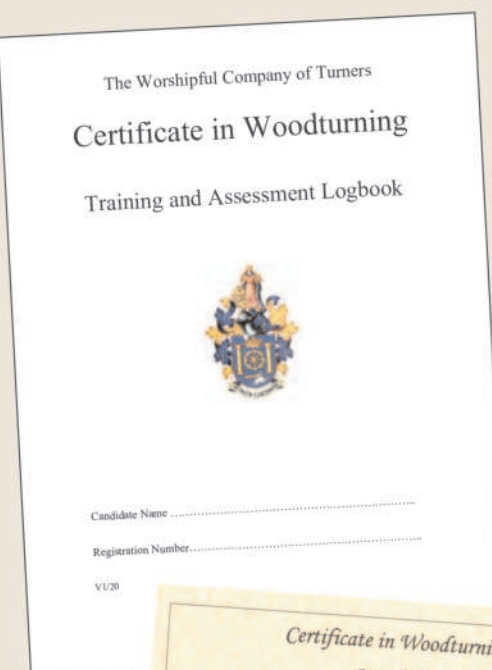
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It is essential that candidates have some woodturning experience in both spindle and faceplate work before commencing the course. An additional induction day prior to the start of the course may be required.

There are a limited number of AWGB sponsored places. So if you are an AWGB member before the



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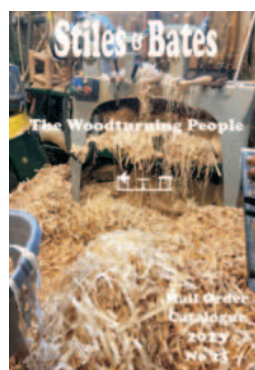
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Skittles

Kevin Alviti makes a bar skittles set for family fun and games

My wife and I seem to have created three children who love games. It's not that they're competitive, more they just enjoy each other's (and our) company and want to do things together.

I'd much rather they were playing games than had their heads buried in a screen, zoned out from the world.

I had a proud moment the other day when my youngest, Alistair (6), was waiting for his sisters to finish their swimming lesson. He looked around and saw a boy and girl around his age, went over with a deck of cards and then for the next half an hour proceeded to teach them the card game 'poo head' (a name we have tried to make a little more PG when teaching it to them originally, but little imagination is needed to figure out its original designation). Now each week he brings that same deck and sets up with his friends, looking forward to that time rather than dragging his heels or going on a screen. Far better than if I had just brought the tablet with us or let him play on my phone.

And their quest for games never seems to end – we play many board games (*Carcassonne*, *Skull*, *Ticket to Ride*, etc) and they enjoy making up their own games and rules. We often play lots of these when on holiday with our extended family. It got me thinking how it would be nice to have a small set of bar skittles that they could use in the house without causing too much damage and would be great for their younger cousins who struggle sometimes with the rules of more complicated games.

It would also be a great exercise for myself in repeat turning. Making something nine times can cause a lot of people to dread the thought of it, but I try to look at it differently. I see repetition as the best way to improve my skills, especially as it can sometimes be a few weeks between projects on the lathe. Doing something multiple times builds muscle memory and makes it so that certain actions become more automatic.



Above: Alviti children – skittles, maths and a little healthy competition

Plans & equipment

Tools & equipment

- PPE & RPE as appropriate
- Lathe
- Tablesaw (optional to dimension timber)
- Chopsaw (optional to dimension timber)
- Spindle roughing gouge,
- Bowl gouge
- Skew chisel
- Spindle gouge
- 6mm parting tool
- Narrow parting tool
- Handsaw
- 25mm bevel edged chisel
- No.6 carving gouge, 12mm
- Router with 6mm round-over bit
- Pellet cutter and matching Forstner bit (16mm)
- 22mm Forstner bit
- Coloured wood stains
- Danish oil

Materials

For this project, I chose to use some ash. It turns well and accepts colour. I wanted the skittles to be different colours to make them more appealing to children, so by using a light-coloured wood, like ash, it means I'll be able to stain them.

Sometimes I think ash is really under-appreciated – it looks glorious, but I am worried for its future, like many of you, I'm sure. I do hope that my children get to grow up and live in a landscape with ash trees like I have, and they don't become like the elm trees of my parents' childhood.

I also used a bit of (what I think is) pear as a contrasting timber to make the pellets to show where the pins are to be set up. Any contrasting wood will do, this just happened to be what I could find.

- 280 x 350 x 28mm (base board)
- 75 x 50 x 50mm (to make the ball)
- 32 x 32 x 650mm (to make the pole)
- 9 x (120 x 28 x 28mm) (to make the skittles)
- Scrap of wood for the contrasting pins

HOW TO PLAY

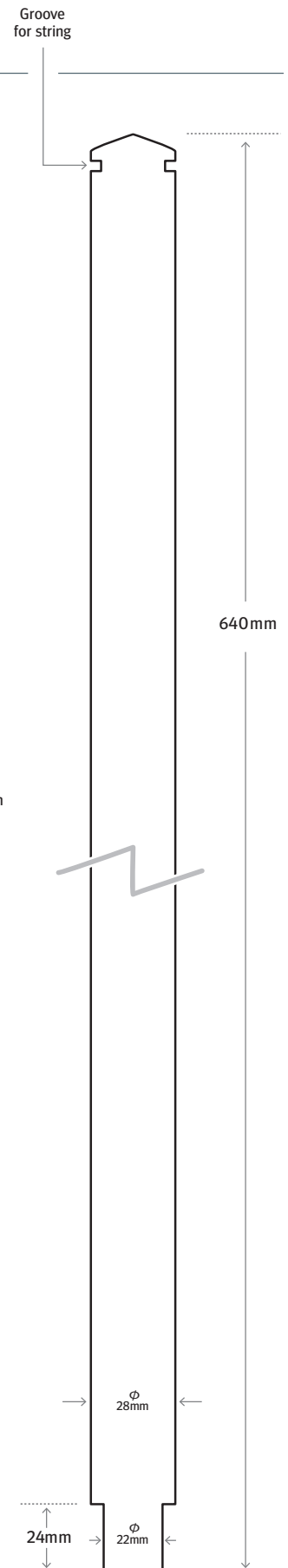
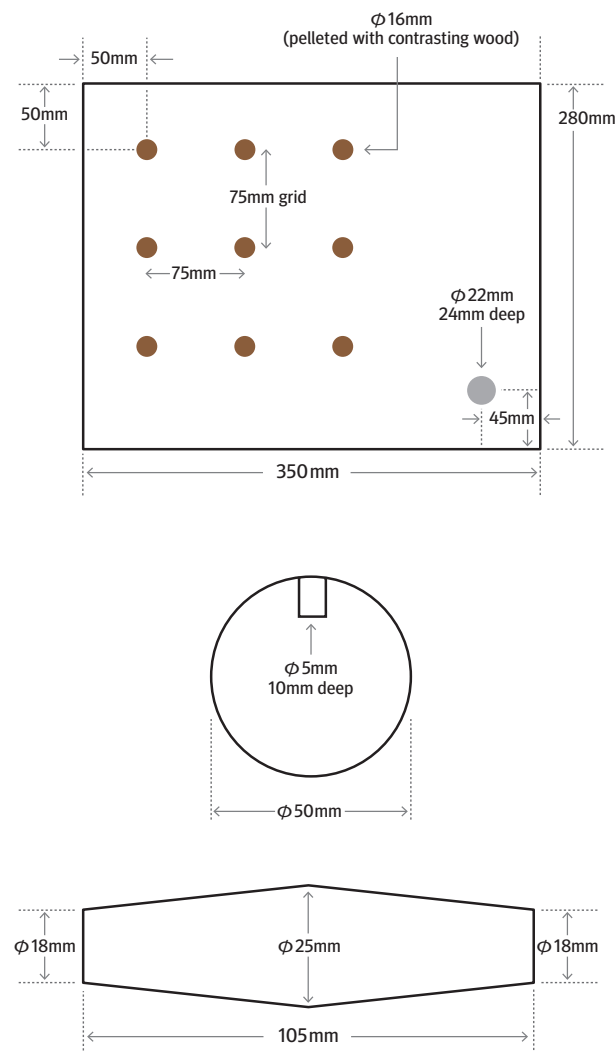
There are lots of games to play but a good one is called **91 Down**. It makes it a bit more interesting and is good for the maths skills of younger players.

Everyone starts with a score of 91 and must get down to zero. You get three swings of the ball each turn, each pin is worth one point, and your total is removed from your 91. If you knock all the pins down with the first swing they get set up again, so you can score a maximum of 27 in a turn.

If all the pins aren't knocked down on your first swing, then you must keep going with your remaining swings until it's cleared or your go is over. If you knock them all down on your second swing, the pins get set up again (so here you could score 18 if the third swing knocks them all down).

When it gets towards the end you must knock down the right number of pins in your go, you don't need to use all your swings to do this though. So, if you have eight left to score and on the first swing you score four and the second swing you score four you don't need to use your last swing. If you knock over nine, however, your go is over and you need to wait until it's your turn again.

Simple.





Making the skittles

1 Dimension the blanks for the skittles. I batched these at once and although this picture shows nine I also made one extra (just in case). Mark them all up and punch a hole ready to mount them on the lathe. These were 27mm square and 120mm long.

2 Rough your blank between centres. I used a four-prong drive centre and a standard rotating tailstock drive. Run the skew chisel over it to get it to your widest diameter, which for me was 25mm.

3 I used a scrap piece of ply to mark the overall length and the mid-point – makes marking up a little quicker.

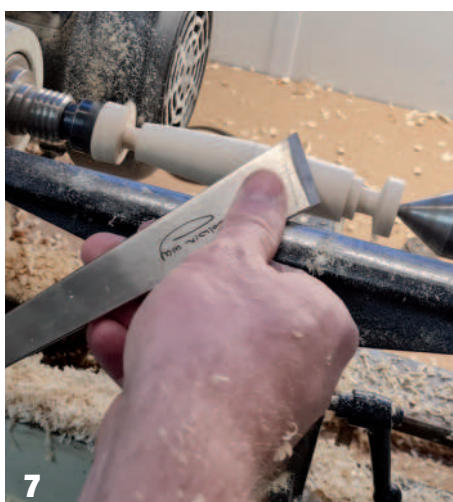
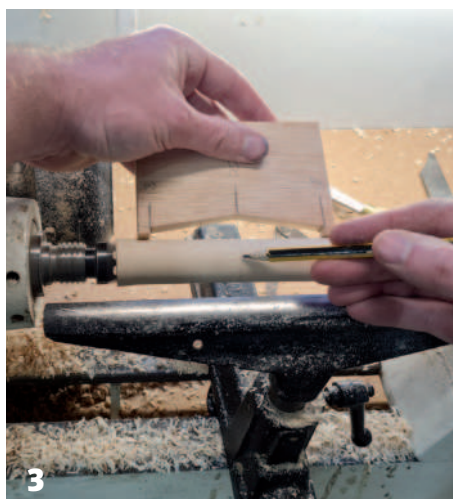
4 Reduce down either end, using a parting tool, into the waste section to give yourself room to work.

5 Use the parting tool to reduce either end of the skittle to just over 18mm. Use a strong, one-handed grip with the parting tool and hold the gauge in your less-dominant hand.

6 With the skew chisel, taper from the middle to the one side. Take care not to remove your middle line. Have the toolrest raised just a little over centre for this.

7 Use the skew in the other direction now, working from the middle outwards.

8 Sand up the skittle. Work up through the grits. Take care to stop on each grit and sand with the grain, especially if you intend to stain it with colour afterwards as it can be quite unforgiving with showing any scratches left by the paper.



9 Reduce down the skittles on either end with a narrow parting tool. Undercut here slightly to make sure they will sit level when in play.

10 Remove any stubs left with a tenon saw and bench hook, then clean up the area using a carving gouge and some sandpaper.

11 Repeat this nine times. I found this quite fun as it's a simple shape to turn and you soon get into a groove with it.

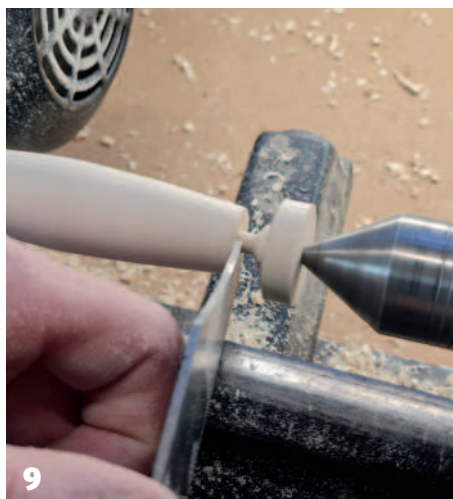
The ball

12 Start to make the wrecking ball part of the project. Drill a hole in one end which will go on the tailstock. This is to fix the string to later. Rough a 50mm diameter cylinder.

13 Take whatever you have as the diameter and mark it down the length of your cylinder. That will be the length of the ball.

14 Mark the centre of this distance. The idea is to leave that centreline there until it comes to sanding. Then reduce down some of the waste to give yourself room to work.

15 With a spindle gouge, turn one end of the sphere. Take care here to get the curve to look right and also to make sure you don't let the tool touch the tailstock. If that's something you're worried about, you can allow some waste on that end, but it requires more hand finishing later.



9



10



11



12

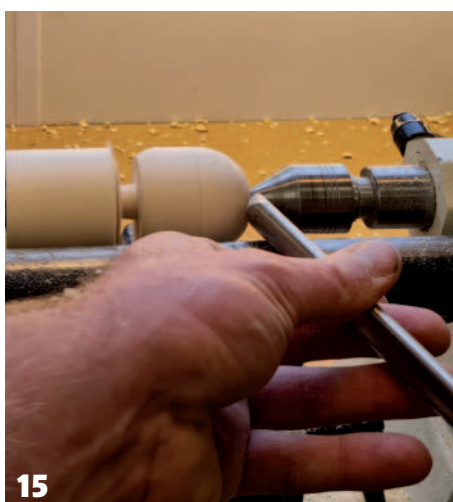


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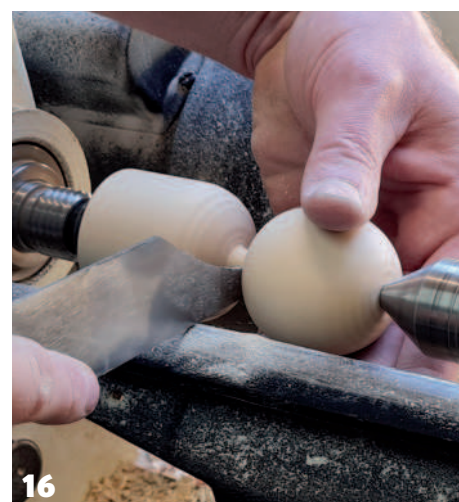


14

16 With one side done, cut the other side with the spindle gouge as well. It doesn't have to be perfect as it's going to swing rather than roll across the floor. But you can cut a curved piece of ply or card the right radius to check, or just go by eye. Sand it up and when you are happy part it from the lathe using a narrow parting tool and finish any bits that need it by hand.



15



16



The pole

17 Turn the pole. Take time to make sure you have a blank with straight grain and that you mount it as near to centre as possible. I turned this without a steady rest mounted in the middle, but I really wish I had one to help prevent chatter. It's essential to make sure your tools are as sharp as possible when turning something this long.

18 Rough it out with the spindle roughing gouge, then use a very sharp skew chisel to smooth it up. I supported the turning workpiece with one hand while holding the skew in the other to reduce chatter. A steady rest to effectively split the distance in two would really help here. When the main shaft is turned, sand it up smooth, working through the grits. I went to 400 grit.

19 The one end is a tenon to go in the base plate. Make sure you size this accurately if you want the game to pack away for storage, otherwise it will be impossible to play if it is loose. Mine was sized for a 22mm hole with a snug fit, using a parting tool and a gauge.

20 Finish the top end with a shallow groove made with the narrow parting tool – this is to take the string – and then shape the top using a spindle gouge. Part off from the lathe and finish by hand.

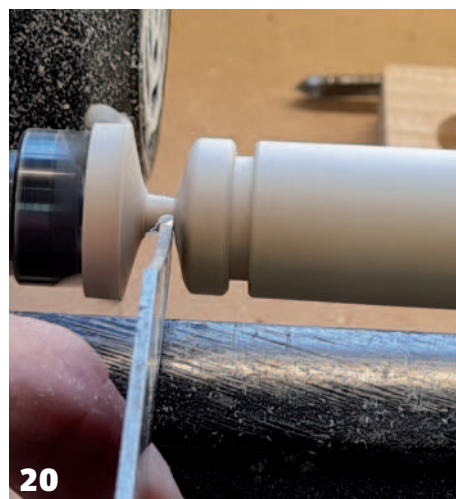
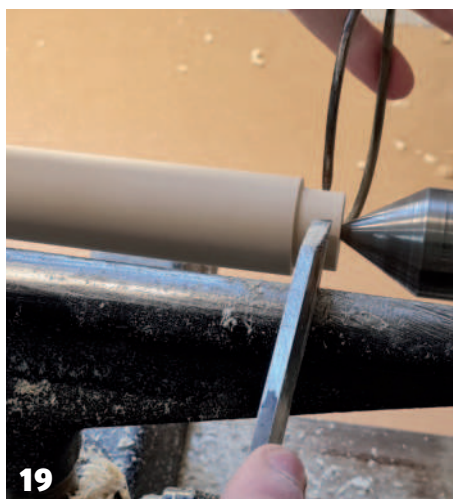
The board

21 Prepare a board of ash for the base. Mine was 350 x 280mm finished and 28mm thick. Sand this up to remove any plane marks, but don't go too far with sanding just yet.

22 Play around a bit with the positioning of everything. The ball will need to not hit the base but still hit the furthest-away skittle. Having the pole offset from the pins also makes it a more enjoyable game than if it was in line and every swing is a strike.

23 Using a Forstner or sawtooth bit, drill the mortice for the pole, making sure it's vertical. Drill to a depth of about 24mm.

24 Then evenly space where the skittles are going to go. Before drilling for the pellets, I marked the centre of each with a punch to give the drill somewhere to start.



25 Drill these to accept some pellets of wood in a contrasting colour. They don't need to be deep, about 4mm will be plenty. I would have loved to use a pillar drill here but the throat on mine wasn't deep enough, so I managed with a cordless drill, just try to keep it as plumb as possible.

26 I used a pellet cutter to make the pellets. This way the grain can go in the same direction as the grain in the base. You could also turn them on the lathe, take care though as the grain will be running in the other direction so use appropriate tools (bowl gouge rather than spindle roughing gouge).

Glue the pellets in and then chisel off the waste using a carpenter's chisel. Start your chisel as high as possible and see which way the grain is going, then adjust your direction if necessary. We used to do this a lot when fitting oak skirting and architrave, flushing it up as much as possible to save sanding later.

27 Sand the base, working up through the grits again. Make sure all the pellets of contrasting wood are flush otherwise the skittles won't stand up very easily.

28 If using stains for the skittles apply a little to a scrap piece of wood first and make sure you're happy with the results before you start on the ones you've turned. Apply evenly. If using spirit stains, make sure they are fully dry before trying to apply a finish on top, otherwise the colour may run.

29 I went for a few colours. Knowing my children they will create rules around which colours give which points. It also makes the game look a bit more interesting.

30 With the base, ball and pole I just used a few coats of Danish oil applied with a cotton rag and I made sure the rag was laid out somewhere safe (away from the workshop) to dry afterwards before disposal. Knock back with fine sandpaper between coats if needed.

31 With the oil dry, I added an area of blackboard paint so scores could be recorded easily. To do this, I marked out an area with masking tape, then painted the area and removed the tape before the paint was dry to clean the edges. Once dry, add some felt to the underside to prevent the board from scratching any surfaces it is placed on.

32 For the ball, I inserted some string in the hole I drilled and then glued and wedged in a piece of wood to secure it in place. Tie the top of the string in the groove on top of the pole. With all the elements dry it's a simple step of setting it up, positioning the skittles and having a game. ●



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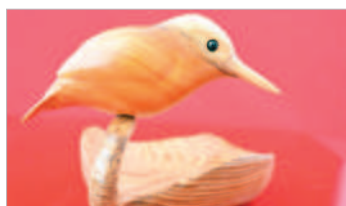
Rotary Spoon Stand

Rotary Spoon Stand: Lee Stoffer, our very own 'Mr Spoons', takes a bit of a funny turn when he comes...



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Eccentric Turning, Using Chucks: Richard Findley tries out eccentric turning chucks. I am taking a look at a couple of...



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Layered bowls

Mike Stafford makes the most of his good wood scraps

I have worked with wood most of my life. My earliest recollection of putting a tool to wood is sawing off the knobs on a chest of drawers with a saw from a set of child-sized carpenter's tools that I received at Christmas. The reason I remember that incident is that I received reinforcement from my father who wanted me to understand that sawing on the furniture was to be discouraged.

Obviously, this led to my love of all things wood. In my life I have built tables, toys, furniture, cutting boards, jewellery boxes, tackle boxes, artsy boxes, apothecary cabinets, humidors, toy chests, wine racks, sleds, roof racks for fishing equipment and just about everything else that you can think of except paddles – no paddles.

I saved every scrap of 'good wood' that was left over from those projects in banana boxes that collect dust in my shop. Since I started woodturning, most of those boxes

haven't been opened in 15-20 years. I did look through a few when I was seeking exotic scraps from which I could turn pens. One day my wife came into the shop and asked about all those boxes stacked along one wall and what I was going to do with them. That conversation set off an alarm. It was just a matter of time before she was going to suggest that I get rid of all that 'good wood' or she might offer my shop for an episode of one of those TV shows where professionals come to help hoarders clean up their mess. I did not want that to happen. So, I needed to come up with a way to prove that those boxes and their contents were worth saving.

Jim McPhail is a woodturner from North Carolina who makes wonderful miniature layered bowls. I have seen Jim's work at our state symposium several times over the years. I decided to take inspiration from his work and see what I could do to reduce my hoard of good wood by creating some layered bowls of my own design.

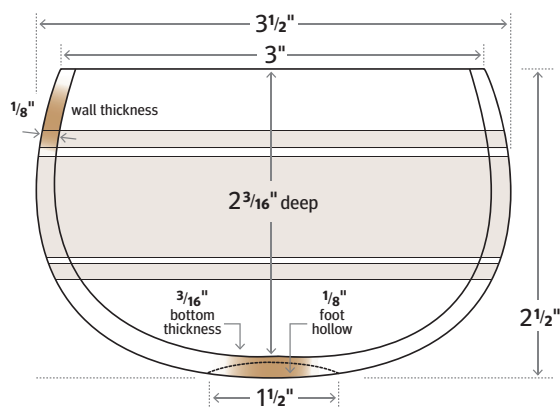
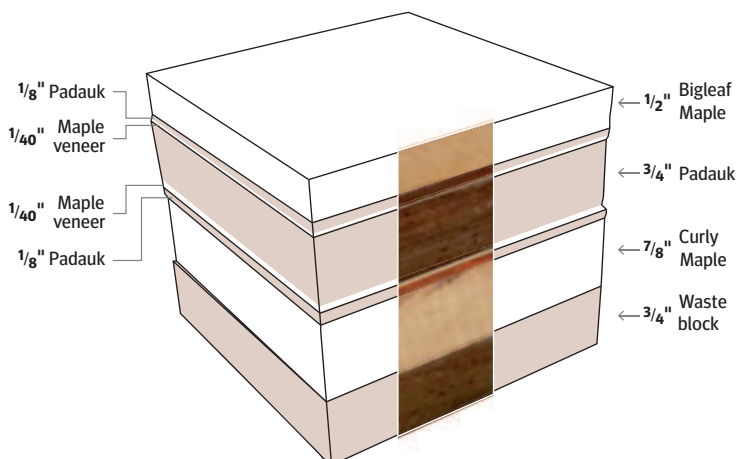


Plans & equipment

Tools & equipment

- PPE and RPE as appropriate
- Wormwood screw and chuck
- Chopsaw/radial arm saw
- Hunter stabiliser
- Clamps, various sizes
- Bowl gouges, $\frac{3}{8}$ in and $\frac{1}{2}$ in
- Thin parting tool
- 2in Forstner bit
- $\frac{9}{32}$ in drill bit
- Glue – powdered resin
- Mixing cups
- Stir sticks
- Stiff brush
- Sandpaper in various grits
- Very fine steel wool

Below: blank ready to turn (left) and finished bowl



Getting started –‘harvesting’ the wood

1 Most turning projects start with the wood. In this instance I had to ‘harvest’ wood from my boxes of good wood scraps. Generally, I started looking for pieces that were long enough from which to get two or three turning squares so that the colour of the wood would be similar. I also looked for different species and thicknesses. A layered bowl can be from a single species, but it is more interesting if it is made from colourful or figured wood. It didn’t take me long to collect a nice little pile of offcuts in various maples (birdseye, curly, big leaf), birch, ash, oak, cherry, walnut, granadillo, panga panga, wenge, padauk, rosewood, bocote, zebrawood, and purpleheart in various thicknesses from $\frac{1}{8}$ in to 1in or more and widths from 3in to more than 6in. With my old radial arm saw, I cut squares from the various timbers.

2 Of course, in a layered construction, all you see are the thin lines of contrasting colour from each veneer, but it is quite interesting to see how much visual impact those thin lines of accent veneer provide. Some veneers, such as this curly maple and lacewood, that have particularly beautiful figure only visible in the face grain would be a real waste if used as accent stripes because the beautiful figure would be lost. However, if the scraps are too small for any practical use, then the wood can be used if the thin wood’s colour contrast would add interest.



Glue

Having initially used PVA glue for my layered bowls, I noticed that after a few months ‘glue creep’ became an issue. On the advice of an English turner, Chas Jones, I tried, and then adopted, a powdered resin wood glue; specifically, one with the brand name Cascamite. I now use this glue for all my layered bowl assemblies.

About all you need is a container in which to mix up a batch according to directions, some disposable craft sticks for mixing and a stiff brush (like an acid brush) to spread the glue evenly.

Building a turning blank

A layered bowl is assembled by choosing various contrasting or complementary timbers and stacking them up to form what will hopefully be a visually pleasing bowl when it is turned. Sometimes veneer layers can be inserted to provide additional visual interest. Begin the process by collecting your good wood scraps and stacking various combinations of wood to see what looks best. I like to cut my scraps into squares that are of a standard dimension (3in, 4in, 5in and so on), which makes it easier to align and assemble a bowl blank.

As I create these stacks, I consider in my mind’s eye whether inserting veneer(s) will add to the visual interest. Sometimes single veneer layers provide an attractive accent, and sometimes more layers or combinations of different veneers are beneficial to the overall effect.

3 For me it is a trial-and-error process. I am working with fairly plain timbers for the most part, so my assemblies are more about colour and end/side grain visual interest. Sometimes, book-matching timbers creates a unique and attractive visual effect. Basically, I try to visualise what the finished turning will look like as I create my blanks. When I am finished stacking up woods and veneers, I take some strips of painter's tape to keep the 'blank' together in preparation for gluing.

Gluing up a blank

4 I chose a stack for a blank to turn. It consisted of, from top to bottom, ½in bigleaf maple, ⅛in padauk, ¼in maple veneer, ¾in padauk, ¼in maple veneer, ⅛in padauk, ⅞in curly maple and on the bottom a piece of ¾in walnut as a waste blank. All the pieces were about 4in square. I have lots of small walnut cut offs in my hoard of good wood, therefore, those walnut cut offs become waste blanks in this process. The stack for my bowl blank looked like this.

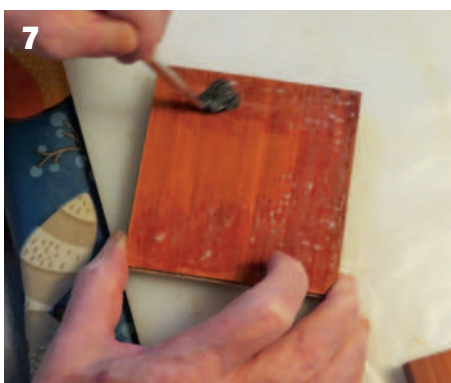
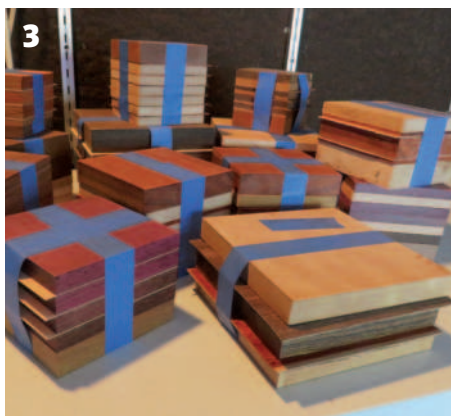
The black dots of marker in the corners are reminders for me of which side is end grain so that when I assemble the blank during the gluing process I don't glue the wood cross grain.

Gluing is a pretty straightforward process as long as you have everything ready. That means have all your clamps at hand and adjusted to be slightly more open than the total thickness of the pieces you are going to glue together. Have your glue mixed and a brush ready. Keep a few paper towels handy to clean up any glue that squeezes out or other messes that occur.

5 I find it much more difficult to keep everything aligned in my stack when I have too many pieces. So, I divide and conquer. I split the blank into a manageable number of layers. For this blank I chose to glue the top four layers of wood and veneer in one sub-assembly. The pieces are presented from left to right in the order of assembly. The veneer is at the top because it will not have glue applied to it directly. Veneer will begin to curl almost immediately when any moisture-laden substance is applied to it, which makes it more difficult to handle. I tape down some wax paper on my polypropylene cutting board to make clean-up easier.

6 Apply glue to underside of top piece
The directions for the glue I am using read that it is not necessary to apply glue to mating surfaces. Therefore, I just apply glue to one side of each piece of wood. I apply glue to the underside of the top piece of bigleaf maple.

7 The thin padauk is pressed into the glue on the bigleaf maple because glue has to be applied to its underside for the veneer. Glue is then applied to the top surface of the thick ¾in padauk. Once that glue is evenly spread, the veneer can be sandwiched between the two pieces of thin and thick padauk.



TOP TIP

Veneer accents

More than 20 years ago I was asked by a friend to help a woman dispose of her father's shop tools. He was a jeweller by trade and a highly skilled craftsman. He was also a highly skilled marquetarian. As we went about pricing his tools and wood, we found dozens of boxes of veneer.

The day of the sale came, and everything sold except for the boxes of veneer. I had priced it at 25% of the retail value. The woman asked me if I wanted it. I had no use for over 40 boxes of veneer, so I asked her if I could pick through it and just take a few boxes. I finally took an assortment of 10 boxes which represented several hundred flitches of gorgeous veneer in quite a few species.

Once I started turning, this fine veneer languished with the other good wood in my hoard. It wasn't until I started turning layered bowls that I found a use for the veneer as accents between layers of the thicker wood. By using veneers of contrasting colour, I was able to give my layered creations a distinctive look, sort of like adding pinstripes to the fabric used for a suit. Most of the time I only used one piece of veneer between the solid wood layers, but on occasion I did use two, three or even more layers sandwiched together to form 'veneer plywood'.

TOP TIP

Block preparation tip

Gluing up multiple layers of veneer during the bowl blank assembly process was quite messy as the thin veneer tended to slip-slide around. I started creating 'veneer plywood' separately and inserting the veneer laminations during assembly. It was a simple process to cut the individual veneer pieces to about the same size, spread a thin layer of glue between the layers and then stack them on top of each other. Then I put a sheet of waxed paper on top of a piece of thick plywood. Next came the veneer layers followed by more wax paper and another sheet of plywood. On top of this sandwich, I stacked some heavy objects and let the glue cure for 24 hours. It worked like a charm, no more slip-sliding.

Clamping

8 Clamping the pieces together is essential to ensure a good bond between the glue and the pieces of wood. I like to hold the pieces firmly by hand and then start the clamping process with a deep throat clamp that reaches to the centre of the stack of square pieces of wood. Tightening down the clamp can be tricky. As the pressure increases the wood sometimes tends to twist. It is essential that a firm grip is maintained to prevent the pieces from sliding or twisting. By gradually increasing the clamp pressure it is easier to keep the pieces of wood in alignment.

9 Next apply a clamp to each corner so that equal pressure is applied to the entire assembly. After tightening the clamps it is a good time to wipe off any glue squeeze-out with a damp rag or paper towel. If the glue is allowed to cure outside the joint, the little beads it will form can make it more difficult to align the edges when both sub-assemblies are glued together.

10 The process of gluing and clamping is repeated for the bottom half of the blank. The only piece that is not glued at this time is the maple veneer that will be between the thin padauk and the thick piece of padauk. The wood layers are clamped in the same manner as the top sub-assembly.

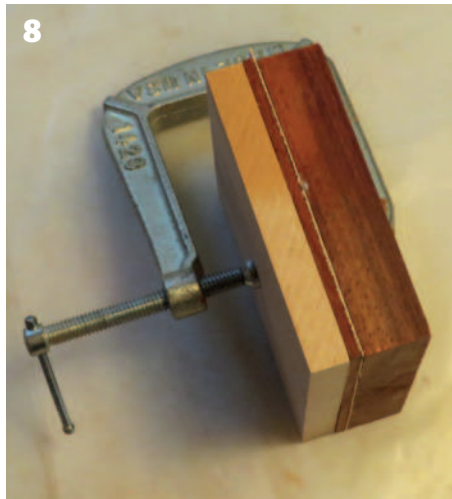
11 With the two sub-assemblies clamped there is nothing else to do but wait at least overnight for the glue to cure. The veneer which is to be added between the two is in the top left of the photo. After the glue cures it is time to glue the remaining piece of maple veneer between the piece of thin padauk on the top of the bottom sub-assembly and the thick piece of padauk on the bottom of the top sub-assembly. Clamping is accomplished in the same manner with only the capacity of the clamps being different.

12 After clamping overnight, the glue is cured, and the blank is ready to be turned.

Turning

13 The first thing I do in preparation for mounting the blank on the lathe is to find and mark the centres on the ends. Then I knock off the corners on the bandsaw. Doing so saves a lot of time when the actual turning begins. I drilled a $\frac{9}{32}$ in hole in the end which will become the top of the bowl to mount the blank on a wormwood screw held by my chuck. Then I brought up the tailstock and live centre for support. Next, I rounded up the blank with a bowl gouge.

14 As you are turning a layered bowl blank you might notice the differing densities and fineness of grain of the various timbers affect how the gouge cuts. It is best to cut slowly so as the tool's edge moves from one timber to another it is not 'grabbed' by the softer wood and begins to self-feed. Even the veneer layers can cut differently to the thicker solid woods. Failure to control the cut can result in tear-out as the gouge moves along the blank. With the blank round, the next operation is to prepare a tenon on the walnut waste block with the bowl gouge.



◀ Shaping the bowl

15 With the bowl gouge, shape the bowl exterior. As you cut along the exterior pay particular attention to the changes in density and grain of the various pieces that make up the blank. It is very easy for the gouge to self-feed when moving from one wood density to another. Keep the gouge sharp as it is easier to control.

16 After developing a pleasing form on the exterior of the bowl it is time to sand the bowl to prepare it for finish. I use several coats of brushing lacquer rubbed out with steel wool between coats.

Hollow the bowl

17 I removed the bowl from the wormwood screw; removed the screw and mounted the bowl in the chuck so that it could be hollowed. The first step was to remove a lot of the waste with a 2in Forstner bit.

18 It is quite mesmerising to watch the different colour curls emerge from the blank as the boring progresses. It helps you keep track of your depth progress as well. With the bulk of the waste wood removed I completed the hollowing with the Hunter stabiliser.

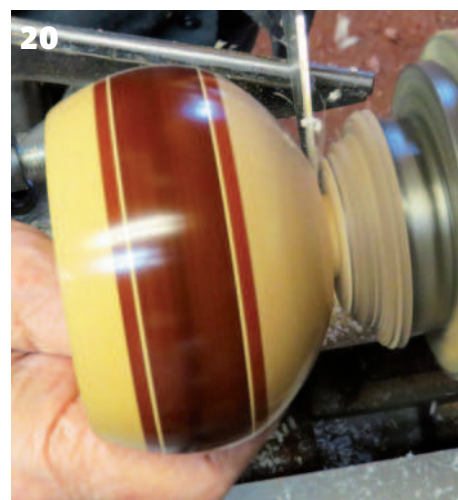
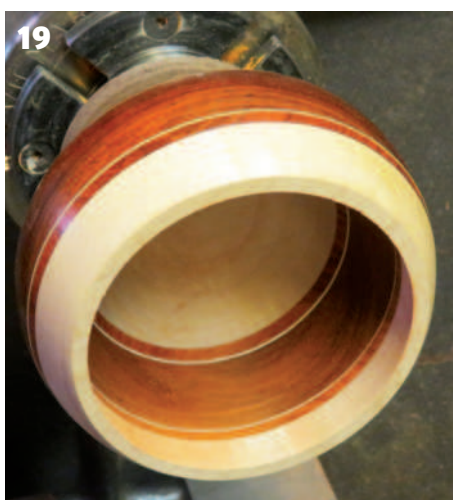
19 The little 6mm carbide cutter of the stabiliser removes wood quickly and almost totally without stress to the mounting, while leaving a smooth surface that needs little sanding.

20 After sanding the inside of the bowl, I flood on coats of brushing lacquer using the same methods as I used when I finished the outside. The next step of the turning process is to part off the bowl and reverse turn to clean up the bottom. Parting is accomplished with a thin fluted parting tool held in one hand while the other hand catches the bowl as it comes free.

21 I mounted the bowl on a chuck with jaws that barely fit into the bowl and expanded them to hold the bowl while I cleaned up the bottom with a small gouge and left a concave surface so that the bowl would sit properly.

To complete this operation a little sanding and some finish is all that is required. When the finish had cured a day or two, I applied a top coat of microcrystalline wax to give the bowl a nice sheen.

22 The finished bowl is 2½in tall and 3½in diameter. It is finished with multiple coats of brush-on lacquer smoothed between coats with very fine steel wool and polished with wax.



Continuing to downsize the hoard

I wasn't satisfied turning just one. I had to reduce the number of banana boxes to a manageable level, so I turned a couple of dozen bowls once I got started. A few examples follow.

23 Mahogany, Spanish cedar, walnut and macassar ebony veneers

24 Padauk and maple bowls

25 Purpleheart, maple and veneers

26 Bocote, maple and macassar ebony and a red veneer

27 Black walnut and maple herringbone

28 Maple, rosewood and veneer

Final thoughts

Turning a layered bowl is only slightly different from turning a bowl blank cut from a tree. The grain orientation is the same and similar problems such as tear-out can be encountered. A layered bowl differs in that, by using multiple timbers in a variety of thicknesses, the turner must pay close attention to tool control as the cut moves from one timber to the next to control tear out.

Designing a layered bowl blank is simple, but sometimes the finished result is not what the turner expected. It is always a surprise to see what is revealed when the blank is first turned round. In my experience smaller bowls i.e., less than 6in in diameter, are more readily sold but your results may vary.

So, if you have a lot of scrap wood that places you in peril with your spouse or the producer from one of those TV hoarding shows, start gluing up layered bowl blanks. I think you will find that people like them.

My wife added the bowl that was the subject of this article to her collection. She also picked a couple more that she intends to send as gifts. I managed to reduce my stack of banana boxes full of good wood by two, so some progress was made. I don't think I will be the subject of a hoarding show any time soon, at least not for my wood hoard. ●



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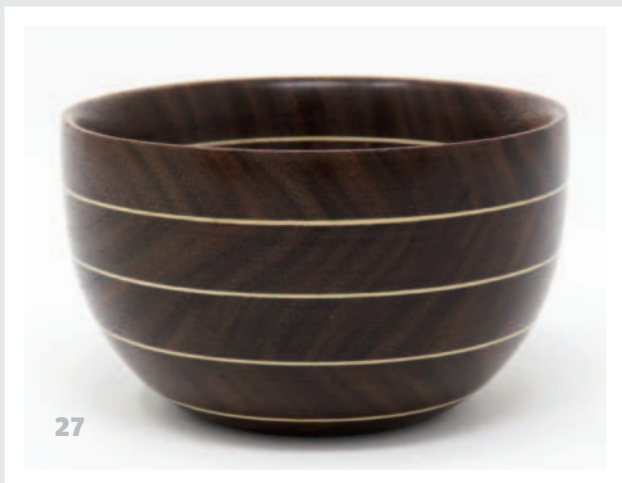
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How not to get stuck in a woodturning rut

Pete Moncrieff-Jury shares his top tips on taking risks and trying new things

As a professional turner I have to make things that will sell, and this dictates my work to some extent. Hobby turners rarely have this restriction. So why do we often see turners seemingly stuck in a rut turning pretty much the same thing over and over again? Not all obviously, before anyone shouts at me, and some are happy doing just that. One reason is because many of us, and I have been (am) guilty of this myself, look at the incredibly inventive and creative work online or in magazines and give up before we start. Add the cost of wood to that and we are so often simply unwilling to take the risk of wasting that gorgeous piece of timber experimenting. It is quite sad the number of times over the years I have been asked to go and look at a demised turner's stock and do an inventory only to find a stash of beautiful woods, often at silly prices as they were bought years previously but never used.

So, what is the answer? There are several actually.

First, always be prepared to take the risk and go for it. As my gran used to say, you will never learn to swim if you don't go in the water. Another way of putting it is that the turner who never made a mistake never really did anything.

Second, be willing to practise, make prototypes in cheap wood, ignore the sanding marks and don't worry about the final finish. Make a prototype and see what it looks like. Design, shape, form etc. are all important. And remember that if you aren't selling it or giving it away, the person you need to please is yourself.

Third, do some research. There is nothing new under the sun so there is a good chance someone somewhere has done something similar, maybe not in wood but metal, ceramics, glass etc. Get out of the rut of only looking at wood and see what else is out there. Please do ask if you are copying someone else's work though – it is only common courtesy and a bone of contention having people copy your work without asking or acknowledging.

Fourth, be prepared to adapt and change as you work. Something you make in pine or ash can be very different if you make it in burr oak or an exotic wood. I have always got a shelf full of pieces that I eventually get back to and adapt, change or – as in the case of this sculpture – put to one side and wait for inspiration. Initially a plain small plate, it eventually morphed into the sculpture shown with gilding and additional work. I am fortunate (though don't always feel it) to have someone with a background in high-end design who critiques my work. If possible, have someone look with a fresh eye at what you have done and be prepared, if not always willing, to accept honest criticism. We are often the worst people to assess how good something we have made is – we are likely to either think it is wonderful or never be happy.

So, what am I saying? Don't get stuck in a rut because you are afraid to experiment, don't be afraid to make a complete mess of something and be prepared to scrap and start again, make prototypes and/or put it away and come back to it. The world of woodturning is vast and getting bigger and more innovative by the day. Go for it.

If you are someone who loves simply making pens, bowls or goblets then that is fine as well, as long as it is not because you are afraid to take a risk and be different. Whatever you like doing and whatever makes you happy in your turning, be the best you can at it. Can't ask for more, be it a hobby or a profession.



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