# Woodturning



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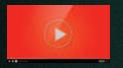


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Will there be a surge of interest in woodturning now the lockdown has encouraged countless people across the world to look away from their screens and investigate the beauty of nature, the opportunities of artisan crafts and the satisfaction of working with their hands?

In Lisbon, Portugal, even before the coronavirus pandemic, there had been a surge in creativity, and we meet Ricardo Jéronimo of design brand Rival, who is part of that thriving young scene. He tells us all about his life, his work and his passion for making spoons.

If you love turning vessels, you'll enjoy

Richard Findley's latest Editor's Challenge to create heavenly constellations from brass wire in a beautiful bowl. Then there's Mark Sanger with his first steps towards turning perfect platters and Rick Rich's simple, yet elegant, vase made from Douglas fir.

In our regular series, Andy Coates continues his look at the best ways of turning thin-walled vessels, particularly those with natural edges; Chris West moves on in his quest to design functional items, looking at how to move from a sketch to a detailed plan for the lathe; and Les Symonds' look at our

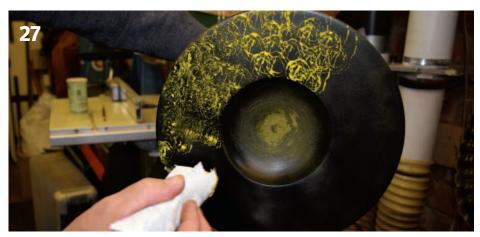
favourite tools this month covers the skew chisel.

Ever wondered how to ship fragile items, sharpen your tools or write a book on woodturning? Kurt Hertzog answers your questions. Meanwhile, Stewart Furini looks at easy, low-cost ways to add colour to your turnings, Louise Biggs gets inventive in recycling old turnings and Pete Moncrieff-Jury considers the highs and lows of life in lockdown.

Whatever you're looking for on your lathe this month, we hope to leave you informed and entertained - happy reading, and happy turning.



COVER IMAGE: Richard Findley (see page 6)



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#### **HEALTH AND 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).



#### **NEWS, LATEST PRODUCTS, MAGAZINE UPLOADS & EVENTS**

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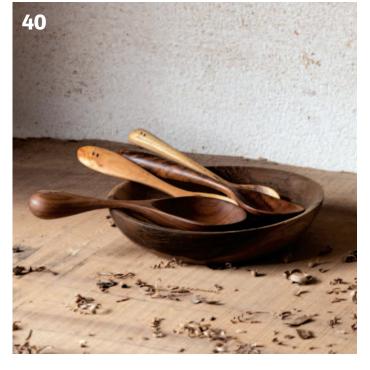
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# Brass wire

The latest Editor's Challenge tasks Richard Findley with incorporating brass wire into a project

#### Introduction

During my monthly phone call, the Editor asked: 'Have you ever used brass wire in your work?' I haven't, but I've seen it done. 'Perfect, that can be your challenge then. I'm sure you'll be able to get some online quite cheaply.'

Well, that's quite an open brief. I've seen people use wire to 'stitch' cracks in bowls, but cracked bowls aren't really my thing.

I wonder if I could make a laced pattern around the rim of a bowl though? This is definitely an option. Scrolling through

a few of my saved 'inspiration' files on Instagram I come across a series of furniture by Hyde & Gallagher, cabinetmakers based in the Cotswolds, which had made several items, including a table, with an accurate star chart laid out in brass. Not wire, but it certainly gets my brain ticking. My oldest son is really into space at the moment (yes, it was previously ships) and he'd certainly appreciate something spacey. I'm going to need to experiment and see what is possible.

#### Experiments with wire

I searched online and found a company that sells a mixed sample pack of 0.4mm, 0.6mm, 0.8mm and 1.25mm in rolls of 4-10m for around £10, which I figure gives me lots of scope to experiment. With the star chart idea still rumbling around in my head, I also order some short lengths of brass rod from eBay, 300mm lengths of 2mm and 3mm, which were another £7. Not technically wire, I know, but sometimes you have to just roll with an idea. So for under £20, I have all the wire

and brass rod I could possibly need. A few days later they arrive and I can set to work with some experiments to see how best to use them. My first is to create a band on a piece of spindle work. This must be the most basic way of using wire, but even I would struggle to write a six-page article about wrapping a wire band around an egg cup. That said, I think it will be interesting to see how easy it is to do.

I turn a piece of walnut into a cylinder and cut a small groove around it with a point tool. I cut a length of wire and experiment with getting it into the groove. My preference for sticking metal to wood is always a two-part epoxy resin, but this takes 30 minutes to set and I quickly discover that the wire needs holding in place while the adhesive cures, otherwise it wriggles away. It is tricky stuff to handle. I decide CA glue is going to be

the way forward, even though I'm not a fan of it, and will avoid its use wherever possible. I find it tends to stick brilliantly when you don't want it to, and lets you down whenever you really need it to hold. In this case, however, it looks like it is going to be the answer.

I try initially with just the glue, but even CA doesn't grab quick enough for my liking, so I try it with some accelerator spray and this seems much better. My first attempt is poor in every way - it is lumpy and uneven and generally a mess. My second attempt goes much more smoothly. This time I run the wire through my fingers, encouraging it to curl into a shape more to my liking and less like the tight, uncontrollable coil that it came in, and find this makes it far more manageable as I lay it into the groove, adding CA and accelerator spray as I go.

I snip the end of the wire so that it sits snugly next to the other end in the groove and glue it down, holding it carefully in place with the tip of my awl.

I leave this to dry thoroughly and place a board of walnut into my vice to see how it does on flat work. I decide the easiest way to cut a tiny groove is with a carver's V-tool. I run a couple of lines in the wood, one with the grain and one diagonally across it. The razor-sharp tool cuts cleanly in the walnut in any direction, which I find encouraging. I snip off some pieces of wire and lay them into the grooves. They don't lie particularly flat, having come from a coil, but with a little manipulation between my fingers, I manage to straighten them somewhat. I run CA into the groove, lay the wire into it and spray accelerator. The accelerator produces a kind of bubble of glue over the wire, which I find interesting.



Selection of mixed wire



First attempt isn't good



Wires fitted to the flat board

#### Experimental clean-up

I busy myself with another job and return to the glued wires after a couple of hours. I always try to leave adhesives longer than necessary to cure - nothing good ever comes of rushing glue. Looking at the wires on the flat board, I decide the easiest way to clean it down would be

with my belt sander, so I give it a light buzz over and am pleased to see it looks almost as I'd hoped. They need more though, so I sand again. The next time I look, the wire running in line with the grain is gone. I believe the combination of heat and the aggressive nature of the

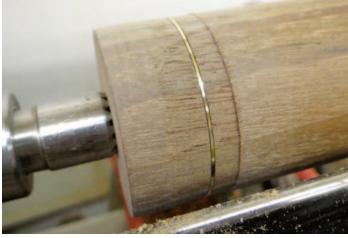
tool caused the glue to let go. The wire running diagonally survived better but it is easy to see that it hadn't been lying entirely flat in the groove as it appears as a variable thickness line. I need to straighten the wire better before putting it into the grooves.

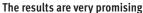


Straightening the wire with my hammer



Turning the wire in the groove







The test wires in place and sanded

After a bit of thought, I cut a length of wire and lie it on the board of walnut. I draw the face of my hammer repeatedly over the wire, rotating it regularly until it is almost completely straight. I am sure this will make things easier, so I cut a couple more grooves in the walnut and glue in pieces of the straightened wire. While this dries I head over to the lathe

and have a go at cleaning down the wire wrapped around the walnut cylinder. This time, rather than sand, I use a negative rake scraper and lightly scrape off the glue and true up the brass. I start with my second attempt as I am not hopeful that the first would stand up to much. I am very pleased with the result. A clean line of brass shines as it reflects the light from my lamp, even the join in the wire is quite neat. I return to the flat piece and, knowing that the belt sander is too aggressive, this time I try my orbital sander and the result is much better. I can feel a slight difference in the surface as the sander removed more wood than brass, leaving it very slightly uneven, but I think it would still be acceptable.

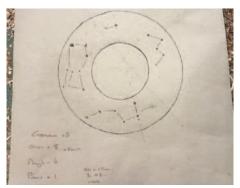
#### Design

The more I think about it, the more I like the idea of a 'constellation bowl' with stars, linked by wire to show some of the best-known constellations. I check through my woodpile and find a board of 230mm wide, 40mm thick walnut, which will be perfect. Walnut is going to be the ideal partner for the brass. I think a widerimmed bowl, similar to the 'fire bowl' I made a couple of months ago, will work well here, so I draw it out full size on craft paper to plot out my constellations.

The three most prominent constellations in the night sky above me here in the UK are Orion, Cassiopeia and the Plough, which is part of Ursa Major, or the Great Bear, and famously points to Polaris or the North Star, so I decide to add this too.

On my drawing I place Polaris at the top, with the Plough at the bottom, pointing to it. On either side, I place Orion and

Cassiopeia. I draw it out a few times before I am happy with the positioning. I think the 3mm brass rod will represent the stars well. There are, of course, other stars in the sky, so I decide to randomly add smaller stars in the open spaces, using the 1.25mm



My initial drawing of the 'constellation bowl'

wire I have in the mixed pack. I experiment by fixing each size into the walnut board and sanding them down flush. As before, the belt sander is too aggressive and the heat build-up is too much, but cleaned up more gently I am certain this will work.



Belt sanding isn't the way forward but I have 'proof of concept'

#### The bowl

I cut a disc from the walnut board and mount it on the lathe. Generally, I would turn the underside first into a sweeping ogee shape, but, in this case, I am going to need to work on the top face and it needs to sit flat on the bench without wobbling around while I do.

To achieve this I initially sandwich the blank between the chuck and my live centre and cut a holding tenon with my narrow parting tool. I can then flip it over and work the top face, holding it securely in the chuck. I will turn the underside afterwards.

I turn a very slight curve into the face of the bowl, give it a light sand with 120 grit and seal it with sanding sealer. In my experiments, I hadn't had any issue with contamination between the brass and the wood, but I figured it never hurts to give it a little more protection.

I cut the 3mm brass rod into 10mm lengths using bolt croppers. I will need 20 for my planned layout. Orion also has three smaller

stars which form a sword, hanging from the three stars that make up his belt; I decide to show these with three 1.25mm wire dots.

I set out the constellations on the rim of the bowl, adjusting a couple of times until I am entirely satisfied. I then mark the position of each star with my awl to ease the drilling. I take it to my drill press and drill 8mm deep holes with a 3mm drill, followed by 1mm holes for Orion's sword and a random selection of holes in the open areas, which I had marked out by eye.







Marking the positions of the stars with my awl



Drilling for the brass rods

#### The stars

With the holes drilled and the wire and rods cut, I mix up some epoxy. CA will work for the wires, but I think epoxy will give me a much more secure fixing for the stars. I quickly find that my fingers are too big to easily hold the short pieces of brass, even using my small pin hammer. A pair of snipe-nosed pliers would be ideal but I don't have any handy, so I grab a pair of tweezers from my first aid box. Usually used for removing splinters, they work almost as well for holding the brass rods as I tap them into place. I am pleased with how they look and leave them overnight to fully cure.

After giving it some thought, I decide the easiest way to remove the excess brass sticking out of the bowl is going to be to turn it. I remount the bowl and sharpen my 12mm bowl gouge (16mm bar). I turn the lathe gradually up to 1850rpm. I believe brass should turn better at high speeds. I use the wing of the gouge in a gentle draw cut across the face of the bowl and stop it to check. Some of the brass rods show a clean, shiny end, which proves it has worked, so I carry on turning it until I make some fine wood shavings and once again stop the lathe. It has worked well, except for one star

from the Plough which has gone AWOL. I didn't see, hear or feel it go, but it has slightly enlarged the hole, so I will need to replace it and fill around it, but I have some dark filler-wax which should do this easily at the end. I replace the missing rod and, after leaving it for a couple of hours, return it to the lathe. This time I don't turn it as it will most likely pull out again, so I file it smooth by hand - and before the engineers email me, I know this isn't ideal, but it works well. I power sand the whole thing with 120 grit to ensure it is smooth and even and ready to cut the grooves for the wire.



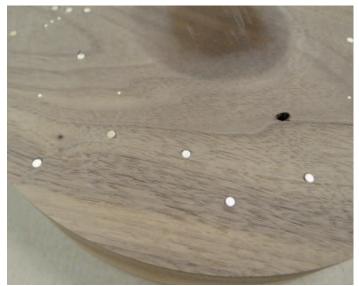
Tapping the brass rods into place



Left aside to dry, but looking good



Turning the brass rods



One star went AWOL



Filing the replacement smooth

#### Joining the dots

I begin by drawing a line with a sharp pencil and steel ruler, between the stars of each constellation. I decide the spacing between the stars of Orion's belt and sword is too close for the wire links, so don't add them there. With it all drawn out I can begin cutting the lines. As I had in the practice, I use a V-tool from my Grandpa's set of carving tools. These are always kept razor sharp and I have a leather strop on the bench to keep them like that.

I carefully slice a shallow groove along

each of the lines, trying my best to ensure an even depth all the way along and on each line. The thin curls that the tool produces are incredibly satisfying, and it doesn't take me long to cut all of the lines.

Now I need to add short pieces of wire into each of the grooves. I cut a piece of o.8mm wire around 300mm and, as before, I use the face of my hammer to rub part of it flat and straight. It isn't perfect, but should hopefully do the job. I mark the length of the first piece I need

and snip it off. A test fit looks promising so I run some CA into the groove and push the wire into the bottom of it with the tip of a pencil and my awl. Satisfied it is lying as flat as possible, I spray accelerator to set it in place. I repeat this process on each of the grooves until each constellation is marked out.

The bowl is a bit of a lumpy, gluey mess but shows signs of looking how I imagine it. I leave this overnight to fully cure and return to clean it down the next morning.



Literally joining the dots



Carving the grooves with my V-tool



Snipping the wire to length



Running CA into the groove



Adding accelerator



Orion is ready to clean down

#### Sanding

Initially, I use my orbital sander with 120 grit abrasive to remove the excess glue and smooth the surface. I then re-mount the bowl in the lathe and sand through to 400

grit using abrasive wrapped around a cork block. I decide this is the most gentle and controllable way of smoothing everything out without wearing away the wood more than the brass. In between each grit I stop the lathe to check my progress. Each time the brass is a little more sparkly, but as I check it after the 320 grit I spot a casualty.



Removing excess with my orbital sander and 120 grit



Another piece is missing





Final sanding on the lathe

The replacement glued in place

One of the wires in the panhandle of the Plough has vanished!

I return the bowl to my bench and cut a new piece of wire. Using the V-tool, I clear out the dry glue from the empty groove and then, using a 1mm drill bit, I scrape at it a little more until I am happy that the new piece of wire will sit neatly. I add a bead of glue, carefully place the wire and

add some accelerator. As before, I leave it for an hour or so to cure. I need to take great care here not to disturb any of the other wires which are sitting shining at me so perfectly, but I need to remove the excess glue.

After giving it some thought I decide to continue to use my orbital sander. By approaching from the centre of the bowl I shouldn't touch the other wires too much, and by using just the edge of the pad I can target the problem area. This is technically bad practice as it can produce hollow in what should be a flat surface, but with care, I manage to get the result I'm after. I then sand as before, using the cork block, through to 400 grit and this time everything stays where it should.

#### Finishing the bowl

I am very pleased with the look of the constellations. All I need to do now is hollow the bowl, finish the underside and with a few coats of oil it will be done.

Using the tip of my skew in scraping mode, I score a mark where I think the bowl should go. After checking I enlarge it slightly and begin to hollow. I make the bowl slightly undercut to add interest and shadow. Once I am happy with the depth

and curve, I sand to the same 400 grit as the rest of the bowl.

I use a disc of MDF, which is permanently fitted to a faceplate, to re-turn the bases of bowls and I do the same here, only it is the entire underside of the bowl which needs turning and not just the chucking tenon.

I turn a shallow, sweeping ogee shape and sand this to 400 grit as well. The

remaining small pip where the live centre was pinching it to the MDF disc is easily carved away with a carving gouge and power sanded smooth.

I use a dark wax filler stick to tidy the slightly enlarged hole around the star in the plough that went AWOL and apply the first of four coats of my favourite hardwax oil. I buff it with my dome buffing brush and the 'constellation bowl' is finished.



Turning the inside of the bowl



Turning the underside of the bowl



Oiling the bowl really sets off the brass against the walnut

#### Conclusion

I'm not sure if this is entirely what the Editor had in mind when the challenge to use wire on a project was set, but I suppose that is the joy of the creative side of woodturning – you just never quite know where it will lead you.

I have enjoyed the challenges of this project and, despite my strong dislike of CA glue and the loss of a couple of pieces during the turning, I feel that it has all gone well. The combination of walnut and brass is always a winner for me, the effect of the constellations works well and the grain that has appeared within the hollowed bowl only adds to the night sky effect of the piece.



The finished bowl

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# What you need to know about turning thin — Part 2

Andy Coates continues his look at the problems and tricks of turning thin-walled vessels, with specific reference to the natural edge



#### Introduction

I had not planned to expand on my previous article on turning thin, but the Editor thought it should be elaborated to focus on turning thin while trying to retain the natural edge. So here we are again.

Within the constraints of word and picture counts I at least touched on everything pertinent in regard to turning thin in the previous article, but it is helpful here to be able to home in on some of those aspects in greater detail. Apologies if some of it seems to be

repetition, but hopefully where applicable it will seem justified.

Successfully turning thin is dependent on a number of things, but we can condense them down to three important considerations: wood, tools, and technique. We will look at all these factors in more depth in this article.

We looked at a blanket definition for 'thin' turning in the previous article, and we will simplify that here by saying it can be anything from 1-5mm - wood species,

condition of the wood and ability will determine where within that range you turn your vessel's wall thickness.

I would also like to point out that this article was written during the lockdown, which meant I could not obtain the freshlyfelled wood that I would have preferred to have used, and all the smaller log and branch stock I had to hand was perhaps a little too-long felled to be ideal.

But we make of the situation what we can and carry on.

#### Anatomy of wood and how some aspects relate to suitability

Whether we take our turning blanks from log, branch or board stock, the anatomy of the wood does alter, and some aspects relate to the suitability of the wood as material for a natural-edged vessel.

The outer layer is the bark, and this is the layer we are ultimately concerned with. The bark itself has two layers: the outer old bark, which is dead, and an inner laver that is living. The inner laver is called the phloem and is the tree's transport path for food. The cells of the inner layer do not live for long, and when they die they become part of the outer layer of bark. Between the bark layers and the sapwood is a layer just one cell thick, called the cambium. This layer is the source of new bark and new sapwood cells. Moving into the wood we next come to the sapwood, which is the water-carrying pathway of the tree. As the new outer sapwood is formed the older inner sapwood becomes heartwood. The heartwood is effectively dead, but while the other layers are healthy it will not deteriorate and will retain its inherent strength and support the whole tree.



Anatomy of a log

#### Why does any of this matter to us?

The first three images here illustrate why this matters to us: the bark is beginning to delaminate as the wood dries and the cambium layer shrinks. In the Douglas fir example the structure and depth of the bark layers is also a contributing factor to the potential loss of the bark. The bark layers – cambium, sapwood and heartwood – each dry out at different rates creating tension in the log. This can result in the bark pulling away much more easily, especially in faster-growing species. What we want to avoid is this happening while we are turning. By discounting species that are prone to these problems we reduce risk, and carefully checking the logs for signs of delamination can save potentially dangerous delaminations later on.

Knowing something of the drying habits of the species can also be helpful in preventing failures. Ash, for example, will dry relatively evenly, whereas the bark layers on oak can dry much quicker than the sapwood and this results in the cork layer of the bark shrinking, sometimes dramatically. This can be so severe that it causes the bark to delaminate, but even where it does not it can leave an unsatisfactory, uneven bark edge.

Holly is another species to be wary of. Holly distorts, contorts, cracks and checks as it dries like almost no other species I use regularly, and bark loss is almost a given.

The fir, while at first appearing to be unsuitable, can prove visually appealing and be successfully turned provided that the bark layers are stabilised prior to and during turning. The same can be said for heavily spalted woods – with some care and attention satisfactory outcomes are possible.

If I simply wanted an almost-guaranteed success with no fuss then I would only ever turn thin-walled, natural-edge vessels from sycamore, beech, maple and ash — they are all fairly reliable.

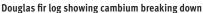


Walnut log with delaminating bark



Spalted silver birch with delaminating bark







Ash log with tight bark



Holly log with tight bark

#### Preparing a log

Spalted wood is probably the most difficult to turn thin and natural-edged due to the loss of structure caused by the fungi. The spalted silver birch I had available was probably a little more spalted than I would usually consider as viable stock, but it at least provided for showing the potential problems and solutions of using spalted wood.

If the spalting is heavy the likelihood is that the structural integrity of the wood has been compromised, and in order to have any chance of success we need to put some structural

support back into the wood. This is best achieved with cellulose sealer. Paint the cellulose sealer directly on to the end grain and allow it to fully soak into the wood. This is the only use for which I might dilute cellulose sealer with thinners, in order that it penetrates as deeply as possible, but usually I find undiluted works fine. Allow the sealer to fully dry. A second coat may be required, and often a further coat is required during the turning process. Try to ensure that the bark layers are thoroughly soaked with the sealer.



Sealing the end grain and bark edge



Sealing the bark edge on a cross-grain blank

#### Making the difference

At this early roughing-out stage you can see the effect of the spalting on the sapwood and bark layers. The cut has left a terrible surface of torn and pulled fibres. Ordinarily you would get closer to the finished shape before sealing, but doing so at this stage was convenient for illustrative purposes.

The cellulose sealer is applied liberally and allowed to soak into the wood. Once fully dry the wood already feels firmer, but a second coat will help enormously. The pictures below show the unsealed cut and the cut surface after just one coat. The improvement is clear to see.



Unsealed surface after shaping cuts



Sealing with cellulose



Surface after fresh cut on sealed and dried surface







Treating the tailstock end



The headstock end can be treated at the same time

If you find that the bark layers are still pulling then you could also try CA glue as a firming agent. Use thin or medium viscosity CA, soak all the bark layers and allow to cure before proceeding. (NB: The area being treated at the tailstock end of the blank is simply for illustrative purposes).

You might also treat the bark edge at the headstock end of the blank at the same time. Do not use an accelerant to cure the CA glue; allow it to cure naturally. Once cured the first cuts should be made with a freshly re-ground tool and light cuts taken.

#### Taking cuts on the bark edge

The cutting techniques for turning thin are just as applicable for turning spalted wood, so there are no differences of note here. The gouge must be freshly re-ground and as sharp as your technique and equipment allow for; a blunt or dull tool will not make these cuts. Bring the toolrest as close as possible and ensure the rest is locked down. Push cuts should be used to cut through the bark edge, and because this is spalted wood, lighter cuts are taken. Engage the bevel fully but use the lightest of pressure – the aim here is to support the cutting while having the bevel lay the fibres down flat behind the cut.

When it comes to taking the first hollowing cuts the same

instructions apply. Use push cuts to avoid dragging the bark off the rim, and keep cuts light and fully supported by the bevel. The wall thickness should be set immediately and, once set, that portion of the wall should not be returned to. In the bottom two pictures you should be able to see the bevel-supported cut, and the wall thickness between the tool and the outer wall of the form. When the vessel is so thin it is easy to cause surface deformation by applying too much pressure on the tool, so keep cuts well-supported but light. The exterior shape will be incomplete at this stage, as detailed in the previous article, so complete the interior shape in a pleasing sweep and abrade to a finish.



Push cut for shaping



Push cut on interior lip



Bevel fully rubbing



Wall thickness

16

#### Moving on

Abrading any natural-edged piece can be tricky. Not only do you not want to damage the hard-fought-for bark rim, you also need to be safe, and abrading with the piece rotating can be problematic. If the rim is not too out of the circular it can be possible, with care, to abrade while the lathe spins the piece. A soft pad with hook & loop abrasive works very well here, providing you only lay the pad on the wood and do not apply too much pressure. Let the abrasive do the work, and work very carefully off the bark edge.



Abrading the regular natural edge



Following the interior curve to complete the exterior shape





Wood layers tight

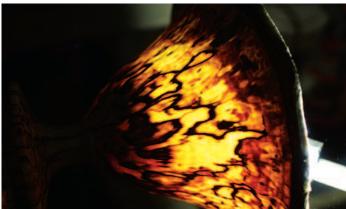
Once the interior shape is completed and the surface has been abraded and sealed, the outer shape can be completed.

Using light as an indicator of wall thickness is, as mentioned in the previous article, a real boon, but we should remember that light passes through different grain areas at varying rates - end grain will be lighter than cross grain.

When the wood is spalted, as here, the light will also pass through at varying rates due to the discolouration of the wood.



Sealing the interior



The thin wall illuminated

hard, but with a sharp gouge a clean curve was cut through the layers, leaving a beautifully illustrative diagram of the bark, cambium and sapwood layers.



The wall thickness setting cut

Our shape part-finished, the cuts to set the wall thickness are made in just the same way: full bevel support from a freshly-ground gouge, and a light cut. On end-grain vessels the problems of distortion are much less than for cross-grain, and on dry wood the chances of distortion are also reduced significantly.

Tool support is kept as close to the vessel wall as is practicable to allow for a controlled cut with as little pressure

on the surface as possible. Once the interior is completed the exterior can be finished. The wall thickness on this ash vessel was the same throughout its travel, but note how the light passes through the end-grain section far easier than it does through the side grain. Had it been turned to ensure that the light colour was uniform then the wall would have been of irregular thickness.



Following the curve using the bevel



Different intensity of light on consistent-thickness wall

#### Using cross-grain blanks

Turning thin-walled, natural-edged vessels from cross grain is no less tricky, and when using green wood can be a little more so due to distortion as the wood dries during turning. If this is the case it can help to keep the wood wet by using a spray mister with tepid water in it. (You must ensure the lathe is protected from overspray and electrical shorting.) Keeping the wood wet will reduce distortion.

Distortion is a problem because it is a primary cause for turning uneven

wall thicknesses, and in extreme cases can lead to a harmonic that can result in a shattered workpiece, so we need to reduce the possibility of distortion wherever possible.

When turning the outside shape the convention is to cut from centre out to rim, but in this case we run the risk of knocking the bark off the vessel, so the cut would be as in the picture below right rather than left. With a freshly re-ground gouge, close toolrest support and lathe



Cutting against the grain



Cutting with the grain



Trimming the bark



The depth of the wall thickness-setting cuts

speed at about 1000rpm a light cut is made, bringing full bevel support as soon as possible.

When turning the interior of such vessels it is common for the bark to 'feather' along the trailing edges. Continuing to cut will result in the bark being lost, so the best course of action is to stop the lathe and trim the loose bark away with scissors. Repeat as required until a clean edge is produced.

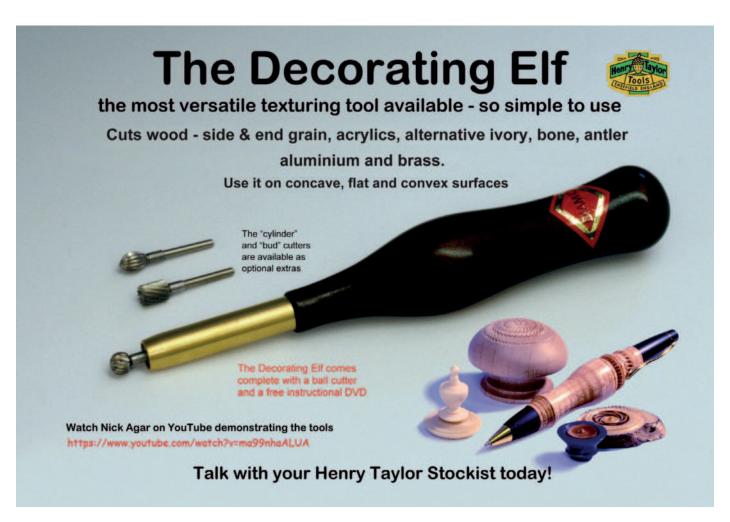
Setting the wall thickness on these forms is a little different to the end-grain bowl. The depth of the setting cut is determined by the highest point of the bark rim, and what will be the lowest point. A pencilled line here indicates the depth to which it must go. If we fail to do this we inevitably end up with an irregular wall thickness and this will give a bark edge with irregular thickness. Abrading and finishing is achieved as previously detailed.

#### **Conclusions**

Turning thin and natural-edged forms is fun and can be challenging. It can also be extremely frustrating. You will have failures, you will lose bark, and you may even go through a side wall. But persevere.

These vessels can be taken in other directions once completed. Pyrographed designs, staining and colouring, piercing and carving can all add interest and value to the finished pieces. Once you get comfortable turning these kinds of vessels you will find you can make them relatively quickly, then spend the time saved on exploring after-lathe options. I know you'll enjoy it. Have fun and stay safe.





# From design to a functional item — Things to do

Chris West discusses considerations that need to be addressed when you are looking for a nice shape

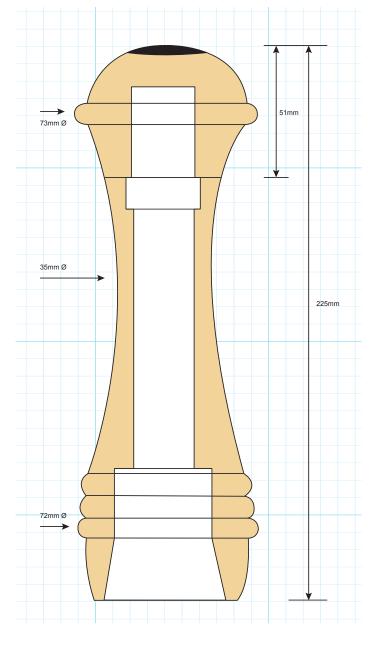
This series is all about considering the decisions that should be made when designing utilitarian woodturned items. The last article looked at the 'request from a friend' for a pepper mill and how it starts out with the design phase, looking at initial inspiration for the design, the choice of mill mechanisms and how to identify the contents of the mills. This phase will cover converting a sketch into a line drawing and decision making with regard to the blank and how it will be held on the lathe. A prototype will be turned and viewed. Its shape will be looked at and the question

asked: Is it aesthetically pleasing? The methods of fitting the mill mechanisms will blank are now needed. These will take also need to be addressed at this early stage of the process.

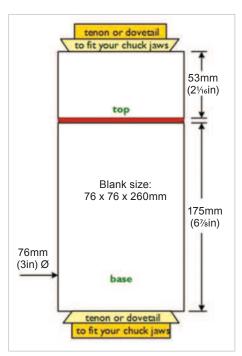
A sketch needs to be turned into a working drawing, which includes a drawing of the blank and spigots and/or dovetails for holding the blank. You may decide to include a false tenon and decisions on how best to identify the contents of the mill will also have been made. The decision has been made to design and turn a pepper mill from the same wood using a CrushGrind Shaft mechanism.

A sketch of the proposed mill and its into account the required mechanism's holes. Given that the mill is going to be made from a single piece of wood then the inclusion of a false tenon will be looked at to allow the grain to be seen to flow continuously from the bottom to the top of the mill. These points will be addressed in the next issue. Whichever design you decide on, the base of the mill must fit the user's hand. A diameter of 70-75mm is usual.





The Lymington Mill Right: Sketch for mill from a single block of wood



Plan for blank

A sketch gives the basic shape and key dimensions, such as the height and overall diameter. From this a blank can be drawn and decisions made with regard to the use of spigots, dovetails and false tenons. In this instance a false tenon will be used to keep the flow of grain through the mill.

The first thing to be turned is a prototype mill. Any hardwood will be suitable. No drilling is going to be carried out. It is only the outside shape of the mill which will be turned as one. From the sketch, the overall size of the blank can be seen to be approx. 225 x 75 x 75mm.

This is mounted between centres and turned to the dimensions shown on the sketch. The break position between the top and the base is marked with a pencil to start with. Personally I start the turning at the base and mark the beads in what I think is an appropriate position. The same goes for the bead on the top. Once the piece has been turned the prototype is placed on a level surface at eye level and, say, 2m away. It is quite likely you will immediately see some required changes, whether a height issue or the diameters in relation to the height being wrong. Changes to the shape and measurements are added to the sketch. The first prototype is added to the designer firewood pile and a second prototype is turned.

Assuming this one looks OK, you may well decide to spray it matt black and re-look at it. Spraying it black takes the eye away from any blemishes, knots, worm holes etc. in the wood and the eye just picks up the outline. If necessary the prototype's shape is again tweaked. So, we have our final sketch with key dimensions on it.



Traditional black mill

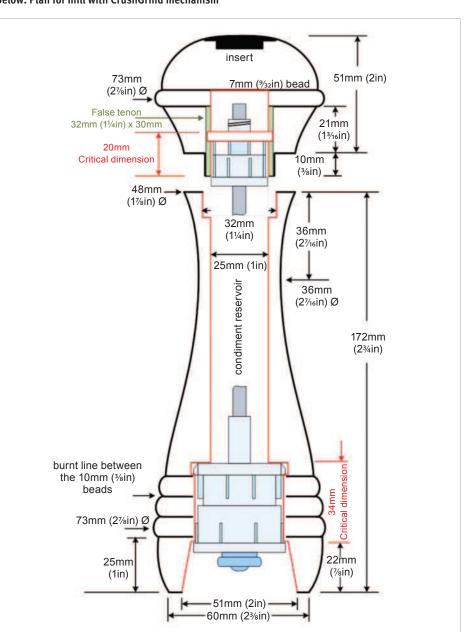
The one thing that has not been addressed so far is what wood are the pair of mills going to be turned from? We know that the top and the base should be one continuous piece of wood. It will need to be a hardwood.

What wood should be used?

- Is the wood being considered food safe?
- Is it likely to affect you personally when being turned? i.e: Is it toxic?
- Depending on the answers to the first two questions, should the condiment reservoir be sealed?
- Should the reservoir have a liner of some kind?
- · Are the mills going to be coloured?
- Are they going to be textured?
- Are there plans to use any other material/wood? i.e: the insert on the top of the mill that indicates the contents?

Answers to these questions have been addressed in previous magazine articles and for me to cover them here would take at least another page. Finally, the grain needs to be attractive, knot-free and dry. There is nothing worse than finding after a month or so that the false tenon or the recess in the top of the base which receives it has become oval!

Below: Plan for mill with CrushGrind mechanism



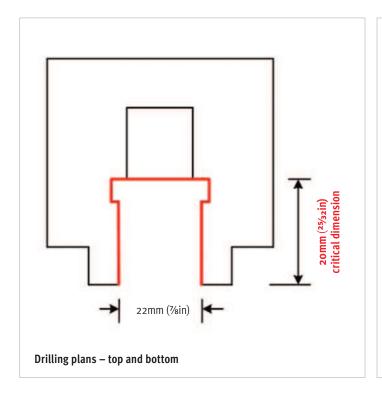
All of the necessary dimensions for both the hole drilling and external measurements would now be included in the line drawing. The drawing shown on page 21 has only been drawn to show the relationship between the mill and the mechanism. A number of detail measurements have been omitted for clarity. This drawing also includes a hole for the false tenon. The tenon is turned from the same wood as the mill.

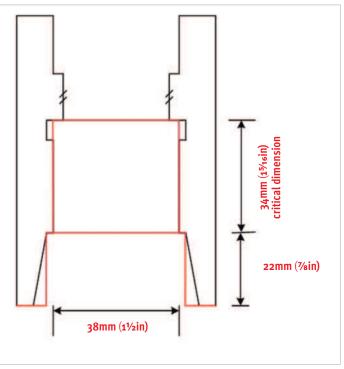
After mounting the blank as one, between centres, turn the corners off and form either the spigot or dovetail as preferred. Remove from the lathe and using a jig to support the cylinder, bandsaw between the base and the top.

The top is mounted and, when running true, the hole for the pre-turned false tenon is drilled. The tenon is glued in and clamped between centres.

One of the decisions that will have to

have been made while the line drawing is being produced is whether you are going to form the recesses for the lugs on the mechanisms or are you going to cut them off and glue the mechanism in using a two-part epoxy adhesive? Whichever method you use, once the mechanism has been inserted it cannot be removed without causing potentially serious damage to both the mechanism and the mill itself.

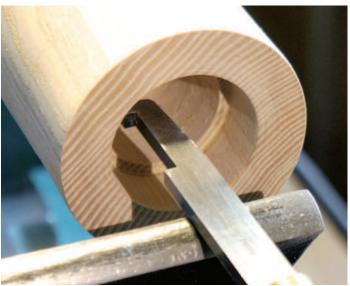




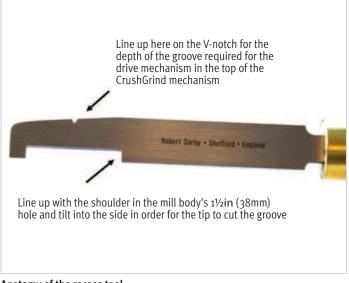
As you will see there are two critical linear dimensions which need drilling extremely accurately. Looking closely at the drilling diagrams it can be seen that these dimensions are particularly

important when the lugs remain on the mechanism. If the decision had been made to keep the lugs in situ then the following tool would have been required and used as shown to form the recesses.

The advantage of the recess-cutting tool shown is that it has been specifically designed for forming the recess for the CrushGrind mechanisms. •



Recess tool in use



Anatomy of the recess tool

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# Kurt's clinic Kurt Hertzog gives some answers to readers' questions

#### Safe passage

Question: Any suggestions on how to ship fragile items? I use postal shipping as well as the usual package services.

Answer: I can share a few tips I've gained that have helped me get fragile items through the shipping systems intact.

Depending on the fragility - for example, I often ship pierced eggshell ornaments - it pays to double-box your items. By properly padding and packaging your item(s) inside a box then padding and packaging that box inside a larger box, you have done a good job of protecting your shipment from impact shocks. Remember, it isn't the fall that breaks things, it is the sudden stop. Providing for a softer and slower 'landing' will help fragile items survive.

The inner package doesn't need to be bullet-proof since it shouldn't see the direct contact or mechanical abuse that outside packaging receives. I favour wadded-up tissue paper for the inner box padding and will use Styrofoam peanuts for the outer box padding material. Because my turnings are rather fragile and pretty small, I put my inner pack in low-cost, throwaway kitchen food leftover storage containers. I also make use of

cardboard cores for industrial printers and plastic drink packaging.

Obviously, larger items and those less fragile than pierced eggshell ornaments can go into a cardboard box as the inner container. You can upscale the entire process based on the size of your shipped item(s). The inner package really only provides the support around your goods for containment in the larger package. I always secure the outside packaging with indestructible sealing tapes. To prevent the accidental piercing of seals, I use fibreglass reinforced tape. While it's expensive, so little needs to be used that I find it worthwhile. A few strips placed strategically seal the box and then can be over-covered with the less expensive, commonly used clear packaging tape. It also works well as simple tamper-evident packaging.

I am torn about insurance. I always take the full amount of the no-cost insurance but opt out of additional value. Insuring does give the impression that the carrier is responsible and should willingly treat your package more carefully, but

if you've ever tried to collect a claim, vou know what a joke it is. I've always given up after they put you through the ringer intentionally to wear you down and make you go away. Also, to insure for the true value of your materials and time, your premium will be pretty hefty. Playing the odds over the long haul, I find my rare losses are still ahead of the game when compared to the insurance costs. Marking packages 'fragile' without taking additional coverage might only be challenging any malcontents working somewhere in the system to try to break things. You decide.

When I am travelling by air and shipping fragile items in baggage - whether turnings, supplies, or expensive piercing tools - I pack them into industrial containers such as Pelican cases or equivalent. Since I'll be returning with my same tools etc., the cases will accompany me on the journey home. As needed, even with the foam interiors, I will pad and double-box items of extreme fragility or keep them in my carryon computer bag.



I use much higher-cost tape such as fibreglass reinforced in a few areas for needed strength, then use the traditional clear plastic strapping tape over top



For fragile items, I double-pack in an assortment of boxes, plastic packaging, cardboard tubes etc. using wadded tissue paper for the inner packaging process

#### By the book

**Question:** I am thinking about writing a book on woodturning. There seem to be plenty of turning books around at the retailers but none that I think cover what I'd like to write about. I'm sure there are ins and outs about the publishing world. Do you have any advice on book authoring?

Answer: While I've had more than 180 woodturning articles published, my experience with books is very limited. Years ago, I had a publisher offer what I found out later was, by comparison to most, a pretty attractive contract for a book. At the time, I had three columns that were being published every issue in different magazines so I never pursued it. Over the years, I have done a bit of digging when thinking about a book but haven't gone farther.

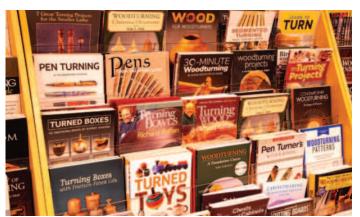
I can offer some advice from my own digging and from friends who have authored woodturning and non-woodturning books. Don't do it to get wealthy. Your financial take after all is said and done, is usually pretty meagre when compared to the time and effort required. Whether you deal with an established publisher or self-publish, it is a large undertaking. Self-publishing, while seeming to be more financially attractive, puts the entire monkey on your back, from writing and illustrating to editing, printing, marketing, distributing, and more. In established publishers, there are big and small, generic and speciality, decent and not-so, as

well as flim-flam in the mix. I suggest you avoid the vanity press operations. BTW, GMC, the parent of *Woodturning Magazine*, has a book publishing division.

You don't say what your topic is, so I'm assuming you intend to keep it quiet for now to avoid competition. Regardless of your topic, remember you are playing to a niche market with very limited distribution and will have competition from tools and equipment for every discretionary dollar. Your topic and book will need to be pretty good to pry money from the wallets of woodturners. My closing suggestion is to follow this path because you love it and want to share. Any fame or financial reward will likely be minimal or non-existent. If you find you are serious, get in touch with any of the authors of books in the woodturning field that you've found helpful to learn the ropes. I'm certain they will give you their recommended dos and don'ts that they've learned along the way. Please don't confuse my comments as talking you out of writing, only to help you go into it with your eyes wide open.



My local Woodcraft store has a better-than-most selection of woodworking and woodturning titles yet only a small number are dedicated to turning.



Even in a well-stocked woodworking book rack, only 20 or so of the 200odd books are woodturning titles

#### Stay sharp

**Question:** I'm not very good at sharpening yet and my tools get discoloured at the ends where I grind. My turning friends make fun of them and tell me I'm damaging things. They seem to cut well and I think they are just funning me. Am I damaging them?

Answer: I'm wondering if your friends might lend a hand helping you improve your sharpening skills. Perhaps you might ask them for assistance. You don't say what kind of steel your tools are made of. Unless they are the hardly in circulation any longer carbon steel, you're fine. Once you get to high-speed steel and beyond, you can make the tools look pretty ugly at the grinder without damaging the steel. Your comment about cutting well is really the key. If the tools are properly sharpened and cut well, then you have succeeded. Now you need to develop the art of touching up a tool. Without waiting until a tool is cutting poorly, a quick trip to the grinder for a 'touching up' will never degrade the tool or discolour the steel. While I doubt you have the older, rarely-found carbon steel tools, do know that excessive heat from grinding can damage the temper of those tools. Regardless of the ribbing from your buddies, developing your sharpening skills can only enhance your turning enjoyment and accomplishments.



For HSS and beyond, if your tool is shaped correctly and cuts well, you can accept any unsightly heating discoloration as cosmetic only



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# Colouring equipment What do you need?

Stewart Furini looks at low-tech choices for adding colour to your turnings

What do you really need to start colouring wood? When I do club demos, I seem to take a huge amount of equipment with me. So much that it might appear putting colour on wood is a very complex process requiring at least a car-load of equipment. I bring paint brushes, sponge brushes, stencils, templates, airbrushes, tapes, aerosol spray paints, artists' acrylic paints, metallic paints, iridescent paints, acrylic medium, spirit stains, water-based stains, paper towels, newspaper, cardboard, sanding sealer, acrylic lacquers, ebonising lacquer and even combs (don't ask – you'll

find out why in a later article). But you can get fantastic colouring results from very basic equipment. In fact, one of my bestselling platter designs needs absolutely no specialist equipment to produce, nor indeed any art equipment.

When I started colouring wood, all I had was a sample set of stains, and this kept me occupied for a good few months trying out different ideas, colour combinations, and ways of applying colour. It also showed me that you don't need a whole load of extra equipment. Well, not until you feel the pull of this new slope you

have unwittingly plonked yourself on and find that you are buying better quality paints and brushes, and getting drawn to trying out an airbrush, then buying multiple airbrushes so you can have them dedicated to a particular colour, and immersing yourself in the possibilities offered by the world of special-effect paints. But I don't want to put you off with the thought of all the expense that might entail, so move on to the next section as you really don't need this extra stuff until you find yourself wanting to try out new and exciting techniques.

#### ■ The bare essentials

Let's assume you have turned your piece of wood, it's ready to colour, and you've got some paint or some stains that you want to use. How do you go about applying that colour? Most kitchens will probably contain all you need to get that colour on to the wood without a trip to the art shop or clicking that 'buy now' button on a website – kitchen roll. In fact, in my house we don't actually have any of this in the kitchen as it is all in my workshop. If you're feeling more adventurous, you might want to reuse plastic food wrapping or plastic bags, or crumpled-up pieces of newspaper, but the kitchen roll is what I normally reach for. Total cost of equipment so far – £o (assuming you already have the kitchen roll).



Bare essentials - you can achieve a lot with this basic kit











and this can give some great effects, especially when combined with putting different colours on and sanding back between coats. But you don't have to limit your artistic exploits to just wiping colour on with the paper towel. You can use a dabbing approach and lay different colours over each other, which helps to create some interesting textures and variation in your colouring. You can do this with stains and paints, or be doubly adventurous and use both.

You can use the paper towel to wipe your stain on to the wood

Gallery of decorative effects achieved with paper towel and paint or stain

28

Finally, you can fashion paper towels into different shapes and use them to add colour in particular patterns – maybe use the edge of a folded wad of paper towel, or roll it into a tube and dab the colour on with the end. As you can see from the images in this section, you can create a wide range of colouring effects with the humble kitchen roll.



Right: Kitchen roll 'tube' as a paint applicator

#### Spray paints

You may well want to branch out from all this slapping colour on with a paper towel and have a go at spraying. We'll be looking at airbrushing next month, but cans of spray paint offer another easy way into colouring wood. The type of paints I use come from an art supply shop for about £5 a can. These give a different range of effects to what you can achieve with airbrushes, being cruder in their spray pattern, though you can get a range of different-sized nozzles for them. Perhaps you have seen some of the space scenes that street artists produce with these paints. Some of the techniques they use work well on colouring wood. My favourite is putting several coats of paint over each other while the previous coats are still wet, and then putting newspaper over the paint and pulling it off to reveal a mixture of the colours. This is just the tip of the iceberg, though, as you can use masks and templates to create effects, splatter the paint on in flecks, and develop gradients and shadows. Be prepared to make a bit of a mess though, and you must make sure you are wearing appropriate safety kit.

#### Paint brushes

Then there's what has been the artist's choice for centuries – the brush.

I don't consider myself an artist, and that's not just because I'm not that good with a paint brush, although that is part of the reason. I am yet to develop techniques with a paint brush and paint to be able to produce a painting with much skill to it, or with a pleasing degree of verisimilitude to a real-life object, but that doesn't stop me using brushes to have fun with my colouring.

There are some wonderfully skilled and talented artists who use brushes and paint to create truly astonishing and beautiful pieces of wood art. There is a degree of precision and realisation of intent in their work that I haven't yet developed, and may never develop. But it is easy and rewarding to use brushes to create some decorative effects that will bring another dimension to a piece of plain-looking wood.

They are, of course, very helpful with putting paint on, but I tend to only use them for a limited range of purposes, given my lack of skill with painting. They are great for putting a wash of colour on –

and I've had good results doing this with thinned metallic paints over a rim sprayed with ebonising lacquer. I've also used brushes to get stain into texture, reaching into those places where paper towel can't. They are great for splattering dots of colour on to add texture. I also use brushes to put paint on when I'm making centrifuge-effect bowls. You can use brushes with stencils as well by stippling paint through them, though I usually do this with an airbrush.

Dry-brushing with a soft paint brush is great for adding depth to the colouring of textured turning. To dry-brush, you first put paint on your brush and then remove almost all of it on a scrap piece of paper or card. Then lightly brush over your surface for a subtle enhancement to your colouring. You can get great results from a cheap blusher brush with this effect. Foam brushes are useful too, and I often drag a foam brush with black paint on over a coloured and textured surface to add more contrast and depth.



Spray paint is an option if you don't have an airbrush



My brush collection - room to expand it for sure



The black on this rim was added by dragging a foam brush lightly across the textured surface after colour had been added

#### Coloured pens

Coloured pens – whether these be of the permanent marker variety, felt-tips of various nib sizes, paint-filled pens, or even chalk markers - are another medium to try. I haven't coloured a piece of turning entirely with pens, but they are great for adding to some colouring by putting in detail or adding boundaries to what has been coloured. You can also use them to put a design over the top of your colour, being only limited by your artistic talent. I've stuck at using them to add lines as my drawing skills need some development. To protect the colour, you will need to protect the surface with a sealer and a lacquer, which we'll cover in more detail in a later article.



Ink and chalk marker pens are useful addition to your equipment

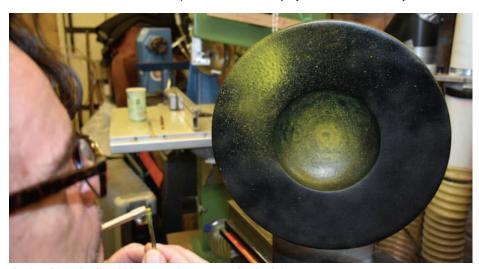
#### Airbrushing without an airbrush

These come with a health warning, which is to make sure you only blow through them. Before I started compulsively buying airbrushes, I had a couple of these spray diffusers. In fact, I still have them and they get occasional use, and once saved me in a demonstration when I had a problem with my airbrush. To use them, the bottom tube is placed into a small bottle of stain or thin paint and then you blow through the mouthpiece across the top of the tube in the paint. This pulls up your stain or paint and diffuses it on to the surface of your wood. You can achieve a mottled, even splattered, look, or build up a coat of solid colour with a few more puffs

of air. Just remember never to suck inadvertently when you are inhaling the next breath of air.



These spray diffusers are fun to try out



Blowing thinned yellow iridescent paint on to an ebonised rim

#### **Closing comments**

If you've not done colouring before, I hope this has shown you that you don't need to spend a lot of money to have a go — and as for buying expensive equipment, well, you don't need it. Though I do know, of course, as all of us woodturners perhaps do, that there is a difference between 'need' and 'want', especially when I go to a woodturning show. Next time, we'll look at airbrushes and how to get started with them for colouring your woodturning.

#### **Health & Safety**

You need to protect your skin when using stains and paints – not just to keep your hands clean, but because some products may contain chemicals you should avoid direct contact with until they have cured fully. Wear suitable protective gloves and eyeprotection, ideally a full-face shield.

Be aware that for some stains and paints you should also wear appropriate respiratory protection. You will need a mask that protects you from vapour rather than dust. A dust mask is not suitable for protection from fumes.



Protect your health with the right PPE and RPE

#### Unleash your inner potential

Get back into nursery school mode and try adding paint to your surface with all manner of objects - bits of sponge, pieces of string soaked in paint, paint flicked off an old toothbrush, paint rolled around under an inflated balloon. paint printed on to wood from a leaf or paper doily or even the underside of a bottle cap. This approach is about creating an interesting paint effect on a plain surface, so don't worry about the method you use to get paint on to it. The fun we all had with paint at nursery school doesn't have to stop in our later life - and the effects can be great. Release your inner child and have some proper fun. Put your colour on with a smile on your face, a song in your heart and a twinkle in your eye.



The author at nursery school developing his brush skills

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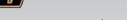
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## Stem mirror

Jason Breach creates a stunning, poseable vanity mirror

#### Introduction

I have made quite a few of these over the years, but not so much lately, so this has been a nice way to getting these going again. One incident sticks in my mind on these. It involved a man who raced across the car park of a gallery that had some of these on display, he asked if I was Jason and if I made the mirrors? He wanted to know how these worked, how do you get the mirror head to tilt? I will say that these took a lot of thinking about when I first made them, and so wanted to keep my ideas to myself, I think you get the idea.

The most important aspect of this as a design is that it works on the simple idea of a ball and socket joint. This is connected with a knock-down furniture fitting. These allow the movement, the mirror head locks in place by being turned clockwise, and loosens to allow the tilt movement by being turned anticlockwise. The two connecting sections must be accurately made or the locking movement does not work properly. The material sizes are easy to find – two 200mm x 50mm bowl blanks and one 305mm x 50mm square section. These need to colour match nicely if possible, cut from the same board. The sizes can easily be changed

The square blank needs a few holes drilling before it is turned, which is best done using a pillar drill to ensure the holes are parallel - a set of 10mm drill and plug cutters make life a lot easier. The cutting of the plug before turning allows colour matching of the drilled-out hole. Inserting of softwood plugs is also advisable as this stops the timber fibres chipping out around the face of the drilled holes.

A screw chuck is the easiest way of holding the top and the base on the lathe for the first mounting. The size of the screw holding point needs to be 6mm or less in diameter due to the size of fittings that locate through this hole. The other advantage of this mounting method is that it allows the parting off of two rings which have no screw hole in.

There are a few fittings within this that make this work - a short length of M6 threaded bar, an M6 four-pronged nut, and an M6 cross-head dowel. Other items that make life easier are a <sup>1</sup>/<sub>4</sub>in router and a 6mm straight cutter, and then a table set up to fit into the banjo on the lathe. This allows the slot to be cut, but a jig could be made to do this on a bench if required.

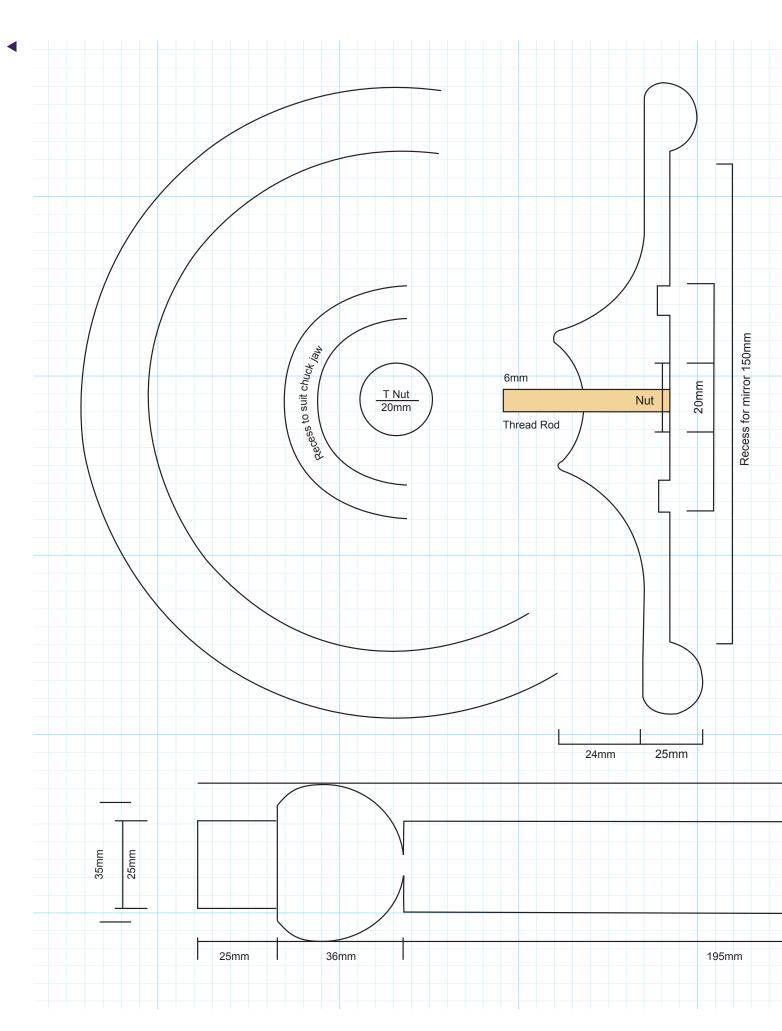


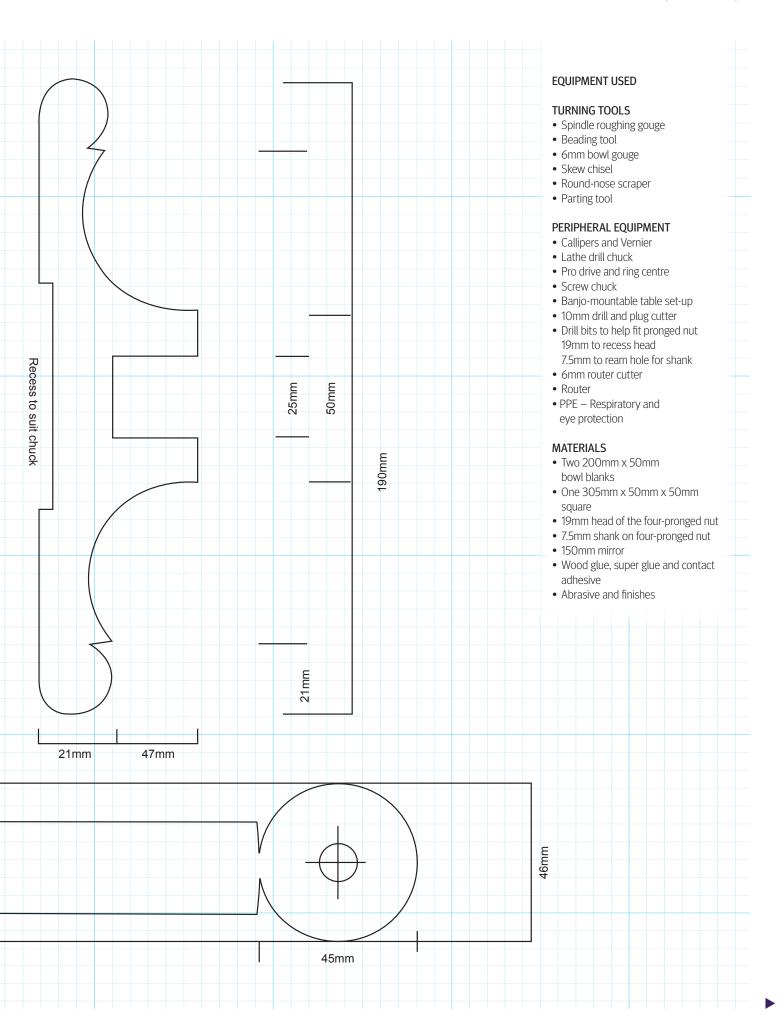
The M6 threaded bar, M6 four-pronged nut, and an M6 cross-head dowel that make this project possible.

These types of fittings are available online from a number of suppliers. You may find them described differently depending where you are in the world.

Pre-cut mirror blanks can be obtained from many craft supply companies in a range of sizes. NB: Always wear eye protection when fitting glass components.









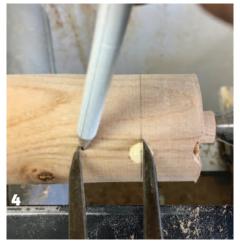




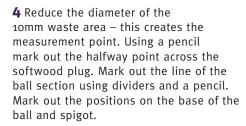


#### The stem

- 1 Carefully mark out the centres using a marking gauge. Decide which is the top and base and on the top mark the centreline down about 50mm in length on one face. Set out the measurements – 10mm waste line, 35mm from the end provides the position of the centre of the ball.
- 2 On the 35mm central point drill a 10mm hole all the way through the blank then, using a 10mm plug cutter, cut two plugs within the waste area, these need to be about 10mm long and on either side. I also cut some softwood plugs that I insert into the drilled out hole. Remove the plugs from the ends.
- 3 Mount the blank between centres, turn down to a cylinder with a roughing gouge and check the diameter as required. This shows the softwood plug in place.







- **5** Using a beading tool cut the shoulder lines on the stem; this will define the ball sections, the diameter of the stem is 25mm, the spigot to join into the base is also 25mm diameter. Remove the waste to create the straight section of the stem. With this done, shape the balls on either end, sand, seal and wax.
- **6** The softwood plug ensures a clean surface around the hole - without this the timber chips out. These are only pushed in place, not glued, and a wipe over with





a damp cloth before inserting ensures that these hold in place.

#### The top and base

**NB:** The top and base are both held on a screw chuck.

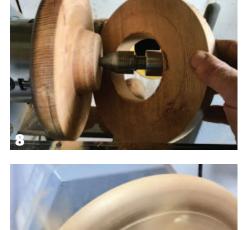
- 7 The base. Clean up the outer face to a round and shape the underside of the base using a bowl gouge. Cut a recess to suit the chuck jaws, position the length of the bead edge (pencil line) and shape the underside of this.
- 8 Remove from the screw chuck and mount on to the chuck, and shape the top face. I hate wasting timber so I use a parting tool to cut the waste section off. Bring up the tailstock and keep the overhang over the toolrest to a minimum. This can be done with the base and top.















**9** Shape the base using the bowl gouge, create the bead and check the overall shape. Create the hollow section – remember to think about the direction of cut. This should be an even curve, which is tricky as you are having to cut from two directions, meeting at the centre of the hollow.

**10** With the shaping done, drill the hole to fit the stem. Use the point of a skew to cut a small V in the centre to guide the drill into. Use a 25mm Forstner bit to drill the hole and mark a depth line on the drill

shank. Reducing the lathe speed will help reduce the heat produced. Also hold the drill chuck to ensure this does not twist.

**11** The top – clean up the outer face, using a set of dividers carefully mark out the diameter of the mirror, using a parting tool create a break line cut just inside this line then using a bowl gouge remove the stock, check that this recess is flat so the mirror will sit in the recess correctly.

**12** Mark out and cut a recess so the chuck can be used to hold the work, allowing

the rest of the shaping. In the centre cut a V with the skew, drill a 19mm recess to accept the head of the four-pronged nut and a 7.5mm hole to accept the stem. Remember this is held on the screw chuck.

13 Shape the bead edge with a bowl gouge, and check that the mirror will fit in place – there needs to be a 2mm clearance gap to allow the wood to shrink or move. Use masking tape on the mirror to allow this to be held when fitting, as these can be difficult to retrieve. Do not worry about sanding this yet.











**14** Remove from the screw chuck and hold in with the chuck jaws. Either part off the ring section or remove the waste using a bowl gouge, then start to shape the socket to accept the ball, this needs to match the size of the ball so care needs to be taken when doing this. A template can be made to match the size.

**15** Continue to shape the back of the mirror using a bowl gouge, refining the profile and blending into the curved bead edge. With the shaping done, sand this – it should be possible to sand all the bead edge around to the mirror recess. Ream out the screw chuck hole with a 6mm drill, then seal and wax.

#### The slot

**16** The best way of making the slot is with a router. A simple table to fit in the banjo

is required and the router is bolted on to the table. This needs to be robust to do the task, and needs to be held in place firmly within the banjo, as this does not need to move in use.

17 The softwood plugs need to be removed, which can be done by using a wood screw. Carefully screw this into the centre of the plug and then pull this out using some pliers to grip it with. Holding this on the lathe between the centres is easier.

**18** The lathe is used as the clamping and holding method. Make up two stepped bungs to fit within the plug holes on the ball (10mm diameter) — these need a step with a softened edge to ensure they do not mark the ball. One

of these will be held in a set of chuck jaws, the other needs to fit on to a tailstock multi-head centre.

**19** Test to ensure that these bungs fit in place and that the outer stepped edges provide pressure to hold this in place. The base of the stem should be able to move up and down, the raising and lowering of the stem creates the length of the slot.

#### Health & Safety

When using router jigs on the lathe when the work is intended to be static it is important to remember not to turn the lathe on. It is safer to disconnect the lathe power cable to ensure accidents do not occur.











20 Set up the table with the router bolted in place and a 6mm router cutter held in the collet. The banjo will need to be rotated so that the locking handle is locked down on the far side of the lathe bed. Carefully position this so that the centre of the cutter lines up with the centre of the ball, and in line with the centreline of the lathe - the revolving tailstock location on the stem helps with this. Clearance of the chuck is important. I had to change the chuck jaws and remake the chuck-held bung to allow the table to be positioned. A longer bung could have been made. Ensure everything is locked in place.

**21** With the router running, gently lower the cutter into the ball, the left hand putting weight on to the top router lowering the cutter, the right hand raising and lowering the stem and so creating a slot, the cut depth is achieved when the cutter reaches the 10mm drill hole. Take light cuts.

22 Position the cross-bolt and hold in place with a threaded rod. With this held in place, glue in the plugs, align the grain direction, and use a small amount of glue.

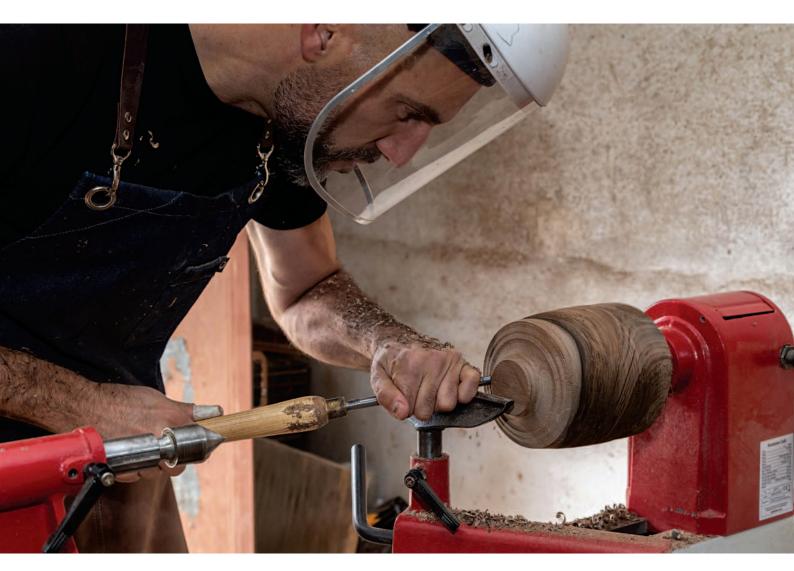
23 When cured return the stem to the lathe, and carefully skim off the protruding areas of the plugs using a small spindle gouge. Then remove the tailstock centre stump, blend in by hand and seal and wax. The stem can be glued into the base. Ensure this all comes together aligning the grain.

**24** To push the four-pronged nuts into the recess in the mirror, these can be tapped in with a hammer and a bolt, but this is a little brutal. Pushing this in on the lathe works well NB: note the foam-faced board held in the chuck. To measure the length of threaded rod use a Vernier as a depth gauge. Hold the mirror head in place on the stem, ensuring the cross-head dowel thread lines up, and measure down through the hole. Reduce the length by about 5mm, test, then glue the thread into the four-pronged T-nut. The mirror can be glued in with contact adhesive. The stem is glued into the base with PVA and when dry the completed mirror can be assembled.









#### How did you go about it?

I was fortunate enough that people started to like and buy my work, so I was able to leave my design job and dedicate 100% to my own business. I started my workshop in my grandfather's garage, and the business slowly grew as more orders came along.

#### What type of tools do you like to use?

For the most part I use hand tools – gouges, chisels, handplanes, some Japanese saws

- and some power tools such as the lathe, drill press, tablesaw and sanders. I prefer to use only hand tools if I can because I believe it adds value to the final product, but sometimes it's not possible and I use the power tools as they are especially useful to accelerate production times.

#### Are there any things you avoid?

I tend to avoid projects that are not challenging enough or where I am not allowed any creative freedom.



# You have worked on a number of restaurants. How does this work compare with your carving of smaller projects? The major difference is the number of pieces I have to create, usually in the

pieces I have to create, usually in the hundreds. It's very challenging to repeat some objects so many times, but practice makes perfect.

### How does your commissioning process work?

Mostly it's collaborations – the clients have some input after the first drawings and prototypes, some adjustments are made and we get the final result. Sometimes I have total freedom and the client trusts me to create freely.

#### Tell us about your workshop?

I still have my workshop set up at my grandfather's garage — I've been there for about two years now. I like to be near my family so this is a perfect situation for me.

#### How does your design process work?

Usually I start by doing some kind of research and getting inspiration, mostly from nature. I then make some sketches, and begin creating the final object.



### Which woods do you most like working with?

I love working with walnut, because of the smell, the colours and the way it carves. I also like to work with cherry, apricot, loquat, olive and chestnut. I love the smell and the final result is always amazing.

Do you work with other materials as well? I've worked with stone and metal, always in conjunction with wood in some of my projects. They are perfect complements to the wood, allowing more freedom to create different designs.

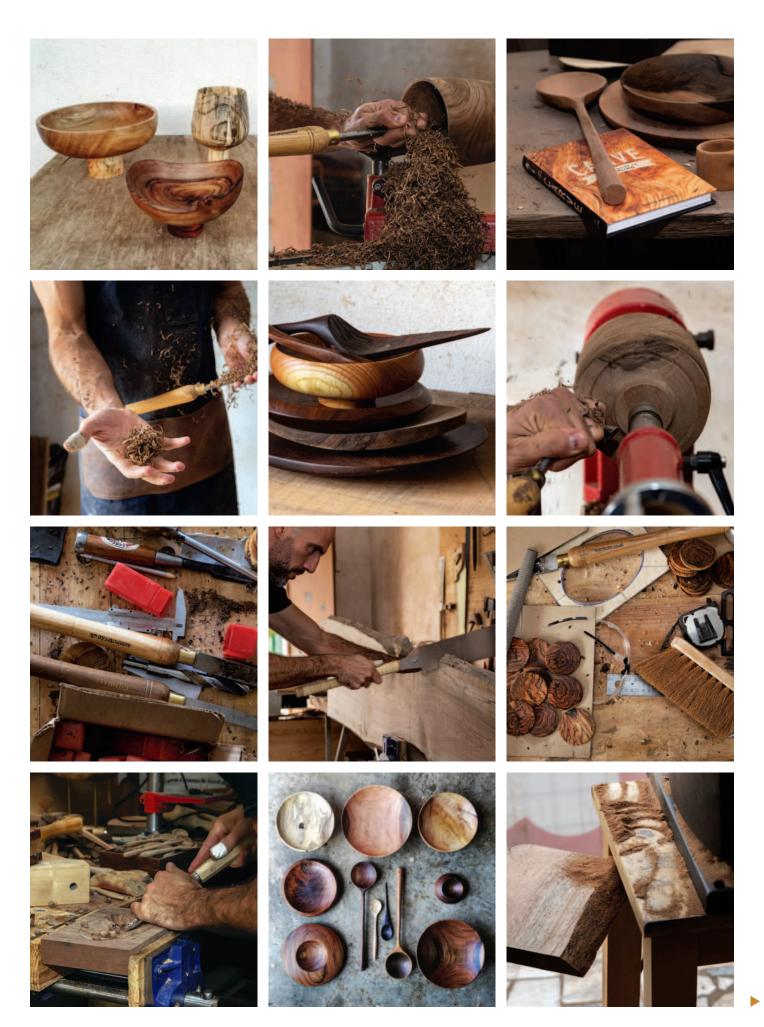
#### What sort of finishes do you prefer?

I only use natural finishes, mostly linseed oil mixed with beeswax. I refuse to use chemicals in my products.

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

The world inspires me, and most of my designs derive from natural forms. I love to collect seeds, seashells, leaves, rocks and so on.







#### Tell us about the creative scene in Lisbon.

I do believe there is a lot of young talent in Lisbon right now. I have had the pleasure of meeting and working with some of those people and to share some insights with them. I can surely say that the creative scene going around in Lisbon has served as inspiration for my work, it's amazing to be a part of something this special.

#### What is your favourite project you have worked on and why?

I have to say the carved plates for Restaurante Feitoria in Lisbon; I just love the final result, and working with chef João Rodrigues is always a big challenge that I happily accept.

#### What is the most challenging project you have worked on?

It's for sure the work I did for Fifty Seconds by Martin Berasategui in Lisbon. The amount of work was crazy, and the difficulty of some of the designs was very hard, but the final result was amazing.

#### What are you working on now and next?

Right now I'm finishing some work for Restaurant Ocean in the Algarve, and the next project will be for the Ritz Hotel in Lisbon.

#### Where do you see your work going in the future?

I would like to start to make some furniture, but also to experiment with new materials and techniques, always in combination with wood.

#### Have the Covid-19 pandemic and the lockdown affected your business?

I can't say it has affected much as of right now, because I already had some projects moving forward, but in the long term I can't predict what will happen. I can only keep working with the same mindset and hope for the best.

#### What do you do when you're not working? Mostly take care of my three little boys.

I also love to go to the beach and take walks in the forest.

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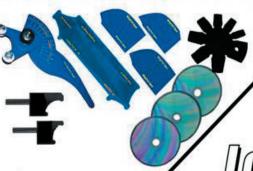








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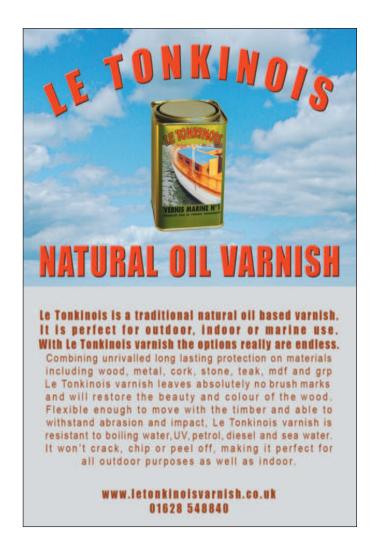
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## The skew chisel

Les Symonds takes an in-depth look at the tools we work with, dealing this month with one that has a reputation among beginners for being tricky

In this series of articles, which has already examined the parting tool and the range of gouges, I aim to give turners a better understanding of their tools. This month I will be looking at the skew chisel, which has quite a reputation among learners for being the most difficult of all the turning tools to master. There will be an emphasis on understanding the dynamics of what makes it work well and what can therefore make it fail but, essentially, I aim to give you a level of understanding that will

### enable you to avoid the pitfalls and to use your tools to their best advantage.

The series is aimed at those turners who are beginning their journey into the craft and at those who have intermediate skills. There will be many experienced turners who may well know other patterns of tools and other ways in which to use them, but it is not my intention to offer a comprehensive list of these. Indeed, the subject is so vast that many books are available covering it. Rather, I will cover those tools which all of us use

regularly and similar versions of them that some of us will be familiar with, and I will offer some hints on safe ways to use them.

Thus, with this look at the skew chisel, I will briefly consider the many versions of profile and grinds that have been developed, but I will concentrate on the most popular versions in use today.

I will consider how and why different grinds are formed and used, and how these variations can help or hinder our turning.

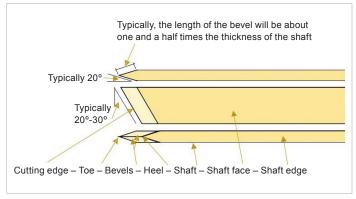
#### The anatomy of the skew chisel

To name and describe the various parts of the skew chisel, I will be referring to images of a standard skew, but please note that the nomenclature can easily be applied to other variations.

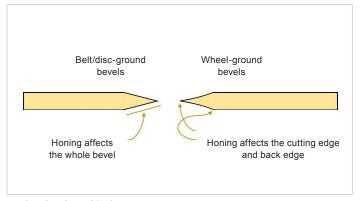
Essentially, the skew has two bevels, mirror-images in shape. Its end is ground to an angle of about 20-30°, and then each bevel is ground back at an angle anywhere between as acute as 15°, up to as much as 40°, although the former is the norm, which makes it probably the sharpest tool in the woodturner's tool rack. Many woodturners use their tools straight from the grinder/linisher, but this tool, more than any other, works best when ground, sharpened and finely honed.

The system that you use for grinding and sharpening your tools will have some bearing on the shape of the bevel. With

such a long bevel, a tool ground on a grinding wheel will have slightly concave faces to the bevels, whereas the tool ground on a linishing belt or a flat, abrasive disc will have flat bevels. When honing a concave bevel on a fine whetstone or leather strop, set the tool down on the back edge of the bevel, then raise the handle very slightly until the cutting edge just begins to make contact before rubbing the bevel on the hone. With a flat-ground bevel there will be more steel in contact with the hone, making it a little easier to maintain the correct honing angle, but whichever system you use, check the bevel regularly to confirm that you are holding the tool at the correct angle and not rounding over the cutting edge. Repeat the honing regularly to maintain a keen edge to the tool; it really does pay dividends.



The anatomy of the standard skew chisel



Honing the skew chisel

#### Various patterns of the skew chisel

There are two common patterns of this tool available today, with a few minor variations within them, plus one or two other patterns that are rather less commonly seen.

Starting with the traditional, standard pattern tool, which has a simple, rectangular section shaft, this is the one most novice turners encounter and which is most commonly available through internet-based sales and auctions of second-hand tools.

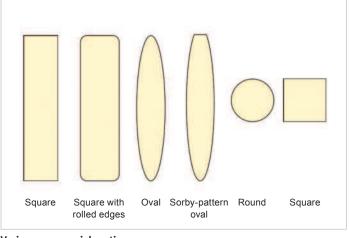
It has a slightly modified modern counterpart, in which the four long edges of the shaft are 'rolled' as a part of the manufacturing process; a minor variation, which is of considerable benefit in that it is much kinder on your toolrest than the original pattern. We will all, no doubt, have encountered a catch at some point with a skew, so it is not difficult to imagine the effect on your toolrest of a machined square edge banging down on to it – the rolled edge relieves this effect greatly.

Moving on from the standard pattern, we have the oval pattern, which is gaining in popularity and which is now frequently included in tool manufacturers' kits of woodturning tools. In its simplest form, the shaft is of a broad, flat oval in section (although, technically, it is an ellipse, rather than an oval), which I will discuss in detail later in this article. Once again, a minor variation is available, in this case from Robert Sorby, which involves one of the sharper points of the oval section (the vertex), being ground to a narrow flat edge, all along the shaft.

Finally, there are the round and the square sections, which will typically be in the region of 6-9mm in section. They are commercially, but less commonly, available, although making one of these is a simple process if you have a suitably sized spindle gouge or square-shafted tool to spare, or even an appropriate piece of a suitable steel.



A collection of skew chisels



Various commercial sections

48 www.woodworkersinstitute.com

#### The two most common grind profiles

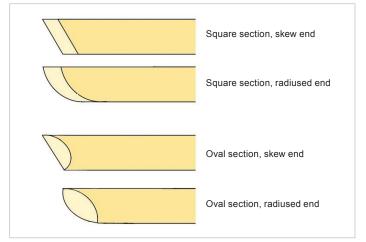
Traditionally, the skew chisel gets its name from the simple, skewed angle of the business end of the tool, ground, as I mentioned previously, to about 20-30° off-square. More recently, however, there are two variations, one quite common, the other less so – these are the radiused end and the square end.

The whole purpose of the radiused-end skew chisel is to ease the process of learning to use this tool by sweeping back the toe at the extreme point of the tool. It is the toe which generally causes most catches when performing planing cuts, with the toe uppermost. Having a radiused end to the tool brings both the toe and the heel away slightly from their normal positions and arguably makes it a little easier to control.

The square-ended chisel really doesn't qualify to take the name 'skew', as this is a contradiction in terms, but those turners who use them usually grind to this shape, using a traditional skew as a

starting point (although this could possibly also be achieved with a spare parting tool of suitable section). It is particularly useful in forming a tenon at an end of a spindle, where a spindle end sockets into a mortise in such items as a lamp base. When used in this way it can remove material rapidly, although this can also be done with a traditional skew chisel.

While discussing the grinding profile, it is worth considering an issue with the oval section skew. When grinding this variation of the tool, the turner does not have a flat surface on the tool shaft to rest on the tool support in front of whatever grinding system is in use. Thus the tool can be inclined to roll, giving a poorly shaped bevel as a result. It is therefore essential that the existing bevel rests fully against the grinding wheel or linishing belt and is held with gentle pressure to prevent rolling of the tool.



The basic combination of sections and grinds



Comparing the skewed end with the radiused end

#### The basic cuts

There are three basic cuts which can be performed with a skew chisel and each of these can be done with any of the shaft sections and grind profiles discussed above. There are, as is ever the case, professional and/or time-served woodturners with advanced skills who can use this tool for further cuts, but some of these (such as cutting coves) require advanced skills and will not be discussed further here. These three basic cuts are, therefore, the planing cut, the V-cut and cutting beads, each of which has been used to produce the sample in our image.



The three basic cuts

#### The planing cut

Let's start by considering the single, most common cause of a catch when making a planing cut, which is that of the toe making contact with the workpiece, thus everything that we do in learning to use the planing cut bears in mind the need to keep the toe clear of the workpiece.

To start, set a 50mm square, long-grained spindle on your lathe and rough it out to a cylinder using the spindle roughing gouge. Stop the lathe and look at the tailstock end of the workpiece, imagining that there was a clock face drawn on it – 6 o'clock would be at the lowest point, 12 o'clock the highest. Now swap the gouge for your skew chisel and, with the lathe still switched off, imagine a line on the surface of the timber at 45° to the axis of the lathe. Now rest the skew chisel such that its cutting edge lies on that imaginary line and rests at about 10.30 on the end grain's clock face. Next, experiment with slight twisting of the tool handle so that the full width of the bevel behind the cutting edge is flat on the surface of the workpiece. Finally, by lifting or lowering the handle, note how the point of contact can move from the heel right up to the toe. You need to adjust the presentation of the tool such that the point of contact is in the middle onethird of the cutting edge, and you must keep it there.

With this configuration, you have a full width of the bevel rubbing on the workpiece, and this makes the cut quite safe. Lift the handle a little and the cut starts to move up towards the toe, and as you approach the toe, there is less and less bevel behind the cutting edge to support it. The inevitable result will be a catch – the toe will dig in, the rotation of the tool will pull it down towards the toolrest and the 45° angle of cut will shunt the tool forwards, making a deep scar and a spiral groove.

On the other hand, drop the handle too much and the heel makes contact. There can be full bevel support behind the heel, so a catch is not inevitable, but consider the leading edge of your skew, just below the heel. Here you have the triangular end of the shaft, especially on a rectangular or square section tool, and by using the heel to cut, the tip of that triangle will be forcing fibres to be cleft from the surface, rather than sheared off cleanly by the cutting edge. This will result in a roll of ragged fibres immediately ahead of the heel. If this happens, just raise the handle very slightly and the cut will once again begin to enter the correct position, in the centre one-third of the cutting edge.

Cutting with each of the three one-third areas of the cutting edge can be experimented with while the lathe is switched off by sliding the tool gently along the surface. The resulting cuts will be quite obvious.

Now switch on and put this tool presentation into practice. Keep firm pressure against the toolrest, but gentle pressure against the workpiece, along which the tool should glide. Try reversing the cut such that you cut in each direction and note any areas in which the configuration of the grain causes difficulties – sometimes this

cut works better in one direction than it does from the other. This is a good point at which to consider the grind profile that gives us the radiused end. As you will have seen, the heel and the toe are the danger points, so if you don't have a radiused tool, just set your own tool on the workpiece (while it is stationary) and first you will note that, with a radiused end, the centre one-third automatically leads the way. Gently raise the handle and you will note that the tool profile is a little safer because the toe is swept back. If you feel that this will be of an advantage to you try regrinding to this profile.

Finally, in consideration of safety and good practice, consider the size of the workpiece. You have just experimented with a 50mm-diameter spindle, but bear in mind that as the size of our workpiece increases, the curve of the perimeter of the wood becomes flatter and flatter. In practice this means that the larger the workpiece, the closer the toe is to its surface, so the simple lesson to be learned here is to practise on small pieces of timber. Conversely, consider the turning of small items such as pens, lace bobbins and hair-sticks. With these, the diameter is so small that the toe projects up above the workpiece, making a catch almost impossible!



Position the tool at 45° to the lathe axis



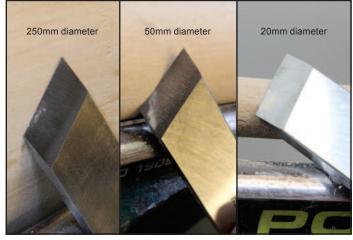
Cutting in the centre one-third of the cutting edge



Cleft tissue from the bottom one-third...



...caused by the leading edge of the tool



Three different workpiece diameters

#### The V-cut

The V-cut is used primarily to separate two different features of a spindle, such as a bead and a pommel. To perform this cut, rest the tool on the toolrest on its thin edge, with the toe pointing downwards and with the tool square to the workpiece. Advance the tool on to the workpiece and you will cut a shallow V-notch, but the tool will soon stop cutting because both bevels will be rubbing inside the V.

Retract the tool, swing the handle a little to the left and look at the left-hand bevel. As your tool makes its next cut, it will follow the line of this bevel. But for it to cut efficiently, you will need to roll the tool anti-clockwise so that the heel points up to about 11 o'clock. Advance the tool, starting just a millimetre or so to the left of the V-notch, and the skew chisel will cut away the left-hand cheek of the notch, making it a little deeper. The degree to which the tool needs to be rolled clockwise is such that the toe is cutting at all times, so proceed slowly and look carefully at the toe. If you roll the tool too much, the cut will start to run up the cutting edge, away from the tip, and this

will result in the tool suddenly twisting clockwise and slamming down on to the toolrest. It is therefore better to experiment with too little a roll of the tool than too much.

You can progress making cuts from one side of the V-notch, but it is better to work one cut to the left, one to the right and so on. What you will need to bear in mind is that the tool needs to be reset for each cut, so to cut on the right, swing the handle to the right so that you cut along the line of the bevel, and roll the tool clockwise to about 1 o'clock. As you alternate the cuts, the V-notch gets deeper.

Once you have mastered this, try cutting a V-notch in square section timber. This is often a feature seen on such spindles as stair components and gives a very pleasing blend from square to round. The process is exactly the same, but visibility of the workpiece is greatly impaired because the corners of the spindle really don't show up at all when it is revolving at speed, so practise, practise on round stock. Also note that this cut is excellent at cleaning up end grain on the square end of a spindle.



The tool will soon stop cutting



Cutting the left-hand side of the V



Cutting the right-hand side of the V



Always maintain that slight gap at the top of the cutting edge



Rolling the tool too far will cause a catch

#### The bead

You may well be used to cutting a bead with a spindle gouge or even with a beading and parting tool, but once mastered, the skew chisel will be found to do an excellent job of this.

Mark out the bead with three pencil lines and cut a wide groove to each side of the bead (this is a good example of a cut which is suited to the square-ended skew!). To cut the left side of the bead, set the skew on the toolrest, flat on its side with the heel pointing left and the bevel lying flat on the surface of the workpiece. Start working close to the left-hand corner of what will become the bead, gently pivoting the tool anti-clockwise while simultaneously rolling it anti-clockwise. This will start a cut with the heel, which will eventually reach about two-thirds of the way around the bead. To progress further you will also need to swing the handle around to the left, always remembering that the tool is going to cut along the line of the bevel.

This is a complex set of movements and you are very unlikely to cut a clean, well-shaped bead on your first attempt, but practise on cheap pieces of 50mm-diameter softwood until the

process becomes natural. The skew will give an excellent finish when used well.



Using the square-ended skew to define the bead



Starting the cut with the heel



The final position of the tool on the left of the bead...



... and on the right

#### The advantage of the oval skew

There is quite a simple matter to understand here. With a standard, rectangular section skew chisel, when performing a planning cut, it is always a corner of the shaft that is resting on the toolrest and no matter how far the tool is rolled over, its support is always at quite an angle to the part of the cutting edge that is in contact with the workpiece. However, the radius of the wide edges of the oval skew allow its support to move away from the corner, out on to the oval face of the shaft, keeping the support more in line with



Comparison of the lines of support

the part of the cutting edge which is doing the cutting. If you imagine a line drawn from the point of the cut to the point of the tool's support, in the case of the oval skew that line will be close to directly along the shaft, behind the cut. This can make the tool less inclined to twist and therefore can reduce the risk of accidentally bringing the toe into contact with the workpiece.

#### Conclusion

We all use the skew chisel for a host of extra little jobs to which it is suited so well, such as refining a dovetailed chuck tenon, marking out small V-grooves ready for scorch-lining or adding a few decorative rings under the foot of a bowl, but if we restrict ourselves to these, then we are failing to use a tool which can give an excellent finish that requires very little sanding. However, becoming proficient at using the skew does not happen overnight; it is a tricky tool to get to understand and to feel comfortable with. Persevere – it's worth it.

#### Health & safety

There is, of course, an element of danger involved with any dig-in or catch, irrespective of what tool you are using, and the skew chisel is the one tool that causes spectacular catches for many turners new to the craft. So, as in the learning process associated with all tools, take time to study what is happening at the cutting edge, with the lathe switched off, before you start your cut. Understanding what is happening and what can go wrong is the key to working safely.



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## Community letters

Here are some letters the Editor has received from readers



#### Meet the Otway Turners

Otway Turners formed over coffee in a local cafe on 30 April 2014, when five of us local woodturners agreed that there was a need for a social group for woodturners in the Colac/Otway area. We formed with five members and remain with five members.

We are on the edge of the beautiful Otway Ranges in Victoria, Australia, where our sometimes spectacular Blackwood (Acacia melanoxylon) grows naturally. Melbourne is just 150km away and the famous Great Ocean Road just a 45-minute drive, but best of all there is a good woodturning tool shop less than an hour away at Geelong.

We are just five friends who gather monthly, on a rotational basis, at each other's homes. We have a Show & Tell where members bring along their latest projects, or perhaps a new tool they have bought or made, maybe a book, maybe even a failed project they're seeking advice on. All this occurs over morning tea, after which we usually adjourn to the host's workshop where we may see his latest tools or work, and often a demonstration – particularly if he is setting the next quarterly project.

The quarterly project is something we take turns to set, and may involve

stipulating a particular project or item, perhaps supplying detailed plans, sometimes an 'airy fairy' project for which members have to use their imaginations and think outside the square, and at other times giving each member a lump of wood to see what they can do with it.

Recently we had a collaborative project where each of us started a turning, before it culminated with the third member. This project caused a lot of head scratching and consternation but all agreed that they enjoyed the project and agreed to make it an annual event. This idea was generated by an article in *Woodturning* about how the late Ray Key's unfinished work was sent out to notable turners all over the world to be completed as they saw fit. We don't envisage printing a beautiful book of our efforts though.

Our members have visited Turnfest on the Gold Coast in Queensland several times now to see some of the world's best in action at the lathe and many of us have visited other woodturning clubs, woodworking shows and displays, etc.

Recently we started meeting for a catch-up over coffee once a month, to discuss woodturning but also solve many world problems, as well as meeting over

lunch with our wives in December each year.

One advantage of such a small group is that if a member is unable to attend a gathering, usually we can adjust times/dates to enable 100% attendance.

As a group we would have more than 150 years' turning experience. Thirty-two years ago, two of us got our start in woodturning by attending a local night class. Our tutor at that time is now a member of Otway Turners.

When we formed, we also laid down the following guidelines:

**Our purpose:** To be a social group for persons in the surrounding area of the Otway Ranges south of Colac, Victoria who share a common interest in woodturning.

**Our aims:** To further our knowledge and enjoyment of woodturning and to share ideas and techniques.

We also decided that our group was not intended to be a public club and therefore is not open to membership from all-comers. To be eligible to be invited to join the group, a person would need to:

- Be passionate about woodturning irrespective of their age, sex, skill level or experience.
- Preferably have their own lathe or a strong desire to do so.
- Have a desire to be an active and contributing member and be willing to attend meetings and activities as scheduled, share ideas, and take their turn to host gatherings and do demonstrations.
- Finally, any prospective new member must be approved by unanimous vote of all other group members.

We have found that this system works for us and may interest other turners who wish to keep their interest in woodturning, not just in our area but anywhere that backyard hobby turners could do with some help from like-minded people, but without the pomp and ceremony of an organised club.

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#### The experiences of an older woodturner

Articles about inspirational disabled woodturners help us understand the needs of those afflicted, and artistic pieces can inspire many to improve. Educational articles for the newer and younger crafters appear regularly, but there is one sector that seems to be missed out. Bearing in mind that most commentators write about the 'ageing demographic' then pass on to something more 'interesting', I thought it was time we geriatrics were given a few words.

Nothing is more frustrating than to realise we are not as good as we used to be, so here is my story about how I am combatting the dreaded 'I cannot do this anymore'.

Since having a stroke in 2000 I have encountered a few difficulties, the first being unable to lift larger pieces on to the lathe. My solution: a rope and pulley system that enables me to move pieces from the bandsaw to the lathe. This worked well for years until nature decided I needed another stroke, so I had to downsize the pieces I make. This let me continue turning but there are only so many small bowls one can make. Then a charity intervened and I had a ready market for my goods, all profits going to the said charity. Happiness came when I realised that all sorts of treen sold well, so dozens of door wedges, dibbers, etc. were added to the inventory.

Nature has a way of kicking ass however, and a triple bypass followed. This left me

with only 5% strength and an intermittent tremor that made an art form out of catches. My tremor is mainly on the right side and a 2 to 3in forward push resulted in a ½-1in movement of the cutting edge into the workpiece. Remember all those science lessons of 60 years ago on the principle of movements? Well, with the help of the nice people at Crown Hand Tools I got a considerably longer handle that reduced the movement into the workface to a manageable amount. A new medicine helped: CBD oils reduce tremors.

So I got back to work and managed for a few years, then came the next kick in the butt: I had a melanoma removed from my left leg (thank you to Flash, my Labrador, who insisted I have this strange lesion checked out). The operation was fine but after proper recovery, my left leg decided that after 75 years of propping me up, it would quit. Now, the turning instructors all say you should tuck the end of the tool into your right-hand (or left) hip, and prop yourself against the bed of the lathe. If I did this the sharp bit of the tool would be pointing out the shed door - they have not yet made tools for the more rotund figure.

The solution came with the help of my former neighbour, Mike Darlow. We sat in the shed with copious amounts of coffee and pondered the vagaries of design. The solution we arrived at met all the criteria of safety, comfort and access.

With the limited market, we worked out that the cost of manufacture would be more than a new, expensive lathe, and would probably weigh as much as a small car. So, back to basics, and basic works for me. I already had in my possession a swivelling, sprung, lightweight, height-adjustable bar-type stool, along with a billet of teak about 15in square. So the stance is right, height is OK, reach is fine and I have all my controls safely at hand. Now the tools. I took a well-worn and shortened spindle gouge and reduced (butchered) the handle to 8in and lo, happiness is a short gouge.

There was only one problem left: looking through my wood store I realise that there is only enough wood left to last me until I am 130 years old. Maybe after all this virus stuff I may venture out with my chainsaw and wheelchair to find some more.

I'd like to say a huge thank you to Mike Darlow, tutor, mentor, friend and fellow drinker of good coffee and thinker of clarity who inspired me to start thinking again. Thanks also to Crown Hand Tools for its patience in the face of little commercial reward, and to Peter Hemsley at the Toolpost, who helped me to find the complete Wivamac lathe. Finally, thanks to my lovely wife of 44 years who tells me to 'go and play in your shed', and who, with her constant supply of tea and coffee, makes life so much fun.

PJ Gosselin

#### Whirligig

Hi.

I am lucky enough to be employed by a university and am on full pay during the lockdown. Working from home has that bittersweet feeling. I am exceptionally blessed to be in full-time work but sitting here working in full view of my shed is frustrating. I'm not complaining, though. I know how lucky I am.

We moved here just over two years ago, so much of my free time has been given over to renovating the house. I still manage to find time to get out to play occasionally though. I started turning when I got my first lathe in 2011, and I am completely self-taught. My time spent turning before we moved was pretty much about four to six hours on a Saturday. I still class myself as very much a beginner.

We had a log stove installed last year.

Our firewood is delivered in pallet-wood crates, most of which have been chopped up for kindling.

I managed to save some though, and have finally made something based on a project by Colwin Way in the May 2019 Woodturning magazine. My attempt, after nearly two years away from the lathe, was largely made from the pallet timber, with a small amount of elm (from the fireplace), and holly. All





either scrap, or leftover timber from other projects. I have given it a couple of sprays of clear-coat to protect it, and I think I may change the axle for a slightly heavier rod due to an alarming wobble in the blades at full speed.

Stay safe, stay home.

Best wishes, Tom Speirs



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## CONTRIBUTORS



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Andy is a professional woodturner and has a workshop and gallery in Suffolk. He makes one-off pieces, smallbatch runs, antique restorations and other strange commissions. He also demonstrates and teaches.

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#### **CHRIS WEST**

Chris has spent a good deal of his time designing, turning and writing on the subject of salt and pepper mills. He has also published a book, Adding Spice to Woodturning: 20 Salt, Pepper & Spice Shaker Projects for Woodturners. www.westwood

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**RICK RICH** 

Rick is a part-time woodturner from Washington State. He is a member of the **American Association** of Woodturners (AAW), the Cascade Woodturners in Portland, Oregon, and a founding member of the **Southwest Washington** Woodturners in Vancouver, Washington.



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Andrew sees inspiration around him every day. He 'arrived' on the Australian woodworking scene in 1983, and since then his work has developed into areas of sculpture, furnituremaking and the odd bit of cabinet work. andrewpotocnik@ telstra.com



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A professional woodturner. demonstrator and teacher. Kurt writes for various woodturning and woodworking publications in the US. kurt@kurthertzog. com kurthertzog.com



#### LES SYMONDS

After a career in teaching, Les developed his hobby of woodturning into a career. He is on the Register of Professional Turners and has a small shop and gallery in Bala in the Snowdonia National Park, where he displays and sells his work.

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#### **MARK SANGER**

Mark pursued woodturning full time in 2004, making oneoff sculptural pieces that include colour and texture as well as pure woodturned forms. He demonstrates and teaches in the UK and abroad. www.marksanger.



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Jason started turning at the age of 12 and has built up a reputation as a tutor and demonstrator that has taken him around the world. He produces a range of items, but is best known for his unusual turned boxes.

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**RICHARD FINDLEY** 

Richard is a full-time production turner specialising in small production runs, oneoff commissions and turning for furniture and restoration work. richardfindley.uk



**PAT CARROLL** 

As a builder/carpenter, Pat has always loved working with wood. In 2002 he took a woodturning class and was very quickly hooked. He is keen to explore the combination of texture and colour in his work. slievebhui woodturning@ gmail.com



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**PETE MONCRIEFF-JURY** 

Pete learned turning in school and, when made redundant 12 years ago, became a full-time woodturner. He focuses on making for high-end shows. He also demonstrates and teaches.

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**DR DAVID MALLORY** 

Retired from 27 years in practice, David now enjoys time with woodturning, photography and sports. He retired due to the effect MS had on his hands, but if he can make a pen then so can you.



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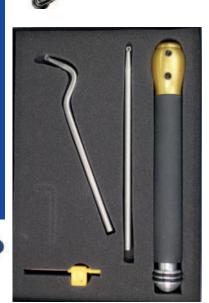
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## Introduction to platters

In part one of this new series, Mark Sanger looks at the fundamentals of turning a utility platter

#### Introduction

In my previous series, starting with Woodturning 343, I covered the foundation of cross-grain bowls, starting by turning a simple open bowl while covering wood selection, work holding, tools and techniques, and considerations of form and how this can affect the utility of the bowl. Later articles in the series including turned texture for enhancement and finally how the bowl can be developed for a purely sculptural form. This series will run along the same vein, concentrating on the platter as the base form.

To start with we look at the foundation techniques and considerations I apply for utility platters, evolving to include texture and eventually the platter as a purely aesthetic/sculptural canvas for a wall hanging.

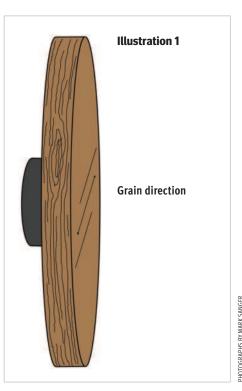
The wood turned here and in subsequent articles is a commercially purchased, seasoned, cross-grain, 50mm-thick sycamore (Acer pseudoplatanus) blank, but any seasoned wood can be turned

while taking into account its utility. For example, if you are turning a utility platter for use with food then select a suitable wood such as sycamore, beech (Fagus sylvatica), ash (Fraxinus excelsior) or other non-toxic wood, making sure that the final finish applied is food-safe. As shown here, for a purely sculptural project any wood could be chosen. Here the form of the platter has been kept simple to cover the foundation techniques required, but you can alter the design to suit your own taste and needs.

I hope you will enjoy this series and pick up a few techniques and ideas along the way. Most of all stay safe and have fun.

#### Wood blank selection

In this series I am utilising seasoned crossgrain blanks purchased from a woodturning store. The wood grain when mounted on the lathe runs perpendicular to, or 'across', the lathe bed. This cross-grain orientation provides good strength, particularly in large, flat forms such as platters.



#### Selecting the blank

Our choice when selecting a blank can be limited but there are a few points to consider.



Blank mounted and ready for shaping the base

1 The outer edge of the blank is often sealed with end-grain sealer or wax, so check around the edges for signs of hidden cracks that could render the blank waste when turned, as well as causing potentially injury if it splits apart.

2 Check the blank is not excessively cupped or warped, which can prevent positive seating against the faceplate when mounting, as well as both faces initially having to be turned flat, thus reducing the final thickness of the blank. There is little point in purchasing a 50mm blank only to turn it down to 25mm thickness due to excessive warping. If the blank has knots or other inclusions, you may be able to turn these away or include them within the design, but I always choose the cleanest blanks to make life as easy for myself as possible. The blank used here

includes two outer sections containing the curved outside edge of the tree. In order to maximise this it was mounted so these sections would be turned away during initial shaping of the base of the platter.

#### Mounting the blank

The methods I use for mounting crossgrain blanks on the lathe – faceplates, screw chucks and between centres – are all discussed within my previous article in WT343, with the benefits and negatives of each being covered. However, when turning platters or larger projects I often choose the safest work-holding method, here being the largest faceplate I have, in this case 150mm diameter. To supplement the faceplate, I also bring the tail centre up to the face of the blank to maximise safety and security.

#### **Faceplates**

Faceplates are the safest, most secure method of mounting cross-grain blanks for initial shaping of the base. A large selection of various diameter faceplates are available, but to start with a 100mm plate will suffice. Ideally, I try to use a faceplate no smaller than a third of the project being turned. The faceplate is screwed to the blank using all the available screw holes, with the largest screws for the thickness of the blank and form being turned with the screw protrusion into the blank being no less than 25mm, here I am using M5 x 40mm. Mounting the project on a faceplate makes it secure and enables the recess and base shape to be turned without the need for a tail centre being brought up for support. However, I always bring up the tail centre and only remove to gain access to the

centre of the platter for final working. For dense timbers, pre-drill pilot holes for screwing the faceplate on to the blank, which prevents the heads of the screws snapping if over-tightened. Gauge the depth of the pilot holes by offering up the



Selection of faceplates

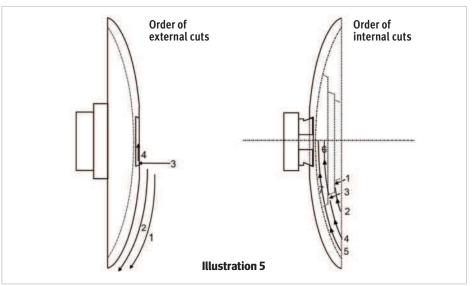
drill bit to a screw held in the faceplate, mark the length on the bit with permanent marker and note for future use. The faceplate can now be centred on the blank and pilot holes to the correct depth drilled through each hole before tightening.



Assessing required pilot hole size

## Cutting with the grain, tool presentation and cutting sequence for a cross-grain platter

When turning our aim is to be safe and to produce the best possible finish from the tool to reduce the amount of finishing required with a scraper and/or abrasive. NB: For an in-depth explanation of 'cutting with the grain' and the long grind bowl gouge see my previous articles in WT315 and WT343. The direction of the grain orientation of a project dictates the direction the wood is cut. In illustration 5 you can see a representation of the platter with cutting directions, and sequence for the exterior and interior hollowing while leaving sufficient thickness in the base by hollowing down in steps. This prevents the walls of a large vessel from flexing.



Direction of cuts on cross-grain blanks

60

#### Tool presentation

Tool sharpness and correct presentation are essential for an efficient, safe, clean cut requiring minimal finishing. For this, set the toolrest close to the blank and at a height for the gouge to cut on centre height with its flute pointing towards the direction you wish to cut – 10 o'clock when cutting from right to left (pic 6) and 2 o'clock when cutting from left to right (pic 7). In both

instances the tool is being fully supported directly underneath by the toolrest, with the gouge handle being lowered until the bevel fully supports the cutting edge by gently rubbing the wood surface immediately behind the cut. These 10 and 2 o'clock presentations are the optimum to achieve the best finish with efficient wood removal.



Tool presentation for cut to the left

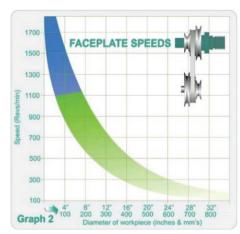


Tool presentation for a cut to the right

#### Stages of turning a platter: Balancing the blank

With the blank securely mounted, toolrest set, everything secured and being kitted out in our personal safety equipment, the first task is to balance the blank. To do this clean up the outside with moderate cuts using the bowl gouge until the blank is concentric. Start at a low speed and bring up the rpm

to a moderate speed so that the blank runs smoothly without vibration. This will depend on the type and size of blank being turned and the lathe used, but refer to the speed guide. Next, clean up the front face with a pull cut. You can use a push cut if you prefer.



Faceplate lathe speed guide



Turning the blank concentric



Cleaning up the face

#### Producing recess for mounting on chuck

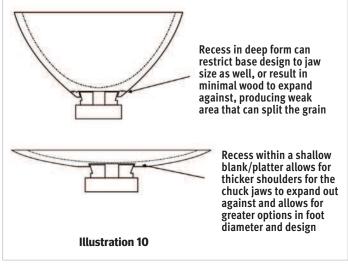
My preferred method of work-holding for smaller and more upright forms is a spigot. A spigot provides strong workholding as it offers versatility within the final design of the foot and can be used on large forms, taking into consideration suitable jaw size for the project – for more information see WT315. Here I am going to omit the spigot and concentrate on the recess as this is my preferred method of mounting large, shallow blanks for turning platters or similar, so enabling me to maximise usable thickness of the blank. The shallow profile of a platter provides a large surface area of wood to expand the jaws out into, providing maximum security and versatility and scope to produce the foot of various diameters and designs. The recess is an option I do not use within a deep,

upright form such as a vase or deep bowl, as the lack of material within the base can cause a fracture if heavy cuts are taken or catches occur.

Accurately mark the recess diameter on the face of the blank to slightly larger than the external diameter of the chuck jaws being used; exact dimension is obtained from the manufacturer's specifications of the jaws being used. Mark the diameter on the front face with a simple rule and pencil or, as here, a homemade marking jig can be made from scrap wood that has a hole drilled to accept a pencil with a metal tack set into the face of the jig at exactly the radius of the jaws recess or spigot required. Offer this up to centre with the lathe rpm set low for accurate and efficient repeatable marking.

Use a parting tool in scraper mode horizontally on the toolrest and plunge to the depth of the recess. With a small bowl gouge hollow out the inside of the parted line to centre, but leave a 20mm raised section in the centre to allow for final reversing

and refining of the recess chucking point later. Using the toe of a skew chisel presented in scraping mode horizontally on the toolrest, plunge the toe gently into the face at an angle to undercut the internal shoulder to match the chuck jaw profile.





Homemade marking gauge

Pros and cons of the recess as a holding method



Plunge cut with the parting tool



Refining and completing the recess with a bowl gouge



Using a skew to complete the recess shoulder

#### Recess template

A template can be made to check the angle to ensure it is shaped as accurately as possible to give maximum work holding.

On to a piece of card or thin off-cut of ply mark around the external profile of one of your chuck jaws with a pencil and cut out using a fine-blade handsaw. Finish the edges with abrasive. With the lathe stopped, use it to check the internal profile of the recess as you shape with the skew chisel.

#### Points to remember

The recess must be the optimum diameter for jaws being used as per manufacturer's guidelines.

Recess profile must match that of the jaw profile.



Copying the jaw shape



Using the template to check the recess

#### Turning the platter outside shape

The base of the platter is shaped with a bowl gouge cutting from centre out to the rim (see illustration 5). This enables the fibres of the wood to be sliced diagonally as well as supported through the cut, thus achieving the best finish from the tool. Here the foot diameter has been marked on to the base using a pencil, with shaping being achieved using the bowl gouge and



Using the tail centre for support

pull cut, which removes the issue of the tool handle fouling with the tail centre. If, as here, the blank is mounted on a large faceplate, there is adequate security to remove the tail centre out of the way for shaping with a push cut if preferred. But it is my preference to turn with the tail centre in place for maximum security and support. For a more in-depth look at the long grind,



Using the square edge of a scraper to refine the surface

and how to sharpen and use it for the pull cut, refer to my article in *WT315*.

## Refining and finishing the recess and outside profile

The outside profile can be refined using a square-end scraper; here I am using a shear scraper to remove any remaining tool marks. To cut with the grain, scraping is achieved from centre out to the rim. It is often the standard method to finish the inside of the recess and base of the platter at this stage, but it is my preference to mount the platter on to the chuck, turn the top and hollow out, then finish with abrasive. The reason for this is if the base and recess are finished while on the faceplate and I subsequently drop it or knock it against the lathe while re-mounting then I potentially have to rework and finish again, whereas finishing in one go removes some of the risk of this happening. Once all other work has been completed it is also my preference to finish and refine the edges of the recess/chucking point by reversing the platter on to a friction plate. This will be covered later.

#### Hollowing the platter

Mounted securely on the chuck, the face of the platter is now cleaned up again with a pull cut as before, and, once complete, hollowed by cutting with the grain from rim to centre with the gouge flutes pointing at 2 o'clock. The handle is swung confidently around towards us as



Cleaning the surface with a pull cut



Achieving the wall thickness

the cutting edge is gradually plunged into the surface to produce a smooth curve, as shown in illustration 5, arching each cut to produce a smooth transition from rim into the base. Hollowing a large platter to the final wall thickness in one go can result in tool chatter being induced during



Hollowing the interior



Cutting towards the final wall thickness

the last few finishing cuts, especially when refining up to the rim, due to lack of thickness in the lower section of the base. To avoid this problem hollow in stages from the rim to the centre, leaving waste at the centre for maximum thickness and strength. To achieve this hollow from the rim down into the bowl, stopping just short of each previous cut until desired wall thickness is achieved.

Next, continue roughing down the next 50-100mm section in steps, by plunging diagonally into the face of the blank and stopping short of the final thickness by a few millimetres. Finally, continue cutting with the grain from the previous section all the way to centre. I repeat this process in as many stages as needed until the final wall thickness and internal curve is achieved, with any tool marks or surface imperfections being removed with a round-nose or French-curve scraper.



Refining with a French-curve scraper

#### Finishing

Finish the surfaces with abrasive, working from 120 through to 400 grit. My preference is to finish the base, rim, and inside of the platter at this stage. When finishing large, shallow surfaces, I use the largest diameter sanding arbor available, in this case 100mm. The larger the diameter arbor is less likely to produce an uneven surface that can occur when finishing a large surface with an undersized arbor. Pic 25 shows a selection of sanding arbors and a sanding pad for flat areas, alternatively you can finish all surfaces by hand with the lathe running - just make sure you work for the same amount of time in all areas so as not to produce an uneven surface.



Abrading the platter



Selection of sanding arbors

#### Reversing to refining base and foot

It is my preference to finish the recess once all other work has been completed. For me, a platter with the chucking surface left unfinished ruins the visual impact of

the base of the project. There are various ways to mount a platter to refine the base and foot, such as a vacuum chuck – a versatile method but coming at a cost.

For small vessels we can use Cole jaws or similar to clamp around the rim, but these have a limited capacity often below that required to hold large vessels. When I



Homemade friction drives



Refining the recess with a spindle gouge



Adding decorative features

started turning platters I would choose to finish the recess and base with abrasive, with the platter being mounted on to the recess for hollowing. The issue here, however, is that the unfinished recess detracts from the platter aesthetics upon being turned over. You will recall I left a raised central section within the recess into which the tail centre indented during the initial shaping. The platter is driven and sandwiched between the indent left and a friction plate. This was made from waste plywood with a spigot made from a waste piece of close-grain wood fixed to the back. Soft rubber or similar material is glued to the front face and the platter sandwiched between this and the tail centre indent, with everything locked before the lathe is started.

With the platter mounted on the friction drive the recess is refined with a small or spindle gouge to blend inside of the recess to alter to a softer curved profile. Detail was added to the inside of the recess with a few simple grooves created with the toe of the skew chisel. For safety



Cutting to the cone centre

the remaining central waste section is only reduced to around 5mm from the centre. Here a 'cone' centre, which encapsulates the wood preventing it from splitting, is being used. Finally all accessible areas of the recess and detail are finished to 400 grit abrasive by hand.

Remove from the lathe and cut off the remaining waste section. Here wire cutters are used to gently snip through the weak cross-grain waste as close to the base as possible. Blend using 120 grit abrasive stuck to a small sanding arbor held in a waste block in

the chuck, and finally finish by hand rubbing with the grain to 400 grit abrasive.

A simple, food-safe finish was applied by hand and left to soak in, with any excess being wiped off after a few minutes. The platter is now ready to be used.



Hand finishing the sanding



Using electrical snips to remove central pip



Using a lathe-mounted sanding arbour



Applying finish



Finished platter

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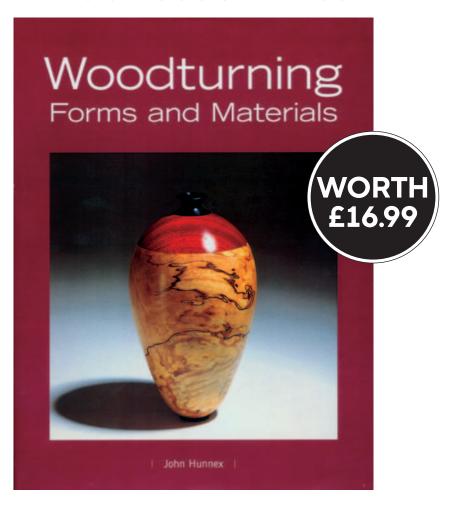
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# Square platter series

Pat Carroll makes a square platter with an enhanced rim

#### Introduction

Following the Editor's request to do a series of square platters, this piece was intended to be left natural with no enhancement. As the piece was made from kiln-dried elm, I thought there would be no issues surrounding defects on my inspection of the timber selected. As I started the turning process some cracks began to show. I was sure these were not moisture related. I usually rough-turn pieces of kiln-dried wood to allow for any movement in the wood caused by removing part of the structural integrity. But for this article, I turned the piece from start to finish as, due to the shape, slight distortion would not have been easily seen. The cracks were the only issue, and had they been more noticeable or large enough to cause danger, I would have scrapped it. As I progressed, I saw an opportunity to display a method of enhancing the piece and disguising the cracks. This piece and upcoming square platters will show some very similar cutting techniques. Some cuts work better on some woods than others, so regular readers will see some distinct differences in my approaches to cuts and techniques.

Trying different approaches can often help improve techniques and understanding of the wood but, for example, may solve an issue with troublesome grain. The main thing is to stay safe, enjoy the process and explore your options.

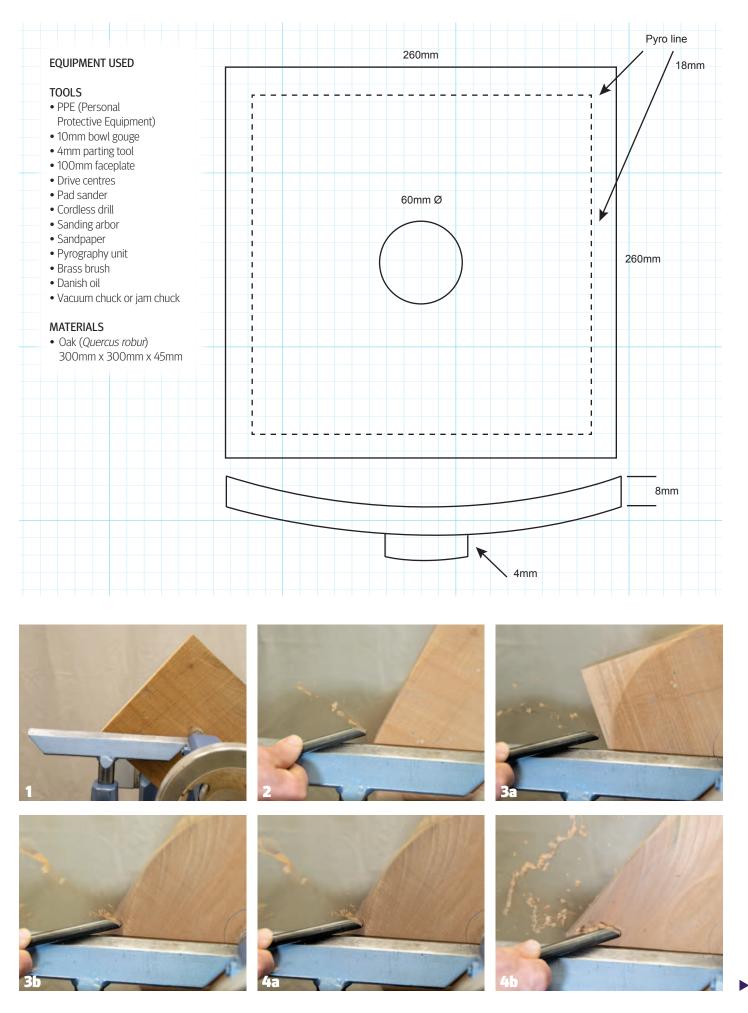
1 Using a 100mm faceplate which has eight holes for fixings to be applied, the piece of elm is mounted on the lathe. The tailstock is brought up for additional safety. As the cuts used are not impacted by the tailstock being in the way, it is always a good addition to safety. This also leaves a centre point for realigning when finishing the foot. Note the two pencil marks indicating where the small cracks are in the wood. Not very noticeable but it is always important to monitor small cracks even if they are to be turned away as they can increase as the piece is turned.

**2** As with all woodturning projects, safety is the first consideration. Ensure all safety and PPE (Personal Protective Equipment), is used for your own safety and the safety of others in the work area. The piece is safely secured to the lathe with the speed

at its slowest rpm. Gradually increase the speed to a safe and comfortable level for your confidence and turning ability. As this is a square platter, there is an area when working on the outside corners where the tool will be in negative space. This can be minimised by increasing the speed, but safety is always first and foremost.

**3** The circle has been marked as reference for the chuck jaws and, as the pictures show, the tool is often in negative space to begin with. Good tool control is essential here. I have chosen to use pull cuts using the lower wing of the 10mm bowl gouge with the Irish grind for the shaping of this piece. The flute of the gouge is facing into the piece and only open a few degrees. Opening the flute too much runs the risk of cuts getting too heavy and possibly engaging a catch.

**4** As the shape develops a steady stream of shavings begins to appear as the tool gets into the solid centre of the wood. Being very careful not to forget the corners, which only appear as a ghost shadow, proceed with very light cuts.



















5 Progressing slowly towards the centre, the tip of the tool helps to form the tenon for the chuck. This is further refined with a 4mm parting tool. The foot is part of the design of this platter and is intended to gently elevate the piece to create a shadow line below it when displayed. A larger foot may be required if the piece is to be made into a more functional item.

6 With more timber removed, what I feared has materialised. The cracks have become larger as they were exposed. This could be for a number of reasons — when the tree was cut or blew down in a storm, or a lightning strike could all cause stresses in wood. But also stresses can be caused during air or kiln drying. But looking at the grain pattern, I would hazard a guess that it's the structure of the wood that caused the cracks; notice the change in the grain between the inside and outside of the piece. The splits look like stress fractures across the grain, possibly caused by the drying process.

**7** The cracks are first filled with thin cyanoacrylate (super glue), as this penetrates areas not usually visible to the naked eye, and allowed to cure fully. Then the deep areas are filled with a medium viscosity glue. The white areas visible in the picture are from using an accelerator to speed the process of curing the glue. I prefer to usually allow these glues to cure naturally as I find that speed-drying them makes the glue brittle and increases the chance of failure. Although the glued area looks dramatic, it is not that bad. If the cracks were too big I would scrap the piece. This project was completed to show there are sometimes options.

**8** With the 10mm bowl gouge freshly sharpened, a shear cut is used to gently refine the shape. This technique takes a little practice and should be tried first of a solid piece of wood. By lowering the handle the edge of the tool is presented at a sharper (shear) angle to the wood. This technique can sometimes help give great results on punky or softer woods.

Use caution when experimenting with this technique.

**9** The outside corners are sanded with the piece stationary. An electric pad-sander is an ideal tool for this job. A piece of sandpaper wrapped around a flat block of wood will also work – try to sand with the direction of grain to minimise scratch marks. Also be careful to hold the paper flat against the piece so as to not round over the corners. The piece is sanded with 120, 180, 240, 320, and 400 grit sandpaper, and full respiratory protection is used in conjunction with a dust extractor.

**10** The solid areas are sanded with the piece at a slower speed using a rotary sander. The picture shows the back of the piece after the sanding. Note the centre circle is for the tenon to fit into the chuck and the outer circle is for the top of the chuck jaws to seat against to help ensure a secure fit.

11 Before removing the faceplate ensure the

















piece fits the chuck correctly. Keep pressure on the centre of the piece while tightening the chuck. Check for alignment and only remove the faceplate when you are happy with the fit, and it is safe and secure.

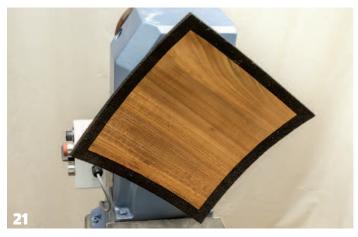
- **12** With the tool bevel pointing in the direction of the cut, working from the outside towards the centre, a few trial passes are made to get a feel for the flow of the cut. Starting with a slower speed as the piece orientation has changed, the gouge is moved very slowly until it picks up the cut. Then the progression of the cut is made at a slow, steady pace.
- **13** Working in towards the centre in small increments is important. Maintaining the integrity of the wood so as not to make the piece weak and the corners possibly flex and break. The cracks are also being closely monitored. The thin super glue has penetrated the wood sufficiently to ensure a good work surface.
- **14** The area around the wings is complete

and an even wall thickness has been achieved. Now the focus is on removing the bulk from the centre. Progress towards the centre with gentle cuts as being too heavy handed can cause vibration and possible damage to the outer areas.

- **15** Once again the outside corners are sanded with the piece stationary and using an electric pad sander. Dust extraction is used once again and grits as listed in step No.9 are used.
- **16** Once again the rotary sander completes the solid part of the platter, being very careful not to touch the corners.
- 17 Measuring in to just where the glue is visible a line is drawn to frame the piece. This will be the pyrography definition line and is copied to all four sides and to the bottom of the piece.
- **18** Using a pyrography dot pattern to texture the rim is time consuming, being careful to adhere to the lines. But the

addition seems to work well with the elm. Always be sure to wear correct respiratory protection against the fumes of the pyrography. Regular dust masks are not suitable for this type of work. A small fan or extractor works well too. Do not use your dust extractor for the fumes as sparks could ignite the fine dust possibly laying in pipes or the collection bag. All fumes from pyrography are a potential health risk.

- **19** A soft brass brush is used to clean off the area which has been enhanced with pyrography. Respiratory protection is again used during this procedure. I used an air line to gently blow away the dust but a soft brush will also work. This is done to stop the black dust getting in the grain of the main body of the piece.
- **20** As with most woodturners, I think adding finish is a great moment; in this case it's Danish oil. Watching the grain show its true beauty is a part never to be tired of. The oil is applied with a soft tissue and the piece held stationary.









21 Using soft tissue on any texture will tear the cloth so be careful to check that no debris is embedded in the finished piece. Three coats of oil are applied and sufficient drying time left between coats. De-nib with 320 grit sandpaper between coats.

22 A vacuum chuck is used to support the piece while turning away the foot or enhancing as a feature. A scrap piece of wood will also work, secured in the chuck. Form a convex shape similar to the piece to be held against it. Using a soft cloth or a piece of router mat, tailstock pressure will hold the piece while finishing.

Vacuum chucks are a great addition to any workshop but take caution when using such equipment. Pay regular attention to the pressure gauge. Keep tailstock support in place as long as possible. Increasing speed can cause the piece to detach when centrifugal force is stronger than the gripping power of the vacuum.

**23** The foot is shaped to the desired design with the tailstock in place for as long as possible. Only when it is necessary is the tailstock removed and some detail lines added for effect. The foot is oiled using the same procedure as step No.21.

24 The bottom of the finished piece.

When using CA, or super glue, in the workshop it is sensible to have a bottle of de-bonder on hand for the eventuality of bonding things to your skin.

Always follow all safety guidelines recommended by producers and manufacturers of equipment such as pyrography machines. ●





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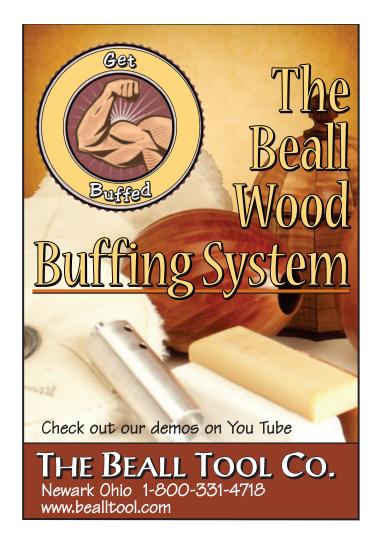
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## How to recycle old turnings

You just never know what might turn up, as Louise Biggs discovers

As a bit of a departure from my usual work, at a local event I was approached by a woman who admired the turned jewellery I had made. The conversation turned to the subject of some pieces of walnut she had.

The tree had grown in her grandmother's garden and was much loved by all the family. Then the inevitable happened – the tree had to be cut down. Her grandmother had the tree planked with the thought of it being air-dried to make a piece of furniture. Unfortunately, wrongly advised, much of the timber rotted so all that remained was 'three smallish pieces'.

The brief was ad follows – could I make two pendants and a pair of stud earrings and anything else that I thought would be possible?

It came as something of a surprise when the 'smallish pieces' turned out to be three turned pieces, which later became four:

- Two flat-disc pot stands, between 10mm and 15mm thick.
- Two 'bowls' with screw holes in the bases and a maximum of 20mm thickness in the flat bottom of each bowl.

I make small gift items to use some of the offcuts from the furniture-making/ restoration and have in stock keyring kits, mirror compacts, hinged box rings and jewellery findings. From one disc I judged I could get a turned button for the lid of the compact, two pendants and the stud earrings – all turned on faceplates. From the bottom of one bowl two keyrings – spindle turned – also a small ring box, turned as a faceplate turning matching the grain as much as possible.



The old turned bowls and discs



A selection of jewellery findings, keyring kits, mirror compact and hinged box ring that will be used

78



#### Ring box

- 1 Two small discs were cut from the bowl bottom, slightly larger than the hinged box ring. At only 20mm thick I glued the pieces to waste boards fixed to a faceplate using hot-melt glue. This avoided losing timber by forming a chucking point. All being well, I would keep to the two-thirds/one-third proportion commonly used by turners.
- **2** The compass point marked a centre point and, with the tailstock drive, the disc was positioned on the faceplate. Once secure, the face of the box base

was trued up using a beading/parting tool. The edge was then cleaned up using a small bowl gouge.

- **3** The hinged box ring had a rebate on each ring which would, in turn, be fitted on to a small rebate on the timber lid and base. Using a Vernier gauge set to the required diameter, the bottom section was marked using the left point of the Vernier. The right point is a visual guide to get the registration mark centred it must not make contact with the timber.
- 4 The rebate was cut using the beading/parting tool and the box ring was checked for a good fit. In both cases the top ring was used as the bottom ring had a small bow feature that obstructed the fitting process. The inner edge of the ring was then marked with a sharp pencil.
- **5** The inside of the box bottom was hollowed out using a small bowl gouge. To start with, the gauge was positioned with the bevel at right angles to the face in order to cut and mark the opening. This was kept flush to the inner edge of the ring. Working from the outside to the

centre a curved hollow was made. A small round-nose scraper was used to finish the inside surface.

- **6** Too small to form much of a shape to the outside of the box, a closer look at the hinged ring revealed a slight taper on each ring. This was echoed on the bottom of the box, cutting the taper using the bowl gouge with the bevel rubbing.
- **7** After abrading through the grits, a coat of finishing oil was applied to the base before it was parted off the faceplate using a 2mm parting tool, kept flat against the timber block with a minimal clearance gap.
- 8 Finally, a jam chuck was used to clean up the bottom of the box. A rebate cut opposite to that on the box centred the box and, for further security, tape was used. With light cuts from the bowl gouge the bottom was undercut slightly. Repeating stages 4 to 8, the top section was turned. Once parted off and fitted to the jam chuck a small dome was formed on the top using the bowl gouge and some graduating decorative rings cut using a skew chisel.



















#### **Keyrings**

- **1** To set up the keyrings, the brass tubes need to be fitted and glued into the timber sections. Drilled out on the pillar drill, the blanks were left slightly longer and trimmed back after gluing. This prevents any excess glue being forced into the ends of the tubes.
- 2 Using a pen mandrel with some tight-fitting washers to act as extra spacers, the sections were turned to round using a spindle gouge to obtain the maximum diameter.
- 3 Each end of the two pieces was reduced in size using a beading/parting tool to



match the diameter of the turned metal end caps. A Vernier gauge with the corners rounded off was used to gauge the diameter. A cove and fillet was formed at the bottom and a small bead at the top.



4 Using a small spindle gouge the bead and ogee shapes were formed between the two end shapes. They were abraded through the grits and finished before the end caps were fitted into place.



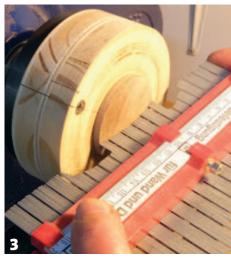
**Pendants** 

- 1 Using two discs of board material the first is fitted to the faceplate. The second is fitted to the first using two screws. Once the edge has been trued up, the top screw is marked with a line centred to the screw hole. An offset line is marked 16mm either side. This jig will form the off-centre hole.
- 2 The disc of timber was adhered to the front of the jig using strong, double-sided tape. Using a bowl gouge a domed shape was turned on the surface of the disc. working from the centre to the edge. The edge was then turned to size using a skew chisel.



- 3 A profile gauge was used against the dome as both sides of the pendants will have the same curve. The opposite side of the gauge would be used to form the jam chuck later on.
- 4 The jig was then moved to the offset position and, using the long point of a skew, a registration mark was put on the surface. It is best to start towards the centre and gradually move outwards, checking the position after each cut. I was aiming to have a 7mm band at the top of the pendant. The centre hole is cut halfway through the thickness and the shape blended in.





**5** One side of each pendant was turned. Registration marks were made on the edge as well as the direction of offset. A recess was then turned in the face of the jig to match the shape on the pendant. The recess was checked against the profile gauge. When turning the reverse side of the pendant the registration marks were aligned and the offset had to move in the other direction.







#### Compact and stud earrings

1 The timber dome for the mirror compact was stuck to the waste board using the double-sided tape. Using a bowl gouge and working from the centre to the edge, a shallow dome was formed and the diameter turned to size using a skew chisel.



2 Once the dome had been abraded, it was released from the waste board by easing a small pallet knife behind the disc and working it round in a circular motion. The stud earrings were formed in the same way, using the profile gauge to ensure that both shapes were the same.







The items were finished with finishing oil and buffed on a buffing system. The disc and post which form the earrings were glued into position. On one pendant a small jump ring was fitted to hold the pendant to a silk cord. The hinged box rings were glued into place.



The completed items are shown here. One disc and one bowl were used to make the items. The other two pieces will be returned to the customer unless she is interested in the idea of the second bowl being re-turned, incorporating the second disc to form a foot or small tripod legs. We shall see. •

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# How to make a simple vase

Rick Rich makes a stylish and elegant vase from Douglas fir



In mid-May, a member of my woodturning club emailed me with a request to teach a small class on turning a basic vase with final dimensions of approximately 3in in diameter and 8in in height. The class needed to be in June as it was for a local Rotary Club where the guest speakers would be given a vase with flowers as a gift. The Rotary Club meetings were scheduled to commence in July if the local Covid-19 pandemic guidelines would permit.

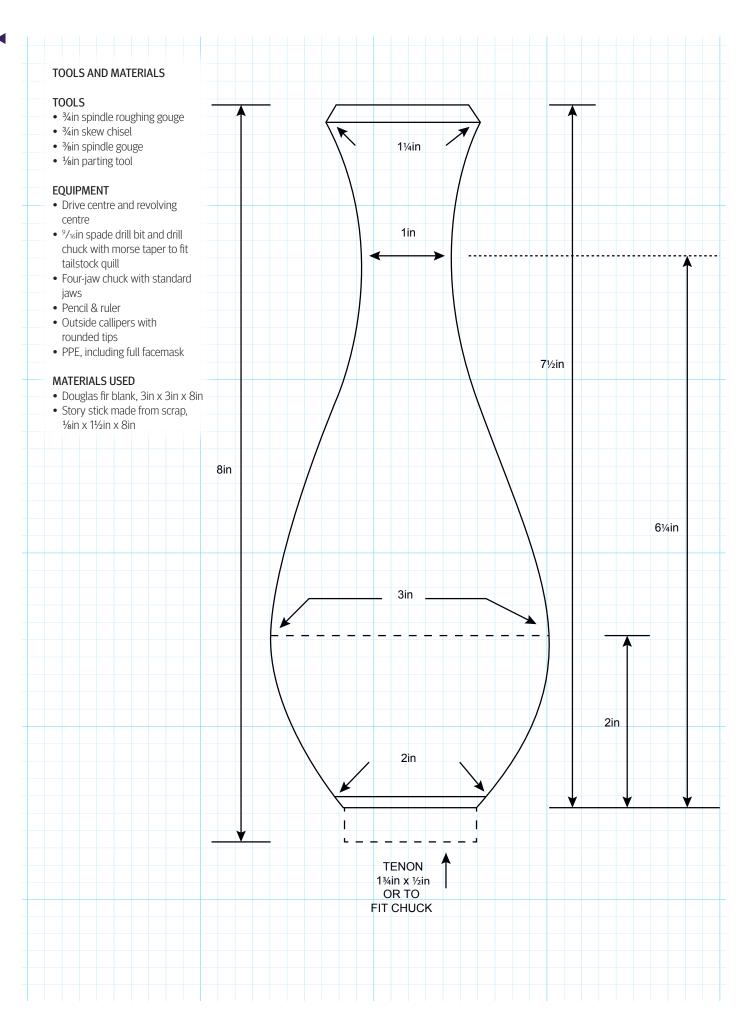
As it was, our county guidelines allowed for small groups of up to five people starting in early June, so I was pleased to reply that I would be able to help. I like to be prepared for classes such as these, so out to the shop I went to turn a few vases. By doing this, I had a clear idea of the turning process for teaching it in an organised and methodical manner. By taking step-by-step photos, I was also able to put together a small handout of the process, just in case the guidelines regressed and we would not be able to hold the class.

After turning the first vase, which is the one shown in the process photos, I was a bit unhappy with how the centre, or largest part of the vase, was visually too high. I lowered the centre on the next vase I turned by 1in, which I thought made for a better form. That is one of many aspects I enjoy about woodturning small projects – it is so easy and fun to turn 'another one' until the dimensions are pleasing to the eye. I adjusted the story stick accordingly and was ready to make several more so that, when it is time to have the class, I will be well prepared.

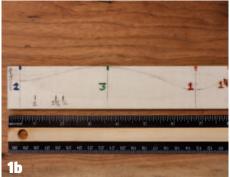
Here is the process for making a simple vase.

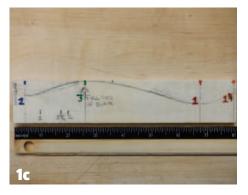


Left – unsatisfactory first version, Right – more pleasing second version











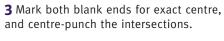


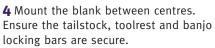
1 Assemble the necessary tools and equipment. Locate stock of sufficient size. You will also find that making a story stick allows for repeatability. The story stick will then be used to mark the rounded blank for parting cuts to get proper diameter sizes on the blank. The coloured numbers on the pictured story stick correspond with the lines and are the diameters of the parting cuts.

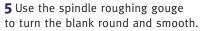




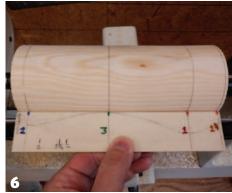
**2** Here I used a piece of Douglas fir from my firewood pile. Cut the blank to 8in long by 3in square.











- **6** Use the story stick to mark the lines around the spindle. The small grooves in the story stick allow the pencil tip to ride in them while the line is drawn on the turning blank.
- **7** Check the chuck jaws that you will be using and set your callipers to where there is space between the jaws of about  $\frac{3}{16}$ in or where the jaws form a circle. Part down and create a dovetail if using dovetail jaws. The important part is that the tenon isn't too small or large and that the tops of the jaws set securely against the shoulder of the spindle.



- **8** Now take off the spindle, remove the drive centre and mount the chuck. Mount the spindle tenon on to the chuck and tighten securely.
- **9** This is important set your lathe speed to low. My lathe has a slowest speed of 400rpm, so that is what I use. The next step is drilling on the lathe and a slow speed is much safer. Mount the drilling chuck into the tailstock. The %16 in spade bit is then tightened into the drilling chuck.

Use controlled turns of the tailstock hand wheel to drill the hole. Ensure that the drill is retracted often to clear out wood chips. Stop drilling at 5½in.

10 Remove the tailstock. Draw a line around the top of ½in. This will be the extent of the inside opening turned. Use a spindle gouge lower left side edge to pull cut from the drilled hole in small, controlled cuts. Ensure that the flute is rotated sideways towards the 9 o'clock position so that the tool does not catch. Lightly make pull cuts until there is a pleasing shape inside from about 1in down to the drawn line.

11 Remove the spindle from the chuck and remove the chuck from the lathe. Remount the drive and revolving centre and secure the spindle between them. The revolving centre will be somewhat inside of the area just turned, but should self-centre within it.

**12** Use the parting tool to part down to the diameters. For the vase top part down to 1¾in for the neck part to 1in and for the base part down to 2in.

13 Use a skew and spindle gouge to connect the diameters with smooth cut lines. At the top and base, cut a chamfer. At the bottom of the base chamfer, part slightly inwards to about ¼in, leaving a small nib. Now sand and apply a finish if desired. Once removed from the lathe, the nib can be carefully removed with the carving gouge or chisel.

**14** Insert flowers. The completed vase should look like this.

A story stick permits repeatability of design. So long as each vase turned is marked with the story stick in the same fashion, the vase can be parted to the set diameters in the same place. Even if the diameter or the line is dissimilar by a sixteenth or perhaps even an eighth or so the human eye will likely not detect it. I have always found a quality spade bit of smaller diameter to be safe for end-grain drilling on the lathe as long as the speed is set low, and I have not used one to go deeper than 5-6in. •



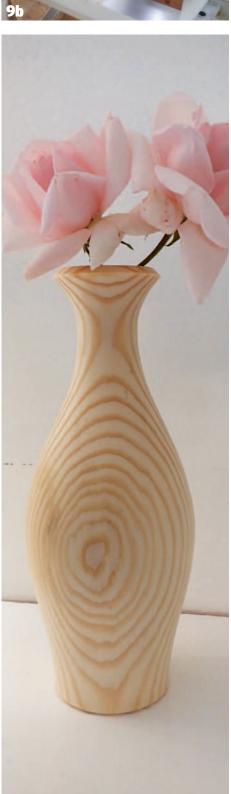














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#### Gold and Red Bowl

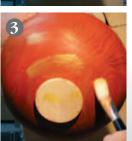
WITH STEVE GILES



1 A piece of Ash was turned to form the outside of the bowl, sanding through the grits to 400grit. Using a paint brush or airbrush apply a coat of Yellow Spirit Stain to the outside of the bowl.



2 This is followed by a coat of Red Spirit Stain. The Yellow underneath gives a warmer orangey Red to the bowl.



3 Using a dry, coarse paint brush Gold Metallic Paint is applied in a random pattern to the outside of the bowl. Before the paint dries the lathe is run at a slow speed and the dry brush is held 'against the edge to spread the wet paint further around the bowl.



The dry, decorated bowl is turned around on the lathe and hollowed out. It is then sanded through to 400 grit. Acrylic Sanding Sealer aerosol was applied inside, and denibbed and smoothed with Red and Orange NyWeb.



6 Finally, three coats of Acrylic Gloss Lacquer were applied all over, and denibbed and smoothed between coats with Orange and White NyWeb. The decorated bowl is finished and ready for use.

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## Crown Royal pen

A pen-ultimate project by David Mallory

Over the 20-plus years that I have been woodturning, the most enjoyable projects for me are pens. After making 500 I lost count. They were never sold, instead given to family, friends, as graduation gifts, as hostess gifts, for favours done, and to my good patients. A pen from me comes with one instruction and that is to use it. It is extremely rewarding to hear that years later someone is still using my pens day to day (in today's disposable world some recipients are not aware that refills are available). This project will provide years of enjoyment for you and the recipient, so please have fun making a pen.

My home is in Vancouver, BC, Canada. When I started to turn pens there seemed to be a limited number of styles available. Over time, either more companies started stocking pen kits or I became better at finding them. My two favourite places to get my kits are both here in North America. In Canada I buy from Lee Valley Tools, which is the greatest place if you want to own all the best equipment in the world. My wife cringes when I go there because she knows I will not be able to resist something or other. The place I prefer to get my pen kits is in the US and is called Penn State Industries. If you are not familiar with it then you need to check it out. It has dozens of styles of pens, other projects, and lots of lathe equipment. Good thing it is far away.

:APHS COURTESY OF DR. DAVID MALLORY

#### YOU WILL NEED

#### **TOOLS**

- 25mm round-nose scraper
- 10mm parting tool or 25mm skew
- Appropriately sized drill bit
- · Appropriately sized bushings
- Mandrel that not only fits your lathe, but also the bushings
- Barrel trimmer
- Vice
- · Hand drill
- · Drill chuck for the lathe
- Scroll chuck
- Live centre

#### **MATERIALS**

- A pen kit, in this case a Crown Royal kit from Penn State Industries
- A piece of wood to make into a pen (or bone, acrylic, stone etc.) This pen is olive wood
- · Nitrile gloves
- · Gap-filling cyanoacrylate glue
- Regular cyanoacrylate glue
- Sandpaper (I use 80, 100, 120, 150, 180, 220, 320 grit)
- Micro-Mesh sanding pads (1500, 1800, 2400, 3200. 3600. 4000, 6000, 8000, 12000)
- Appropriate PPE

1 The first thing that you will need will be a pen kit. In this case it is a Crown Royal kit from Penn State Industries. The kits come with all the parts that you need to make the pen. Oh, except the bushings. More about those later, but for now make sure that you buy the bushings specific to the kit you are making.

**2** You need to assemble the tools you will be using. Of course the lathe and its components are self explanatory. To me anyway, especially after they were explained to me!!

**3** You can buy blanks or make your own. Most blanks are about  $\sqrt[3]{4}$  in square and longer than most pens need. It sure helps to have them square. You need to cut the blank down to a manageable size. Always leave some space at either end for a couple of good reasons, which I will cover later. I use a bandsaw in the shop, but have made hundreds of pens at

home using a coping saw. Please keep your fingers intact. If you are making a double-barrelled pen then take a tip from me – before you cut the wood, draw a vertical line down the centre of the blank perpendicular to the horizontal cut line. This will make sure the wood grain matches for assembly.

**4** Using the jaw chuck, centre the wood and tighten down on it. Put the drill chuck in the tailstock and put the proper drill bit for your kit into it. Holding firmly on the drill chuck and using pressure on the tailstock drill into the blank. Be careful at the end. This may take a few passes as the bit will clog up. Take your time. One reason you add a bit of space is that sometimes the drill bit will punch out a chunk of wood as it exits. This way you have some space to spare. Be sure to hold on to the chuck — I had one eject from the tailstock and it damaged some nerves.



















**5** Put on nitrile gloves and coat the brass tube with gap-filling cyanoacrylate. Slide it into the hole in the blank and spin it as you insert it to ensure even coverage. Make sure it is not poking out or exactly level.

**6** Once cured, use the vice to hold the blank, and with the barrel trimmer in the hand drill, you want to drill down until you just see the brass tube. Go carefully. If you go too far you may have a pen that does not retract. I have several. The brass tube edge will look shiny when it is square.

**7** Mount the squared blank on the mandrel with a bushing at either end. I add an extra old bushing to help with spacing and to make sure the screw nut can tighten down properly.

**8** Now is the fun part. Turn the pen down but not all the way to the diameter of the bushing.

**9** The reason that you do not turn all the way down to the bushing is that you need some material to sand. If you turn

all the way to the bushing, then by the time you do the first sanding you will be below the bushing and later on when you assemble the pen it will not fit properly. I know – I did it numerous times in the early days. The bushing is your guide as to the finished diameter of the pen barrel. Using a small square of doubled-over 80 grit start sanding. Move your hand back and forth along the turned blank as you apply pressure. Remember that up to 150 grit you are still cutting the wood down to size but we need precision here. Work through the grits until you get to 320. You should be just level to the bushings at that point. Also stop the lathe at the end of each sanding grit to sand with the grain (along the length of the mandrel) which helps remove deep scratches.

**10** Now that you have a great-looking sanded-down blank, it is time to finish it. Take some advice here, oils and shellacs etc. look great on other projects but are not as practical here. You will find that wood fibres poke up with some of the finishes and they also wear poorly. Regular cyanoacrylate glue is magical. It forms a rock-hard finish that is gleaming, has no

#### **Health & Safety**

- When working on a lathe please ensure that you do not have loose clothing. A turning smock is preferred because of the knit cuffs. Loose clothing can get pulled into the work and then pull you into it. Plus it keeps wood chips from going down your shirt.
- Also always, and I mean always, use a visor. You do not need a brain injury from something flying off your lathe at 3.200 rpm.
- A respirator is important as well especially if you plan on having functioning lungs in the future.
- Control your speeds. I drill and turn at a high speed.
   I sand at a low speed.
- Remember about holding onto the drill chuck. The torque of the drill in the wood can cause the chuck to spit out and fly across the shop. This happened to me this year as I was showing someone how to make a pen. For a fraction of a second I looked the other way just as my student took his hand off the drill chuck. It spit out of the lathe at 3,200 rpm and hit me almost breaking my hand, but causing nerve damage. I cannot feel part of the back of my hand now. My mistake. I should have been aware. So stay aware!
- Always protect your eyes. Always.
- No glueing your fingers together! Wear gloves for glue jobs and have debonder to hand.

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This pen disassembly punch set is invaluable

fibre pop-up, and wears unbelievably well. I do not know how I heard about it but this has been my finish of choice for several years. Buy the glue at a dollar store. Three or four small tubes per \$1 card. A tube should finish two pens. With the nitrile gloves on put a dollop of glue on the barrel and slide it back and forth as you rotate the lathe by hand. You want to evenly coat it. Wait for each layer to dry and then add another layer. I use six to eight layers.

**11** Using the Micro-Mesh sanding pads sand the barrel once the glue is good and dry. You don't need to apply lots of pressure. Clean the pads every few swipes. Sand all the way to 12,000. By 4,000 the finish should start getting shiny and by 12,000 it is gleaming. Beautiful.

**12** Using the vice you will now assemble the pen according to instructions. If you mounted the blank with those extra lines you drew then the grain should match. Assemble it one piece at a time and be aware if the pen kit had different sizes so that you do it properly. Another thing that I have done wrong in the past.

**13** And there it is. A beautiful pen handmade by you. Each and every piece of wood has its own character or meaning and will mean the most to whoever uses it. Please enjoy making these lovely pens.

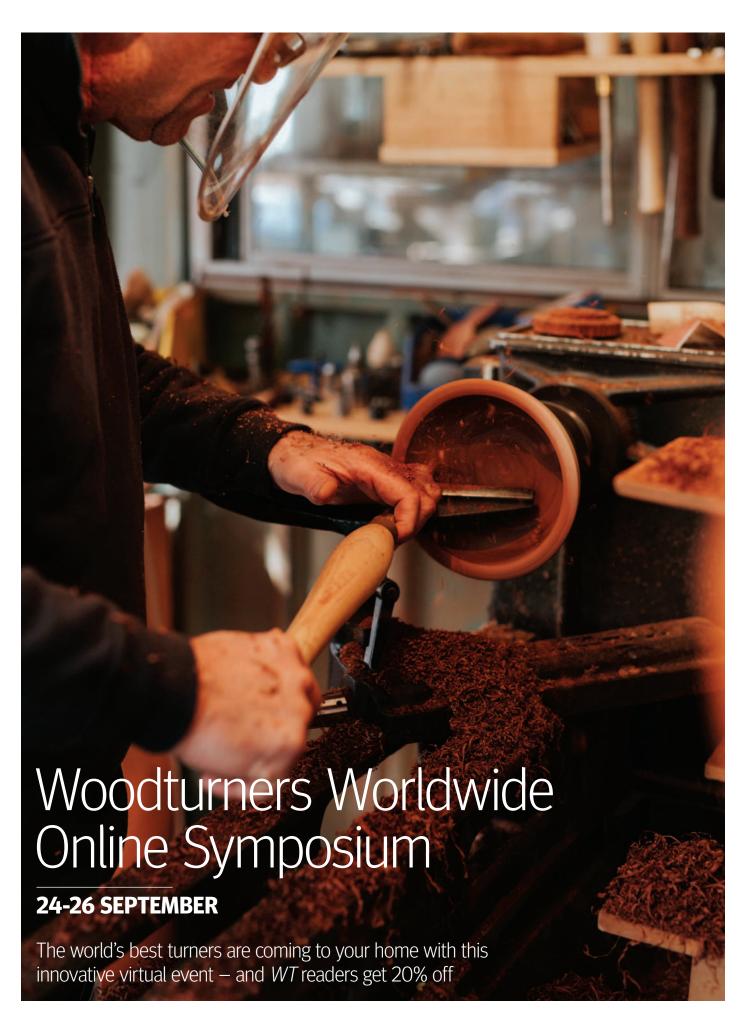
#### Pen disassembly kit

Let's face a fact here — at some point in your pen-making career you will have something that goes wrong and you will only know it once the pen is assembled. The barrel is too short because you barrel trimmed too much and so the nib will not retract. Or you assembled the top as the bottom and the bottom as the top. Or, as you press the pieces together with the vice, something cracks. It has all happened to me. What a disaster if you do not have a disassembly punch set. You will have no way to take the pen apart. Fortunately you can buy a

disassembly punch set. It has a bunch of steel rods that can go in different-sized orifices and punch out the stuck pieces. Well worth the money I say. It has saved many a pen in my shop. And at \$10 a pen minimum, just do the math on that. •

#### **TIPS**

- Look for interesting wooden cutting boards at discount stores. They can make awesome pens like this one.
- Take your time turning the wood. Nothing good ever happened when I went too fast. It always created problems.
- Now and then, depending on the piece of wood, you will be happily turning it and a big chunk will break off. Project ruined? Not always. You can use the gap-filling glue to fit the pieces back together and I think it creates more character.
- Use the small parting tool to take excess glue off the join between the bushing and the pen before you do your polish sanding. If you don't, then when you try to separate them you can get a chunk of the finish breaking away from the pen.
- Once the pen is off the lathe, put a piece of 180 grit sandpaper down on a flat surface and gently spin the end of the pen on it to remove excess glue residue from where the bushing met the pen.
- When you assemble the pen put the nib on last. Repeated pressures on the nib while you assemble the rest of the pen can cause it to bend.
- Keep the instructions that come with your kit in a binder. That way you will always have them.
- And read the instructions. Go slow.
- Finally, just really enjoy the process. Pen-making is not hard.
   It does require a bit of knowledge but it is not intimidating.
   The look on the faces of the people who get your pens is awesome and nothing is better than years later when they tell you how much use they have had.





The Woodturners Worldwide Online Symposium offers a unique opportunity for turners to get really close to the action. Pause, rewind, watch it again, play it while turning. Learn the way that works for you. Watch some of the world's best turners and still get to sleep in your own bed every night.

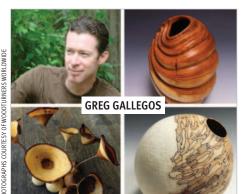
The Symposium will be live from 24-26 September and videos will stay on the site for at least two weeks, and up to a month afterwards. Woodturners Worldwide founder Matthew Deighton tells us more.



#### Taking turning online

I started an Instagram account five years ago promoting woodturners and the great work they do. That account,

@woodturners\_worldwide, now has more than 125,000 followers and promoting woodturning is still my passion. I've been trying to convince several organisations to build an online symposium for years. It was a phone call with Mike Mahoney



when I finally decided that I would just have to build it myself. Many people don't live within driving distance of a club, can't afford all the costs associated with an in-person symposium and never get a chance to learn from some of the greats in the profession. I want to fix that with this symposium.

In-person symposiums are amazing, but they have their drawbacks. With our online symposium, you can go back and watch the videos while vou're in front of your lathe. You can pause, rewind and



turn when it's convenient for you. And you can watch all the demonstrations regardless of when they are scheduled, you don't have to miss a presentation because of scheduling. Another advantage is being able to chat with other participants who have similar interests and share photos of your own work.

We will be filming people in my studio as well as bringing in presenters from their own studios around the world. Demonstrators will include Mike Mahoney,



Michael Alguire, Cindy Drozda, Jeff Hornung, Rebecca Degroot and more.

The conference will include a full interactive vendor hall where you can chat with companies, get discounts, watch additional videos and download extra content.

We are also hosting speed-dating-style networking events for specific topics that participants are interested in. Sign up and you'll be automatically paired with someone else for a five-minute meeting,



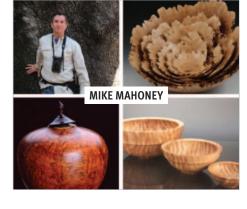
then switch to another person and so on. Just enough time to get to know them, share your work and passion, and get their contact information.

We have a call for short content that will be a part of the symposium. Anyone can send in a short demonstration (five to 10 minutes) to be included in our Always Live section of the site. It's a great opportunity for those who normally don't get to demonstrate to show off their skills. Email Demonstrator@woodturnersworldwide.com with questions and submissions.



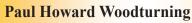
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## Queensland maple bowl project

Andrew Potocnik looks at two approaches to a decorative bowl

The last time I remember working with Queensland Maple was way back in the early eighties when I was doing my B.Ed and came up with a laminated bowl blank that was intended to be something simple. It grew to something way beyond, just as my projects seem to do to this day, but what lingers is the wood's distinctive fragrance.

Isn't it interesting how our memories are guided by senses well beyond the working qualities of the wood but are just as important to the process of working with the material we love?

For this project I opted for a far simpler option, but once I cut into the wood, memories of the fragrance flooded back, so this was a trip down a fragrant memory road.

Sourcing wood for this project led me to two blanks that I couldn't resist incorporating into a pair of bowls that explore texturing, either cleanly cut and fine, or more robust. The two blanks also show variation in colour and figuring available in

As we push the boundaries of woodturning and its artistic potential, it is still important to remember that the craft stems from utilitarian origins, and that the humble bowl resonates with

humans as an extension of a pair of cupped hands from which we can eat or drink. It could be said that the bowl represents the centre of nourishment, and therein, for some, there is an element of religious significance.

However, as a turner I just find the bowl an endless form of exploration, embellished or not. There are so many options explored throughout history, and many more to come.



#### ◀ Focus on Queensland maple

Although named Queensland maple, this wood is not a true maple (*Acer genus*), but is instead is contained in the Rutaceae family, which also contains many genera and species in the citrus family, so it is more closely related to an orange tree than a true maple.

Queensland maple (Flindersia brayleyana) is a medium to large-sized tree growing to 40m in height and 1m diameter in trunk, which is not buttressed, and the stem is usually well formed and circular in cross-section. It has long been appreciated as a shade tree for Australian parks and gardens and also for its striking pink wood, which adorns many heritage homes and distinctive wood pieces. It flourishes in the northern Queensland rainforests between Townsville and the Windsor Tableland.

Its heartwood is pinkish-brown to midbrown in colour with a medium and even texture. The grain is often interlocked, producing a wide variety of stripe and fiddle back figure, which makes for a distinctive wood, It was historically widely used for aeroplane propellers, coachwork, carriages, and boats. It was also popular for picture frames, and for musical instrument components such as guitar necks and piano parts. It is said to have very similar tonal qualities to mahogany. It is also used for veneer, gunstocks and turned objects.

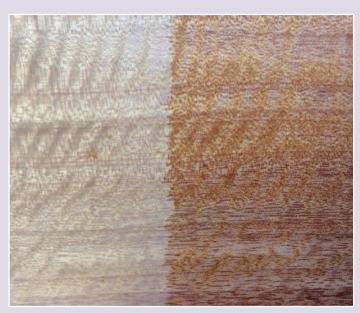
Although the heartwood can range from yellow to golden or reddish-brown, the colour darkens with age, while its narrow band of sapwood is pale to white; however, growth rings are generally indistinct. Grain

is interlocked and sometimes wavy or curly with a medium and uniform texture and good natural lustre, hence it is sometimes referred to as 'silkwood'.

It has good overall working characteristics, although because of the interlocked grain, planing may result in tearout, particularly on quartersawn surfaces. It is generally easy to work, turning, gluing and finishing well.

The wood is easy to dry with very slight collapse. Shrinkage is about 3% radially and 7% tangentially. Average dry density (ADD) is about 580 kg/m<sup>3</sup>.

The wood of maple silkwood (*Flindersia pimenteliana*), which also grows in Papua New Guinea, is very similar to brayleyana; however, it is slightly denser at 640kg/m<sup>3</sup> and has a narrower trunk.



Interlocked grain on quartersawn timber



End grain showing clear growth ring



Clear grain on young growth quartersawn timber



Side grain showing transition from sapwood to young growth. The colour deepens closer to the heart of the tree

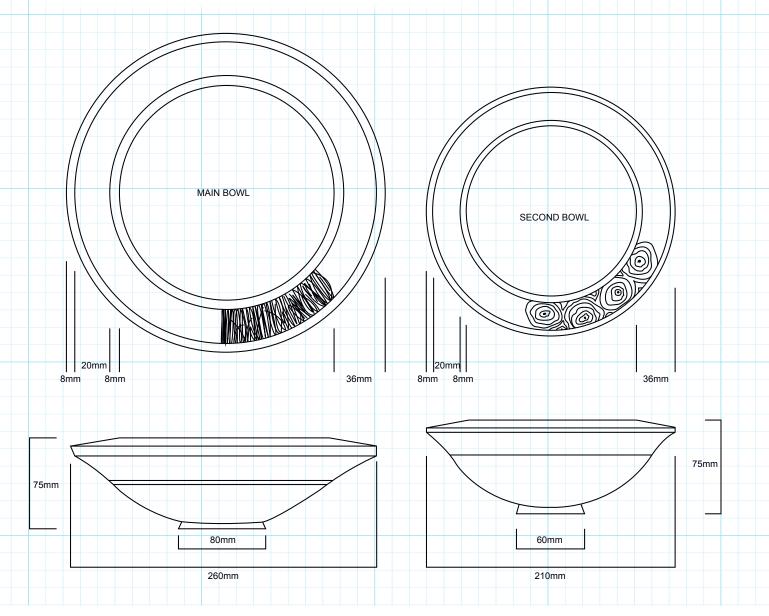
#### **TOOLS AND MATERIALS**

#### **TOOLS**

- ¾in bowl gouge
- ½in bowl gouge
- ½in spindle gouge
- Parting tool
- Round skew
- 1in scraper
- Carbide-tipped scraper
- Shear scrapers
- 3 point scraper
- ½in scraper

#### MATERIALS

• Queensland maple 1-off 270 x 80mm and 1-off 220 x 80mm







#### The making

1 Wood used for this project was already cut to a disc without a clear centre mark evident, so to determine a central point I used a pair of dividers to scribe several lines close enough to the centre to establish a guesstimate so that I could fit a faceplate.

**2** Mounted on the lathe, I could rough the blank and cut a tenon by which the bowl form could later be held to complete the face and interior.



















**3** To remove unwanted material quickly, I opted for a swept-back ground gouge using a pull cut, which produced fluffy shavings and released the aroma I associate with this timber.

4 Unfortunately a problem I encountered throughout this project became evident right from the beginning of shaping – cutting 'uphill' resulted in poorly cut endgrain, no matter what tool I used; scraper, gouge or shear scraper. Unfortunately I had to revert to the 80 grit abrasive to solve this problem later in the making.

**5** Fortunately 'downhill' cutting produced a clean surface, even where there was figured grain.

**6** To refine the outer surface of the bowl I began by refining the tenon, or foot, of the bowl with a skew chisel, which enabled a V-cut where surfaces intersect. This allows for later sanding without the danger of rounding over adjoining areas.

**7** Now I could clean up the bowl's outer surface with a sharp scraper. You can see from the shavings why this timber lends itself to turning.

**8** After sanding through to 320 grit I felt the classic S-shaped outer curve needed a visual break. A couple of definition lines cut with a carbide cutter about 40mm below the rim of the bowl seemed to do the trick. Unfortunately there is no tried and tested formula for what works visually. This is something that comes from years of experience, so bring a pencil up to your bowl and mark a line, take a step back and look to see if your eye approves of the balance. If not, erase and try again. The more times you try this, the faster you'll find a proportion that works for your aesthetic.

**9** With the exterior completed, I reversed the bowl into appropriately sized jaws fitted to a scroll chuck so I could determine the width of the band to be textured and

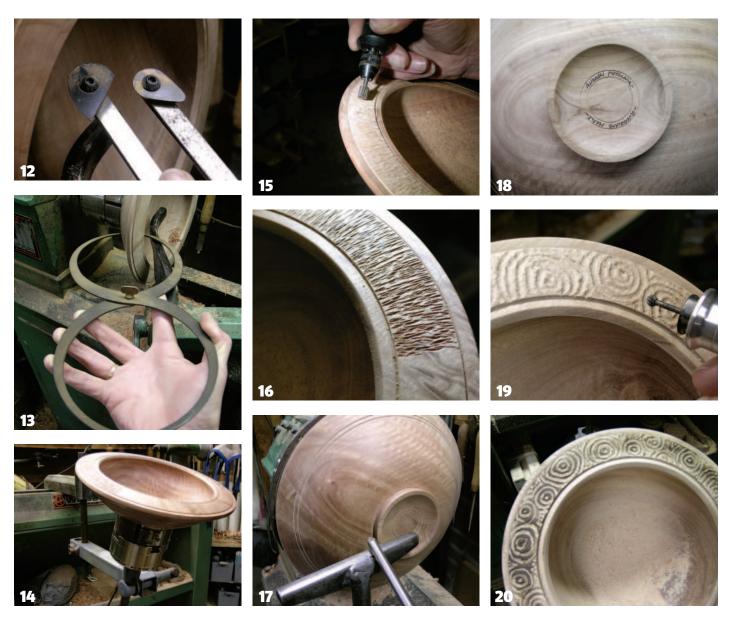
an area to be sanded smooth on either side. Personal aesthetics will determine proportions, but for me a smooth area of about 6mm on either side of the 35mm texture band worked on this project.

**10** Neat definition lines were cut between each segment and both surfaces meeting the collar to be textured were slightly undercut so texturing would not harm the neat border.

11 For hollowing the bowl, I need to point out that I 'cored' the interior so I could create another small bowl from wood that would otherwise be relegated to shavings. I do use these to mulch my garden, so they don't go to waste.

After clearing unneeded material with a bowl gouge I changed to a shear scraper to clean up grain that I'd already found to be 'furry'.

**12** Here you can see two scraper shapes held on about a 45° angle that helped to



reduce tear-out on uphill areas of the bowl.

**13** While hollowing, I used a pair of 'figure 8 callipers' to ensure an optimum base thickness of about 6mm was achieved.

14 Sanded through to 320 grit, the interior of the bowl was complete and I could turn my attention to texturing the raised band in the rim. In preparation for this step I transferred the bowl and chuck to a carving clamp I acquired many years ago, which is really an assembly that the chuck is screwed to that is held in the saddle of my lathe. It enables raising and lowering of the workpiece, rotating it and changing the angle you approach it from.

**15** Texturing was carried out with a cylindrical burr fitted to a micro-grinder, in this case a hand-held Dremel tool. A strong side light helped show where I had 'carved or 'engraved' lines into the band. I also needed to ensure there weren't any

stray strokes that would mar adjoining sanded borders of the bowl.

**16** As texturing was applied and the bowl rotated, I could see areas where extra cuts were needed to provide consistency.

17 After texturing was cut, checked and checked again with missing areas textured, the bowl was reversed on to a chuck fitted with Cole jaws so the base could be hollowed, sanded and a couple of definition lines cut with a pointed tool.

**18** This helps to 'break' the surface visually, and provides a neat band where you can sign your name and add the type of timber the bowl has been made from. This isn't just a matter of vanity, but a way that customers can identify the maker of a style they like.

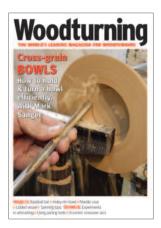
**19** For the second bowl I followed the same process but opted for a different method of texturing the raised band on the rim of the

bowl, this time using a ball-shaped burr, again fitted to a micro-grinder, which left a raised edge, partly due to the softness of the blank used in this piece. It is important to note that this blank was cut from a section on the outer part of the tree, where fibres and growth rings are less dense.

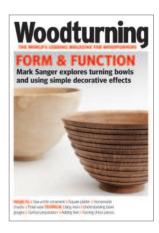
**20** To eliminate 'furry 'grain I used a micro-gas torch held at an angle of about 25°, waved lightly over the textured surface to scorch raised surfaces and burn away unwanted stray fibres left by the texturing process.

These texturing techniques are nothing more than an entry way into exploring the characteristics of any species of wood we have on hand. But keep in mind that every piece you work with will have variation in colour, grain and texture, depending on where it grew, so be prepared to adjust your designs to the wood available to you. Go with the flow and see where it takes you.

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## Lockdown: Good or bad?

Pete Moncrieff-Jury considers life in lockdown

Here in the UK and elsewhere many of us have been in a position where club meetings, shows, conferences etc. have been cancelled due to the Covid 19 pandemic. Around the world many have had to stay at home and so often we see and hear of people struggling to cope. Personally, I have had shows, tuition and demonstrations cancelled or postponed and have had three months of no commitments apart from a few commissions. For myself and Mo this has been a real chance to experiment, try new things, do things that take time that we couldn't commit to with shows and deadlines to meet. It has, in fact, been a really enjoyable time of new experiences. I am indeed fortunate in that my wife and I collaborate in many ways and an evening for us is often spent sitting bouncing ideas off one another, with the help of a glass of wine of course. The main problem we are facing at the moment is that our stock room is full and we need more space to store the new stock.

Seriously, I wonder how many of us have actually seen this time as a good thing. Yes, it is difficult for us not seeing family and friends, though with modern technology that is not impossible, but every cloud has a silver lining and sometimes we need to actively look for it. Most turners I know have a supply of pieces that didn't quite work out, things that were started but not finished. Perhaps a stock of wood that we have had for ages waiting for inspiration or the time to do something with. One of the things that has become very fashionable is decorating our work and that again is something we could be experimenting with. Not

just colouring but different ways of marking the wood. For me it has been texturing, something I have long admired but not got round to. For Mo it was pure pyrography as opposed to using it as a part of decorative work. With access to all the training videos online, experienced turners who are often more than willing to share their knowledge, the only excuse for not trying new things now is that you don't want to. I am a firm believer that you don't know whether you can do something unless you try. Now many of us have the chance and the time to give something new a go. Many turners seem to get stuck in a rut and I meet those who only do bowls or some other type of work and could never understand this. Perhaps it is my small attention span, but I find a large part of the fun of turning is trying something different, a new way of doing things. Variety is the spice of life and I do like my life to be as spicy as possible. I accept that many hobby turners are people who have taken it up on retirement but that is no excuse for turning the same things all the time.

how many of us have seen it that way or have just seen it as a nuisance and a disruption of our normal lives. I hate to admit it. I am officially in the 'older' category, but as far as I am concerned age is skin deep and inside I am still that young 13-year-old who fell in love with turning and wants to keep trying new





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