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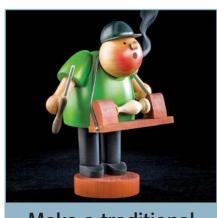




Make your own Troika-style vessel



Explore turning hollow forms



Make a traditional German smoking man

The Record Power CL series lathes enjoy an enviable pedigree and reputation, stretching back to the 1950s and represent the best of British design and innovation.

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CL3 Professional 5 Speed Lathe

Specifications

Maximum bowl diameter: 762 mm (30") Maximum between centres: 610 mm (24") Maximum swing over bed: 305 mm (12") Spindle speeds: 475, 670, 985, 1410 & 2070 rpm

Thread: M33 Taper: 2 Morse taper Weight: 86 kg Size: L1210 x D435 x H386 mm



CL4 Professional Electronic Variable Speed Lathe

Specifications

Maximum bowl diameter: 762 mm (30") Maximum between centres: 610 mm (24") Maximum swing over bed: 305 mm (12") Spindle speeds: 13 - 4600 rpm

Motor: 1 hp Thread: M33 Taper: 2 Morse taper Weight: 90 kg Size: L1210 x D435 x H520 mm

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Event planning



here is a definite buzz in the air regarding activity now. The woodworking shows are in full flow and there's a few coming up that you may be interested in:

The Toolpost Open House event on the 5–6 November, 2016: www.toolpost.co.uk

The North of England Woodworking and Power Tool Show on 18–20 November, 2016: www.skpromotions.co.uk

Let's face it, we all like shows so we can see what is available, what bargains there are, learn something new and catch up with friends. Shows form an interesting part of what we do as turners and woodworkers. Whether the shows are local, regional, national or international, many people enjoy going. It is true however, some shows

increase in popularity, others decline and many just disappear completely.

There are far fewer shows than 10 years ago. Go back 15 or 20 years and the show landscape has changed dramatically. Times change and the way people shop, access information and interact with each other are also changing, but it seems some shows are still needed and loved. This is no bad thing. I think variety is important. I can't imagine only ever eating porridge. I love porridge, but wouldn't like it to the exclusivity of all else. Not only is it bad for me long term without other things, it's not balanced as far as my needs are concerned and I'd get very bored! It is the same with my woodworking, I may concentrate on carving and turning more than anything else, but I still make furniture and do DIY so there is variety, but this also means I need to access different things at different times for balance. Home and family life, travel, fishing, visiting friends and, of course, work adds variety to keep me busy and stops me getting bored. But I am one

of those inquisitive, and at times, annoying people with a thirst for knowledge. I'm working on one thing and then something crops up or I read a piece that throws up another area for exploration. I don't become sidetracked, but there is ever widening knowledge that started as offshoots from an original topic. We all do this to a greater or lesser degree and that's how we learn. But I hold the opinion that there's little time and so much to learn, which is why I'm always on the go. So as I dash off now to finish off a series of photographs and attend a show, I'm mindful of my saying I will not buy any more equipment or goodies. I have yet to not buy anything at any show I've attended, but I'll try and I will let you know if I am successful in avoiding the lure of the shiny things.

Have fun,

Mark

markb@thegmcgroup.com

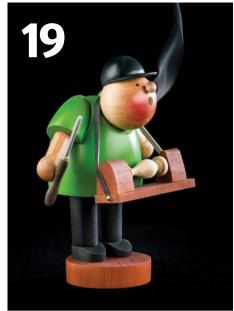


Woodworkers Institute website (www.woodworkersinstitute.com) is thriving. It would be great if you took a look and participated in the various discussions and competitions in our community, or see us on Facebook & Twitter.

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can all be found on www.woodworkersinstitute.com. These all appear on the magazine homepage and you can see a bigger selection by scrolling down the page and clicking on the individual stories. We also have an extensive online archive for you to browse

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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.

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Continuing his series, Richard Findley turns his first hollow form

RICHARD FINDLEY



Richard is a registered UK professional woodturner living and working in Leicestershire. He discovered woodturning while working for his father as a joiner. He makes all kinds of work to commission, from replacement

antique components, walking canes and stair spindles, to decorative bowls. It is the variety of work that he loves. He also offers demonstrations and a range of woodturning supplies.

richard@turnersworkshop.co.uk www.turnersworkshop.co.uk Follow on Instagram: richard_findley

ou would think that, at some point, I would have turned a hollow form. I've seen it done plenty of times in demos and at shows, I've read about it in books and in magazines, but I've never turned one, start to finish, on my own. There are two main reasons I never got into turning hollow forms: firstly, the tools always seemed wildly expensive (although recently manufacturers have been developing tools for wallets of all sizes) not to mention the mind boggling

array there is to choose from. Secondly, I've always worked with seasoned timber and I don't really want to introduce wet logs full of creepy crawlies into my timber pile. All of this means I have stuck with turning seasoned timber, and if I'm honest, that's the way I like it.

Plan

As you might guess, I am looking at this article with mixed emotions. Part of me is itching to try a new project that I've fancied doing for years, and part of me is thinking 'yuck, wet wood!'. While I don't have a supply of fresh logs, I am fortunate to have a friend that does. George Watkins is a well known turner of hollow forms and boxes, and has considerably more experience than myself, so I not only blag wood from him, but also pick his brains on the subject. Not owning any of the appropriate tooling, Mark Baker sends me a package of tools that I might be able to use. Now armed with everything I might need, my plan is to turn two hollow forms, the first being a fairly straightforward open 'vase', which should give me a chance to get the feel of the tools and become comfortable with the process, before turning a second form with a more enclosed shape, which is likely to

challenge me a little more. This will be next month's article.

Theory

A hollow form is, in theory, just a large turned box, without a lid and I've turned plenty of boxes, so it should be a case of practising with the tools on the early part of the job, before getting to the deeper and potentially more tricky part of the turning. As long as I can get to grips with the tools and get them cutting how I want them to, it should be reasonably straightforward, but we shall see!

A word on tools

There is a truly mind-blowing number of hollowing tools on the market at the moment, but they can be loosely grouped into three types: scrapers, carbide tipped cutters, shielded cutters. Within each group, there are variations for different specialities, allowing one tool to do several jobs. With such a wide variety of tools out there, it seems obvious to me there is going to be a lot of mixed opinions, which of course will be entirely subjective. It would probably be a good idea to try a few different tools before buying.



Some of the following tools available in the scraper category, for turning hollow forms...



... some tools available in the carbide tipped category...



... and finally a couple of the hollowing tools available in the shielded cutter category

Timber

I call around to see George and he shows me to his wood store. Neatly stacked under cover and behind his garage workshop are logs of all sorts. He pulls out a piece of oak (Quercus robur) and a piece of ash (Fraxinus excelsior), explaining that ash is a great place to start as it is one of the more stable timbers and is quite user friendly. He explains that the key to successful hollow form work is to get rid of the pith, which is the very centre of the tree, this is where nearly all splits and associated problems stem from. Alternatively, you can keep the pith in, if (and it's a pretty big 'if') the pith is dead central and the growth rings are quite even on both sides, i.e.: the tree grew straight. If I am to do this though, I would probably need to drill out and plug the pith in the



The ash log cut up, showing the larger section which may move and the two smaller pieces which should be more stable

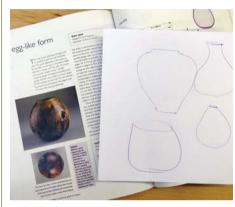
base of the form otherwise cracks are sure to follow.

He slices up the logs for me, explaining that the ash, once cut through the pith, can be cut into two larger squares or four smaller ones. I went with a mix of both. He explains that the single larger one may move slightly unevenly because of where the pith was, but he would expect the two smaller pieces to have very little movement. Of the four he cuts for me, I already know which I'm going to use: I'm usually up for a challenge, but sometimes, especially when it's your first time, the easiest option is the best option! He then wraps the blanks in black bin bags, which should prevent them from drying out too much and allow me a week or so to get them turned before they start to crack.



The oak log with very central pith should work with care

Design



My inspiration

I am a big advocate of doing a sketch, or taking a picture to the lathe with you, just to give a loose target to aim for. Before doing anything I do some internet searches for 'hollow forms' and 'vase forms' among other things. I also check a couple of my books to see if anything catches my eye. From the internet search I made some very rough sketches and I spotted a picture in Mark Baker's book, which was of interest to me. With these in hand, I am ready to make some shavings!



The rough shape drawn out on the blank

MOISTURE CONTENT

Out of interest I put my moisture meter on the ash after turning it into a cylinder. The reading is 38%. To put that into context, the seasoned timber I usually use is rarely above 12%, some of the imported American oak can be as low as 6 or 7%.



My moisture meter reads 38% on the ash blank I'm working on

Work holdingMy first step is to hold the blank between my four prong drive and live centre and rough it down to round. As it is around 160mm square I go with my big bowl gouge rather than my spindle roughing gouge. Sure enough, big shavings are soon flying and despite the mess, I am quite enjoying myself.



Shavings begin to fly, roughing down the blank



Flattening the end ready to fix the faceplate



Checking it is flat to give the best contact with the faceplate

Once the blank is round and one end is suitably flattened I can fix my faceplate. There are two main ways of holding hollow forms: on a faceplate or in a chuck. George uses a faceplate every time while others prefer a chuck. As I am mostly taking my guidance from George, I decide to do as

he does and use a faceplate with four good sturdy 45mm No.10 screws. I mark out the area where the screws will be, an area about 25mm wide for waste to give me working room when finishing the bottom of the form, my projected size of the form and the remaining waste.



Fixing the faceplate

With the tailstock in place I get rid of the waste from the top of the form and begin to put in a little shaping. It is loosely based on my earlier sketches, but as I am, for once, not bound by a CAD drawing, I let it develop as I turn. The opening is still a good size, but is not quite the wide opening I had originally



Marking where the screws are



The blank is marked up and ready to turn

planned, hopefully this shouldn't cause too many problems. The form, all being well, should end up 150mm diameter and around 180mm tall. I have no idea if the tools I have will cope with this depth, but as they are specialist hollowing tools I assume that they must be able to.



standard spindle turning



The outside shape is roughly turned



■ Hollowing

From all of my theoretical experience of this type of turning, I know that the first step is to drill a decent sized hole down the centre of the form to roughly the final depth. I find a 21mm twist drill in my box of drill bits and decide that will probably do the job. Having drilled this with the bit held in a Jacobs chuck in the tailstock, I'm ready to start hollowing

Nothing I have done so far is out of my comfort zone as it's basically spindle turning, but hollowing is where it gets interesting. I have various tools in the box from Mark, but I'm keen to try the shielded ring tool as this is what I tend to think of when someone says 'hollowing tool'.

I get it out of the pack and can see it's been used, probably in a tool test review for the magazine, so I assume it is good to go, which is a school boy error. Tools are never just 'good to go' because everyone likes their tools a bit different, even down to a spindle gouge where turners can argue among themselves for hours over the best bevel angle or the shape of grind. On a specialist tool like this



Drilling a central hole in the form

there is likely to be a huge variation of ideas as to the 'perfect' setting. Whoever used it before me had it set up in such a way that when I try to use it, the tool wanted to twist with the rotation of the wood. Not violently, but enough that it just couldn't be right. I persisted for a few cuts before deciding to try to tweak the set up a little. One of the features of these specialist hollowing tools is they usually have an adjustable section between the shaft of the tool and the cutting head. This allows it to be adjusted to work on

almost any shape of hollow form. I looked at it for a few moments scratching my head before realising that the problem lies in the alignment of the cutting head to the shaft. An important factor of any hollowing tool with a swan neck or some sort of crank to it, is that the cutter should still be in line with the shaft and handle, otherwise the twisting force is too much to control, and this was my problem, so I fiddled with the Allen screws and rearranged the position of the cutter head sightly and bingo! A controllable tool.



The shielded tool as supplied was not set up well for me



A subtle change and it works much better



The three tools I used most, one from each tool category

As I feel like I am starting to get to grips with the tool, I realise it doesn't seem to be cutting quite as well it should. I pay a little closer attention to what is going on and find that the cutter head seems to be clogging. Another friend of mine uses this particular tool a lot, so I give him a call to pick his brains. He tells me that it doesn't clog unless the shield isn't seated properly. The other possibility is that, sometimes, you need to apply a little more pressure to the wood to make it cut, particularly on fairly straight sided forms. This immediately rings true as my form is quite straight sided. As a precaution I take the shield to pieces and give it a clean and then try again, sure enough, with just a bit more

pressure it cuts much better. I had been trying to refine the wall but too lightly. I just need more practice.

During the hollowing, I try a scraper tool and a carbide tipped tool. Both work really well, although the scraper seems a little less efficient at removing the wood than the other two tools. The advantage I find of the small carbide tipped tool is that it's very slender, even at the tip, whereas the shielded tool and the scraper both have quite bulky cutter heads, meaning I need to set my toolrest a good way back from the rim of the form to allow smooth movement. The carbide tipped tool could easily work with the toolrest up close for better control.

A closer look inside

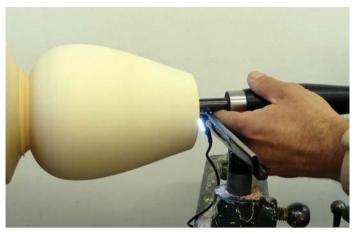
It amazes me just how much dust, chippings and shavings you get from the inside of a hollow form. Regular clearing is a must. Initially I was stopping the lathe and just scooping it out with my fingers but found it impossible to get it all. In the end I decided to use my air line to clear it. I know many people don't agree with this approach as it blows debris everywhere and makes dust airborne, but as I wear my air fed helmet and run an air filter at all times I figure it has to be worth a go. The difference was unbelievable. I still find it best to stop the lathe, but the speed and efficiency of clearing the shavings this way makes it a no brainer to me.



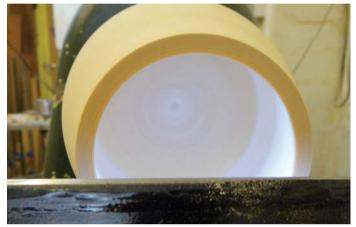
Using an air gun to clear out shavings



Using the torch on my phone to inspect the inside of the form



The magnetic LED in place and the shielded tool working to its limit



The inside is now well illuminated



Carefully removing the little pip

Having cleared out the debris, I could take a good look inside. I regularly check the wall thickness with my callipers and have settled on 6–7mm as a suitably thin – but not too thin – wall thickness for my first attempt. The inside is coming along well, if a little ridged at this stage. I decide to try to refine it before getting to the bottom. After trying a few options I come back to the shielded ring tool, making long, slow, smooth passes to improve the inside wall surface. Once I feel happy, I carry on to finish the bottom.

Working on the bottom corner and across the base, it becomes clear to me that I am working on the limit of these tools. I passed the limit for the scraper a while ago, but both

the shielded tool and the carbide tipped tool are now pretty well maxed out. Looking through the respective tool manufacturers' websites, it seems bigger versions of both tools are available, but I have the smaller ones and now know the limit of their reach is about the 180mm I'm working on.

Trying to perfect the bottom means a lot of stopping and starting, moving the toolrest to try to see the bottom. I even resorted to using the torch on my phone to have a really good look inside. At this point I remember I have one of those magnetic LED lights which stick to your toolrest. I was given it a couple of years ago to try, but as I don't normally do this kind of thing, it had sat in a box on

a shelf unused, until now. What a difference it makes. I'm sure experienced hollow form turners will tell you that you don't need to see inside a form, you just feel your way around it. Well, they probably can, and I feel I've done a pretty good job so far, but for the very bottom I need the assistance of the light.

With my path now well lit, I use the shielded cutter to smooth the bottom and blend the curve. There is still that annoying little pip in the centre though. To get a better view I remove my helmet and switch to safety glasses. Now fully illuminated, I use the carbide tipped tool to slice away the nib while being careful not to let the tool handle hit me in the face (you only tend to do this once).

Sanding

With the inside far from perfect, but as good as I can get it from the tool, I'm ready to sand. Just before I do I realise I have not yet tidied the rim of the form. Hoping I haven't left it too late I use the wing of my spindle gouge to cut a slight inward curve. Thankfully it worked without incident, but I probably should have done it far earlier.



Shaping the rim should probably have been done before now, but I got away with it



Refining the lower portion of the form

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Sanding inside with my sanding stick



Sawing off the form

I take a couple of cuts on the lower portion of the outside of the form to reduce the wood that is holding it, and allow me to sand as much as possible before parting it from the waste on the faceplate. Sanding the outside is quite straightforward but inside is a different matter. I can safely reach in with my fingers a short way, but beyond this I need some help. I have a wooden stick that I use to sand twists which is fitted with Velcro and allows easy fitting of abrasive to it, so wrap



Sanding the outside



Fresh from the lathe

it in 120 grit and use this to sand the inside. It works well but it soon becomes clear that there are a few marks that won't sand out. On this occasion I decide to put them down to experience and hope that I will achieve a better surface on the next one, now being more familiar with the tools. I sand the whole form down to 400 grit and, with the bottom turned down to about 25mm, I saw through with a hand saw to release the form. A little sanding on the base and it sits flat as it should.

Finishing

I realise at this point that I don't know whether I should just finish it now or leave it to settle and season, so I ring George. His advice is to oil with lemon oil, which is a very light finishing oil, and leave it in a cool place for a couple of weeks to fully dry out. Only then should I apply my final finish. George explains that the lemon oil just lightly seals the surface and protects it from dirty finger marks until the final finish can be applied. With lemon oil being such a light oil it won't affect any further finishes applied to it.

Conclusion

So there we are, my first solo hollow form is done; well, coated with lemon oil and set aside to season fully anyway. I intend to turn the hollow form for the next article immediately,

while the tool movements are fresh in my mind and while the wood is still crack free. By the time I have written the next article I will know for sure if this first one was a success or not. There is still lots of room for improvement. I think the overall shape works, although I need to live with it for a time to be absolutely sure. The inside is not bad, but there are a few tool marks which I'm not happy with. The positive from them though is that they are not catches or torn grain, just not totally smooth fluid cuts. Despite my intention to make my first hollow form a simple shape, I may have inadvertently chosen a shape that wasn't as easy as I first thought, but now that I know the limitations of the tools I have, and a little more about my own limitations, I will be able to plan the next one accordingly.



The form, coated with lemon oil and now set aside to fully season



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Community news

We bring you the latest news from the world of woodturning and important dates for your diary

We try to give accurate details on forthcoming events. Please check with organisers for up-to-date information if you are planning to attend any of the events mentioned.

AAW: Demonstrators for Kansas City announced





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he AAW is pleased to announce a partial* list of demonstrators for its 31st Annual International Symposium, June 22–26, 2017, in Kansas City, Missouri:

- Dixie Biggs, USA
- Trent Bosch, USA
- Jimmy Clewes, USA
- Kurt Hertzog, USA
- Michael Hosaluk, Canada
- Rudy Lopez, USA
- Glenn Lucas, Ireland
- · Andrew Potocnik, Australia
- Tania Radda, USA
- Richard Raffan, Australia
- Mark Sanger, England
- Merryll Saylan, USA
- Betty Scarpino, USA
- · Al Stirt, USA
- Derek Weidman, USA
- John Wessels, South Africa
- Additional demonstrators, demonstrator topics and panel discussions, will be announced at a later date.

The Symposium will offer three-and-ahalf days of wide-ranging presentations, demonstrations and panel discussions to enhance your experience wherever you are on your woodturning journey.

The action begins on Thursday, June

22, with Special Interest Night for focused disciplines, including segmented and ornamental turning, and pen turning. Small groups, such as Women in Turning, woodturning teachers and young people, along with sessions on other relevant woodturning subjects will also take place. What's more, internationally esteemed woodturner, author and instructor, Richard Raffan, will present 'A Life of Turning and Teaching'.

RICHARD RAFFAN

Richard Raffan holds a rare position among contemporary woodturners. While many turners have changed course seeking creative satisfaction and economic viability, he has maintained the values of turning as a trade by producing high quality functional work. He is a recipient of the AAW's Professional Outreach Program (POP) 2012 Merit Award for his extensive contributions to the turning field and as an acknowledgment that traditional turning should continue to be recognised and respected by the contemporary turning world.

Mark your calendar

No other event offers as many opportunities to learn from the world's best, like the AAW Symposium. We hope you'll join us in Kansas City!



Andrew Potocnik



Kurt Hertzog

AWGB: The Roger Stewart Fund



Dave presents a delighted Luke with his award

n July last year I was contacted by Robert Craig, a member from North London Branch, and a solicitor by profession. He told me that the Trustees of a Trust he is connected with had agreed to donate to the AWGB the fantastic sum of £10,000 to be used to help our members, and prospective members, take up or advance their woodturning journey. The fund is used to support individuals and organisations who would like to undertake some woodturning

activity but do not have the funds available. The fund is called The Roger Stewart Fund, named after the founder's late husband.

The Trustees would like to thank the trustees of the charity for supporting AWGB, and thank Robert Craig for this introduction. So far this year we have made four awards totalling over £1200. These comprise two membership grants, purchase of a lathe, stand, chuck and accessories and the insurance for the fist year for a new AWGB Branch – Ise and Nene. This is an extract from a letter sent by their secretary Sue Cattell:

'I am writing on behalf of the Nene Valley Turners Woodturning Club to thank you very much for sponsoring us with the long term loan of a lathe, stand, chuck and accessories and also, for funding the equipment insurance for the first year. We can't express what a huge help this has been to us; we started with nothing and now we can share this great benefit with all our members.'

Finally, I was delighted to make our final award to Luke Hullock on 13 July. Luke is 14 years old and as keen as keen can be on woodturning. He has saved his paper round money to buy a lathe and tools, joined Eden Valley Woodturners and the AWGB. He has got a place on the Young Turners training day with Andrew Hall in October, which is funded by the Worshipful Company of Turners.

John Davis Woodturning are sending Luke a Record ambient airfilter, a Camvac dust extractor with tool kit and an Ellipse dust mask and filters.

David Atkinson, Chairman, AWGB

Border Woodturners annual open day



Last year's event was well attended

order Woodturners annual open day will be held on Sunday 30 October, 2016. Doors will be open from 11am until 4pm. There is free parking in and around the centre and light refreshments and lunches are available in the Centre Café throughout the day. There will be a display of members work, together with members work for sale and various members will be demonstrating on the Club lathe during the day.

The Annual Inter-Club Competition with entries from seven clubs from the surrounding areas of the North of England and Southern Scotland, will be judged in the morning and entries will be on display throughout the day. There will also be the usual raffle and tombola with a large selection of prizes. This is an excellent day to view woodturning and to meet fellow enthusiasts and friends. The popularity of this event has continued to increase over the years.

Contact: Brian Conchie When: 30 October, 2016

Where: Brampton Community Centre, Union Lane, Brampton Cumbria, CA8 1BX

Tel: 01387 265 608



Harrogate Show

he 'North of England' Woodworking & Power Tool Show – the Harrogate show as it is affectionally known – takes place on the 18–20 November, 2016 in the newly refurbished Hall 1 at the Yorkshire Showground. The new hall was officially opened a few weeks ago and will be great for the show, with easier access, more catering areas and almost 20% extra exhibition and demonstrator stands. With 40 demonstrators and almost 100 exhibitors on show, this years show will be something special. Make sure you do not miss it.

Contact: SK Promotions When: 18–20 November, 2016

Where: Hall 1, Great Yorkshire Showground, Harrogate

Web: www.skpromotions.co.uk





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The North of England Woodworking & Power Tool Show



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German incense burner (Rauchermen)

Colwin Way makes a traditional German smoker

COLWIN WAY



Colwin started turning aged 13 and has since gone on to teach the craft and wishes to continue to give people confidence to try the wonderful hobby for themselves.

colwinway@btinternet.com www.axminsterskillcentre.co.uk

t's getting close to Christmas and it is time to start making things! It is a magical part of the year or at least it is in our house. I like Christmas so much my children call me Mr Christmas, but then with tongue-in-cheek call my wife the Grinch, but only because she's not quite as excited as me. If you can remember back to this time last year you may recall my very first article was based on the making of a real German tradition, nutcracker figures. These proved to be really popular and are responsible for extending my Christmas to roughly four months long to the horror of my wife. So this project is to start you thinking of this year's gifts, after all the family

don't need another bowl! This year we're going to go back to southeastern Germany and the Erzgebirge Mountain area, famed for the craftsmen and toy making. This project focuses on a personal favourite, the German smoker or incense burner. Otherwise known as Rauchermen, these wonderful little characters send out plumes of Christmassy smelling incense. Incense has been used for centuries in religious ceremonies and as a way to cleanse the air of evil spirits and is often considered a treasured gift. In Germany, the 12th night of Christmas is a celebration of the gifts of the three wise men and people light incense to mark the end of the Christmas season. I think the smoking men were likely given as a good luck charm to keep away the nasty spirits.

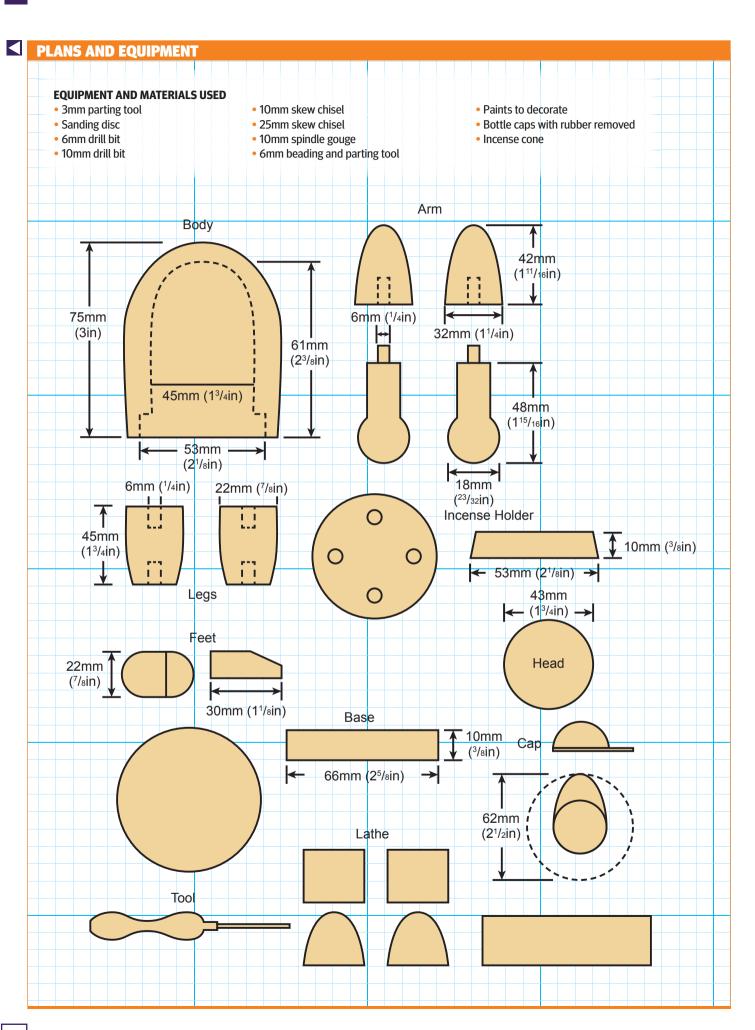
Unlike the nutcrackers that portray figures of authority like kings, queens and soldiers,

carved out of one piece of wood and the incense burnt beside it, but since the mid 1800s and the invention of incense cones, the figures have been made in two pieces and the incense placed inside. Staying true to German craftsmen and their heritage of making these wonderful figures, I am going to keep to the traditional tools as much as I can: this means 90% of this project will be turned with a skew chisel and I would encourage you all to do the same. I'm a very keen collector of original

German nutcrackers and smokers but want to purposely distance myself from their designs to pay tribute to, but not copy the figures and skills that have been passed down from father to sons for centuries.

All pieces to be painted are turned from lime (*Tilia vulgaris*) as this has a plain grain and covers well, but where I leave timber unpainted, I'm going to use beech (*Fagus sylvatica*), as it has a nice woody fleck to it which I like.

our smokers are the opposite and represent the working man like builders, carpenters, and in my case, a farmer and a woodturner. Originally, these figures would have been



The base

We're going to use a selection of jaws throughout this project and start with a set of dovetail jaws to hold a piece of 70mm lime (which will end up making the base), incense burner and hat. Rough the piece to a cylinder then holding in the chuck, use a skew chisel to clean up the exposed face of end grain. This is a good point to sand the face and edge of the base ready for parting off, use grits 150, 240, 400 on all the parts to be painted. Remember the face of the base will be facing upwards so take your time with this area. Now you're ready to part off using a narrow parting tool. Once the base has been parted, sand the rough face on a disc sander to tidy it up

2 Sand the feet to shape, not forgetting to sand an angle toward the toes to give a more foot-like shape

3 Next, add a couple of 6mm holes to the feet which will help attach the legs to the figure

Before turning the arms and legs, a little preparation is required, the legs need a 6mm hole drilled to both ends at a depth of 10mm, and the arms the same size holes to just one end. These holes are used to connect to the feet, body and arms

5 We continue with the legs, which are a very simple turning and a simple taper toward the foot making sure that each of the ends are cleaned up to ensure a clean join when the piece is put together. Because of the holes at either end of this blank, use a light pull drive to drive the blank and a single pointed live tailstock centre. Make sure that when you make the second leg you take the measurement from the first, then sand them both

Making the main body part is the most complex of all the parts but still relatively easy. Rough down the main body piece to a cylinder before holding it in our set of dovetail jaws. The exact dimensions and shapes of the pieces are on the line drawing, but now in the dovetail jaws we need to hollow the body out leaving a ridge 12mm up for the body to sit over the incense holder. Do this with a 6mm bowl gouge cutting from centre outward. To drive the hollowed out body, turn a drive dog from a piece of scrap wood and give it a slight taper, this taper gives a tight fit and means at later stages of shaping we can take the tailstock away to clean this area up and sand without interference

Now, shape the body into a dome. You can see the skew working well, it's a cutting tool so leaves a really nice finish to the timber

After shaping the body, take the tailstock away and clean up the area that the tailstock was supporting before sanding

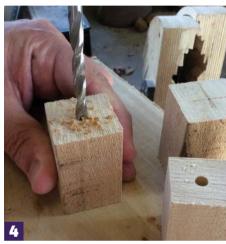


















Now to join all of these pieces together to make the incense holder. This is a piece of lime turned to fit the inside of the body up to the ridge we spoke about in step 6. This fit needs to be good but not tight as you will need to light the incense cone then put the figure together and you don't want to be forcing the two parts together. I've drawn a line straight through the centre of the holder and then drilled four 6mm holes, two for the legs to fit in 28mm between centres and two more in the opposite quarters as flue holes to allow good air flow for the smoke

1 O You should now be able to see how the body goes together and we can move onto the next stage

Turning the arms is fairly simple and involves a convex taper, I'm using a ring friction drive to drive the piece with a single pointed tailstock centre. Leave a bit of waste to clean off the narrow end of the arm before sanding to 400 grit then repeat on the second arm

12 In preparation to start assembly we need to sand a few flats to the body and arms. Firstly, on the body in opposite positions two flats to take the arms and then in between these another flat to take the head and positioned slightly higher up the body

13 In the same way, sand a flat on the arms to position the arms onto the body. You can alter the angles here to suit the gesture you want your smokers to stand at

Another bit of turning here and onto the head, which is a simple ball shape turned between two centres. You can see here that I have a bit of waste at both ends of the head which can be easily sanded away when finished and another reason for using lime as it works so well

15 Before gluing anything together we need to drill another couple of holes this time to allow the smoke from the incense to come through. Firstly the main hole in the body which is 10mm at a downward angle then the second 6mm hole in the head, this needs to be done with a sharp lip and spur bit to avoid breakout. To make sure the holes line up, I position the head over the body and eyeball with the drill in position before taking down and placing on the bench to actually drill

This picture shows the first part of the gluing of the arms in position, I use epoxy resin which dries extremely quickly and is incredibly strong

































17 While the glue is drying on the body we can move onto some of the accessories starting with the beech arms. I'm using a set of internal step jaws here to hold a piece of 20mm dowel and start by turning the ball of the hand then turning down the wrist section before creating a 6mm tenon that will end up slotting into the hole in the arm

Now this is a bit of fun turning the 'turning tool' working back toward the chuck before sanding. The small table lamp on the lathe was turned in the same way

19 I'm using the same piece of timber here that we used for the base and the incense burner, this is going to be the baseball cap. I start by facing off the front of the blank to a good finish before making a hollow to fit over the head which I keep offering into the hole until it fits perfectly. Then once the underside of the cap is complete we can look to shape the top, you have to leave enough peak to shape on the sander later. Don't forget to sand before parting off with a skew chisel

2 O so here you can see how the peak is formed easily with the disc sander, but if unsure, use a pencil to sketch out first then sand to your lines

21 We can now move onto my favourite bit, the painting, I always paint the arms and body after gluing, but before the head is attached, which saves me having to mask anything off. I'm using an airbrush to do most of the painting, however there are small areas like the turning tool that are done with paint brush. This picture shows the airbrush being used to do the main body colour of the smock. The great thing with airbrush paints and how they're applied is that they dry instantly so there's no waiting between coats or colours

2 To add a bit more detail here, I'm adding the 'soul' by putting the eyes in with a permanent marker then airbrushing the red cheeks on before adding the turned nose on a 3mm spigot

23 So the incense cone can smoulder safely, I'm using an old bottle cap as a dish to sit them in. Make sure that you peel away or burn off any silicone used to create a seal on the cap before installing it onto the figure. I drill these caps and screw them on instead of gluing for safety reasons as this cap will be in touch with the smouldering cone

Here you can see that I've used a rotary tool to give a slight recess to the hand allowing the turning tool to be glued to it more securely

25 So here we have the finished smoker ready to have its tool glued on, I then give the whole figure a couple of coats of satin lacquer to lift the finish. As you can see from the main finished picture, I've included a small lathe hanging around the neck which is a bit of artistic license on my behalf so please don't email me asking where you can get them from

The finished German insence burner, and a fun alternative design





INCENSE CONES

As I said at the beginning of this article, I'm an avid collector of these lovely figures and pictured here are a selection of incense cones I use. These are especially designed for these types of burners and are easily available over the internet. Well there we are, just like before and last year when we made the nutcrackers, I hope you think about the recipient when making these figures and build a bit of their character into them.



Just a few of the available incense cone packs







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KURT HERTZOG



Kurt is a professional woodturner, demonstrator and teacher and writes for various woodturning and woodworking publications in the United States as well as

contributing to *Woodturning* magazine. He is on the Pen Makers' Guild Council and is past president of the American Association of Woodturners (AAW).

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s a woodturner, we are usually in the mode of instant gratification. Mount the blank, turn, sand, finish, dismount and use or sell it. This is usually in one session at the lathe. Most of us are unlike woodworkers who usually spend far more time on their projects. In the search for fast and durable finishes, I've only been satisfied with two. One is spray lacquer. Not the fastest but reasonably quick, good looking and durable. We'll cover that finish some time in the future. The fastest, most durable finish I know of is a Ca finish.

Cyanoacrylate adhesive makes a wonderful finish for wood. There are many methods for application as a finish. Some methods I agree

with, others I don't. For the most part, Ca finishes have been relegated to small items such as pens, but with proper technique, it can be used on much larger items. The method explained here will allow you to use Ca finishes on bigger turnings. If you have a method that works for you and are satisfied, continue with it. Please don't construe my methods as the right or the only way. What I'll explain works for me and I'm sure it will work for you. If you are in need of something better than what you currently have, give my suggested method a try. After trying, you'll be able to make a value judgment to continue with it, adapt it, return to your old, or continue your search.

Safety

Cyanoacrylate adhesive gives off fumes that some people find offensive. Plenty of ventilation is recommended. There are vendors offering 'oduorless' versions of Ca but I haven't found the need to use them. I can't offer information on their odourlessness effectiveness or the working characteristics of those versions. Depending on your sensitivity and the amount of Ca being used, you can certainly use a filtering mask. An activated charcoal filter mask may alleviate any difficulties you encounter with Ca fumes. The Ca curing process or more accurately, crosslinking, gives off heat. This can be very hot! Take care when performing a Ca finish to avoid being burned. Do not



Eye and face protection should include safety glasses and faceshield. Gloves and positive airflow helmet can help

dispose of any application rags until they have completely cured and cooled. A common problem faced by those careless with Ca adhesive is becoming attached to their equipment or themselves. Ca adhesive cares not what it bonds together. You can easily attach your fingers together or your hand to your lathe. The debonding chemicals are effective but also require care in handling, use and storage. Read and heed the manufacturers' instructions for your safety. Ventilation and eye and face protection is always in order at minimum. Regardless of the finishes you use, Ca, lacquer, rub and buff, or other, be aware of the food safety concerns. Unless the finish has been tested per your local regulations and certified as 'food safe', use your finishes as decorative finishes only.

1. Preparation is everything

In our rush towards completion, the preparation for finish is usually where woodturners scrimp. Regardless of the finish you are applying, your final look will never be any better than the workmanship underneath. Any dust, oils or other contaminants will hinder your finish. Scratches or other flaws will not be hidden. They will be amplified with any see-through finish. Woodworkers will spend on average a third of their project time on building the project. Another third is spent prepping for the finish. The last third is spent applying and 'finishing' the finish, i.e. rubbing it out, buffing or other final touches. I don't intend to tell you to spend one third of your time sanding and prepping for finish but I do recommend you spend sufficient time to remove all of the scratches, debris and contaminants that will show up underneath or hinder the proper application of your finish. Sand through the grits. Use the intermediate grits as needed. Don't be afraid to continue on with MicroMesh abrasives if appropriate. MicroMesh abrasives work very nicely on dense woods. In normal situations, getting to 400 or 600 grit abrasive will be adequate. Remove the dust and particles between each grit. You shouldn't need to degrease if you've been careful with your waxes and oil through the process of turning and sanding. I always use a complete wipe with a paper towel with denatured alcohol to clean up all of the dust and any finger oils just prior to applying finish. Depending on your location, nearly any of the petroleum distillates will work.

2. Master the process in the practice area

Learning to apply a Ca finish isn't difficult. That said, you'll certainly improve your results with practice. Don't do your learning on a valuable turning. Take some scrap pieces and prepare them as you would to apply your finish. Learn and master the techniques on those less valuable pieces. Turn just the outside of a bowl. Finish that. If you wish, continue with the inside next by hollowing, sanding and finishing. Your practice will pay off and your success percentage will increase. If someone tells you they are always 100% successful, I'd beware of anything else they said. Over the years I've become pretty proficient but on occasion there is a less than ideal application. When that happens, I need to go back to the sanding and prep to apply again.

3. Have the correct materials minus the voodoo

When I apply a Ca adhesive as a finish, I use only thin viscosity. There are those who will profess that medium is the answer and



It is good practice to clean the final surface prior to finish application. Here a practice piece is wiped down with denatured alcohol



As with any skill, practise helps mastery. Take a scrap piece of material and prep as you would a 'real' piece and practise

often will dictate the brand of Ca. Some of the more vocal will even insist that the brand of paper towel impacts your success. Not to offend those folks but I've found that fresh thin Ca from any manufacturer, applied correctly to a properly prepared surface, will be successful regardless of the maker of the paper towel used for application. I suggest you use your favourite Ca adhesive and any roll of decent quality paper towels. The glue should be fresh meaning that it hasn't sat around so long that it begins to change viscosity. You'd like it to be like water. I won't quote the viscosity values in centipoise (cP) but if you look at various spec sheets it will have a wide range and still be called thin Ca. Water has a cP of 1 so get lower value rather than higher if you have a choice. That said, I've never run into a nontime degraded thin Ca that I couldn't get to work. Skip the boiled linseed oil adulteration of the adhesive. For those who use the boiled linseed oil/Ca technique and are happy with it, by all means continue. Those who haven't



Not intended to offend those who believe but I find combining with BLO or needing a specific brand of towel just bunk



Just a few of the brands of Krazy, superglue or cyanoacrylate adhesive that you can use for a Ca finish. Find one and stick with it

started, I recommend skipping the addition of boiled linseed oil to the Ca as you apply it. The chemical wizards that I've checked with say it adds no value to the process from their perspective. It adds cost and complexity for little or no apparent gain. You'll also be using Ca accelerator. The version using acetone as the carrier is preferred but not critical.

4. Use proper PPE

As noted in the safety section, be certain you have sufficient ventilation so the Ca fumes don't cause you problems. The moisture of your eyes and nasal cavities will be affected. Once you've gotten proficient applying Ca finishes, you may wish to skip some of the hand protection but it is your choice at that point. For starters, I recommend using gloves as hand protection to prevent you becoming stuck to things. As you apply the finish, too much glue or poor application technique can get you bonded to your work, your lathe, your clothes or yourself. With disposable gloves or the equivalent, you can simply peel off the glove and extract yourself. Gloves, especially the thicker nitrile, help protect from the heat a bit.

5. Be prepared for problems

Whether you work barehanded or with gloves, it is wise to have the Ca release chemical at hand. You can buy the Ca release chemical from your local woodturning supplier in small quantities. The active



Regardless of your proficiency with Ca adhesive, you'll do well to keep acetone nearby and open for one-handed use

chemical ingredient to effect a separation of your skin from the lathe is acetone. If you wish to buy acetone in larger and far more economical pricing, nail polish remover is usually 100% or very high concentrations of acetone. You can also buy acetone from your local home supply retailer in larger industrial sizes. To separate things that have been bonded together with Ca adhesive, soak the interface generously with acetone and wait. Slowly try to work the pieces apart repeating the soaking process. Patience is a virtue to leave with all of your skin. Have your acetone source nearby and open. Should you get bonded to your lathe, your can of acetone on the shelf across the shop will not be convenient. Nor will opening it one handed. I use an old Ca bottle that was cleaned well with acetone as my dispenser bottle. I open it and have within easy reach whenever I am working with Ca adhesive. Always label any transfer container with the contents.



Ca finishes go quickly. Get all in readiness before you start. Looking for the debonder once you are stuck isn't funny

6. Don't begin until all is ready

The temptation to hurry and put on a finish is great. I recommend that you don't begin until all is ready and in place. The work to be finished whether one piece or many should be sanded and cleaned to the best of your ability. Your selected Ca adhesive should be fresh and in sufficient quantity to complete your task at hand. Running to the store to buy more or even going to your supply cabinet and opening a new bottle is disruptive. When you get going, you want to work to completion without interruption. Have your PPE at hand including extra gloves, towels and accelerator. Don't forget to have your Ca release agent open and at hand. A small dispenser of acetone will work nicely. Dragging your 900 pound lathe across the shop to get to the acetone ruins your day.

7. The application process

The technique that I used for many years has been altered recently to a more versatile method I learned from Alan Trout. Alan has been sharing a technique he developed for some time. His has the advantage of working on any sized work. Once all is ready having sanded, wiped clean, and ready to apply the finish, here is the process. Take a paper towel and fold it enough times so you have a multiple layered pad of about 50 x 75mm. If you have the half sheet perforated paper towel variety, folding that half sheet into four quarters works well. The multiple layers will provide sufficient thickness to wet the towel with enough accelerator and protect from wicking through to your hand. Using the lathe to hold and rotate the work, set the speed at a low rpm. Somewhere between 250 and 600, depending on the size of the work. Apply a quantity of accelerator to the paper towel so it is well wetted but no puddles or running liquid. While the work is turning, apply the accelerator to cover the entire surface. You will be depositing dry chemical for the most part so you won't see wetting or at least not on the entire surface. Apply until

you have fully covered the surface. Re-wet the towel if you feel it is necessary to complete the entire surface. Take a new towel and fold it until you have an application pad that has a good bit of thickness. The thickness will help avoid wicking adhesive through to your hand as well as minimising the heat transfer. Apply Ca adhesive to a towel corner and then spread that on the turning as it is rotating. The goal is to make complete pass and avoid seams. Be careful of the heat that will be generated in your towel of Ca once the accelerator has been contacted. The goal is to apply a light coat that stays wetted from end to end. Depending on the size of the turning, you may not make it from end to end in one pass. If not, repeat using a clean corner or a new towel to apply Ca to the area not yet covered. I always place used paper towels in a safe place in the middle of my cement floor. There can be continued heat release so don't discard the towel into the trash until you are certain the glue has setup and is cold. I wait until the next day to pick them up and discard them. After the first coat of Ca over the entire surface, repeat



With your alcohol wipe flashing off, spray accelerator on to your folded paper towel. A wet coating but not running or dripping

the Ca application again. Because the coats are extremely thin, it takes many layers to build up any thickness. The adhesive can be applied almost continuously since the thin coats will cure almost immediately. The thinner the better. You can check for the set of the adhesive with a light touch of the back of your finger. Any tackiness means to let it sit for a few moments longer or don't put it on so thick. The process is one application of accelerator followed by three applications of Ca adhesive. Repeat this process as many times as you wish to get the build you want.





With the lathe running slowly, dependent on the work piece size, apply the accelerator to the surface entirely. You may not see wetting



Fold a clean paper towel segment thick enough to protect your fingers from the wicking of the Ca and from the heat generated



Apply the thin Ca adhesive towards one end of the folded paper towel. Be sure to apply enough to make a good wet spot but not sopping wet



With the lathe still running, wipe on the Ca adhesive flowing from one end to the other. You will see the wetting occur



Properly applied, the Ca will cure immediately. If you feel the need to check, use the back of the fingers with a light touch with the lathe off



Repeat the Ca application process the same way ensuring complete coverage until three Ca applications are complete

8. Go slowly & methodically

More Ca finishes are ruined because of hurried application. Like applying lacquer, for each application less is better. Go slowly with thin and repeated applications. The trick to having a spectacular finish is to build many, many thin coats until you reach the desired look and protective thickness. The protective aspects are obtained pretty early on. It is the look that requires all of the added coats. You can also take a break if needed. As you progress through your many coats of Ca finish, you can stop at any completed coat and walk away. There is no harm in letting things set as they are for an hour, day or month. When you get ready to continue, should you take a break, be certain that the surface is clean. Don't let any



Repeat the accelerator application being sure that the application towel has dried prior to applying to the work. Apply three more Ca coats

accumulated dust or debris ruin the finish now. Get all of your materials out and ready as in Step 6 and continue on. How many coats is enough? Depending on your application, 20 to 30 coats isn't unreasonable. Remember, these are light coats that build. There are some spectacular hollow forms I've seen with 40 or more coats.



Continue to build to the desired finish. Use the same sequence of one accelerator application followed by three applications of Ca



The practice piece with only six coats of Ca applied to the flat cylinder surface.

No levelling, sanding or buffing yet. Imagine 20 coats



While you can level any ridges with 400 or 600 grit abrasives, you'll need finer to get to a high gloss or steel wool to matte back

9. Sand out any flaws

The goal in applying a Ca finish is not to create any ridges or imperfections in the building process. It does happen however. You can stop anywhere in the process to sand out any flaws that have become apparent. You'll need to be certain that the Ca has cured prior to sanding. Once it is cured, you can sand beginning at a fine grit. Usually 400 or 600 grit is sufficiently coarse enough to remove ridges. You'll want to remove the flaws, usually radial ridges, by sanding by hand across the ridge. You only want to remove the ridge. Go completely around the turning until all of the ridges have been removed. Be careful not to sand through the applied finish especially at any corners. Work through the grits until any scratches you may have created are gone. You can use MicroMesh or the finer automotive finishing grits from 600 through 2500 as needed. You can continue to apply more Ca after cleaning the surface as needed.

10. Going the extra mile

Ca finishes are not only protective but beautiful. You can control them from a super high gloss to a matte finish. Not many opt for the matte but if you wish, use very fine

abrasive to bring down the sheen to the level you wish. If you want to take the sheen to the highest level, continue working through the MicroMesh grits at the completion of your builds. You'll need to begin in the middle to not remove too much finish. You're only bringing up the shine. If the surface is perfectly leveled, as it should be by now, you can begin with their 3200. That is finer than P2500 or 1200 on the CAMI scale. You be the judge. You can certainly wet sand as well as use automotive finishers type abrasives. Depending on your end goal, you can progress all of the way through 4000 grit if you are using automotive abrasive papers. You can always use some of the plastic polishes available. The cured Ca is indeed a plastic so fine plastic polishes or jeweller rouge on a flannel wheel.

Conclusions

Is all of this necessary? Isn't this a huge time consuming effort when you could use a wipe on Poly or a friction polish? The answers are no and no. You certainly don't need to put on 40 coats and work through to 4000 grit. You can also skip Ca entirely if you wish. The explanation is far more daunting than it really is. The reason for Ca as a finish is the beauty and durability. Depending on the end use of your turning, you can put a rub and buff on it and put it on the upper shelf.



There are polishes with fine abrasives that are available. You can use these in combination with traditional abrasives or stand alone



Upon completion of a Ca finish, it can be brought to a high lustre using the MicroMesh sequence or extremely fine automotive paint abrasives

If no one ever touches it or uses it, that finish will last a long time. If you wish to have a finish that looks like peering into a clear pond or something that is tough enough for a pen, Ca will get it done. How long will it take? Depends on how proficient you are, how big your turning is and how tough or deep do you want the finish. For a point of reference, I can put beautiful, durable Ca finish of 30 coats on a pen in less than five minutes. Not a huge amount of time to create a finish for a turning that has the toughest life there is. Larger items take longer but it still is a fast process. Whether you use Ca as an adhesive or not, I highly recommend you try using Ca as a finish. Properly applied, I don't think you'll find a better looking tough and durable finish for your turnings. •







Andy Coates transforms a purely decorative object into a functional box

he esteemed Editor of this periodical recently paid a visit to my workshop for a pre-arranged meeting and a catch-up. For three hours, we happily did what perhaps comes most naturally to the both of us - we chatted about woodturning. One of the problems with being a self-employed woodturner is you invariably spend the majority of each day alone, standing behind the lathe, and your outlook can become occluded so any opportunity to discuss your craft, demonstrations, have casual meetings, or, as here, a planned discussion, can prove beneficial.

While on the visit, our Editor noticed some pieces I make from large oddments, which have variously been referred to as 'bombs', 'bullets', 'shells' and 'things' which is basically just a large tapering form, decorated, or not, in a variety of ways. Aside from incidental use as a door stop, they serve no purpose whatsoever, but I like them, and they sell so I make them from odd lumps that are unsuitable for anything more complex. Our Editor suggested that, perhaps, they would make an interesting box so here I am making one. Although I have previously covered boxes in these pages, this one is slightly different, more difficult to hollow, and the shape requires some care.

ANDY COATES

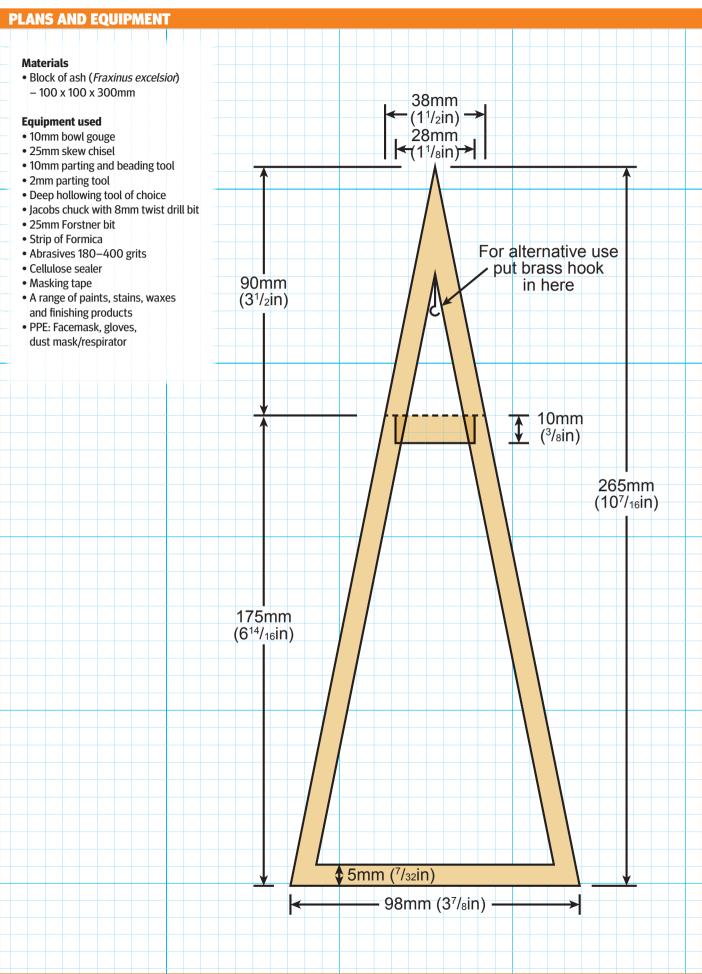


Andy is on the Register of Professional Turners (RPT). He is a professional woodturner and has a workshop and gallery in Suffolk. He mostly makes one-off pieces, but like any jobbing woodturner, is just as

likely to be found doing small batch runs, antique restorations or any number of strange commissions. He also demonstrates and teaches turning.

cobwebcrafts@btinternet.com www.cobwebcrafts.co.uk

















Mount the block between centres. I prefer to use a 'steb' type drive and a revolving ring centre. I find this combination safer and it has the added advantage that the workpiece can be removed and replaced precisely. Rough down and turn a 90mm tenon to suit gripper jaws

The large tenon will provide superior support for the increased difficulty of the hollowing process. Remount the blank in the gripper jaws and bring the tailstock up for support. Next turn a 60mm tenon to suit standard C jaws. Make a clean cut along the blank to ensure it is true. Check for faults that could be potential problems

Proportion is as important with boxes as it is for any other project. If you struggle with proportion then a simple 13–23 rule will help, but a simple homemade Golden Mean Gauge can be a boon. Here I used the gauge, the 13 rule and used the midpoint between the two marks as my parting point. Using the 10mm parting tool cut down to produce a 28mm tenon, 10mm deep. You need to ensure it is parallel and abrade to a finished surface at this point

If using callipers ensure the ends have been filed to rounded tips to prevent catches. Take care abrading down such a narrow channel. Before parting off the top section you can begin some rough shaping using a long ground bowl gouge on the wing. Take care cutting across the recess. Aim for a gentle curve from chuck to tailstock ends and leave a mass of wood at the tailstock end for support later

5 Part off the top section at the headstock side of the 10mm tenon and use a 2mm parting tool. Removing the tailstock support just prior to final parting will enable parting through in one cut. Now transfer the diameter of the tenon (28mm) to the surface on the base piece. Using a small parting and beading tool cut the 28mm diameter, 10mm deep recess to accept the tenon on the top section. At this stage it helps to make the fit as tight as possible. It can be finessed with abrasive later on to provide a slacker fit. Remove some of the centre to allow a test fit

Fit the top section on to the base and bring the tailstock up to support it. Apply gentle pressure with the quill. At this stage, the surfaces of the two halves will not match, so continue rough shaping using the longground bowl gouge until they are continuous. Using a 25mm skew chisel begin to refine the shape. Aim for a gentle curve rather than a straight, flat line. At this stage do not remove the waste at the end of the top section; this is required for support while hollowing the top section of the box

In order to complete the top section you need to ensure you know where the eventual tip will end inside the waste section. Visualise where it will end (slightly rounded rather than pin-sharp is preferred) and make a mark on the waste section. This may be within the tenon section if necessary

Remove the top section and remove the chuck, complete with the base section. Using a second chuck and C jaws mount the top section. Using a twist drill in a Jacobs chuck, drill out the top section. Check the drill bit width to ensure the depth is correct to prevent breaking through the tip

Hollowing a tapered hole of this depth (80–90mm) is best achieved with a long-ground 10mm spindle gouge. Cut on the bottom wing with the flute pointing to 10 o'clock using a sweeping cut backwards from centre outwards. Abrade the interior to a fine finish, seal and apply the final finish

Remount the base section in its chuck. Using a 25mm Forstner bit on an extension bar in the Jacobs chuck, drill out to a depth of 160–170mm. Withdraw the cutter at regular intervals and remove shavings from cutter and interior to prevent the cutting binding and locking in the hole

Hollowing an expanding tapered interior through a 25mm hole is not easy. Use the deep hollowing tool of your choice, preferably a small-headed tool, and take light careful cuts, working deeper to a wall thickness of about 5mm. The base is tricky due to the depth and narrow access, but try to aim for a flat surface. Abrade using a pad on a stick

Remount the top on the base and bring up the tailstock for support. Do not apply too much pressure as the tip may shatter. Begin to remove the waste down to the line of the form. Take light cuts and work carefully. Match the surface curve to the already finished section. Use masking tape to secure the top to the base section prior to completing the tip section. Apply the tape counter to lathe rotation. Using a 25mm skew chisel complete the tip, aiming for a slightly rounded end

13 Next you need to decide which areas you want to colour, and which to leave natural. It helps to have a coloured section helping to disguise the joint. Mask off the areas you want to remain natural. Using 'stretchy' masking tape helps to get around the curves neatly

Allow the aerosol paint to fully cure and then remove the masking tape. Even with careful masking, edges can be irregular. Tidy up with the tip of a skew chisel. Cut a very shallow 'V' cut to define each area. Scorching in the cut with Formica creates definition





















15 Using a point tool or the tip of a freshly honed skew chisel, cut irregular very shallow decorative lines in to the coloured sections. Design is entirely personal, and you may even decide to omit this stage, but, as ever, it is contrasts that we are creating to provide visual interest

Remove the base section and mount a piece of scrap wood. Turn a jam chuck to suit the 28mm recess. Mount the base on to the jam chuck and apply gentle tailstock pressure. Remove the 90mm tenon using light cuts. Abrade the base and off the lathe remove the remaining central stub with a craft knife and complete abrading

ALTERNATIVE DECORATIVE TECHNIQUES

Simple 'V' cuts can provide a pleasing visual effect, but that doesn't mean there are not a multitude of further options for decorative effects. Here I have briefly detailed six potential alternative techniques that do not require exotic tools or finishes. Explore, experiment and play to find one that suits your tastes. I hope these ideas foment a spirit of exploration and experimentation and provide some inspiration for your decorative work.



Simple carving tools, electrical powered reciprocating carvers or traditional hand carving tools can provide a vast range of decorative techniques. You could even use a sharp pen knife in the style of chip carving. Here I have used the simple device of carving through a spray painted surface to reveal the natural wood beneath. Irregular patterns seem to work well, but you may prefer something more structured and accurate. Any 'fluffing' of the edges can usually be dealt with by using a fine abrasive or nylon pad.



Using the same acrylic spray paint another section was masked, painted, and allowed to fully cure. Using a rotary burr in a Dremel or similar device irregular holes were cut through the painted surface. By using a 'ball type' cutter, and cutting to varying depths, holes of differing diameters can be achieved with a single burr. Once again I prefer an irregular pattern, but there is no reason you shouldn't plan and mark out a regular pattern. When creating panels of this nature it helps to confine the area to be worked (post- or pre-cutting) with a 'V' cut, preferably scorched in to provide visual definition.



This option is akin to the last, in as much as it uses a burr. Here I left the section natural and used a 'cone' type burr. It's one I use solely for this purpose because it's essentially ruined the first time you do this! The cone allows for holes of differing depths, which results in holes of varying diameter. In this instance, however, I purposely push the burr in to the wood forcefully, which results in the burr scorching the wood due to the resulting friction. Clean the burr with a brass brush after use.



On this section I used white gouache and paint. The gouache is applied thickly, trying to create ridges and furrows, and force dried with a heat gun. Acrylic spray paint is applied and allowed to cure; the latent heat in the gouache speeds this stage up. Once cured simply abrade through the high spots to reveal the white gouache underneath. You could even use sgraffito designs, which I have discussed in a previous article (*Woodturning* 286). The finished surface is best sealed with an artists' sealer to protect the finish.



Both sections were wire brushed using a rotary brush in a power drill, working with the grain to remove summer growth. The left-hand version has been filled with gold gilding paste and cured prior to buffing with a soft lint-free cloth. The right-hand version has been over-painted with Vitrail glass paint. This medium provides a translucent coloured finish. As a final option I lightly abraded over the top of both sections and used a permanent marker to top the texture with black ink.

MEET THE FUTURE IN WOODTURNING



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Troika-style pot

Dave Springett makes this textured vessel



DAVID SPRINGETT



David Springett has been a professional woodturner for over 30 years. He is the author of several books; Woodturning Wizardry, Woodturning Full Circle, Woodturning Trickery and

with Nick Agar, *Woodturning Evolution*. All available from GMC Publications.

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have always felt honesty of materials is best. If it's made of wood it should look like wood. Having said that I mainly choose woods for their mechanical properties, such as castello box, rather than their decorative grain pattern. I have spray painted the occasional piece so the shape and form reads without grain pattern interfering, but that's been about it. Now I have been drawn into wanting to turn a wood piece and to make it look like fired pottery.

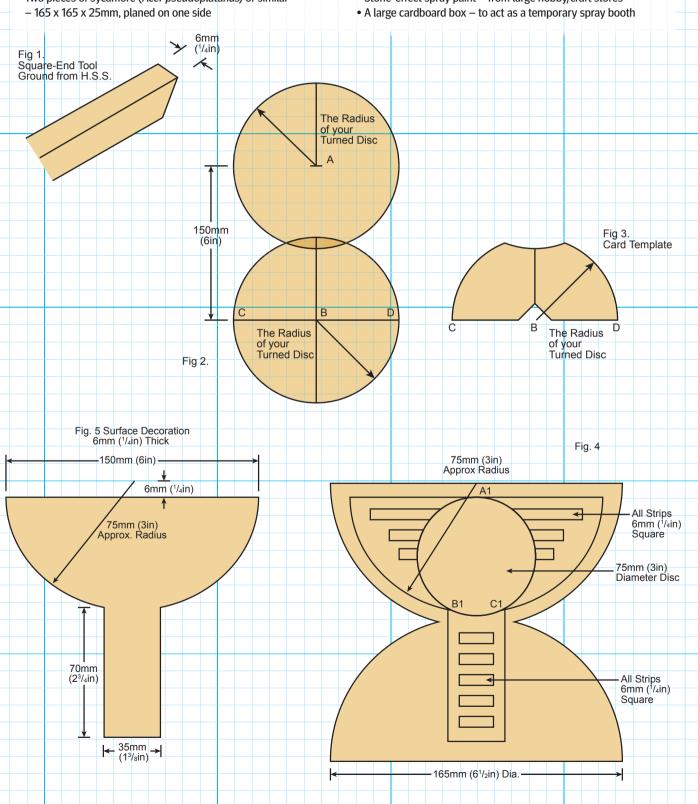
I have always liked the adventurous and varied designs of Troika pottery (from St Ives, Cornwall), but I have never been able to find a piece that I can afford to buy. As I am a woodturner and not a potter, I thought I would attempt to make a similar piece with the skills I have.

Here's how I went about the task of creating my own faux Troika. I hope that you will find some of the techniques of value and not be too hard on me.

INFORMATION AND PLANS

EQUIPMENT USED

- 9mm gouge
- 6mm square-end tool ground from HSS stock
- Shelf toolrest optional
- Several clamps
- Newspaper
- PVA glue
- Two pieces of sycamore (Acer pseudoplatanus) or similar
- Two pieces of planed wood one at 160 x 160 x 6mm, one at 75 x 75 x 6mm – you can use MDF as a substitute
- 25mm thick softwood cut to 170mm diameter
- Three small tubes of acrylic paint Prussian blue, olive green and white or colours of your choice
- Automotive spray paint a filler/primer and matte white
- Stone-effect spray paint from large hobby/craft stores



















Starting work Fit the prepared softwood disc centrally and

Fit the prepared softwood disc centrally and securely to a metal faceplate. Turn the face flat and turn the edges square to that face. Cut a 170mm circle of newspaper. Take each of the sycamore pieces and, on the unplaned side, mark a 165mm diameter circle. Make sure the centre point is clearly marked. Take the two pieces to the bandsaw and cut out those two marked circles. Each sycamore piece will be turned in the same way. Apply PVA to the face of the softwood disc and the planed surface of the sycamore disc. Press the newspaper against the glued surface of the softwood then push the glued sycamore face onto the newspaper creating a wood/ newspaper/wood sandwich.

Bring the revolving centre forward pressing it into the marked centre of the sycamore. This will centre the disc and also add pressure while the glue dries overnight

Then, when the glue has dried you can turn the edge clean

Next, turn the face flat and true, making sure that the turned edge is at 90° to the face. The diameter should be about 165mm and thickness at about 25mm

Amark the centre point on the turned face and, with the grain, draw a pencil line across the diameter through the centre point. Using a try square, continue that centreline down the edge on both sides

5 Along that centreline mark a position 6mm in, from the edge towards the centre

Take the square-end tool, which has been ground from HSS stock, and mark (using white typist correction fluid) a point 19mm from the cutting edge. This dimension is determined by measuring the exact thickness of the sycamore disc and taking 6mm away. This will ensure that the thickness at the base of the turned disc will be 6mm. Set the square-end tool on a shelf toolrest so that it cuts at centre height. Turn, on the centre side of the marked line, down to the marked depth. Always widen the cut so that the tool is not pulled into the work

Replace the shelf toolrest with a conventional toolrest and turn out the interior to the depth marked out by the square-end tool

Make sure that the base of the turned interior is perfectly flat. Sand to a fine finish, but make sure that the top edges of the rim remain perfectly square

The newspaper/glue joint holding the blank to the softwood disc may now be split. Carefully place an old dinner knife on the joint line and tap it with a hammer. This will open the joint and provide a starting point for wood wedges

To prevent damaging the sycamore wood, use wood wedges to fully open the joint line

The turned sycamore piece may be pulled away from the softwood faceplate. Set this aside and repeat the process for the second disc

12 It is essential that both discs are turned to the same thickness. This may be judged by holding the first piece against the second which is still held on the softwood faceplate

13 Once both discs have been fully turned, and the newspaper/glue residue has been cleaned off, the internal hollow can be sprayed white using automotive spray paint

14 Before the two turned parts are each cut in half, mark a pencil line at 90° to the pencil centreline. This is simply done using a pencil compass and rule. This second line will help when, later, joining the two parts

15 Now take each piece and bandsaw through the original centreline (with the grain) to produce identical halves. Do not mix those halves

16 The matching halves may now be glued and clamped firmly together

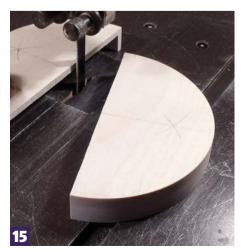
Joining the halves

To determine the shape of the joint line between the two halves make a card template. Draw a vertical line down the centre of a piece of card. On that line mark two positions, 'A' and 'B', which are 150mm apart. Measure the diameter of each half. It should be around 165mm. Yours may be slightly different. Set a pencil compass to half the diameter of one of the half vessels. Place the compass point on 'A' and mark a circle. Set a pencil compass to half the diameter of the other half vessel. Place the compass point on 'B' and mark a circle. Next, mark a horizontal line through 'B'. Where that line intersects the circle will be points 'C' and 'D' (see Fig. 2, page 40). Cut the card template along line 'CD' around the curve and along the intersection of the two circles. At 'B' cut a Vee notch.

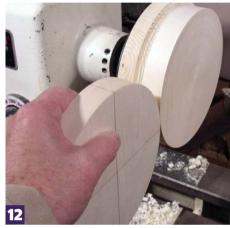






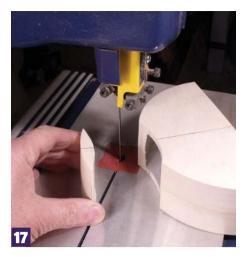


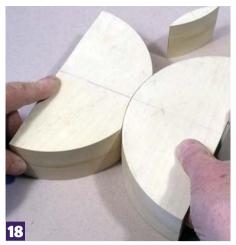








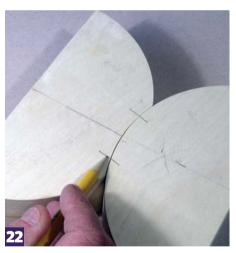
















17 Position the card template on the half vessel. The notch in the template at the base and the curved cutaway at the top make it easy to line up the centreline on the half vessel with that on the template. When the lines coincide, the curved cutaway can be marked at the top. On a bandsaw precisely cut the marked curved joint line

Be sure to try the two halves for fit...

19... and if the pieces do not fit correctly, simply adjust until the fit is good

20 Make sure the ends of both halves are sanded flat

21 Temporarily fit the halves lining up the marked centrelines. It is wise to check that the top edge will be level. Make adjustments if necessary

22To strengthen the joint between the two halves, use small toothpicks as dowels. Having laid the temporarily joined halves flat on a work bench, the toothpick dowel positions can be marked

23Choose a drill marginally larger than the toothpick diameter to leave a little 'play' and drill into the marked positions

Apply glue to the toothpick dowels and along the joint lines then clamp the two halves together. Clean off any squeezed-out glue

Surface decoration While the glue is drying, the parts for the

While the glue is drying, the parts for the surface decoration can be marked and cut out. The precise shape and size will depend upon your joined halves but the dimensions shown in Fig. 4 (see page 40) will act as a guide.

25 From 6mm thick planed wood (or MDF) cut the shape shown in Fig. 5 (see page 40). Some small adjustments to size may be necessary. Clean up the edges thoroughly



26 From a 75mm square piece of 6mm-thick planed wood, cut as large a circle as possible. Press this disc centrally onto a small wood faceplate and hold using pressure from the tailstock. Turn the edge. The diameter of this disc, for best effect, should just touch points A1, B1 and C1 shown on Fig. 4

27 When these two parts have been cut they may be glued and clamped in place on the vessel's surface. Make sure that they are carefully positioned so that the gap at the top and around the curved sides is equal

28 When the glue has dried, cut 6mm-wide strips from the offcuts. These can be trimmed to length to create the horizontal decorative strips either side of the wood disc and the five strips set below. Carefully glue these in place. Leave to dry

Spray painting

As I do not spray paint pieces very often, instead of the expense of airbrush equipment and spray booth, I have used automotive spray paint. As a temporary spray booth I used a large cardboard box. Make sure that you are in a well ventilated area or, if the weather is good, work outside when spray painting, Follow the instructions on the can. A primer/filler, usually a buff colour, is used for the first coat. When that had dried I applied a matte white base coat. The textured finish is created using a stone-effect spray paint available from large hobby/craft stores. If you are not happy with the effect, when using the spray for the first time, it can quickly be wiped off and reapplied. Once the stone-effect coat has dried and hardened it is difficult to remove.

Acrylic paint

Relax when applying the acrylic paint. If you do not like what you have done, then once dry, spray over with matte white and begin again.

2 The background colour, olive green, is applied first to the lower level and sides and allowed to dry. The textured surface is then lightly sanded exposing small white dots in the finished stone effect. Apply a thinned olive green wash and this will throw up pale highlights improving the effect

The next level can now be painted with a Prussian blue hue. Take care around the horizontal decorative strips

3 1 Mix the Prussian blue with white to produce a contrasting pale blue. Paint the raised disc and horizontal decorative strips with this mix. Leave to dry

32 You may like to try other forms of vessel using the same technique. Shown here is an experimental piece which I hand painted.















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Community letters

Here are just a few letters the Editor has received from you, the readers

Spiders in the workshop

Conkers?

Hi Mark.

Well, there is an answer to John's (WT 297) spider worries. I myself have a few large arachnids in my workshop but I find it can be a source of contemplation when watching them trying to catch a fly and really it is very clever how they deal with sometimes more aggressive intended victims (wasps), etc. that can fight back and the spiders become the victims. My wife has conkers all over the house usually in the corners by the doorways but to no avail they either use them as hurdles or are just not bothered about old witches tales, etc.

Bill Munro

Unwelcome guest

Morning Mark,

The letter about spiders made me smile. I was doing some turning a few weeks ago and went to pick up the tool and this little chap (chapess?) made me jump! I put it safely outside. Hope all well with you.

Dave Atkinson



Turning pens





Top: Clocks mounted in yew Bottom: Bog oak pens

Hello Mark,

I have made about 20 pens from different wood, eight of them from Irish bog oak and Croatian bog oak, which is now impossible to get and if you can get it you will pay for it. The other ones are olive wood, which has a lovely grain and then various other wood. Find also attached two of a number of clocks I have made from yew.

Regards, Tom Leonard

Competition prize

Hi Mark,

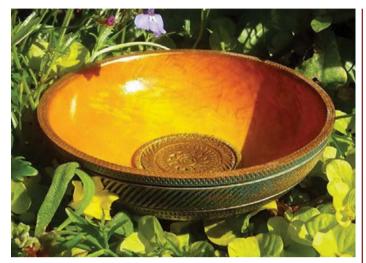
I have just received a Robust Live Centre kit through the post after being selected in your competition, and have been using it to turn a piece for the Wizardry in Wood competition. It is a great bit of kit and I am very pleased with it.

I have been reading Woodturning magazine for a number of years, and much to my wife's dismay have every issue going back to No.39, with a few before that as well. I am still trying to get some of the copies before that time but it is not easy. Thanks for a great magazine and keep up the good work.

Regards, John Montgomery

FROM THE FORUM

Here we share with you the pieces that readers have posted on our Woodturning forum. If you are interested in the possibility of your piece appearing here, or would simply like feedback and advice on your work, visit **www.woodworkersinstitute.com** and click on the forum button.



'Spalted Sycamore bowl' by Mark Sutton

Mark Sutton posted his spalted sycamore bowl on the Woodworkers Institute forum, commenting: "I just thought I would have a quick play with the airbrush in the workshop yesterday, and finished this. Made from spalted sycamore and coloured with Molotow Aqua inks." Picked as our Members' Choice, by Adam Cornish, here's what he had to say about the piece: "My choice is Mark Sutton's Spalted sycamore – a beautifully balanced piece where clever use of colour definitely enhances the design. Or as we say in Devon – it's a handsome bowl!"



'Ash Vase' by Dunkhooper

Dunkhooper is very pleased with how his ash vase came out, saying: "the beautiful piece of wood helps." Picked by Mark Sutton, here's what he had to say about the piece: "There were many choices this week to choose from but I could only choose one and that goes to Dunk for his ash vase. This looks like a deceptively simple form which has been accentuated by the flowing curves, beautiful grain and finish. Well done Dunk and richly deserved."



'Double curved' by Crataegus

"This is one I turned wet and tried a little simple carving on," Crataegus explains of his bowl. "The shape is a combination of convex and concave curves, prompted by some example shapes in Richard Raffan's book *Turned Bowl Design*. Having had a flick through just now to check my facts, I see that's probably where I got the idea for the carving from as well. Elm with a small bit of burr, 197mm diameter by 116mm high." Fellow forum member Stiggy commented: "Nice work Tony! Very clean finish, good shape."



'Platter-Cosmic Clouds' by Paul Finlay

This beautiful platter was made by Paul Finlay, inspired by a video on YouTube by Gary Lowe. The piece is made from sycamore (*Acer pseudoplatanus*) and finished using iridescent paints, to make that galaxy-esque effect. Crataegus commented: "Absolutely great, Paul! And the colours are easily strong enough to overcome the colour and grain of the wood." While Ian Thorn said: "That is a great effect Paul clearly defined between the two white lines and the balance between bowl and rim looks about right."



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Eleanor Lakelin, Studio Portrait 'Process', 2015

Eleanor Lakelin in profile

Her work has a glorious, other-worldly quality, but this acclaimed Welsh turner couldn't be more down to earth. **Catherine Kielthy** explores her ethereal creations

eminiscent of a ravaged, remote landscape with echoes of erosion and the unyielding forces of nature, Eleanor Lakelin's work could present an inhospitable terrain. Yet it cries out to be touched, demands to be explored and actively invites the viewer to look closely at what's on the inside. It is also stunning. Which makes it all the more remarkable that this talented Welshwoman only learned to turn in 2008.

Her interest in the natural world and timbers was always evident, however. As a child she collected bleached-out bones, wizened roots, weatherbeaten driftwood, shells and fossils from the area surrounding the mixed farm where she lived with her family in a village community – but her passion was not, well, let's be kind, 'encouraged' at school. Having been refused

the opportunity to study woodwork, Eleanor was put into needlecraft lessons, which she promptly skipped to watch the pottery class instead.

After leaving school, she studied languages at the University of East Anglia and trained as a teacher. Her work took her to various countries across Europe and Africa. When she was offered redundancy in the 1990s, however, she retrained as a furniture maker and between 1995 and 1998 studied cabinetmaking at City and Islington College and the London College of Furniture. It was towards the end of this period that she started designing bowls while also establishing a business making sets and furniture for shows in London's West End and public and private commissions. "I initially started my bowls with offcuts from large furniture projects," she explains. "These were basically square



Eleanor Lakelin, Studio Portrait, 2015

with a rebate on the bottom and I would pay someone to turn a shallow bowl shape in the top surface."

Time to turn

It wasn't until 2008, when she was living in south-east London, that Eleanor finally found



LEFT: Eroding Form III (detail), Time & Texture, cedar, 370 x 370 x 170mm, pierced lidded square bowl with tall finial

time to learn how to turn. "I went on a five-day bowlturning course with Dave Regester at West Dean College." There was no going back. By early 2009 she had bought a second-hand Graduate lathe and built a shed at the bottom of her garden. "Whenever I had time, I would practise - dipping into Dave's Woodturning: An Individual Approach and The Woodturners Workbook by Ray Key to try to remember what to do. I spent a very important couple of days with Tom Pockley, who was a great teacher." Her main source of wood, apart from relatively thin furniture offcuts, was the local tree surgeon, so she added Turning Green Wood by Michael O'Donnell to her collection. "I also began another lengthy series of mistakes!"

Making bowls remained a hobby, however, until 2011 when Eleanor was granted the Cockpit Arts/Worshipful Company of Turners Award, which included free studio space for a year. "It was ideal as the demands of a home, two children and a hefty monthly rent on an industrial unit for furnituremaking had become challenging," she recalls. It also meant she could start turning on a more regular basis. At the start of the Cockpit year, she visited the AWGB seminar in Loughborough. It was a revelation. "I had never seen anyone turn apart from Dave Regester and had no idea cameras and screens were used. It made me wish I had been able to join a woodturning club. It would have undoubtedly speeded up my progress."

Not that it's been slow. Anyone who's been following her progress will know her work was exhibited with Sarah Myerscough at Collect and Sculptural 2015, which was co-curated by William Benington Gallery and Julian Wild; featured heavily at London Craft Week and the RHS Chelsea Flower Show in May; and was part of a group of six British artists at the prestigious Nature Lab at Design Miami/Basel in June. She also exhibits work with Contemporary Applied Arts, Taste Contemporary Craft in Geneva and The New Craftsmen.





In the Pink, 2016, still life in Wellingtonia



Shifting Sands, 2016, Wellingtonia



Voided Vessel IV, Contours of Nature, ebonised horse chestnut burr, 320 x 320 x 210mm



Forms, Contours of Nature, horse chestnut burr, bleached and carved, 250 x250 x 210mm, 2014



Hollow Form, Time & Texture, carved and pierced sycamore, 300 x 300 x 120mm, 2013

Budding success

Eleanor spent her first few years trying to perfect the full, roundbodied shape to which she's drawn but has since moved into more sculptural and hollow form vessels, which can take anything from days to weeks depending on the project. Like many things in life, however, it happened almost by accident. "I had learnt to sandblast and bleach wood at the London College of Furniture Restoration Department and had carved several waney-edged ash tables and bleached them to look like bone. A chance meeting with a piece of horse chestnut burr at the AWGB seminar in 2011 reminded me of these pieces and set me off on a more sculptural path." She now endlessly comes back to this wood which fits with many of her inspirations.

As well as the natural objects from her childhood, these influences include gourds, seeds, pods and baskets collected while she worked in Africa; blown-up images of pollen and seeds in the books by Rob Kesseler; Swedish botanist Bertel Bager's photographs of flowers and pods; and aerial photography of landscape such as William Garnett's work in the 1950s. Her influences in life have been equally as many and varied and include sculptors Brancusi, Hans Arp and David Nash; ceramicists Hans Coper and Magdalene Odundo; and the work of Carl Hahn, Marc Ricourt and Thierry Martenon. "When I saw Dale Nish's 'Wormy Ash' piece in a book, I realised that anything was possible," she adds, "and Michael Peterson has yet to make something I don't like."

Layers of texture

For her part, she says round-bottomed gourd forms or pebble-like vessel forms have become her shapes of choice. "Whatever the piece, I think I'm aiming for something that looks simple but has a certain stillness about it," she says, "and where there is a contrast within the piece either through colour or texture or shape." She is particularly interested in the way natural elements and processes layer and colour wood and how the passage of time is etched into the fibres of the material. "I peel back bark to reveal the organic chaos that can exist in the material itself or build up layers of texture through carving and sandblasting. I use the vessel form and surface pattern to explore the layers and fissures between creation and decay, the erosion of nature and our relationship to the earth."

As you might expect this involves a lot of imagination and ingenuity and Eleanor is increasingly using sandblasting techniques and experimenting with textures and layering. First, she cuts out the shape on a bandsaw before turning the piece on her lathe to the rough form. The protrusions are created with a variety of handtools including



metal burrs. She then sandblasts, scorches, bleaches or even microwaves the pieces.

"In the past couple of years I've also started carving a lot off the lathe," she reveals. "Nick Agar showed me how to carve with a burr, which I'm told was first done by Michael Hosaluk, and I've been experimenting with various textures using burrs, drills and then scorching afterwards. I previously used sycamore and fruitwoods for these kinds of pieces but since I started sandblasting ash is becoming a favourite wood."

Much of Eleanor's experimentation happens at Cockpit Arts in south-east London, which is

also home to other woodworkers as well as ceramicists, leather workers and weavers. "It's wonderful after years spent working alone," reveals Eleanor. "The environment is really helpful when first starting up and trying to establish the right market for your work." She has managed to keep the studio that was part of her Cockpit Arts award year. It houses her compressor and Guyson sandblast cabinet, a secondhand Vicmarc VL300 lathe and her more recent purchase of a Centauro Bandsaw. Lathe and bandsaw aside, her 'pretty essential' items are hotmelt glue and clear PVC shrink wrap (see Top Tips, far right)!

The shed at her home has her Graduate bowlturner, bandsaw and Mastercarver. "I spend a lot of time in there as I can be around when my teenagers get back from school and college. But both places are full of bones, gourds, pods, shavings and mess. I dream of having everything in one place but that will have to wait for now." She would also like more hours to spend experimenting in her 'shop, but as many a turner will know this is no easy task. Eleanor works some part of every day, but finds there are always too many things to do that are not actually making. As well as her website and social media, which 'being



WHAT MAKES ELEANOR'S DAY...

- 1. The smell of green cedar
- 2. Prising bark off a burr
- 3. Sandblasting ash
- 4. Talking to people who share a love for wood
- 5. The moments when what you planned is what you got

... AND WHAT GETS HER GOAT

- 1. Sanding
- 2. Shavings (in EVERY item of clothing)
- 3. Sweeping (when I should be heading home)
- 4. Sweltering (in the workshop the windows don't all open)
- 5. Splitting (in wood before I've had time to turn it)

TOP TIPS...

- 1. "Always cut wood as it wants to be cut" - Tom Pockley passed on these words of wisdom from Frank Paine and they have always stuck with me
- 2. I shrink-wrap wood in clear PVC to stop it cracking when I hollow forms
- 3. Write ideas on the wall before they disappear from your mind. Only in the workshop, not at home!

digitally challenged' she gets some help with, there is exhibition prep, shows, photographs - she insists having good photography and strong shots of her work has made a real difference to her business - invoices, emails, paperwork, packing up work and, of course, demands of family life. "Amidst the chaos there are moments of self-doubt and moments of joy," she reveals. "I work very hard but I'm still amazed when everything actually comes together in the end."

She hopes a gradual move towards working more to creative commissions – previous works include a series of vessels for the

National Trust to mark the 200th anniversary of the Battle of Waterloo - exhibiting through a select number of galleries and spending fewer hours selling work directly through shows will give her the time to make as well as to experiement with techniques and develop ambitious, larger-scale pieces of work. "The dream is for more hours and space for making work, attending lectures and seminars, joining a woodturning club as well as quality time with my family."

Luckily, the competing demands on her time haven't dented her passion for her craft. "I love those turning moments when

everything is sharp, the wood greenish and the shavings fly. You prise the bark off a piece of rotting horse chestnut and in spite of the spalting, corky texture and grey mould, a world of wild texture is revealed and there is a glimmer of excitement about what it could look like." One thing seems certain: in Eleanor's expert hands, it will be out of this world.

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The making of and turning on a spring pole lathe

Getting his inspiration from 18th-century colonialism, **Ernie Conover** creates a spring pole lathe

ERNIE CONOVER



Ernie Conover is best known for teaching and writing about woodturning, as well as designing and marketing the Conover lathe.

erconover@conoverworkshops.com

n 2007 I was a presenter at Colonial Williamsburg for their 18th-Century Furniture Conference. I demonstrated making barley-twist candlesticks in the traditional style, using the principle Maudslay used to generate the first lead screw for an engineering lathe in 1800. I had the pleasure of doing so on

 $Colonial\ Williams burg's\ great\ wheel\ lathe.$

Influenced by fellow presenter Peter Follansbee's skill at a pole lathe, I became intrigued with human powered lathes. Roy Underhill was kind enough to share some drawings of a German spring pole lathe that he had unearthed. The design was elegant because the pole was mounted under the bed of the lathe and worked through a walking beam to turn the spindle. It was a very clever job of bringing the pole lathe out of the forest and into the 'shop.

Once home I set about making a pole lathe from the drawings. Roy's plans were for a lathe of Lilliputian height, for statures were much smaller in the 17th century. I enlarge where necessary to my own size. A friend had some white oak (*Quercus alba*) that his grandfather cut on their farm in 1919 that

had sat in their barn since. It was not of cabinet quality but premier building timber, perfect for a lathe. I had a very large chunk of cherry (*Prunus avium*) that I made the movable poppit (tailstock) from.

Method

It took the best part of five days to make the lathe. My 16-year-old apprentice, Evan Siembida, made one too. Having the enthusiasm of youth and being very mechanically gifted, he not only made a good lathe, he learned to use it with confidence. Everything was straightforward joinery and we made no attempt to exclude power tools. All parts were brought to basic size with a tablesaw and a handheld jigsaw. We sunk all of the mortises with a floor model hollow chisel mortising machine and raised the

tenons with a tenoning jig in the tablesaw. All surfaces were brought to a hand planed smoothness and the polish was white shellac.

The cord for a spring pole lathe deserves some mention. Synthetics, such as nylon are terrible because they stretch. In the end we found it easier to make our own cord from linen, which I purloined from my wife's weaving supplies. My spinning wheel was a cordless electric drill with a bent nail in the chuck. Evan and I looped about 15 yards of linen threads around a nail driven into the wall of my 'shop and bent into a cup hook like the one in the drill. We joined the ends with an overhand knot and slipped it over the bent nail in the drill. We then ran the drill in clockwise direction until the cord shortened by about one third, and then doubled this over the nail in the wall and joined the ends again. We then ran the drill anti-clockwise and were rewarded with a non-stretch, long wearing cord of exactly the diameter we desired.

My reasons for building a spring pole lathe were twofold; the first being it would be fun and secondly, for many years I did a five-day stint at the Geauga County Fair practising woodworking as it would have been done at the time of the American Revolution. Our county fair is the oldest continually operating agricultural fair in the State of Ohio and takes place six miles from my 'shop. I always enjoyed it because it stunned audiences in regards to the efficiency of hand tools, and got many thinking about tools in their garages or barns that belonged to an ancestor. Many would return a day later with a handful of antique tools, which resulted in the explanations of their uses and encouraged them to cherish and preserve these tools.



A spring pole lathe requires non-stretch cord. We made our own from linen, which yielded long-wearing, stout cord. The treadle is near the bottom of its stroke here and is about 1.1m off the ground at the top. While many think the rope ends under the lathe it actually ends far in front of it. It is pulled forward and down by the treadle



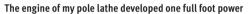
Ernie splitting billets with a froe



Riven billets are further shaped with a drawknife before mounting in the spring pole lathe









Pole lathe demonstrations delight young and old alike

At the fair we made stools showing off turning through the making of the legs. We rived the spindles on site from green maple (*Acer* spp.) logs. Starting with wedges we quartered the log then used a froe to further reduce the masses by halves until we had billets of appropriate size. With riving it is important to split equal masses to achieve a straight split. With unequal masses the split will walk to the lighter piece. We further refined our riven billets with drawknives before mounting in the lathe.

Turning with a spring pole lathe requires the ability similar to patting your head and rubbing your belly at the same time. You must stand on the cross bar with one foot and push the treadle down with the other foot. Stepping smartly on the treadle yields about three to five turns of the spindle. The goal is to end up so balanced; you can manipulate the tools with your hands. A factoid is that you must lift the tool on the reverse stroke. Planning cuts with the spindle roughing out gouge or the skew require no change in pressure at all; however, cutting coves and beads with a spindle gouge requires a lessening of pressure during the backstroke. When the treadling leg gets tired you change feet. Tools with long bevels and razor-sharp, honed edges are required and Morris dancing may have evolved as training for 18th-century turners.

Throughout 2007, we held turning classes

where we set up our lathes in the apple orchard outside my 'shop and let the students give them a try. Since most were struggling with powered lathes, results of the spring pole lathe were abysmal. But even bumbling a while gave them a better appreciation for technique and an immense appreciation for sharp, correctly shaped tools. In fact I think that is why everyone should spend a few hours using a human powered lathe. For chasing threads, the spring pole lathe

is better than a powered lathe as you don't have to lift the chaser and pick up the thread again.

I published the plans for the spring pole lathe in my 2010 book *The Frugal Woodturner*. I have gotten numerous notes from individuals and clubs who have built pole lathes and they all report that demonstrations for groups and shows draw bumper crowds. Give it a try; you can forgo buying an exercise machine!



Turning on a spring pole lathe requires sharp tools to get results



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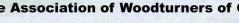
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Metal leaf platter

Leaves and woodturning combine to create

Sue Harker's metal leaf platter



SUE HARKER



Sue is a member of the RPT and AWGB, teaches woodturning, demonstrates all over the country, writes for *Woodturning* magazine and has produced three DVDs.

sue@sueharker.com www.sueharker.com

ou can open up a wide range of possibilities in decorating your turnings with the use of staining, carving, texturing, colouring and burning to name a few. For this project I have combined pyrography burning and metal leaf. There are various varieties of metal leaf available to purchase. The one I have chosen is a metal leaf that has been chemically treated to produce a variegated green pattern, which works well with the leaf design I wanted to use. The image, with two different size sycamore (*Acer pseudoplatanus*) leaves, is printed several times to produce the required

number of leaves. The leaf outlines are then cut out and arranged into a collage, and stuck together with double-sided tape. The completed collage is then placed on some graphite transfer paper so it can be traced onto the surface of the platter. I made several variations of metal leaf and pyrography burned platters, some with a scattering of leaf outlines decorated with a selection of coloured metal leaf, and others with a single leaf in the centre of the platter with a textured surround. For this project I have chosen to burn a collage of leaves and only apply metal leaf to the centre burned leaf.

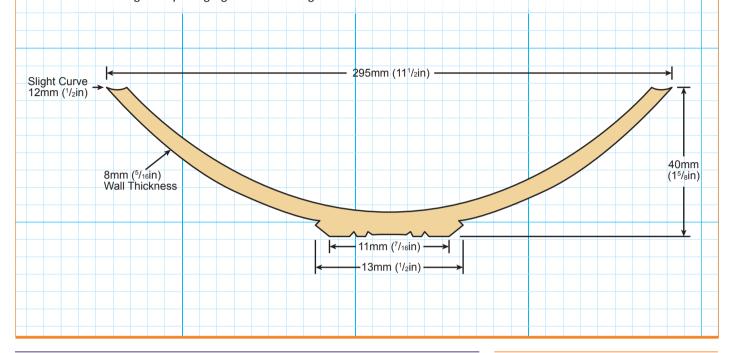
PLANS AND EQUIPMENT

Materials

• Sycamore bowl blank 305 x 50mm

Equipment used

- 3mm parting tool
- 12mm fingernail spindle gouge
- 10mm standard grind bowl gouge
- Flat-sided skew chisel
- Three point tool
- Pyrography machine
- Carbon extractor
- Variagated metal leaf
- 120, 180, 240, 320, 400 grit abrasives
- PPE respirator facemask
- Dust extraction
- Microclean



CONSTRUCTING THE COLLAGE



If, like me, you are not artistic enough to draw a collage freehand, then simply type into your internet search engine 'copyright free leaf images'. Print the shapes you want to use and cut them out. Using double-sided sticky tape, stick the leaves into the desired collage and when done attach to some carbon transfer paper. The collage is then ready to apply to your turned platter. Tape the collage in place using some low tack tape and use a pencil to trace the outlines.

APPLYING THE METAL LEAF

Gold/metal leaf comes in a variety of colours: solid colours or chemically treated sheets which produce a variegated pattern. Proprietary size (adhesive) and lacquer are also available from your gold/metal leaf supplier. Before applying the size, always seal the surface of the wood and allow it to dry completely. The size will need to be evenly applied, making sure not to apply it to the burned lines. Then leave this to dry for approximately 10 minutes by which time it should be tacky. When applying gold/metal leaf to large areas lift the leaf using the backing sheet and apply to the tacky size. Leave the backing sheet in place to protect the leaf while smoothing down. The applied leaf will need to dry sufficiently before being handled. I usually leave it for a minimum of overnight to dry. Remove excess leaf by gently rubbing with a very soft brush. Using a cocktail stick, scrape away any leaf that has adhered to the burned lines. Some sections may require re-burning to tidy. When you are happy with the results, coat with shellac lacquer to avoid oxidisation of the metal leaf.









Method

Mount a piece of sycamore 305 x 50mm on the lathe. Turn into the round and true up the front face

Mark the required size of a chucking spigot, in this instance I will be using 100mm jaws and cut the spigot depth. Using a 3mm parting tool cut a hole at centre point, this will help to centralise the bowl when reverse mounting to remove the spigot when the platter is finished

3 Using a standard grind bowl gauge shape the underneath into a shallow curve

With the shape formed, refine the foot.
Use a 10mm fingernail profile spindle gauge to cut a groove around the foot

5 With a skew chisel laid on its side cut a dovetail the correct profile to fit your jaws (if your jaws are dovetailed). Sand the underside of the bowl using a rotary sander, starting with 120 grit and working through 180, 240, 320 and finish with 400 grit

Remount the platter on the lathe using the chucking spigot cut earlier, and true up the front face









Now, start shaping the inside profile of the platter and cut a shallow cove around the edge

With the edge shaped, remove the remainder of the timber to an even wall thickness. Using the same grits as for the outside, sand to a finish before removing from the lathe

Next, reverse-mount the platter; here I am using a vacuum chuck. The taildrive is located in the centre hole cut earlier, ensuring the platter is centralised on the vacuum cup. Once the vacuum pump has been turned on, the taildrive can be removed allowing full access to the foot

Remove the spigot and cut a groove or two for added detail and proof that you have 'been there' with turning tools.

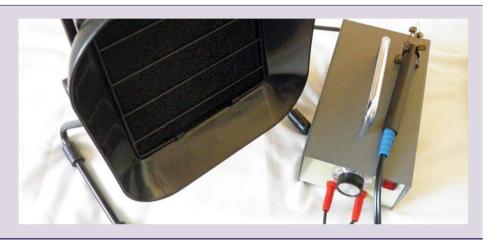
Sand using the same grits as before





BURNING THE OUTLINES

When the collage design has been traced onto the platter surface, a pyrography machine with a fine tip attached to the pen can be used to burn the leaf shapes. It is advisable to use a carbon filter extractor positioned as close to your work as possible to protect your lungs from the harmful fumes created.



11 Arrange your chosen leaves into a collage and stick some carbon transfer paper to the underside. Position the collage centrally, tape in place with low tack tape and using a pencil trace the outlines onto the platter

12 Using a pyrography pen burn the outlines of the leaf collage. It is advisable to use a carbon filter extractor placed near the burning, which draws the smoke away from you

13 Sand the surface with 1000 grit abrasive to remove any over-burn.

Use a tack cloth to remove the dust created

Use a small brush to seal the surface of the centre leaf with an acrylic sealer





TOP TIP

• Other methods of reverse mounting can be used. Mount the platter into Jumbo Jaws fitted to your chuck. Centralise using the taildrive and once the jaws are firmly holding the platter the taildrive can be removed. Another method is to turn a domed piece of wood and lay some nonslip router matting between the dome and platter. The taildrive will need to be left in place and locked tightly. Remove as much of the underneath as possible, leaving a sizeable pip where the taildrive is



















15 When the sealer is completely dry, evenly apply metal leaf size. Here I am using a small brush to apply the size, avoiding the burned lines

Leave the size to dry for approximately 10 minutes then lay a sheet of gold leaf over the size: here I have left the backing sheet on the metal leaf. This helps you to position the leaf accurately without breaking into pieces

17 With the backing paper left in place rub the gold leaf sheet, ensuring the surface is smooth

Remove the backing sheet and leave to dry completely before removing the excess leaf. This can be done initially with a very soft brush and then using a cocktail stick or similar remove the excess from the burned sections

With the excess gold leaf removed tidy up the shape by re-burning any areas that require it

20 Coat the gold leaf with shellac lacquer to prevent the leaf from oxidising

21 When the shellac lacquer has completely dried your desired finish can be applied. I have chosen to finish this platter by applying several coats of oil to the remainder platter

TOP TIP

- · When applying the metal leaf to your turnings you can either use full sheets as I have, or select sections of leaf, for example if you wanted to apply more of the green section then tear sections of green and apply them individually, ensuring the pieces are overlapping and cover the entire leaf. Cover with a backing sheet and rub firmly to press the leaf into the size. Allow to dry before removing the excess. This excess can be put into a container for use on other projects. Another method is to use gold leaf flakes. The flakes are pressed into the tacky size. Once dried the excess flakes are removed and put back into the container
- When finishing an item with several coats of oil make sure you are in a dust-free environment and in between applications. If the surface feels rough, sand flat with approximately 1000 grit abrasive and remove the dust created with a tack cloth. When the oil is totally dry gently buff the surface using a buffing mop with Tripoli compound applied. Take care not to buff too heavily as this could remove the gold leaf

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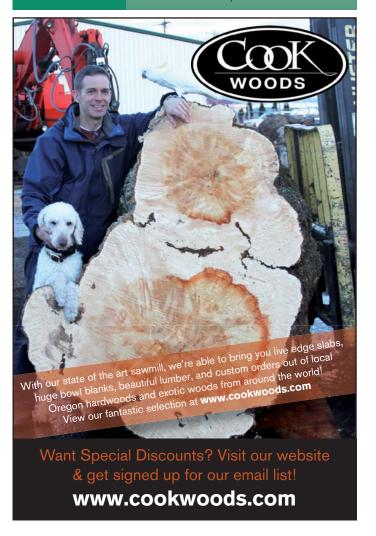
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Woodturning

Issue 299 on sale 3 November

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Making a pillar box

Keith Mallinson tells us how he made this fun money box

KEITH MALLINSON



Keith is a recently retired engineering technician. As a hobby, he has always enjoyed the satisfaction of working with wood, making simple furniture and small projects at home. Several years ago Keith

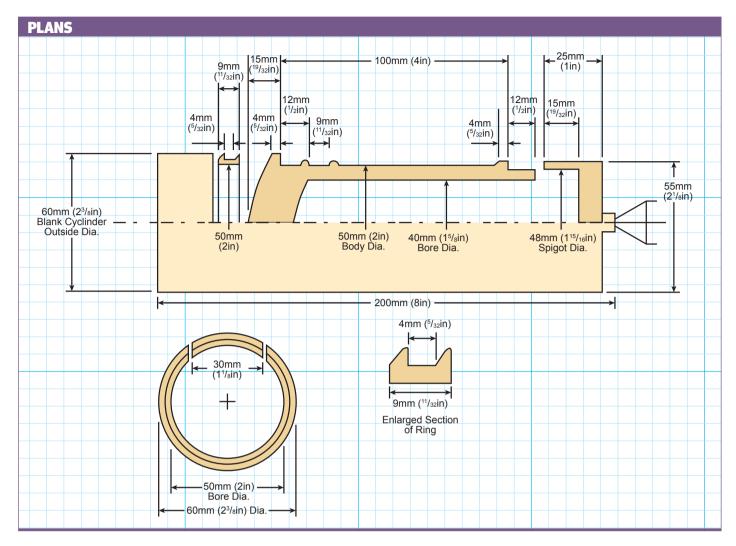
had plans published for a toy truck, which he designed and made. Keith only recently started woodturning and enjoys making small-lidded boxes, particularly in yew.

k.mallinson01@gmail.com

he box was turned from a piece of sapele (*Entandrophragma* spp.), 65 x 65 x 200mm. I didn't work to measurements; I just wanted the proportions to look right. The measurements quoted were taken after the job was finished.

Making the money box

Hold the square timber between a driving centre and a live centre, turn to a cylinder. Then grip the cylinder in a 4 jaw self-centring chuck, supported at the tailstock with a live centre. Finish the cylinder to 60mm diameter. Now turn the cylinder to 55mm diameter from the tailstock end, up 150mm to form the rim of the domed lid. Face up the end leaving a pip to accommodate the centre. Features of the box can now be marked onto the cylinder, the top of the base and the groove for the letter opening. Allow extra length for the base as it needs to be parted off and turned to make the spigot for the removable base. Cut the groove for the letter opening – 9 x 50mm diameter. Turn the body of the box to the same diameter up to the rim of the domed lid, and down to the base. Form a bead as a feature either side of the letter opening groove and form a radius to blend with the larger base diameter. Finish with abrasive, working



through the grades down to 400 grit. Remove dust, apply a dark stain to the lip of the lid and the whole of the base using a small artist's brush while the work is spinning. Finish using friction polish. Mark up, and part off the base, leaving enough length to turn the spigot for the base cover. Form the spigot on the base - 12 x 48mm diameter, sand smooth. Drill out the body. I used an 8mm pilot drill followed by a 32mm spade bit, ensuring that it is deeper than the coin slot position. Make sure the chuck is tight, drill nice and steady to ensure work stays true in chuck. Clean out and enlarge the drilled hole to improve the finish and ensure the correct depth - 40mm diameter x 105mm deep. Roughly form the dome end as the pillar box body is parted off.

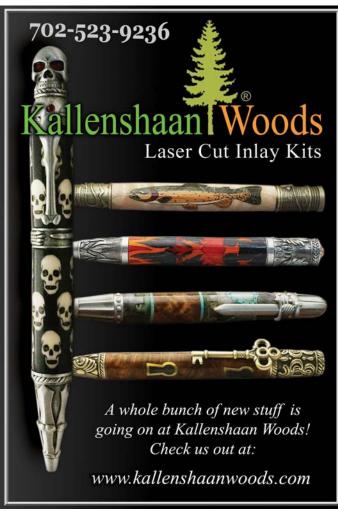
From the material left in the chuck, a ring is formed, from which the mouth of the letter opening is made (see diagram). The bore of the ring must be the same diameter as the groove on the pillar box body – 50mm. Mark the width of the ring – 9mm. Now turn the central groove – 4 x 2.5mm deep – which forms the letter opening. Shape each side of the groove, sand, stain, finish and part off. Next, mark off a segment of the ring – 5–6mm wider than a coin, 10p is 25mm diameter. Cut the segment from the ring, sand each end removing sharp corners, and

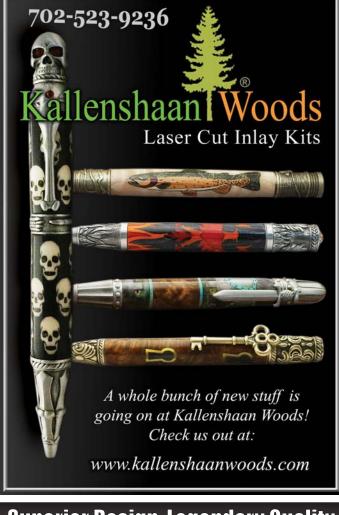
apply stain and finish. Mount the box body back in the chuck, gripping on the spigot base, to finish turn the dome top. Sand, apply stain and finish with friction polish. Mount the base in the chuck, to remove the centre pip, using thin card under the chuck jaws to preserve the finish. Turn the base slightly convex to ensure that the box sits well when standing. A few concentric circles can be added to smarten up the base. Sand and finish as before. Reverse the base in the chuck and bore out to accommodate the spigot on the upper part of the pillar box body. This should be a snug fit without being over tight.

For safety turn off the power to the lathe for the following operation. To make the opening for coins, I mounted the body of the pillar box back in the lathe, gripping on the base spigot. Ensure that it runs true. The finished segment from the ring can now be glued into position on the body using super glue. Make sure the segment is the right way up. To cut the opening for coins I positioned a pillar drill on the bench alongside my lathe so that its chuck was central above the slot. Using a 4mm drill I drilled a hole at each end of the coin slot, rotating the lathe chuck by hand and holding in the desired position. I then drilled a series of holes as close as possible in between. The slot was then cleaned up by turning the body back and forth while the drill was spinning, to remove waste from the slot. Remove the pillar box body from the lathe. Clean up the coin slot - sandpaper wrapped around a lolly stick - apply stain to colour, and friction polish to seal.



The open pillar box











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Behind the scenes — North Devon Woodturners

Originally a small club, they are still going strong celebrating their 25th anniversary

orth Devon Woodturners was formed in 1991, initially with around 12 enthusiastic members. The key instigators were Fred Ward and Jack Dean, who attended a demonstration at Parkins Steel, Barnstaple and decided to form a woodturners club, the other instigators being Jack Chapel, Roy Turner and Keith Mountcastle. The first meeting was held at Pilton School, Barnstaple, but following a few clean-up issues it soon moved to village halls nearby, first in Muddiford for a couple of years, then to Marwood for 20 years. From small beginnings, membership quickly rose to 30, peaked at 70, and is now between 50 and 60 members. For the past three years our meetings have been held in Fremington village hall, which is more central for the area, with easier access for the majority of our members and where we use our two Axminster lathes, grinder, tools

and our up-to-date audio-visual equipment. The club is an associate member of the Association of Woodturners of Great Britain (AWGB), and many of the more experienced members belong, as individuals, to AWGB.

Meetings and members

The club's meetings are held on the third Friday of each month and are a mix of demonstrations by visiting expert turners, club members and occasional 'hands-on' nights. Two of our original members recall that the first professional demonstrator was Dave Regester in 1991, who graphically illustrated the principles of 'keeping the bevel rubbing' with the benefit of a 120mm axe, a sharpened garden trowel and a 100mm masonry nail. Dave actually turned a complete goblet using the sharpened nail. He has since visited us, most recently at our June meeting this year, when he turned his famous Trunnion Box



Martin Coates demonstrating at a recent event

including rings inside and outside the box, all within an hour and a quarter – altogether different from producing a goblet using a nail!

Club nights

A typical club night starts at around 7pm with a brief address by the chairman with club notices, discussion on any issues, followed by the introduction of the evening's demonstrator. Their session lasts around two and a half hours with a break for refreshments, giving members an opportunity to network and chat with the demonstrator. Questions are always welcome during a demonstration, but as with many clubs, members aren't always as forthcoming in an open forum. So that as many members as possible can get a good view, we use an HD video camera which projects a full high-definition image of the demonstration, live, on a two metre screen. It means we can alter the viewing angle and get close-up to the action when appropriate. Furthermore, we have recently purchased a UHF wireless headset which improves the demonstrators' commentary for any members with hearing difficulties.

At every meeting, we have a project table for which members are encouraged to exhibit their work in line with the published theme for the month, or any other pieces they've produced. It's a great opportunity for makers and observers alike to benefit from helpful critique by the club's experienced turners as well as by our visiting experts, and also to help solve problems (the use of tools or finishing, for example). The more pieces a member exhibits throughout the year, the more chances they get to win one of several cash prizes presented at the annual Christmas lunch - it's been a good way to encourage participation by members of all skill levels. Our meetings end with the monthly raffle of useful bits and pieces of turning kit providing a good source of income for the club to augment the annual subscription, which is currently £30 - that funds the cost of all meetings and demonstrators.

Feedback

To help the committee discover and provide what our members want, each meeting is followed up with an email feedback questionnaire. Of course, it needs to be simple to complete, so it is limited to returning a score of 1-5 from 'had nothing to offer anyone - please don't ask this person again' to 'excellent demonstration hope to see them again very soon', with an opportunity for comment as well. We get a fairly good response rate, usually around two thirds of the members, producing an average score between 3.6 and 4.7. This allows us to create a 'popularity' database, which alongside details of demonstrators' fees and expenses is very useful to the committee in deciding on the future programmes.

Club events

Occasional meetings include a 'bring and



Just a small number of projects created in the club

buy' sale where members are encouraged to bring any spare tools or wood for sale. In addition, we organise an annual trip to the Yandles Show, usually in April. The coach trip is well supported providing woodturners with a good day out, and about three hours of gossip, mostly about turning, and no doubt other less than mind-improving topics during the journey. The Christmas lunch provides another opportunity for networking and a turning display – a chance for members to show off their best work to their wives, husbands, partners and friends.

Our anniversary celebrations in August included a social evening for all members, present and past, invited to come and share their memories and revive old friendships. With an enthusiastic membership, North Devon Woodturners aims to build on its success over the next 25 years.

Details and promotion

The club has a good mix of skills from its novices to some expert turners (also members of the Worshipful Company of Turners) who freely share their knowledge and experience. We have a website www. northdevonwoodturners.org.uk, we're on Facebook, and always keen to encourage new members, especially younger ones. To promote the club and attract new turners, for some years we have run a Craft Fair annually in Barnstaple with sales, demonstrations, a turning competition and other craftspeople selling their wares. This year, for our 25th anniversary, we held a special event featuring only woodturning, which was kindly sponsored by, and held at, St John's Garden Centre in Barnstaple on 6 August. There were three lathes running all day with nine club demonstrators, a members' sales display, a tombola with



A tombola sales display with over 50 prizes

over 50 prizes of members' turnings, and our annual competition with four well-represented classes – 'novice' to 'master' – which was judged by the St Johns managing director Nick Oliver and professional turner John Montgomery (AWGB).



25th anniversary competition table

QUICK INFO

- Date formed: 1991
- Meetings held: monthly at Fremington village hall, EX31 3BG
- 50-60 members currently
- Chairman: Cyril Johns
- www.northdevonwoodturners.org.uk
- Facebook: North Devon Woodturners

Is it really that time of year again?

As the years go by it seems to me that the festive season comes round every more quickly! This year is certainly no exception: it has been quite a year hasn't it? We thought that it might be worth giving you turners an early prod to start on your 'Christmas List' because, it seems to me, our nearest and dearest start buying gifts ever earlier and we don't want to be caught unprepared do we?

Let us take some of the pressure off you by making a few suggestions for the sort of products from our wide range that might make suitable gifts. Perhaps the sort of thing you might not otherwise buy for yourself.

All competent turners would agree that sharp tools are the very essence of good turning. At The ToolPost you'll find a host of equipment designed to give you an excellent edge on all your tools, with the minimum of effort and with perfect repeatability. Whether it is a Wolverine jig from Oneway, a Pro-Edge system from Sorby, a bench grinder or a Tormek system, we can supply.

anger lurks in every woodturner's workshop because our activities lead us to create dust. Happily there is effective protection at hand in the form of a powered respirator. We offer the JSP PowerCap at a subsidised price to encourage more woodturners to take care of their long-term health. Simply put, this is the cheapest life insurance you'll even find - and it pays out to you, in your lifetime!

rawing on their experience as precision engineers, the family business that is Carter & Son Toolworks have created a collection turning tools that would make the most hardened tool nut drool. Made from M42 high speed steel, these tools hold a supersharp edge like no other. If you only buy one tool this year, make it one of these. If Santa is very caring, (s)he'll buy you a sackful. If you turn on a smaller lathe, with a swing up to about a foot in diameter, then you'd undoubtedly enjoy turning a whole lot more if you were using tools designed specifical y for use on lathes of this size. We thought it so important that we arranged for Hamlet to make the CompAcc tools to our specific tion.

We reckon you'll be as impressed as Walter Hall was when he tested them for 'Woodturning' magazine!

New wood finishing products are introduced frequently but one of our favourite methods is wood buffing. This quick and easy method of finishing not only imparts a controllable sheen to the surface but also gives a superb tactile finish, We offer a choice of systems from Beall, from Chestnut and from Oneway.

Lif you are not attracted by the thought of buffing your precious wooden artifacts, then you might prefer to use one of the new generation of toy-safe, quick-drying, colourless oil finishes such as Steinert Drechsleroel or D & M Natural Oil Finish. Both are made from entirely natural ingredients and produce a hard wearing surface with a pleasing soft low, enhancing the timber colour.

The idea of being able to use jawsets from different manufacturers on a single chuck body was originated by The ToolPost with the introduction of The Versachuck. The Versachuck still offers that capability and combines it with a wide range of backplates to suit various spindles and a very attractive pricing structure. Now that really would start off your New Year with a bang.

Hamlet are the producers of the specialist tool sets that bear our own name. We choose them because of their balance of quality and value. But if it's turning tools that you're after, we stock a huge range from the British majors - Hamlet, Henry Taylor, Robert Sorby and Crown as well as a range from renowned toolmakers around the world such as Hunter, Carter, Rolly Munro, Wiedemann, Kelton, Serious Toolworks, Oneway and our own BCT Tools.

Each generation of new products holds promise of performing tasks better and faster. Our O'Donnell ruby and blue ceramic grinding wheels, long the choice of the cognoscenti, are proof of that.

Perhaps the current star of the world of sharpening media is CBN - Cubic Boron Nitride. We continue to develop the range of both sizes and grades of CBN wheels we offer - sixteen currently and more to come.

ong spindle work can be a real problem to turn as it whips around. A simple solution is to use a spindle steady to restrain it and we have a choice of products on the shelf to deal with the situation. The same issues can effect bowl turners when large, thin-walled bowls flex at the rim. Help is available for this issue too with the Oneway Bowl Steady.

llowing a drill or router to be mounted and plunged in relation to the workpiece opens up new project possibilities. This control is possible by using the Oneway Drill Wizard. Now you can make good use of your lathe's indexing capabilities. Inlaid bowls, clock faces, stool seats, ring trees, cupholders and so many more projects will become a breeze. Or if fluting and spirals are more your cup of tea, then take a turn with the FluteMaster or SpiralMaster.

Maybe the New Year brings new sartorial style - or is it time to

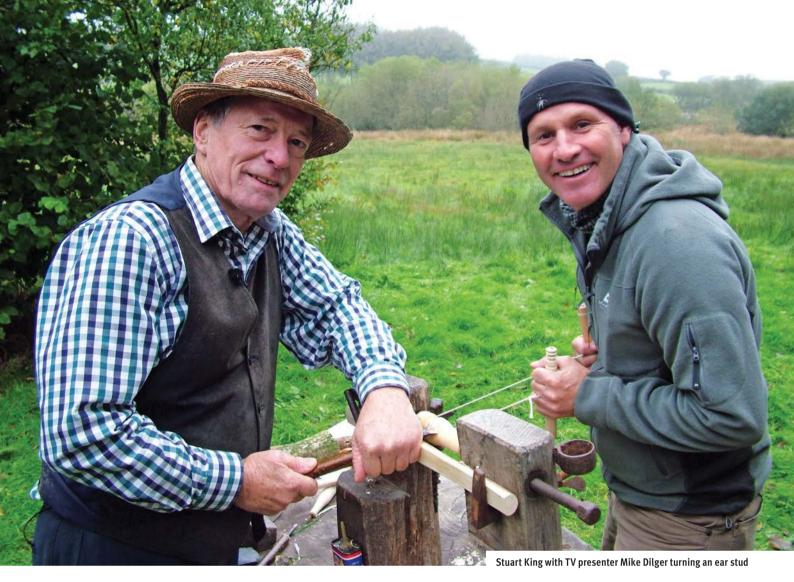
refresh the Santa theme? We can help with our smart and practical new ProDesign smocks embodying everything we always wanted in a turning smock - and they're very affordable too! Or perhaps a T-shirt emblazoned with The ToolPost Busy Bodger to show your allegiance? Praise be if you've managed to stay with it this far. Christmas may still seem a long way in the future - but it is defin tely closer than you think. Give the givers an early helping hand this year by deciding very soon what you'd like to be presented with on Christmas morning. Of course we are always willing to make suggestions - and will do the same for your partner, family and friends if they approach us on your behalf. And if deciding is just to-o-o-o difficult you can always suggest a ToolPost voucher which you can then spend with us at your leisure, when you have had time to ponder.



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A look back through 4000 years of woodturning

Stuart King talks us through 4000 years of woodturning and creates lathe-turned ear studs

oodturning is alive and well, there is a fabulous selection of tools and equipment available from a wide choice of suppliers, the woodturning clubs are buzzing with enthusiastic members eager to imbibe the latest technology and to be inspired by recognised experts. Today's woodturning scene is largely one of leisure, supported by a respectable number of professionals. Whatever one's involvement with woodturning, I wonder how many think about how our craft evolved, and over how many hundreds of years of development have led us to where we are today?

Well, we are not talking about hundreds of years but thousands, simple lathes have been in use in the UK for at least 4000 years, and recently I was privileged to be able to provide

the practical evidence for this early technology.

In August 2011, an early Bronze Age 4000 years old cist (a small chamber made of thin stone slabs) burial was discovered on Dartmoor. Inside were the cremated remains of a female, and, almost uniquely for this period, well preserved grave goods including four lathe-turned ear studs (labrets). Analysis has established that these studs are made from spindle wood, (*Euonymus* spp.) a small shrubby tree that still grows on the moor. Spindle tree is a hard, fine-grained wood that has traditionally been used to make skewers, toothpicks, knitting needles and, of course, 'drop' spindles.

Method

Studying high-resolution images, I was

convinced that these artefacts were lathe turned rather than carved, but the question put to me by Andrew Brown of Defacto Films, who was producing a BBC documentary, was how were these exquisite items turned on a lathe, and what sort of lathe? These objects are no more than 250mm diameter so I ruled out the use of a traditional pole lathe, which is much too heavy for such delicate woodturning. As the invention of the crankshaft providing continuous revolution was at least another 1500 years away, possibly more, the only options were some form of reciprocating apparatus. This left me with the choice of either a 'bow' lathe or a 'strap' lathe.

This was to become an intriguing archaeological experiment. I set up a piece of 'round wood' spindle tree between two

points and, with a bow in one hand and a chisel in the other it was clear that with a little practice, progress could be made, coordinating the bowing and holding the tool using a separate hand for each and only making a cut as the wood revolves forwards can be tricky at first. Perseverance proved that it could be achieved and I did indeed produce a passable ear stud, and so down to Dartmoor for the filming.

The location was perfect, in front of a recreated ancient round house. The lathe was set up; the presenter was Mike Dilger of *The One Show* with Dr Richard Brunning, a wood expert, in attendance. Using my set of Bronze Age tools, notably a socketed chisel and a small round nose scraper I bowed away, slow but sure. I then suggested that if Mike put a cord around the workpiece it would free up both of my hands and this would allow me



Spindle wood and repro ear stud against the image of an original



At the reconstructed Bronze Age Dartmoor dwelling with the film crew



The Bronze Age bronze chisel used in the experiment alongside a slightly earlier Neolithic flint chisel, could this also do the job?

to have more control, which makes a great difference with both the speed of turning and the accuracy of tool use. More speed, more torque, more accuracy, quicker production, this had to be the method used. Indeed, this form of turning proved so efficient that multiples could be turned, pointing possibly to the earliest form of mass production?

The original studs were so well preserved that one could see evidence of final finishing on some of the side walls, as if the turnings had been rubbed on a coarse stone to remove the uneven surface where the studs had been finally parted from the main stock, possibly with a knife. This was my first encounter with spindle wood and I was amazed at the fine finish that was achieved directly from the bronze skew chisel.

Within a couple of hours, I had taken woodturning back another 500 years to the early Bronze Age. These ear studs (or are they cloak fasteners?) are in remarkable condition and rare organic survivors for this early period. Only one was subjected to species analysis which confirmed as spindle wood.



It is possible to turn wood with a flint tool

This is the first time that I have turned this wood, it turns very cleanly, almost like box (*Cornus florida*) wood. There is no doubt that these pieces were turned, they are uniform and crisp/clean, there are no tool marks because as I have proved these can be turned using a sharp flat/skew chisel leaving a clean, polished surface. The bottom of the cove was completed using a sharp round-nosed bronze sheer scraper.

There are signs of abrasion on the centre portion of the sides, these can be explained thus; the turnings are completed down to approximately 5cm diameter where they are broken off the 'blank' leaving a central side area requiring cleaning up. This could have been done with a knife and completed by rubbing on an appropriate piece of stone leaving the abrasive marks.

I used an original Bronze Age chisel from my collection and found that these studs can be turned using a bow lathe and a one handed tool, but using the two man 'strap' lathe technique made it a breeze. Dr Richard Brunning stated: "These wooden studs are unique in British prehistory. It has been suggested that they may represent ear studs or studs for elsewhere on the body. They could also have been used as studs set into leather belts or clothing. They represent the earliest evidence for woodturning in the UK. It seems logical that woodturning may have begun with the manufacture of such small items rather than with the creation of more complex artefacts such as bowls."

So we are able through artefactual evidence and archaeological experiment to prove the technique hypothesis but artefactual evidence for the lathe itself is still missing from the historical record, we have to wait until about 300BC for our first illustration of a reciprocating lathe, in this case a two-man strap lathe. We know that reciprocating lathes had developed into the more sophisticated pole lathe capable of turning bowls and



A hypothetical Bronze age turners tool kit



This small round-nosed scraper was made from a scrap piece of Roman bronze and used to create the cove in the stud

wheel hubs by c.50BC at the Iron Age Lake Village at Glastonbury. Continuous revolution lathes probably appeared during the Roman period but, as can be seen from later illustrations and modern use (Morocco and the chair bodgers, etc.) there is much crossover time wise.

The best view into the past is to study the simple technology captured on early



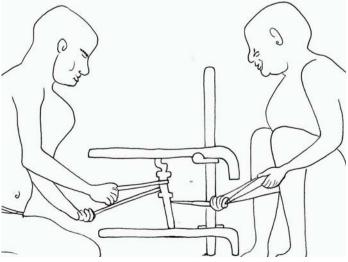
I found it easy to turn a series of studs using the bronze tools, was this the origin of mass production?

illustrations and photographic images or to study long held traditional techniques still used today in certain, often isolated worldwide communities.

My next piece of experimental archaeology is to prove that Neolithic (Late Stone Age) people had the potential technology to turn wood!



An illustration of how the studs would have been turned from a half round section of branch wood



Earliest illustration of turning. This two-man reciprocating strap lathe is drawn from an Egyptian tomb dated c.300BC



Screen and blind

Chris Grace builds a screen and blind to protect his tools from shavings and dust

CHRIS GRACE



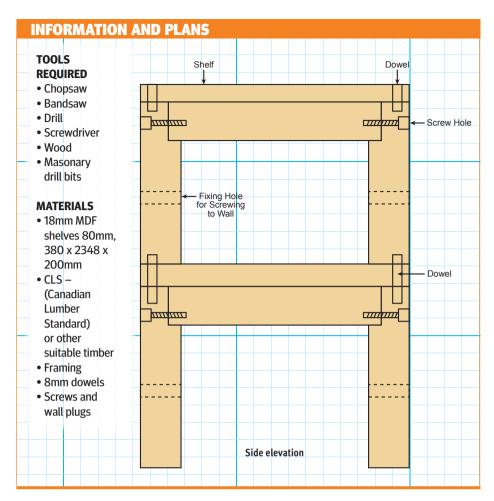
Chris has enjoyed making things with wood, metal and improving himself ever since his granddad encouraged him as a young child. He enjoys a variety of DIY projects as well as woodturning and carving. Chris sells

his work by commission, demonstrates and provides instruction.

Chris.Grace@NotJustRound.com www.NotJustRound.com

can't count the number of times I have had to clean up the mess on the shelves behind my lathe. In between, every time I pick something off them to use, I have to shake off the shavings and blow off the dust. Not exactly good for a healthy working environment, especially as I have athsma. I have made progress in reducing dust in my workshop recently with a new extractor and better ducting, now my attention has turned to the biggest dust/shavings trap behind my lathe. The solution suggested by a friend was a roller blind, however there were some installation challenges posed by no suitable hanging point and an up-andover garage door. The solution was some

more shelves - you can never have too much storage in a workshop, and this provided the perfect mounting point for my roller blind. I chose a light grey, as it would make a good background for me to use to see my woodturning against, instead of the previously cluttered background, and as an added bonus it would make a perfect photographic backdrop for when I need to take pictures to illustrate articles. An all-round solution! I created a scale drawing to determine how many shelves I could accommodate in the available space, allowing for the garage door opening, and to determine how much timber I needed.



Cluttered shelves – especially near lathes – that become clogged with shavings and dust every time work is undertaken can be a problem for everyone. The picture shows what had happened in my workshop and I decided it was time to deal with it

A series of N-shaped notched supports as shelving supports/brackets were used for this project. They were going to sit on MDF shelving that sits on top of a previous shelving unit - but you could make full rectangular or square version or use wall brackets for your shelving. I used a chopsaw to cut the vertical and horizontal pieces to length to suit my shelving and used a bandsaw to cut the longitudinal and cross-wise notches in the vertical pieces to house and support the horizontal supports. But a chopsaw in conjunction with a depth stop could be used for this process too. In this instance, I chose to use glue and screw to fix the uprights to the horizontal support section and once dry, used dowels to lock the MDF shelving to the supports - but you could use screws. If you use dowels, make a small jig from scraps of MDF to ensure you accurately drill into the middle of your uprights. The shelves can be created from many materials, but MDF - 19mm in this case is inexpensive and suited my needs well. Build the shelves up alternating the frame pieces, and MDF shelves, using dowels to interlock them, screw the frame to the wall every couple of levels

Once the shelves have been constructed you can install the hardware required for the roller blind. Here one of the end supports has been installed on top of the shelf, overhanging slightly, so that the blind will readily extend down in front of the new unit. The roller blind can be installed once the hardware is in place. Ensure that the cord is in the correct position so that the stop prevents the blind being rolled up over the roller, then insert the plastic locking piece to secure it in place

The completed shelf unit and roller blind provides more space to store tools, materials and projects in a clean environment. It also provides a much less cluttered view of my work while I am turning and for photographing items •



















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Using a CrushGrind Shaft mechanism

Chris West looks at getting started with turning a mill, using a CrushGrind Shaft mechanism

CHRIS WEST



During the last dozen or so years, Chris has spent a good deal of his time designing, turning and writing on the subject of salt and pepper mills. A number of Chris' mills have appeared in *Woodturning* and the now defunct US *Woodturning*

Design magazine. His book, Turning Salt and Pepper Shakers and Mills was published in 2012 by Taunton Press in North America and GMC Publications in the UK.

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he CrushGrind salt and pepper mill mechanism, developed by IDEAS Denmark A/S, became available to woodturners back in 1994.

The difference between it and other mechanisms at that time was it had a ceramic grinding mechanism. It was developed as a multi-purpose ceramic grinder suitable for not only salt and pepper, but also for herbs and spices. Over the years it has become particularly popular with commercial condiment manufacturers.

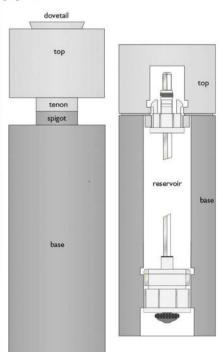


Fig 1. The anatomy of a CrushGrind Shaft mill



Anatomy of a CrushGrind shaft mill

Fig 1. shows the anatomy of a Crushgrind Shaft mill. A recess tool (see Fig 2.) is required to form a recess in the base and top for three lugs, which hold the mechanism parts in place.

Lengths

CrushGrind Shaft mechanisms are mostly available in the following lengths: 195 and 255mm. A mechanism with a shaft length of 463mm can be bought.

CrushGrind recess tool

The CrushGrind recess tool is critical to the process of fitting a CrushGrind mechanism. It forms a recess, 5mm wide and 3mm deep inside the mill for the three retaining spring lugs to sit in. The lathe speed should be between 450-500rpm with the toolrest placed at 90° to the bed, approximately 20mm from the blank with its height just above centre.

Fig 3. show the recess tool being placed on the toolrest, with its end touching the bottom of the 38mm diameter hole. The tool is then pulled towards you. The recess is cut to the correct depth when the side of the cutter touches the side of the hole. Carefully move the cutter back towards the centre of the hole and remove.

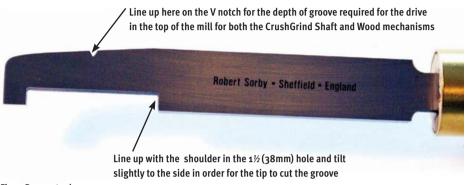


Fig 2. Recess tool

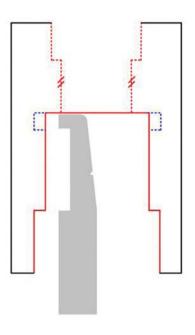


Fig 3. Recess tool's position for cutting the recess to accommodate the grinding mechanism lugs

Turning a pepper mill with a CrushGrind shaft mechanism

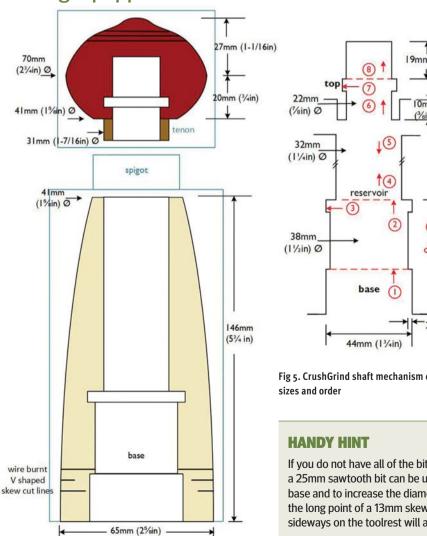


Fig 4. CrushGrind shaft mill dimensions

19mm (3/4in) ↓ 20miii 10mm (25/32in) 20mm 34mm (1-5/16in) critical dimension 22mm (7/sin) 3mm (1/8in)

Fig 5. CrushGrind shaft mechanism drilling

If you do not have all of the bit sizes shown, a 25mm sawtooth bit can be used in the base and to increase the diameter of a hole, the long point of a 13mm skew chisel laid sideways on the toolrest will achieve this.

This mill uses a 190mm CrushGrind shaft mechanism. I chose to turn the base from ash (Fraxinus excelsior) and the top from bubinga (Guibourtia demeusei). You may choose to use another combination of woods which you feel may well look even more effective. The finish I applied was two coats of a 60:40 mix of cellulose sanding sealer and three coats of melamine gloss lacquer spray. After waiting 24 hours I buffed the mill using first, tripoli, then white diamond and finally buffing with carnauba wax. The drill bits used for this mill are Sawtooth bits.

Preparing and drilling the base

The mill's base uses a blank 70 x 70 x 165mm. Turn the blank as shown in Fig 4. Hold the base's spigot in compression jaws and clean up the bottom. Measure and mark the length 146mm. Reverse the blank, holding the bottom of the base in expansion jaws. When running true and with a live tailstock in place, and face off at the marked line and remove most of the spigot leaving the centre point in place. Remove the tailstock and drill five as in Fig.5.

MULTI-PURPOSE JIG

Turn the jig as shown in Fig 6. The multi-purpose jig has two roles; when placed in the base of the mill and with a live centre in the tailstock, the mill's outside can be shaped. When reversed and the grinding mechanism is placed in the hole it can be forced into the mill by winding the tailstock barrel in.

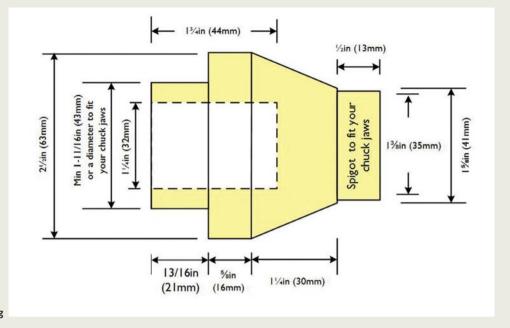


Fig 6. Multi-purpose jig

Turning the base

Hold the multi-purpose jig in chuck jaws as shown in Fig 7. Position the bottom of the base over it and support the top with a live centre as shown in Fig 8. The base can now be shaped using your favourite gouge. Sand, seal and finish as described earlier.

Preparing, drilling and turning the top's blank

The mill's top uses a blank of 70 x 70 x 76mm. Turn the blank as shown in Fig 4. Hold the base's dovetail in compression jaws and face of the bottom of the tenon. Referring to Fig 5. drill number six. Number seven uses the recess tool and drill number eight. Reduce the tenon to a diameter of 30mm with a length of 10mm. This should be a slack fit into the top of the base. Begin turning the top by shaping the bottom curve. Sand to 400 grit. This is the time to fit the drive plug (Fig 9). Push the drive plug into the hole a short



Fig 7. Multi-purpose jig awaiting the bottom of the base

distance before placing a piece of plywood between it and the barrel of the tailstock. Wind the tailstock in until the drive plug is fully inserted. Remove from the lathe, wrap masking tape round the tenon and hold in



Fig 8. Base after shaping and finishing

compression jaws. When running true the overall length, 47mm, can be marked and parted, removing the dovetail as you go (Fig 10). The rest of the top can now be turned and sanded, finishing in a similar way to the base.

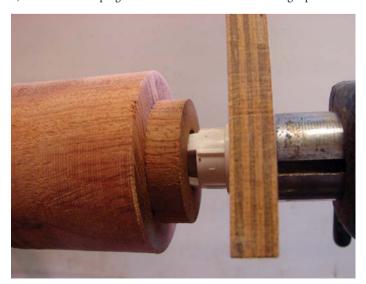


Fig 9. Drive plug ready to be pushed in



Fig 10. The top's final turning about to be completed on an earlier yew top

Fitting the grinding mechanism into the base of the mill

Fit the multi-purpose jig into compression jaws ready to accept the CrushGrind mechanism (Fig 11). Place the mechanism into the base of the mill and position the body of the mill and mechanism into the jig such that everything is square. Bring up the tailstock and lock with the piece of wood central over the tailstock barrel (Fig 12).

A 13mm hole in the centre of the plywood is required to allow the CrushGrind shaft to be pressed through it and into the hollow barrel of the tailstock. When everything is parallel and the tailstock locked, wind in the barrel to force the mechanism into the mill's base (Fig 13). The lugs need to have clicked into the recess. This can be seen visually from the top of the mill's base. Finally the shaft of the mechanism needs to be shortened.



Fig 12. Grinding mechanism in position

Shortening a CrushGrind shaft

Having fitted both parts of the mechanism push the top over the shaft as far as it will go (Fig 14). Measure the gap between the two halves of the mill; the shaft needs to be shortened by this amount, plus a further 7mm. Hold the top of the shaft in a vice and remove the excess using a small hacksaw. File a chamfer on the top edges of the shaft. A more detailed explanation of how the calculation is shown below. Based on the dimensions shown in Fig 15, the amount to be cut off from the end of the shaft would be 25mm, plus 7mm (Fig 13). This will leave 6mm above the top of the drive plug. Be sure to test the mill and adjust the grind using the grey knob at the base of the mill. ●



Fig 11. The multi-purpose jig held in chuck jaws



Fig 13. Everything in place and waiting for the tailstock barrel to be wound in

gap = 25mm (lin)

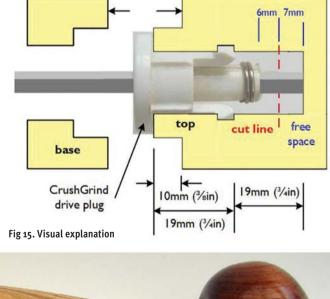




Fig 14. The top placed over the shaft to indicate the amount of shaft to be removed

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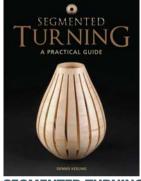


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Molly Goodfellow Winton – 'Minis'

Molly Goodfellow Winton tells us of her inspirations when making minis



inis, a speciality of maker Molly Goodfellow Winton, was inspired by ancient, and prehistoric art such as cave drawings and other ancient artefacts depicting animals and nature. Making minis was first a way of using offcuts and scraps of pretty wood, so they wouldn't go to waste. Over time, Molly found other benefits to significantly scale down the pieces she made and always a proponent of exquisite form; minis forced her to attend to minute details to ensure the final proportions and aesthetic. She says: "there is little room for error on

a 40-50mm tall vessel," adding that minis are great experimentation by attempting unfamiliar forms or trying out new embellishment techniques. Trying out new things on a piece of wood that's only 45mm tall is a lot easier to throw away if something goes wrong, rather something that's four times that size.

Although this is a great way to experiment, Molly believes that carving facets and impressions into the surface simulate chiselled rock and cave walls. Molly uses ancient forms of pottery and basketry to inspire her vessel shapes and on some pieces further enhances the textures through the use of gesso and Gilders Paste. Carving, engraving, and pyrography and making small branding irons out of wire allow her to print the symbols onto the minis. Molly told us "feeling textures with my hands and exploring the same with my eyes is thrilling, and a successful piece is one that when the admirer picks it up, they don't want to set it back down."

Email: turningmaven@hotmail.com **Web:** www.turningmaven.com

CAVE PAINTINGS

Cave paintings are painted drawings on cave walls or ceilings, and mainly of prehistoric origin. Although the exact purposes of cave paintings are unknown, there are theories that cave paintings may have been a way of communicating with others. Remarkably, these paintings are similar around the world with animals being common subjects, and humans mainly appear as images of hands or stick men.

The majority of prehistoric cave paintings were figurative and 99% of these were animals. During the Stone Age, predator animals were mostly painted such as

lions, sabre-toothed felines and bears, almost as often as 'game' animals like bison, and reindeer. Pictures of humans were exceptionally rare occurrence, and were usually highly stylised and far less naturalistic than the animal figures. Abstract imagery (signs, and symbols) were also common, and actually compromises the oldest type of Palaeolithic art found in caves of the late Stone Age.

The earliest known cave paintings are at least 35,000 years old and they've been discovered in hundreds of caves around the world particularly France and Spain. The Lascaux caves located

in southwest France are famous for its cave paintings and contain some of the best-known Upper Palaeolithic (the third and last subdivision of the Palaeolithic or Old Stone Age) art and these paintings are estimated to be around 17,300 years old. These images consist primarily of large animals, most of which are known from fossil evidence to have lived in the area at the time. The oldest cave paintings are reported to be on the Indonesian island of Sulawesi, and before then, the oldest cave painting known was a 40,800-year-old red disk from El Castillo in Northern Spain.



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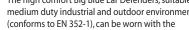
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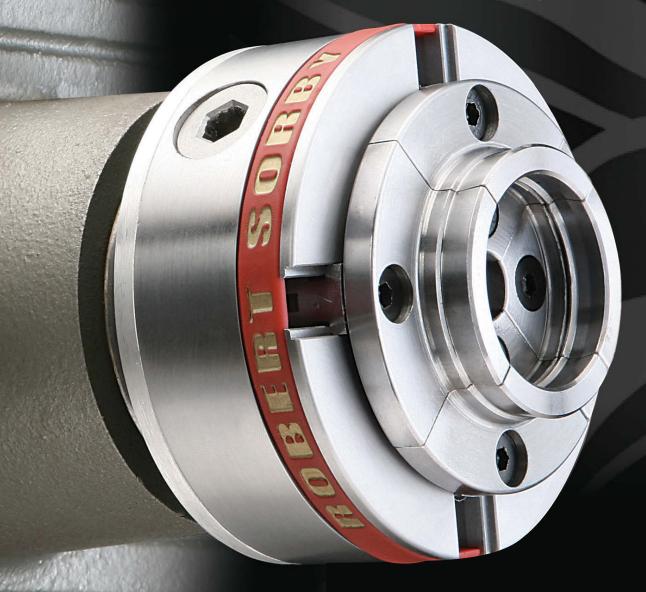
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