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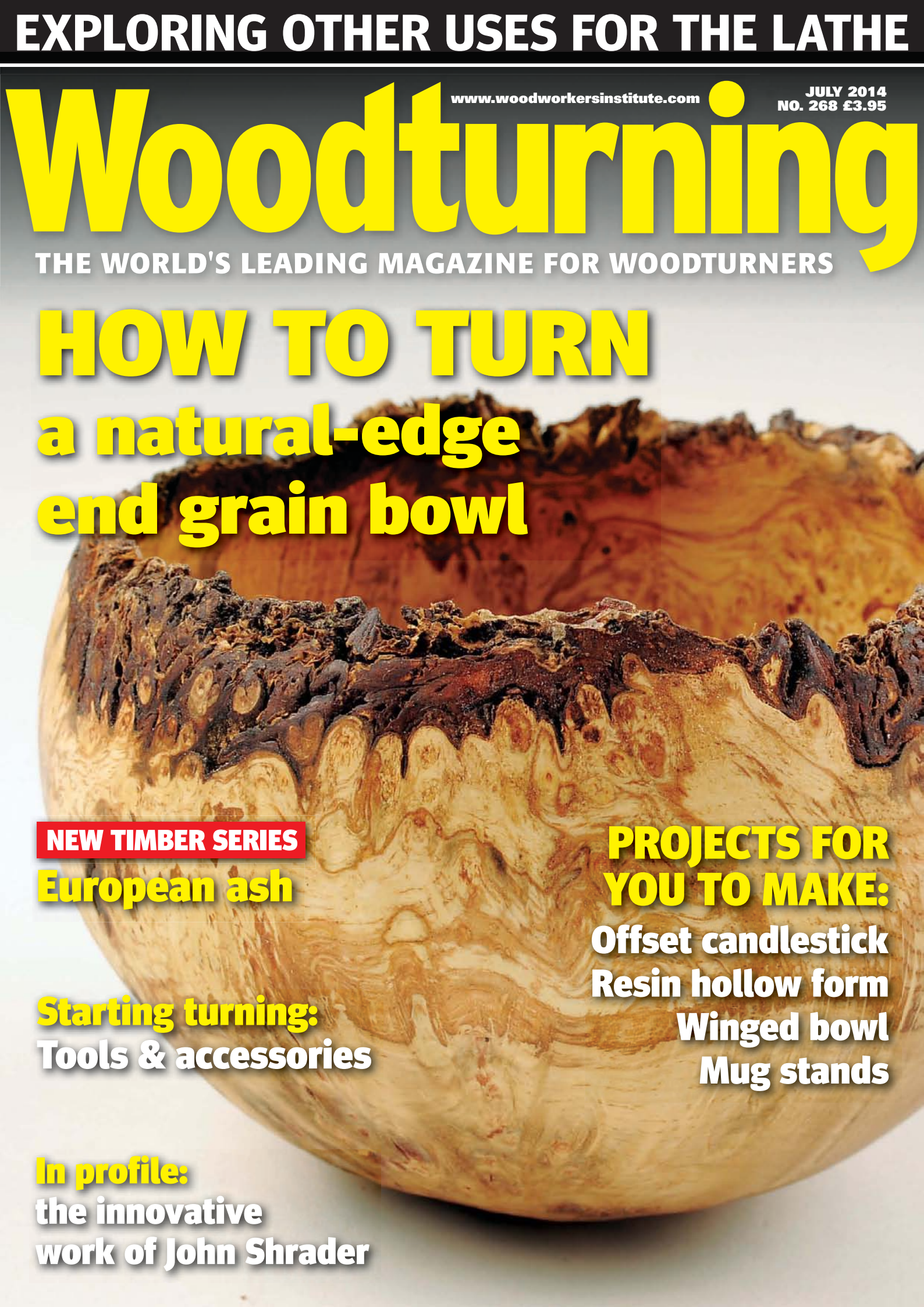

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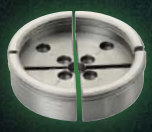

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PHOTOGRAPH BY GMC/ANTHONY BAILEY

The summer lull

Summer is almost here and from what I am hearing, many people are now going on holiday, in the garden or out with the family, and not in the workshop turning much. I am not surprised by this at all – every year is the same. As soon as the better weather comes along, people do the things they have not been able to over the colder late autumn and winter months. Those colder months are the creative and productive peaks for many people. It is one of the reasons there are few shows between April and September, and it is also why many manufacturer catalogues launch in the spring or autumn time, so they get the items and events in front of people during peak periods. Having said all that, the summer is not a waste in any way. It is the time when batteries are recharged, people visit new places, see and experience new things, which in turn often influence work created later on. So, use this time to see and do something new and have lots of fun. I have always stressed that turning needs to be fun and if it is not, then find something else you might like to do. That might sound strange but truthfully, I have taken up hobbies that I enjoyed to start with and then found I wasn't enjoying them some time later. It is funny how sometimes it took me quite a while to realise that.

"I have taken up hobbies that I enjoyed to start with and then found I wasn't enjoying them some time later"

And, despite having spent a lot of money on kit and such like, I decided to stop and start something else.

I must admit that I am less impulsive now in trying and getting started on things – that saves me money that I don't have and thereby I am less likely to waste it. I also urge you to try to find a local group or someone you can contact so you can get a feel for it before committing time and, no doubt, money. This is the best advice for anyone starting any form of woodworking or hobby – try it more than once before you start buying things and try those before you buy them, too. Also, don't buy everything that you think you will need. It is surprising what can be done with very little.

Let me know what you have been making, and have fun.

twitter

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.

I have been making some boxes lately and have been working with laburnum *(Laburnum anagyroides)*

Cover image by GMC/Anthony Bailey.
Turn a natural-edge end grain bowl with Mark Sanger

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KIT & TOOLS

NEWS, LATEST PRODUCTS, MAGAZINE UPLOADS & EVENTS 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

FEATURES

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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Round & about

We bring you the latest news from the world of woodturning as well as letters from the Woodworkers Institute forum and important dates for your diary from the woodturning community

SAW Silver Jubilee

The Surrey Association of Woodturners (SAW) first met on 31 January, 1990 at the home of Bob French, our club president, and with 14 other founder members. Now, the club is proudly celebrating 25 years of promoting and developing the art of woodturning in the northwest area of Surrey. Over the years, nearly 700 turners have joined and we still have five active members from the first year. Most years we have over 150 members and in 2013 we had 16 lady members – and while 10% is quite a small proportion of the total membership, the number appears to be growing.

New premises

In the first year it became clear that the club needed to find some premises for their meetings and as one member was a teacher, his school, Tomliscote, was the first venue. The club then moved to the Wavell school near Farnborough, which is now a technology college. The club really wanted a venue where things could be stored and which encouraged the social side of things, so the final move was to Mytchett Centre in Mytchett near Frimley Green – a perfect venue – storage – and you could get a pint or a wee dram!

Those early club nights are looked on with great nostalgia by the founder members. The first professional turner to do a demonstration for the club was Stuart King. Stuart has been a regular demonstrator over the years and a great friend of the club.

Setting challenges

Most club nights involved setting challenges that encouraged members to bring a completed project along for the following month. Some of the more memorable were the spinning top challenge – where the winner was the maker of the top that spun the longest – and the wind-up egg challenge! A hollow egg – like a box – had to be created and an elastic band was fixed inside to both ends of the egg. The two halves were then twisted as much as possible to 'power' the egg which was then released on the floor. Both the distance travelled and the time the egg shot around the floor was measured. As you can imagine, much amusement ensued.

Equally, the club met in half of the small hall at Mytchett, divided off from the other half by a sliding partition. This could lead to entertainment of another sort! Sometimes a group of clog dancers had a practice session next door but if the members were lucky it would be the 'young ladies' keep fit group.... leave it to the imagination to work out why they felt lucky. Let's just say that there were no lady members in the early days.

25th celebration

The club hopes to celebrate its Silver Jubilee in a number of ways during the year. The open day will be bigger as the Mytchett Centre is letting us use its other meeting room so we will have more traders and room for more clubs to participate. The star prize will be £250 and there will be an additional category in the main club competition, which will be for turned items that move in some way. We are delighted that Mark Baker and Andrew Hall have agreed to come to be our judges and demonstrators for the day. So set aside Sunday 26 October – the day the clocks go back – it should be a great 25th celebration. Our final Jubilee event will be at our January 2015 meeting, which we are declaring our actual birthday; we will also be holding a club social after the AGM has finished.

PHOTOGRAPHS COURTESY OF JOHN CREASEY

Club members sharing a joke

A young turner with his award

Jennie Starbuck

DETAILS:
Contact: The Surrey Association of Woodturners (SAW)
Where: Mytchett Community Centre, 140 Mytchett Road, Camberley, Surrey GU16 6AA
Tel: 01252 373 073
Web: www.sawoodturners.org

Annual 'Open Door' at Drechselbedarf Schulte

Drechselbedarf Schulte is a woodturning retailer in the north west of Germany, close to the Dutch border. The very large shop, training area and internet sales facility are housed in what was a nightclub, which lends itself amazingly well to its new incarnation. It is light and airy with pieces of woodturned inspiration around every corner. Well laid out and welcoming, absolutely everything for the keen woodturner is available here, and entry to the event, which takes place over two days in September, is free and includes refreshments. Kornelia and Hans Schulte are generous hosts.

It's a buzzing event with many notable turners showing off their skills at the same time. No-one is too busy to talk with you to offer advice and people come from far and wide every year to join in the fun and to see what is on offer. Wood and exotic nuts are usually for sale and carving, pyrography and colouring are often to be seen as well.

Jens Schulte has made an excellent video, which can be watched via the website, and this gives a great flavour of this very enjoyable event. Details of this year's line-up, which includes Andrew Hall and Mark Baker, are available on the website – www.drechselbedarf-schulte.de.

DETAILS:
When: 26 & 27 September, 2014
Where: Drechselbedarf K. Schulte Meppener Str. 111 49744 Geeste-Groß Hesepe
Tel: 0 59 37/91 32 34
Web: www.drechselbedarf-schulte.de

Horst Pieper demonstrating

Decorating a turned platter

PHOTOGRAPHS COURTESY OF LESLEY CHURTON

Sally Burnett at MAKERS

Woodturner Sally Burnett is now stocking her work as part of the MAKERS collection at the Manchester Art Gallery shop. "This is the first time we have had woodturned products in the MAKERS collection. This kind of work has a loyal army of admirers and they fit into the MAKERS stable of British, high-end, hand-crafted homeware perfectly. Sally Burnett has a unique and distinctive style that I know will be popular," says Janine Fishwick, Curator.

For many years Sally has specialised in the design and manufacture of glass vessels and panels and large ceramic installations, for both private and commercial clients. More recently she has become fascinated with wood, particularly creating work from freshly felled green wood – the shapes and textures that can be created are endless. It is a material that can be used to create both practical items and artistic creations.

The MAKERS collection is a brand of the highest quality, hand-crafted furniture, lighting, textiles, ceramics, glassware, silverware, mirrors, boxes and other beautiful and functional items for the stylish home. All MAKERS are British-based, professional craftspeople. See more of Sally's work here: www.sallyburnett.co.uk.

DETAILS:
Contact: Manchester Art Gallery – shop
Tel: 01612 358 888
Web: www.manchestergalleries.org

PHOTOGRAPH COURTESY OF SALLY BURNETT

Sally Burnett's 'Spiral Stair' platter

'Box from Another World' by brody01527, dry sycamore *(Acer pseudoplatanus)*, carved, textured and coloured

Hybrid boxes by cornucopia, 65mm wide × 90mm tall

Turned beetles by nicksimpson, split turned and carved in lime *(Tilia vulgaris)* and coloured with Jo Sonja luminescent paints

PHOTOGRAPH COURTESY OF GLENN LUCAS

Glenn Lucas and the sculptural wall

Wood Wall takes flight

Recently, 22 wood artists from all over the world made this sculptural wall piece over six days last summer. 'Improvisations on the Theme of an Irish Stone Wall' was commissioned by Carlow Arts Festival Eigse in June 2013. Dublin-based artist, Roger Bennett, who was involved in the making of the wall said of the piece: "A stone wall, but not a stone wall. A curving, sensuous, tactile form, mutating along its line from 'stone' into wood. Each block an individual, shaped with care by eye and hand. Randomly assembled, but with tight precision and infinite patience," he explains.

The sculpture was the brainchild of Terry Martin – wood artist and writer – who is an Australian with Irish roots. Martin was looking for a project in which a group of wood artists could gather together, pool their individual ideas and skills, and work collaboratively with a common goal. Terry fell in love with Irish stone walls – their rugged beauty, their shapes, colours and patterns, the way they snake across the countryside and the stories behind their making. In a light-bulb moment, he came up with the idea of a piece of sculpture, a stone wall made of wood. The idea went from crazy dream to reality. The 22 wood artists from around the world – carvers, turners, furniture makers – gathered at Glenn Lucas' workshop near Mount Leinster in southeast Ireland. The participants were: Liam Flynn, Glenn Lucas, Brid O'Halloran, Ambrose O'Halloran, Alan Meredith, John Lee, Roger Bennett, Emmet Kane, Brendan Hogg, Adam Doran, Liam O'Neill, Cillian O'Suilleabhain from Ireland; Neil Turner and Terry Martin – Artistic Director – from Australia; Michael Brolly, Jacques Vesery and Sharon Doughtie from USA; Mark Sanger and Louise Hibbert from UK; Xiang Dong Wang from China; Art Liestman from Canada; and Christian Delhorn from France.

The project was supported by Flexcut, Arbortech, Carlow Arts Festival, Dublin Airport Authorities, Carlow Local Authorities, Glenn Lucas Woodturning Study Centre and the International Wood Culture Society. See below for further details.

DETAILS:
Contact: Carlow Arts Festival
Web: www.carlowartsfestival.com

Conversion chart

2mm (5⁄64in)	35mm (1 3⁄8in)	145mm (5 3⁄4in)
3mm (1⁄8in)	38mm (1 1⁄2in)	150mm (6in)
4mm (5⁄32in)	40mm (1 5⁄8in)	155mm (6 1⁄8in)
6mm (1⁄4in)	45mm (1 3⁄4in)	160mm (6 1⁄4in)
7mm (9⁄32in)	50mm (2in)	165mm (6 1⁄2in)
8mm (5⁄16in)	55mm (2 1⁄8-2 1⁄4in)	170mm (6 3⁄4in)
9mm (11⁄32in)	60mm (2 3⁄8in)	178mm (6 7⁄8in)
10mm (3⁄8in)	63mm (2 1⁄2in)	180mm (7in)
11mm (7⁄16in)	65mm (2 5⁄8in)	185mm (7 1⁄4in)
12mm (1⁄2in)	70mm (2 3⁄4in)	190mm (7 1⁄2in)
13mm (1⁄2in)	75mm (3in)	195mm (7 3⁄4in)
14mm (9⁄16in)	80mm (3 1⁄8in)	200mm (8in)
15mm (9⁄16in)	85mm (3 1⁄4in)	305mm (12in)
16mm (5⁄8in)	90mm (3 1⁄2in)	405mm (16in)
17mm (11⁄16in)	93mm (3 2⁄3in)	510mm (20in)
18mm (23⁄32in)	95mm (3 3⁄4in)	610mm (24in)
19mm (3⁄4in)	100mm (4in)	710mm (28in)
20mm (3⁄4in)	105mm (4 1⁄8in)	815mm (32in)
21mm (13⁄16in)	110mm (4 3⁄8in)	915mm (36in)
22mm (7⁄8in)	115mm (4 1⁄2in)	1,015mm (40in)
23mm (29⁄32in)	120mm (4 3⁄4in)	1,120mm (44in)
24mm (15⁄16in)	125mm (5in)	1,220mm (48in)
25mm (1in)	130mm (5 1⁄8in)	1,320mm (52in)
30mm (1 1⁄8in)	135mm (5 1⁄4in)	1,420mm (56in)
32mm (1 1⁄4in)	140mm (5 1⁄2in)	

Your tazzas

Hi Mark, in response to your recent editorial, here is a tazza I turned. This is a variation made of the foot from a birch *(Betula pendula)* root from my garden and barrels of birch here on Senja, Norway. It is treated with oil and polished with wax.

Regards,
Svein Svendsen

Svein's tazza in birch *(Betula pendula)*

PHOTOGRAPH BY SVEIN SVENDSEN

'Dragon's Den' by georg

Lantern in yew *(Taxus baccata)* and cherry *(Prunus spp.)* by colinjp, 85mm dia. × 210mm high

Birch *(Betula pendula)* platter with enhanced rim, 280 × 45mm, by Mark Sutton

Various sculptures being created

Crowds at last year's show

PHOTOGRAPHS COURTESY OF WESTONBIRT ARBORETUM

Treefest 2014

Tickets have now gone on sale for Treefest, which takes place from 23–25 August, 2014, at the Forestry Commission's National Arboretum at Westonbirt, Gloucestershire.

Treefest, which is Westonbirt's signature summer event, attracts around 20,000 visitors each year and takes place across the August Bank Holiday weekend, celebrating nature, trees, woodcraft and family fun with activities, exhibitors and live music.

This year the festival will celebrate its 20th anniversary, having been developed from the original 'Sculptree' tree carving event in the early 1990s.

2014's Treefest will celebrate this heritage as well as introduce new entertainment and displays to the packed three-day schedule. Activities such as falconry displays and archery will return to the festival this year and the newly named Westonbirt at Work exhibitors' area will be expanded to illustrate the journey of wood to visitors, including guided walks around the area. Big carving has always been a highlight of the festival programme and this year the carvers will focus on creating benches inspired by wildlife.

Children's activities include Treefrog climbing, zip wires and, new this year, den building, where children can learn why we need shelters, what materials to use and build their own dens in the trees. In 2013, Treefest introduced a new Food Hall to offer visitors tasty delights and this year, you can sample food from 30 local producers.

Adult tickets are £15 per person, concessions at £12 and children under 18s go free. Members of the Friends of Westonbirt Arboretum receive a 50% discount with adult tickets priced at £7.50 per person and concessions at £6. Further details can be found on the website.

DETAILS:
When: 23–25 August, 2014
Where: Westonbirt, The National Arboretum, Tetbury, Gloucestershire GL8 8QS
Contact: Westonbirt Arboretum
Tel: 01666 880 220
Web: www.forestry.gov.uk/westonbirt-treefest

The 'Dorset Do' 2014

This event is a wonderful opportunity to meet new like-minded people and also old friends and acquaintances. The show has grown in popularity based on the creation of a friendly and intimate environment in which to discover new things about old skills.

During the day, there will be a range of demonstrations of age-old skills as well as four one-hour talks by experts on a range of craft skills. These are expected to include, woodcarving, rural crafts and cottage industries, coppicing techniques and tree surgery. At all times there will be people eager to talk about their skills and experiences.

A variety of interests are catered for, with crafts such as beekeeping, leather craft, pyrography, painting, jewellery making, quilt making, homemade soap and bullrush baskets. More and more women are taking up skills such as woodturning, woodcarving and stick making, etc. and this is reflected in the event, with several ladies demonstrating. Again, there will be a main display of carvings combining the work of both the Ringwood Woodcarvers and Oaklands Woodcarvers from Southampton. The variety of work is likely to be considerable. There will also be a range of things to buy. Even the dining arrangements, which have proved popular in the past, are novel. For those not bringing their own food to eat at the event, people are invited to order sausage and chips on the day, which will be brought in at lunch time by a local supplier.

DETAILS:
When: 27 September, 2014
Where: Ringwood School, Parsonage Barn Lane, Ringwood, Hants BH24 1SE
Contact: Mike Tuck
Email: mftuck@sky.com
Web: www.dorset-do.co.uk

A resounding success for the 'Midlands'

The Midlands Woodworking & Power Tool Show, which took place for the first time at the Newark Showground on 28 and 29 March was voted a resounding success by both exhibitors and visitors. Large queues formed well before opening times each day and over 3,000 visitors streamed into the show during the two days. The dates for next year's show will be 27 and 28 March, 2015.

DETAILS:
WHEN: 27–28 March, 2015
CONTACT: Nelton Exhibitions
TEL: 01474 536 535
WEB: www.nelton.co.uk

TOOLSHOW 2014

TOOLSHOW 2014, which takes place from 19–20 July, 2014, will once again be hosted at the American Express Community stadium, Brighton. For this year's event, PR Industrial have joined up with FFX to launch the South Coast's biggest tool show. Now in its third year, PR Industrial have sought a partner in FFX, who will ensure they can satisfy the keenest available prices.

DETAILS:
WHEN: 19–20 July, 2014
WHERE: American Express Community Stadium Village Way, Brighton BN1 9BL
CONTACT: PR Industrial Limited
TEL: 01273 774 455
WEB: www.prindustrial.co.uk

Win tickets to the Chilterns Craft & Design Show

We have 10 family tickets to give away to 10 lucky readers, which admit two adults and two children to the Chilterns Craft & Design Show, which takes place from 22–25 August, 2014 at Stonor Park, Henley-on-Thames. You can find out more about the show here: www.thecraftshows.co.uk/henley-on-thames. To be in with a chance of winning one of 10 family tickets, simply email your name and address to briony.darnley@thegmcgroup.com. The first 10 responses will win a ticket. The closing date for the competition is 14 August, 2014. Good luck!

INDUSTRY NEWS

This month, **D&M Tools** tell us all about their new-look website

News from D&M

Updated website from D&M Tools

At the beginning of May D&M's newly refreshed website went live. Customers have always commented on how easy the website is to use, and now D&M have introduced some great new features to further enhance the experience including:

- **Stock availability for everything** – customers can now see at a glance whether a product is in stock, available in 24-48 hours, available in 2-5 days or in the unlikely event an item is out of stock

- **Email-me when back in stock** – if a product is out of stock, customers can click a link and receive an automated email to inform them when the item comes back in to stock

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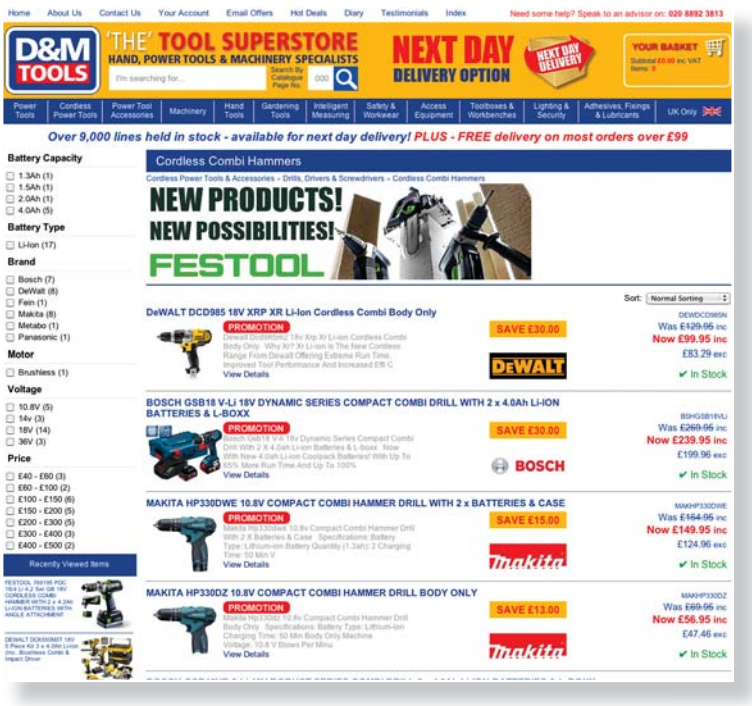

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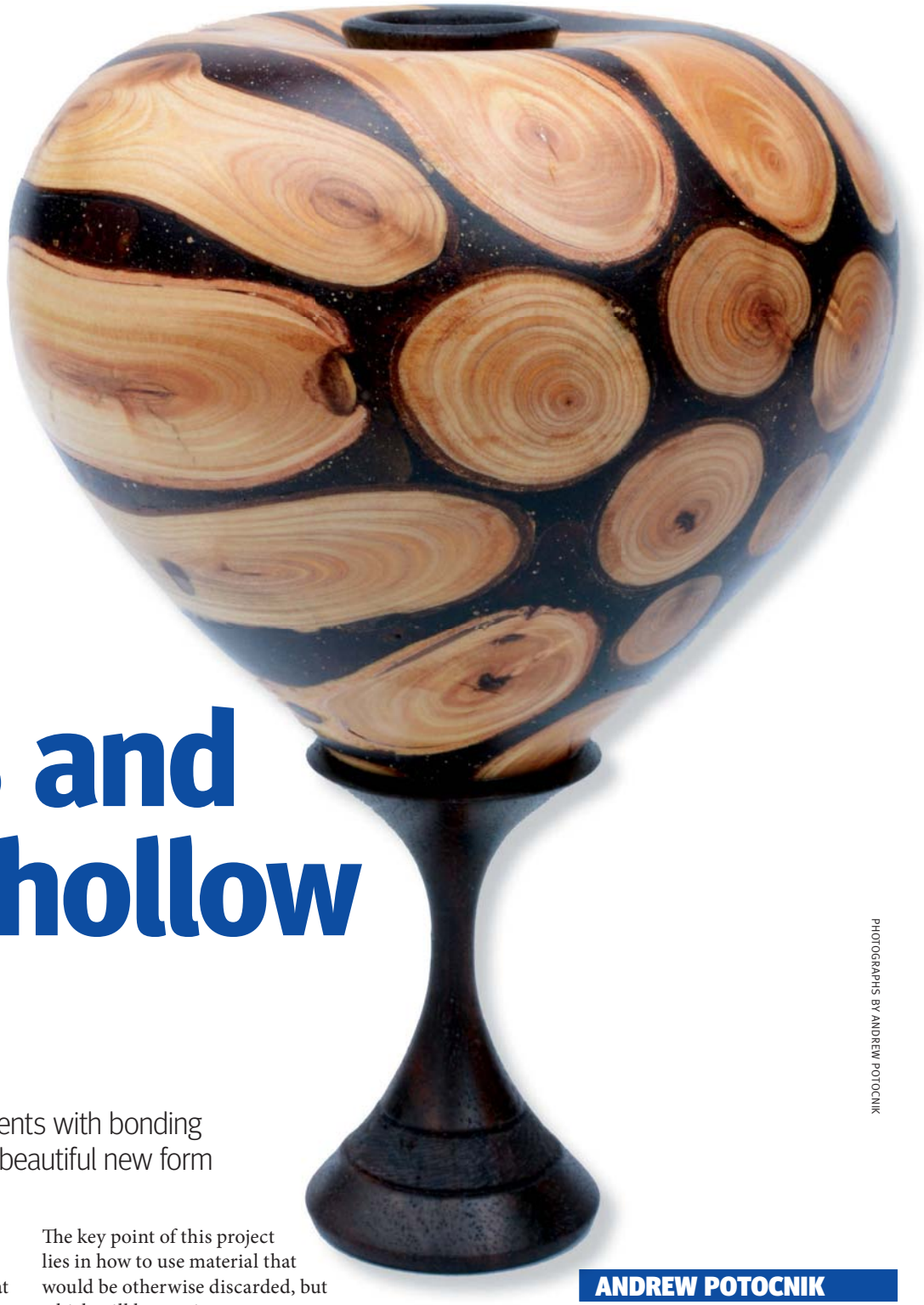


Twigs and resin hollow form

Andrew Potocnik experiments with bonding twigs and resin to create a beautiful new form

This project is a development of previous experiments where I turned pencil-like cylinders that were glued together with resin to form a 'blank' which was then turned into a small hollow form. Although the results were interesting, the process was slow, so I decided to speed things up using twigs that featured tight growth rings prominent in slow growth trees. These would not only provide me with cylindrical material, but would also add an organic element to the profiles exposed in the turning process. However, it was still a time-consuming process.

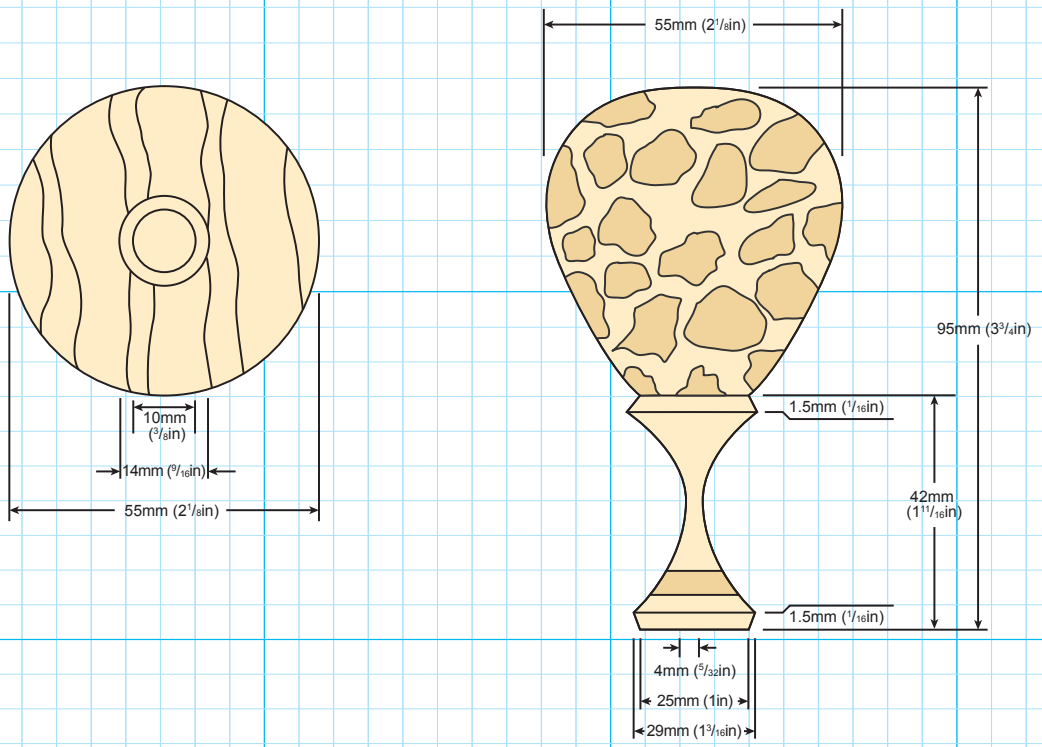
The key point of this project lies in how to use material that would be otherwise discarded, but which still has grain structure and colour worthy of celebration. I can see many opportunities in trees that grow just millimetres in decades, but can be turned into treasures way beyond their original size by being bonded with coloured resin into a larger form that can be turned into…? The possibilities are endless. So here is how I began my journey of learning, drawing on previous experience, but needing to adapt along the way.

PHOTOGRAPHS BY ANDREW POTOCNIK

ANDREW POTOCNIK

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

CYPRESS HOLLOW FORM DIMENSIONS



INFORMATION

TIME TAKEN & COST

Time taken: Approximately 6 hours spread over a couple of weeks

Cost: £32.50 for the epoxy resin

TOOLS REQUIRED

- Miniature hollowing tools
- Parting tool
- Granny tooth scraper
- Diamond-pointed scraper
- Chatter tool

ADDITIONAL TOOLS

- PVC electrical tape
- Two-part epoxy resin
- Food dye
- Microfile
- Heat-sensitive glue
- Vernier callipers
- Abrasives
- PPE: facemask, respirator/dust mask and extraction

1 The first step was selecting the twigs to use and then setting them up for gluing. Luckily, when I made mine, all the pieces fitted together with few gaps...

2 ... but once the gluing process started, things changed. I laid out some PVC electrical tape – sticky side up – to hold the twigs in position and later to wrap around the outside so the resin would be trapped as it dried. I built the block up in layers and mixed several batches of resin, colouring it with food dye. Although I used two-part epoxy resin glue, you could use dedicated casting resin and associated dyes. The glue I used has a two-hour open time, which was ample for a block of this size. The downside is that glue can leak, leaving voids that need to be filled later. A few extra bits of tape can block these points, but there will nearly always be a spot or two you miss. Working in batches could create an issue with colour matching, but thankfully, this wasn't an issue for me. In hindsight, this was the result of flying by the seat of my pants! Make sure you measure things properly

3 After the glue had set I realised more twigs were needed to fill some hollows. A microfile was used to remove some unwanted resin so another twig could be added to give me a solid block ready for turning

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4 At every stage, I allowed the resin ample time to dry and cure before continuing, which was about two weeks. However, this will depend on your local environment and temperatures/humidity levels

5 Once the orientation of the blank was determined – with twigs up and down or across it – corners and waste were trimmed on the bandsaw

6 To mount the blank on the lathe I made a small driving spur that would provide plenty of grip but not lead to too much wasted timber, which can be the result of using a commercial driving spur. A scrap of wood was gripped in the scroll chuck, trimmed to a diameter of about 20mm, then a brad was inserted into the centre and two more on either side of the piece...

7 ...which enabled the blank to be mounted between centres. A revolving ring centre provided a more secure hold at the tailstock end than a point centre

8 When turning constructed/laminated pieces keep lathe speeds low and only increase the speed close to the standard turning speeds for a given size of solid timber, but only adjust when you are absolutely certain that everything is secure and stable. To minimise the risk of things flying apart, stop and check the piece regularly for voids, fractures and fissures. Take gentle cuts rather than aggressive ones and gradually refine the shape. Roughing the form down gave me an indication of how the twigs would look later on, so now it was time to think about form. The resin I used was not brittle. I cut the wood in the same way I would any dense wood and when I started shaping it I realised there were some gaps where more twigs needed to be added later on

9 Once the new pieces were glued into place, the excess wood was sawn off, which enabled the turning to continue and the final shape to evolve. Some may think this is a strange approach to design; however, when working with organic material, it is imperative to stop after every cut and look at what the exposed timber reveals. In this case, I needed to make the most of what was revealed in every twig's profile. So, having roughly shaped the outside, I removed the piece from between centres, mounted a waste section of wood in the chuck, shaped it to a taper, cleaned up the front end and created a recess the size of the tenon at the tailstock end, as can be seen in the photos. The work was then glued into the recess using CA glue and tailstock pressure was used to centralise it and apply pressure while setting. Once dry and checked for security of hold, I then reskimmed the outside in order to achieve the form required

10 The tailstock is always in place where possible. Once I'd settled on a form that I was happy with it was rough sanded, which exposed bubbles in the resin – I drilled out any bubbles found and later filled them with resin. I suppose this is where we need to accept that none of us can be an expert in all areas of the work we do, so we just need to find ways of thinking laterally to solve problems we are faced with


10

11 To hollow the form I used a range of home-made tools, which are variants of those used by David Ellsworth. You can, if you have the skill and confidence, sometimes make your own tools, but likewise, there are many available to buy too. A combination of straight and angled/swan-neck tools we needed for the shape I chose. Always cut above centre with the tools slightly trailing downwards or at worst, horizontal. Gentle light cuts are needed here. As you go thinner, there is a risk of the resin hold failing. You can wrap adhesive tape or film wrap around the outside of the form, which will help to hold everything in place. Stop and check things regularly and err on the side of caution speed wise. Again, lowish speeds are advisable here


11

"To hollow the form I used a range of home-made tools..."

12 The most time-consuming part was getting waste material out of the hollowed form. The smaller the opening, the more hassle it is to remove the shavings from the inside. With the lathe stationary, I used a piece of coat-hanger wire hooked at 90° to scoop shavings out on an irritatingly regular basis. If you have one, an airline may help too


12

13 Once the wall thickness was reduced to a desirable thickness – about 2mm in this case – it was time to 'top' the form with a suitable collar made of contrasting but complementary timber. I opted for ancient red gum *(Eucalyptus camaldulensis)*, which has been buried in soil along the Murray River in northern Victoria. The silica embedded in the soil causes the wood to blacken, a bit like bog oak. To turn the material, it was attached to a carrier fitted to a faceplate using heat-sensitive glue, trimmed carefully and checked frequently with Vernier callipers to ensure a tight fit. The interior opening was also created at this stage and sanded


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14 Parted free of its carrier, the collar was glued into position...


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15 ... then finish turned and sanded, ready for the form to be cut away from its carrier...


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16 ... which was achieved using a parting tool and a supporting hand resting on the toolrest so the form would not fly off the lathe. Remember, prevention is better than cure, so no matter how experienced you are, always look to prevent mistakes rather than working out ways of fixing them, especially after you've invested a lot of time into a project

17 To support this form I used more ancient red gum to make a stem of about 40mm long, but the main problem was in cutting a recess the hollow form could be seated in. Vernier callipers and a 'granny tooth' scraper and lots of careful scraping, measuring, scraping and measuring, and... you get the idea

18 Once I'd got the correct fit, I trimmed the stem down to a desirable shape, and cut a narrow border with a diamond-pointed scraper

19 Chatterwork could then be applied within the border. I like to use a commercially made chatter tool, but it's easy enough to make your own using a hacksaw blade. The tricky part is in learning how far back to position your toolrest so the blade can flex and create the irregular cut and, hence, the 'chatter' pattern

20 Using the point of my tailstock centre to hold the form perfectly centred, I applied glue to its base and located it within the recessed ancient red gum stem and left it to dry. Rotating the outboard handwheel allowed me to check that all was centred and true

21 Once dry, the form was parted free of its carrier – again with my left hand providing support

22 The remaining stub was carved away with a small gouge, sanded and a hallmark carved into the base, ready for a finish to be applied

23 Once completed, the finished hollow form looked like this ●

Handy hints

1. An advantage of exploring the concept of adding colour is that you can build small pieces of wood into larger blanks, especially if you have restricted access to large pieces of timber; however, the negative part is the time involved in building the blank and the cost of the resin or epoxy glue

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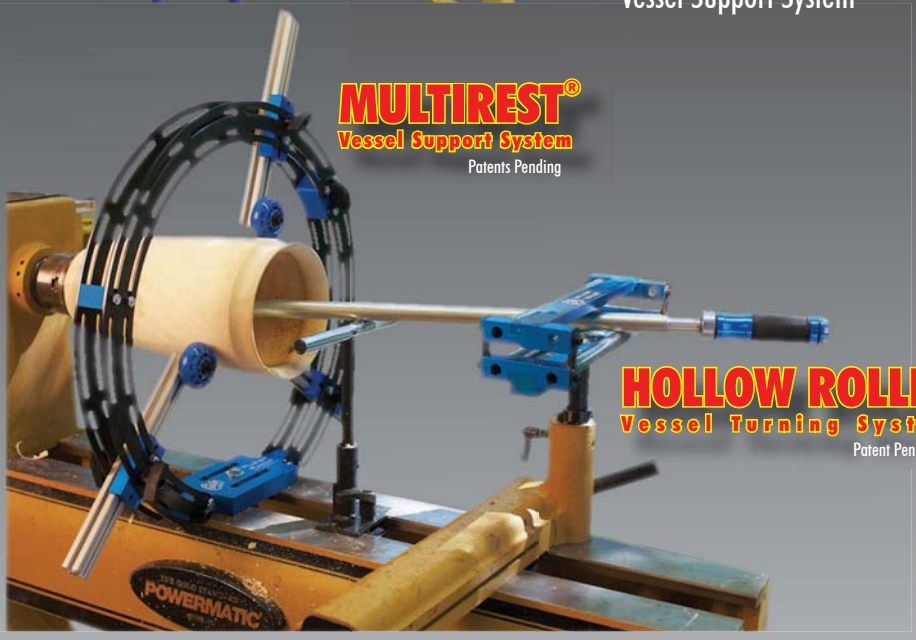

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European ash

In the first of a new series looking at timber species, **Dave Bates** of **Stiles & Bates** focuses on ash

Ash *(Fraxinus excelsior)* is my favourite timber to turn, with possibly the greatest variation in grain and colour among our native timbers. Ash is also our toughest timber in terms of tensile strength; its only weakness being that it is not durable outside but for turning vases, platters, bowls and all types of spindle work, including tool handles, it is a superb timber. The timber is slightly coarse and ring porous – think of the ends of the grain being like open tubes. Generally a pale white in colour with prominent grain, the sapwood is not distinguishable from the heartwood but most will have olive stain in the centre. Interestingly, ash is a member of the olive family, which includes privet and lilac, so, as you can see, our description of 'olive ash' is not so far out.

This olive stain – or black heart as they call it in Europe – is denser in terms of texture and weight than the white timber and even small amounts of it can cause imbalance in the smallest bowl blanks on the biggest of lathes.

This olive can be impervious to applied colours and stains and will also absorb finishing products at a different rate to white timber. For these reasons, production furniture makers prefer white ash for even finishing and staining.

DAVE BATES

About the author: Dave, , who is on the Register of Professional Turners, started turning when he was about nine years old but didn't start taking it seriously until he saw three bark edge bowls by Bert Marsh in the early '80s. From a background in horticulture and then tree felling, he took up arable farming in 1979, and in 1987 following the Great Storm, set out to acquire a few trees for his hobby. 50 trees in 17 types filled most of the farm buildings and in 1988 he set about collecting more! By 1990 it was clear that he would have to sell some – reluctantly – and so a hobby became the business of Stiles & Bates, which is now larger than the farm. The business is run by Dave, his wife Janet and their son Pete. **Email:** sales@stilesandbates.co.uk **Web:** www.stilesandbates.co.uk

PHOTOGRAPHS BY DAVE BATES

Two spindle blanks: the right-hand side piece shows the standard whitish blonde/cream colouring of ash; the left-hand side one shows the olive ash colouring that is often encountered

An ash plank that has it all: figure, olive stain, ripple and white

Ripple/basketweave in ash vase

FIGURING

In mature parkland or field trees – those that have not been able to lean into other trees and share the stresses of high winds – ripple or basketweave grain is common in the buttresses around the base and under main forks. These forks can also yield spectacular flame figure grain that is coloured by olive stain and, if you're lucky, ripple too.

Just occasionally, there appears the odd tree with ripple throughout and even rarer, one with olive stain right out to the bark but most blanks commercially available will be either white or with some olive stain. Some blanks can look like pure olive wood and even resemble a pale zebrano *(Microberlinia brazzavillensis)* at times.

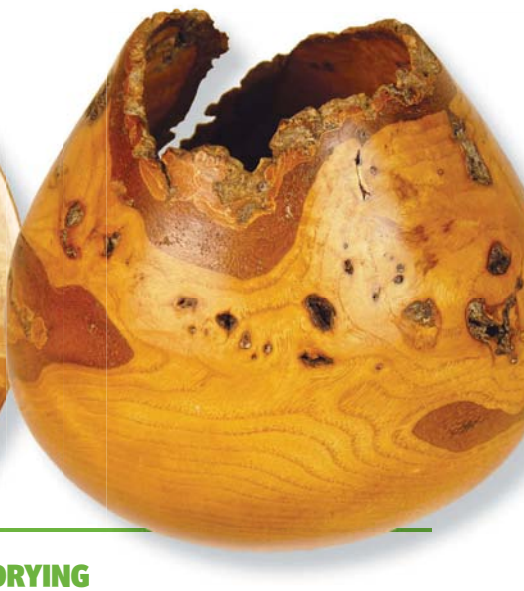
Spalting in ash that has lain out in the rain for a few years is not uncommon and can look spectacular, but most often, by the time the timber gets to this stage, it is too pecky to turn reliably.

Ash bacterial canker *(Pseudomonas savastonoi)* is rarely fatal to trees and can add interest to the timber, either as large voids or small dark patches, which appear on the surface. Don't panic if you see the fine pin holes of the ash bark beetle *(Hylesinus varius)*, as they are specific to ash, only live in the bark and cambium layer of the tree, but do not enter the viable timber.

Starburst-like figuring created by turning a section from where a long-ago cut branch had fully healed over

Ash platter with olive stain and ripple

Bark-edged ash form with canker patches



FELLING

Like most timbers and especially pale ones, ash is best felled in the winter and before the new leaf buds begin to swell. When it is first cut, the white timber takes on a pinkish tinge, which soon disappears.

MILLING

Ash is best milled soon after felling, which reduces the risk of grey stain in the sapwood. That said, we once milled some that had laid in the yard for two summers and they were as clean as new. It just goes to show that for every rule you think you have learned about timber, there is always a tree that disproves it and makes the job so interesting. The timber mills easily despite having a tough grain and is put into stick as soon as possible after milling, which helps to keep it clean.

In my opinion, trees are like people: the young ones are strong, full of tension and therefore prone to being unreliable, whereas the old ones are more settled – possibly starting to senesce as the cells break down and lose their elasticity so are a little weaker – and more reliable, and this certainly can be the case with ash. Thinner section planks of 25-38mm are usually milled from the smaller trees. 125mm planks are not an impossible plank thickness from larger trees, but 100mm is generally the thickest we mill. This is because with most hardwoods, thicker planks tend to shrink and harden before the core moisture has seeped out and as the outer case shrinks and the centre does not, something has to give, so splits appear on the surface. Heavy oak beams are the best illustration of this.

Interestingly, ash is one of the few timbers that hangs into its bark during the drying process, especially if it is winter felled, so is therefore ideal for bark-edged bowls if you harvest your own timber. Commercially speaking, it is rarely viable to mill a tree to yield bark-edged bowl blanks.

DRYING

On hot summer days in the UK, timber stored undercover will dry to around 16% moisture content (mc) by weight – although we have tested sycamore at 12% – and during January, will rise up to around 20%. In our centrally heated houses, timber dries to around 8% or 10% mc.

For woodturners, especially those of us doing bowl or faceplate work, ash this dry can be brutal to turn and may be the reason why some turners talk of it being hard timber. For spindle work, it does not make a huge difference as we will always be cutting with the grain, but on a bowl, where we are cutting with, against and across the grain twice per revolution, it can have the characteristics of a digestive biscuit. For this reason, we kiln dry ash to 14% mc or sell our air-dried ash at around 16%. It has more 'life' in it you might say.

It will still shrink a bit – typically a bowl will go oval as it shrinks across the grain – when brought into a warm house but that extra moisture makes the timber altogether different for turning. This applies to all timbers but in my experience, especially ash.

Shear scraping ash

An ash bowl being measured

TURNING CHARACTERISTICS

You might be starting with a prepared blank all nicely waxed around the edge or pieces you part-turned earlier and have figured a way of mounting it in the lathe.

With some moisture, as mentioned earlier, the timber cuts easily and where you experience some grain tear-out in the wild areas or in the end grain, careful shear scraping will produce an excellent finish. I am a devotee of shear scraping with a ground edge of around 15° and a burr to cut with created on a grinder, rather than using a diamond hone.

If you are turning a bark-edged bowl – this could be a round plug taken through the bark or even a branch if you are happy to risk the pith – go against the rule on the outside of the bowl and cut from the bark down towards the base; this will reduce the risk of lifting the bark off. It is against the grain of course, but it is a case of balancing one risk against the other.

ABRASIVES

Abrasives work well on ash but where there are any slight torn grain areas – even after shear scraping – work on these areas by hand with the lathe switched off because no amount of finishing product will hide them! They can otherwise show as pale lines in the work.

Power sanding a bowl

FINISHING PRODUCTS

I always say that if you rub a car down with a house brick, no matter how good the paint sprayer, it will always look like a car rubbed down with a house brick. The same applies to wood. It is the finish you get *on the wood* prior to applying a finishing product that counts. After this, it would look good with just margarine rubbed all over it, but the shine would not last of course.

A cellulose sanding sealer and paste wax give a good finish but not as good or as long lasting as oils. If you have the time and patience, then multiple coats of finishing oil or a hard wax oil give a lasting shine and patina. The platters shown on page 22 have had 10 coats over about a fortnight and 13 years on, despite having never been waxed, they still have a great shine. An alternative I have used only on bark-edged ash bowls is a shellac sanding sealer followed by paste wax. It seems to show the bark off better when compared to other products.

Finishing ash with an oil finish

AND FINALLY...

Ash is not generally recommended for food use because of the ring porous grain. I guess the theory is that bacteria will lodge in these pores. Very few finishes are recommended for food use although this is not necessarily correct. Look for EN 71 compliant for food use or FDA approved for food use. I guess this is because harmful elements are detectable in the products both when in the can, and if the dried finish is analysed in a laboratory. Maybe it's the age we live in and maybe, years ago, they used whatever they could find because they didn't have a choice, but I would doubt their reduced longevity was ever attributed to using ash for food use.

We have been using an ash salad bowl and a fruit bowl for over 20 years now, both finished with multiple coats of finishing oil, and we are all healthy and normal. Apparently.

ASH DIEBACK DISEASE

Ash dieback, caused by the fungus *Chalara fraxinea* is of great concern to us all and was, for a spell, a major news headline. It is reported to have killed between 60 and 90% of the ash trees in Denmark and there is no reason why our ash is any less vulnerable. Unlike elms in the '70s when Dutch elm disease ravaged the UK, it is not thought that the movement of unsawn logs poses a risk to the spread of the disease.

PHOTOGRAPHS BY RICHARD FINDLEY

Turning for restoration

Richard Findley explores the subject of turning for restoration and looks at how to reproduce antique components to the best of your ability

Of all the different turning jobs I do, restoration work is my favourite. I hesitate to call it 'antique restoration' because, while many of the items I work on are old and loved by their owners, possibly with great sentimental value, most are unlikely to break any records at auction. On the odd occasion when a true antique is being dealt with, I am usually working with a professional antique restorer who will deal with the finishing and colour matching, leaving just the turning to me.

Very often, a customer will contact me because they have a clock which has lost a finial during a house move, or a chest of drawers has a knob which has been damaged by a workman, perhaps a much loved chair has a broken stretcher or leg. The replacement part is needed to bring the item back to life, and if they can get a finial, drawer pull or chair leg turned, stained and polished from one person, then they will, and this is a service I offer.

Because these parts are usually old, they are hand turned, with classic shape combinations, well proportioned with beautiful flowing curves, crisp detail and delicate areas, all of which can't be replicated on a copy machine. Modern mass-produced parts tend to be chunky with bold open shapes, so the clumsy scraper tips can form the shapes. The challenge of replicating these old items is a pleasure. Once turned of course, they then need to be stained to match the original, and polished so that the owner can't tell the difference between the new and the old.

RICHARD FINDLEY

About the author: Richard Findley is a registered UK professional woodturner living and working in Leicestershire. He discovered woodturning while working for his father as a joiner. Richard 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, tuition and a range of woodturning supplies.

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WHERE TO START

In my experience, there are four main areas to focus on when you are reproducing 'antique' components:

1. Timber choice
2. Matching the shape
3. Matching the colour
4. Matching the sheen level

You can really go to town on an item by distressing it. I've heard of people drilling 'woodworm' holes, banging them against bricks or rough surfaces, or with hammers to produce dents, all with the aim of 'ageing' the final item.

Over the years I have tried most of these methods on various items that I've made, but have found that, in the end, they always end up looking like they have been drilled or knocked around, rather than looking genuinely antique. Creating the real patina of age is something that simply needs to develop over time. If you can focus on the four areas I have listed opposite, then the component will not look out of place and should stand up to all but a very close inspection. Time, handling and UV light will do the rest.

TIMBER CHOICE

The first step with a restoration project is to identify the timber that was originally used. This sounds easy but I have found that, just because the finial belongs to a 'walnut wall clock', it doesn't necessarily mean it will be a walnut finial. Today, a craftsman probably wouldn't consider using a different timber for a finial, but attitudes have changed a lot over time, and it is quite common to find a finial made in sycamore *(Acer pseudoplatanus)* or beech *(Fagus sylvatica)*, and stained to match the rest of the clock.

This may have been because the main woodwork of an item was made of thinner material, and rather than buy thicker stock just for a finial, they would choose to use whatever they had to hand, knowing it could be stained to match. Or perhaps they sourced turned components from a specialist turning company, and chose a cheaper material? Whatever the reason, it is important to try to match the original material to help obtain the best result and to maintain authenticity throughout the project.

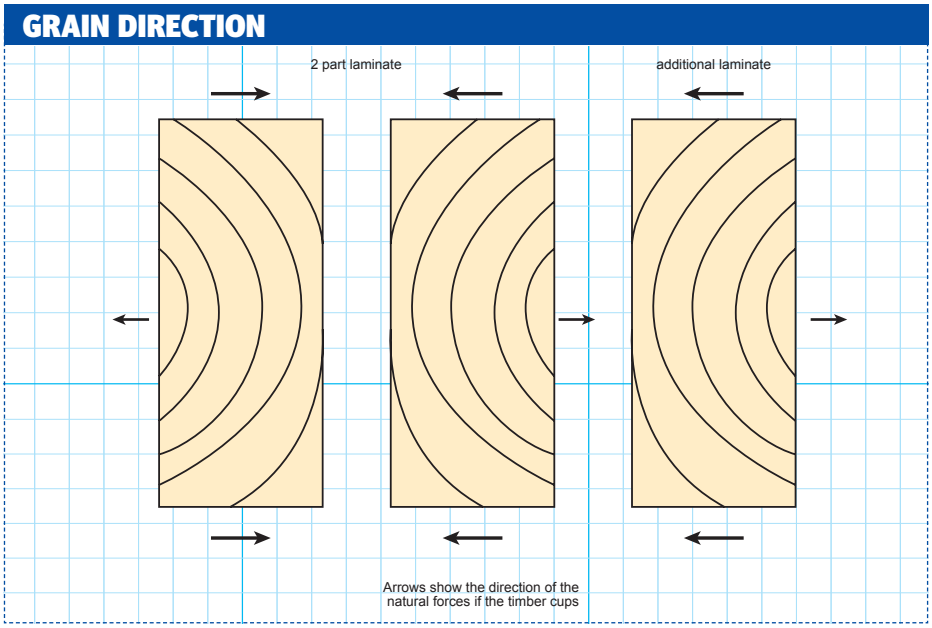
It has always been, and still is, quite acceptable to join, or laminate timber in order to produce larger sections. Some consideration needs to be taken here to help ensure the best possible results.

Firstly, the choice of glue is important. From experience, resin-based glues offer the best joint as they resist 'creep'. This occurs when a joint moves after a part has been worked, leaving a joint line which is obvious to the touch, despite it being smooth immediately after turning and sanding.

The other important factor in successful lamination is the grain orientation. If you look at the end grain of the timber, growth rings will try to straighten, which leads to cupping. If you glue the timber with the rings in the wrong direction, they will naturally try to pull apart at the edges. By orientating them correctly, the edges will always push together, giving long term success to your joints.

It is worth remembering that, if the item being turned has slender parts to it, then a central join is only going to cause you problems later on. If this is the case with your project, it is much better to glue in three sections; this method will leave you with solid timber in the centre, which is where the thin detail is.

Various timbers commonly used in restoration – sycamore, beech, oak, walnut and sapele



MATCHING SHAPE

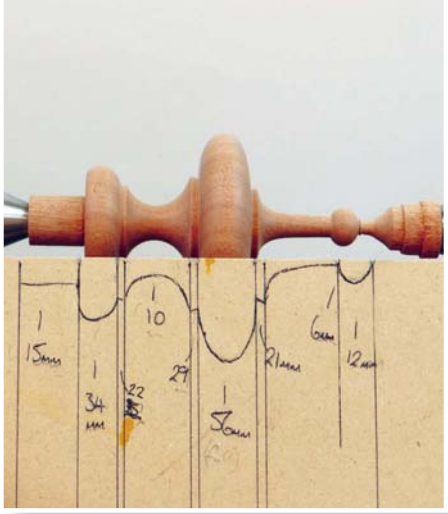
Good copy turning is vital here. To get the best match I would make a copy template, as described in issue 266. These are simple to make from a thin offcut of MDF or ply. As long as you take your time and make them accurately, a copy template will enable you to mark out the positions of the details along a spindle, as many times as you need to. They also keep all of the relevant information about the part in one place for easy reference.

The key to good copy turning is getting the details in the right place. A bead or cove out of place will draw immediate attention to itself. The template will help you to mark out the component accurately, and all you then have to do is cut it to the correct shape.

A good eye helps when copy turning: some naturally have one, but it certainly comes with practice. Don't be afraid to hold up the new and original parts together, out of the lathe

Turning the finial

Sanding the finial



A copy template

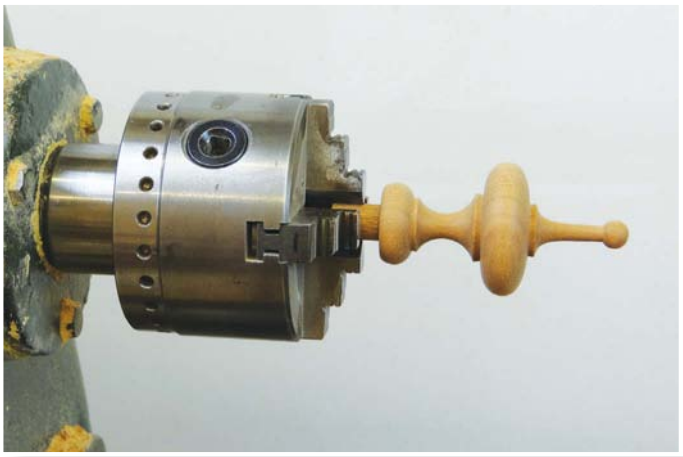
MATCHING SHAPE

and in good light, then compare them. Be prepared to remount them on the lathe and adjust. It's amazing the difference it can make to the appearance of a part, just by turning it the right way up!

Good tooling is important, but good sanding can't be underestimated. Many a turning has been ruined by poor sanding. On small items like this, and with good tooling technique, it should be possible to start sanding at 240 grit. If you can minimise the sanding you do on small detailed turnings like this, then all the better. I would usually use 240, 320 and then a fine abrasive pad to prepare it for finishing. This is fine enough to remove all visible abrasive scratch marks and will allow you to achieve a good level of gloss at the final stage.

COLOUR MATCHING

Just some of the wide range of stains available



The finial, mounted in the chuck, ready for finishing

This stage is seen by many as something of a dark art. There are several ways of approaching it and a number of products that you can use, depending upon the situation.

Firstly, there is the type of stain that you use. The two most common types of stain are water-based and spirit-based. Once, these would have been kept as powders and mixed with either water or meths, to an appropriate shade before applying. Now, you can buy excellent quality premixed stains, which themselves can be mixed with other colours to create new shades.

More often than not, I will use spirit-based stains, as they dry quickly and are easy to apply. However, if you plan to apply French polish by hand, then you need a water-based finish, otherwise you will lift off the stain as you apply the polish – the polish also being spirit-based. When using water-based stain and French polish together, I can't emphasise enough the importance of allowing the stain to fully dry. French polish does not take kindly to moisture, and the component will be immediately ruined.

If you do a lot of restoration work, you can build up a collection of mixed stains to suit various shades of mahogany or dark oak colours. The problem is, if you don't do it that often, you will find you have a collection of jars containing an unnamed stain, which quickly get muddled up. I prefer a slightly more trial and error approach, which allows you to gradually build up the colour, and ultimately gives you more control over the final shade.

Most components have some sort of spigot to allow for fixing, or perhaps a screw hole, which means they can often be remounted on the lathe in such a way that maximum access to it is possible. This means you can finish it on the lathe. If this isn't possible then, as long as you are able to hold it without marking the visible parts, you can do it off the lathe. Using the lathe to hold it is usually far easier, though.

The first stain I use is yellow. This sounds strange, but using this method will build up a depth of colour, and with yellow as a base, it gives a hint of age to the part, as sun bleaching often yellows woodwork. From here I would gradually add premixed mahogany or walnut-type colours, depending upon the shade you are aiming for. Generally speaking, redder, mahogany shades are on a red coloured wood to start with, such as a genuine mahogany *(Khaya ivorensis)*, sapele *(Entandrophragma cylindricum)* or similar. Shades of brown, or dark oak as it is often referred to, often start on oak *(Quercus robur)*, walnut or a paler timber such as beech *(Fagus sylvatica)* or sycamore *(Acer*

COLOUR MATCHING

psuedoplatanus). Obviously, the initial colour of the timber will have an effect on the final colour. As an example of this, in the past I have had to use maple as a base timber to achieve a faded mahogany colour, so faded it was more yellow than the original red-brown**. Using a darker wood would have made a colour match impossible.

Needless to say, you do need to have a selection of colours available to you, I have found it useful to have premixed timber colours and base colours to hand. A good selection would include:

- Light mahogany
- Dark mahogany
- Walnut
- Light oak
- Dark oak
- A really dark oak – sometimes called Tudor or Jacobean oak
- Red
- Yellow
- Green
- Black

If you intend to really get into restoration, then there is no problem buying a standard 500ml or 1l container of these stains, but if you only have one or two pieces to do, then some manufacturers offer mixed trial packs, which give small bottles of most of these and many more colours.

Standard manufacturer's instruction sheets usually contain the phrase 'test on a small area first'. The problem with turned parts is that, because the turning process reveals the more absorbent end grain to varying degrees, a colour that works on a flat piece of wood often doesn't work on a turned part. The main advantage of this method, applying a little at a time, is that you just keep going until you get it about right. If, however, you go too dark, then all is not lost. Allow the stain to dry and then you can either resand the component, or use a spirit thinner, or a combination of the two, to lift off some of the stain. You will never remove it all, but you can certainly take it back to a stage where you get a second go at achieving the right colour.

Applying the first colour – yellow

Adding further colour to deepen the effect

Sanded back and wiped over with spirit thinner for a second attempt

FINAL FINISH AND SHEEN LEVEL

If the piece of furniture that the component is from is old, chances are it will have been French polished. True French polishing is a real skill which can take years to perfect, but for our needs here, I have a short cut!

Traditionally, French polish is applied using a 'rubber'. This is formed using a ball of wadding, soaked in polish, wrapped in a lint-free cloth, which can be slightly lubricated with linseed oil to aid smooth application. The advantage of the 'rubber' is that by changing the pressure applied to the surface, you can control the amount of polish you are using.

I have had success by simply putting polish on a cloth and applying to the spinning work – but you can only do this on completely dry water-based stain. To apply French polish to spirit stain you need to apply the first coat by spraying.

I have a full compressor, spray gun and spray booth set up in my workshop, but I have also had success using an airbrush to apply it. You will need to strain the polish first, as it often has bits in, and thin it with a spirit thinner, then spray with the lathe slowly spinning, until the component has a good even layer all over. It is always better to apply several thinner layers than one heavy coat. Once this coat is fully cured, it is then possible to apply further coats with a cloth and the lathe spinning, as the sprayed coat effectively seals the stain into the timber.

There are two main advantages to using French polish over another type of lacquer. Firstly, French polish imparts a colour and sheen almost impossible to replicate with any other product. Secondly, you can use small amounts of spirit stain to tint the polish still further, which will allow you to get the colour absolutely perfect.

As with most finishes, the more coats you apply, the more hard wearing it will be, and also the more glossy it will be. Sheen level is one of the keys to good restoration, in my opinion. A finial fitted to the top of a clock that is too glossy, or too flat, will stick out like a sore thumb. Get it just right, and it will help it blend in and look as if it has always been there. To finish off the item, I will normally apply a coat of wax with a fine Nyweb pad, which is a kind of synthetic steel wool. This has the advantage of gently cutting back the polish and smoothing it out, and also adding that waxy glow to the work. You can also use coloured waxes to further darken the component, if required. The Chestnut waxes that I use are available in several shades of brown, but the clear version can be mixed with small amounts of spirit stain to create custom colours, should you need to. Once applied, I use a soft cotton cloth to gently buff it to a final finish. Although cotton cloths are generally advised against for lathe work, I find they do give the best finish with waxes, and used with care, are perfectly safe.

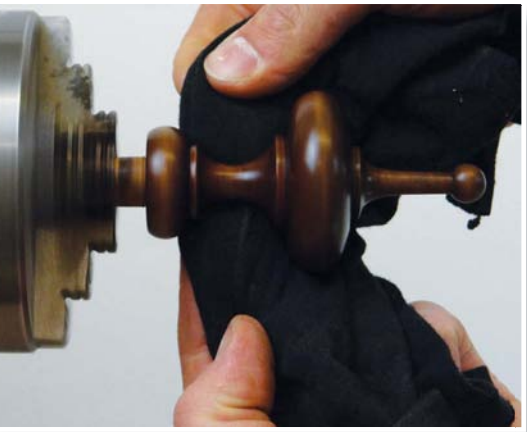
Spray equipment, proprietary polish and thinner

Spraying polish with an airbrush

Spraying polish in my spray booth

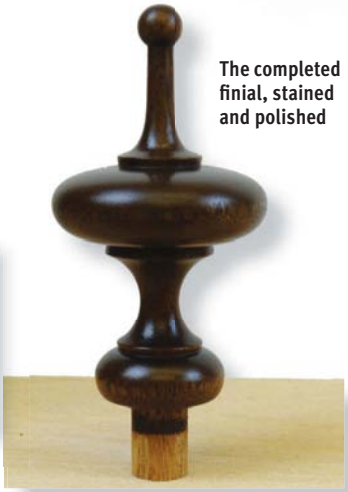
Applying further coats by hand

Applying wax with a Nyweb pad



Buffing the wax with a soft cotton cloth

The range of Chestnut coloured waxes



The completed finial, stained and polished

ALTERNATIVE LACQUER FINISHES

There are other lacquers which offer an excellent finish to small turned components like this, although you do lose a little flexibility with colour tinting and control of sheen levels. Acrylic lacquers give a really clear finish, so if you have the perfect colour from staining, these are a good option. They are also great for work in pale woods, such as sycamore, maple *(Acer campestre)* and ash, where the aim is to preserve the whiteness of the timber. Melamine and AC-type lacquers tend to have a slightly golden tint to them, making them excellent finishes for oak and walnut, bringing out the depth of colour. Each of these can be buffed further with wax, or cut back slightly with fine abrasives.

A range of lacquers and polishes

FINAL FINISH AND SHEEN LEVEL

WHAT IS FRENCH POLISH?

Shellac, the base of French polish, comes from the excretion of a bug that lives on trees in India and Thailand. From this excretion they produce dried flakes, or 'buttons', which can then be mixed in alcohol – methanol – to produce the golden polish, known as French polish or button polish. You can buy proprietary 'French polish', premixed into a general use consistency. Skilled French polishers will often make up their own mixes of polish for certain jobs, with more or less shellac, as required.

HEALTH AND SAFETY

Protective equipment should be used when handling finishes, especially when spraying. A spray mask, eye protection and protective gloves are a minimum requirement.

You will notice I am wearing gloves when applying finish on the lathe. There is a health and safety quandary here: you shouldn't wear gloves when using a lathe, but you should wear gloves when applying finishes. You need to make your own mind up as to which is best practice. If you do wear gloves, then use thin disposables and take extreme care not to to touch chucks and moving parts. Only the cloth/paper should touch the work. Likewise, when using cloths or paper towels with the lathe running, fold the material into a pad so there are no trailing parts to get caught, and never wrap it around your fingers; this makes it as safe as possible. Awareness of the risks and implementation of a few simple procedures will make this a safer operation.

Personal protective equipment

EXAMPLES OF RESTORATION WORK

Twisted spindles for a genuine antique clock, supplied unfinished for the restorer to ebonise

Faded mahogany knobs made in maple and colour matched. Shown mixed in with the originals **

Chair stretchers made to match the originals. Shown mixed in with the originals

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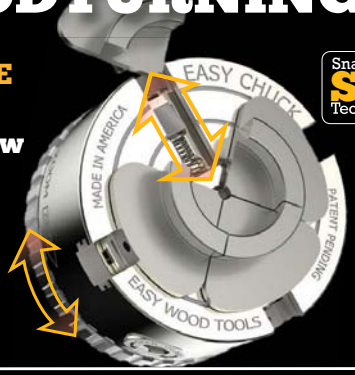

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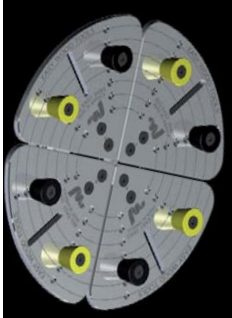

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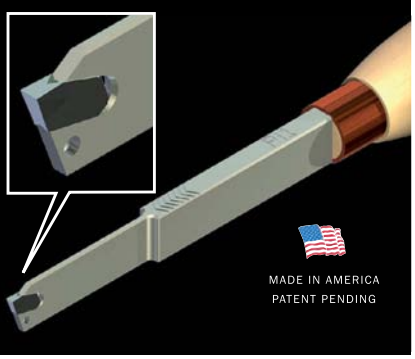

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PHOTOGRAPHS BY MARK SANGER

End grain natural-edge bowl – part 2

Mark Sanger continues looking at the subject of natural-edge turning and in this issue, turns a natural-edge cross-grain bowl from a piece of unseasoned English oak

In my last article, the first part of this series on turning natural-edge pieces, I showed you how I turn an end grain natural-edge bowl in yew *(Taxus baccata)*. Here, in the second part of this series, I am going to show how I turn a natural-edge cross-grain bowl from a piece of unseasoned English oak *(Quercus robur)*, which contains a considerable amount of burr from a slice cut from the side of a large trunk. Once processed, the blank is mounted on the lathe with the grain running perpendicular to the spindle axis, which is known as 'cross-grain' turning. The growth and grain structure within a burr makes it difficult to say that the grain runs in any given direction as, in reality, it runs in all directions, making it difficult to interpret how the wood will move after turning and during seasoning. Within the section turned here, a small amount of normal wood remained within the base of the bowl with it being approached as a cross-grain blank, and therefore, as I wanted to maintain the natural edge of the piece, I had to take a few considerations into account in order to ensure this was preserved.

MARK SANGER

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Mark is a professional turner living and working in Dorset. He specialises in creative turning that incorporates texturing, colour and mixed media. Mark has written numerous woodturning articles, demonstrates the craft, runs courses and has produced DVDs on the subject.
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BURRS

Burrs grow on the main trunks of trees, large branches and within the root structure, where they appear as large knobbly growths. The internal structure is tightly bound with the resulting patterns when cut being highly prized by furniture makers and turners alike due to the sheer beauty and possibilities that they hold. The photo opposite shows a close-up shot of the figuring from the English oak burr bowl that is later turned in the project.

It is thought that burrs grow as a reaction to disease, infection or injury to the tree, at which point the wood defends itself by surrounding the area with hard compact growth. Burrs can be purchased from woodturning supply outlets as seasoned prepared blanks or solid burrs, but can also be sourced from a good timber mill, the latter being my preferred source of wood.

The figuring of an English oak *(Quercus robur)* burr

PREPARING BURRS FOR TURNING

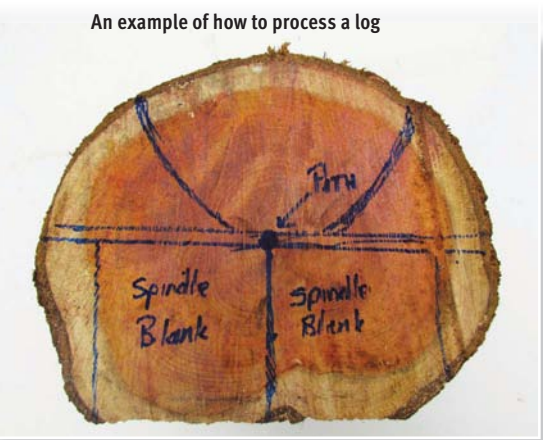
Purchasing from a timber mill requires further work and processing on my behalf but allows me the freedom of choice when it comes to processing the wood, allowing me to achieve maximum grain impact within the finished piece. If you do decide to process your own stock, then a suitable sized bandsaw and/or chainsaw will be required. However, before using these pieces of equipment, a suitable training course should be attended as both can cause serious injury or death if not used correctly.

The location in which a tree grows and the location of the burr within it need to be taken into account when processing into stock for turning. Trees growing in hedgerows or boundaries may have been used as an anchoring point for fences and gates and, as such, the adjacent wood/burr may contain nails, wire or even a gate hinge that has been enveloped by the many decades of growth, all of which pose a potential risk of injury during cutting and turning. Burrs growing within the root structure and low sections of the trunk can also contain stones, grit and similar within the surface of the bark, which may result in damage to tools as well as potential injury during turning.

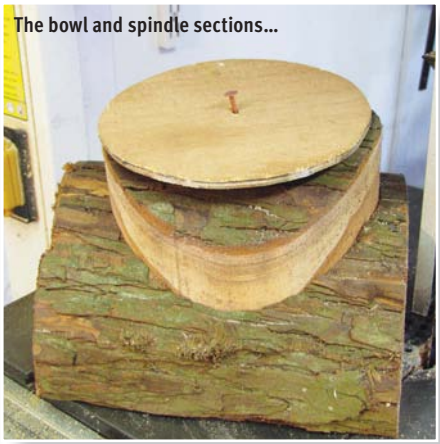
Best practice is to check burrs for metal fragments using a builder's metal detector before cutting from the tree. This equipment can be purchased from most good builder's merchants but it should be noted that they will only penetrate to a specific depth depending upon the model, so are not fail safe. The surface, prior to processing, should also be checked for stones and cleaned using a high-powered jet washer – again, this is not fail safe as fragments may be found deep within the burr, so always wear a high impact full-face mask during processing and turning. If access to a jet washer is not an option, then brush out the bark/burr with a stiff brush to dislodge any stones. The burr turned here was cut from the tree by my local sawyer and was cleaned prior to cutting on the bandsaw using a power washer.

Using a power washer to clean a burr

PROCESSING A LOG INTO THE ROUND



An example of how to process a log



The bowl and spindle sections...

... processed from the remaining half of the log

Any sound log or section can be used for a cross-grain natural-edge bowl. The pith should be excluded from the processed blank until you have more experience as the movement, if included within the final project, can raise the chance of cracking and excessive distortion. An example of how to process a log is shown here where a yew log has been marked to show the pith – a proposed bowl with the remaining section being processed for spindle blanks. The log is cut along the

The burr being processed using the same method

PROCESSING A LOG INTO THE ROUND

centreline at the pith with the bowl being cut out on a bandsaw. A plywood disc is fixed to the top using a tack and used as a guide for cutting, showing the bowl and spindle sections processed from the remaining half of the log. The lower section here contained side growth and was not suitable as a bowl blank due to multiple piths with most of the growth being cut away initially, which allows better workholding on the bandsaw. The burr being used later in the project was processed in the same way as the yew bowl.

WOOD MOVEMENT

The movement within 'normal' wood, as covered in the previous article, results in a thin-walled, cross-grain, natural-edge bowl that moves and relaxes into a slight oval shape without cracking. This, together with the natural-edge, adds to the interest of the finished form. The grain direction within a burr is complex, interlocking and without any specific direction, the result being inconsistent movement during seasoning, which produces dramatic movement and surface texture as the surface and structure of the burr collapse and twist into final position. Not knowing how a piece will season is an exciting part of the process of turning wet wood and burrs, as no two pieces will ever be the same.

"Not knowing how a piece will season is an exciting part of he process..."

KEEPING THE BARK INTACT

Retaining the bark on a cross-grain bowl is achieved in the same way as that of an end-grain bowl. Sharp tools, the correct cutting sequence and a moderate spindle speed are all important factors. On occasions, the bark, no matter how careful we are, will come away from the wood, so always wear a full-face mask and take your time. It is better to take small cuts than to cause excessive stress within the wood through making heavy cuts. If the bark does come away, then it can be secured with CA glue to fix it in place. CA glue will often stain/darken the bark and wood so to help prevent this, apply a general finishing oil to the area being glued. This in turn fills the pores and allows the glue to set, thus greatly reducing staining. It is not fail safe but works more often than not. Alternatively, glue can be applied to all of the bark around the rim, which produces a consistent colour throughout.

Bark being secured in place with CA glue

WALL THICKNESS

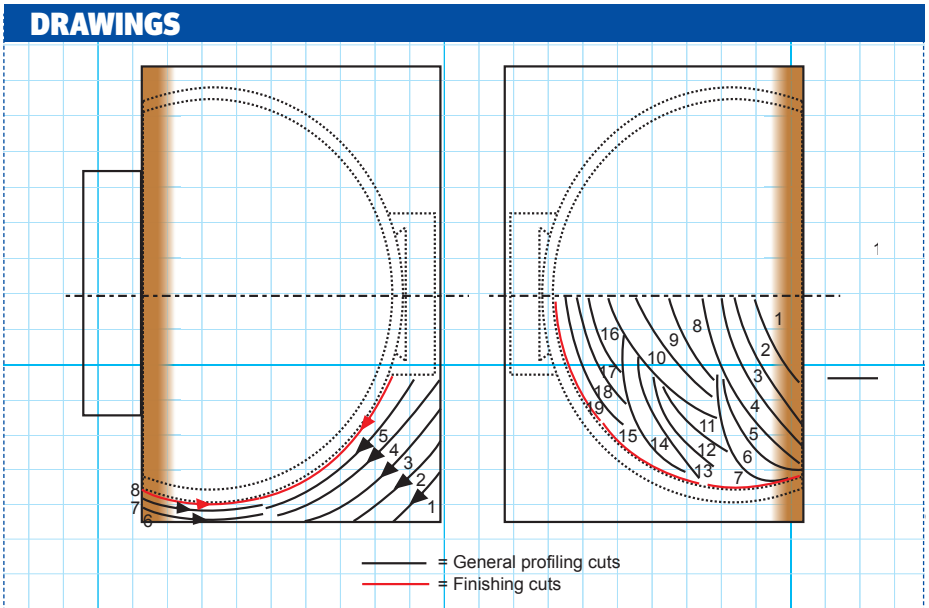
As highlighted, the movement in a burr during seasoning cannot be gauged as with 'normal' wood so the wall thickness in an unseasoned burr vessel should be thin enough for the wood fibres to move without cracking as it seasons. A consistent wall thickness from rim to foot of around 3-6mm is adequate for this. If the wall is 6mm thick at the rim, it must be consistent all the way down into the foot. An uneven wall thickness will cause the wood to season and move at different rates, raising the chance of failure through cracking.

Callipers are used here to measure the wall thickness, as shown in step 7 of the project. Alternatively, a light positioned close to the vessel can be used to shine through the wall as it becomes thin. To recap from the previous article: the amount of light penetrating the wall will vary from species to species. The light used should be a cold LED workshop light. These are robust and housed in impact-resistant plastic or rubber and are designed for workshop environments. All trailing cables must be kept well clear of the moving parts of the lathe with best practice being to use a low voltage or battery-powered version. Never use a domestic desk-type light with a filament bulb or similar. Not only do these get hot, which can crack the thin wall being turned, but if accidentally smashed, live contacts are exposed that can cause serious injury, but more often than not kill if touched. It is paramount to always be thinking of safety whenever you are in the workshop.

CUTTING SEQUENCE FOR A CROSS-GRAIN NATURAL-EDGE BOWL

In order to retain the bark on any natural-edge vessel, the wood must be cut in a specific way that varies slightly from standard turning. Here the outside is cut from the base toward the rim stopping 25mm from the cambium layer and bark instead of cutting all the way from the base to the rim as normal. The direction of cut is then changed to cut from the rim down to the section already shaped. This enables the fibres of the bark and rim to be supported by those directly in front of them. Cutting as standard from the base to the rim would result in breakout at the rim and loss of bark. However, hollowing out of the inside is as

DRAWINGS



◀ CUTTING SEQUENCE FOR A CROSS-GRAIN NATURAL-EDGE BOWL

for a standard cross-grain bowl with the direction of cut being from the rim to the base. Here the bowl is turned to finish in one go with the inside being hollowed out in stages. Each section hollowed is refined with a scraper before using a deeper cut. The flexibility and movement within a thin walled vessel, even within a short time on the lathe, will often result in movement and shrinkage within the wood, which makes it difficult, if not impossible, to return for further refining later after the hollowing has been completed.

FINISHING

Finishing, depending upon the size and depth of the form, can either be carried out in stages as we work deeper or, as here, once all the tooling and refining with a scraper has been completed. A bowl with a fairly even rim can be finished by power sanding or by hand with the lathe spindle rotating. The method you choose is up to you and will obviously depend upon the equipment you have available to you. The rim of a bowl with a jagged undulating rim is best finished with the lathe stationary using power sanding to refine from 120-320 grit abrasive, as shown in the previous article. Finishing a jagged rim by hand is dangerous and should not be attempted.

So, if you want to finish with the lathe in motion, always use abrasive that is attached to a foam pad and keep fingers well away from the edges. Apply moderate pressure only when finishing with a foam pad; this prevents the edges of the rim being rounded over through aggressive sanding. Whichever method you choose, always think safety – never stick your fingers in a spinning form with voids or an uneven rim.

WORKHOLDING

Mounting a cross-grain blank on the lathe requires a slightly different method to that of a prepared blank that has a flat sawn surface. In order for us to maintain a natural-edge, we keep the convex curve of the log or face of the burr intact. One method for initially mounting on the lathe is to drill a hole slightly larger in diameter of the four-prong drive around 20mm deep into the wood through the bark of the log. This allows the drive to be held securely against a solid surface while encapsulating the drive, as shown later in the project.

MAKING A NATURAL-EDGE CROSS-GRAIN BOWL

DRAWING

INFORMATION

TIME TAKEN & COST

Time taken: 1 hour

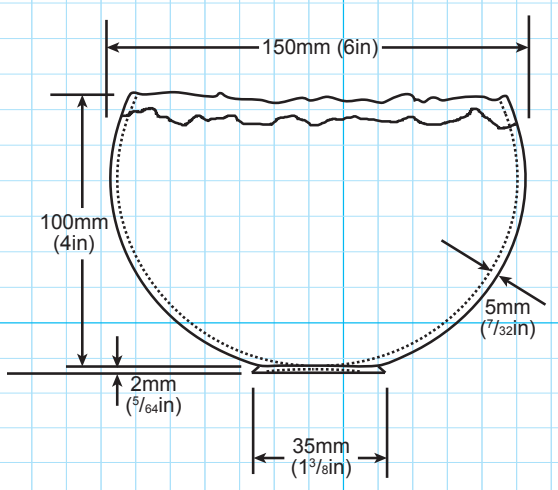
Cost: £4

TOOLS REQUIRED

- 10mm bowl gouge
- 12mm skew chisel
- 25mm square-end scraper
- 25mm round-nose scraper

ADDITIONAL TOOLS

- Fine-bladed hand saw
- Abrasives from 120-320 grit
- Inertia sanding arbor
- Finishing oil
- 25mm Forstner bit
- Drill/driver
- PPE: facemask, respirator/dust mask and extraction



Step 1: begin by drilling a hole centrally into the top of the blank using a Forstner bit held in a drill/driver. You need to drill to a depth of around 20mm into the wood below the bark

Step 2: using a 10mm bowl gouge, clean up the outside to the round. Cut from the headstock end into the bark to the tailcentre and produce a spigot and waste area at the base. Refine using a 12mm skew chisel held horizontal on the toolrest in scraper mode, if required, to suit the profile of your chuck jaws

Step 3: using the bowl gouge, continue to shape the base profile of the bowl. Cut from the tailcentre towards the headstock stopping around 20mm from the bark/natural edge. See the cutting sequence diagrams for clarity

Step 4: refine the profiled area with a 25mm square-end scraper

Step 5: reverse into the chuck, cut from the rim into the lower section with the bowl gouge and blend the two areas together. Refine as before using the scraper, taking fine cuts and again working from the rim down, which will prevent the bark from being pulled from the rim

Step 6: start hollowing out the inside with the 10mm bowl gouge to a depth of 50mm. You should keep going until you have cut below the join of the natural-edge and bark

Step 7: continue reducing the wall thickness to 3-6 mm. Check regularly with callipers and refine using a 25mm round-nose scraper as required remembering to cut from the rim in; this will prevent breakout of the bark or edge

Step 8: continue to hollow in stages checking the depth with a depth gauge as you near the base

Step 9: finally, refine the lower section with the scraper

Step 10: due to this bowl being relatively shallow, enough rigidity remained with the walls and the inside and outside was finished after hollowing. For this step, carefully use an inertia sanding arbor with abrasive from 12-320 grit to sand near the rim and bark. For the rims of deeper vessels, finish with abrasive and work down in stages after refining with the gouge and scraper. Forms with voids or excessively uneven rims should be finished with the lathe stationary using a 50-75mm diameter sanding arbor held in a battery powered drill/driver, which was covered in the previous article

Step 11: reverse the bowl onto a friction drive that fits down into the base of the bowl, protecting the surface with several sheets of kitchen towel. Bring the tailcentre up for support and apply moderate pressure

Step 12: using the 10mm bowl gouge, refine the base profile and reduce the waste section and spigot

Step 13: refine the surface with the gouge in shear scraping mode, or alternatively, use a standard 25mm square-end scraper

Step 14: using a 10mm spindle gouge, further reduce the waste and profile the foot, making sure it is slightly concave. Finish the base with abrasive by hand from 120-320 grit

Step 15: stop the lathe and cut through the remaining waste with a fine-blade saw

Step 17: finish the base with abrasive on an arbor held in a scrap piece of wood in the chuck

Step 16: refine with a power carver or sharp chisel, working away from your body as you cut

Step 18: apply several coats of finishing oil and wipe away any excess. Set aside in a cool draught-free location for several weeks to season. Weigh with digital scales weekly until the weight stabilises for two weeks, at which point the moisture level will be equal to that of your workshop. Introduce into a cool location in your home to settle. Apply more oil if required or a top coat of your desired wax. Once seasoned, if the bowl rocks, place 180 grit abrasive on a flat surface and place the foot of the bowl onto this, gently twisting back and forth until the bowl is stable

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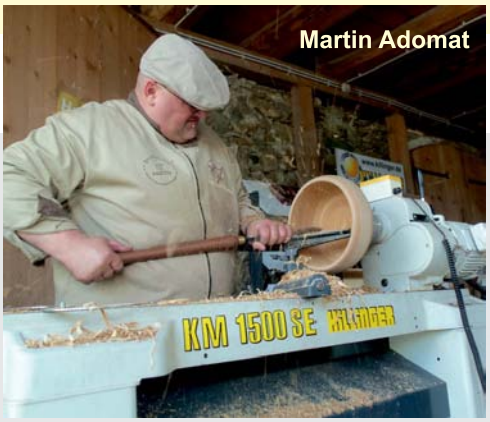

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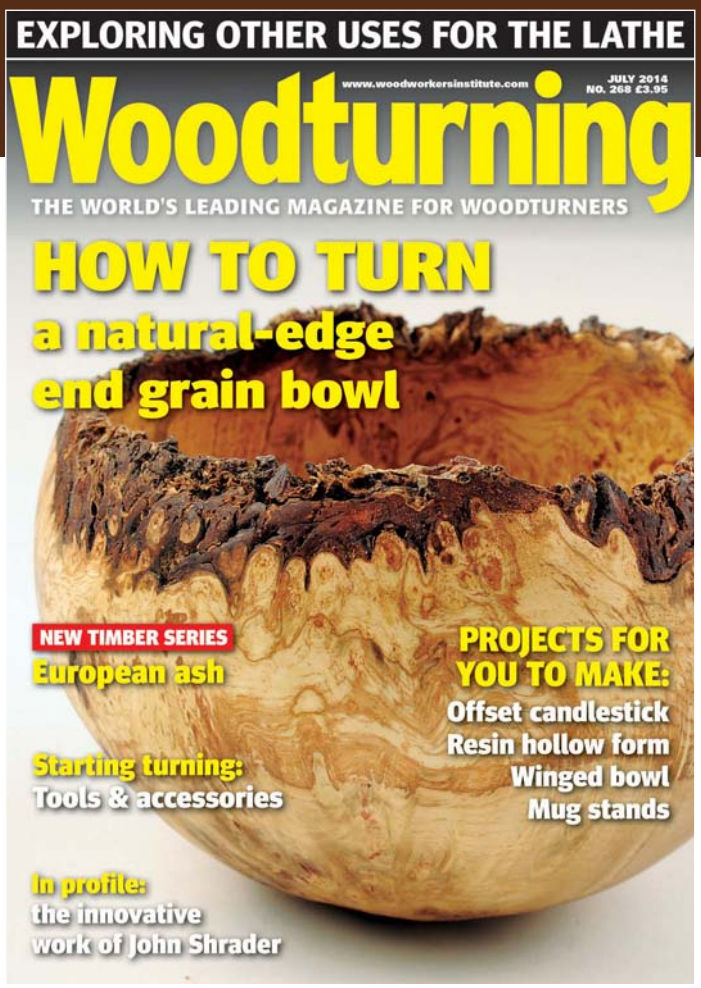

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PHOTOGRAPHS BY FRANCES WILEDY

Winged bowl

Nikos Siragas shows you how to make a turned and carved 'winged' bowl in European olive

Combining carving and turning has become a popular part of artistic turning and impressive work can be seen at various exhibitions and competitions. However, hobby woodturners can be nervous about incorporating a carved element into a turned piece as perhaps they have not tried carving or do not know how to create a satisfying form. It is a good idea to take a look at work on the Internet and also to look at forms in glass and pottery to get inspiration for your own pieces. Turning and carving go hand in hand and adding a carved element to your turned piece can really help to elevate your work and also helps to broaden your skillset. Also, nowadays there are many tools that can help turners to shape their work beyond the round, using power tools and various different shaped rasps – as can be seen in this article.

With this design, I wanted to create a bowl with a real three-dimensional effect so first I cut and shaped the wide 'rim' of the bowl and then cut into the side to add more shape in a way that is not too difficult for intermediate turners to do. Thus, the carving on the bowl can be seen both from above, with the 'wings', and from the sides, with the wave effect.

NIKOS SIRAGAS

About the author: Nikos specialises in turned and carved work, running a gallery and workshop in the historic tourist town of Rethymno on the island of Crete, Greece. He holds courses at his workshop in the hills above Rethymno and also demonstrates and teaches each year in the UK as well as other parts of Europe. You can see more of his work on his website.

Email: nsiragas@yahoo.com

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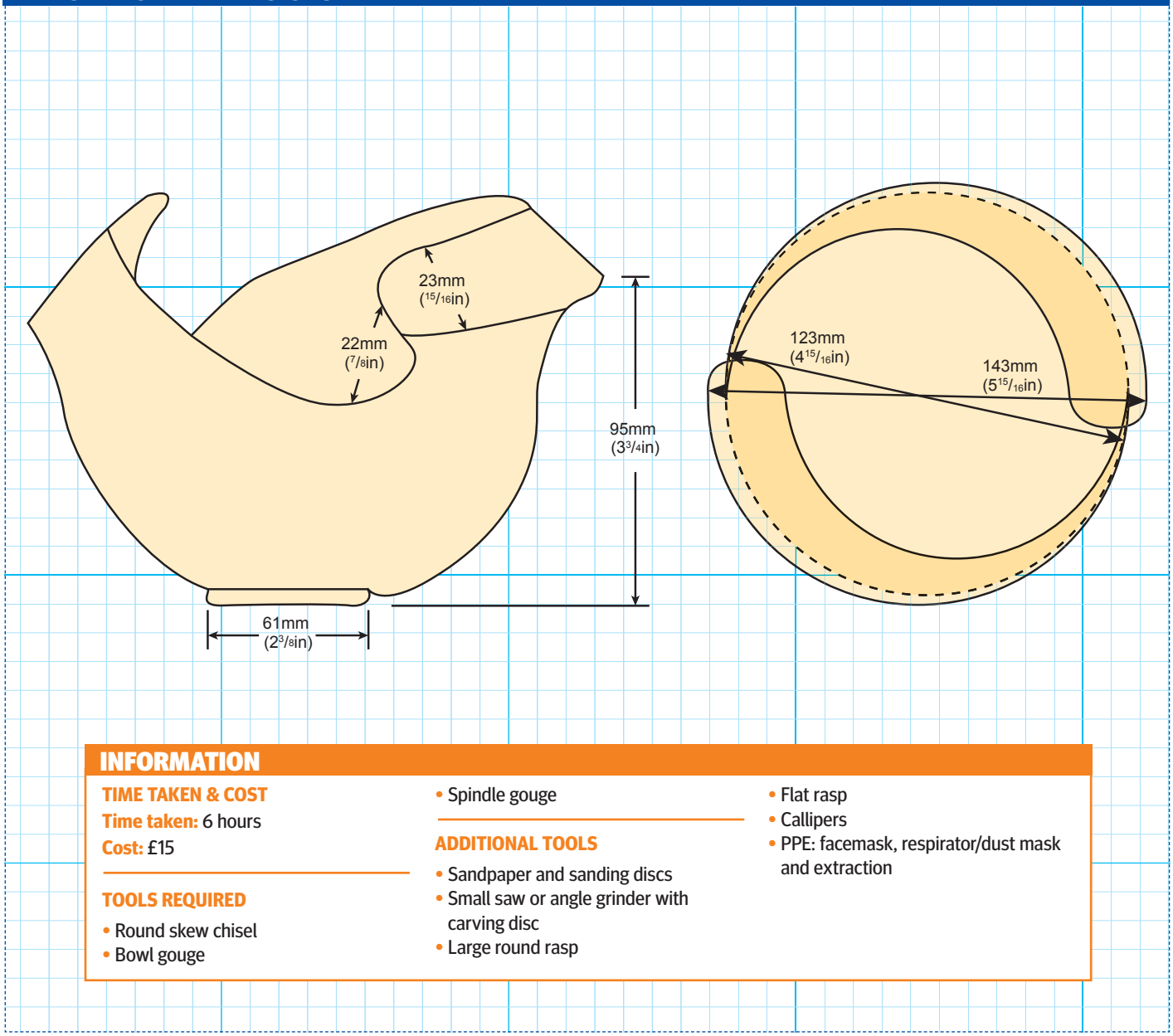
WINGED BOWL DIMENSIONS



INFORMATION

TIME TAKEN & COST

Time taken: 6 hours

Cost: £15

TOOLS REQUIRED

- Round skew chisel
- Bowl gouge
- Spindle gouge

ADDITIONAL TOOLS

- Sandpaper and sanding discs
- Small saw or angle grinder with carving disc
- Large round rasp
- Flat rasp
- Callipers
- PPE: facemask, respirator/dust mask and extraction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1 For this project, you will need to start with a dry bowl blank of about 140mm diameter, 110mm long. For this piece I am using olive *(Olea europaea)*, which is a compact wood that is good for both turning and carving. Mount this securely on the lathe and then create a chucking spigot the correct size to fit your jaws, using a round skew chisel. Using a bowl gouge, level off the surface and then mark a line (A) about 20mm down from the top part of the blank. Also mark a line (B) on the surface about 30mm in

2 Cut off the corner at a shallow slant between line B and A with a bowl gouge. Note the angle the gouge is presented to the wood surface in the photo, at this angle you will cut away the wood quite effectively

3 Mark a line across the centre of the piece and then another line around the piece, about 20mm down from the edge. Join the central line to the line around the wood

4 Start shaping the outside of the bowl with your bowl gouge, using the line on the side as a guide for the shape. This line will disappear as you remove the wood but will be marked again later

5 After rough shaping the outside you should end up with a lip at the top and a gradual curve towards the base. Leave it with this basic shape as you will go back to work on the outside after hollowing out. Start hollowing out with your spindle gouge. Use the gouge as a drill to open up a hole in the middle and gradually open up the hole with short, sweeping movements from the middle of the bowl, moving slightly upwards and then to the left

6 To ensure you get to the right depth and don't open up a hole in the bottom of the bowl, use your gouge to measure approximately how deep you should go

7 When you have hollowed out a certain amount of timber, go back to the outside, using your bowl gouge, and turn it further to its final shape. Use the gouge at an angle and to the side of the flute, as shown, so it shear scrapes the surface

8 Now you need to hollow out the centre to the wall thickness you want. Here I am using my scraper to open up and refine the inside surface

Handy hints

1. Before you start, make sure your tools have been sharpened, you are wearing a mask or protective eyewear and suitable clothes for turning and you have your dust extraction system turned on. If using power tools it is a good idea to wear ear defenders

2. Sanding often works better if you work with the lathe in reverse mode. Remember to keep the sandpaper moving along the surface of the piece, never leave it in one place when it is rotating or you will get sanding lines

3. For sanding curves and other tricky parts of a carved piece, I have found it useful to make myself a wooden stick that is flat on one side and curved on the other. I then stick a strip of hook-and-loop abrasive to it so I can attach sandpaper – with flock lining on the back – to it and sand more easily


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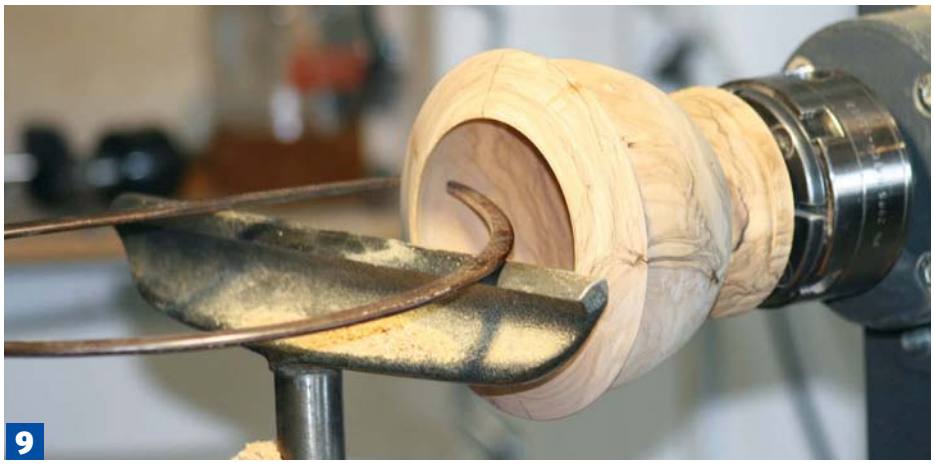

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9 Use callipers to check the wall thickness. The rule with carving is always to leave a little extra wood in case of mistakes

10 Sand the bowl inside and out, I go up in stages to 600 or 1,000 grit. Mark a line around the outside of the bowl, about 30mm down from the lip and join this line to the one you have drawn across the centre of the bowl top

11 Use either a small saw or a Proxxon angle grinder with the black Arbortech carving disc attached. Cut across the top of the bowl 'wings' on both sides down to the 30mm line marked on the side of the bowl. Note that I have had to add wood dust and glue to many parts of the timber as the olive wood developed small cracks as I worked on it. This is a typical feature of olive even when it is quite dry

"Now you have the top rim cut in half you need to find the centre of each half"

12 Now you have the top rim cut in half you need to find the centre of each half. Use callipers to find the central point and draw a line. This line sets the limit of where you will cut the rim to get the 'winged' shape

13 Use the angle grinder and carving disc or a small saw to cut diagonally from the top edge of the line you have just drawn, down to the bottom of the cut in the side of the bowl. Repeat this process on the other half of the bowl so you have a symmetrical design

14 To get the curled wave effect on the side of the bowl, use a large round Microplane rasp to cut into the side of the bowl, on both sides. Cut the wood gently with the rasp until the rasp fits almost two-thirds into the side of the bowl and there is a circular shape

Handy hints

4. For reverse chucking, another method for creating a bung in the chuck is to have a wooden bung with a wider piece of insulation polystyrene glued to the end – it looks a bit like a large mushroom – and then you can use a chisel to shape the polystyrene to fit the piece you are working with. I have a wider one, for bowls, and a narrower one, for vases

15 Clean off the rough edges with a flat rasp, smoothing the surface and rounding off the edges on the side of the bowl. Use your eye to make sure there is a smooth transition from the turned element to the carved part

16 Use cylindrical sanding discs attached to a Dremel to give finer detail to the carved part and to round off the ends of each 'wing'

17 Sand all around the carved section of the bowl using a rounded stick with sandpaper attached to it – see handy hint 3. This will give you exactly the shape you want to sand the wave detail on the side of the bowl. Sand the whole bowl and then brush on oil or sealer, whichever you prefer. On this piece I brushed on sealer, wiped off the excess with paper and then cut it back with wire wool. Repeat this a few times

18 Make a bung for the chuck so you can reverse the bowl between centres. Use a round-ended piece of wood and add some thick soft cloth to avoid contact marks on the bowl

19 Use a spindle gouge to shape the foot of the bowl and to reduce the size of the chucking spigot to a small plug in the centre of the base

20 Complete the sanding of the base and add sanding sealer, then part off

21 You should be proud of your work if you have done a good job, so sign it on the base. I usually add the year and my signature in indelible ink, and then trace over it with a pyrography pen

22 Your finished bowl should look something like this ●

Handy hints

5. Finishing is an extremely important part of completing a good piece of artistic turning and requires patience. Make sure you spend enough time on sanding your work, going up in stages to at least 600 grit. Experiment with finishing oils/varnishes/waxes to find a combination that suits you and the wood you work with. You will see the difference immediately in a well sanded and finished item as the wood colour and grain will be more vivid and it will feel very smooth to the touch. These are all key factors that make your work attractive


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John Shrader in profile

Briony Darnley finds out about the work of **John Shrader** and discovers more about his innovative turning processes

John Shrader retired from Boeing in 1998, where he was an engineer/physicist for 20 years and then a manager for 13 years. Much of John's time at Boeing was spent in applied research, in what he calls 'gee whiz' technologies, including such areas as electric cannons, death rays, strategic defence initiatives – nicknamed Starwars – hypervelocity impact and explosives. In addition to working at Boeing, John also managed a small company that developed a machine for the teaching of the rhythmic part of music. Working with his hands is not just something John enjoys: "It's something I need." He had made model aeroplanes, jewellery, furniture, optical instruments, etc. before he settled on woodturning. Like many in the turning community, he is – as Dick Sing puts it – a 'gentleman turner'. Whether John sells anything or not, his retirement cheque and his social security cheque arrive every month.

ABOVE: A typical group of bowls in zebrawood *(Astronium flaxinifolium)*, padauk *(Pterocarpus dalbergioides)*, Macassar ebony *(Diospyros celebica)* and bloodwood *(Pterocarpus angolensis)*, 250-300mm dia. × 150-200mm high

LEFT: John at his lathe

Starting in turning

In 1996, a friend invited John to a local AAW meeting, to see Richard Raffan demonstrate. John knew Raffan was the most famous woodturner in the world at that time, so he went. John was impressed with Raffan, but he was 'knocked out' by the show-and-tell table: "A number of the pieces were world class," he tells us. John quickly realised that this was a golden opportunity to learn from the AAW members, so he jumped in with both feet, took classes and attended demos – asking as many questions as possible. In this process, he discovered that the turning community was eager to share knowledge – an attitude that resonates strongly with John.

Living in the Seattle, Washington area, John first made salad bowls and

PHOTOGRAPHS BY JOHN SHRADER

ABOVE: 'Sea Chalet', made up of six stacked rings of holly *(Ilex spp.)*, turned, pierced and then carved, 100mm high × 150mm dia.

natural-edge bowls from the local big leaf maple *(Acer macrophyllum)*, but he also discovered that turning could be much more than salad bowls, therefore allowing room for him to grow. Today, John does still make the simpler salad bowl, but prefers to focus on the more elaborate pieces.

John also made Christmas ornaments at the beginning of his turning career, making the bulb of the ornament from maple *(Acer campestre)* and walnut *(Juglans regia)* in a checkerboard pattern and the icicle from either maple or walnut. Unfortunately, John was dimayed when he put them on his Christmas tree. With all of the lights, tinsel and glass bulbs, he couldn't even see his ornaments. In order to be able to see his ornaments, John decided they needed to be gaudy, and the gaudiest material he could find was colourwood. "Colourwood is made like plywood, except that each layer is dyed a different colour and the grain all runs in the same direction," he explains. Colourwood was fairly expensive for John, so he utilised the technique of cutting tapered rings from a flat board and stacking those rings to save material.

John tells us that somewhere in the first few years of turning, he also got excited about making small boxes, similar to those made by Kip Christensen. He tells us: "I like the look of silver wire embedded in dark exotics like ebony *(Diospyros spp.)*, cocobolo *(Dalbergia retusa)*, desert ironwood *(Olneya tesota)*, etc., so I developed a technique for making simple pictures with wire in the tops of my boxes. This technique cannot show much detail, so from this experience I learned to refine a picture or design to just its essence."

Turning style

In his woodturning style, John strives for clean and simple elegance in his work. He doesn't set out to make his pieces technically difficult, but that is where his muse usually leads him. Most of John's pieces require a significant investment of time, because of the technical difficulty. For example, to bring out the beauty of the wood, most of John's segmented bowls are finished with 24 coats of lacquer and are then buffed out to a glass-like surface. Using a furniture analogy, John calls himself: "A sort of Danish modern." He goes on to say: "I'm not as stark as the stainless steel, glass and black crowd, but I'm a long way from the chainsaw and blowtorch primitive style as well."

John is fascinated by the intersection of lines, planes and simple shapes in three-dimensions. He is also fascinated by patterns in nature: "when these patterns also involve intersections of lines and planes, I'm a happy camper!" John feels that his 'Radiolarian' series is a good example of this.

Speaking of his 'Radiolarian' series, John explains the process behind the pieces. "I got the idea for my 'Radiolarian' series from a microphotograph of a radiolarian

'Neptune's Chalice', spun copper, holly *(Ilex spp.)* and bloodwood *(Pterocarpus angolensis)*, 200mm high × 115mm dia.

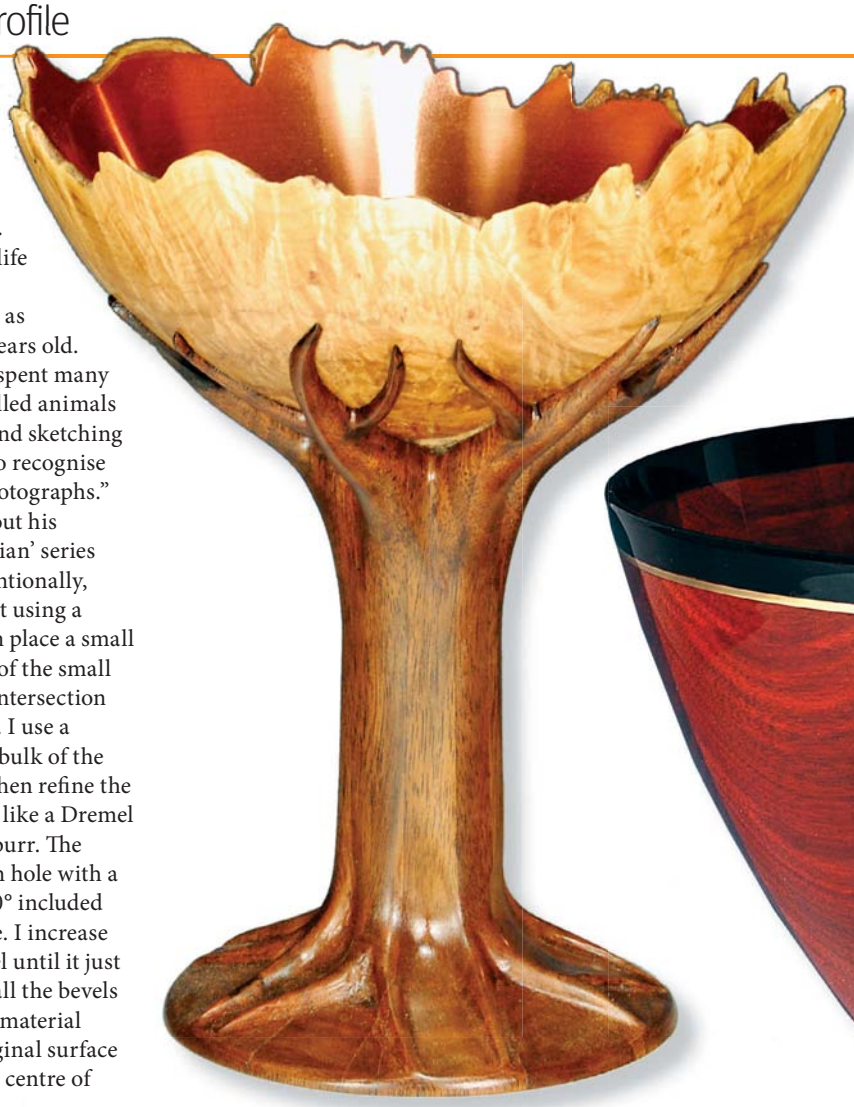
on the cover of a children's edition of *Discover* magazine that I saw in a doctor's office. It's the only time in my life I shoplifted anything – I didn't worry too much as the magazine was two years old. When I was about 12, I spent many hours looking at one-celled animals through a microscope and sketching them, so I was primed to recognise and appreciate microphotographs." He goes on to tell us about his methods: "My 'Radiolarian' series pieces are turned conventionally, then each hole is laid out using a drafting compass. I then place a small pencil dot in the centre of the small triangle formed by the intersection of three adjoining holes. I use a step drill to remove the bulk of the material for each hole, then refine the hole using a rotary tool, like a Dremel and a straight cylinder burr. The next step is to bevel each hole with a rotary burr that has a 90° included angle – 45° on each side. I increase the diameter of the bevel until it just touches the dot. When all the bevels are completed, the only material remaining from the original surface is the dot I placed in the centre of each triangle."

Evolution

When John started out making his bowls from the local big-leaf maple, he ended up making a lot of them. Any time a tree came down, John was there with his trusty chainsaw. It was around the time that John ran out of friends and relatives who wanted another bowl that he became excited about making small boxes, but he soon discovered the demand for these was really low.

John's single biggest influence in woodturning is Wally Dickermann. From when John saw his work at the first AAW meeting he attended, he saw the potential for artistry in turning, which he had never seen before.

John is drawn to the beauty of several of the exotic timbers, but could only get them in flat boards, because the main market for those woods were furniture makers. He added his own twist to making bowls from flat boards, using tapered rings cut from the boards and has been doing this for quite a while now. John has recently begun to explore using Douglas fir *(Pseudotsuga*

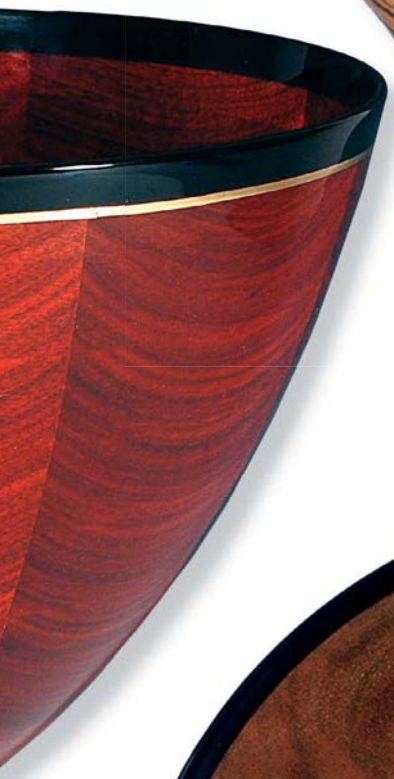


ABOVE LEFT: 'Cup of Commitment', walnut *(Juglans regia)*, maple *(Acer campestre)* burl and spun copper, 150mm dia. × 170mm high

ABOVE MIDDLE: Segmented bowl in bloodwood *(Pterocarpus angolensis)*, 280mm dia. × 200mm high

LEFT: 'Tenth Anniversary Chalice', walnut *(Juglans regia)*, maple *(Acer campestre)* and gold leaf, 180mm dia. × 200mm high

ABOVE: Segmented bowl in zebrawood *(Astronium flaxinifolium)*, 300mm dia. × 190mm high



BELOW: 'Communion Cup and Platter', East Indian rosewood *(Dalbergia latifolia)* and sterling silver. Platter is 300mm dia. × 35mm high; cup is 110mm dia. × 175mm high

menziesii) in his turnings and is on a quest to see where this will lead him.

"As far as perfecting my style, it's still not perfect, and it never will be. Each bowl I make I still make improvements," John tells us.

He has also previously had a go at furniture making, and the resulting furniture is still in use. Having taken a woodworking class when he and his wife of 51 years were first married, John made their living room furniture. These were in a Danish modern style. The couple used the furniture right up until their first daughter's graduation. Upon her graduation, John gave his daughter the furniture for her first apartment. The pieces have since been moved on to a friend. John says: "From this experience, I learned a lot about the behaviour of wood, such as shrinkage, grain orientation, finishing, etc., that helped me when I started turning."

Workshop space

In regards to his workshop, John rents a shop space. In this rented space the large machines – tablesaws, jointers, etc. – are in a central common area and each renter has a separate area just for themselves. John's area is about 600sq.ft., which includes his lathe, workbench and storage. John's space is cramped and cluttered, but he tells us it is well organised. In regards to his time taken per piece, John feels it varies, but is typically in excess of five hours per piece. "I'm certainly not a production turner!"

Special tools

"Computer and printer!" he tells us. "I could design my pieces with pen and pencil, but it would require a lot more time than using my computer."

John has made a lot of special purpose tools for what he does. Without these tools, he feels the time per piece would be so great, that it wouldn't be any fun to make them. He also feels he couldn't do without the swivel head on his lathe: "It would kill my back to lean over the bed to work on the interior of my vessels." We asked John about tools he uses

for decoration, to which he answered: "I really don't do much decoration: my work is pretty clean. An exception is a piece like 'Celestial Home'. It has approximately 1,500 pieces of silver wire embedded in it. I used a drill with a stop collar on it to drill the holes, then placed a piece of wire about 4.76mm long in each hole and secured it with CA glue. The drilling and gluing went fairly quickly, the time-consuming – and boring – part was cutting each piece of wire."

Highs and lows

Some of the highs in John's woodturning career have been when he is able to realise in three-dimensions what he previously only saw in his mind, also winning significant awards and he enjoys giving demonstrations. Some of the lows for John, he feels, have been his poor results at promoting his work and himself. John promotes his work through his website, in Bellevue Arts Museum Artsfair and by doing regular demonstrations, but he tells us: "I'm well aware that I need to put more emphasis on this area to boost sales, and I haven't because I don't like doing it."

John feels that the best thing about woodturning is the fact that it's an environment that is small enough to keep focus, but big enough to allow unlimited exploration. The biggest high of all for John is that he has been able to do what he loves for the past 18 years.

A typical day

Three days a week John plays 'pickleball' in the morning and then gets to the shop after lunch, where he works until 5pm. John explains: "Pickleball is like tennis, but on a smaller court using a paddle similar to a ping pong paddle and a wiffle ball." About once a week John spends the evening working on some aspect of his woodturning.

Future aspirations

John is currently preparing for the 'Knock on Wood' contest, sponsored by the Bellevue Arts Museum, Washington. The contest calls for proposals, not completed work. The museum received over 180 responses to the contest and John is in the top 39 selected. He tells us: "My proposal was to explore different ways to use Douglas fir in turnings. Fir is frustrating to turn due to the large difference between the hard winter-wood and the much softer summer-wood. Hollowing Douglas fir end grain is particularly unsatisfying as the tool vibrates violently and progress is slow. Rather than work around this characteristic, I embraced it. I'm exploring staving the turning so the grain is parallel with the centreline of the turning, sandblasting it, painting it black, and then sanding it so the hard winter-wood is exposed, but the softer summer-wood stays black."

John places a high value on craft: "I don't strive for perfection, because I believe it can be the siren song that leads to playing it safe. I strive for excellence. I'd rather fall short of achieving a lofty goal than achieve an ordinary goal perfectly."

John knows he will continue to strive for high craft in the future, hoping to explore alternate materials and try new techniques. He also has plans to build an ornamental lathe to incorporate it into his turnings. Ultimately, John would like to have the chance to do a demo at an AAW symposium. ●

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Handy hints

Use Titebond Type 1 Extend for gluing segments because it is the most creep resistant of all Franklin Aliphatic glues

LIKES & DISLIKES

Likes:

- Culture of community
- Working with wood
- Working with my hands
- Being self-directed
- Having the chance to combine my left and right brain functions
- Ease of storage of inventory

Dislikes:

- Allergy to rosewoods – particularly cocobolo (*Dalbergia retusa*)
- Promoting my work and myself

TOP TECHNIQUES

- Making bowls from flat boards
- Producing a flawless glass-like finish
- Being able to hold near machine shop tolerances with woodworking tools

BELOW: 'Ocean Home', holly *(Ilex spp.)* and bloodwood *(Pterocarpus angolensis)*, 150mm dia. × 300mm high

RIGHT: 'Sea Cathedral', holly *(Ilex spp.)* and bloodwood *(Pterocarpus angolensis)*, 430mm high × 125mm dia.

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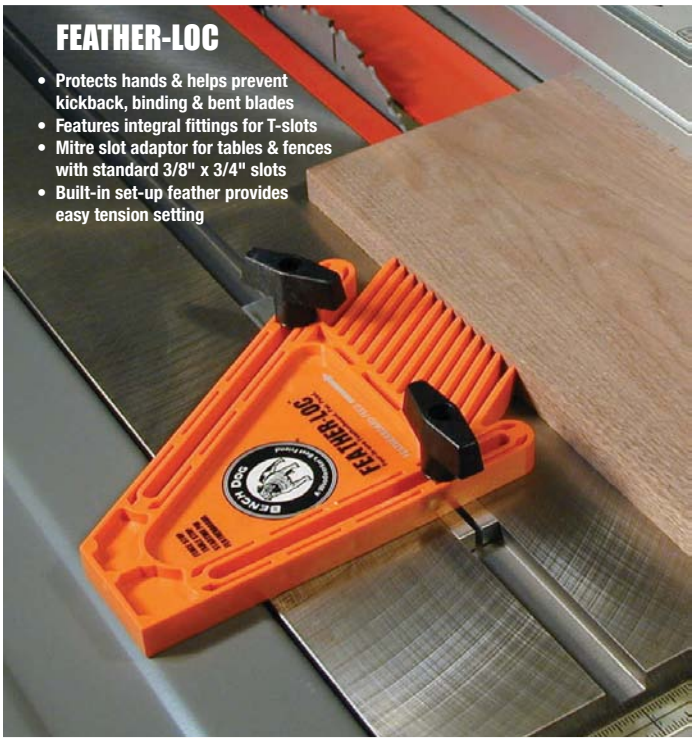

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PHOTOGRAPHS BY KURT HERTZOG

What you need to know about other uses for the lathe

Kurt Hertzog looks at just a few of the ways you can use your lathe to multitask

When we go shopping for a lathe, we usually are concerned with the features of the machine as it pertains to woodturning. There are the important considerations such as swing, distance between centres, horsepower, speed control systems, weight and more. While all of those specifications are key to your lathe's turning life, there is another side of your lathe that often isn't thought about. Your lathe can perform many other functions in your woodturning shop. Perhaps these weren't in your original intentions but they can certainly add value to it as a multitasking piece of equipment.

Whether you have a freestanding piece of equipment that does that same function or not, your lathe can sometimes do a better and more precise job of the task. Listed below are just a few of the functions that a lathe can do: an indexing assembly fixture, a layout and marking jig, a gluing clamp, a rotating spray fixture, a drying fixture, an assembly press, a carver's clamp, a power sander, a drilling device, a power carver, an inspection/measuring device and a tool sharpening system. In this article, we'll explore just some of the many ways your lathe excels at other valuable tasks besides just turning wood.

KURT HERTZOG

About the author: Kurt is a professional woodturner, demonstrator and teacher and writes for various woodturning and woodworking publications in the United States as well as writing for *Woodturning* magazine. He is on the Pen Makers' Guild Council and is a member of the Board of Directors of the American Association of Woodturners (AAW).

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SAFETY FIRST

While I'll suggest a variety of functions that your lathe can perform, don't construe any of this information as contrary to safety. Some suggestions are ways to use your lathe to drive the cutting agent while you present the workpiece. It is no different than you controlling the workpiece as you present it to your router table cutter, tablesaw or bandsaw blade or disc sander face. Use the same level of personal protective equipment and precautions that you would if you were using the equivalent stand-alone equipment. Do not do anything that you don't fully understand or have any reservations about. Safety is not a subject to be trifled with.

DISC SANDER

There are several ways to use your lathe as a disc sander. The easiest is to simply install a sanding disc backing plate into your headstock and present your work to the sander. These are available in many sizes and with flexible or stiff backs. Abrasives can be any type, size, media or mounting method depending on your implementation. Another easy method that can be used is to make your backing plates from flat material, such as plywood or MDF. Mounted to a faceplate or by a recess cut for chuck mounting, you can have a large selection of grits ready to use at will for relatively low cost. You can create a platform to provide for exactly 90° presentation of your work to the abrasive media. Make a box that will sit on the ways so the top is at the centreline of the abrasive disc. There are many advantages of this system over the freestanding disc sander. Not the least are the elimination of the cost of the disc sander and the floor space that it would take. I assume you can see how this can be used to sharpen your tools. While it would provide a flat grind as opposed to a hollow grind, sharpening can be implemented with a simple set of fixturing or skills to freehand. Sharpening on the lathe, using chuck gripped MDF platens with abrasive applied provides the travelling turner a sharpening system at minimal cost or transport burden.

LATHE DISC SANDER ADVANTAGES

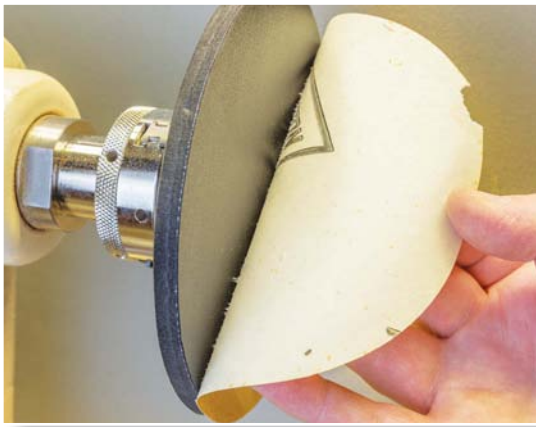
- Variable speed sanding
- Variable diameter platens limited only by swing
- Easy grit change without removing/ damaging abrasive disc
- Increased horsepower available
- Saved floorspace
- Huge selection of abrasive grits and media available
- Cost savings over stand-alone

MULTITASKING

For many of us, having the space and funds to own all of the niceties for a workshop might be far down the road. Drill press, spindle sander, a rack of sturdy woodworking clamps, disc sander, belt sander, hand grinder, micromotor or flex shaft tool and many more pieces of equipment could be on this list. You might already have some of these and not sufficient need of others to add them to your workshop arsenal. Regardless of the reason for their absence, let's look at the best multitasker you have in your workshop – your lathe. Regardless of the size, your lathe can perform the tasks of nearly all of the equipment I've listed. Let's see how.

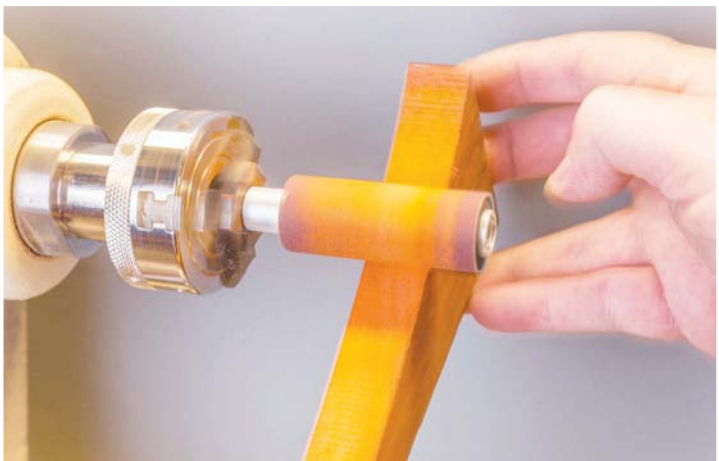
Creating a disc sander is as easy as adding a stiff sanding pad. You can go as large as your swing will allow

With plenty of manoeuvring room, you'll find this disc sander more user friendly



With PSA abrasive sheets you can easily change grits quickly without ruining the sheet

SPINDLE SANDER



Easy to put in a drum sander of any size. Plenty of room to work and easy to clean. If you prefer, use the tailstock to support the mandrel

For safety's sake, drill chucks in the headstock are not appropriate. Use a threaded-on fastening system like a chuck or collet

For those unfamiliar with a collet and drawbar, the drawbar pulls the collet in to close it and holds it there clamped

MAKING A SPINDLE SANDER

While my lathe may not oscillate as my oscillating spindle sander does, it can be made to effectively perform the same function. There is a wide range of sanding drums available for your drill press, hand drill, thickness sander and powered flex shaft equipment. All of these can be easily clamped or threaded into your headstock to bring them to bear on work presented to them. However, you can easily make your own sanding drums, whether straight, tapered or any other shape you wish. Because you can easily turn your own diameter, you can have a large array of them available that wouldn't be in the usual spindle sander range. With these easily made, low-cost spindles, you can have different grits ready to use with minimal cost and quick changeover. The same table used for supporting your stock for presentation to the disc sander can be used for the spindle sander with a simple modification.

Home-made drum sanders can be any shape needed. Here a tapered block with PSA sandpaper rounds Urchin holes

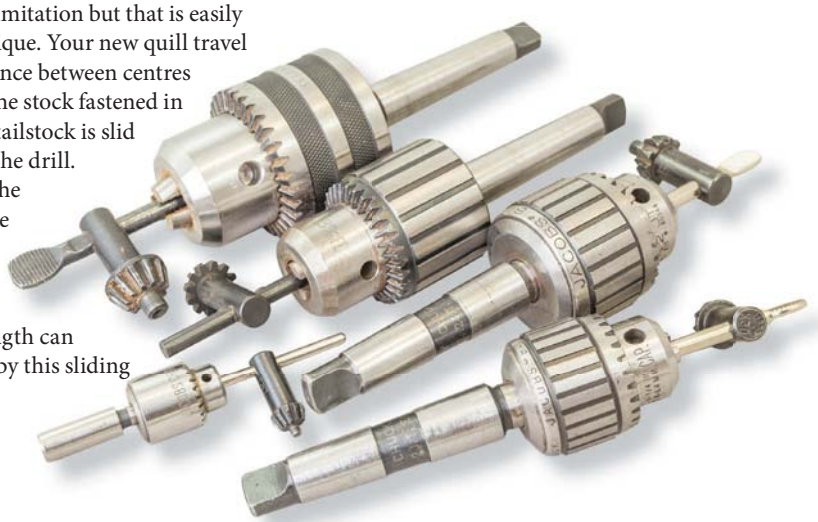
LATHE SPINDLE SANDER ADVANTAGES

- Variable speed sanding available
- Variable diameter shafts possible
- Easy grit change with multiple low-cost shafts
- Increased horsepower available
- Saved floorspace
- Huge selection of abrasive grits and media available
- Cost savings in implementation

DRILL PRESS

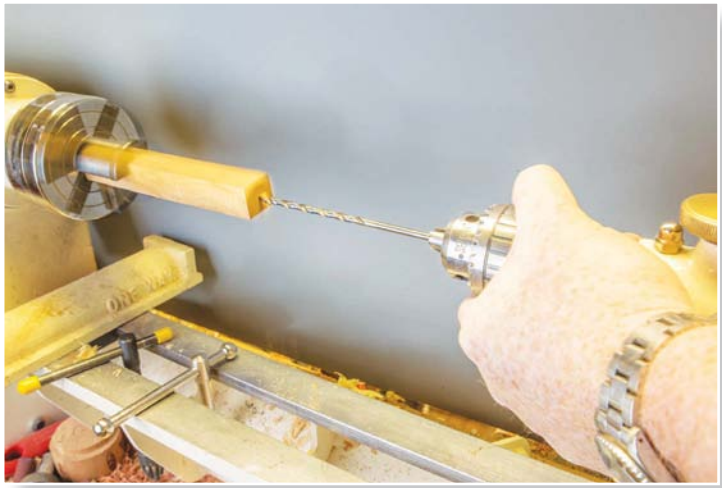
The drill press or pillar drill is a weak spot in nearly everyone's workshop. If it is big enough to do the large jobs, it takes too much space on the floor and has a high cost, but if it isn't big enough how do you do the large jobs? For the most part, the two problems are quill travel and maximum table clearance. The quill travel on the common drill press is 50 to 75mm. Anything in excess of 75mm is rare and usually costly. When drilling deeper holes than the quill will travel, there are the acrobatics of drilling, retracting, shimming up the stock staying parallel, continued drilling, etc. This is cumbersome and sometimes introduces less than safe conditions. These problems are eliminated or at least minimised with lathe drilling. The quill in the tailstock does have a travel limitation but that is easily overcome by technique. Your new quill travel in close to the distance between centres of the lathe. With the stock fastened in the headstock, the tailstock is slid forward to engage the drill. The drill chuck in the tailstock needs to be held to prevent it loosening on retraction but your entire drill length can be accommodated by this sliding

A drill chuck in a drill press rarely gets changed. In a lathe, you can easily use the correct size as needed

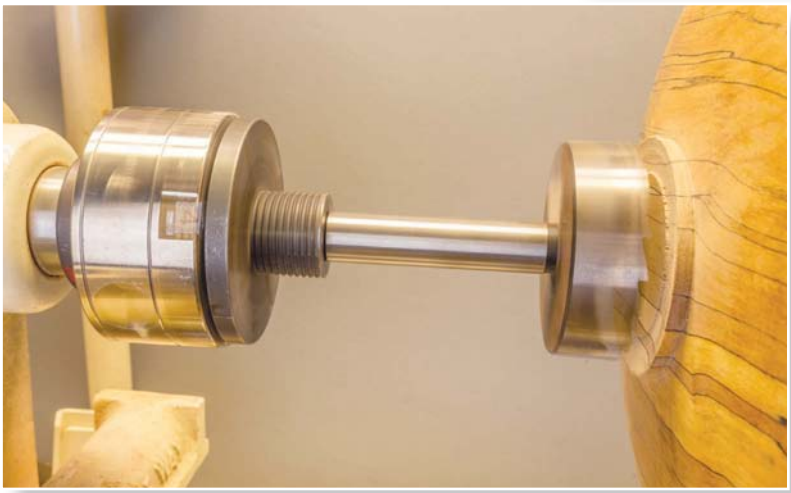


DRILL PRESS

in and out using the tailstock. You also have use of the tailstock quill travel if you wish. Don't lose sight that the drill can be placed in the headstock and the stock mounted or supported by the tailstock. The other problem of maximum table clearance is also relieved somewhat by a lathe drilling. The new table clearance is the tip of the drill in the tailstock to the face of your workholding method in the headstock. In a full-size lathe, 915mm, 1,066mm or 1,220mm is common. Even the larger floor-standing, full-sized drill presses don't offer much more. The bench-mounted drill presses are lucky to have 305mm to 510mm which most mini-lathes can provide.



The drill depth is limited only by the drill length when using a lathe. It is important to hold the drill chuck on retraction



For serious drilling, use a thread-mounted device of sufficient size appropriate for the work to be done

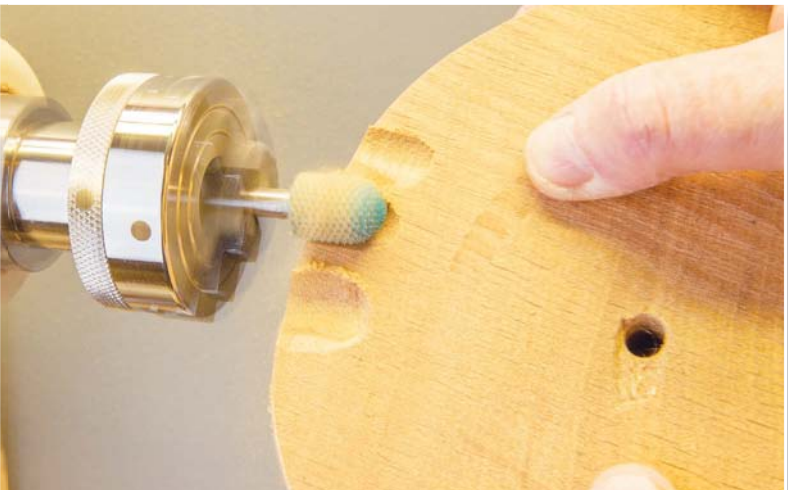
In this drilling, the bit rotates but the work advances. You have the resolution of the tailstock quill and the force of the handwheel gearing

LATHE DRILL PRESS ADVANTAGES

- Variable speed drilling more easily accomplished
- Increased horsepower available
- Much larger quill travel possible
- Much larger platen clearance often available
- Easily changed drill chucks
- Fine drill advance/retract ability using tailstock quill
- Increased force when using tailstock quill and wheel
- Saved floorspace
- Cost savings in implementation

POWER CARVER/POWER SANDER/POWER BUFFER

It should be obvious by now that most of our implementations except the drill press involve the headstock clamping the cutting agent and providing the relative motion. The power carver and power sander are no different. You can take the various Foredom, Dremel and other manufacturers' cutting and sanding tools and clamp them into the headstock. Once done, you have a variable speed, fixed position cutter or sander that you can present your work to. You can turn various mandrels to any shape you wish and



The Beall Buffing System includes three buffs for different compounds and has inside buff sets of different sizes

Don't get stuck on what's in the store. You can use wheels of your choice with your own selection of compounds

◀ POWER CARVER/POWER SANDER/POWER BUFFER

apply abrasives as needed to create your own specific sanding head. Fastening shafted cutters or sanders into the headstock can use collets or chucks. If the mounting method is taper mounted as a drill chuck usually is, it should be secured by a drawbar to provide a mounting that won't loosen up. A drill chuck pulled free of its mount can present unsafe conditions so the retaining drawbar is highly recommended. I favour a threaded-on chuck whether full size or miniature to hold shafted tools. That eliminates the problem of the taper mount loosening. Drawbar secured or threaded-on collet systems are also available. Buffing wheels already exist for the lathe. The Beall Buffing System in its various configurations will do outside or inside buffing. Barring that, you are free to grab anyone's buff and anyone's compound to create your own buffing system. The diameter of the buff is limited only by the distance over centre of your lathe. The compound can vary from Tripoli to jeweller's rouge.

Note: when presenting work to revolving cutters or sanding mandrels, it is best practice, with hand-held work, to try to stabilise the work; this will help to prevent movement, inadvertent catches, etc. Therefore, you should consider resting the work, or bracing your arm against the toolrest.

LATHE CARVER/SANDER/ BUFFER ADVANTAGES

- Large force available with fine resolution
- Custom yet low-cost press faces
- Very large press throat opening
- Saved floorspace
- Cost savings in implementation

INDEXED ASSEMBLY/GLUING CLAMP

From the last issue topic – see *Woodturning* issue 267 – on indexing, you can see how to use the indexing and rotary motion to do marking as needed. You can also see the methods that the open space segmented turners use to glue up their turning blanks. That indexed assembly concept will work for nearly any rotary or linear indexed assembly need you might have. What also falls right into place is the gluing clamp aspects of the lathe. For the standard segmented turner, each of the glued up rings can be centred, rotary aligned and then clamped in place to allow time to cure. The face of each ring is trued starting at the very bottom so that the build of the blank is on axis and without layer thickness errors. You can use your lathe for a gluing clamp regardless of what items you turn. When making two-piece ornaments that you want to glue together, why not use the lathe? When you want to stack various species of woods for cutting boards, pen blanks, ring accents or any other gluing that you need to clamp, you can also use the lathe. You might need to make some platens to distribute the force across the surface appropriately but that is quick work. Often just placing your stock across the jaws of a chuck and a board on the face of the tailcentre shaft will be sufficient. You'll have a clamp that you can exert large clamp load with that has an open throat nearly as large as your centre to centre distance. You can also add outrigger clamps of the standard kind if you have the need to add clamp load on the perimeter.

Indexed assembly, drilling, marking, slotting or whatever is easily done on the lathe. Shop-bought or home-made indexing works well

A nicer gluing clamp is hard to find. A pierced and painted goose egg has the finial glued in place and clamped until cured

LATHE INDEXED ASSEMBLY/ GLUING CLAMP ADVANTAGES

- Large applied force possible
- Large throat opening possible
- Custom platens can be easily and inexpensively made
- Progressive yet fine resolution clamping possible

For most turnings, a pencil and a toolrest can tell you all you need to know. The pencil will mark the high spots and not the low

LATHE INSPECTION/ MEASURING ADVANTAGES

- Simple measurement techniques
- Application of templates to part
- Visual overview to full-scale drawing
- Roundness indicator with the addition of pencil markings
- Dial indicator measurements easily made if needed

INSPECTION AND MEASURING DEVICE

The lathe lends itself to easy measuring and inspection. You may have templates that can be laid up against your turning. You may have dimensions that can be set to callipers and checked at various points along the height. It is also very easy to measure for roundness. There are gauges that can be used but it is quite easy to use a simple pencil. Most of us aren't making rocket parts so we only are interested in if our turning has warped with wood movement or how 'out of round' it really is. Numbers are rarely important. If you can determine whether there is sufficient material available to bring the turning into round, that is all you usually need to know. That information along with what areas are out of round let you focus there. The simple pencil hand gripped to the toolrest is enough.

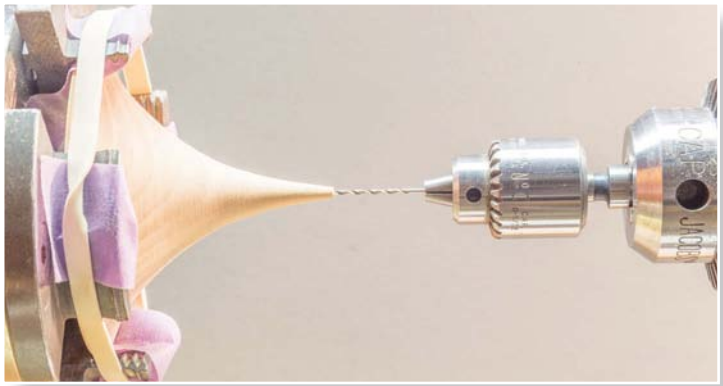
PAINTING/DRYING/WORKHOLDING FIXTURE

This is the most straightforward of all of the non-turning applications. Once you've got something mounted, why take it off? If you need to paint or spray a finish, you can use your lathe as your rotary worktable. Be safe with ventilation, fume extraction and proper respirator filtering. A variable speed lathe slowed right down works wonderfully for spraying paint or finish. You can control the rotational speed for application but also let it rotate to minimise runs as it dries. Since it is already mounted, why not let it cure there? Even before you get to your finishing, what about after turning enhancements? You can leave your work mounted, rotate it to the best working position, lock the headstock and work on your piece. That can be painting, piercing, pyrography, carving or any other alteration. Reposition as needed. Of course, you can mount a carver's screw to a fixture. You can even mount your carving vice to your lathe bed as shown in the workholding series. How better to hold things than with your lathe? It is at the correct height, sturdily mounted and has a secure base. You have it there already. Other than tying the lathe up when it might be needed for turning, it is the greatest multitasking piece of equipment you own.

Capable of an incredibly light touch, here a pierced chicken egg is painted and rotated using the handwheel

LATHE PAINTING/DRYING/ WORKHOLDING ADVANTAGES

- Accurate and secure positioning possible
- Indexable reorientation available
- Slow rotation available for spraying, drying and curing
- Secure mounting possible
- Heavy, immovable support possible



The lathe is a true multitasking piece of equipment with far-reaching capabilities. You can usually figure a way to get it done

CONCLUSIONS

With all of the non-woodturning functions your lathe can perform in the workshop, you might think seriously before you buy those other pieces of equipment if you currently don't own them. If you already have them, perhaps getting rid of a few will open up more space. The lathe itself does a wonderful job at what it was designed to do. Having done that, it can also do so many other things well that it quite possibly might be the only piece of equipment in your shop. Perhaps unlikely but possible. While we won't try to go that far, I do believe that with your lathe you have a lathe, carver, sander, buffer, assembly press, indexed assembly, gluing press, painting, drying and workholding device. And you thought you only bought a lathe? Will it outdo all of the other single-purpose devices? Perhaps not. Will it work to overcome your lack of some of them? Certainly. And I really believe it does a better job at some of them than the purpose-built piece of equipment. The column this month was a thought starter, I haven't mentioned all the possibilities but quite a few. Run with them. A very successful man had a very simple company mantra: think. ●

Mug stands

Chris Grace makes two mug stands on a mini lathe

PHOTOGRAPHS BY JEAN GRACE

Some time ago, before I was a turner, we had bought an imported turned/carved mug stand and many friends had admired it. However, when it came to use it as inspiration to make a birthday present for one of them, it was clear that they actually needed a pair of mug stands. I made those ones in ash *(Fraxinus excelsior)* and they are still used regularly a couple of years later. My wife had always liked the pair I made and had been hankering after her own, but I had never managed to get around to making them for her. I'm not that keen on making the same thing over and over again as I prefer new challenges, however, now the time has come. This time – realising that many of our club members do not have full-size lathes – I decided to see if I could make them on my mini lathe that I use for demonstrations, which theoretically has a capacity of 445 × 127mm. However, in practice you either need to use centres or a chuck, which eats into the available distance between centres quite significantly and brings it down to about 355mm. The swing is less of a problem provided you can place the banjo to one side of the work, though with small lathes I prefer to work as near to the toolrest stem as possible, especially for larger jobs, as I have seen more than one suddenly snap due to fatigue.

I needed timber 76mm thick and a minimum of 203mm wide for this project, so a quick trip to the local timber merchant was in order to see what they had. We are lucky that our local timber shop usually has a good selection of hardwoods to choose from. This time they had an offcut of idigbo *(Terminalia ivorensis)* 1,270 × 232 × 76mm planed. It's a pale yellow-brown wood with some interesting grain.

"...I decided to update the mug stand to give it a slightly more modern look"

As our house is relatively modern, I decided to update the mug stand design to give it a slightly more modern look. I also took this opportunity to make the bases a little larger at 200mm as opposed to the original 150mm, to increase stability and enable them to more readily be utilised as Jardinières should the need arise. I typically draw out my designs on either paper or on my computer and work out how best to utilise the timber. Then, it's into the workshop…

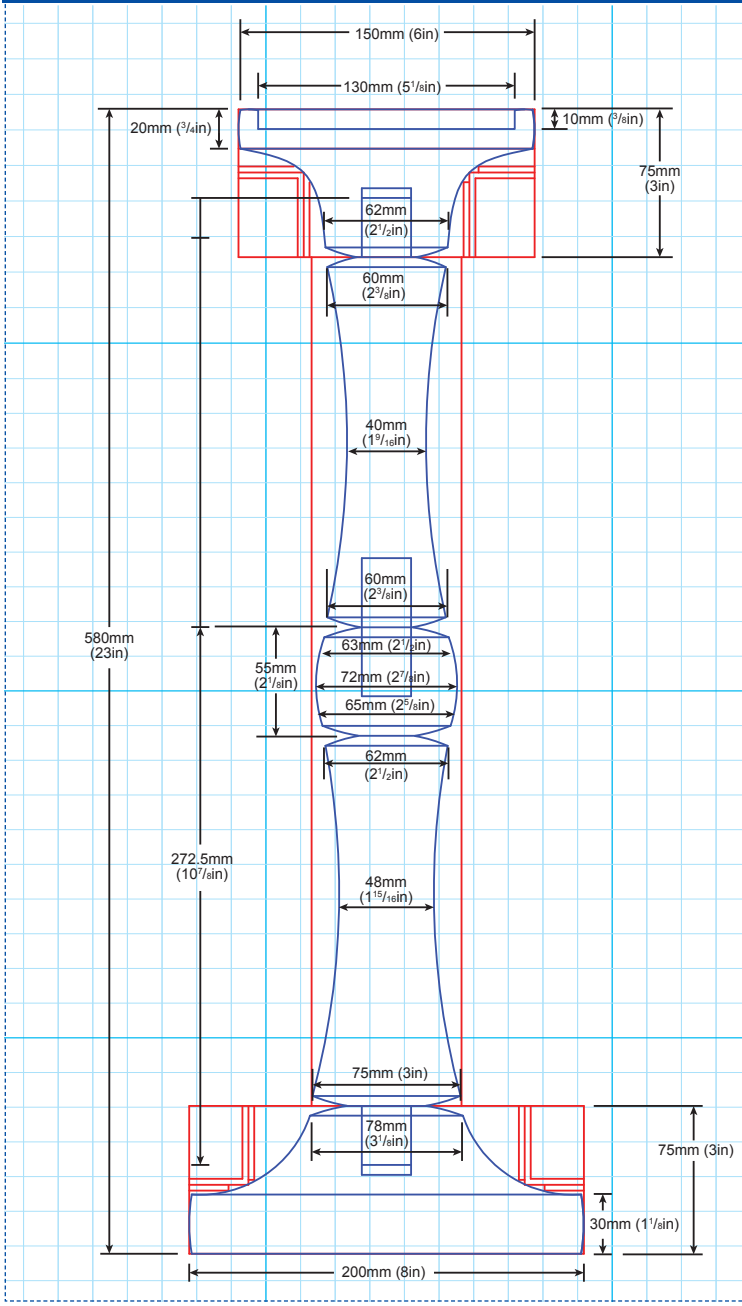
CHRIS GRACE

About the author: Chris has been turning wood for about four years. He has enjoyed making things with wood and metal on and off all his life alongside his work commitments, but the discovery of the lathe rekindled his enthusiasm for working in wood. Chris sells his work by commission, demonstrates and provides instruction.

Email: chris.grace@notjustround.com

Web: www.notjustround.com

MUG STAND DIMENSIONS



INFORMATION

TIME TAKEN & COST

Time taken: Several sessions, over about a week

Cost: £20

TOOLS REQUIRED

- Continental spindle gouge
- Bowl gouge
- Parting tool
- Skew chisel

ADDITIONAL TOOLS

- Bandsaw
- Callipers and measuring/marking tools
- Abrasives
- Centres
- Cork faceplate
- MDF faceplate
- Drill press
- Forstner bit and drill chuck
- PPE: facemask, respirator/dust mask and extraction


1


2

1 Once the blanks are cut, mark the centres as required. Luckily for me, the offcut was planed on both sides, eliminating the need to true it up. Mount the first top blank on a cork faced MDF faceplate with tailstock support and rough it to a cylinder, using a medium-sized bowl gouge. Mark the transitions and then start creating the detail at the top. Mark the top recess and define the edge with a small, accurately ground skew chisel to separate the fibres cleanly. I found that with the wood I used, the grain tore out easily

2 Continue on with the parting tool. Creep up on the line cut with a skew chisel and get it down to the required depth with a parting tool. You must ensure to check the depth regularly

3 Remove the waste with a bowl gouge and then cut a dovetail for the chucking spigot with the side of a parting tool

4 Reverse the blank and hold it using the chucking spigot just created. Mark the first donut cut and cut the fibres with a skew chisel as before. Work your way in with a parting tool. You may need to hold the blank with a chuck, as I did, because I couldn't get my parting tool in with the tailstock in the way

5 Set your depth gauge to measure the groove accurately, so that you know when you are about to break through

6 Sand two of the faces of the donut as it's held securely – these are the faces I will work from when I use it for another project. Note: always use extraction whenever you sand

7 Drill a hole that will be used to mount the top on the stem, using a Forstner bit in a keyless chuck

8 To complete the donut, cut in from the side. Initially, I had the toolrest centrally and checked the depth regularly...

9 ... but for the last few millimetres, I moved the rest as far to one side as possible, so that the donut wouldn't foul on it as it was released. I could have moved it further from the blank, but then I would have had less control over the parting tool. Keep the donut safe and free from marks, so it can't hit the toolrest. Use the tailstock to prevent it from falling off, so it can be removed without any damage or drama

10 You may find it easier to produce two consistently shaped tops if you size the end initially and then create the flowing curve. Turn the curve from both the end and the rim, meeting in the middle

Handy hints

1. In case blanks are not quite square, use a centre-finder and mark from each corner, this often results in a small square, in which it is easy to mark the centre precisely
2. Cork faced MDF faceplates, with the help of tailstock pressure, are a great way to drive work with a flat face. They are stable, but grip the work and can be made any size
3. It is a good idea to start your cut a small distance from your intended line, to see how the wood reacts first and ensure correct use of the tool, then creep up on your line
4. Mark the drill or Forstner bit with a piece of tape to ensure accurate hole depth


3


4


5


6


7


8


9


10

11 The final cut should be a shear scraping cut with the gouge turned over and the handle held low

12 To finish the top recess, create a small spigot jam chuck. Quickly rough out with a bowl gouge and size for a tight fit with a parting tool. Ensure the spigot is parallel and the shoulder wide and flat

13 With the top on the jam chuck, the chucking spigot can be removed

14 Now, reverse the top again onto a cork faceplate, so that the final detail – a chamfer – can be cut with a small skew chisel

"Use a portable drill press mounted on your mini lathe to drill the holes"

15 Use a portable drill press mounted on your mini lathe to drill the holes

16 Turn the base of the stand entirely pressed against a cork faceplate with a revolving centre. Position the rest so the edges of the blank just clear it for roughing

17 On the base, which is larger, I had sufficient room to do the first donut cut with the tailstock in place, simplifying the process. Set a depth gauge and use it regularly, this means you can cut accurate grooves

18 While you can measure key features, you have to check that the two curves are as similar as possible, visually. Here I am seeing if the curves are symmetrical

Handy hints

5. Instead of simply converting wood to shavings, where possible, I cut off any excess and save it for other projects – in this case donuts
6. When cutting donuts, always make the end or face cut first, then cut the donut off perpendicular to the lathe axis otherwise the donut can catch on the tool
7. Always create clearance for the parting tool when making deep cuts, especially when cutting into the face of a blank
8. Use the tailstock to support your work wherever possible, in this case it stops the donut flying off round the workshop when it is cut away

19 As I couldn't fit the stems of the stand under my pillar drill, I made a platform to accurately drill them on the lathe. It's just some MDF and four long bolts with a baton to locate it on the lathe bed


19

20 Draw lines on the top parallel with the lathe axis to act as a guide when clamping on a fence. Then, with the table set to hold the wood at the exact centre height, it can be pushed onto the Forstner bit. The stem is a simple spindle turning, except that it needs to be split into two, otherwise it won't fit on the lathe. I used a versatile large Continental pattern spindle gouge to rough them out


20

21 Once cylindrical, mark on the transitions with their sizes from the plan. Then, set the callipers slightly oversize and cut them with a parting tool. This allows you to create flowing curves and eliminate all traces of sizing cuts. Then the continental pattern spindle gouge becomes an effective shaping tool, producing a very good finish


21

22 Add detail with a small skew chisel. First, push straight in to separate the wood fibres, then keeping the bottom of the skew firmly in contact with the toolrest, swing it a little to the side for the second cut, then to the other side and repeat for the desired depth. Undercut the mating surfaces so that the joins are as unobtrusive as possible. Sand through the grits to 400, with extraction running to remove the dust


22

23 Finally, create a couple of dowels between centres to join the stems


23

24 Groove the dowel to create a larger surface area and add a small flat to enable trapped air to release. Don't use too much glue as it's difficult to remove from the deep groove. Line the grain up accurately before you leave it to dry


24

25 Cork coasters are made by sandwiching a piece of cork tile between two pieces of MDF, one acts as a guide for the skew chisel and prevents tear-out


25

26 Treat the finished mug stands to a few light coats of oil before they are put to good use by your favourite lounge chairs ●


26

Handy hints

9. When roughing wood from square, always cut towards the end, taking a little off at a time. This way you won't dislodge any large splinters if there are shakes in the wood. When you are part way along, start again at the other end and meet in the middle

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Starting turning – part 4

Continuing with his series, this month **Mark Baker** looks at the subject of tools and equipment and the wide range that is available to the turner

Having looked at the subject of workholding in the last issue, we will now move on to the tools themselves as well as basic pieces of turning equipment. As many of you will know already, there is a vast array of tools and related equipment available for you to buy, in a plethora of makes and variants and of course, most can be obtained in different sizes too. But you only have to look at a store catalogue or online, to get a bit confused and frustrated in trying to work out what is actually needed. That said, in truth, you only need a few basic tools and some ancillary equipment, as outlined on these pages, to help you on your journey in woodturning.

I would recommend that you learn to use the basic equipment set to the best of your ability to start with before buying more and perhaps more complex items. It is all too easy to end up with lots of tools and equipment that you think you will use but, in reality, probably won't use much at all. So, why not save yourself some precious pennies and instead, invest in just the equipment you will need, as opposed to what you think you will need.

TURNING TOOLS

Turning tools are required to enable you to shape the wood. I have already identified that there are two styles of turning: faceplate/cross-grain turning and spindle turning, which is also called parallel-grain turning. Some tools available are specific to each type, but there are others that can be used on both.

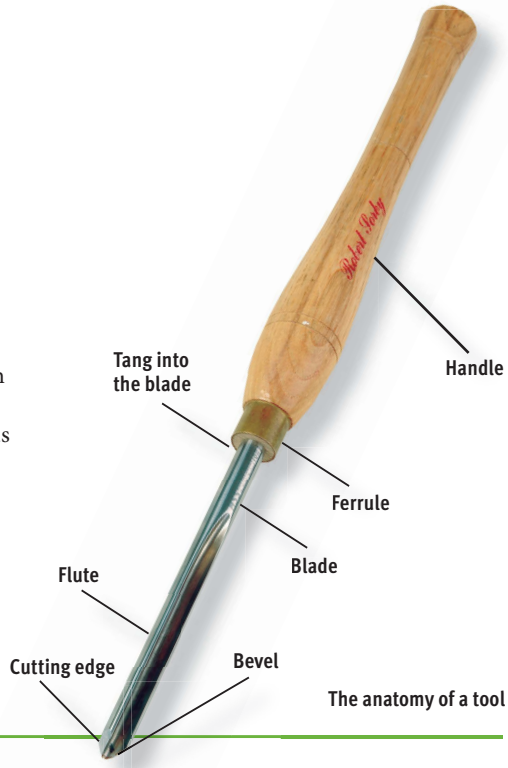
Most turning tools are now made from High Speed Steel (HSS). There are different grades of steel, but M2 HSS is the most common; it gives a superb cutting edge when sharpened, lasts a reasonable amount of time and is available at a reasonable price.

Just remember, the larger the work, the bigger the size of tool you are likely to need. If you are working on a 500mm diameter bowl and only have a 6mm bowl gouge, you are not going to have enough mass or strength in the tool to shape the wood quickly or effectively when you project the blade over the toolrest any distance.

Anatomy of a tool

All turning tools, irrespective of type, have the same basic features: the cutting edge, which is typically at the top of the tool; a bevel, which is underneath the cutting edge; the blade or shaft of the tool; the tang, which is the section that is secured in the handle; and the handle itself, which comes in various lengths to suit the size of the tool.

In the case of gouges, the blade of the tool has a flute running about two-thirds of the way along it. The cutting edge that it produces has a bottom section and two sides. These sides are commonly known as wings. Depending on the shape of the cutting edge, the wings can be quite short or quite long.



The anatomy of a tool

TOOLS FOR FACEPLATE TURNING

Faceplate turning typically requires a bowl gouge, parting tools and scrapers. These should give you everything you need to shape and refine the project you are going to tackle.

Bowl gouges

A bowl gouge is typically milled from a round bar, which has a deep flute running along about two-thirds of the blade towards the handle. The flute, depending on the make, can be a 'U' shape, a 'V' shape or a parabolic curve. It is initially used for rough shaping, by removing lots of wood quickly, then to refine the curves on bowls and platters. A 10mm gouge is a good size to start with. There are various grinds that can be made on the end of the tool, and these grinds subtly affect how the tool can be used. The two most widely used grinds are a standard-grind and a fingernail or swept-back profile. While the tool is known as a bowl gouge, if ground to a swept-back profile on its cutting edge, its construction also allows it to be used on spindle work, which is really good for working on logs and larger-scale work.

Parting tool and beading & parting tool

The standard versions of the parting tool and the beading & parting tool are usually rectangular or square in section, although other shapes are available. They typically have two bevels at the front end that converge to create a cutting edge. They are effectively chisels, used to shear timber fibres cleanly.

The thinner 2-6mm parting tools are ideal for making thin parting cuts and creating delicate fillets. The wider 6-12mm beading & parting tools are ideal for cutting larger tenons, spigots, fillets, and 'V' cuts.

I would recommend a thin parting tool, a 2-3mm one and also having a larger beading & parting tool of 10mm. If cost is an issue, and let's face it, it often is, a compromise is to buy a 3mm parallel-sided parting tool and then ask for a 10mm beading & parting tool for a birthday or Christmas present – far better than socks and jumpers.

A few specialised parting tools have flutes down only one cutting edge and are used to cleanly shear the fibres of the wood when parting off timber.

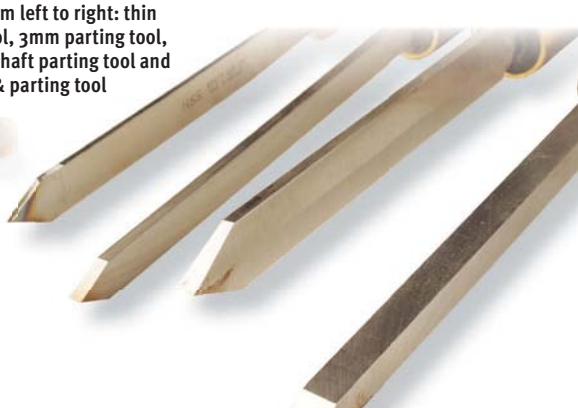

Bowl gouges of various sizes


Bowl gouges from left to right: standard-grind, wings swept back a little and wings swept back a lot


Parting tools

Parting tools from left to right: thin 2mm parting tool, 3mm parting tool, 6mm diamond-shaft parting tool and 10mm beading & parting tool


Fluted parting tool



TOOLS FOR FACEPLATE TURNING

If the flutes are deep enough, and are the right shape, they can be used to cut fine beads too.

Scrapers

Traditional scrapers are usually flat, square or rectangular bars, which have various shaped sections on the end and are available in various widths. They are usually used to clean up and refine the work after it has been shaped with a gouge. A 25mm scraper with a rounded end – or a French curve shape – is an excellent choice to start with but, depending on the work you do, you may need a square design or one with a raked/angled end. If you end up making a lot of boxes, then you might end up needing a side-cut one too.

A range of scrapers

There are alternatives to the traditional scrapers and they are tipped tools. Two variants from different manufacturers are shown here, both of which have the facility to place various shaped tips on the end of each unit. The fact that each has teardrop shaped cutters and smaller cutting tips as options gives you quite a few scraping/cutting capabilities in one tool. Such tools might give you a bit more flexibility, especially if you can swivel the cutting tip or angle the shape of the tool as well, which allows you to undercut work and may be cheaper than three traditional scrapers plus a specialist tool for undercutting.

The larger the work, the greater the surface contact with the tool edge that is required to create a smooth curve or surface. If you use a 13mm scraper on a large bowl curve, you will create more ridges than you take out; if you use a large scraper with a large cutting area in contact with the work, you will smooth out the shape very easily.

Two multi-tipped scrapers, which illustrate a couple of the numerous types and makes available

TOOLS FOR SPINDLE TURNING

The tools required for spindle work are a spindle roughing gouge, a spindle gouge, parting tools, skew chisels and possibly scrapers.

Spindle roughing gouges

Spindle roughing gouges: left, shallow fluted/Continental-style spindle roughing gouge; right, standard deep-U-flute profile spindle roughing gouge

Spindle roughing gouge

The spindle roughing gouge is usually made from a forged flat bar or, less commonly, a milled round bar. The flute – the channel down the centre of the tool – is U-shaped.

It is only to be used on spindle work in which the grain is parallel to the bed of the lathe. The tool is used between centres to smooth timber from square or log section down to round and can be used to roughly shape the exterior of the work before you put in the detail with a spindle gouge. The large flute allows for the rapid removal of timber, but you must keep the toolrest as close to the work as is possible when using this tool.

Start with a 20mm or 25mm tool; this will give you the flexibility to work on projects of many different sizes. This tool is not to be used for roughing out/down bowls; it is only used for spindle work. The tang design cannot withstand the excessive strain of overhanging the rest any distance, leading to possible breakage.

Spindle gouges

The spindle gouge is used for creating fine detail, such as coves and beads, and for creating and refining shapes on spindle work. It is usually made from a milled round bar; the flute is shallow and semi-circular. The profile is totally different to that of a bowl gouge, and, as with the spindle roughing gouge, the tool should not be used with much of an overhang from the toolrest; they are just not strong enough in the tang. A good size to start with is a 10mm version.

Skew chisels

The skew chisel is the woodturner's version of the wood plane. When presented at a shear cutting angle to the wood, it peels the wood off, leaving a fine finish. It can also be used to roll beads and create incised 'V' cuts. Skew chisels can be oval or rectangular in section. A 19-25mm tool is a good starting size for the beginner.

Spindle gouges ranging from 6mm on the left to 13mm on the right, each with a slightly different fingernail profile

TOOLS FOR SPINDLE TURNING

Parting and beading & parting tools

As we saw in the tools for faceplate turning section, parting tools and beading & parting tools are great for spindle and bowl work. The tools can also be used to roll beads on spindle work.

Scrapers

Scrapers can be used for spindle work but, in truth, are hardly ever used on the outside of spindle work. However, they can be used to clean up the inside of boxes, goblets, eggcups, hollow form vases and similar projects.

To recap, I have recommended a limited basic selection of tools to start off with. They are as follows: a 10mm bowl gouge, a 10mm spindle gouge, a 2-3mm parting tool, a 10mm beading & parting tool – these are thick and thin versions of each other – a 20-25mm spindle roughing gouge, a 20-25mm rectangular-bladed skew chisel and either an interchangeable/multi-tip scraper or a few standard rectangular bladed-scrapers with different shaped ends.

Skew chisels: rectangular blade and oval skew chisel

The basic tool selection minus the scraper options

SHARPENING EQUIPMENT

Now you've bought your tools, you will need to keep them sharp. There are various pieces of equipment and accessories available to help you do this, including bench grinders, wet sharpening/water-cooled systems and belt sharpening systems. These all use different grades of abrasive wheels or belts to shape and sharpen the cutting edge of your tools.

Bench grinders

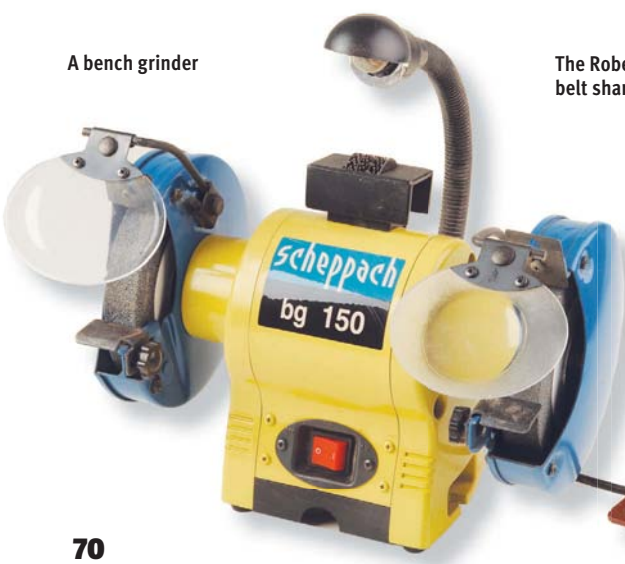
The method most commonly used by turners is to use a bench grinder. That said, don't read into that statement that there is anything wrong with the other options. Bench grinders are typically available in 150 and 200mm wheel diameter options. Both are suitable, the only difference being the 150mm one will create a slightly tighter radius on the tool bevel. Bench grinders also come in slow and normal speed variants: 1,200-2,400rpm. The slow-speed ones are more expensive than the standard ones. Some claim the slow-speed ones give turners a little bit more leeway when sharpening and won't punish you with a blue edge so quickly – one that discolours due to excessive heat build-up and may have its temper affected by being overheated – if you get the pressures wrong. Bench grinders can be picked up for very little money and come fitted with two wheels: one coarse grit wheel that is used to shape tools and a fine grade used for sharpening the cutting edge. It must be said that the wheels supplied on cheaper grinders are often not really designed for turners. They are usually supplied fitted with ones that are used to rough shape metals – albeit crudely. However, replacement wheels – usually aluminium oxide with a friable bond that breaks down to keep a fresh cutting surface in use – are available from woodturning suppliers. These companies may also supply grinders already fitted with such wheels so are ready to go for turners. Shop around and ask some questions of fellow turners and the retailers before you part with your money to make sure you are getting what you need. Grinders usually come supplied with guards and a small rest. Make sure you fit and use the guards supplied. The rests vary in size from make to make, but rarely do they have a large rest so you are likely going to need a separate sharpening platform/jig system to help you with control and accuracy.

Belt sharpening systems

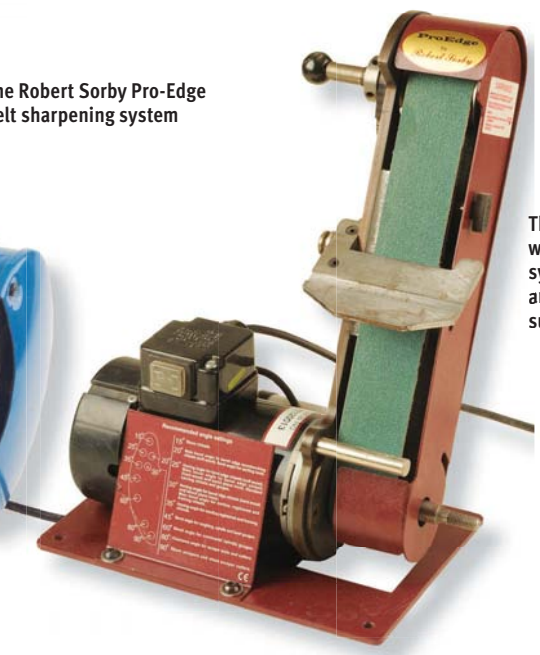
Belt systems do the same as the bench grinders in as much as they can be used to shape and sharpen tools but instead use a belt – various grit grades and types are available allowing the rough shaping down to fine edge sharpening – and the belts can be easily changed to suit the situation. Belts create a flat bevel instead of a concave bevel created by grinding wheels. Purpose-made belt-sharpening systems, as opposed to using a belt sander, come with a table and usually have an adjustable rest on which you can place your tools while sharpening them.

Wet sharpening/water-cooled systems

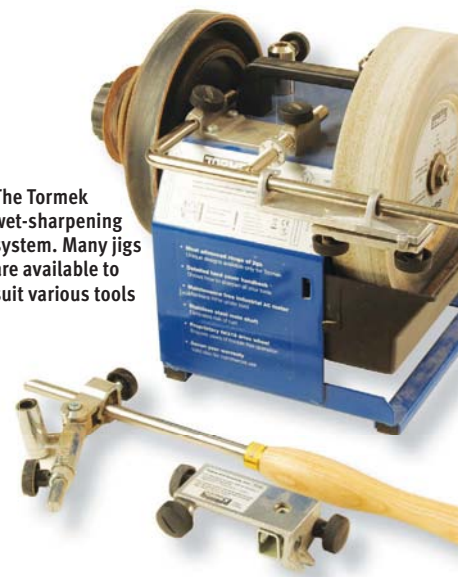
These have a large diameter wheel running in water, which helps with the cutting action of the abrasive of the stone, but also keeps the tool cool, so it is less prone to overheating. Only one stone is used but various jigs and options are available to help with the sharpening and they usually come with a largish table/rest on which to place your tools. An example of this is the Tormek wet-sharpening system, which is pictured at the bottom of page 70. The wheel on these



A bench grinder



The Robert Sorby Pro-Edge belt sharpening system



The Tormek wet-sharpening system. Many jigs are available to suit various tools

SHARPENING EQUIPMENT

tools runs slower when compared to a belt or bench grinder. These are very effective units and if you also do cabinetry and carving, you may well find that these wet-sharpening systems may give you a more complete package for your workshop – albeit at a higher cost. Again, this is something to think about when you are considering sharpening equipment. All the above systems work well and I would urge you to ask friends and try before you buy so you can feel, see and understand the differences between them.

SHARPENING JIGS

Before purpose-made sharpening jigs and systems came along, people often sharpened freehand – and many, including myself, still use this method at times. It was a hard learning curve with many failures and frustration. But, for reasons of consistency and accuracy, jigs have been created by various manufacturers that all, by one method or another, allow you to accurately set up grinding angles and sharpen the tools easily, in a repeatable manner.

Rise and tilt tables

Most tools can be sharpened on what is called a rise and fall tilt table. The table can be adjusted to any angle and provides a stable platform on which to place the tools while you shape or sharpen the cutting edge. There is an alternative to this and that is to use what is called an extendable arm, into which you can hold the tool, and by adjusting the length of projection of the arm you can adjust the cutting angle on the bevel. Note this system also allows the insertion of a purpose-made rise and tilt table.

Fingernail jig/profiler

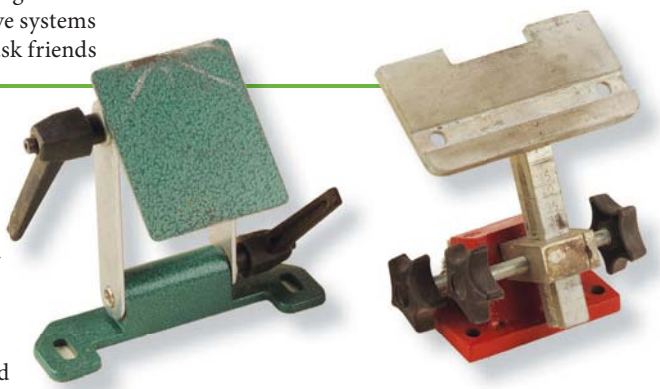
I mentioned in the tool section that some gouges – bowl and spindle gouges – had a swept-back or fingernail cutting edge. This can be created using the adjustable table, but it is easier and more accurate – although more costly in the first instance – to use a purpose-made jig; this is usually called a fingernail jig /profiler.

Primarily it is a rocking arm that may be fitted onto one of the rise and tilt tables or in a special arm. This type of jig allows you to set a given bevel angle and to adjust how much the wings of the gouges are ground back.

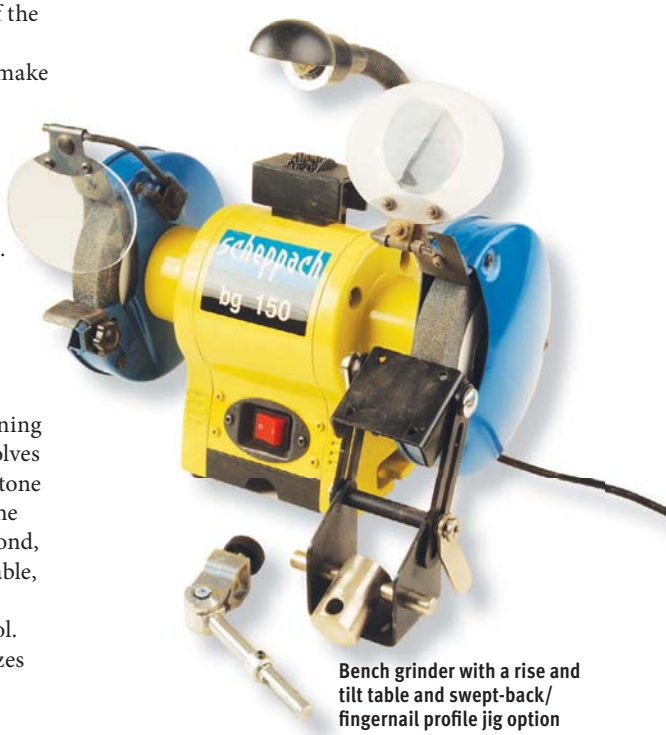
No matter which system you use, make sure that you work at a comfortable height and in a position that allows you to see the sharpening taking place. Of course, wear eye protection when sharpening and make sure all the guards are in place. We will examine the process of sharpening and using your tools in more detail later on in the series.

Honing

Some people use a method called honing to maintain a cutting edge. This involves rubbing a specially created plate or stone across the bevel to refine/maintain the sharpness of the cutting edge. Diamond, ceramic and natural hones are available, but these are designed to create and maintain an edge, not to profile a tool. They come in various profiles and sizes to suit various tools.



Adjustable sharpening tables



Bench grinder with a rise and tilt table and swept-back/ fingernail profile jig option

PHOTOGRAPH COURTESY OF THE TOOLPOST

Sharpening system with rise and tilt table and extendable arm

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Adjustable arm and table can be used to sharpen various tools

PHOTOGRAPH COURTESY OF THE TOOLPOST

The fingernail/adjustable grind jig for creating swept-back grinds

A range of diamond hones

NEXT MONTH

In the next issue, we will continue by looking at other accessories, finishes, abrasives and personal protective equipment ●

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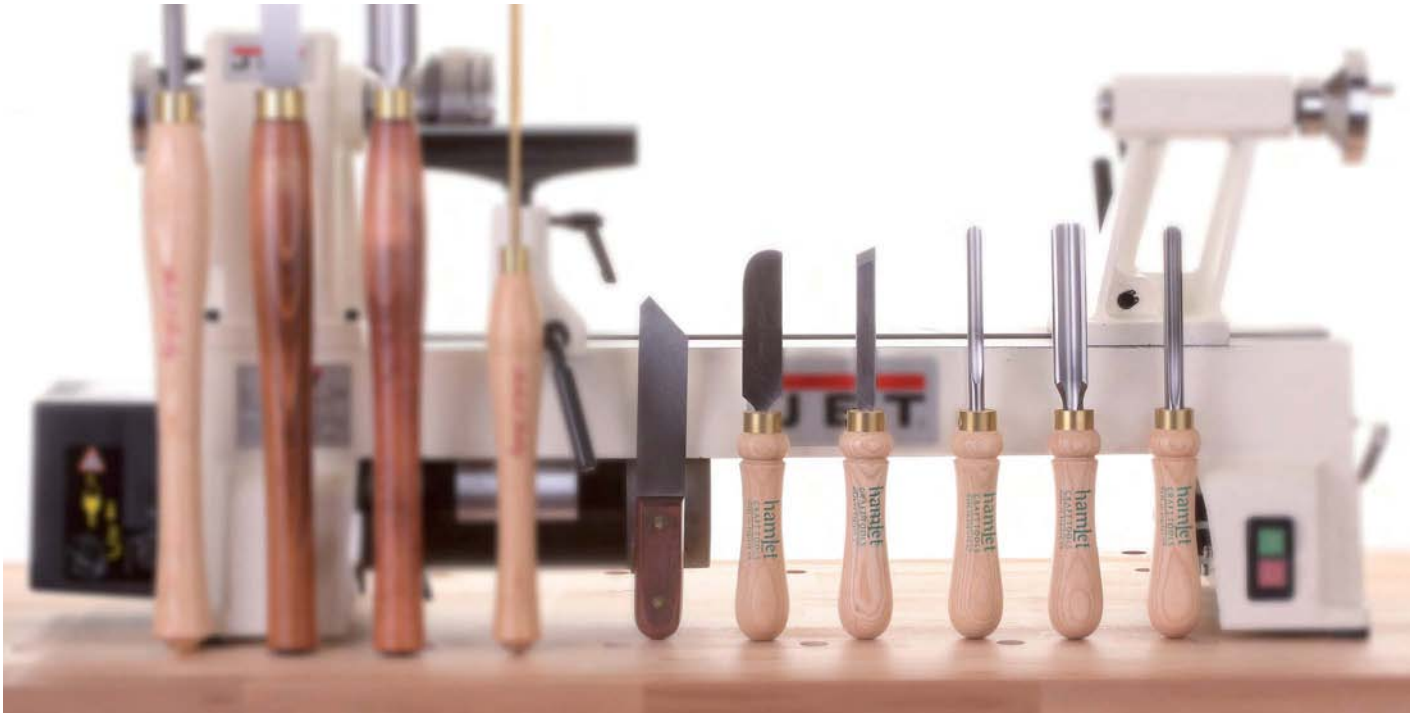

Enough is Enough

Using standard tools on small lathes inhibits proper tool presentation

If you turn using a compact lathe, chances are your tools are preventing you from turning at your best. Standard tools are simply too long for these situations.

Most tools are designed for working on big lathes – and were designed long before today's compact lathes. Happily, we at the ToolPost have identified the problem and offer the solution.

Tool presentation is vital for successful woodturning

If you can't manoeuvre your tools over the bed of the lathe, or in the limited space between headstock and tailstock, you're going to struggle to turn anything great. Or even good. You're simply going to struggle.

A typical small lathe has a swing of about 12 inches over the bed. So there's just 6 inches of space between spindle and bed (and even less over the banjo). A typical bowl gouge is 23 inches long. How are you supposed to fit that into a six-inch space and present it to the workpiece correctly? The answer is that, unfortunately, you can't. The new CompacTool bowl gouge measures just 10½ inches overall – not hard to see why that fits so much better is it?

Between headstock and tailstock you've maybe got 20 inches at best – probably 4 inches less than that when your workpiece is mounted in its chuck. A standard bowl scraper is 17 inches long. How's that going to fit? It won't. The new CompacTool bowl finishing scraper has the same cross-section as a standard heavy scraper but is only 10 inches long. That fits. Comfortably.

Serious tools for serious craftsmen

The four tools shoooting off the top of the left of the photo that heads this page are all normal, standard-length tools from reputable British manufacturers. But they were made for a different job. They were never designed for use on a compact lathe. Most tools aren't.

But don't confuse CompacTools with miniature turning tools. These are full size tools in strength, style and performance, simply made shorter and with more ergonomic handles than old-fashioned standard tools. In a nutshell, they were designed to do a job – creating great work on a compact lathe.

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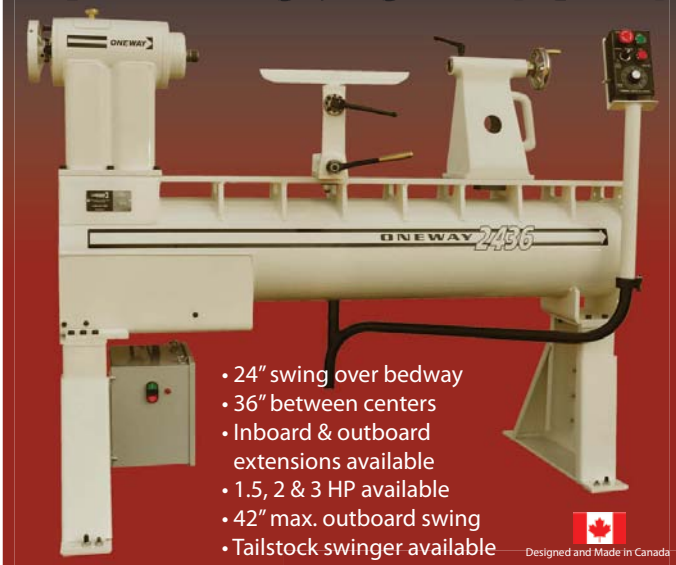

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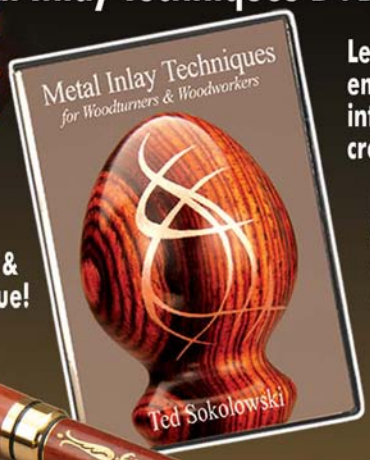

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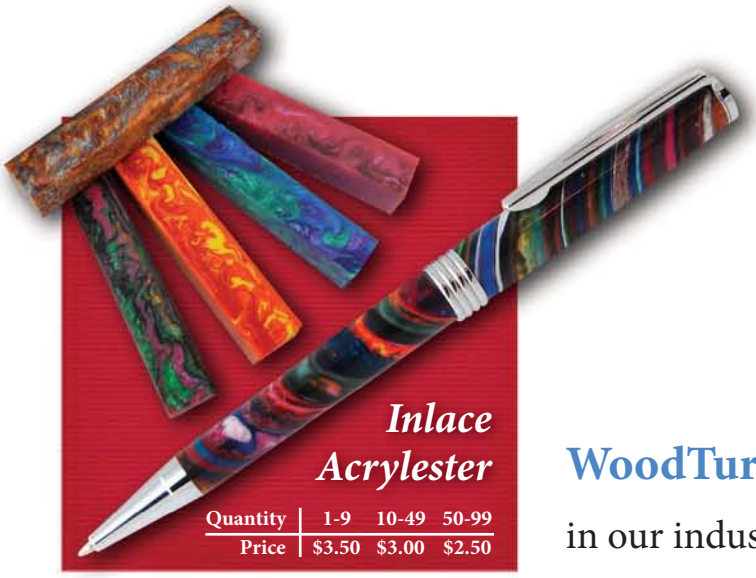

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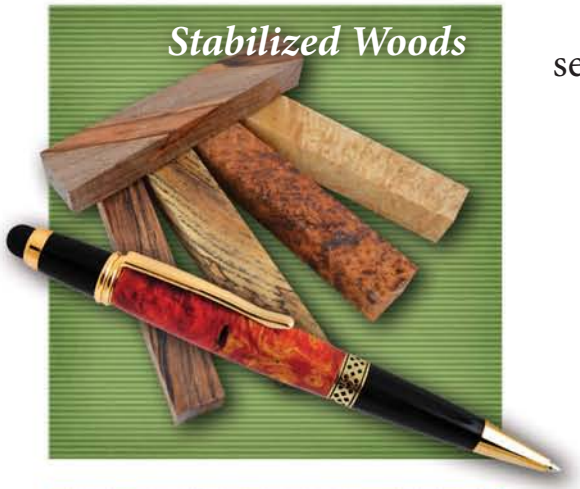

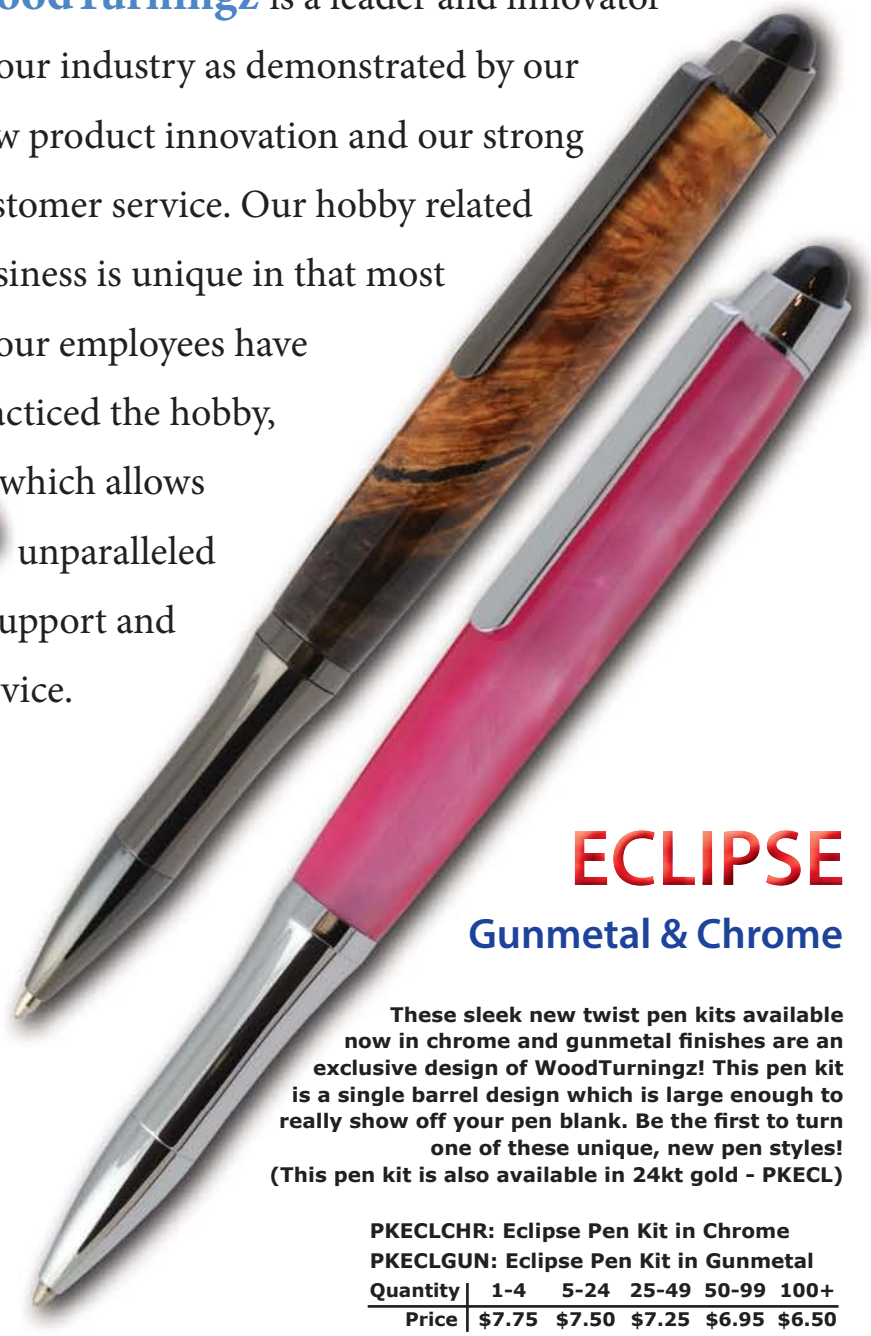

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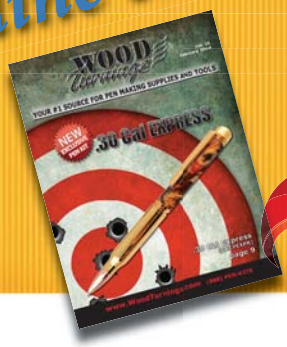

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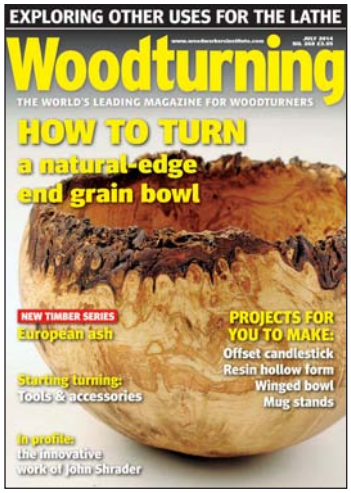

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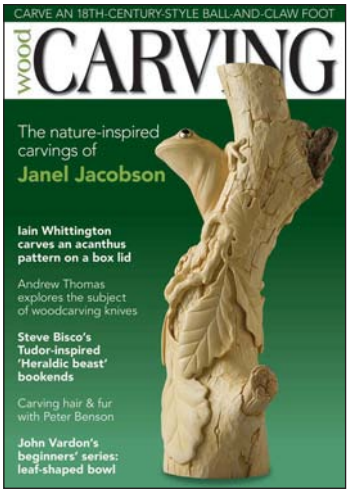

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Glossary of terms – Part 3

Mark Baker looks at more woodworking terms in the third part of this series, from chatterwork to power sanding

This month, continuing with this series, we look at a few more terms relating to turning the wood, surface preparation and finishing.

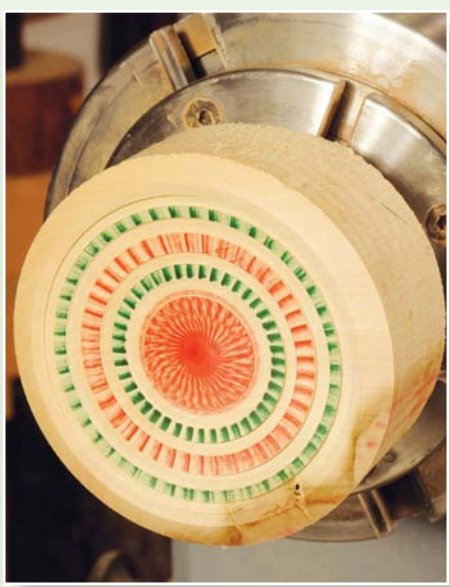
Bevel-rubbing tools

Tools in which the bevel is kept in contact with the wood during the cutting process, which serves as a primary control point of cutting. The main examples are gouges and skew chisels, but parting tools or beading & parting tools may also be included, depending on the cutting technique used.

Chatterwork

A form of decoration, usually applied to the end grain, made by placing a specially made cutter against the rotating work. Because the blade is quite thin, it vibrates and makes an intermittent cut on the surface. The pattern is affected by the speed of rotation, the pressure of the cutter against the work and the amount of flex there is in the cutter, which is due to projection of the blade from its carrier.

A chatter tool being used to create a chatter effect on dense close-grained hardwood



Chatter detail highlighted with a fibre-tipped pen

PHOTOGRAPHS BY GMC/ANTHONY BAILEY & MARK BAKER

Denibbing

This is the process of using a fine grit grade of abrasive to even out or flatten off a finish that has been applied to the work. Some finishes will cure/set and be bumpy to the touch, uneven or contain contaminants – thus creating 'nibs' – which mar the surface appearance so fine grit grades of abrasive are used to even it out and remove the anomalies. The resulting evened-out surface may then have a final coat of something applied to it to finish it off.

Liming

Traditionally, a process in which the grain of an open-grained wood such as oak (*Quercus robur)*, ash *(Fraxinus excelsior)* or similar was filled with a lime slurry, which set in the pores of the wood. Once dry, this was sanded back to reveal the natural colour of the wood on the surface, leaving the filled pores a distinctive milky-white colour, thus highlighting the grain pattern of the wood. Nowadays, tinted paste waxes of various colours are used to create a similar visual contrast by filling/colouring the grain and the term 'liming' is often applied to using these too. There are metallic variants of the 'liming' waxes available and these are called gilt creams. As with all these products, they can be used on bare or sealed wood, but for more contrast, often the wood is coloured first and then the waxes/pastes are applied.

Liming wax being applied to an ash bowl

Silver gilt cream

Oak treated with liming wax

Versaille gilt cream

Pluck-out/pull-out or tear-out

The situation in which the tool pulls a clump of fibres away from the main body of the wood, thus resulting in a serious blemish which can run very deep. It often occurs when the wood has decayed a little and lost some of its strength, so the fibres are not so tightly bonded together as they once were. A surface blemish caused when the fibres of the grain are broken or torn away from the surrounding fibres. It tends to occur when cutting against the grain, or where there are grain irregularities, such as wavy or interlocking grain.

Pull cut

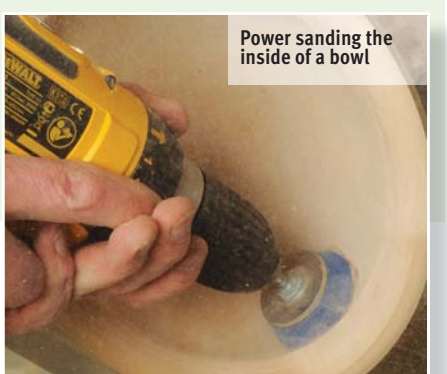
This is where the tool is pulled towards the user as it is moved across the surface being cut. More commonly, bowl gouges and scrapers might be used in this manner, but this type of cut is not just limited to those two types of tool.

Push cut

The process of gently pushing a cutting tool into the timber to effect a cut. The type of tool used will dictate the presentation angle entry into the material being cut, but effectively, the cutting edge is being moved away from the user into the material being worked.

Power sanding

This is a method of sanding that involves holding abrasive on an arbor – a pad which has a hook-and-loop face onto which is affixed abrasive and this pad has a metal pin – which is held in a drill or similar device. Sanding arbors are available from various manufacturers and the pads come in various sizes. 25-100mm are the most commonly used sizes, with 50 and 75mm being the most popular. The pads on the arbors are available in different densities, or the arbor is relatively hard but onto which can be fitted a softer pad, which allows you to sand tighter radius contours. The revolving arbor is traversed across the surface of the work as it turns slowly on the lathe. Best results are achieved by having the arbor run in contra-rotation to the work. Power sanding is devilishly quick and a light touch is required so as not to create furrows.



Power sanding the inside of a bowl

Shear scraping

A cutting technique in which a scraper, or the edge of a gouge, is presented at such an angle to the work as to cause shavings to peel off the cutting edge. There is no bevel rub during this cut. A good angle to begin with is 45°, with the tool trailed across the surface of the rotating work. The angle of approach can be varied: if you find that 45° is not right and you are tearing the wood, then lessen or increase the angle until you achieve a fine peeling cut. The nearer the horizontal the cutting edge is, the coarser the cut created. Conversely, the nearer to vertical the cutting edge is, the finer the cut. The object is to clean up the surface and minimise the need for sanding with coarse grades. Only one part of the cutting edge should be in contact with the wood at any one time so be careful when you cut close or raised details, such as beads, or near spigots, etc.

Shear scraping with a multi-tipped tipped tool

Shear scraping with the cut occurring on the lower half of the cutting edge

Shear scraping with a traditional rectangular-blade scraper. Again, the cut occurs on the lower half of the cutting edge

Ultraviolet (UV) inhibitors

Additives included in certain finishes to block or retard ultraviolet light, which is the primary cause of colour degrade within wood. They act in the same way as sunblocks applied to the skin.

Wet sanding

A sanding technique which employs a lubricant. I first saw this method used by Ray Key, who applies paste wax to the finish-turned piece prior to sanding with fine abrasive. The dust and wax combine to form a slurry, which gets pushed into the grain and acts as a grain filler. Very little dust is produced during the sanding process and, if oil or wax is used, no further finishing is required, other than burnishing with a clean cloth. Oil, wax or water can also be used as lubricants. I mostly use oil, but when working on wet timber I use water, then let the piece completely dry, denib with ultra fine abrasive and finally apply a finish.

Simply turn the work to the required profile and dry sand any major blemishes away, then apply a coat of oil or wax to the surface and sand at a low speed. If you see dust forming, you need to apply more lubricant and work through the grades of abrasive. When the abrasive becomes clogged, use a bronze brittle brush to wipe away the slurry from the grit on the abrasive. After sanding through the grit grades, use a clean cloth to apply a further coat of the oil or wax, then burnish to a smooth finish. One drawback is that this method can only be used when the wood colour is uniform: on a wood such as laburnum *(Laburnum anagyroides)*, which has cream sapwood and dark heartwood. The sanding slurry will be dark and will contaminate the lighter sapwood. ●

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Offset candlesticks

In the latest in his skill-building series, **Philip Greenwood** demonstrates offset turning and suggests two different candlestick designs for you to make

PHOTOGRAPHS BY WENDY GREENWOOD

Offsetting brings a whole new dimension to the items you turn. This type of work is not new by any means, just think of a cabriole leg on a piece of furniture; yes, these are now made on automatic machines but they can be turned on a lathe by hand.

However, it's best to start with a simple item. I have turned two styles of offset candlestick here: the first one is offset at one end while still on the centre at the other end, and this is the one I would recommend to try first if you are new to offset work.

This type of work is off balance so your lathe must be firmly mounted to reduce the amount of vibration that you may experience. The speed of the lathe for these items needs to be fairly fast to achieve an even and clean cut, this is due to the intermittent cutting action. It is possible to create an endless range of shapes by varying the amount of offset at the end and then by offsetting each end differently. Just remember that the more you offset, the more vibration you will encounter as a result. Do not start the lathe before checking the toolrest clearance by rotating the item fully and never move the rest while the lathe is running. Wear a full face shield when turning these types of items in case of any accidents. This type of work requires good tool techniques and sharp tools; this will reduce the need to sand to a minimum, which is useful as sanding can be particularly tricky on offcentre work.

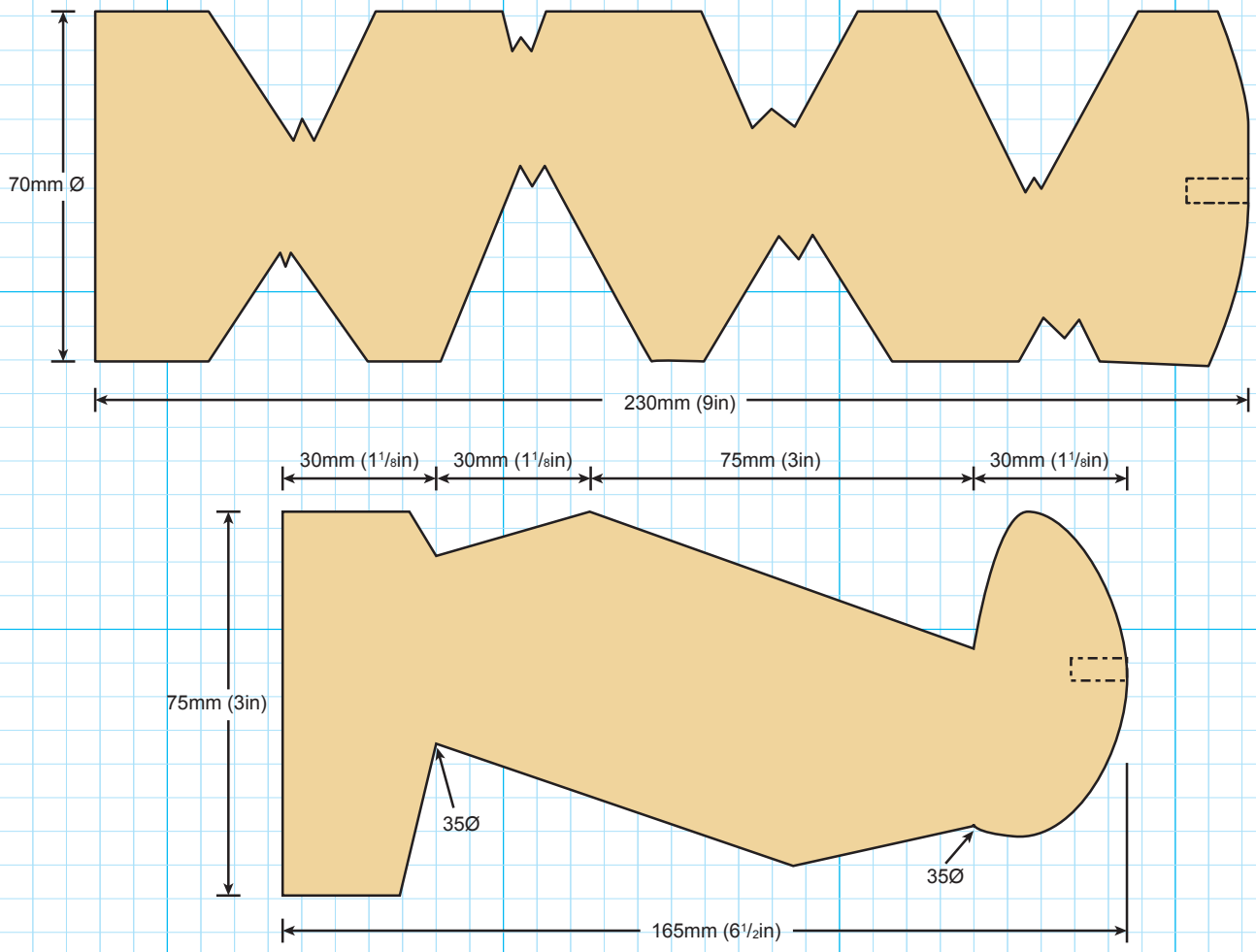
I have used a four-prong centre at the headstock and a standard revolving centre at the tailstock end. The more offset you have at one end the less contact you have at the drive centre, meaning less drive grip.

Always try a test piece first if experimenting to make sure the amount of offset and the design will work on the piece, and then make the item with a nice piece of timber – you do not want to find out that you have wasted a good piece of timber due to not testing the design. The timber choice is important here; you should have no splits or knots and avoid the pith in the centre of the timber, which is a weak point. This generally rules out small branch wood; however, if it is large in diameter and you can cut a piece out to exclude the pith, then this could be used. I chose to turn the first candlestick chunky for stability.

PHILIP GREENWOOD

About the author: Philip has been turning wood since 1980 and started turning professionally in 1986. He was accepted onto the Register of Professional Turners (RPT) in 2006. He is also a member of the AWGB. He can be seen working in his workshop in North Yorkshire and has demonstrated at the woodworking show at Harrogate since 2008. He runs courses at his workshop.
Email: philip@woodturningintoart.co.uk
Web: www.woodturningintoart.co.uk

CANDLESTICK DIMENSIONS



INFORMATION

TIME TAKEN & COST

Time taken: 40 minutes each

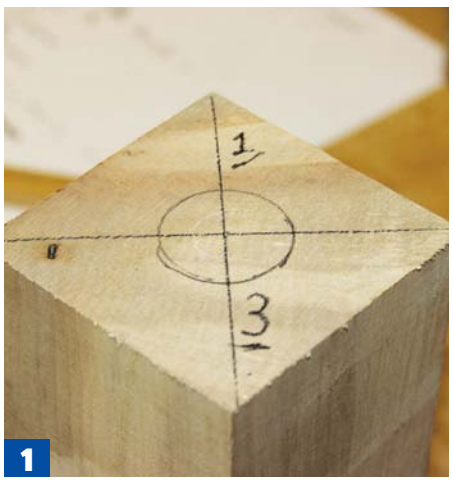
Cost: £4 each

TOOLS REQUIRED

- 3mm parting tool
- 20mm skew chisel
- 20mm spindle roughing gouge
- 10mm spindle gouge with a fingernail profile

ADDITIONAL TOOLS

- Chuck
- Drive centre
- Revolving centre
- PPE: facemask, respirator/dust mask and extraction



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CANDLESTICK 1

1 To begin the first project, mark both ends of the timber, then draw a circle on each end with the compass set to 15mm radius. Place a number 1 and 3 on the first end, then mark the other end with number 1 at the same corner and the opposite corner with number 3

2 Use a mallet to drive the four-prong centre into the middle mark, and then bring up the tailstock to the centre mark. Use the spindle roughing gouge to remove the corners and turn until round with no flats on the cylinder. You can see I have repeated the number near the centre in case the outer ones are turned away ▶

3 Now is the time to offset the tailstock end only to number 1, leaving the headstock end on centre. Rotate the end so number 3 is by the toolrest and adjust the toolrest so it is close but not touching. Now rotate by hand to make sure it fully rotates without catching


3

4 Leave a 30mm width at the widest point at the tailstock end for later, then use the spindle gouge to start turning towards the right-hand edge. You're looking for a simple taper. This will be an intermittent cut at the start. Continue until it is round in the bottom right corner


4

5 Now take a cut down the inside face of the end, you will only have bevel contact for a very short time when at the top edge, when lower down you will find you have a full circle of timber meaning the bevel is fully supported


5

6 Take a finishing cut. Keep the bevel in contact as much as possible to achieve a smooth surface, which will need less sanding later. Sharpen the gouge before this cut if you're in doubt about its sharpness

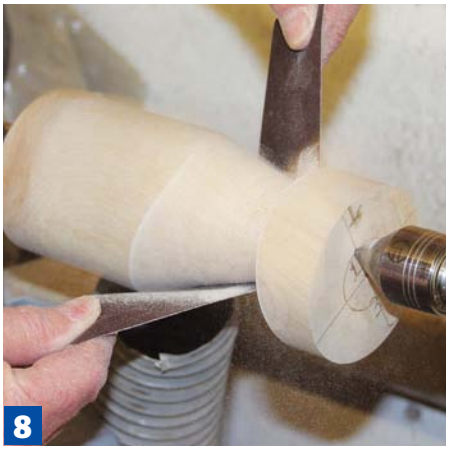

6

"Always use a dust extractor to remove most of the dust – I still wear a dust mask when sanding"

7 Place a 'V' cut in the bottom corner with the long point of the skew chisel. Note that I have angled the toolrest in to avoid too much tool overhang. The right side of the 'V' cut is a continuation of the side. Angle in more from the left-hand side


7

8 Always use a dust extractor to remove most of the dust – I still wear a dust mask when sanding. Use a long strip of sanding paper, this means your fingers are well clear. Start with 120 and work through to 400 grit, stopping after the first grade to check the tool marks have been removed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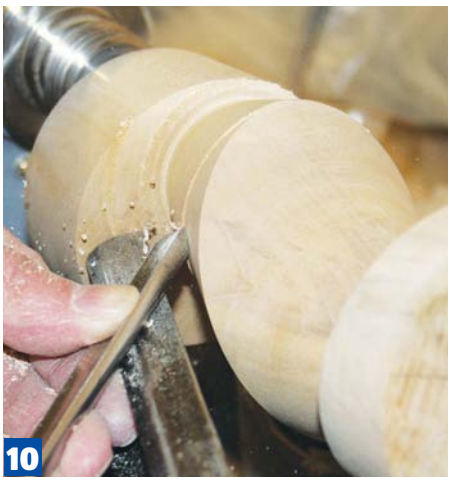
9 Remove the four-prong centre from the lathe and use a mallet to drive it into position 3 at the headstock end, return to the lathe and mount in the centre position at the tailstock end. Now start turning at the other half, leaving 35mm at the end for later. Work towards the inside edge from the centre, and keep taking a cut down the end face as well


9

10 Try to match this end to the first end in both diameters at the bottom corner of the cut as well as the length of the taper. Keep stopping the lathe to check progress as you go, then sand as in step 8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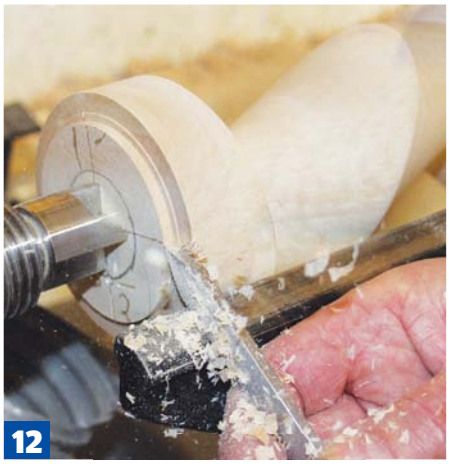

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11 Repeat the 'V' cut at this end as in step 7. Make sure the long point of the skew chisel is sharp for this cut

12 Place back on the centres at both ends then cut a suitable spigot for your chuck; use a parting tool to remove the waste until you are near the chuck jaws diameter, now use the long point of the skew chisel laid flat on the toolrest to cut the dovetail

13 Transfer to the chuck and use the tailstock for support to reduce vibration. Use the spindle gouge to shape the top, this is a convex curve. You could use a Jacobs chuck to drill a small pilot hole for the candle holder. You can then sand the end. Part off the candlestick from the chuck, part down until there is about 10mm left in the centre and use a small saw to remove completely. Finish with sanding sealant and de-nib. This will be buffed up later with wax

14 The completed candlestick should look something like this

CANDLESTICK 2

15 Mark both ends of the block. Draw a circle on each end with the compass set to 15mm radius, then place numbers 1, 2, 3 and 4 on the first end, then mark the other end with the same numbers at the same corners

16 Use the spindle roughing gouge to make the block into a cylinder, this needs to be parallel. Now mark out the line positions, mark 15mm from the right-hand end, then every 25mm. Draw a thick line after the first 25mm and then every 50mm. These lines will be needed to keep the proportions

17 Use the parting tool to part in 5mm from the surface on the thick lines. Do this for all the thick lines only

18 Now offset this onto number 1 at each end. Check the toolrest for clearance before starting the lathe, the gap can be in the region of 30mm at times. Part down the same lines as before – this will be an intermittent cut – until the centre is down to around 28mm, stop the lathe to check with callipers. Keep widening the gap to provide clearance

Handy hints

1. Check the toolrest clearance carefully with this type of work
2. Make sure each end is correctly positioned or you will create a new design
3. Check the lathe speed. Remember you are turning off-centre so the item will be out of balance

19 Use the spindle gouge to cut into the groove that was produced before. Keep cutting from both sides, take small cuts as this will be out of balance and intermittent

20 Cut nearly back to the pencil lines, leaving a bit so you can clean at both sides. Try to match the angle at both sides; this should come easily if you work to the pencil lines and don't open the centre width in the bottom

21 Clean up both sides using the long point of the skew chisel. Line up the bevel with the cut side and use the point only to avoid a catch. Make sure the point is very sharp to achieve a very clean cut. Sanding will have to be done by hand with the lathe switched off, if needed

22 Still using the long point, cut a 'V' at both sides of the centre part up against the sides. Make the V in several cuts. You will see I have moved the toolrest closer to avoid tool overhang

23 Move on to the next part by moving the centres over onto number 2 at both ends. Turn this in the same sequence as for the first part. When this is completed, move onto part 3 as in the photo, having moved the centres to number 3 at each end. Then repeat on section 4

24 Move the candlestick back onto the centre position and turn the top part to completion. You can then use the parting tool to part down at the headstock end to just above the four-prong centre, angle slightly so as to undercut the base. Remove from the lathe and then finish the bottom off with a small chisel. Sand any part as needed

25 Apply sanding sealant and rub into the grain. Once dry, buff to completion with wax

26 The completed offset candlestick should look something like this


19


20


21


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Handy hints

4. Check your lathe is secure on the stand or bench
5. Offset by only a small amount at first until you are comfortable with this type of work
6. Sanding may need to be completed off the lathe
7. Try different combinations of offset at each end
8. Wear a full face shield and a dust mask or a respirator while turning


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Stuart Mortimer and the Scientific Method

1: Objective

To create a pierced hollow form featuring twisted bines, as illustrated, right. This is the style of vessel, or hollow form, associated with Stuart Mortimer. Through his demonstrations, books and DVDs, Stuart has shared with the world of woodturning his approach and the tooling methods required to create these exquisite works of art.

2: Method

Using you favourite hollowing tool, create a hollow form of the desired shape and with a uniform wall thickness. Mark out the bine positions. Use The ToolPost's new SM250* tungsten carbide burr to make plunge cuts through the wall of the hollow form, quickly, cleanly and safely, thus creating the bines. The Toolpost, long-term friends and admirers of Stuart Mortimer's work have developed this

revolutionary product to meet the specific requirements of this operation under Stuart's expert guidance. The cutting disc is designed to mount on to a 2" (50 mm) angle grinder such as the Arbortech Mini Grinder or the Proxxon Long Neck Grinder. Use the side faces of the SM250 cutting disc to clean back the bines to the finished thickness and bring their cross-section to the desired shape. Use abrasive to refine the shape and surface finish on the bines. Create finial and base, to taste. Apply your favourite wood-finishing product. OK, in reality it takes a little longer, but you get the idea?

3: Results

Simply - Stunning!

**The SM250 carbide tooth disc is available only from The ToolPost and costs £28.70 inc VAT*
Information correct at time of going to press

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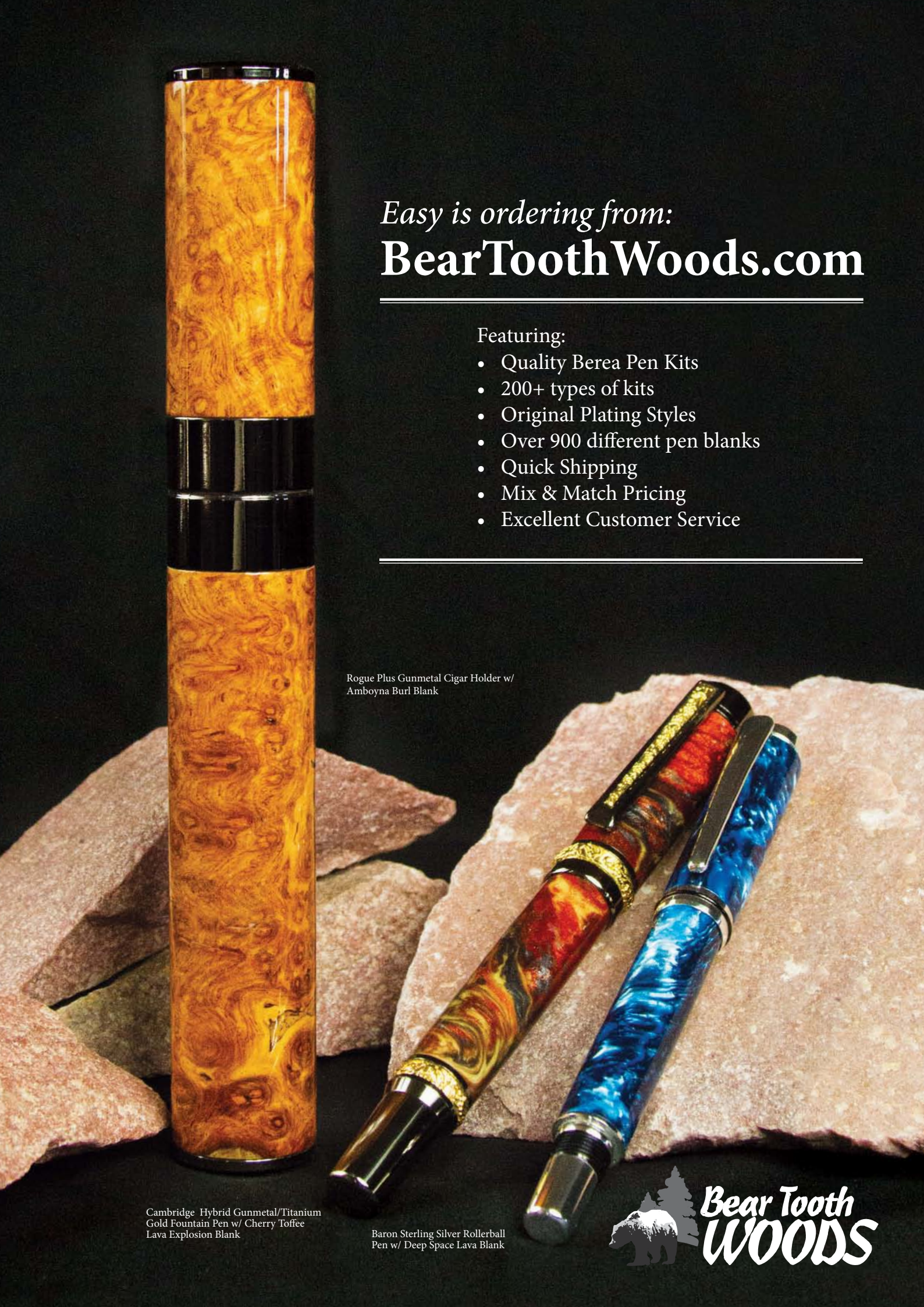
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Bear Tooth WOODS

In the workshop with...
Hans Finsterwalder

We find out more about the work of segmented turner **Hans Finsterwalder** and have a sneak peek at his workshop

PHOTOGRAPHS BY HANS FINSTERWALDER

Tell us about your background
I was born and raised in Bavaria, Germany. I apprenticed as a woodturner at 14 years of age and then became a journeyman woodturner. I then left the profession as all of the furniture after WWII went modern. There were no more turned legs or turned knobs on the furniture. After six years as a journeyman woodturner, I retrained as a stone and brick mason – it was a chance for better earnings. I immigrated to the US in 1963 and made my living as a brick and stone mason on the East Coast.

How did you get into woodturning?
After retiring and moving to Arizona I bought a wood lathe, built myself a shop and started woodturning as a hobby. I went to several seminars in Provo, Utah and was really inspired by Ray Allen and Dale Nish. I have been turning segmented bowls and vessels ever since.

Describe your turning style and the types of work you produce.
I usually don't have anything specific in mind when I go into my shop. I look at a piece of wood, and the wood kind of leads me to the shape I want to turn. It might be a hollow bowl inspired by a piece of Native American pottery for the feature ring, a Kiva suggested by a burl, or a sculpture.

What inspires you?
Lots of my inspiration comes from ancient Native American Ollas, paintings and other media. It represents a challenge to me to try and translate them into woodturnings.

Hans turning a bowl in his workshop

Segmented bowl in cherry *(Prunus serotina)*, ebony *(Diospyros spp.)*, bloodwood *(Pterocarpus angolensis)*, and maple *(Acer campestre)*

How has your work changed since you first started turning?
It's kind of fun to look back on some of my earlier turnings, which were mostly Christmas ornaments and simple bowls or vessels. My work has since evolved into much more sophisticated shapes and forms.

How would you describe your style?
To me, one of the most important things in my work is that the form of the finished work must be pleasing to the eye; in other words, the shape must be flowing.

Who or what has been your greatest influence?
Some of the greatest influences in my turnings are undoubtedly Ray Allen, Malcolm Tibbetts, Hans Weissflog, Binh Pho and Terry Martin. They have all furthered the art of woodturning and helped to make it into a recognised art form.

Tell us about your workshop
My workshop is about 42sq.m. My wood lathe is a Powermatic 2442. The shop also houses my bandsaw, a Robland combination tablesaw, planer and shaper and every imaginable hand tool you can buy – most of which you will probably never use.

Where do you see yourself heading?
I am now 81 years old and I see myself turning until I am no longer physically able to – hopefully a long way off.

What have been the highs and lows of your career so far?
Actually, I have had very few lows in my woodturning career; the highs are having demonstrated the craft of woodturning all over the United States, hopefully influencing and inspiring future woodturners to propagate the art of turning.

What, in your opinion, is the best thing about turning?
I just enjoy looking at a piece of wood, visualising what it could turn out to be and then proceeding to turn it into my vision. With segmented turning it is combining the different kinds of wood into pleasing designs, then explaining to people that it is all natural wood – not painted – and seeing the surprise and appreciation on their faces.

What methods of promotion do you use?
My work is displayed in several galleries: one in Sedona, Arizona and one in Carefree, Arizona. I am also a member of the Havasu Art Guild, competing in their juried Spring Show and their various expos throughout the year. It is especially gratifying to see patrons return year after year from the northern part of the US and from Canada to see what's new in my repertoire. Other than that it is mostly word of mouth. I do not have a website.

What are your aims and aspirations for the future?
I just hope that I will continue to evolve in my craft and that the public will appreciate the results of my labour.

Typically, how long does it take you to complete one of your pieces?
It is entirely dependent on the intricacies of the feature rings in my segmented bowls. An average time for a segmented bowl 460 × 460mm is approximately 60 to 70 hours.

What special tools in your workshop could you not do without?
Absolutely essential in my shop is my Powermatic wood lathe, my bandsaw and my tablesaw for segmented turning. My skew, bowl gouge and Tungsten tip shear scraper. I also rely heavily on Easy Wood Tools.

Can you tell us a bit about a typical day in the life of you?
A typical day is golf in the morning, come home and change clothes and then I get into my shop to work – for approximately five hours. I break for lunch in the middle. Most evenings are spent relaxing and reading trade magazines and playing on the computer.

Email: hans33@frontier.com

Set of betel nuts with segmented feature ring. The coin is an American quarter

Walnut *(Juglans regia)* bowl with Native American Naktci and water emblem

TOP TECHNIQUES

Having learned the trade in Germany, I could not be without my skew chisel, which scares a lot of turners. I could not be without it for spindle turning and finials

Kiva – a Native American dwelling – in buckeye *(Aesculus flava)* burl. Note the small turned hollow bowls inside. The back wall is alabaster stone, laid like bricks

Buckeye *(Aesculus flava)* sculpture with walnut *(Juglans regia)* centre. The segmented ring is manzanita *(Arbutus menziesii)* and holly *(Ilex spp.)*

Handy hints

1. Don't be afraid to try anything, just be sure to take safety precautions, i.e. wear safety glasses and a mask to protect yourself while turning. I also always wear safety gloves

2. Be willing to make mistakes and to waste some wood, you usually learn something really worthwhile from your mistakes

3. Don't turn woodturning into a job, enjoy what you are doing and have fun doing it

LIKES & DISLIKES

Likes:

- Camaraderie among woodturners
- Almost everybody is willing to share ideas and help each other out
- Also, the desire to help youngsters get started in woodturning

Dislikes:

- I can't think of any dislikes about turning!

LATEST HOME-MADE JIG

This is my offset turning jig. When I was an apprentice in Germany in 1947, we never had metal jigs. We used jam chucks, and I still use that method today, even though it is a bit slower – but old habits die hard. I use this jig whenever I turn delicate boxes

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Kit & Tools

A mixture of tests, press releases and reviews showing the latest tools and products on the market. *All prices include VAT, correct at time of going to press*

Farécla Profile 300 & Profile 500 compounds

Test

Walter Hall tries out two polishing compounds, which are both ideal for imparting a high gloss finish on your turnings

PHOTOGRAPHS BY WALTER HALL

Surfaces should be sanded through the grits to 1,000 or 1,200 before polishing

Profile 300 Rapid Cut is described as a mid-range, high gloss, water-based compound capable of removing P1,000-P1,200 dry abrasive marks while Profile 500 Light Cut liquid compound is a light cut, water-based compound used primarily as a second finishing step to remove swirl marks and give a high gloss finish. I decided to try both of them out.

In addition to the compounds tested, the range also includes Profile 700, which is an even finer compound for painted and lacquered surfaces and the coarser Profile 200, which will remove scratch marks from dry abrasives up to 800 grit.

In use

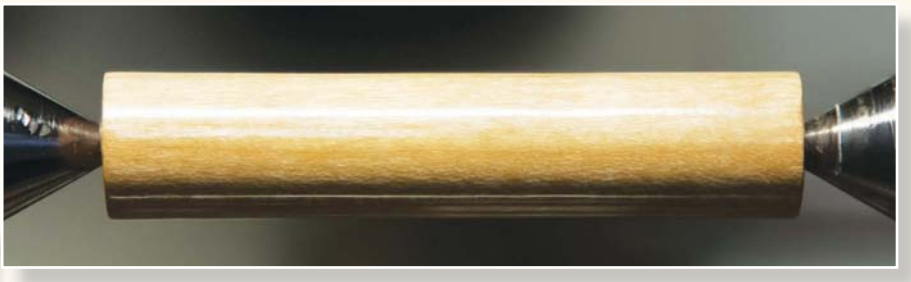
I tested the Profile 300 and Profile 500 compounds on an acrylic pen blank and on a pen blank finished with cyanoacrylate. Both were first sanded through the grits to 1,000 using Rhynogrip dry abrasive before polishing with Profile 300 and burnishing with Profile 500. Both materials were applied using a non-woven safety cloth and polished off with microfibre cloths. On both materials the results were impressive to the naked eye and even when viewed through an ×30 loupe there was little evidence of any remaining scratches or swirl marks. This is as good as or better than any other finishing system I have used on these materials.

As a final test, I tried the compounds on a solid surface material – Corian type – where it produced equally satisfactory results. The compounds have wide application and I found that the finer Profile 300 also effectively removed swirl marks from car paintwork while the Profile 500 eradicated scratches on a brushed stainless steel fridge and freezer.

Verdict

There is a wide range of fine abrasive materials and compounds available to woodturners for the fine polishing of gloss finishes and these products from Farécla are as good as any I have tried. They will take their place alongside some of my old favourites and may well become my 'go to' finish for acrylics. These products, used after sanding with dry abrasives such as Micromesh, will provide an excellent finishing system for anyone making pens or similar small turned items.

Prices: From £5.20 (for 200ml)
Contact: Farécla
Tel: 01920 465 041
Web: www.farecla.com



Wood that has been finished with a hard coating such as CA or lacquer can be brought to a fine finish with Farécla 500

Acrylic materials can be brought to a glasslike shine with Farécla 500

JET 2424 SHORT BED WOODTURNING LATHE

The Jet 2424 lathe is a short bed version of the 4224B lathe. Offering 600mm between centres, it is ideal for turners who practise bowl, vase or goblet turning, or those who have a shortage of space. In all other respects it is identical to the 4224B. Being manufactured using heavy gauge cast iron helps to minimise vibration and at 365kg, this lathe stays rock solid even when turning large diameter projects. The heavy-duty headstock is designed to travel up and down the entire length of the lathe, which allows the turning of very large diameter work at the tailstock end of the lathe. Both headstock and tailstock have positive cam action locking and a safety spindle lock makes it easy to remove faceplates and chucks. Built-in indexing offers 48, 36 and 14 hole positions on the spindle. The three-stage 10-groove Poly-V belt transmits full power from the motor to the spindle at all speeds while providing extra long belt life and ultra smooth running. The pivoting motor mount allows easy lifting of the motor for fast speed range changes. Three speed ranges are available – 40-910, 80-2,000 and 140-3,500rpm – with the lower range enabling high torque at very low rpm. An electronic speed control via an inverter allows you to fine-tune the speed of the lathe by the turn of a knob. Comparator centres for copy work are a very useful feature as is the neat storage compartment in the tailstock. The tailstock quill thread has been upgraded from the previous model and now features an Acme-style thread, which adds extra support when drilling with a tailstock chuck in place. The lathe also features a vacuum chuck facility, which operates using a compressor – not supplied – to generate the vacuum via a venturi connection. A 1,600mm bed extension with a leg stand and a 500mm bed extension kit are available as optional extras and the shorter unit can be used in two positions. Supplied with a host of additions.

Contact: BriMarc Tools & Machinery
Tel: 03332 406 967
Web: www.brimarc.com

HONESTAR ERRATUM

In issue 265, we featured the HoneStar but printed the incorrect image of the product. The correct image can be seen here. The tool is especially suited for honing flutes of gouges or carving tools, is unbreakable and consists of a steel base coated with a super abrasive CBN grit.

Contact 1: Peter Child Woodturning Supplies
Tel: 01787 237 291
Web: www.peterchild.co.uk
Contact 2: The ToolPost
Tel: 01235 511 101
Web: www.toolpost.co.uk

BAROQUE ART GILDER'S PASTE

Available from Craft Supplies USA, this professional grade gilding paste allows you to create gilded finishes and coloured effects for added beauty and contrast on your turnings, carvings and other woodwork. It is wax-based and highly concentrated for a long-lasting, deep, rich look that is easy to create. This product uses real metallic pigments, which help to create an authentic gilded finish. To use to best effect, apply the gilding paste on or off the lathe using a brush, sponge or cloth. It can also be thinned with paint thinner for use as a stain, wash or spray. Dry to the touch in about 60 minutes, you can apply a top coat, such as lacquer, varnish, shellac or urethane finish. The manufacturers advise that a little goes a long way – just 1.5oz will cover up to 30sq.ft. of surface area.

Contact: Craft Supplies USA
Tel: (001) 800 551 8876
Web: www.woodturnerscatalog.com

PYROTTE FROM THE TOOLPOST

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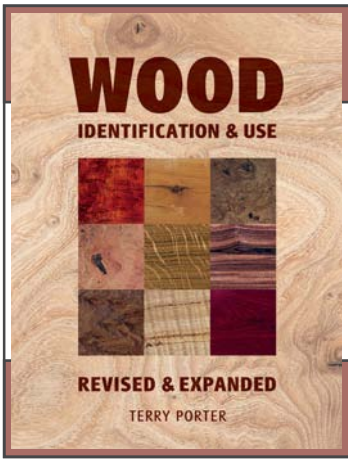

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Michael Gibson – From the Ashes

Michael Gibson shares this stunning piece with us, which was recently entered as part of the AAW's 'Rising' juried exhibition

Every year, for its National Symposium, the American Association of Woodturners (AAW), has a juried exhibition, which is open to all its members. To be accepted is a great honour. Entries usually run over 100 and from those about 25 are chosen and are set up separately from other exhibits and the Instant Gallery. For the 2014 event, the theme was 'Rising'. This could be interpreted in as many ways as your imagination can lead you: rising tide, rising moon, or even rising temperature. Rising did not have to be in the title but you had to describe the relationship. The work will be displayed in St Paul at the AAW Gallery of Wood Art after the symposium, until December, 2014. Two exhibition awards will be given at the Symposium. In addition, each participating artist received a complementary full-colour copy of the exhibition catalogue. With the chance of the piece being sold, it is a great incentive to enter.

As the Symposium was held in Phoenix this year, my mind immediately, and I am sure many others did as well, went to the mythological bird that rises from the ashes of its predecessor. My next problem was how to incorporate the theme into what has become my signature – the classic teapot! I decided to have a bird emerging from the body of a teapot. After looking through many roughed out pieces, I found one that would suit the purpose. The wood is Bradford pear (*Pyrus communis*), which is common here in the Southern States. It is used as an ornamental tree but prone to splitting in two in the slightest of storms. I primarily used pear as it is a bland tight-grained wood, which is ideal for my wife Cynthia to pyrograph her designs on my finished teapots. I re-turned the body to suit the shape of the bird and once finished and off the lathe, I cut out the bird.

About eight months ago I twisted my back severely. My wife had bought me an airbrush for my birthday and as I could not do much else, I played around with it and ended up producing a piece called 'Ghost Flames'. I thought this design would be ideal for the piece I was making. Once finished, I felt like it needed elevating so I made a stand also out of pear and airbrushed the flames to match the bird and the teapot body. There is also a small holly *(Ilex spp.)* egg sitting inside, which cannot be seen from the photos. I hope you enjoy it as much as I enjoyed making it.

Email: msgibson00@gmail.com
Web: www.michaelgibsonwoodturner.com

PHOTOGRAPHS BY MICHAEL GIBSON

'From the Ashes', Bradford pear *(Pyrus communis)* on a matching stand with airbrushed flames and a small holly *(Ilex spp.)* egg, 380mm high × 125mm wide

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