RICHARD FINDLEY: OVERCOMING SPINDLE GOUGE PROBLEMS

Woodturning

THE WORLD'S LEADING MAGAZINE FOR WOODTURNERS

What you need to know about hollowing

IN PROFILE:
Rod Page and his latticework creations

Tools and equipment for pen making

PROJECTS

- Acorn box
- Rugged oak bowl
- Painted leaf platter
- Button cylinder pendant

Tips for making a cufflink & tie pin box

Techniques for turning wall art components

SC3 Geared Scroll Chuck Package

Spring/Summer
£119.95
RRP £198.97
Save £79

Includes:

SC3	Geared Scroll Chuck (Thread options below)
62313	50 mm Jaw Set
JS25N	25 mm Jaw Set
6025	Mini Step Jaw Set
10006	Woodworm Screw
61016	Pinion Key

Thread Options:

61004	3/4" x 16 TPI
61002	1" x 8 TPI
61005	M33 x 3.5

SC4 Professional Geared Scroll Chuck Package

Spring/Summer
£149.95
RRP £204.98
Save £55

Includes:

SC4	Professional Geared Scroll Chuck
62313	50 mm Standard Jaw Set
JSPIN	Pin Jaw Set
62833	Standard Woodworm Screw
3326	8 mm Ball Hex Key
62825	Universal Spanner
	Chuck Insert (See website for full range of inserts)

New Woodturning Chuck Jaw Range

As part of the design process involved in creating this brand new range, we looked in depth at the ranges of jaws available to today's woodturners. Our aim was to create a new range which allowed for all the flexibility currently on offer whilst also engineering out superfluous features and, where possible, condensing the attributes of some jaw designs to increase their usefulness. The result is a comprehensive range of 14 intelligently designed sets of chuck jaws, some of which are brand new designs exclusive to Record Power.

This range offers woodturners a definitive collection of jaws to cover virtually any woodturning task and represents unbeatable value for money.

Brand New Exclusive Range
Fully compatible with Nova brand chucks

62321 35 mm Standard Jaws **£34.99**

62313 50 mm Standard Jaws **£39.99**

62329 100 mm Dovetail and Deep Gripper Jaws **£49.99**

62317 130 mm Dovetail Jaws **£54.99**

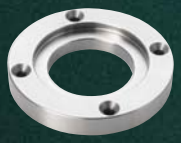
62322 75 mm Heavy Bowl and Gripper Jaws **£59.99**

62323 Long Nose Jaws **£59.99**

62327 Pin Jaws with 9 mm Bore **£49.99**

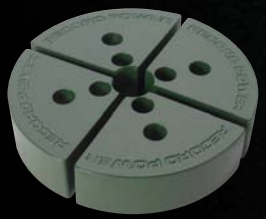
62336 Mini Spigot Jaws with 13 mm Bore **£39.99**

62337 Pen Jaws **£29.99**



62572 2 Inch (50 mm) Faceplate Ring **£29.99**

62574 4 Inch (100 mm) Faceplate Ring **£36.99**



62378 RP Plastic Soft Jaws **£16.99**

62356 Remounting Jaws Mini - Up to 200 mm Bowl **£49.99**

62376 Remounting Jaws Mega - Up to 295 mm Bowl **£79.99**

Prices valid until 31.08.2015. E&OE.

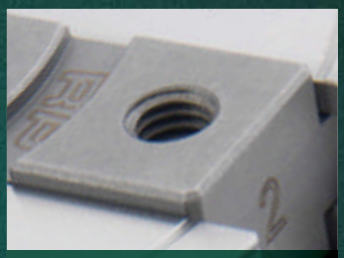
For full details of the brand new range of chucks and jaws please visit the Record Power website or request your free copy of the Spring / Summer 2015 promotional catalogue.

Introducing the Brand New Range of Woodturning Chucks and Jaws

We are extremely proud to introduce the brand new range of Record Power woodturning chucks and jaws. This exclusive new range has been developed using Record Power's extensive experience and knowledge of woodturning in conjunction with a group of highly experienced professional and hobby woodturners, to bring you the ultimate in quality, versatility and value. Incorporating the best elements of our previous ranges, we have also listened closely to our valued customers over the years and have taken note of their feedback, suggestions and requests to guide our design approach.

Precision Engineered Gears
Super Geared True-Lock™ technology ensures high levels of accuracy to provide smooth and solid operation.

Jaw Fixing System
The SC3 and SC4 feature a jaw fixing which will not only fit the Record Power series of Jaws but is also fully compatible with Nova and Robert Sorby brand jaws.



Heavy Duty Jaw Slides
The improved and enlarged jaw slides give unsurpassed holding power and load bearing ability. They are made from high tensile steel, reinforced with nickel and copper and heat-treated to ensure superior strength.

Sealed Backing Plate with Full Indexing
The SC4 features a strong backing plate to protect the gear mechanism from dust and 72-point indexing around the full circumference.

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Support • Expertise

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BURGESS

Incorporating some of the most famous brands in woodworking, Record Power have been manufacturing fine tools & machinery for over 100 years. Built to last we provide support for thousands of machines well over 50 years old, which are still in daily use. Testimony to the sound engineering principles and service support that comes with a Record Power product.

NEW

IT CAME, IT SAW, IT CONQUERED!

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Ever-reliable cutting performance, improved handle design

- NEW ProTouch Grip for maximum feel
- 25% faster cutting performance*
- Full Range of Fine, Universal, Coarse and Coated PLUS Handsaws Available

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*IRWIN® Jack® 880 Universal Double-Ground Saw

Looking ahead

PHOTOGRAPH BY GMC/ANTHONY BAILEY

Working on some plywood projects

As I look back over the years I have been at GMC, it is with wonder and awe that I remember the people I've met and the pieces of work I have seen. It is, however, tinged with sadness that many people are no longer with us. But, their smiling faces, their wit, knowledge, sense of humour and abilities and how many lives they have touched are not forgotten or lost. They live on in what we do. I owe very much to my fellow woodworkers.

I have been fortunate to meet many woodworkers and invariably all have graciously shared their time, thoughts and skills with me. This sharing of knowledge and the subsequent assimilation and adaptation of that knowledge causes new things to happen, by enabling and equipping people to take them in different directions. I would say such things are inevitable and vital to ensure that our chosen craft/hobby or art remains vital and relevant to today's society.

We can all hark back to yesteryear. How often have we heard a comment starting with 'when I was a lad…?' We learn lots from books, DVDs, notes, demonstrations, clubs and, of course, by talking to people who are able to cast their mind back to long ago or are the 'keepers' of the history of what has gone before. But, one does see change over the years – albeit slow at times. Yes, there are some who would maintain that the skills of the traditional crafts have to remain to be taught, so as not to lose them. I would wholeheartedly agree. Such rich knowledge is needed! We as a people are collectors of knowledge and the things from the past are foundational in helping people move things forward.

In the modernised world, we rarely plough fields with a horse and cart, but the knowledge of how to do it, how to make and use the equipment, is important and has helped things develop mechanically, but what happens if we have no fuel to drive the mechanised elements? Knowing how to do the job with the horse and plough is important. A direct comparison would be pole-lathe turning. It is still relevant today, but most people now use electric lathes, rather than pedal-powered ones.

Having said all that, as a body of people, who are passionate about what we do, we – the collective – are not something that can be constrained or kept in a museum fossilised in time. I do not want to see our crafts, hobbies or arts set forever in aspic jelly or viewed through rose-tinted glasses. We learn from the past so we can ever push at the boundaries of what is currently accepted as the norm, or the way to do things in order to be better and do more.

Have fun,
Mark

markb@thegmcgroup.com

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

Contents

Issue 280 June 2015

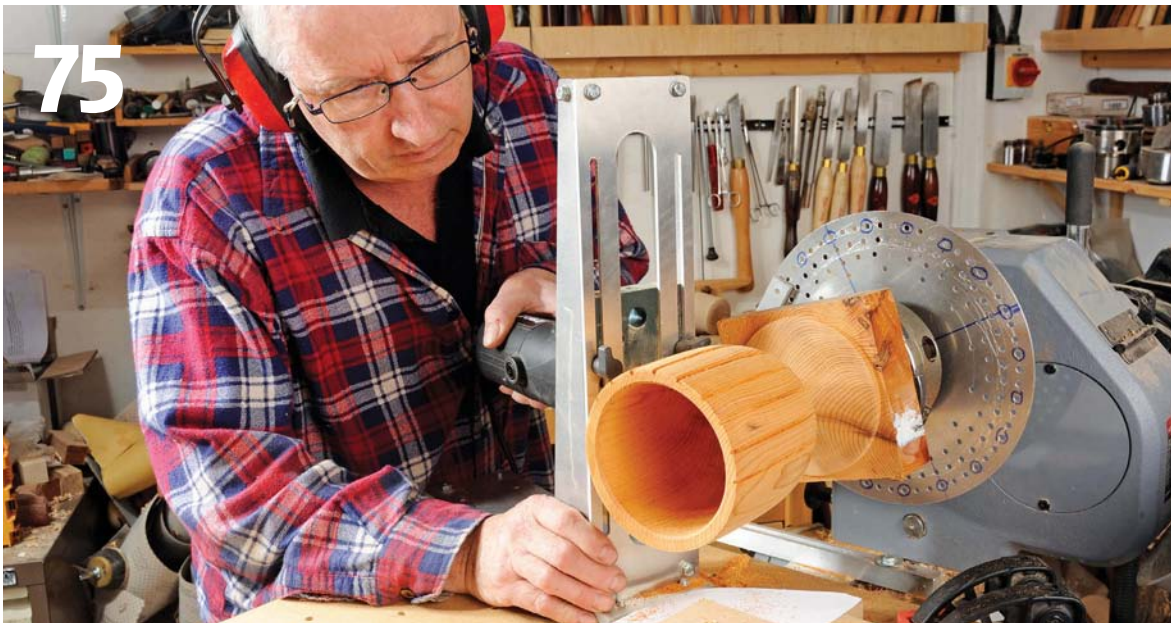
COVER IMAGE:
See page 54 for our feature on Rod Page and his latticework creations. Photograph by Rod Page

Community

Projects

Technical

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

Kit & Tools

HEALTH AND SAFETY

Woodturning is an inherently dangerous pursuit. Readers should not attempt the procedures described herein without seeking training and information on the safe use of tools and machines. All readers should observe current safety legislation.

Conversion chart
2mm (5/64in)
3mm (1/8in)
4mm (5/32in)
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7mm (9/32in)
8mm (5/16in)
9mm (11/32in)
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405mm (16in)
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610mm (24in)
710mm (28in)
815mm (32in)
915mm (36in)
1015mm (40in)
1120mm (44in)
1220mm (48in)
1320mm (52in)
1420mm (56in)
1525mm (60in)

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Opening Times - Monday to Friday 9am to 5pm. Online 24 hours a day, 365 days a year.

This Month we focus on Hollowing Tools

Simon Hope Hollowing Jig

Equipped with sealed bearings for smooth and easy use.

A well constructed, quality jig whose main benefit is that it takes the strain during hollowing.

£185.00 inc vat (PN: EAHJ)
+ Earn 154 Reward Points
+ Free P&P

Laser Guide for the Hollowing Jig

Recently added to our product range.
Allows the user precision control and accuracy.

Hollowing Tool: £69.00 inc vat (PN: EAHJLAS)

Simon Hope Hollowing Tools

The PCT hollowing tool from Hope Woodturning uses a 6mm carbide tip mounted in a stainless steel holder.

Hollowing Tool: £69.00 inc vat (PN: PCT)
Optional Angled Tip: £25.00 inc vat (PN: PCTHOOK+TIP)

Simon Hope 6mm Mini Carbide Box Set

Another new item, this kit contains a straight and a swan necked 6mm cutter tool and a suitable handle.

Hollowing Tool: £99.00 inc vat (PN: SH6MINSET)

Simon Hope 8mm and 10mm Cutters

Two tools suitable for end grain work.

8mm: £38.50 inc vat (PN: SH8CT)
10mm: £42.50 inc vat (PN: SH10CT)

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

Auctions provide critical funding for grants

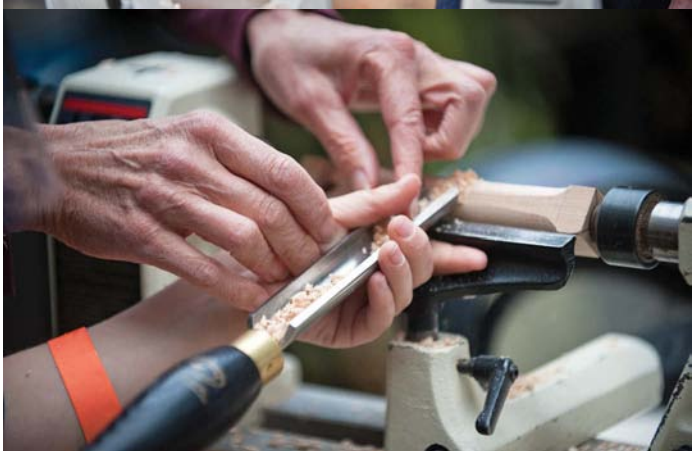
AAW's EOG Live-Online Auction at the 2014 Annual International Symposium in Phoenix, Arizona

PHOTOGRAPH BY ANDI WOLFE

PHOTOGRAPH BY PAUL JOHNSON, NIKISKI MIDDLE/HIGH SCHOOL

Students from Nikiski Middle High School, Nikiski, Alaska, a past EOG grant recipient, show off turned bowls

Woodturning education for youth at Eliot School of Fine & Applied Arts, Boston, Massachusetts, recipient of a past EOG grant



PHOTOGRAPHS COURTESY OF ELIOT SCHOOL OF FINE & APPLIED ARTS

The American Association of Woodturners (AAW) Educational Opportunity Grant (EOG) programme can be a potential funding source for individuals and groups who offer woodturning opportunities that expand and enrich the woodturning world. Recipients selected for grants may use the money for educational purposes, including woodturning equipment purchases, projects, tuition, demonstrators' fees and more. Details about EOG grant eligibility and the application process can be found on the AAW's website: www.woodturner.org/?page=GrantsEOG.

2015 EOG grant recipients

The AAW is pleased to announce the recipients of 2015 EOG grant awards as follows: Alfred Sharp, Mike Kirshbaum, Byron Bergen Central School, Eagle Ranch School, Roosevelt Junior High School, San Diego Woodturners 'Turn Around for Vets' Programme, Weiser High School, Barnesville Woodturners, Bay Lake Woodturners, Chapel Hill Woodturners, Chicago Woodturners, Corydon Central High School, Grey-Bruce Woodturners Guild, Indiana County Woodturners Association, Minnesota Woodturners Association, Northwest Oklahoma Woodturners Association, South Saskatchewan Woodturners Guild, The Kansas City Woodturners and Western New York Woodturners 1. A total of $22,644 grant funds were allocated for 2015 distribution.

EOG Live-Online Auction

Two important benefit auctions held during the AAW Annual International Symposium raise the funds that support each year's EOG grant awards. Greater auction proceeds mean more funds available for grants. The EOG Live-Online Auction is open to the public and features the sale of exquisite, museum-quality functional and sculptural work donated by internationally known woodturning artists. Additionally, symposium attendees and others may participate in the onsite EOG Silent Auction of items donated by woodturners from around the globe.

The 2015 EOG Live-Online Auction will take place on Friday 26 June, 2015 at 7.30pm eastern standard time in rooms 301 A, B, C, D of the David L. Lawrence Convention Center in Pittsburgh, Pennsylvania. Items will be available for viewing online prior to the auction date. More information about these auctions can be found at www.woodturner.org/?page=2015Exhibitions.

Contact: AAW
Tel: (001) 877 595 9094
Web: www.woodturner.org

The European Woodworking Show 2015 – woodworking in action

After a one year break, the European Woodworking Show returns to the show calendar with its usual mix of top class demonstrators and exhibitors across a wide range of woodworking disciplines.

The show will be held at the historic Cressing Temple Barns near Braintree in Essex over the weekend of 12 and 13 September, 2015.

Demonstrators who have already confirmed for the show include woodturners Joey Richardson, Nick Agar and Mark Hancock, pyrographer extraordinaire Bob Neill, timber hewer Steve Woodley, woodcarvers Peter Berry, Tim Atkins, Dave Johnson and Gerald Adams and marionette maker Lenka Pavlickova. In addition, scrollsaw expert Fiona Kingdon will be present, as well as spoon carver Anna Casserley and Sophie Heron with her converted VW camper van, which was featured on Channel 4's *Amazing Spaces*. You can also expect to see Japanese joint maker Brian Walsh, plus furniture makers David Charlesworth, Dylan Pym, David Barron, Treeincarnated and many more besides. The British Woodcarvers Association – BWA – will be hosting their extremely popular public vote competition. There will also be many familiar tool suppliers including Turners Retreat, Trend Tools & Machinery, Lie-Nielsen Toolworks,

Jet Tools & Machinery, Gransfors Bruks axes, Pfeil, Auriou and Flexcut carving tools, Classic Hand Tools, Lincolnshire Woodcraft, Chestnut Products, David Barron Furniture and a host of other retailers. The masterclasses are being presented by Simon James, author of *Working Wood 3*. For full details and advance tickets, see below.

When: 12–13 September, 2015
Where: Cressing Temple Barns, Witham Rd, Braintree, Essex CM77 8PD
Contact: The European Woodworking Show
Tel: 01473 785 946
Web: www.ews2015.com

PHOTOGRAPHS COURTESY OF CLASSIC HAND TOOLS

You can expect to see a wide selection of wood-related demonstrations at this popular event

The Cotswold Show and Food Festival

Plans are well underway for this event to be held in Cirencester Park on 4 and 5 July, 2015 with more attractions and trade stands than ever.

Two pavilions on the 100 acre site will be showcasing the very best Cotswolds, UK and international crafts, including ceramics, jewellery, art and fabrics. Many of the traders will also be demonstrating how they work and offering useful hints and tips.

Outside the pavilions, some 200 trade stands will feature shopping for inside and out with garden features, tools, kitchens and log burners.

The traditional rural skills area plays host to a range of artisans, including blacksmiths, beekeepers, fish smokers, saddlers, thatchers and woodcarvers – and perhaps a chance to try your hand at some of these ancient skills for yourself.

Children's entertainments are plentiful with free circus skills lessons as well as a fun fair, donkey rides, a climbing wall, bouncy castles and lots more.

Tickets for the show are on sale via the new website, which is constantly being updated with attractions as they are confirmed.

When: 4–5 July, 2015
Where: Cirencester Park, Cirencester GL7 2BU
Contact: Cotswold Country Fair Ltd
Tel: 01285 652 007
Web: www.cotswoldshow.co.uk

PHOTOGRAPH COURTESY OF PHILIPPA STAGG PR

The Cotswold Show will have all hobbies covered for 2015

Necklace holder in mahogany (*Khaya ivorensis*), 75mm deep × 150mm wide, by Richard Piper

A selection of pens turned for Help for Heroes, by woodyturner

Collaboration piece – beech (*Fagus sylvatica*) hollow form, 125mm high, by georg

Wedding Bells sound turning marathon

When Gloucestershire Association of Woodturners' member Rohan Price's niece, Sophie decided to get married last year, she asked her uncle to turn a small item – bell, tree or snowman – for each of the wedding guests. The trouble was that 170 people had been invited to the wedding, so when Rohan was not polishing up his speech, he was spending serious time in the workshop. Fortunately, fellow club member Alastair Birtwistle came to his aid and lent a hand.

PHOTOGRAPH COURTESY OF JOHN HAWKSWELL

Alastair Birtwistle (left) and Rohan Price (right) behind the completed project

Alastair insisted that each bell came complete with its own clanger, which were duly installed. As you can see, they managed to complete the order on time.

Contact: Gloucestershire Association of Woodturners **Web:** www.gaw.org.uk

Sourcing timber

Hi Mark,
Getting sufficient wood is apparently not an easy task for everybody. These days, I get my wood by keeping my eyes open and looking online. Apart from some smaller pieces I am given from people who know me, I am now mostly interested in bigger pieces.

As I tend to turn larger and larger, the wood also needs to come in larger diameters and longer lengths, so trees are what I am after and I find them online mostly, or from people who tell me they are cutting down a tree in their garden.

I don't know how it works in the UK, but here in Belgium, you cannot assume that people are willing to let go of their wood for free. Sometimes they do, but often enough they want cash. And not just the small coins… Getting in the bigger wood does not always come easy. It can be hard work and luckily I get some much appreciated help when needed.

Recently, I went on a turning course with Hans and Jacob Weissflog, at Drechselbedarf Schulte, in Germany. It was lots of fun and a great course.

Anyway, as you can see, wood can be sourced from many places – you just have to put some effort in. Sometimes a lot, sometimes a little.

Take care,
Ronny

Turned beer mugs

PHOTOGRAPH BY DAREN DA'VAL

A small selection of Daren's turned beer mugs, from left to right: British bulldog in sycamore (*Acer pseudoplatanus*); red devil in beech (*Fagus sylvatica*); Celtic cross in lime (*Tilia vulgaris*), cherry (*Prunus spp.*) and slate grey and white Corian. We'd love to see your attempts at making similar items as well as hearing about the different techniques you use – we can all help each other out!

Hi Mark,
I was interested to see Terry McDonald's beer mug article in the March issue. I've been making beer mugs for a while and some of my techniques are slightly different. Maybe you can use some of these or perhaps you have a different perspective that can be of help to me?

When I first started, one of the first obstacles to overcome was how to measure a pint. Eventually, I started using dry sand. I poured dry sand into a pint glass then tipped it into the mug. If all the sand goes in, then it holds one pint.

Secondly, was how to secure the handle. Personally, I prefer to use a 6mm dowel in the top and bottom of the handle. I scribe the handle to the contours of the mug using a Dremel, then drill through the mug with a 6mm bit, cut back the dowel, then glue the handle and mug together.

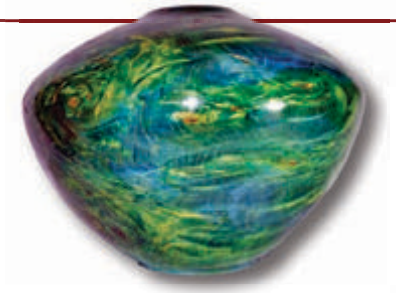
With the finish, I personally use Rustin's plastic coating. I like to have at least five coats all round to ensure it is waterproof. I like to decorate some of the plainer woods using a pyro-pen and colour with wood stains. However, be careful as the plastic coating can react with the stains. You can prevent this by picking out the individual colours using an artist's brush on the first coat. Subsequent coats can be applied all over.

Sometimes, a piece of timber I have used may not be large enough for my project so I cut a bottom and top rim to compensate. Some interesting effects can be achieved by mixing different types of timbers or colours. It is also a good way to use up small offcuts from previous projects.

I hope this might help you guys with future projects and if you have any suggestions to help me, they would be very much appreciated.

Have fun turning,
Daren Da'Val

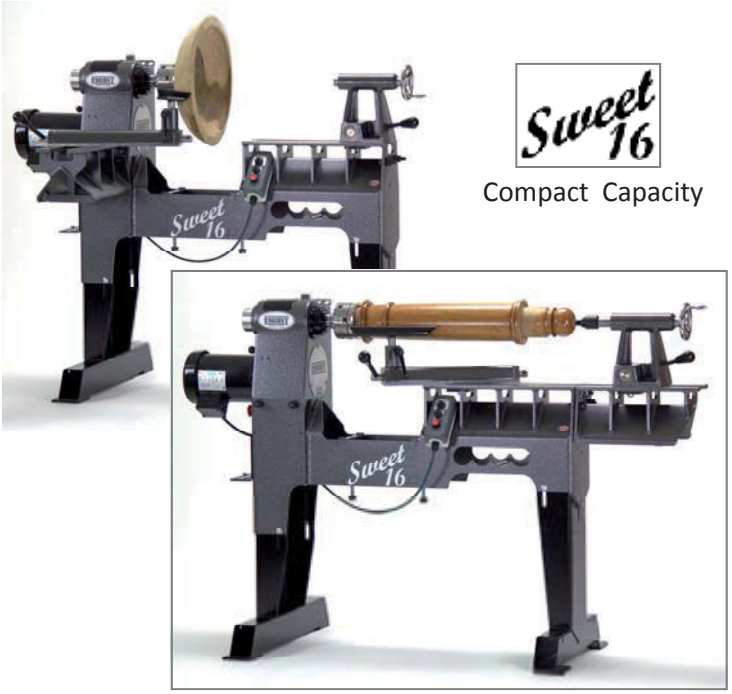
Plywood bowl, 180 × 70mm, by dunkhooper



Hollow form, horse chestnut (*Castanea sativa*) burr, 180 × 125mm, coloured with water-based dyes and finished with CA and burnishing cream, by edbanger

Semi-enclosed hollow form, sycamore (*Acer pseudoplatanus*), 100 × 80mm, hollowed to 4mm thickness throughout, by Mark Sutton

WE DIDN'T JUST CREATE A NEW LATHE WE REDEFINED WHAT A LATHE COULD BE



Sweet 16
Compact Capacity

American Beauty
Premium Bowl and Vessel Lathe

Ten years ago no one thought a little company in a small town in Wisconsin would be influencing how lathes are made around the world. Innovations like stainless steel ways, standard adjustable height and the patented Tilt-Away are affecting a new generation of woodturners.

But it's not just the lathes. We've even changed how you get yours. You won't find a Robust lathe in a "big box" store. They are only available direct or through our network of woodturning specialists.

Rest assured that when you speak with a Robust representative, you are speaking with someone who knows something about woodturning.

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Methods for making a cufflink & tie pin box

Andy Coates takes you through the various steps for creating a cufflink and tie pin box

ANDY COATES

Andy is on the Register of Professional Turners (RPT) and is Chairman of the AWGB. He is a professional woodturner and has a workshop and gallery in Beccles, Suffolk. Andy predominantly makes one-off pieces, but like any jobbing woodturner, is just as likely to be found doing small batch runs, antique restorations or any number of strange commissions. He also demonstrates and teaches turning.

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

PHOTOGRAPHS BY ANDY COATES

Anybody who knows me, or has seen me demonstrate, knows that my passion is for decorative work, and yet here I am with a project for what might reasonably be called a 'treen' piece. There are two reasons for this: firstly, it's a piece I designed for a customer who asked for a turned cufflink box, and secondly, the Editor asked me to do it!

When the customer enquired about a cufflink box I could have quickly turned a simple box, told him it was for cufflinks, collected the money and moved on to the next job. But where's the fun in that? More importantly, for somebody who turns for a living, the question you should always ask is, 'where's the added value?' In my experience, the added value is always in the detail. So I went about adding detail.

I have an almost morbid fear of wasting wood as it costs too much to waste. As a consequence of this, I save everything. It occurred to me that I could utilise some offcuts and oddments to add value by inlaying the lid with contrasting or character wood. This not only allows you to add value, but also means you can perhaps use a less costly blank as the main body and still end up with something that looks designed, considered and classy. The result of this is that you end up with a piece that has a greater value than what might reasonably have been achieved from a quite ordinary blank of wood.

If you also enjoy using decorative techniques, then you can add even more value with some simple texturing, colouring or gilding, pyrography or carving.

I had the makings of a plan and set about designing the box and the obvious thing seemed to be to make a display box, rather than simply a box you put cufflinks in. All the cufflink boxes I had seen previously were not turned and lined and fitted with a slip holder for the cufflinks. I didn't want to get involved with felt or material linings and came up with the drilled tray idea, but that isn't to say that you couldn't modify this design to incorporate a silk or felt lining if you wish.

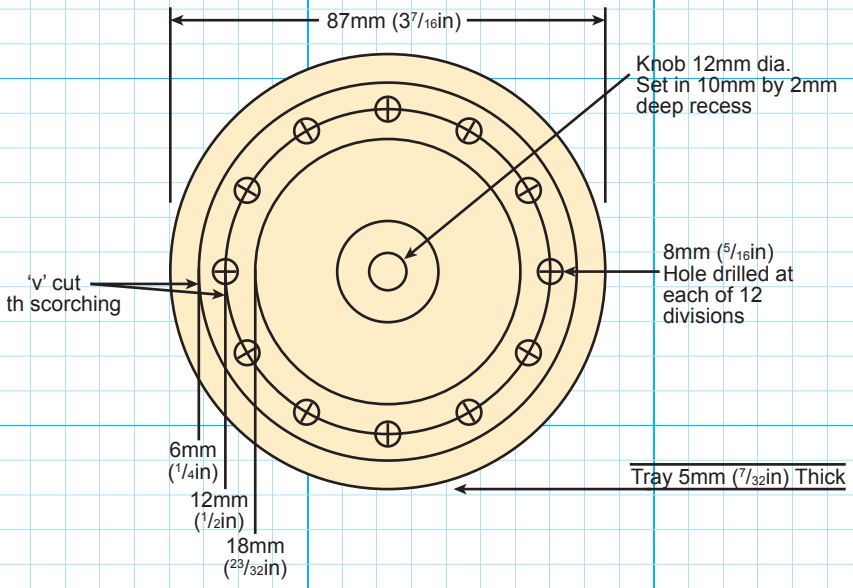
It also occurred to me that the type of chap who wears cufflinks might also wear a tie pin, so the simple provision of some space beneath the cufflink tray to hold a few was another degree of added value.

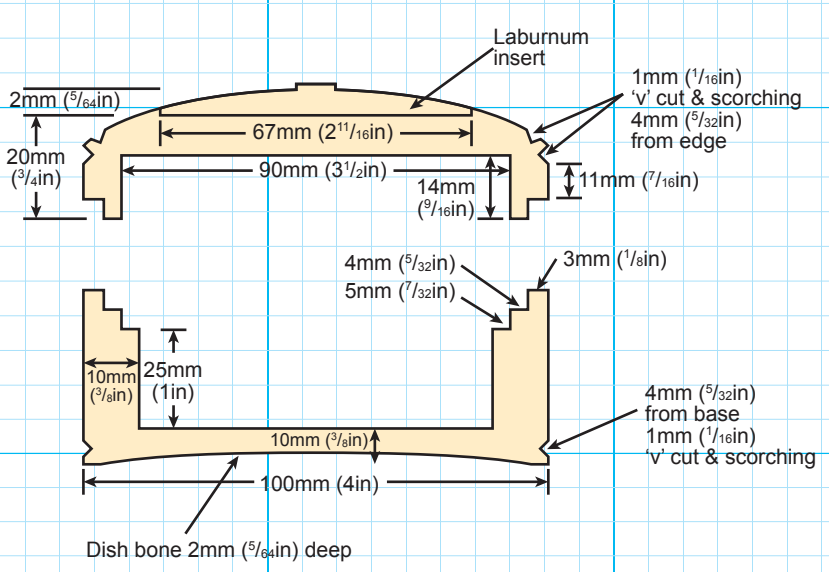
A final note: after all this thought, some prototyping and a final, gloriously opulent part-gilded box made from jarrah (*Eucalyptus marginata*), wenge (*Millettia laurentii*) and elm (*Ulmus procera*), the customer rejected it in favour of a simple box he could throw his cufflinks into! As is the case for most full-time woodturners, making things quickly is the key to profit. Professional turners are not able to spend indeterminate lengths of time making objects for sale and need to be able to make them quickly to ensure the faintest opportunity of a profit, and for this reason, I use two separate chucks with two different chuck jaw types fitted. You may not have this facility, but where appropriate, I have indicated the different options. Otherwise commonsense should indicate an alternative approach for the chuck challenged.

EQUIPMENT USED
10mm bowl gouge
25mm straight scraper
10mm spindle gouge
6mm beading & parting tool
10mm beading & parting tool
2mm parting tool
Strip of Formica
Decorating Elf
Abrasives from 240-400 grit
Cellulose sealer
Hard wax stick
Masking tape
Black felt-tipped pen
Bronze gilding paste
PPE: latex gloves, facemask, respirator/dust mask

TIMBER REQUIREMENTS
Dry sycamore *(Acer pseudoplatanus)* blank: 110mm diameter × 95-100mm deep

Small scrap of contrasting wood to make a knob: 25 × 25 × 50mm long, or a size determined by your chuck's ability to hold it safely





SHAPE & FORM

Many new turners struggle with shape and form. The keys are sharp tools, good tool control and an understanding of how a particular wood 'likes' to be cut and how the tool works. A bowl gouge seems like a simple tool, but in reality, it is a nuanced tool that requires mastering and the key is the bevel. The bevel supports and directs the cutting edge: where it goes the cutting edge goes. If there is no bevel support, the likelihood is an uncontrollable cut, which leads to unintended shape and an unintended shape is more often than not an ugly shape. Cut six small bowl blanks and aim to turn six identical simple bowls. The last two will probably be your best. You may decide to dispose of the first four, but you'll have learnt an awful lot along the way

ABRADE, SEAL & BURNISH

Throughout the project, you will see instructions to 'abrade, seal and burnish' at appropriate points. Abrading is a tedious but necessary occupation, so when you see this instruction, you can assume I mean to start the process at an appropriate grit – for your tooling capabilities – and work through the grits until there are no more marks on the wood. You may wish to apply oil or wax at this stage, but keep in mind that either of these finishes can alter the fit of components at the time of applying, which is why I suggest burnishing in this project; the box can be oiled or waxed on completion. This project is most easily achieved if you have access to two chucks: one with standard 'C' type jaws and one with O'Donnell-type jaws. It can be achieved with only 'C' jaws, but in this case, you need to omit the 18mm line and 'V' cut in steps 4 and 5 and add it later at step 14


1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1 Mount your blank between centres and true to a 100mm diameter cylinder using a long-grind bowl gouge, facing off both ends and cutting a tenon on the tailstock end to suit the standard 'C' type jaws of your scroll chuck. You can turn the tenon with a 10mm beading & parting tool but, with practice, it can be quicker with the bowl gouge. Mount the blank on the tenon in the chuck and re-true if required. On the face, turn a 40mm tenon – depth to suit the O'Donnell jaws – extended nose – or otherwise, as appropriate for your standard jaws

2 On the face with the tenon, mark a line 12mm in from the edge and turn down to this line using a parting tool, creating a 10mm deep tenon. This 'tenon' will form the box's tray. Make sure the surface is flat, parallel and clean. Abrade the face and edge, seal, then burnish

3 Mark a line 6mm in from the edge of this new tenon, another at 12mm, then a third at 18mm. If you are using one chuck with standard 'C' type jaws, omit the 18mm line and 'V' cut due to the size of the tenon and add it at step 12

4 Using the tip of a skew chisel, or the corner point of a parting tool, cut 'V' cuts on the 6mm and 18mm pencil lines. Taking a thin piece of Formica, carefully push a thin edge into the rotating wood to scorch a burn line into each of these. You may need to gently abrade any over-scorching with 400 grit or grey Webrax. Instead of Formica, you could also use a fine-tipped black marker to produce the darkened line, but take care as it can bleed through the wood fibres

5 Using an indexing system – or compasses/dividers – divide the face surface into 12 segments, marking lightly with pencil where the divisions bisect the 12mm pencil line. Mark these intersect points with a bradawl

6 Drill 8mm holes at the 12 marked points, using a drilling jig supported in the toolrest banjo. This can either be a proprietary model or a homemade version, but it must drill on the centreline of the lathe. Here I use a bought jig and a battery drill. Set the drill depth to 11mm to ensure it passes cleanly through the 10mm tray

7 Using the finest parting tool you have, preferably 2mm, part off the disc, which we will now refer to as the 'tray', keeping the tool straight. Take special care as the tool cuts through the band of drilled holes to reduce tear-out on the underside of the tray. Note: the tray will now be approximately 8mm thick

8 Mount the tray in the O'Donnell – extended nose – jaws in the second chuck. True up the face surface of the tray carefully using a 10mm spindle gouge, taking fine cuts, aiming for approximately 5mm thickness at finish. Abrade the finished surface, then seal and burnish

10 Re-fit the original chuck with the workpiece in it. True up the face surface and form a shallow 40mm tenon for remounting later. Stop the lathe and mark a line 20mm from the end face around the cylinder. On the headstock side of this, cut in with a parting tool, 4mm deep and 6mm wide. Make this surface as flat as possible. At the headstock side of this tenon, part off the lid section. True up the surface of the resulting face and measure the diameter of the tenon on the underside of the lid, then transfer this dimension to the face


10

11 Cut a recess close to the marked line and test fit the lid as you go, making further cuts until you get a tight fit. If you have a slightly convex underside to the lid, remove some of the internal waste, or skip to step 14, hollow the lid now and return to step 11 afterwards


11

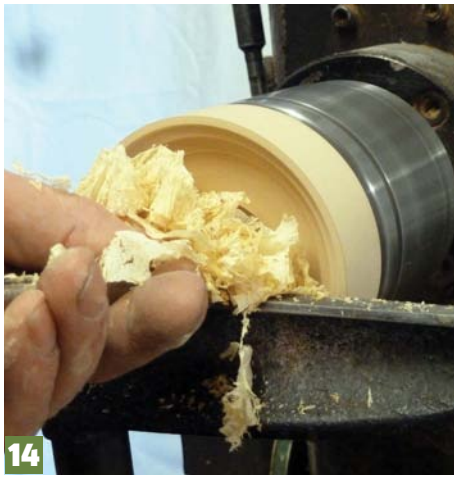
12 Take a measurement of the tray diameter and transfer to the inner surface of the box, then cut a tray recess. The top surface of the tray should be level with the surrounding flat area. You need a tight fit to enable you to turn off the tenon on the upper side of the tray


12

13 To remove the tenon, take light cuts with a 10mm spindle gouge, leaving a flat surface. In the centre, make a shallow 2mm hole, 10mm wide, to take a small knob. Abrade, seal and burnish. If you are using one chuck with 'C' jaws, add the 18mm line and 'V' cut now


13

14 Hollow out the box, leaving a 2-3mm lip for the tray to sit on. Check the depth to ensure the base is as thick as the wall. The interior should be about 25mm deep. Make the base of the box flat and the sides parallel. Abrade the interior ensuring you don't round over the crisp edges, then seal and burnish


14

15 You may wish to add a decorative detail in the base by making a 'V' cut, scorching and adding texture to the surface


15

16 Remove the chuck and box together, then fit the second chuck and mount the lid section. Hollow out the lid section, ensuring at least 12mm of depth, then abrade, seal and burnish. Make a note of the thickness of the top of the lid, re-fit the original chuck and box base and put the lid onto the base – it should still be a tight fit. Using a 10mm spindle gouge, remove the tenon on the lid. Add design details, then abrade, seal and burnish. Here, you can leave the lid as it is to complete a simple version of the box, or go to steps 16a-16d, add some value, then return to steps 18-21. If leaving the lid as it is, remove the lid and carefully adjust the recess in the base section to make an easy fit

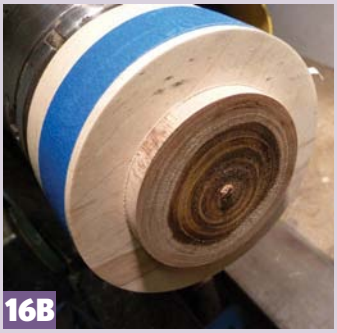

16

17 To reverse turn the box base, use a chuck with appropriate jaws or a homemade jam chuck. Ensure you prepare the jam chuck to hold on the interior, not on the fragile lip


17

ALTERNATIVE STEPS


16A


16B


16C


16D

16A Taking an offcut of some contrasting or character wood, turn to a suitable diameter – anything between 50-70mm is ideal. True up the face until perfectly flat and ensure the side is parallel. Abrade the side edge with 120 grit abrasive. Here I have used a stub of dry laburnum *(Laburnum anagyroides)* branchwood. I managed to get four discs out of this stub! I save all the waste from projects just for this purpose; they are a useful resource and essentially free!

16B Now remount the chuck with the box in it. The lid should still be secured with masking tape. Transfer the scrap disc diameter to the lid section and carefully cut a tight recess for the disc, no more than 2mm deep, using a flat scraper, or even a 10mm beading & parting tool. Take light cuts so you don't pop the lid off! Apply CA glue to the recess, edges and base and after spraying the base of the scrap disc with accelerator, push the disc into the recess. You can bring the tailstock up to apply gentle pressure while the glue cures. A pad of wadded kitchen roll between the revolving centre and the wood will save any damage you would then need to address

16C Once cured, use a 10mm spindle gouge to remove the excess, or if the thickness of the scrap insert allows, perhaps add some shape or features such as coves

16D The joint line can be enhanced by making a 'V' cut and scorching with Formica. I added further 'V' cuts and scorch lines to the edge of the lid and to the sides of the box at the top of the lid and base of the box. These serve as frames and make the piece look complete. Abrade, seal and burnish. Now return to step 18 and work through to step 23 and complete the box. Just remember to stop. Don't get caught in a loop! If you prefer, add another little detail to add value – why not turn a simple pair of wooden cufflinks to give away with the box?


18


19


20


21

18 Mount the box base on the jam chuck. If you have made the fit 'snug', then you should have little problem removing the tenon. If you are at all uncertain as to the quality of the hold, secure with a few blobs of hot melt glue – remove with a heat gun after – or where practicable, with masking tape

19 Carefully turn the tenon away with light cuts using a 10mm spindle gouge. Slightly dish the base, then abrade, seal and burnish. Remove from the chuck

20 Now mount a small scrap of wood, preferably of a contrasting timber, and turn a small knob to fit the hole in the centre of the tray section. The knob needs to be a simple design, suitable to allow a finger grip and should be no more than 8-10mm tall – it needs to fit with the lid on – excluding the 2mm tenon. Turn the 10mm tenon first, then turn the bulk down to about 12mm diameter before putting some shape in. Abrade, seal and burnish, then part off, leaving slightly less than the 2mm required for the recess. Carefully glue the knob into the recess on the tray, taking care and if the grain is obvious, then do your best to align this with the grain of the tray

21 Your cufflink and tie pin box is now completed. Wax and burnish, or finish as to your preference, but don't forget to sign the base! ●

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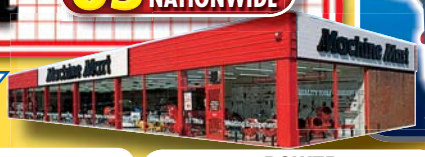

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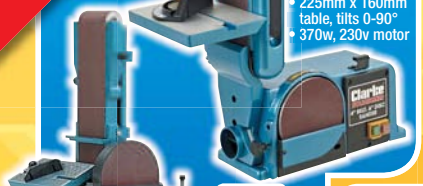

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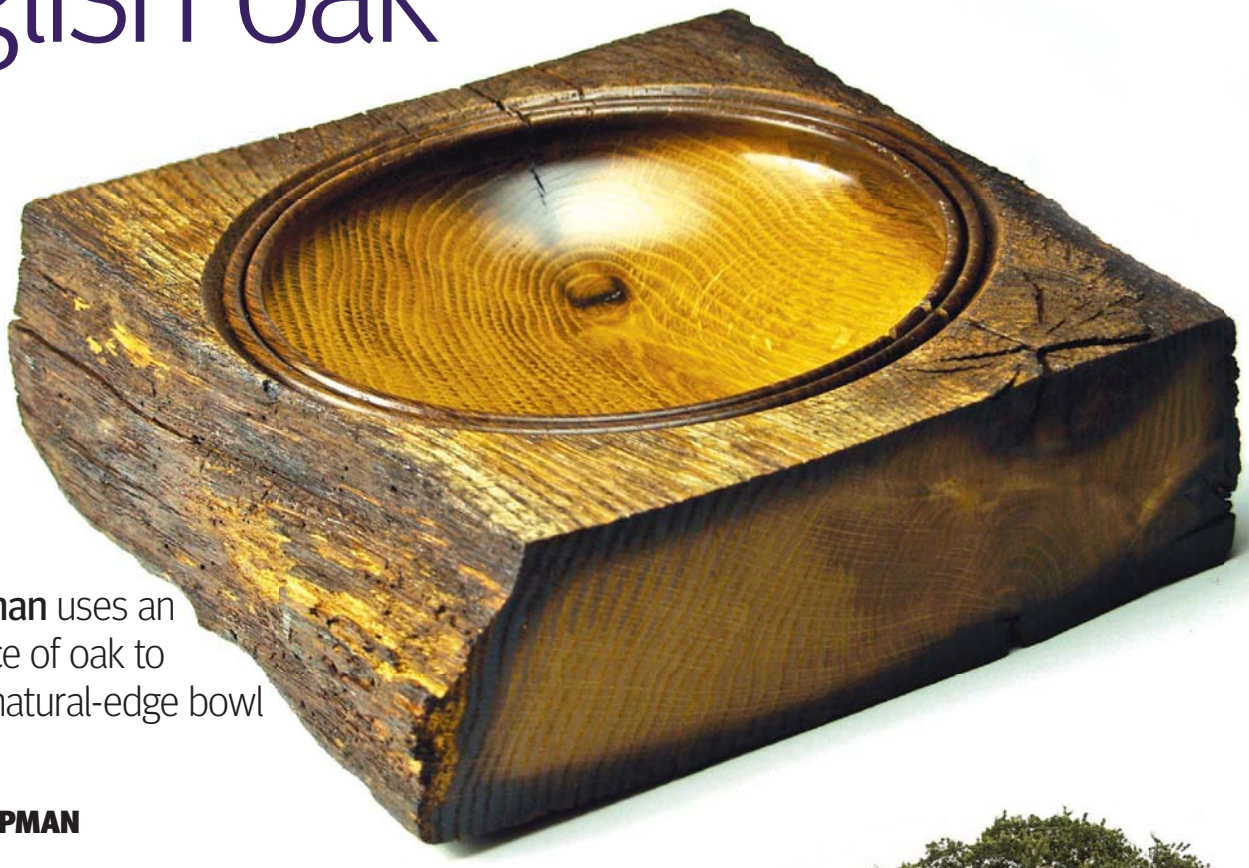
Rugged bowl in English oak



PHOTOGRAPHS BY BOB CHAPMAN

Bob Chapman uses an ancient piece of oak to create this natural-edge bowl

BOB CHAPMAN

After teaching chemistry for many years, Bob took early retirement to become a professional woodturner, and is a member of the Register of Professional Turners. He was a demonstrator at the 2009 AWGB Woodturning Seminar and is available for commissions.

bob@bobchapman.co.uk
www.bobchapman.co.uk

Horatio Nelson won the Battle of Trafalgar in ships of oak *(Quercus robur)* and the ships of the Royal Navy became known as England's 'walls of oak'. Oaks are among Britain's most common trees and the wood has a multitude of uses, many of which depend on its legendary strength and durability. A traditional timber for building ships, oak was, and still is, widely used for building and constructional work. It has been unearthed in ancient hill forts and will still be found in most churches. Much ancient, and modern, furniture is made of oak where its colour, strength and durability lend items a sense of timeless quality.

Famous oaks

In 2008 my wife and I holidayed in Norfolk, in eastern England, and while there we went to see a famous oak, Kett's Oak. It can be found on the old road leading from Wymondham to Norwich and is so named because in 1549 two brothers, Robert and William Kett, gathered their followers under this very tree before walking to Norwich to protest at the enclosure of common land. On the way the walk became a march and the protest grew into a rebellion, but it ultimately failed and its leaders were executed. Robert was hanged at Norwich Castle and his brother William was hanged from the tower of Wymondham Abbey.

In June, 2002 Kett's Oak was designated one of 50 Great British trees in recognition of its place in the heritage of the nation. As Linda and I approached the tree, we discovered that it is strapped up with iron bands, its heart is filled with concrete and its massive branches are supported by stout oak props, but we were delighted to find that, more than 450 years after the rebellion, which gave it its name, it was still bearing acorns.

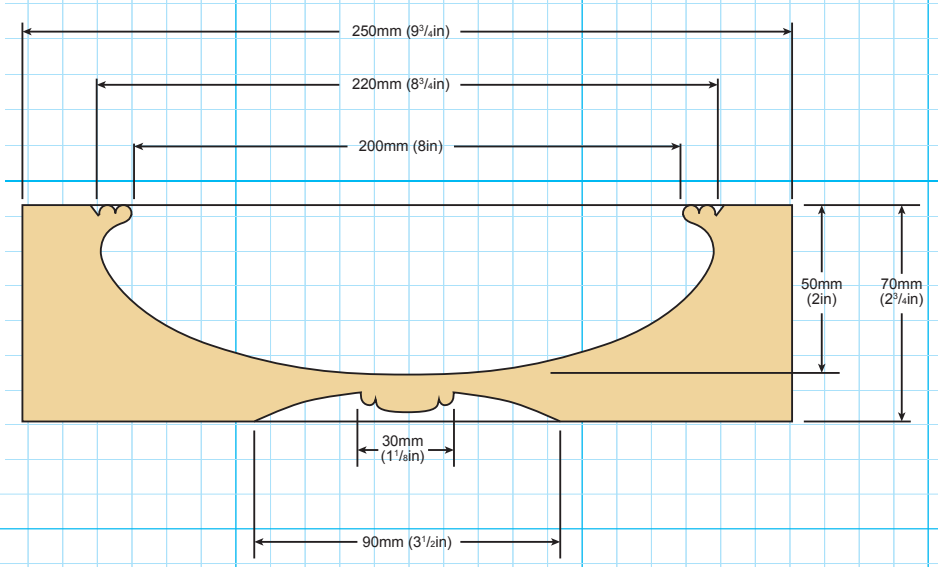
Kett's Oak in Norfolk

The tree is strapped up with iron bands and supported by stout oak props

PLANS

EQUIPMENT USED

13mm bowl gouge
6mm scraper
38mm scraper
6mm bead forming tool
Metal detector
Scroll chuck
Vacuum chuck
Power drill with sanding attachment
Range of abrasives
Sanding sealer
Kitchen roll
Beeswax
Carnauba wax
PPE: latex gloves, facemask, respirator/ dust mask



INCORPORATING FAULTS

If you do find buried metal in step 1, the problem is what to do about it. Forewarned about its presence and approximate location, you may be able to design your bowl to avoid it. If not, I usually carry on with the turning. When the bowl gouge hits the nail – or whatever – you will hear the click and soon discover that the tool has been blunted. If you stop the lathe you will see the shiny metal top of the nail where it has been cut by the gouge.

Use a narrow parting tool to cut two grooves, one just outside the nail and one just inside. Make these as deep as you can without compromising the shape of the bowl. By breaking away the narrow fillet of wood between the grooves, a short section of the nail can be exposed. If you can, heat the nail – perhaps with a small blow torch or a soldering iron. Let the nail get hot and then let it cool again. Repeat this several times. With luck, the repeated expansion and contraction of the metal will loosen it in the hole and allow you to pull it out with pliers. Don't worry if you char the wood around the nail as it will almost certainly be black anyway where the iron has reacted with tannin in the oak.

THE DESIGN

In keeping with oak's reputation, I decided to make a rugged, uncompromising bowl from the remnants of an oak beam given to me by a friend who was in the process of converting an old barn into a home. The barn is marked on maps of the area drawn in 1850, so I know this oak is at least 165 years old and might be even older.

One of the beam's edges is the original edge of the tree trunk or limb it was cut from and is very uneven. The sapwood has long ago been eaten away by wood-boring insects but they seem to have found the heartwood much less appetising and, apart from a few very shallow holes, it is still perfectly sound timber. My design involves leaving the shape and 'roughness' of the beam as it is while turning a highly polished bowl into the upper surface to contrast with this rough exterior

If you can't get it out, then you must decide whether to scrap the piece or use pincers to cut off as much of the nail as possible and then carry on regardless. A modern high-speed steel gouge will cut through an iron or mild steel nail relatively easily, albeit with some blunting of the tool. Re-sharpening as frequently as needed, proceed carefully until you eventually reach your required depth or the end of the nail. In a bowl of this nature, a visible piece of metal simply becomes yet another feature of the piece.

The photos here show an oak *(Quercus robur)* bowl, made in 2005, from another piece of beam. A section of an old square nail was uncovered and successfully removed in the manner described, but was then replaced in its original hole after the bowl was completed

WHAT IF YOU DON'T HAVE A VACUUM CHUCKING SYSTEM?

Well, turners were finishing the bottoms of bowls long before Torricelli invented the first vacuum in 1643. Ingenuity must be called into play. You could, for example, trap the bowl between the tailstock and a rubber-covered plate on the headstock. The rubber would provide sufficient friction to drive the bowl round while the tailstock centre holds it in place. The tailstock eventually gets in the way, but you just have to work round it as best you can and do the final tidying by hand, with the bowl off the lathe. You could centre the bowl on an MDF plate fastened to a faceplate and then screw through from the other side into the corners of the bowl. When the turning is done, fill the screw holes with CA adhesive and oak dust. You might make wooden clamps to hold the piece onto the MDF while it is being turned, or hold it in a cage chuck, or... well, as I said, use your ingenuity.Whatever method used to hold the piece, you will almost certainly be able to use the same method on other bowls, so the time spent on devising a holding system for your turnings won't be wasted. Do, however, take care that the workpiece is held securely, start the lathe on a low speed and stand to one side until you are sure everything is fine, or you might build your own vacuum chucking system. Full details of how I built mine can be found on my website: www.bobchapman.co.uk

OF COURSE, IT DOESN'T HAVE TO BE ENGLISH OAK

The early settlers in Australia discovered a tree whose timber, they thought, resembled English oak. They called it she-oak or sheoak, although the origin and meaning of the prefix 'she' is now a matter of speculation. Sheoak *(Allocasurina fraseriana)* turns easily, polishes very well and is very attractive. In making this small bowl, I decided to texture the underside and sand and polish the upper surface in contrast to it.

RIGHT: Texturing the bottom of the sheoak bowl
FAR RIGHT: The completed bowl in sheoak *(Allocasurina fraseriana)*

Make a rugged oak bowl

1 Before using ancient timber like this, it is wise to check for hidden nails, etc. A small metal detector is ideal for this

1

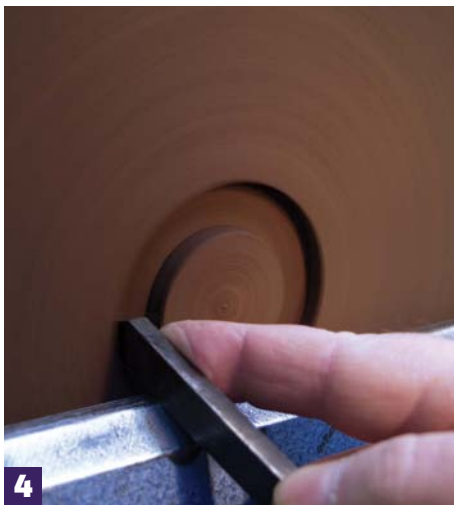
2 Cut your piece more or less square on the bandsaw. With my piece, this revealed how the surface darkening penetrated further where there were cracks in the wood, which allowed air deeper into the timber. This darkening resembles the effect of 'fuming' oak with ammonia and is quite common in oak from barns


2

3 With the position of the bowl centre decided, drill an 8mm hole and mount the blank on a screw held in the jaws of a scroll chuck. The blank is a heavy piece of wood, but it is quite secure on the screw. Before switching on the lathe, rotate the blank by hand to make sure it clears everything


3

4 In order to preserve the original surface, hold the bowl using a recess rather than a spigot. Using a skewed parting tool, cut a dovetail recess to accept the jaws of the screw chuck in expansion mode. The diameter of the recess should be a little more than the external diameter of the chuck jaws when they are almost fully closed; this ensures good contact between the jaws and the wood for almost the whole of the circumference of the recess. I like to leave the raised portion in the middle and convert it to a decorative central boss later on. At this point, mark the centre of the bowl either with a pencil or by making a small indentation with the chisel; this will be used to locate the bowl on the vacuum chuck when you do the final work on the underside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5


6


7


8


9


10


11


12

5 Remove the blank from the screw and reverse it onto the jaws of the chuck, and, for safety purposes, expanding them to grip the recess firmly. Tighten them cautiously, taking care not to split the blank along one of the cracks, which must already weaken it a little. In this instance, use a 6mm beading tool to cut a pair of beads; these will mark the diameter of the actual bowl within the blank

6 With the beads now formed, use a 13mm bowl gouge to begin hollowing out the bowl. Work inwards towards the centre, taking several light cuts at a time and stopping occasionally to clear shavings from within the developing bowl

7 The next step is to use a 6mm scraper to undercut the rim of the bowl. Raise the toolrest until the tool's cutting edge is exactly on the lathe centreline and be sure to keep the tool horizontal during the cut. Take several light cuts to complete the undercut and blend the curve into that from the bowl gouge. You can now swap to the bowl gouge and use this to remove the rest of the waste from the bowl's interior

8 Only the most skilful of turners will be able to complete the interior without leaving a few small ripples in the bottom of the bowl and, if necessary, make the final, 'tidying up' cuts with a large scraper, again held horizontally with the cutting edge on the lathe centreline

9 With any imperfections removed, you can now power sand the interior of the bowl from 120 grit down to 400 grit and paint a liberal coat of sanding sealer over the whole piece. Wipe off the excess sealer from the bowl interior using kitchen roll and buff, with the lathe running, using the same paper towel. Polish the bowl with beeswax and carnauba wax applied from solid blocks and buff to a deep sheen, which contrasts with the original surface of the oak beam

10 Using a vacuum chucking system or a suitable equivalent, remount the bowl in order to finish the foot of the bowl. Centre it by bringing up the tailstock, with a live centre, into the indentation made earlier for this purpose. Turning on the vacuum pump draws air from the system. Atmospheric pressure pushes the bowl onto this chuck with a force getting on for two hundredweights, which is more than adequate to hold the bowl in place while the underside is tidied up. Once again, rotate by hand and check for clearance before switching on the lathe and beware of the indistinct but highly dangerous whirling corners of the piece

11 Use the bowl gouge to remove all evidence of the chucking recess by which the bowl was held and use the beading tool to decorate the raised boss in the centre

12 After sanding and polishing this small area of the underside, the rugged oak bowl is now complete ●

One Thousand Two Hundred (1200)

Now you have to admit, that's a pretty big number, regardless of whether you write it alphabetically or numerically.

Why is it there? Simply, to draw attention to the fact that this is about the number of ***different*** woodturning tools that we stock, sourced from over a dozen manufacturers worldwide. And we do mean ***different*** tools, not simply the total quantity of tools held. That's a whole lot of tools.

If you buy your tools from a shop that only stocks tools produced by one supplier, then you will have a choice of 'one from one' - which is not a whole lot of choice. In fact, it is no ***choice*** at all. One from two isn't much better either!

Here at The Toolpost, we believe that choice is important. But unlike some folk - politicians would be a good example - we understand that many of us, given choice, also need ***guidance***: and that is very much our added value. We don't simply stock tools: we use them, demonstrate them - love them - and we are more than happy to help you understand them, understand what they do, how they work and why you might need them. Helping you to make better decisions, ***informed*** choices.

For sure you don't need 1200 different turning tools in your armoury: maybe six, ten, a dozen - only you can decide - but you do need, and deserve, to have the widest possible variety of different tools, both models and brands, from which to make your selection.

If you are a discerning buyer of tools, if you know about what matters and if you understand that choice is not about difference but about ***selection***, then you should be shopping at The ToolPost.

This doesn't neccessarily explain why we stock more different turning tools than anyone else on the planet - but it helps to keep my bank manager quiet. Maybe my being 'just another turning tool junkie' helps, too! It probably makes sense for you to capitalise on my addiction.

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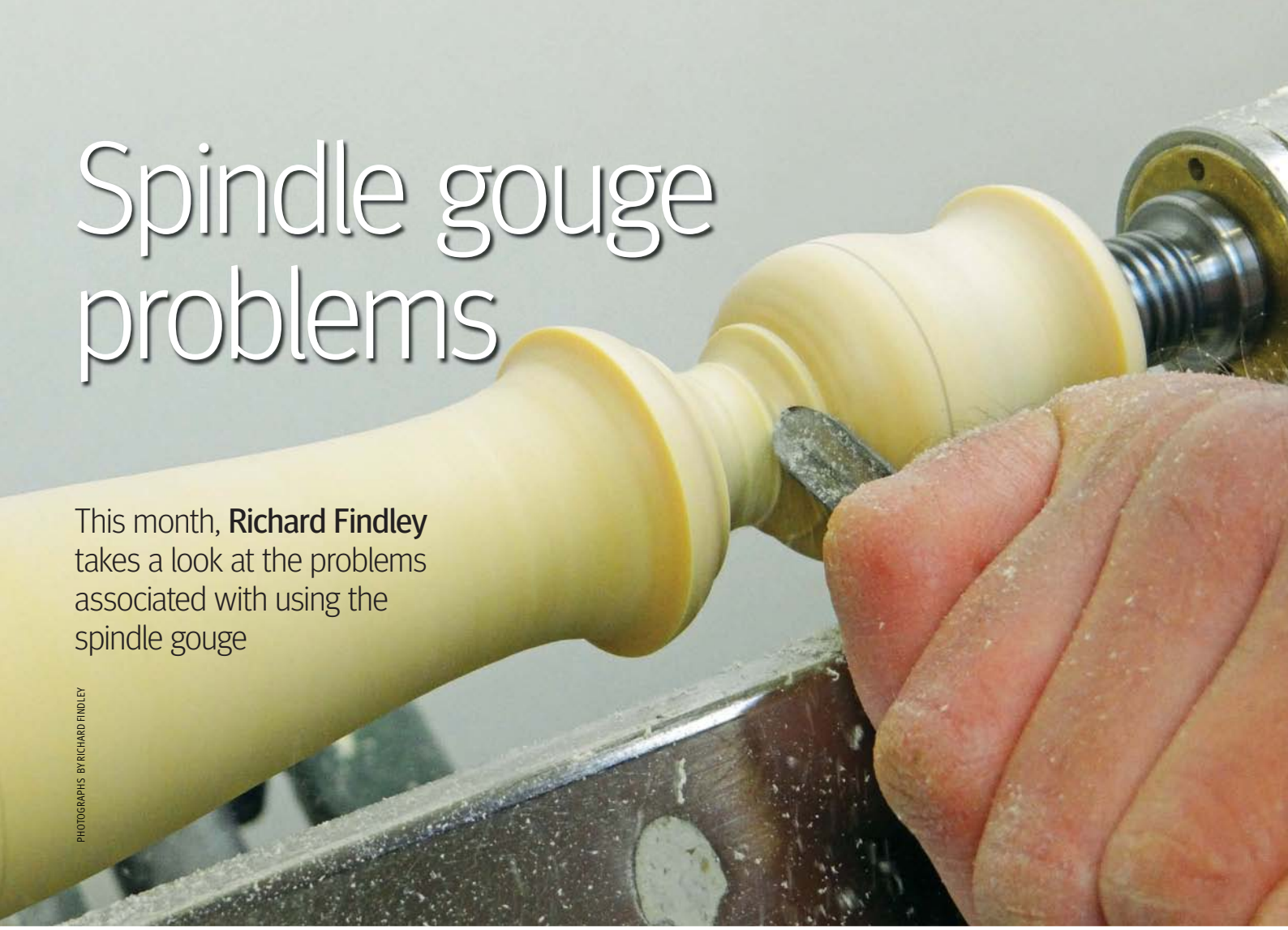
Spindle gouge problems



This month, **Richard Findley** takes a look at the problems associated with using the spindle gouge

PHOTOGRAPHS BY RICHARD FINDLEY

RICHARD FINDLEY

Richard is a registered UK professional woodturner living and working in Leicestershire. He discovered woodturning while working for his father as a joiner. 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 and a range of woodturning supplies.

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The spindle gouge is one of the tools that makes up the core of any turner's tool kit. No matter which area of turning you prefer, a spindle gouge will always be useful for shaping, smoothing and detailing work.

Unlike its cousin the skew chisel, the spindle gouge doesn't have a fearsome reputation for dramatic catches, but catches are still an ever present problem with this tool if it isn't presented and used correctly. The reason people persevere with the spindle gouge, even after multiple catches – when a skew is consigned to a drawer after a similar episode, never to see the light of day again – is that the catches with the spindle gouge, while hugely frustrating, are nowhere near as dramatic or frightening as skew catches can be. I think everyone would agree, though, that completing a piece of work without any catches at all is always something to strive for.

My aim with this article, as with all of this series, is to look at the most common problems faced by turners when using the spindle gouge and try to help you to avoid them in the future.

Spindle gouge problems

The most common problems with the spindle gouge include:

- Tool choice
- Catches when rolling beads
- Catches when cutting coves
- Forming good shapes
- Confusion caused by the difference in technique between use for spindle and faceplate work

A selection of different spindle gouges

Tool choice

You may have noticed that a number of these articles have started with the problem of the huge choice of tools that are available to the turner. This choice is something of a double-edged sword, because while choice is nearly always a good thing, allowing turners with different turning styles to produce all sorts of work with a tool that suits them perfectly, it leaves many beginners and those in need of a new spindle gouge faced with a problem; which one do I choose?

As with all matters in woodturning, ask 10 turners and you will probably get 10 different answers, but your choice is usually between three main types:

- Standard round bar spindle gouge
- Traditional continental spindle gouge
- Detail gouge

Within each of these areas there are a set of various options:

- Size
- Grind
- Handle design

So, which do I choose?

My standard round bar spindle gouges are all Ashley Isles in sizes of 3mm, 6mm, 10mm and 12mm – all have the same profile and grind

The problem is, you will most likely need several sizes of spindle gouge for various different types of work. I have four sizes of gouge: 3mm, 6mm, 10mm and 12mm. For spindle gouges worldwide, this is the diameter of the bar unlike bowl gouges, which use a very confusing system – more on this next month!

Which size?

My spindle gouges are all made by the same company and are ground in the same way, which means no matter which I pick up, it will feel the same in the cut, work in the same way and produce the shapes I want without changing my approach to the work. The choice is entirely down to the size of work I am doing. So, for big work I use the 12mm, for small work I use the 6mm, for really small work I use the 3mm – but this isn't often! The size I use most of all is the 10mm, which is my go-to tool.

So if pushed by someone who wanted to just buy one spindle gouge, I would probably say a 10mm is the best choice, although in my experience of teaching spindle turning, most beginners seem to be able to handle a 12mm with more ease. Whether this is because of the extra weight or that they can see what is happening more easily with the larger tool, I am unsure. At the end of the day you will almost certainly need more than one size so either 10mm or 12mm will be best. I am still using my original 6mm spindle gouge and it is the longest of the group, whereas my 10mm has been replaced a number of times and is in need of replacement yet again in the very near future.

Which shape?

With the main choice between round bar, continental and detail, which is best? Well, each has its benefits due to the profile of the tool. Continental gouges are most traditional, having been formed from flat bars into the curved gouge shape. They work fine for any turning work but excel at shaping and smoothing long flowing curves due to the flatter shape of the cutting edge, which works more like a skew than a gouge.

Detail gouges are made from round bars and tend to have a very shallow flute, which gives them greater stability when used with big overhangs over the toolrest. The shallow flute will usually result in a more pointed tip profile, which makes them more useful for getting into tight spaces, like a skew can, although less good for long sweeping curves in my experience.

The 'standard' round bar spindle gouge fits between the two options mentioned. It can do the same jobs as the others, although arguably they are best in the two areas I pointed out. The standard round bar is less specialist and more of an all round spindle gouge, so if you want to be able to do a wide variety of work, this will probably be the most versatile and if you can combine this spindle gouge with a skew – which will do the sweeping curves and fine detail work that the other two gouges specialise in – then I feel it is the best option and is how I work.

Grind

There will be more about the different grinds of various gouges in an upcoming article in a couple of months, but in general terms regarding a spindle gouge, a swept-back grind is the most versatile option. The factory grind supplied on most gouges is virtually useless for most work. How pointed or rounded the point is and the exact bevel angle is the area that can prompt a huge amount of discussion between turners. Experimentation is the only real way you can decide what works best for you, but as a guide this may give some pointers:

- More pointed profile – better for tight detail work; less good for long sweeping shapes
- More rounded profile – better for sweeping shapes, less good for tight details
- Long angle, e.g. less than 30° – better for softwood
- Short, blunter angles – 45° or more – better for dense hard woods

Most of us will do a wide variety of work and so make some compromise between these extremes, to save having a tool for each job. Personally, I use a swept-back grind, with a moderately curved/pointed tip profile, with a bevel ground to around 35°, which works for me.

ADDITIONAL INFORMATION – SOFTENED HEEL ON GOUGES

You may notice that I remove the heel on my gouges; this removes the harsh edge that normal grinding produces, making the tool contact to the wood much more gentle. This helps to produce a smoother cut, better shapes and improved curves

This shows the profile and grind on my spindle gouges

MYTH BUSTERS:

Myth – 'The toolmakers know what they're doing, so the grind my tool comes from the factory must be right!'

Well, the toolmakers know how to make a good tool but they are supplied with what they deem a functional grind, as advised by their turning contacts. While the grinds are usually functional, they may not be sharp, so treat the grind as the basis of a shape and adjust it, but always sharpen before use. Every turner has a preferred grind, so any profile a manufacturer puts on the tool would not be right for everyone

Which handle?

Handle design is a very personal and subjective decision. I like a wooden handle and each manufacturer has their own design, although there isn't much to choose between them to be honest. The cheapest way to buy a tool is unhandled and turn one for yourself. A modern trend that seems to be popular is for interchangeable handles. These are good but will divide opinion.

Catches when rolling beads

There are two reasons that catches will occur when rolling a bead: use of the wrong part of the edge and no bevel contact. These are largely the same reasons any tool catches at any time, but I'll explain in a little more detail. Throughout any cut with a spindle gouge you need to ensure the cut – the point where the shaving is being produced – is always coming from the same point on the edge of the tool, the 'sweet spot' if you like. When cutting to the left, this sweet spot is just to the left of the tip; when cutting to the right, it is just to the right of the tip.

The wings of the tool, as far as spindle turning is concerned, are ground back like this to get them out of the way – I will come back to their other use later – but for spindle turning, all the action happens near the tip of the tool, which is why its profile of being pointed or more rounded, makes a

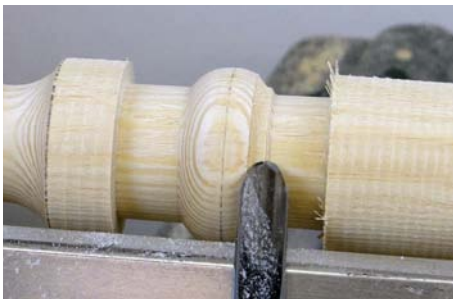
difference as to how well it does certain jobs.

If you cut on the wrong part of the edge, particularly on the wrong side of the centre point, the edge will be unsupported by the toolrest and at this point, the tool is twisted and pulled down, usually taking a chunk out of the bead at the same time.

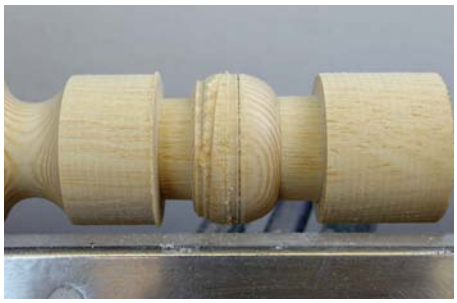
The other type of catch occurs because the bevel is no longer touching the wood behind the cut; this usually happens as you are coming to the end of a bead rolling cut. The correct action is to roll the tool, while sliding it along the rest, raising and slightly swinging the tool handle as you go; this forms the bead and allows you to get the side of the bead almost vertical. But if you swing the handle too much, then it can lift the bevel away from the wood, leaving only the tip of the tool in the wood. This leads to the tool being thrown back towards you and a spiral-shaped catch. The answer is to only swing the tool a small amount. Better to swing it less and to have to make another cut to adjust the shape of the bead than to swing it too much and end up with a heavy catch.

The sweet spots marked on the gouge, either side of the centre point

Rolling a bead with a gouge. Notice the shaving is coming from the sweet spot



Using the wrong part of the edge will result in a large catch



The spiral catch that can happen if you lose bevel support when rolling a bead

Catches when cutting coves

The main difficulty with cove cutting is the entry cut that forms that crisp edge at the top of the cove. As you touch the gouge to the wood it is pulled off to one side, leaving yet another spiralling catch.

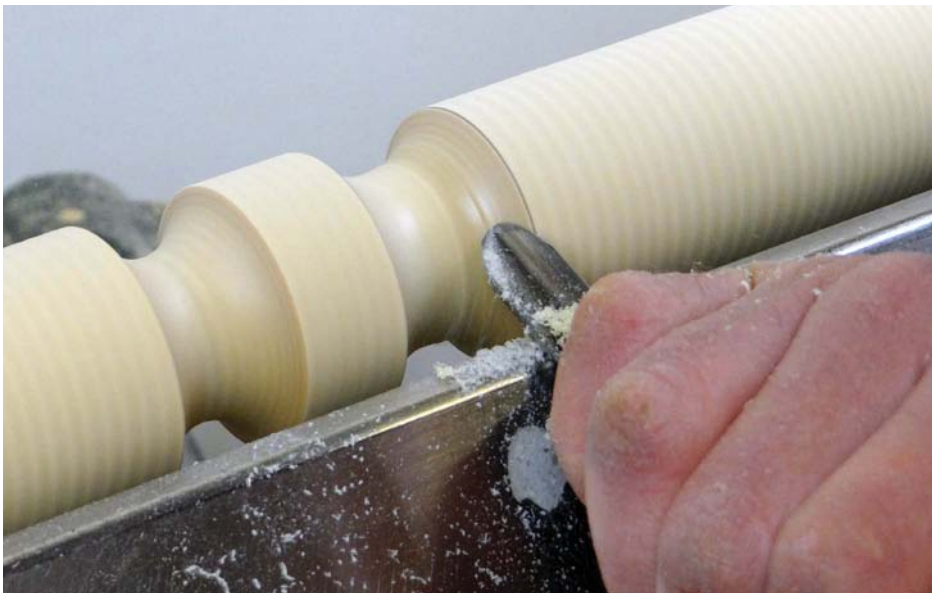
The reason for this is that the edge of the tool, at the point of entry, should be vertical. If you touch a part of the edge that is angled one way or the other, the tool pulls off to one side. The problem here, though, is that the cutting edge is a semi-circle, so finding a point that is vertical can be quite a challenge. When you realise that every manufacturer produces a slightly different shaped flute and if you looked at 10 different spindle gouges, they would all be ground very slightly differently, it is little wonder that this can be difficult.

I would always suggest 'making friends' with your gouge, as you need to find out how you and the tool can work together to achieve the cuts you want to make. If you really can't get your tool to behave, regrind it until it does. If you can try out a few different grinds at a club hands-on meeting or just try a friend's tools, perhaps get a professional to take a look at your gouge and see if it might benefit from a slight alteration. Often it is only a very slight change and it can make the world of difference.

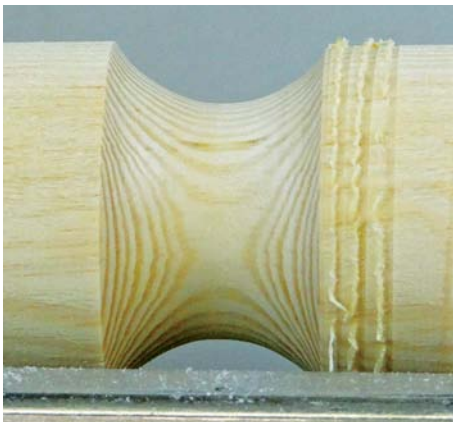
The best way to practise this entry cut is by cutting a series of lines with the tip of the tool. Once the tip is located in the wood, the challenge is just about forming a good shape – which I shall come to next. With the gouge on its side, touch the tip of the tool to the spinning wood. What happens? Is it pulled to the left or right? Does it just cut a groove? If it's the latter, then well done – you will be able to do the entry cut without a problem. If it pulls, I would suggest two things. Firstly, roll the tool – just a fraction – in the opposite direction to which it pulled. So if it pulled right, rotate it slightly anti-clockwise, and if it pulled left, rotate it slightly clockwise. Try again and see what happens now. Keep experimenting with this until you find the point where it doesn't pull, but begins to cut a clean groove in the wood.

The other thing to look at is your cutting action. Don't just poke the tool into the wood. There is probably less than a 50/50 chance that you will achieve the cut with this approach. You need to make a deliberate slicing cut. Start with your handle low and lift the handle, pushing forwards into the wood. This, in conjunction with the correct presentation, should allow you to make that entry cut without a catch.

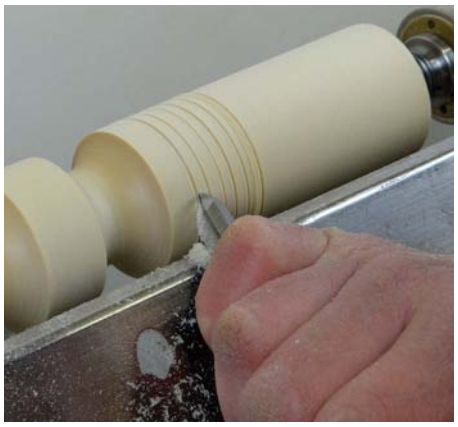
The last thing to add, to help minimise these and any other catch, is to keep your tools sharp! These days I don't get many catches, but when I do, the reason is usually that I need to sharpen my tools. The one catch I get more than any other is the 'cove entry cut catch'. Frustrating, but not the end of the world!



Cutting a cove – the shaving is once again coming from the sweet spot



Entry cut catch



Practising the entry cut by making a series of lines with the tip of the tool

MYTH BUSTERS:

Myth – 'When cutting coves I just pick a gouge the same size as the cove and push it in!'

By doing this you are using the gouge more like a forming scraper. On spindle work, this will only result in torn grain and when the cut becomes too big, the tool binding in the cut and the possibility of an accident. To form coves, you need to slice the tool into the wood, cutting downhill, removing wood from one side, then the other alternately, until the shape is as it should be

Forming good shapes

As with any tool and any cut you are trying to make, your body movement is vital to producing good shapes. With spindle work particularly, I find people want to stand right behind their tool, which gives a good view of what is going on, but actually limits your movement because you get in your own way and the tool handle will tend to dig into your stomach. Stand slightly to one side, the tool at your side, then you can move your body to produce the shapes, rather than just your hands and wrists. Shapes that come from the hands and wrists will be lumpy and faceted; shapes that come from your body movements will always be smoother and more flowing.

My stance at the lathe. Notice the tool handle is by my side, as are my arms, which means it is my body movement that creates the shapes in the wood

More on cove catches

Once you are making the coving cut, it is vital to ensure the cut stays on that sweet spot – which is the same sweet spot you were looking out for when rolling beads – just to one side of the tip. Working downhill is important when forming coves to ensure the cut is clean. As long as you keep moving forwards, working downhill from alternate sides, you should be fine.

Something to keep an eye on is the wing of the tool. On a narrow cove, sometimes a wing can touch the opposite edge of the cove, causing damage. I tend to grind the wings of my gouges so that they sit slightly closed. Other turners prefer them to be more open. To close them it is just a matter of rolling the tool more on the stone when sharpening, which has the effect of placing the very top of the cutting edge within the diameter of the bar, reducing the chances of accidental catches in confined areas.

You can just see that the top of the wing, how the cutting edge is slightly rolled within the diameter of the bar, which I have found prevents some accidental catches in confined areas

Faceplate work vs spindle work

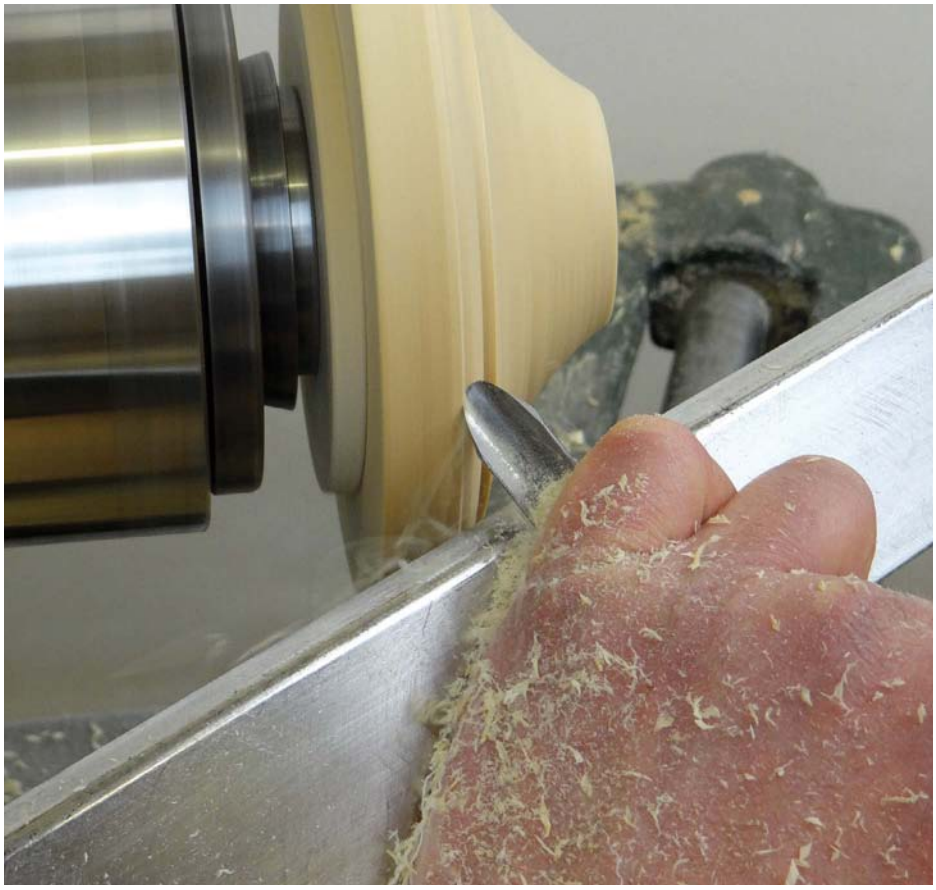
While many of the classic shapes, such as beads, coves and ogees, appear in both spindle and faceplate work, the way in which they are cut with a spindle gouge is quite different, all because of the grain direction of the wood. On spindle work, you cut from the top of the shape – the largest diameter – down to the base of the shape – the smallest diameter – always using the sweet spot near the tip of the tool. On faceplate work, the cuts need to be made from smallest diameter to largest, often using more of the tool's wing.

This oak *(Quercus robur)* table lamp has complementary spindle and faceplate work, both of which can be done with a spindle gouge

TOP TIP

If you are in any doubt over which direction to work a piece of wood, imagine you were going to carve it with a mallet and carving gouge. If you cut in the wrong direction, from the edge inwards, then you will end up with a large chip splitting from the wood. Cut correctly, away from the edge, and you will produce a clean sliver of wood. This will tell you which direction to work in

When forming shapes of faceplate work, you should cut with the handle low, using the area of the edge near the sweet spot, but this time as you draw the tool around the shape, you can engage more of the wing. You can close the flute and use the wing in a shearing cut or raise the handle and use the wing in a trailing scraping type cut too. All of these slight variations should leave a smooth finish, as long as you are working with the grain – smallest diameter to greatest diameter. ●



Cutting on faceplate work, the shaving is still coming from the edge close to the sweet spot, but with a little more wing contact

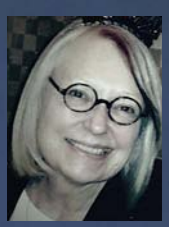
PHOTOGRAPHS BY TIB SHAW

Make a button cylinder pendant

Linda Ferber makes a button cylinder pendant

Utilising the simple, yet elegant, cylinder shape, a person at any woodturning skill level can create a unique version of this button cylinder pendant. Woodturning is a 3D art and a cylinder is one of the first items a turner learns how to create on a lathe. I used basic cylinder shapes in this project and incorporated offcentre techniques in a manner different than most eccentric turning. I invite you to work on design details with the thought that simplicity does not occur without consideration. This project emphasises that successful simplicity does not just happen; it comes with clean lines and precision.

LINDA FERBER



Linda has been turning for more than 10 years and enjoys its creative possibilities. She took a bowl turning class and joined her local AAW chapter. She is now the Program Director at the American Association of Woodturners (AAW).

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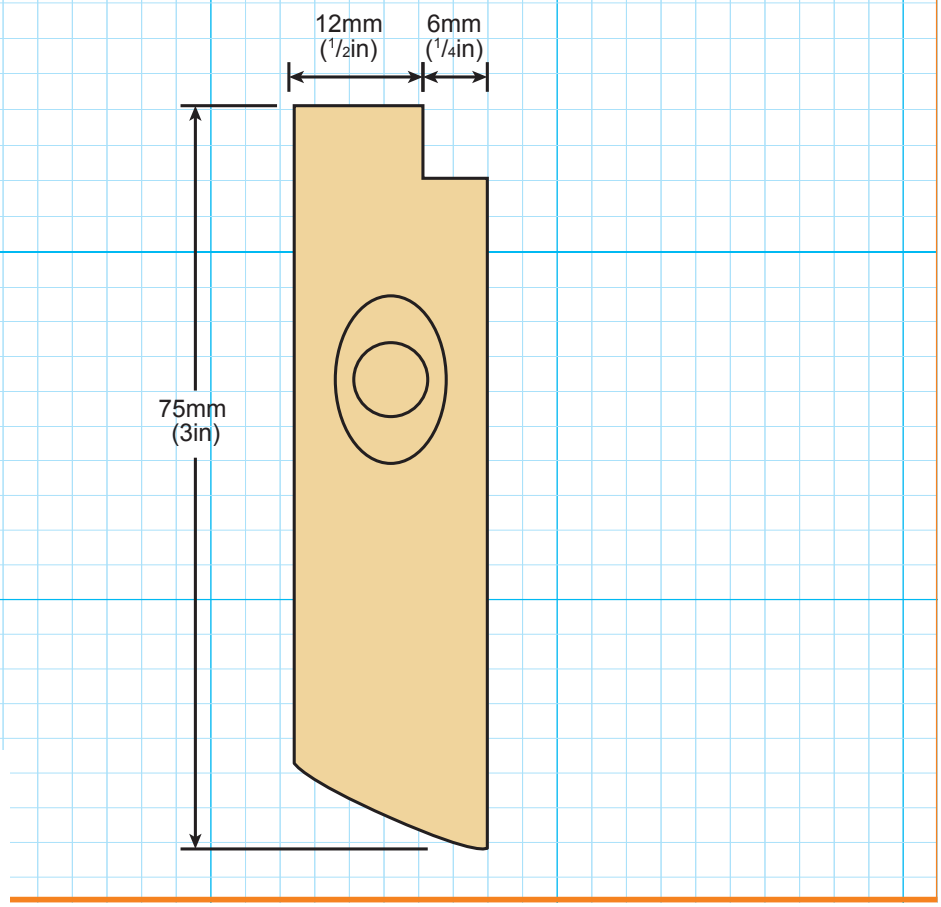
EQUIPMENT USED
Spindle roughing gauge
Skew chisel
Detail gouge
EEE Ultra Shine paste wax
Pen turning jaws
Blue tape
Abrasives
Jacobs chuck
Eye screw
Necklace chain
PPE: latex gloves, facemask, respirator/dust mask



SELECTING THE WOOD

Pen blanks are a perfect fit to use to start this project. The bonus is you are able to get two pendants from each blank. Also, those small pieces of expensive, or highly figured woods left over from previous projects but too good to throw away, are potential resources for this project. Of course, any plain wood can be used as a canvas or to add a small decorated accent to the work. The design is meant to be straightforward and simple, so this is an opportunity for the wood to be the main feature. When selecting the blank stock, examine the grain of the wood – grain running the length of the piece or at an angle will be best for turning. A piece of burl is an excellent choice. Normally I don't like shiny finishes, but with this project I prefer the highly polished presentation on pieces of burl


1

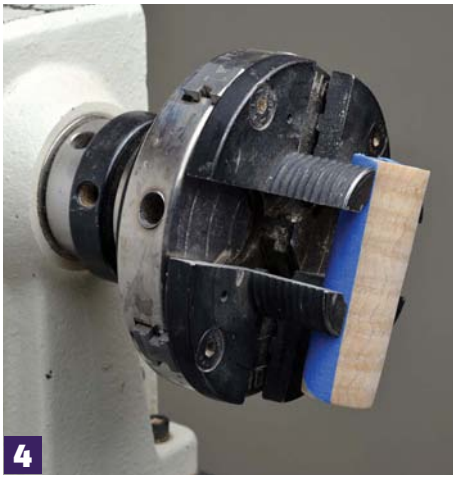

2

1 After selecting your wood stock, set up the lathe for traditional spindle turning. Start by using a spindle roughing gouge to make quick work of turning the cylinder. When turning the cylinder shape, watch the horizon to get a true line. Crisp, clean lines are essential to the final look of the piece

2 With the lathe still in this setup, finish sand the cylinder to at least 800 grit. The finish is critical for a jewellery project. All tool or sanding marks must be removed. The EEE Ultra Shine paste wax is useful to create a nice shine if an exotic wood is used


3

3 After turning and sanding the cylinder, set up your chuck with extended pen turning jaws. They allow a longer reach for the piece and give you the ability to place the piece at an angle to create an interesting turned button – bead. Turn the cylinder over, looking for the side you think will look best in the front and select the most interesting side. The placement of the button position is important to the finished design. I prefer the button higher on the piece more towards the top, roughly following the golden rule of one-third and two-thirds on the bottom. To set up the angle, use blue tape placed on two sides of the cylinder, leaving the desired front open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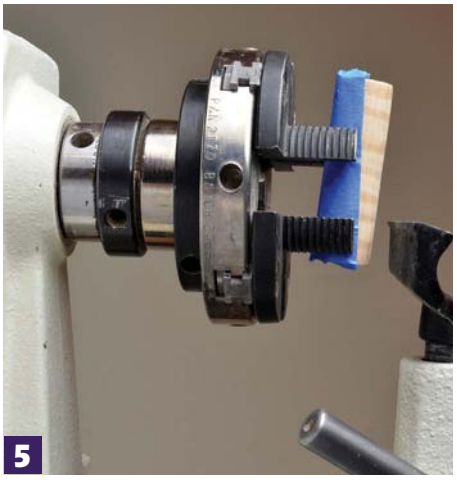
4 This offers protection from jaw marks. You can then select a top and a bottom. The area you will turn is in the centre of the jaws, so place the top of the piece flush with the top of the jaws, angling out the bottom of the cylinder towards you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5 Here is the piece mounted and viewed from the side


6

6 When the piece is set up, the results will be a turned button that has a longer swoop – or plunge – at the bottom, which helps to add an interesting detail. Before you turn on the lathe, always test to make sure the wood is secure in the jaws. While turning, the gouge should be in the same position as you use for turning a bead. Start with the flute up and end with the flute on the side


7

7 The button – bead – can vary in size and diameter. When making a narrow or wide bead shape, always ensure to check depth: too deep and the bottom overpowers the cylinder; too shallow and the proportions are off. When you've finished turning with the detail gouge, turn a small detail at the bottom of the button using a skew chisel. Smooth up the edges with abrasives when necessary. Inspect to make sure no tool marks are showing and sand as needed – with the lathe switched off


8

8 Now set the button back up for spindle turning in the same exact position as your first spindle set up. You should inspect and fix any imperfections that you find. Then, proceed to sand, starting at about 400 grit, then use the paste wax to put on a finish

HANDY HINTS

1. Pay attention to details, especially when working on a small project
2. Using your four-jaw chuck in a non-traditional way, think outside the box with their everyday tools and accessories
3. Have fun and don't worry about the items that don't work out

9 The next step is to set up to turn the offset accent by positioning the top of the pendant so that the button is a little higher on the piece. If looking at the tailstock, move the piece of wood one centre point width away from you to create the offcentre accent

10 You can then begin to turn the offcentre accent at the top of the pendant. Then, using a skew chisel, turn the top offcentre accent piece

11 In this photo, you can clearly see the offset turned cut

12 Clean up the top edge with a skew chisel slicing cut and on the bottom, make a clean slice, also using the skew. These cuts take off the wood where the live centre has left marks. Then, shape the top and bottom. Change the setup of the lathe, putting a Jacobs chuck into the headstock and with a sanding pad inserted into the Jacobs chuck. You could also use the drill press with a sanding pad or a belt sander. Sand and shape the top to be flat, leaving one slight indent in the centre as a mark for the next step. I like an angle to add interest, which also provides the person wearing the piece with a place to handle

13 You now need to fit an eye screw on top of the cylinder. Correct proportions in selecting an eye screw size is critical here: too large or small will quickly spoil the look of the piece, as will its position. Test fit in a scrap piece of wood before drilling into your piece. Once drilled to suit the eye screw selected, apply adhesive to the eye screw and fix in place. Pliers are handy here and will help to hold the eye screw in place

14 Decide on the desired drop distance from the neck the pendant will hang and choose a chain that will best suit the wood, the size and design characteristics of the piece. The finished pendant should look something like this ●

HANDY HINTS

4. It has been said hundreds of times, but make a half dozen or more of items such as this – that is the best way to learn. I find the small refinements you make to the project really matter and ultimately, make you a better turner
4. This is a project that is an exercise in simple lines. Use your imagination to modify the shape and accent features. Enjoy the process and the results you create. As always, a simple project takes many steps, but I believe it to be true that the simple subtle shapes exhibit an infinite amount of precision and planning to achieve


9


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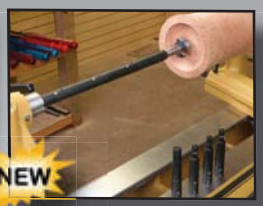

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Colorado Springs, CO USA

‘Natural’ acorn box

Jan Hovens shows us how to make one of his signature pieces – a ‘natural’ acorn box

PHOTOGRAPHS BY JAN HOVENS

The acorn, being the seed of the mighty oak (*Quercus robur*), is a well-known form in turning. For centuries it has been used as finials on furniture, stairway posts and other architectural pieces. The acorn was, and still is, popular in Celtic and Scandinavian art. Acorns have a deep and rich symbolism in druidry. They are the seeds of the long-lived and powerful oak tree, which is a very important tree to the druids. During the Norman conquest, the English carried dried acorns to protect themselves from the brutalities of the day. The acorn as a heraldic symbol indicates independence to its bearer. They are also considered as an emblem of luck, prosperity, youthfulness and power. So knowing all this, you could say that acorns are in the human genes and therefore it is a logical thing that we, as turners, use them in our work.

A box in the shape of an acorn is a well-known design. Lots of turners have made these in different sizes and forms. They are usually in the range of 50-100mm in size and are made of two kinds of wood: mostly, a darker wood for the cap or hat – I have no idea what the correct name of it is! – and a lighter wood for the nut. Some have suction lids; some have screw-on lids. Over the years, I have made a lot of them. As there are lots of different oak trees and therefore lots of different shaped acorns, you can play around with shapes and colours.

One autumn, as I was walking my dogs, I found lots and lots of caps from the American red oak (*Quercus rubra*). A heavy wind had blown the day before, which caused the first fall of the acorns and acorn caps. I picked up a handful, because I like the shape and while continuing my walk, I worked out a method of using these for lids of a small acorn box. Of course it will be a small box, being the size of a natural acorn and probably not very usable, but it is fun to have one and people seem to like them. As all my boxes have threaded lids, the little acorn should also have one. The problem is of course, how to get a thread in one of those caps. Well, you can’t. You have to use an insert of a piece of wood. Turners who have seen my little acorn boxes always ask me how I grip the caps in a chuck so I can chase the female thread. My answer is: “You don’t try to chuck up the caps.” I don’t think it can be done. There is a far easier way to make a threaded insert for natural caps than putting the cap in a chuck. This article shows you how to do it. Of course, these boxes don’t need to have threaded lids; they can also be made with suction fitted lids. The way to produce them is the same as if you would cut a thread.

JAN HOVENS

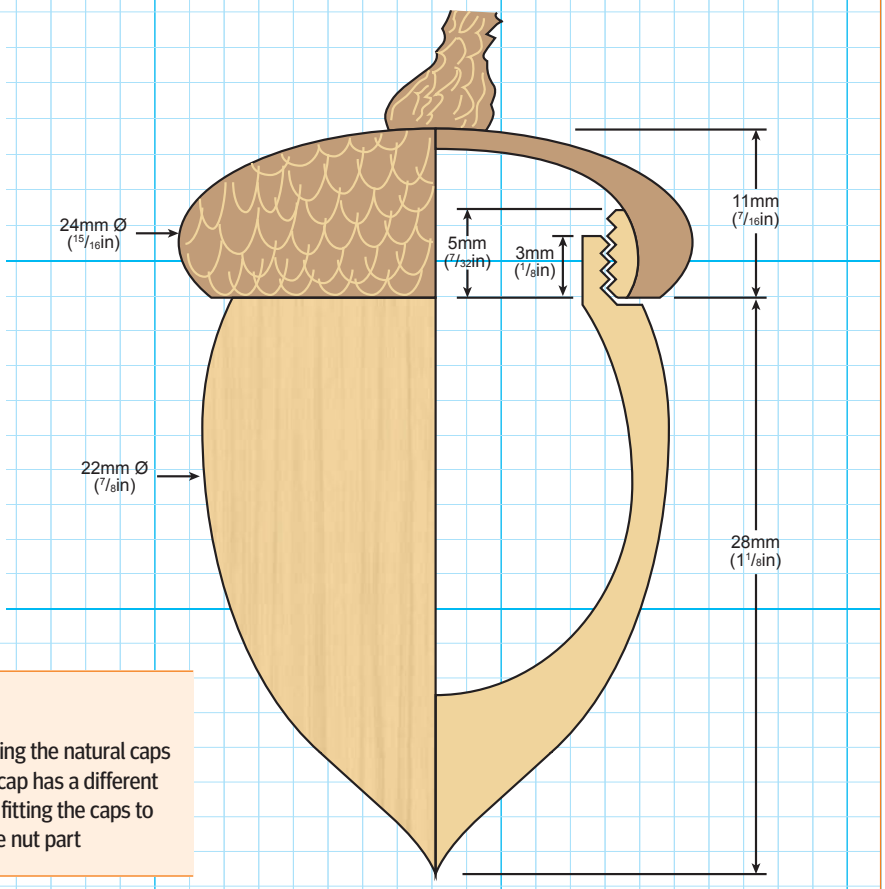
Jan spends half his time making turning-related items, such as tools and thread chasers as well as demonstrating and teaching woodturning courses. He has demonstrated in several countries, such as the Netherlands, Germany Austria, Belgium and the UK.

jhovens@home.nl

INFORMATION & PLANS

EQUIPMENT USED
10mm spindle gouge
Skew chisel
3mm parting tool
1.5mm parting tool
8mm straight-sided box scraper
8mm round-nosed scraper
Grindstone for shaping
18tpi chaser and armrest
Point tool
Abrasives
Callipers
Sunflower oil or beeswax
Buffing wheel
PPE: latex gloves, facemask, respirator/dust mask

TIMBER REQUIREMENTS
For the nut: a piece of olive *(Olea europaea)* wood
Pear *(Pyrus communis)*
wood dowel offcut



USING NATURAL CAPS

I must admit that I never work from a drawing and using the natural caps from the forest floor, there are no dimensions. Every cap has a different size. Making these boxes is trial and error in terms of fitting the caps to the dowel and judgement of the eye when turning the nut part

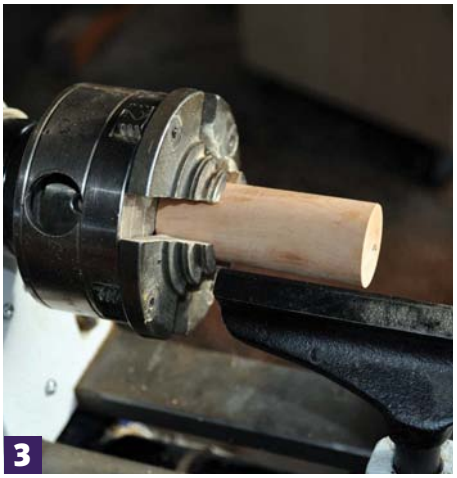
1 Of course, it all starts with going out and looking for the caps. The best ones to start with are from the American red oak, as they have fairly 'straight' sides. Other type of caps will also work, but you will have some more fiddling to do to fit the caps on the tenons. The best time for finding these caps is in the early autumn, but if you look carefully, you can find them all year round


1

2 The caps need a little preparing before the gluing. There may be some fluffy stuff inside, which you have to scrape out with a sharp knife. This also roughens the inside a bit, so the glue has a better grip


2

3 Use a pear *(Pyrus communis)* wood dowel offcut. Pear wood can take a good hand-chased screw thread


3

4 Using a 3mm parting tool, cut a tenon so that the cap has a good, but not too tight, fit. Too loose and the glue will not hold; too tight and the glue is squeezed out


4

HANDY HINTS

1. Thread chasing is not the easiest thing to learn but, with practice, should be no problem. You have to persevere. When learning to chase, start with a finer TPI, such as 18 and 20


5


6

5 At this stage, you should have achieved a good fit, but do not glue it on yet! You still have to cut an inside thread

6 The next step is to drill a hole. Use the 10mm spindle gouge as a spoon bit. You can, of course, also use a drill bit in the tailstock – 15mm deep will suffice

7 Use a home-ground box scraper to widen the opening a bit and give it straight sides. I like my threads to be parallel, so the sides of the opening have to be parallel to be able to achieve this. If you want a box with a suction fit lid, you can skip the next step


7


8

8 Chase an inside or female screw thread as normal. For this box, use an 18tpi chaser on a Bill Jones-type armrest. The speed is about 300rpm here. 20tpi would also work, but I don't like to use coarser chasers for these little boxes

9 Before gluing the cap on, roughen the tenon a little with the help of a point tool. This way the glue has a better 'grip'

10 For gluing on the cap, I prefer to use wood glue. It will take some 10 minutes before you can get to the next step, but it will give you a good glue joint over the years. When I am demonstrating this, most of the time I use CA adhesive as the audience don't like to wait 10 minutes for the glue to set


9


10

11 Cut off with a small parting tool. Try to cut off just on the edge of the cap so as not to have a piece of the tenon sticking out afterwards

12 You will end up with a natural cap with a threaded insert. There is just a little sanding to do to get rid of the small ridges that come from cutting off the cap

13 This sanding is easily done by rubbing the cap on a piece of abrasive lying on a flat piece of steel, like your lathe bed or the table of the saw. Be careful not to put too much pressure on or the cap will end up a little crooked. Turn it a little while rubbing it on the abrasive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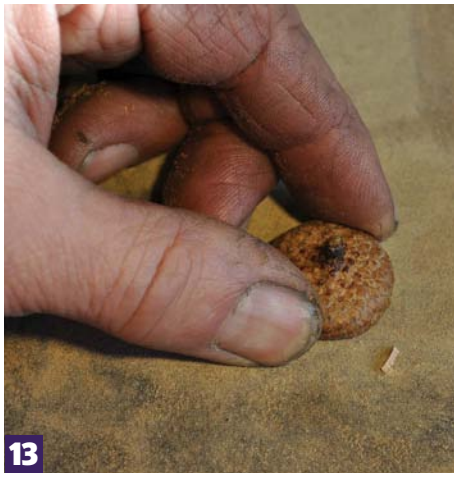
13

14 The finished cap should look something like this

15 I normally use callipers to measure the inside diameter of the female thread and then add 1.5mm – in the case of using the 18tpi chasers – to get the size for the tenon

16 The next step is to cut a tenon to this size and make sure it is fairly long. You need a good long tenon so that you don't have to move the chasers with short strokes. Short strokes give you a bigger chance of striking a 'drunken' thread. Longer moves are smoother and a good thread is easier to achieve

17 Using a skew chisel, cut a 'V'-shaped relief at the shoulder. Make this relief as small as possible for your comfort. The aim is to get a thread almost up to the shoulder. This is necessary because there are only two or three threads in the cap

18 You can now begin to chase the outside thread on your box

19 In between passes use some oil; this will prevent crumbling of the crest of the thread. I normally use sunflower oil for this, but you could also use beeswax if you prefer. You can then chase the thread until the cap screws on without sticking

20 The finished thread is of course too long at this stage, so using a small parting tool, cut off until only two to three threads are remaining

21 You can now test the fit. The cap should screw on all the way up to the shoulder. If not, then take off another thread with a parting tool

22 With the threads for the lid of the box now cut, it is time to start forming the outside of the nut. As the nut still has to be hollowed, you must not turn the point part too thin as this would result in vibration occurring when hollowing


14

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23 Turn the outside so that there is a pleasing and natural looking contact between the cap and nut. Screw on the cap regularly to be able to judge this

24 Again, using the spindle gouge, drill a hole in the nut. Be careful not to damage the thread. If you are unsure of this method, then drill with a drill bit in the tailstock

25 I like the inside of the nut also turned, so use a small round-nosed scraper to turn the inside and even to undercut it slightly. This lessens the weight of the nut and it looks and feels better this way. There is no need to sand the inside of the box as you aren't able to get a finger inside to test for roughness anyway

26 The next step is to form the pointed part of the nut with a spindle gouge


25


26

"Turn the outside so that there is a pleasing and natural looking contact between the cap and nut"

27 Almost finished turning the outside, the box can now be cut off with the small parting tool


27


28

28 Using a scrap piece of wood, chase an inside thread so the nut can be screwed in to be able to finish turn the nut

29 Here is the final shape. Sand the outside and finish using your preferred method. I normally put on some oil and afterwards, buff the piece on the buffing wheel

30 The final box should look something like this

31 Here are some other acorn boxes on my lathe bed. I used different kinds of woods for the nuts and some show caps from different species of oak ●


29


30


31

Tools and equipment for pen making

Walter Hall looks at the tools and equipment needed for pen turning

PHOTOGRAPHS BY WALTER HALL

A hand saw and bench hook is a simple way of cutting blanks to length

WALTER HALL

Walter Hall is a woodturner who has specialised in making pens and pencils for more than 20 years. Based on the beautiful Northumberland coast in the UK, Walter sells his bespoke pens and pencils through local craft centres and via his website.

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One of the questions that I am most often asked, or see posted on forums and social media is: 'What tools and equipment do I need to start making pens?'. There are so many options and so much conflicting advice available to the newcomer that it is easy to become confused and spend money on expensive equipment that is not needed, while neglecting the basics.

In this article I will outline the processes involved in making a basic kit-based pen and set out the options available for the satisfactory completion of each stage. I recommend that you buy the best quality tools you can afford. The old adage 'buy cheap, buy twice' holds true in pen making just as it does in so many other fields.

Preparing the pen blank

Whether you re-saw your own blanks to size from large sections of timber – by far the cheapest option – or only use ready prepared wooden or man-made pen blanks, you will need a means of cutting the blank to length. At its simplest, this could be a hand saw and bench hook and this is all that is required – there is no need to splash out on expensive machine tools. If you do decide to buy a powered saw, then a bandsaw is the most versatile machine for pen making and indeed for woodturning in general.

A pillar drill and vice will ensure accurate drilling

Drilling the blank

Once the blank is cut to size it must be drilled to take the brass tube. To do this effectively, the blank must be held securely in relation to the drill bit, which must be of a suitable type, in good condition and revolving on a true axis at a speed appropriate to the material.

The two principal ways of achieving this are by using a pillar drill or a power drill in a stand, or by drilling on the lathe. Neither way is better than the other.

Drilling using a pillar drill or stand requires the blank to be held in position on the drill table; this can be done using anything from a home-made clamp to a dedicated pen blank vice. As long as the blank is positioned securely and accurately, it matters little which method is used so go with what you can afford. As for the machine itself, obviously better quality machines will be more accurate but it is equally important to obtain a machine with sufficient travel to drill through the blank in one pass – 75mm is the practical minimum, which rules out many cheaper machines. I drilled my blanks for years using a power drill in a heavy duty stand, so there is no need to spend a fortune to get accurate results.

Drilling on the lathe will avoid the need to purchase an additional expensive machine, but you will need to have a suitable chuck to hold the blank. Dedicated pen blank chucks and jaws are available and while these are the best way to do the job, often the blank can be held effectively using only the basic jaws provided with the chuck or a set of engineer's or pin jaws, which can be used for other purposes too. You will also need a suitable drill chuck to hold the bit in the tailstock. Either keyed or keyless will be fine, just buy the best quality you can for the sake of accuracy.

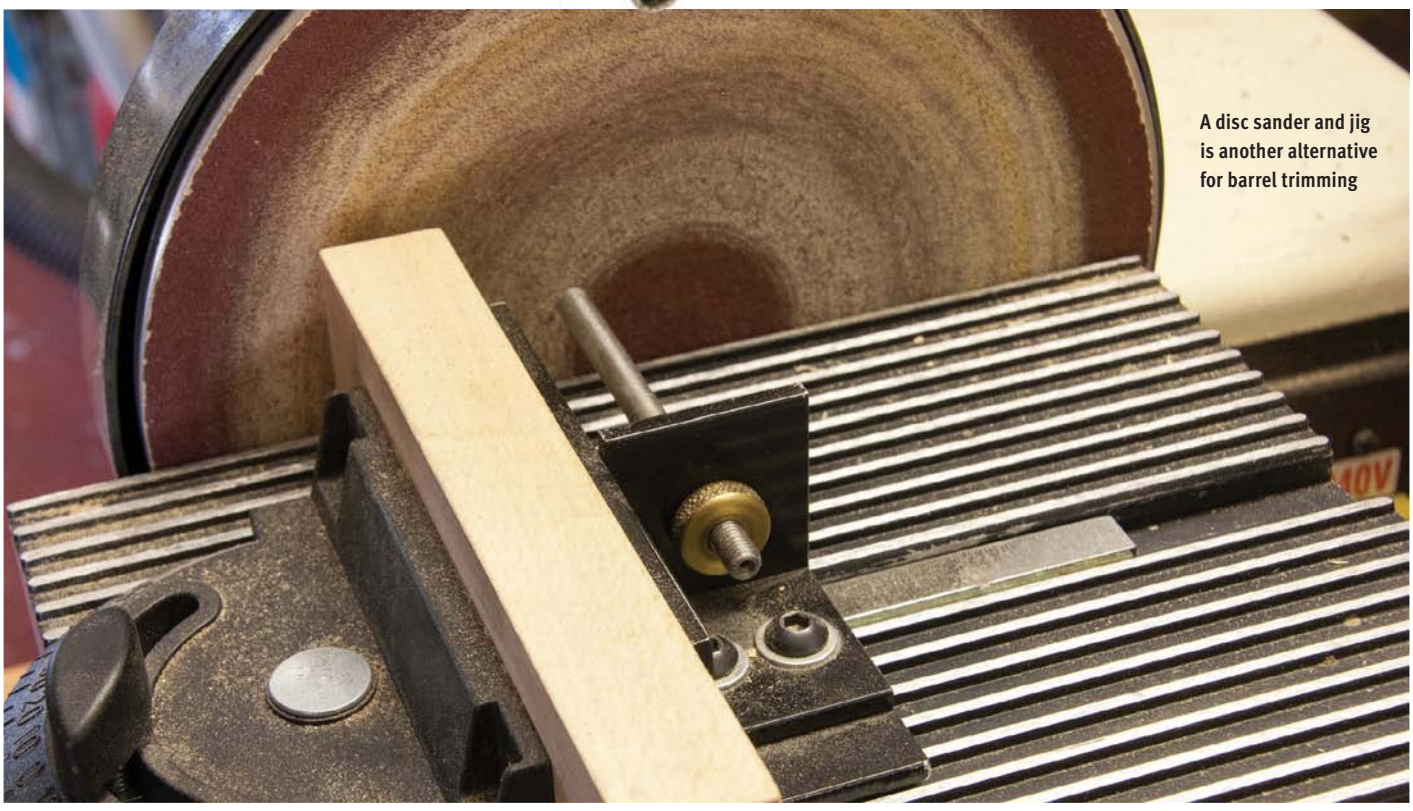
The only other tools needed for drilling are the drill bits. HSS jobber bits will be fine if kept sharp and centred on the work carefully, but as you progress with your hobby, you may want to consider some of the better alternatives that were described in my more detailed drilling article in issue 278.

Dedicated pen jaws can be used to hold the blank for drilling on the lathe

Squaring off

Before beginning turning, the ends of the blank must be trimmed square to the tube; this can be done with a barrel trimmer or using a jig with a disc sander. The best barrel trimmers have up to six cutters and a range of alternative shafts to fit differing sized tubes. You can buy or make sleeves to fit other sizes of tube. A suitable jig for use with a sanding disc can be purchased or you could make your own from an old mandrel shaft, but sleeves will also be required if a jig and sanding disc are used. It is also, of course, possible to improvise a disc sander using the lathe.

A good quality barrel trimmer such as this six cutter type is needed to trim and square the barrels to the tubes



A disc sander and jig is another alternative for barrel trimming

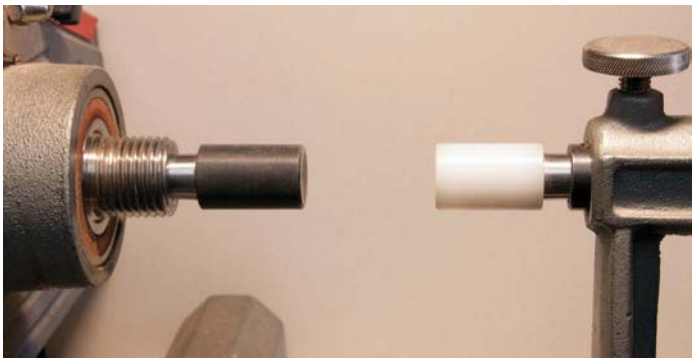
Mounting on the lathe

You will of course need a lathe and advising on choosing the best is beyond the scope of this article, but suffice to say that build quality and accuracy trump fancy features, such as variable speed. It is possible to turn pens between centres either with or without bushes and for this you will need little more than a 60° dead centre in the headstock and a 60° revolving centre in the tailstock. You will also need callipers to measure the diameter of the work and the skill to turn to size accurately. For this reason, most beginners will prefer to use a mandrel. In my opinion, there is little to choose between the major brands. More important is to choose an adjustable mandrel, which can be shortened or lengthened to suit the work in hand.

Collet style adjustable mandrels are probably the most accurate and my personal preference. A non-essential but useful addition is a 'mandrel saver' or 'quick change pen centre', which will help to avoid stresses on the mandrel that can lead to inaccuracy. Because tolerances vary it is best to choose one from the same manufacturer as your mandrel.

You will also require bushings and yes, you will need a different set for each type of kit. There is no way round this other than making your own and if you have the skill to do that, then you could be turning between centres anyway.

Mandrels come in many different forms but my preference is for colletted adjustable types such as these



You can buy or make inserts for the Morse taper of your lathe to press together the components during assembly

Turning tools

I turn almost all my pens with nothing more than a 19mm spindle roughing gouge and a 19mm oval skew chisel. Occasionally, I use a parting tool but the need for this is rare. You do not need anything else. You may prefer smaller tools and as you progress, you may wish to experiment with carbide-tipped tools, but to begin with it is best to concentrate on the basic tools of spindle roughing gouge and skew chisel. Buy the best you can afford and learn to sharpen them properly.

Finishing

You will also need a range of abrasives and finishes and this will be the subject of a future article. To begin with you will get by with a range of aluminium oxide abrasives from 120 to 400 grit, sanding sealer and friction polish for wood and Micro-Mesh from 1,500 to 12,000 grit and a suitable burnishing cream or polish for acrylics. You should not use cloths to polish on the lathe for safety reasons. Non-woven materials or safety cloths should be used.

Assembly

Pressing the components together is the final stage of the job. For many years, I used the jaws of my bench vice protected with MDF jaw plates and this was a perfectly adequate solution. You can buy or make inserts for the Morse tapers of your lathe, which can then be used as an improvised press or you could use your pillar drill as a press. At some stage, most turners will buy a pen press, but this is by no means essential. ●

Only basic turning tools are needed to begin with. I use full-size tools but some turners, especially those with smaller lathes, prefer to use smaller tools

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Rod Page in profile

We speak to woodturner **Rod Page** and find out more about his latticework creations

PHOTOGRAPHS BY ROD PAGE

Rod Page in his workshop

Rod was born in Manchester in 1951. His father was an engineer and his mother a seamstress, so making things was something Rod had been introduced to at an early age.

He went to a Technical school where woodwork, metalwork and technical drawing were part of the lower school curriculum and he went on to take metalwork and technical drawing at GCE 'O' level. After studying for a degree in metallurgy at Sheffield Polytechnic, Rod went on to work in subcontract heat treatment of metals in Manchester for six years.

Understandably, lured by the clear warm water and his interest in scuba diving, Rod went to live in the Bahamas where he managed to get a job as a metalwork teacher, telling us: "I stayed there for five years before returning to the UK and retraining as a CDT teacher."

Rod went to work at the Axminster School, next door to Axminster Tools & Machinery. Even though he was a trained CDT teacher, his previous experience on a woodturning lathe amounted to 10 minutes instruction on how to use a skew chisel, during his teacher training course.

An interest in woodturning began in 1997, when he went to the Yandles show in Martock, Somerset and watched Matthew Calder making large hollow forms. Rod thought he would like to have a go at making one: "I fastened a birch (*Betula pendula*) log to a faceplate on the Graduate lathe at school and with a home-made hollowing tool, made a hollow form," Rod explains. "The shape wasn't great and I made some basic mistakes, like trying to turn uphill, but it looked OK and I was hooked!"

Influential turners

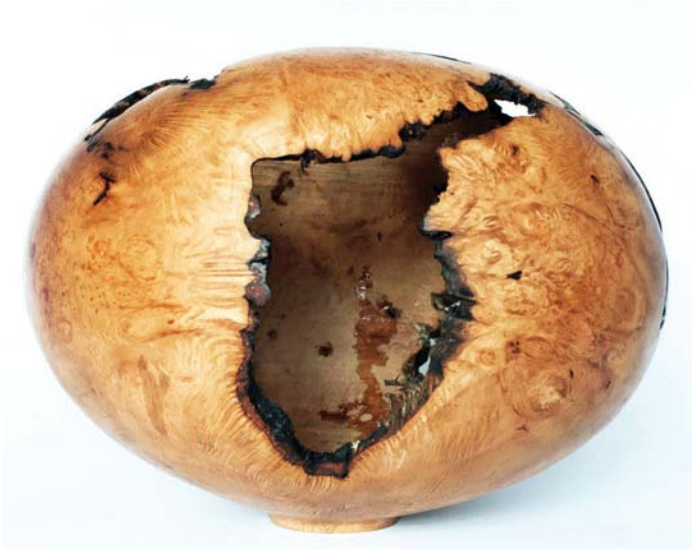
Rod went on to watch Bert Marsh – who he says has had the greatest influence on him – demonstrating at the turning shop in Axminster Tools & Machinery on numerous occasions. Rod would watch and listen to Bert for three to four hours, then return home to his workshop and try to emulate what he had seen Bert do. Bert impressed on him that the form is the most important aspect of the turning, along with an immaculate finish, saying: "He was a delight to watch turn." The last time Rod saw Bert demonstrate was at Strictly Woodturning in 2009, where he won first prize in the delegate's gallery with a laburnum *(Laburnum anagyroides)* lattice bowl.

Watching Bert and other visiting demonstrators, along with Keith Rowley's book on woodturning, is how Rod learned to turn – with no formal tutoring from any woodturners at all. Rod comments that he soon left full-time teaching in 2002 to try his hand at being a professional woodturner.

A typical day

Rod usually starts his day with about 30 minutes of yoga. Then, after breakfast, he goes in the shed to do some turning. He tells us: "I try to do most of my rough turning in January and February, when things are fairly quiet. I usually listen to Radio 2. Around about

Holm oak *(Quercus ilex)* burr hollow form with a natural edge, 300 × 2,400mm



Holm oak *(Quercus ilex)* burr hollow form, 300 × 280mm

Jeremy Vine, I have some lunch and check my emails, then it is back to the shed to do some more turning, or maybe saw up some wood." Rod prefers to use local hardwoods and softwoods wherever possible, getting most of his timber from a local tree surgeon, as well as people who contact him who have had a tree cut down. He also sources timber from a local beach, which can be quite hard on the chainsaw teeth. Generally, he prefers not to work in the shed in the evenings, unless he has some pressing commitments to fulfil.

Turnings

When he first started turning, Rod wanted to make hollow forms, believing 'the larger, the better'. Once he felt he had mastered hollow forms and his success rate had improved from around 40%, closer to 100%, he was turning a large holm oak *(Quercus ilex)* burr, which he made a little thin around the neck and produced a hole. "I realised," Rod tells us, "that it looked better with the hole in, so the next time I made one I left much more of the surface undulations in place to produce rough-edged holes where I broke through." This led to the creation of natural-edge hollow forms, such at those shown here, where the entry hole cannot be seen. Rod entered this piece in a competition and came second. He realised that to do better, he needed to be more innovative. He explains: "I had seen some coarse turned, 'broken through' lattice pieces produced with an Arbortech cutter and wondered whether I could produce something more reminiscent of Hans Weisflog's 'broken through' turnings using a router." The next competition Rod entered, he won first prize with a lattice bowl and has been refining the equipment and the techniques used since that time.

Now, Rod makes all types of turning from commercial items, such as onions, light pulls, earring stands, table lamps, fruit bowls and hollow forms, to more elaborate lattice work

Holm oak *(Quercus ilex)* burr hollow form 340 × 2,000mm

Walnut *(Juglans regia)* slatted bowl, 280 × 130mm

and competition pieces. He feels that small repetitive work helps to develop tool skills and production techniques.

To promote himself, Rod sells his work in galleries and at art weeks in Somerset and Dorset. He also has a website, which produces commissions mainly for table lamps.

Work inspiration

It's not just woodturners who have influenced Rod's work. Some of his later scorched pieces were influenced by the work of sculptors, including David Nash and Walter Bailey. He explains: "Ebonising a piece accentuates the form, or in the words of David Nash 'when you see a wood sculpture you recognise the wood, so you get a wood experience before you see the form, but when they are black, you see the form before you see the material it is made from'." For other inspiration for his turning, Rod tells us he can find it all over the place, from patterns in nature, ceramic pieces, as well as the work of other turners.

Ebonised holm oak *(Quercus ilex)* slatted bowl, 260 × 140mm

Techniques

When asked about the techniques he uses in his work, Rod tells us that he wants to concentrate on the more creative work and develop techniques and tooling. As he explains: "I like to make the form the most important part of the turning. Although size matters, it is not as important to me as the right shape and I will often turn away lots of material to achieve it." He likes to use clear oil or lacquer finishes so that the figure of the wood shows, or sometimes he will use ebonising with either a blowtorch, wood dye, vinegar and steel wool or acrylic paint to highlight a rim or enhance a rather bland timber, but he is not an advocate of painting and decorating his turned objects. "I do use a pyrography tool occasionally, to burn a texture into the timber, and particularly like the effect of branding."

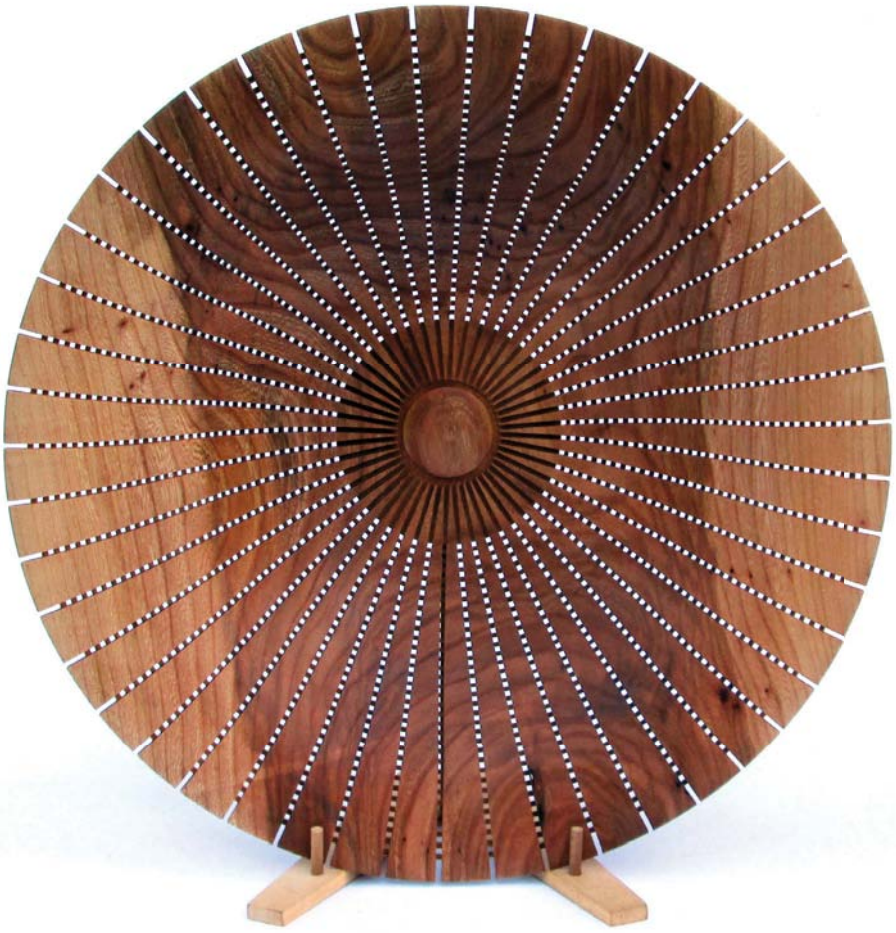
Rod's timings for making his pieces vary greatly. The natural-edge pieces in Holm oak take him four days to complete and he completely sands the inside too, which takes a whole day. The jatoba *(Hymenaea courbaril)* chalices took one month from penning the initial sketches to finishing the pair. Rod also made a prototype of the chalice, to check everything was feasible before buying the wood. The work involved making an accurate drawing, then producing templates of the important profiles before turning the parts. A straightforward lattice bowl takes him one-and-a-half to two days to make.

Rod says that he doesn't have a favourite piece to make, but he simply enjoys the experience of cutting a piece of green wood on the lathe using a sharp gouge. One other thing he finds satisfying is starting with an idea of what he would like to make, then developing the method of working, workholding and jigs and fixtures.

Sycamore *(Acer pseudoplatanus)* slatted vase, 150 × 390mm

Ebonised sycamore *(Acer pseudoplatanus)* slatted vase, 160 × 390mm

Padauk *(Pterocarpus dalbergiodes)* zig-zag bowl, 470 × 80mm



Elm *(Ulmus procera)* lattice platter, 360 × 70mm

TOP TECHNIQUES

1. Using the router to create broken through turnings
2. Deep hollowing using a captured boring bar and a steady rest

HANDY HINTS

1. Use a bowl gouge with a long bevel – ground about 35° – when spindle turning pieces such as fruit to reduce vibration
2. Use magnetic tool strips to hold tools, callipers, etc. so they are within easy reach of the lathe

LIKES

- The freedom to play around and have fun on the lathe
- Making jigs, fixtures and tools
- Meeting other woodturners at demonstrations, shows and competitions
- Learning new techniques

DISLIKES

- Losing small items in the woodshavings
- Wood dust, particularly from sanding spalted timbers
- Keeping wood too long before turning and finding it has rotted or split

Highs and lows

Another way Rod promotes himself is to enter as many woodturning competitions as possible and these have given him many highs in his career. He also includes seeing his work in magazines and being congratulated by Bert Marsh after winning at the Worshipful Company of Turners in 2010, as two 'highs'.

He also explains the lows: "I sometimes find myself overcommitted to producing items for galleries and shops, etc. and have no time to explore the more creative side of the craft. When this happens, I know it is time to re-evaluate what I am doing."

Workshop

Rod moved house in 2002 and one of the main criteria was to have a garage or shed that would take his Wivamac bowl turning lathe. The house Rod moved to had a brick built washhouse, which measured 2.7 × 2.1m and fits the lathe quite well, but without much space for anything else apart from a low cupboard with a bench grinder on top. He needed more storage space, so about two years later – around 10 years ago – he built a 5.3 × 2m shed out of 19mm tanalised tongue & grooved boards with 75 × 50mm framing and a well supported floor, which was able to take machinery. This shed houses his Jet 1642 lathe with bed extension and all the other paraphernalia, such as bandsaw and pillar drill. Rod mentions that the sheds often look quite chaotic, but he usually gives them a good tidy up and sorts out the storage and racking routinely, every January.

In between the two sheds, he has a small wood store, which houses his dust extractors so that dust is removed from the working environment.

Tools

When we asked Rod what tools he couldn't do without, he answered: "I could not do the lattice turning without a router and router base. The router base is one I bought from Axminster and modified it to have a depth stop and a heavier base so that I can use it semi-freehand." He also mentions his Tormek grinder, which allows him to reshape small HSS tools to the profiles he wants and the water-cooled stone stops the fine tips from burning. He finds the whole process is much more controllable than when using a high speed grinder.

Future

Of the future, Rod tells us: "I have lots of creative ideas I would like to explore in the future, many of them involve making jigs and carriers for the router, so that I can cut more shapes." At the moment, he has commitments to galleries and commissions to complete.

"In one word 'creativity'," is how Rod would describe the best thing about woodturning. Towards the end of his teaching career, he realised that his creativity was stifled even though he was working in a workshop environment, but now he is free to explore whatever takes his fancy. ●

Lattice ball boxes in ebonised, bleached and natural sycamore *(Acer pseudoplatanus)*, 75mm dia.

"I have lots of creative ideas I would like to explore in the future, many of them involve making jigs and carriers for the router, so that I can cut more shapes"

A pair of jatoba *(Hymenaea courbari)* and ebony *(Diospyros spp.)* lattice lidded chalices, 150 × 200mm each

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Make your own lathe sta
3 different bowls and pl
PROBLEM SOLVING
Richard Findley looks at the issues surrounding workholding
MAKE A LATHE ROUTER JIG

Painted leaf platter

Neil and Liz Scobie turn and paint an ash platter with a decorative leaf pattern

PHOTOGRAPHS BY NEIL & LIZ SCOBIE

When choosing a platter shape to add a painted rim you need to plan your design well. For too long woodturners have decided to add paint to a bowl or platter if they thought it wasn't quite successful, then they wonder why it still doesn't work. When preparing the platter design, apart from working out where the painted feature should be placed, we think about how easy it is going to be to paint and how easy it is going to be to clean up and finish. If you are going to paint a platter, the design needs to be simple and elegant so that the painting is allowed to speak for itself. The platter and painted surface need to work together to create one harmonious design.

This platter features a wide flat rim that not only looks elegant but is also easy to paint. The inside and outside edge of the rim both have sharp edges that will allow easy sanding at the end of the painting process to remove any unwanted spills. The base is very simple and subtle so as not to distract from the painted rim, which should be the focal point.

This is an easy project for those new to painting. I often tell my students that most of the techniques I use on our turned platters are so simple they probably learned them in kindergarten. This is definitely one of those techniques, but I hope I have improved on it a little since then. Printing with found objects like leaves is a great way of adding colour cleverly without the need of a lot of artistic skills. The most difficult and often most time-consuming part is finding that perfect leaf. We have chosen a light coloured timber with not much grain pattern so that the painted surface will be more dominant.

An Australian native timber silver ash (*Flindersia bourjotiana*) was a good choice for us as it is close grained and works well.

NEIL & LIZ SCOBIE

Neil is a full-time woodworker who makes custom-made furniture and woodturned and carved art pieces for private clients and galleries. He also writes for various woodworking magazines. Liz is a textile artist who has been painting and decorating Neil's turned pieces for 23 years.

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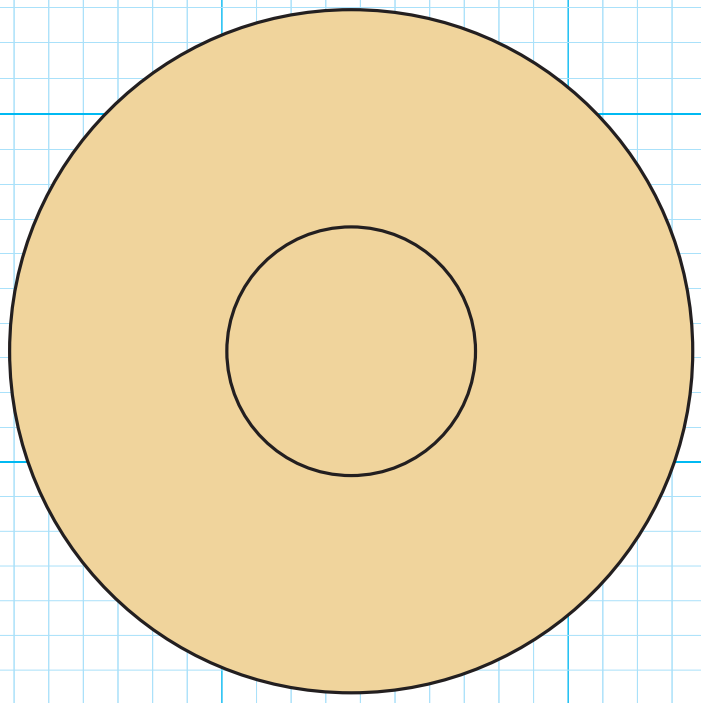
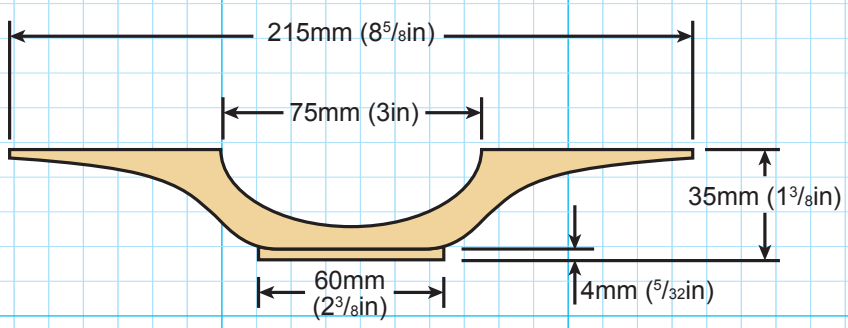
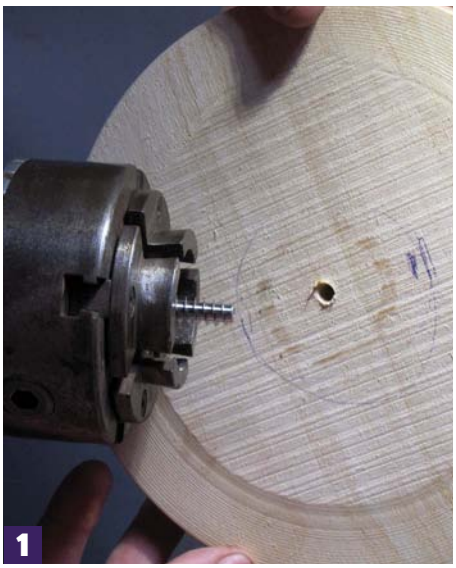
INFORMATION & PLANS

TOOLS REQUIRED
10mm bowl gouge
Round skew chisel
Small carving gouge
Power sander
Scrap of the same timber for testing the paint and surface finish
Paints: Jo Sonja's acrylic colours
Fresh leaves
Paper towel
Paint palette
Water jar
Paintbrushes: flat brush 1cm, small round 3, fine liner 00
Hair dryer
PPE: latex gloves, facemask, respirator/dust mask



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2

Turning the platter

1 There are three methods that I regularly use for holding the tops of bowls and platters while I turn the bottom shape. The one shown here is where a screw centre is held in the scroll chuck and the wood blank has a hole drilled in it to the length of the screw centre. A second method would be to use a sawtooth or Forstner bit to drill a hole about 6mm deep so the scroll chuck can spread out inside the hole. Thirdly, for smaller pieces, placing the blank between centres to turn the chuck spigot also works

2 To turn the bottom, use a bowl gouge with the flute pointing to 10 o'clock, cutting with the bottom edge to remove the waste, from the centre towards the outer edge. A simple shape shown in the drawing is all that is required

3 Once you are happy with the shape, take a trim cut with the leading edge of a 6mm deep fluted gouge. To save sanding time, when using this tool I face the flute up at 12 o'clock, rub the bevel and follow the shape of the bottom of the platter to take a small shear cut. The secret to a good cut with this tool is to start the cut by rubbing the bevel, then bring your back hand forward so that the cutting edge just starts cutting towards the rim, keeping the bevel rubbing throughout the whole cut. Use a skew chisel to shape the temporary chuck spigot. I use a 10mm round piece of high-speed tool sharpened like a skew chisel. Make a slight dovetail shape to match the jaws of the chuck. This spigot will be removed later


3

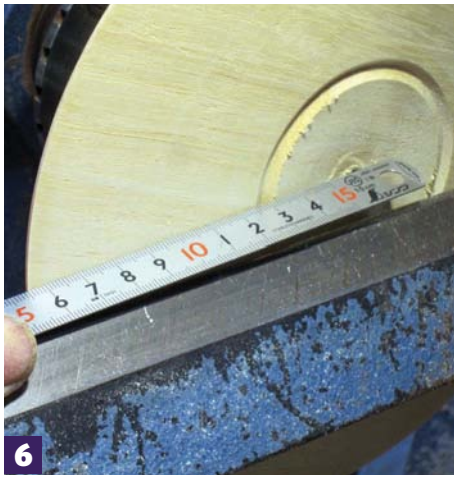
4 Use the same tool to cut a small 'V' in the centre of the spigot; this will be used to locate the tailstock centre when turning off the spigot at the end of the turning process


4

5 Turn the blank over in the chuck so that the top surface is facing you and trim up the top surface. Use the same cutting method and gouge that you used to shape the bottom surface. Rubbing the bevel will help you cut in a straight line


5

6 To check that the rim is flat, place a small ruler across the surface. If it's not flat, recut with the gouge. A flat rim will make the leaf printing job easier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7 Hollow out the bowl shape in the middle by cutting towards the centre using the bowl gouge. If you point the flute to 2 o'clock and cut with the bottom edge, you will be cutting with the grain. Make sure you leave about 6mm of thickness in the bottom of the bowl shape, once the spigot is removed


7

8 Use the trimming gouge to take a trim cut using the leading vertical edge of the tool to shear cut the surface. I round over the back of the bevel to a convex curve so that when rubbing the bevel on the inside of the bowl the back of the bevel does not mark the surface. Next, power sand the rim and the bowl shape, starting with maybe 120 or 180 grit and then progress up to 400 grit. Finish with a quick rub with 600 grit by hand while the disc is spinning


8

9 To turn off the temporary spigot, place a curved mandrel in the chuck that is a similar shape to the inside of the bowl section. Use a piece of foam between the bowl and the mandrel then tighten the tailstock into the small 'V' you turned in the base in step 4. You can now use a small gouge to turn off most of the waste. Cutting towards the centre is probably the best method


9

10 You will need to leave about 10 or 12mm in the centre where the tailstock centre is. Make sure the base has a small hollow in it


10


11


12

11 Use a carving gouge in a padded bench hook to carve off the small spigot. Use the power sander with a fine grit to finish. The platter is now ready to be painted

Painting the platter

12 When choosing your leaf, look for one with an interesting shape that is not too fragile, older leaves are stronger than young ones. Most importantly, choose one that has a good vein pattern and definition on the underside. I have used a leaf from my garden, which is commonly called a Japanese windflower or anemone. Surprisingly, you will find that one leaf will be enough to complete the entire platter


13


14

13 Before commencing your project, take a small scrap of the same timber to try out your colour scheme. You can try this on paper but the only way to achieve an accurate effect is to use the same timber so that you will have the same background colour. It is also advisable to add the intended finish over your dried paintwork. This will more often change the colour of the timber, often changing the entire colour scheme. It is better to make your mistakes now than on your turned platter

14 Place your chosen leaf upside down on a piece of kitchen paper, then apply the paint to the underside using a small stiff flat paintbrush. Apply paint gently and sparingly. Use the paint fairly dry and don't add any additional water. I often offload some of the paint onto a piece of kitchen paper first to make sure the brush is dry enough


15


16

15 It is important that the relief of the veins is still prominent. Don't cover them. A single flat colour would be boring so add the paint in a variety of colours. Think of the varying shades of an autumn leaf. I have used Jo Sonja's acrylic colours since I first started painting on timber. I know them to be colourfast and of a good pigment content, but obviously you can use other makes or variants if you prefer. They also come in a great variety of colours. For this project I used purple madder, brown earth, green oxide, gold oxide, red earth, indian oxide, yellow oxide and carbon black

16 Now you're ready to commence the painting. Repaint your leaf and place it paint side down onto your platter. Cover it with a paper towel and press gently


17


18

17 Remove the paper towel and discard it so as not to transfer any unwanted paint

18 You can then gently lift the leaf and place it onto a fresh paper towel, ready for more painting. Repaint the leaf stamp, changing the colours each time, applying enough so each leaf is unique, but little enough so it still looks like it belongs

19 Reprint repeatedly around the circle in both directions. Be aware of placement so that you will fit full leaves around the rim. It is worth playing with the placement before you commence. Use a random placement with some leaves upside down and some coming off the rim. Leaves don't fall in a neat pattern in nature

20 Dry each leaf as you print it – a hair dryer will speed this process up. This will also help to avoid any smudging

21 When you have completed the full rim, allow it to dry well

22 You may be happy with your pattern at this stage. If so, that is fine and you can leave it as it is, but I personally prefer to add a little more detail

23 The leaves can now be given more depth. This can be done with the addition of a layer of watered-down paint. Using the remaining paint left on the palette and a small round brush, add a coloured wash over the printed pattern; this will allow you to still see some of the wood through the watery colour. Use several colours in the same way you applied the printed layer. This process is very similar to colouring in between the lines. When the watery layer has dried, add a layer of decorative veins with the help of a fine brush and black paint

24 The next layer is the same, adding more decorative veins but now using gold paint

25 The final step is to outline the leaves in black line. To achieve good fine paint lines, use a very fine paintbrush liner like a 00. Adding a flow medium rather than water also helps the paint load and glide easily. Allow to dry well. The time taken will depend on the climate and the type of paint you use; 24 hours is a good amount of time where we live. Resand the platter to remove any spots of paint or marks before finishing using your preferred finish. Finish your platter with a spray can of matt, archival lacquer, which will not allow the surface of the light timber to yellow. Spray on three coats with a light rub with '0000' steel wool in between coats. The normal oil finish we use tends to yellow the silver ash timber

26 The finished painted platter should look something like this ●

HANDY HINTS

1. Choose a timber that will not detract from the painted surface
2. Keep the platter shape simple so the paint is the focal point
3. By keeping your tools razor-sharp you will save a lot of sanding time


19


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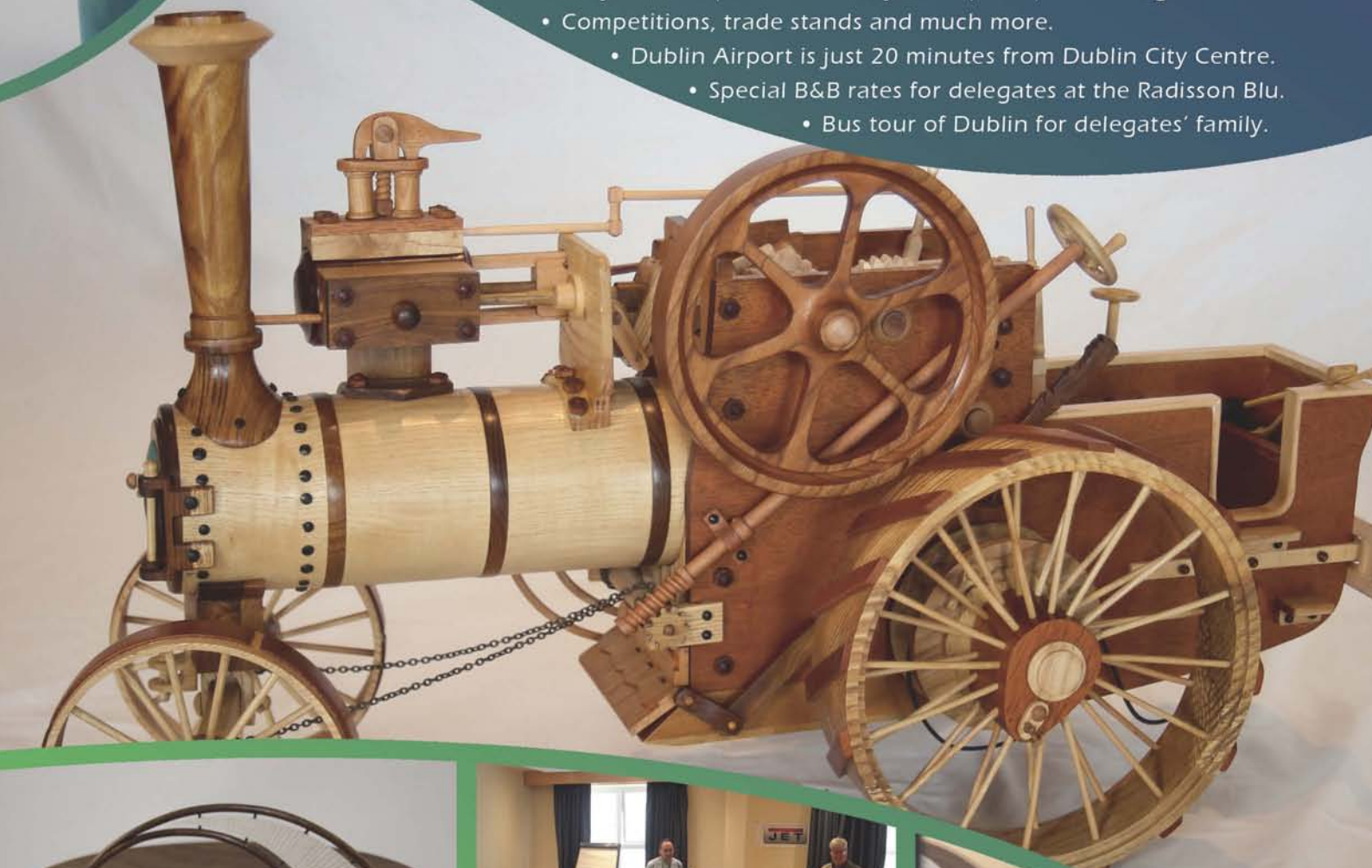

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PHOTOGRAPHS BY TOM LEVI

In the workshop with... Janice Levi

We find out more about woodturner **Janice Levi**

Janice says that her fascination with woodturning goes back to her childhood, when her father would let her hold a turning tool to a piece of scrap wood mounted on his old Sears lathe. She received a lathe for her birthday back in 2001 and the rest is history. Janice makes 'wearable' art, as she says: "Someone else's scraps became my treasures – my art, and today, I'm wearing it."

How, when and why did you start turning?

As a child, my father used to let me 'turn' on his old lathe and I held that fascination with wood and turning well into adulthood. Finally, in 2001, after watching a television programme about turning weed pots, my old fascination was revived and I asked my husband for a lathe for my birthday. I immediately joined the local woodturning club and found myself in the middle of a man's world. But the guys were wonderful and two became special mentors, helping me with wood preparation, toolmanship, style, function and flair.

What and who are the greatest influences in your work?

Without a doubt it's my two original mentors, Bill Berry and Luna Ford from the Houston-area woodturners' club, who were huge influences on my turning. Both are excellent turners and their emphasis on proper toolmanship and tool sharpening have been invaluable. In addition, Cindy Drozda has greatly influenced my turning. Her delicate finials and attention to aesthetic proportion are reflected in my own turnings.

If you were to offer one sage piece of advice to someone what would it be?

When you first begin to turn wood, spend a whole lot of time learning to turn wood! You don't need a lot of tools, but learn to use the ones you have, properly and safely. Learn to sharpen each one and do so often. So many turners want to skip over the turning part and go straight to painting, dyeing, carving and burning, and they never learn to be good woodturners. Trust me, if you start with a basically well-turned and well-proportioned piece, any enhancements you may add will be all the better if you have given a little more attention to the turning part of the process.

What music and which book are you currently into?

Now, I'm from Texas and I grew up on Country and Western music and that's still number one with me. I'm not a reader of novels, but I love history and I've just finished *Killing Patton* by Bill O'Reilly. It is an eye-opening look at World War II and the horrors that Nazi Germany under Adolf Hitler was forcing upon Europe and the world.

What is your silliest mistake?

Not once but twice, my non-woodturning husband had to rescue me when I could not get my lathe to work. The first time, the lathe came on, but I could not get any tool to cut no matter how sharp the tool. I called my husband, Tom, who came over, looked

at the machine, then flipped the 'reverse' button back to 'forward.' The second time, the machine simply would not turn on. I was certain that the electronics board had gone completely out. Tom came over again, looked at the situation, bent over and plugged in the lathe and said: "Try it again." It worked.

What has been your greatest challenge?

After quite a few years of turning bowls, boxes, ornaments and platters, I decided that I wanted to turn something that I would carry around or wear. I started with purse designs and was finally able to develop a style that looks like a big cylindrical box, complete with fabric liner. Then I worked on half-moon-shaped purses that feature wooden hinges. The turning was not the difficult part, but the wooden hinges stumped me for a long time. Finally, I decided to apply the same concept of using wooden hinges on a tiny little box that would be worn as a necklace. Although tiny, these little wooden 'medicine bags' have been the most difficult and challenging things I've ever made.

Name one thing on your 'to do' list

I have done only a little multi-axis turning – one of my purse designs requires some – but it is a process that has fascinated me for quite a while. I look at the work of Doug Fisher, Neil Scobie and Barbara Dill and think: "I wish I could do that." Oh, for more hours in the day.

Tell us about the piece you are currently working on?

I am currently working on a mahogany *(Khaya ivorensis)* half-moon purse with wooden hinges. I'm not exactly sure of the pyrography design that will go onto the purse, but I am sure that there will be one.

What is the one piece of equipment or tool you would not be without and why?

Since I do a lot of spindle turning, the tool that I reach for most often is the 10mm spindle detail gouge. I use it for making delicate cuts on finials, for turning tiny beads and coves, and in my jewellery-making, for turning beads of all diameters.

'Half-moon Purse'

If you could change one thing what would it be and why?

I have been a person who likes to do, try, experience and join everything. As a result, I've had wonderful adventures along the way, met fascinating people and have a supportive husband and family.

What is your favourite type of turning?

Right now I am completely wrapped up in turning jewellery: pendants, discs of all sorts and tiny beads. They are wonderful little canvases for painting and woodburning. Every now and then, however, I just have to go and turn a great big bowl or platter to remind myself that I can still turn 'big'.

If you had one wish, what would you wish for?

I do have one wish and that is for my body to hold up as long as my enthusiasm for woodturning prevails. Failing eyesight, arthritis, loss of strength and back ache. Good grief! Getting old is such a nuisance!

JANICE'S HOMEMADE OFFCENTRE JIG

I wish I could take credit for making this jig but I can't. It is a homemade offcentre chuck that was designed and created by my friend, David Mueller. Since I like to make jewellery, this jig comes in handy for applying offcentre decorations to jewellery pendants. It is made of plywood and features an inset that can be dialled in various directions. The pendant is attached by double-sided tape to the inset and rotated, as needed, from one position to another. The great thing about this jig is that the main portion of the chuck continues to turn true while the inset turns the blank offcentre, resulting in a smoother turning chuck with no shadowy parts flying by to knick fingers. For those interested in learning more about how to build this chuck, see the February, 2015 edition of *American Woodturner* magazine

Janice's favourite offcentre jig

If you could have one piece of equipment, what would it be and why?

Actually, there is one piece of equipment that I long most for – an air filtration system. Actually, I have two already. One is a huge system designed for a commercial workshop and the other is a more traditionally sized unit. The problem is, neither has been installed and are just sitting there doing nothing. Living in Texas, I would really like to have an air conditioner for summer and a heating system for winter, but conditioning a 12.2 × 18.3m barn is not going to happen. Such is life. ●

Email: jlevi@rightturnonly.net
Web: www.janicelevi.com

Janice's favourite tool – the 10mm spindle detail gouge

Reverse side of 'Navajo'

'Turtle Necklace Pendant'

LIKES

- Wood is wonderful! I love the colour, the texture, the bark inclusions, the voids and the worm holes. I prefer imperfect wood for many of my turnings, although a nice straight grain is sometimes required
- I like the challenge of designing and making unusual turnings
- I love the friendships that develop between woodturners around the world

DISLIKES

- I love seeing the chips fly but cleaning up those chips is not nearly as much fun. We have a garden so most of the chips go into my compost pile or in the rows between the raised beds

HANDY HINTS

1. Don't buy a lot of cheaply made tools at the beginning of your turning career. You won't need most of them and the ones you do need will soon have to be replaced with better quality tools
2. Join a club and check into their mentoring programme
3. Attend as many club open shops and weekend classes as possible to develop good woodturning technique and toolmanship
4. Learn to sharpen your tools properly and do it often
5. Attend turning symposiums in your area to see the really great turners demonstrate

'Barrel Purse'

'Old Warrior of the Plains'

Safety eye/face protection not worn here due to no cutting taking place at this stage

Routing detail on the lathe

In the third part of this routing series, **Anthony Bailey** & **Mark Baker** explain the subtle variation of graduated fluting

Previously we have looked at creating multiple flutes of even depth on the lathe. This time, we examine how to create tapered depth flutes, which is subtly different but easy to do. Here on the manufactured mounting, the shroud or surround for the cutter cannot be used to keep consistent depth, so the means of guidance is most easily done at the base of the device holding the router. The same baseboard is used and either the same homemade or manufactured mounting, which we have seen previously, has to be employed, but the MDF block clamped on the baseboard is at a slightly different angle to give the graduation effect. The MDF profile mimics the bowl shape using shadow guidance, as seen in the previous article. There is no reason why you can't use the same shadow drawing, but the resulting shape can always be adjusted before cutting out. I simply altered the position of the template on the baseboard, although the radius can be slightly wrong as a result. Allowing a flute to reduce from the rim of the bowl down to the stem or base can look visually correct, but you need to try this for yourself and this depends on whether you want the graduation.

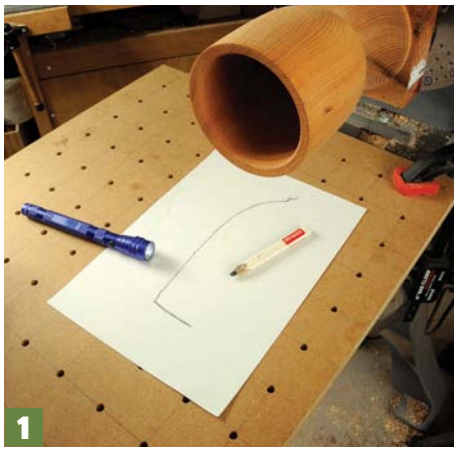
PHOTOGRAPHS BY GMC/ANTHONY BAILEY

SAFETY

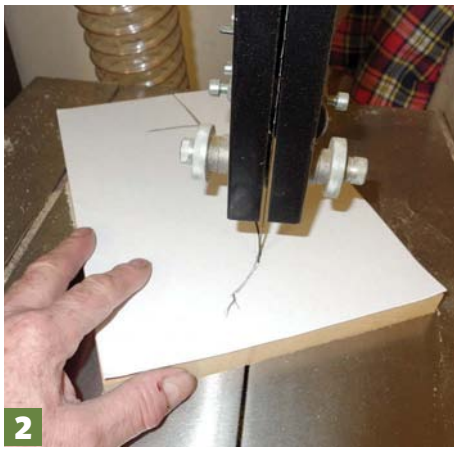
- PPE to be worn at all times and it is advisable to use ear defenders too
- Be aware of the cutter at all times. Shield the cutter in some way if possible and always keep your hands behind the cutter position
- The lathe is always unplugged as there is no need to switch it on when routing. Also, when using a router, remove the plug from the wall socket when changing cutters, moving jigs and suchlike
- Ensure your work is held securely and the router table on the lathe is secure

Using a fixed template

1 One method for creating a graduated curve is to make a template, which the router holding unit can follow. Start by holding a bright, narrow beam torch above the vessel to create a shadow you can draw around. Once you have a faint outline, you can over-draw to strengthen it. The paper is simply spray-mounted on 18mm MDF plywood or block board



2 Cut out the shape carefully following the line using the bandsaw. The slight step at the neck of the vessel is ignored because the router cutter will stop short of this



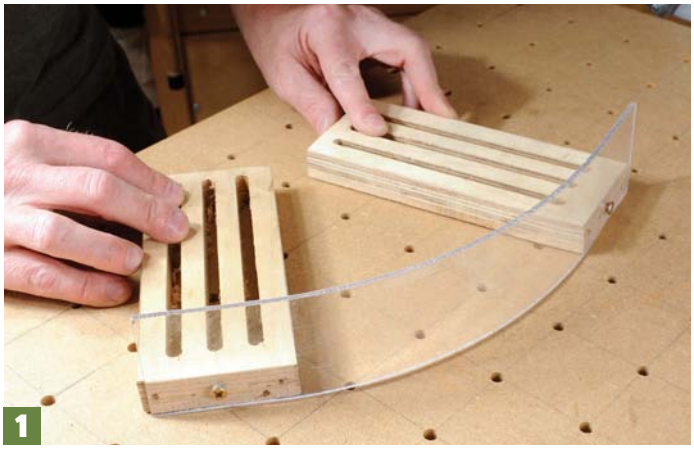
3 The best way to clean up the profile is to use a disc or belt sander; however, a rasp followed by a wood file will do the same job, as will abrasive wrapped around a block

4 The profile is clamped to the baseboard after checking how far in the top of the cutter will be at each end of the machining run. It should be noted that the router setup can foul the square end of the timber if you aren't careful

5 You will need to adjust the template position; this will allow you to get the depth of cut needed at the starting positon and the position required for the end of cut. We are after a graduated cut rather than a uniform depth one. You will need to experiment a little with the positions. The cutter profile used is up to you, but a pointed fluting cutter is ideal for this type of work. Use either the manufactured router holding unit or the homemade one. The manufactured one has a cutter shroud, which might get in the way as you move around the work and come up against the lower section stem. Note how the base rubs against the MDF profile; this is the same as for the homemade mounting. It is important to keep the router cutter at 90° to the work at all times. If you do not and use different shaped cutters, you could end up altering the profile cut. Whichever router holding unit version you use, the cutter is likely to be exposed at some stage so you need to take care and keep your fingers out of the way. Best practice would be to use a cutter shield when you can and if you cannot, make sure your hands are always behind the cutter router holding unit and never in front of it

6 The fluting fades out quickly and evenly towards the neck. Experimentation is essential to learn what gives the best and most pleasing result. Note how the project isn't fully turned yet. The stem is left thicker than required so you have strength when routing the detail and also, it is far easier to refine and clean up the piece once the decoration has been cut. If you end up with any micro splinters, etc. these can be turned or sanded at this stage prior to final adjust of the internal profile, stem and base

Using a flexible template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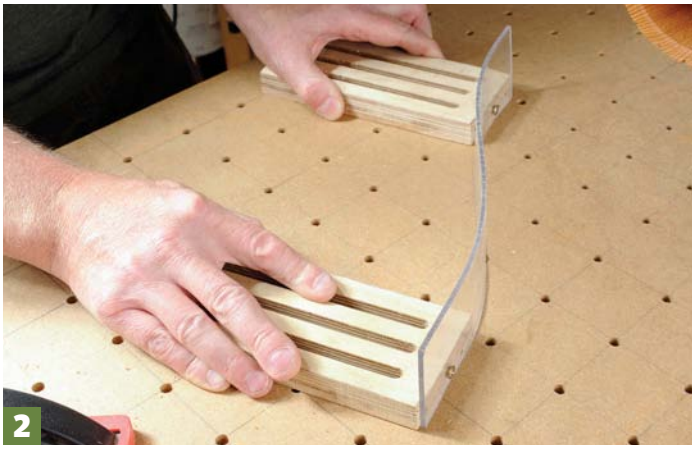
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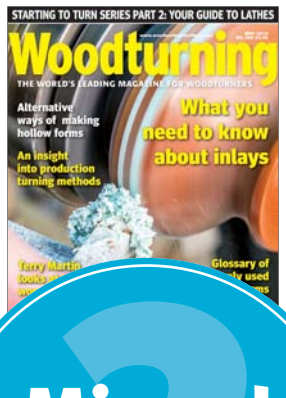
1 Rather than using a fixed cut template to follow, a flexible one can be used. This comprises a strip of polycarbonate sheet, which can be fixed to blocks. The blocks are slotted to allow for movement and fixing down – via bolts – in a convenient position on a baseboard. The advantage is that you can create any curve you want within the constraints of the material

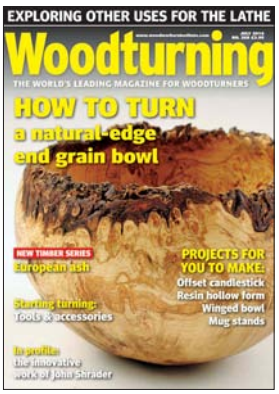
2 Even a double bend is possible, depending on how long the strip is. The polycarbonate must be pre-drilled to avoid splitting when fixing it to the template blocks. Also, don't over-tighten the screws for the same reason. Using more than one screw in each block is advisable. As with the cut template, you need to adjust the bend/curve and block positions to get the shape you need

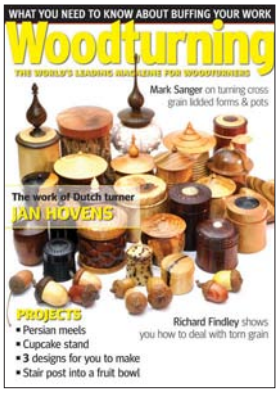
3 You can use just a single point guide to run against the template. You can use a point base guide but you may find it wiggles out of alignment, causing an error in the depth of cut

4 An alternative to the point guide would be to fix a two-point guide for a more predictable shape following cut. Note the use of adjustable bolts as the guide points; this allows you to cant the presentation angle of the cutter in a precise way to alter the profile cut with some cutters. Depending on the thickness of the polycarbonate used and the length of the curve, there is a risk that the polycarbonate can flex in the unsupported area. You could use a thicker piece of polycarbonate, but the thicker section might not give you the curve you need, so an easy option is to clamp or bolt down a support batten/block or more in the middle to stop this happening. Whatever method you use, experimentation is key to discovering the best way to get the decorative effect you want

5 Gentle pressure and a smooth sliding movement will ensure a clean cut. Remember to keep pressure on the lower base section; this will help you to minimise the risk of the cutter riding up as the router is moved along the work ●







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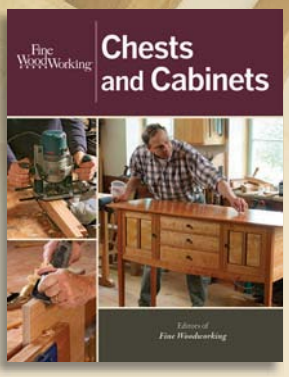

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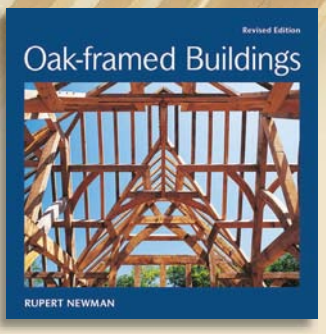

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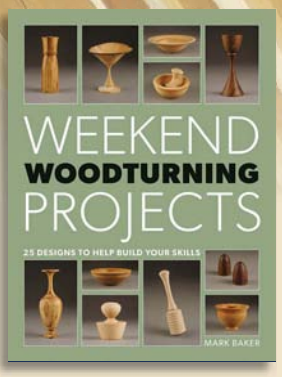

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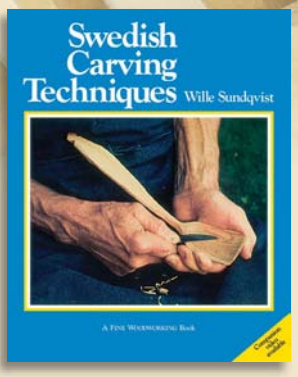

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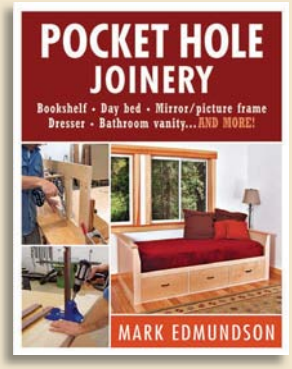

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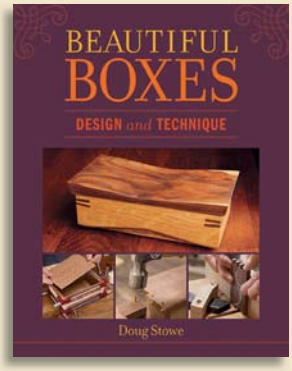

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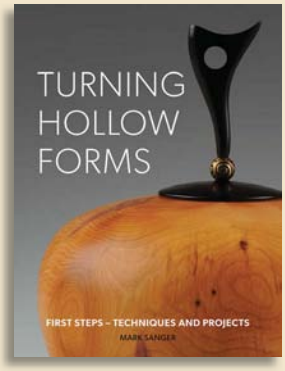

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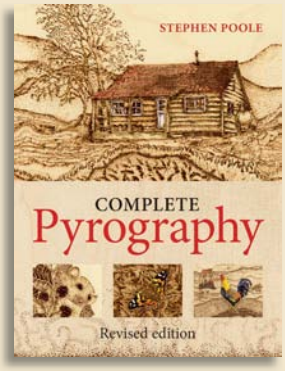

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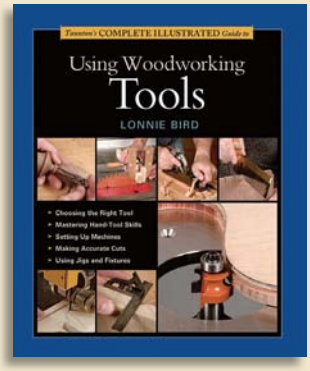

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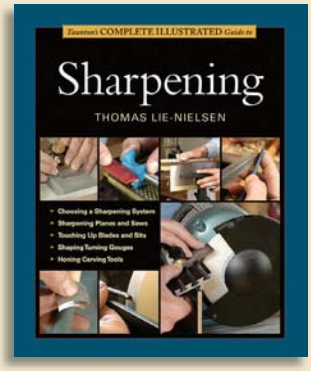

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What you need to know about hollowing

Kurt Hertzog explores the vast subject of hollowing, its specialist tools and offers a wide array of tips

PHOTOGRAPHS BY KURT HERTZOG

KURT HERTZOG

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

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Hollowing in woodturning is a very expansive term. It is the removal of the material when creating a bowl, goblet, other turning with an inside surface exposed for use, or simply for viewing. Hollowing can be as simple as the creation of the inside of a lidded box. Both top and bottom can be excavated or hollowed. Depending on the aspect ratio, it can make certain tools more advantageous for use than others. Other hollowing needs employ the use of special hollowing tools or hollowing bars when creating deeper vessels, such as vases and the like. For the extremes in hollowing, deep vessels can be a foot to many feet in depth. In between the extremes can be traditional hollow forms, ornament bodies and more.

Whether the hollowing process is done in the wide open or through a small hole, it is so critical to the creation of many different woodturning projects that I'd like to offer a primer here. For the sake of space, we'll leave the bowl excavations for another time. While certainly requiring skill to perform well, their depth to width aspect ratios are usually quite low, making them pretty straightforward using traditional tools. This month, we'll launch into the deeper hollowing techniques. Rather than be the purist and use only the 'real turner's mentality', I'd like to broaden the scope to include any way of safely getting to the hollowed end point. If you are stuck in the real woodturner mentality, perhaps you should skip the drilling sections.

Safe hollowing demands support up close with sufficient toolrest strength along with tool shaft and handle appropriately sized

Safety

The keys to safe turning are the use of the proper PPE as appropriate and using tools within your and their limitations. There are many tools available to perform the hollowing process, both commercially available and homebuilt. There are some that I won't include in this article because, in my opinion, they are functional and will do the job yet present greater potential for incident than others. With many ways to get to the same end point, why not use the most efficient and safest method possible? If you don't see your favourite tool or brand included, you can assume that I've opted to illustrate some alternate that will also do the job – no offence intended to any specific tool or manufacturer. One of the most common problem situations is trying to perform work too far over the toolrest; this can be done both by hand and using a hollowing bar. By hand, the strength of the tool, the depth it is embedded in the handle, toolrest design and position, the leverage ratio between the cut position and the turner's control position on the handle, the material being worked on along with speeds and feeds all interact to make the situation safe or potentially unsafe. The same is true for hollowing bar equipment. Toolrest design and position, bar diameter and mass, length hanging over toolrest, demands of the cut being made, along with the material and speed issues

make for a pleasant or nerve-wracking experience. Rather than quote numbers, I will try to explain situations that I recommend against or should be used with added caution.

TIPS ON SAFETY

1. Don't extend your tool any further over the toolrest than necessary
2. With hooked tools or tools with flats, keep the tool on the rest correctly
3. Speciality toolrests are available for hollowing applications
4. Light touch and sharp tools are essential for hollowing safely
5. Always have an acceptable ratio of overhang to control point
6. For hollowing bars, always use their bar 'anti-slip out' safety system

Both tool and tool handle length and mass have a dramatic impact on the length over the rest you can work safely. Select both carefully

When you are going to perform operations deep in a turning, be certain that your tools are sufficiently built for the task

Using drills or Forstner bits

Some will turn up their nose at using a drill or Forstner bits in their hollowing process. Using only turning tools to hollow is what 'real' turners would do. They would perform their initial depth drilling using their spindle gouge. That certainly works nicely but might not be the most appropriate method for all turners. Depending on your skill level, using turning tools will get you there but why not use whatever will work the fastest and safest, regardless of what it is? Using a Forstner bit to hollow a lidded box and then cleaning up the side walls and bottom as needed works nicely. It might be faster and safer since you can easily remove evidence of drilling in the corners and bottom. Can it be done from scratch with a gouge or scraper? Certainly it can but there might be less stress on the workholding and results that are acceptable by using a drill or Forstner bit with some touch up. Is your end goal to create your turning quickly and safely to provide it to your customer or do you feel the need to impress your turning buddies? If it is faster for you to use your spindle or bowl gouge, then by all means do so. If not, don't lose sight of the fact that once the material is gone and you've cleaned up the hollowing, nobody will know how you got there. Forstner bits also lend themselves well to hollowing pepper mill bodies and prepping for any other hollowing by creating a work area and depth indication. Whether a standard twist drill or Forstner bit, don't be afraid to use them if they lend value to your process. The benefit of a drilling in any hollowing, whether by drill or spindle gouge, is that the hole not only creates a good hollowing start point but also indicates the desired bottom depth. Measuring and marking the drill and then drilling a hole to the depth where you intend the bottom, is very helpful in speeding the hollowing process. Not only will you have a hole to work with as you hollow, but you'll already know where you'd like the bottom to be as you work.

Drilling to set depth and hollowing can be done with standard gouges. Use the method you find safest and most reliable

TIPS ON USING DRILLS

1. A standard twist drill can be measured and marked with tape to drill a centre hole to the desired bottom point
2. Use the tailstock with a drill chuck observing good practices and hold the chuck on removal
3. Good drilling practices, sharp drill, proper speeds and feeds and breaking the chip are recommended
4. A Forstner bit, run at proper speed, can not only set bottom but also remove much of the stock required

If your turning is well executed, will anyone know whether you drilled and hollowed the form?

Speciality toolrests

There are a variety of toolrests available that can aid in your hollowing endeavours: some are factory offerings and others are aftermarket offerings. Their goal is to provide support for the tool at the closest point to the cutting position. Like the lever example in your physics class, the closer the fulcrum is to the point of work, the more mechanical advantage and resolution you'll have at the control point. Sometimes it is possible to get these special rests into a useable position, sometimes not. Use them wherever possible. They will stress the tools less and give you far finer resolution and control. Don't lose sight of the fact that you or your local workshop can create special toolrests for your specific application. This can be a great time saver not to mention safer for those who produce many of the items needing a special rest. Be aware of the strength needs and be certain your fabricated rests are built appropriately.

TIPS ON SPECIALITY TOOLRESTS

1. While designed to provide support, the tool overhang concerns still apply
2. Use speciality rests to provide up close support, not to overwork the cutting process
3. Be cautious of homebuilt speciality toolrests until proven. Designs, materials, and welds need to be sound and always used within their safe limits
4. Speciality toolrests are an aid in the process, not license to violate safe turning practices

Forces on a toolrest when hollowing demand sturdily built equipment. Be certain your toolrests are up to the task

Depending on your hollowing needs, you may consider special heavy-duty rests designed and built for the task

Speciality toolrests for support up close. Adjustable for reach or a platform for boxes. Beware of excessive demands placed on toolrests

Hollowing tools

Nearly any tool in your kit can be used for hollowing. Depending on the material, orientation, depth needed and your proficiency, some tools lend themselves more than others. As noted above, cleaning up the sides of a drilled hollowing is far less demanding on the workholding than doing the hollowing from scratch. That said, there are many 'purpose-built' hollowing tools available. Nearly all of them follow the same design and function principles so the choice of manufacturer is yours. With the advent of carbide cutter tools, the entire world of hollowing tools changes. Most hollowing used to be performed by scraping operations using a machine tool-style cutter. Scraping, regardless of the type of cutter, was the norm and still is used. With the advent of the shaded cutter designs and now the carbide cutter designs, true cutting does occur. The design and execution of hollowing tools is essentially the steel shape and strength to present the scraper or shrouded cutter to the work. Most tools are designed to fit through an opening to create hollow forms. As such, the need for straight, partially curved and more curved tools makes up most families. With the newer designs using the carbide cutters, the needs for an extremely beefy tool shaft is reduced. Because the operation becomes a cutting rather than scraping operation, the strength demands are reduced somewhat. This has created a whole new genre of hollowing tool in the short to mid-depth designs. The advantages of the carbide cutter designs are rotating the cutter to provide a fresh edge rather than sharpening and the nesting of the cutter in the tool shaft. Hollowing has been done for many years with everything from ground Allen keys to carbide cutter hollowing tools. The caution I've offered many times in my writings is the magic isn't in the tool; the magic is in the hands of the craftsperson.

TIPS ON HOLLOWING TOOLS

1. Select your hollowing tools based on your typical depth and type of hollowing
2. The traditional had the mechanics for various scrapers and cutters to be mounted
3. Carbide cutter designs usually only accept the manufacturer's cutter
4. Tool and cutter selection needs to be based on wood, orientation and distance over rest
5. Hollowing bar systems, by design, allow for work further over rest but you still need to heed the tool overhang limitations
6. Clearing debris from the hollowing area regularly will improve the hollowing process immensely

Originally, hollowing tools were just bent steel or tool steel usually bought unhandled. My early Chris Stott hollowing tools circa 2001

Just a few of the available carbide cutter hollowing tools for hand-held use. All feature replaceable cutters when the existing has been rotated until spent

Most modern carbide cutter tools support the cutter as completely as possible. The cutter is exposed only in the areas of potential use

Inside surface finish

When hollowing a bowl, goblet, lidded box and the like, the inside surface finish you achieve is important. It will be seen and touched by people and therefore it needs to be cut cleanly, sanded and finished in the same league as the outer surfaces of your turned vessels. For deep hollowings, the rules are a bit different. If you are hollowing through a small hole, no one will likely be able to see inside much less feel the surface. If they can, it will be for a very limited depth. That relieves the creator from needing a great surface finish. It needs to be clean and sanded only as far as the customers reach. This is not to be a freedom to do shoddy work but only to put some bounds on where the critical surfaces are. You certainly are welcome to sand to the bottom of a hollow form with a 25mm opening but perhaps the time is better spent elsewhere. Grain orientation is your choice but most turners will do end grain hollowing for their deep hollowed turnings. Not only end grain orientation but also green wood if possible. While it is dependent on species, nearly all green wood blanks will cut like soap in comparison to that of dry wood. The reason for end grain hollowing is multi fold. My article in *Woodturning* issue 255 has an in depth discussion on 'thinking grain', which will provide additional information on the subject. The short answers here are uniform cutting resistance and less stress relaxation and drying deformation. These alone are well worth making your selection of end grain hollowing a primary consideration. With this orientation, your surface finish in green wood is not ideal but usually is immaterial. If you need to sand inside a piece, use caution and the appropriate tools for safety. My article in *Woodturning* issue 265 has some additional information on hand-sanding safely.

TIPS ON INSIDE SURFACE FINISH

1. Sanding on the inside is only as needed for reach and sometimes sight
2. End grain orientation usually provides an acceptable surface finish as turned
3. When sanding inside of a hollow turning, use caution rotating slowing using necessary aids for safety
4. Inside surfaces are rarely finished so preparation for finish is unnecessary

Do a bit of outside shaping to help with your hollowing but leave plenty of strength for the workholding until later. It is easily cut away after hollowing

If you can't see the surface or even reach a pinky inside to feel it, then the surface is obviously pretty spectacular isn't it?

Learning hollowing techniques

Depending on your end goal, your tools and techniques for hollowing will vary. I'll try to illustrate a few different methods here that I use as examples. I'll include the very simple scraper types through to the largest hollowing bar I own. Please accept them as examples to get you thinking about the process. Once you understand the concept of hollowing, the size of the work and the depth is mainly a matter of scaling. With the constraints on space, an in-depth coverage is not possible so additional information is recommended. There are many sources of additional information available to you, from books to videos. Be cautious of the videos on hollow turning available on YouTube. Some are by the hollowing tool or hollowing bar manufacturers; some are by very expert woodturners focusing on hollowing as their speciality. These videos are usually excellent along with their freely available writings on the subject. However, there are other videos by folks who have limited knowledge and experience. Their content ranges from very bogus to extremely unsafe. Be certain to vet the video creator to ensure they have the credentials to be believed. There is enough content available by true experts to keep you sufficiently engaged.

TIPS ON LEARNING HOLLOWING TECHNIQUES

1. If you are just beginning, practise on inexpensive stock for throwaway
2. There are many experts with books and videos available to learn from
3. Be cautious of the various self-proclaimed experts on YouTube. Vet them carefully before you take their advice
4. While you don't need to specialise, be aware that equipment varies based on type and depth of hollowing

Don't start your deep hollowing learning process working through small openings. Begin practising in the wide open to learn tool control

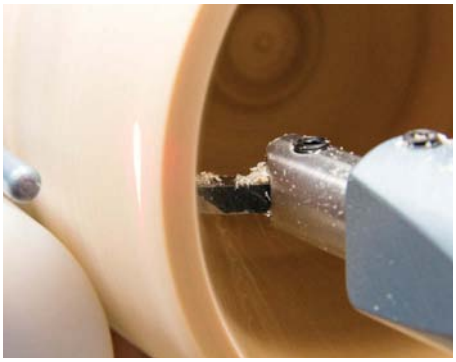
Hollowing lidded boxes is great practice. Notice the desired finished wall surface to work towards

Sequence of hollowing

Like with any turning, the stress on the workholding method and the material needs to be considered. Hollowing, especially deep hollowing, can make large demands on both. As such, be certain you've planned your mounting and turning process to support your cutting demands. Smaller turnings can be mounted using a mounting tenon and chuck. Larger turnings or more stressful hollowing based on material or design do better with a faceplate mounting. By using the appropriate screws and good faceplate mounting techniques, you'll have a secure mounting that can accommodate the larger stresses caused by your hollowing process. Depending on whose advice you take, there are several hollowing sequences available. I'll share mine. I favour a rough shaping of the outside to provide the form. However, I don't shape the base too small; I leave extra material there for support until the hollowing has been completed. I'll finish the shaping later since the cutting to finish the shape is a very low stress operation. From the inside, I usually do a drilling to the full depth of the finished hollowing. This lets me hollow from that hole to the desired inside finished wall. It sets the bottom for me so I can avoid excessive measurements on that dimension. Much like turning a thin wall bowl, if you do your cutting full depth as you proceed to the wall, you'll remove needed strength from below the cut. By processing in stepped depths, you can cut to the finished wall having material below supporting the material. This provides not only mass but also strength to minimise flex and vibration in your area of cut. By finishing at that depth and then processing the next increment of depth, you'll take advantage of the material below supporting your cut. I step and repeat until I get to the bottom. At every level, I make a faring cut to blend each step together. It is a methodical process that allows me to hollow to a thin wall with minimal flex and vibration chatter. There are others that are proponents of other methods. I only share that this method works well for me. You are welcome to try it or adopt one of the other methods available. With the hollowing done, I finish shaping my vessel removing stock at the bottom. Sanding follows prior to parting off and reverse mounting for completion of the outside bottom.

TIPS ON SEQUENCE OF HOLLOWING

1. Use the most secure method of mounting bases on your hollowing demands
2. A faceplate is usually the highest strength. It also allows for removal and remounting with minimal error
3. When turning green wood, be certain to keep it wet to minimise warping
4. Periodic removal of debris will improve the cuts regardless of the cutter used
5. Shallower steps are in order for more demanding materials
6. When hollowing green materials, it is best to complete in one session



Cut to your finished wall allowing the material underneath to support your cuts working in shallow depth incremental steps. Step and repeat

When turning green wood, deep hollowing or not, keeping it sealed and wet is important when leaving even for the briefest time

Regardless of your cutting sequence, the debris needs to be cleared from the turning to allow the cutter to effectively reach the surface

Cutters

There are a host of cutters that can be used for hollowing. The original hollowing cutters were metal machining tool bits ground for use essentially as a scraper. By using a small area of engagement, they worked well removing material in a relatively low stress manner, depending on presentation and the operator. Flat stock that is shaped can also be brought to bear. This scraping action usually has more drag and the area of engagement needs to be carefully controlled lest you cause a catch. This is less of a problem in end grain hollowing as compared to face grain hollowing, but it is a concern in both. The face grain issues are not only based on the area of engagement but also the constantly changing grain orientation to the cutter. This continuing change in forces can cause problems unless you are careful. The shaded cutter introduces the true cutting action with the aggressiveness being tamed by the position of the hood. With the popular expansion of the carbide cutter, there are many companies offering cutters and tools to do hollowing both freehand and with a hollowing bar. All of the cutters available can be used freehand and with the aid of a hollowing bar or system although some are difficult to control freehand. The selection of a cutter is a personal choice. Some turners are capable of producing wonderful work with the simple machinist's tool bit, whereas others are proponents of the shrouded cutter designs. Of course, selection is often driven by the material, orientation, depth of hollowing and more. Cost ranges from virtually pennies to £170 or more.

The mainstays of the hollowing tools for both the hand-held and the hollowing bar systems

Superb at hollowing end grain green wood, the Martel hook tools are not for newcomers

A shrouded/shielded cutter's aggressiveness is controlled by how much of the cutter is exposed from beneath the hood

Carbide cutting tools are now available designed and manufactured for turning in forward and reverse. Remember to lock the grub screws

TIPS ON CUTTERS

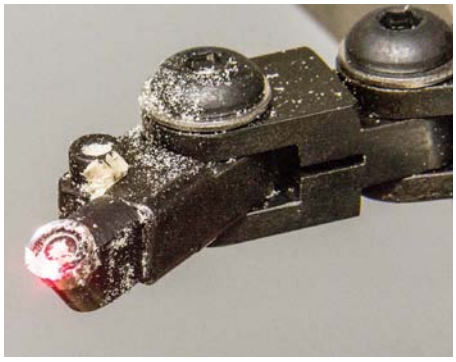
1. Simple steel cutters do work with proper grinding and presentation
2. Orientation of the wood plays a big part in selection of cutters
3. Green wood and dry wood will usually demand a different cutter for effectiveness
4. Clearing of cutting debris is critical for any cutter to work effectively
5. Safe operation requires attention to speeds and feeds. All good turning practices apply to hollowing

Lasers

Nearly all of the hollowing systems available to turners offer a laser attachment option. Because you are working blind for the most part with very limited or no view of the cutter area, a method to know the cutter location is very helpful. With the hollowing bars, the laser attaches to the bar and projects the laser beam down from the top. The user can set the laser prior to the cutting to indicate the cutting edge position or a distance away to mark the desired wall thickness. The laser does need to be periodically reset based on the orientation of the cutter to the work. This is particularly important when hollowing under the lip and when working on the corner near the bottom of a piece. The most common setting for the laser is a distance from the cutter measured for the finished wall thickness. The cutting operations are performed with the laser shining on the top of the work. When the laser image falls off the edge of the work, the cutter has arrived at the proper thickness. The measurements of wall thickness can always be achieved using a pair of callipers or even a bent coat hanger. This requires frequently stopping the lathe and removing the cutter but it works well and has been done since the very beginning of woodturning. I have seen laser arrangements rigged to freehand tools but it is not as common as the systems available from the hollowing bar manufacturers.

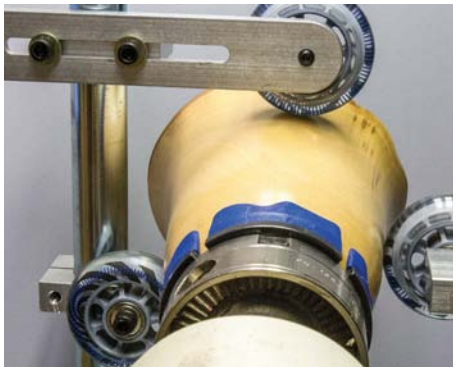
TIPS ON LASERS

1. Be cautious of the laser beam itself: it is not a toy and should never be pointed carelessly. It has the potential to cause vision problems temporarily or even permanently
2. Focusing the beam to a sharp point at the distance being used is most effective
3. Don't be lazy! Readjust the laser as needed as you progress in your hollowing
4. The beam location needed to be dimensioned perpendicularly to the cutting action



Depending on preference, you can adjust the laser to show cutting tool edge or set for a dimension away from the edge

Adjusted for desired wall thickness, once the laser beam falls off the turning that dimension has been achieved



Using a quality, properly adjusted steady rest to minimise vibration and flexing maximises a laser's value on a hollowing system

Turning a deep hollowing to a wall thickness of 1mm is achievable with use of a steady rest, a laser and care in turning

Modern electronics

There are systems on the market now that let you 'see inside'. These systems will project the shape of the turning and the cutter's position within that turning. These systems can be used both inside and outside. Nothing prevents you from using them as pattern systems for repetitive turnings. I am aware of two being offered commercially but have no personal experience with either. I include them to make you aware of their presence. There are also many home-grown efforts underway to make similar systems using phone cameras, home computers and other support software. More on these efforts as they become more mature.

Conclusion

If you've turned a bowl, you've done hollowing. If you've turned a lidded box, you've done hollowing. With this primer, I hope I've given you incentive to begin exploring. It need not be expensive. I still have my Chris Stott style hollowing tools that are modestly priced or easily made by the shop handy turner. Of course, the sky is the limit should you want the full blown hollowing rig with the electronic systems being offered now. Whether you use a Forstner bit and clean up the evidence or make hollow forms through a 10mm hole at the top, give hollowing a try. Not only is it fun but can open a whole new genre of turnings to your woodturning repertoire. ●

Techniques for turning wall art components

Philip Greenwood shares his tips and techniques for turning wall art components on the lathe

PHILIP GREENWOOD

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.

philip@woodturningintoart.co.uk
www.woodturningintoart.co.uk

This project looks at the techniques of how to turn wall art components safely. This style of turning opens up endless possibilities of design. The mounting methods for this project means you will have two pieces to work with, but alternatively, you could use two or four pieces and use three equally spaced on the board, meaning that it will be in balance when you turn the lathe on.

The number of times you move the pieces on the mounting board will determine the design. Again, by moving the piece to a different distance from the centre of the backing board will mean the radius on your turned item will be smaller or larger. Once turned, a single piece could be mounted on a board to be fixed to a wall, or if turning several, you could use these and mount them on a board in a structured manner, or in a random design. Here, I cut mine into several pieces and then joined them back together. Again, you could cut them up and glue them to a board to form a design if you so chose. I am unlikely to be the first to make wall art like this and similar pieces will have been made before, like most items in turning.

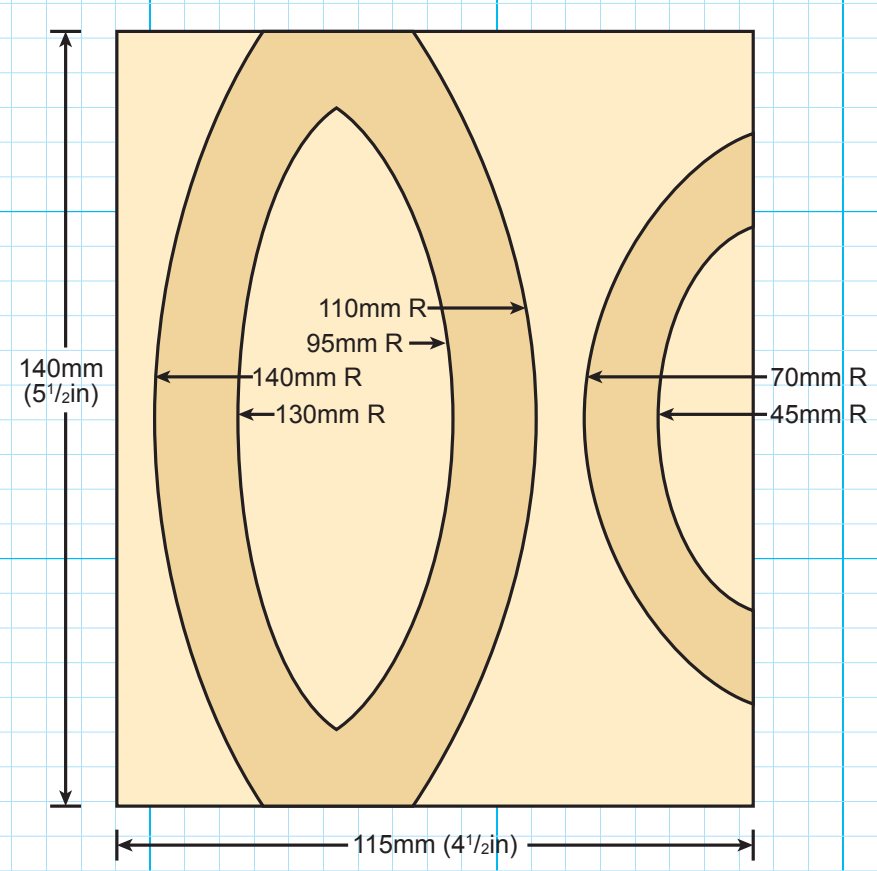
After turning, cut the pieces on a bandsaw or you could use a hand saw if you prefer. You will need to hand-sand your pieces – I value my hands and fingers too much to sand an item like this on a revolving lathe! Another option is to colour the discs after sanding. The finish used is a sanding sealant and the pieces are then buffed on a polishing mop.

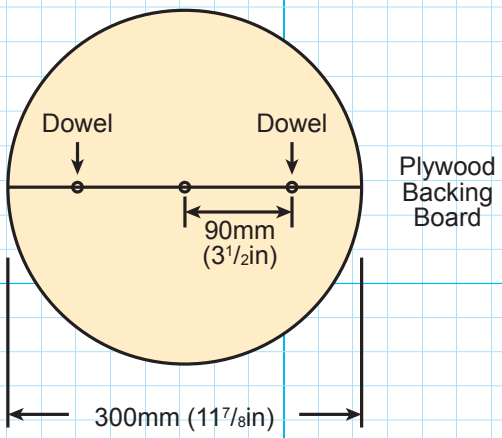
PHOTOGRAPHS BY WENDY GREENWOOD

PLANS

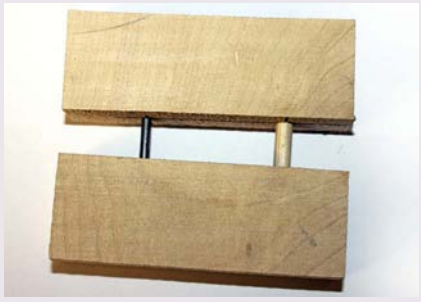
EQUIPMENT USED
10mm bowl gouge
25mm French-curve scraper
3mm parting tool
20mm skew chisel
10mm spindle gouge with a fingernail profile
Bandsaw or jigsaw
Sawtooth bit
Clamp for drilling
120, 180, 240, 320 and 400 grit abrasives
Pieces of dowel
Screws
Masking or insulation tape
Sanding sealant
Three-part buffing system
PPE: latex gloves, facemask, respirator/dust mask and extraction

TIMBER REQUIREMENTS
Plywood backing board: 300 × 20mm
2 × oak *(Quercus robur)* blocks:
115 × 140 × 20mm
Ash *(Fraxinus excelsior)* mounting board:
600 × 135 × 15mm





TYPES OF FIXING



How you will attach your pieces?

How you fix together the pieces depends on whether or not you will use a board to fix the individual components to be mounted on your wall. If this is the type you go for, then it can be as simple as gluing the pieces to the board. If you wanted a firmer fix, however, you could screw the piece to the backing board from behind. Or, if you decide not to use a backing board, you could glue the edges together if you have flat surfaces. If not, on the reverse side mark where they will join, then drill a small hole in the adjacent edges and place a small wood dowel or even a headless nail, then glue in

ALTERNATIVE TOOLS

Tools for adding decoration

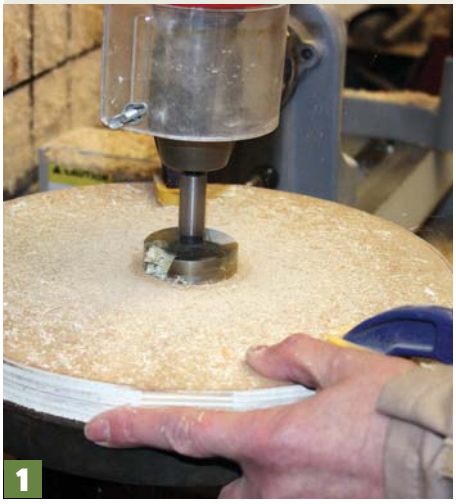
Beside the tools used here for the turning, a few additional tools could be used. A bead-forming tool could be used to form beads on your design, for example. Texturing tools are also a possibility and can be used to form patterns on the pieces; this could range from a tool used while the lathe is rotating, to a tool used while the lathe is switched off. Small carving tools can be used after the piece is removed from the lathe to add more decoration to the piece. Also, small carving rotating tool bits can add texture as well. Experiment on a scrap piece first to see what designs you can achieve – the choices are endless

SAFETY

Always make sure your blank is mounted securely

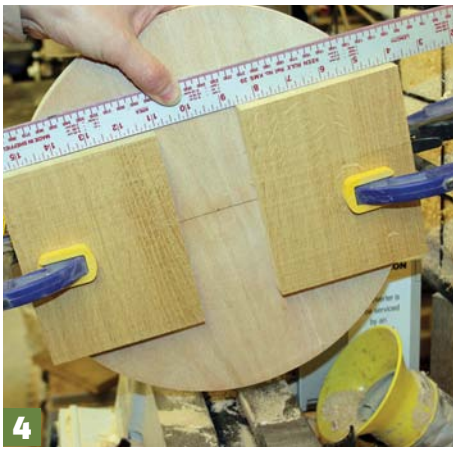
When turning an item such as this, think safety at all times. Ask yourself: is the lathe up to turning this? Are my tools suitable? And most importantly, is the work securely fixed to the backing board and is the backing board fixed safely to the lathe? Always rotate the item by hand first to check clearance of the toolrest assembly and the toolrest itself. Place a piece of masking tape on your toolrest to mark the outer and inner diameter of the piece that is fixed to the backing board, so you know where to place your tool. Safety is always important no matter what woodworking task you carry out. Eye and lung protection is a must at all times – it's the accumulative effect that matters when looking at dust in the workshop and the smaller your workshop, the more important this is as the dust concentration will be greater in a smaller space

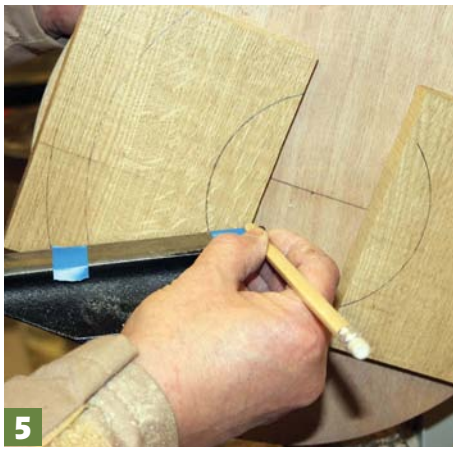
1 The first step is to take a plywood backing board and once you have found the centre of the board, draw a circle on it, then use a bandsaw or jigsaw to roughly cut out the circle. If you only have thinner pieces of plywood available, then you can glue two pieces together. Due to the inherently cross grain structure of plywood, I would only advise using it to make a board for using on a lathe. Use a sawtooth bit to cut the recess in the backing board. It is important to use a clamp to hold this while drilling and this will then be used to hold on the chuck



2 You can now turn the outside edge of the board and true up with a bowl gouge. Note that the tool can go blunt very quickly due to the glue used in the manufacture of the plywood. Use a piece of 120 grit abrasive to round over the sharp corners here and mark the centre of the board with a pencil. You can then draw a line across the centre point and mark a point on this line 95mm from the centre; this measurement will depend on the size of the disc. Repeat on the other side, then drill a hole to suit your size of dowel. Cut two pieces of dowel so it will protrude 5mm from the front face of the board

3 This is one of the pieces I will turn and has been through a planer/thicknesser so I know it is of an equal thickness. The next step is to drill a hole around 5mm deep to locate on the dowel on the backing board



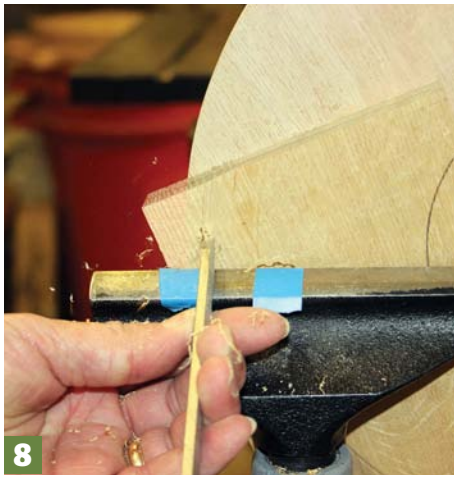


4 Place your pieces on the board by locating the dowel with the hole and lightly clamp. Next, use a straightedge to line up the edges as close as possible, then clamp fully to hold in place. You can now remove the board from the chuck. Now place screws at both sides of the dowel to hold your piece. The screws should penetrate the piece by 8mm – too much and you will run the risk of cutting into the screws while turning. Remove the clamps and fix back on the chuck

5 Place some tape on your toolrest to help mark the cove width and mark very lightly with a pencil until you're happy with the positions of the cove. These pieces of tape can then be removed or left in place if you prefer

6 Use a bowl gouge to cut the cove, finding the bevel first then slowly come onto the cutting edge. Cut inwards from the pencil lines and downwards towards the bottom of the cove; this will stop pieces from splintering off the top face

"Place your pieces on the board by locating the dowel with the hole and lightly clamp"



7 Use a round or French curve scraper to clean up the cove. Small light cuts are a must here. Stop the lathe and check the ends of your pieces for an even curve. If uneven, then remove more material until you have a smooth curve. You will see a line where I have marked the screw depth

8 Now using the parting tool, place a small flat at both edges of the cove to highlight – again, using small cuts. You can also see the tape, which helps line up the edge of the parting tool with the edge of the cove

9 Now repeat the inner cove; this is slightly easier due to the small space between the pieces. After the bowl gouge, use the scraper to smooth out the cove, remembering to use the scraper in a trailing mode

10 Use the parting tool to cut the flats at each side of the cove. Always use sharp tools as these will leave a clean surface and will minimise sanding later – remember that this has to be completed with the lathe switched off. As you can see, this has produced a good, clean surface even before sanding

11 Look at the end for that even curve and use your scraper to adjust if needed. Here you can see a clear view of the pencil line, which shows the depth of the screws holding the piece to the backing board

12 Remove the screws from the back holding your work. Rotate both your pieces 180°, clamp loosely and use a straightedge to line up the ends. Next, clamp fully and screw the pieces firmly to the backing board, then remove the clamps. Check the toolrest clearance by rotating by hand first, then lock tight

13 Place a piece of tape on the toolrest so the left side of the tape lines up with the edge of the cove. The design is purely down to the individual

14 Use the bowl gouge to remove most of the waste, again, taking small cuts as this is an intermittent cut. Once you have the basic cove, then use the round or French-curve scraper to smooth out any ridges. Now use the parting tool to place the flats on the edge of the cove. Remove the backing board from the chuck and then remove the screws to release the pieces from the backing board. You can then cut the blocks in half. You do not have to carry out this step – you could use the blocks if you wish as these will mount on the wall board

"Check the toolrest clearance by rotating by hand first, then lock tight"

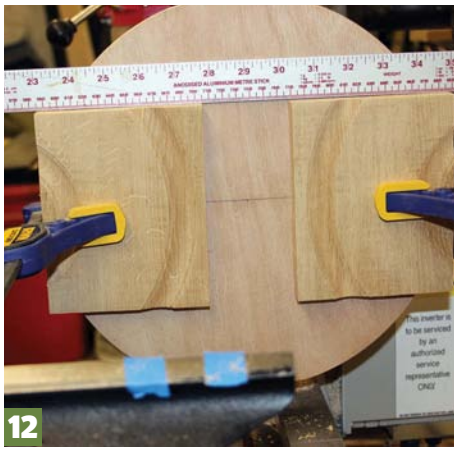
15 If you cut your pieces into halves, like I have here, you will have the dowel hole visible at the side, so take a thin slice off to remove this. Use a pushstick when you are working this close to the bandsaw blade and always keep the guard low down to reduce the amount of exposed blade

16 Sand through the abrasive grades to remove any tool marks left from the turning and from the bandsaw teeth marks. I used 120, 180, 240, 320 and 400. Use a sanding sealant to prevent the wax from soaking into the timber

17 Use a three-part buffing system to finish your pieces: Tripoli is used on the first mop, followed by white diamond on the second mop and finishing with Carnauba wax on the third mop. Don't just use one mop, use all three to get the best finish on your pieces

18 The final step is to glue these onto the wall board. I used some offcuts as spacers, which helps with the lining up of the pieces. If in any doubt, you can then place screws through the backing board into the pieces. Drill a small hole in the wall board; this will allow you to hang on a nail on the wall

19 The completed wall piece should look something like this ●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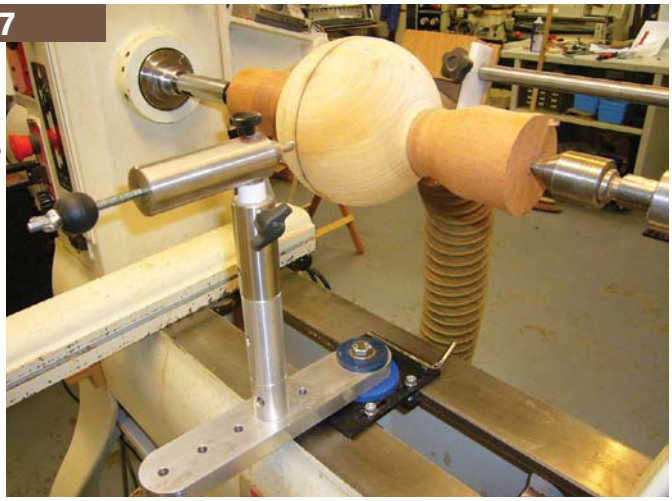

Contact: Paul Howard
Tel: 01621 815 654
Web: www.paulhowardwoodturner.co.uk

PROXXON GE20 ENGRAVING DEVICE

The Proxxon GE20 is a small engraving pantograph, suitable for nameplates, jewellery and other valuable objects. It can also be used with self-made stencils or commercially made templates such as plants, animals or coats of arms.

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NEW DREMEL ADDITIONS

Dremel has introduced a raft of new and improved initiatives to help its users power on with their projects in 2015. The first is the Dremel 8200-20 cordless. This kit contains a Dremel 8200 high performance cordless multitool, two 10.8V Li-ion 2.0Ah batteries, a 30-minute charger and 20 different accessories, all packed into a Dremel soft bag.

Dremel is also launching a new seven-piece DSM20 Compact Saw Accessory Cutting Set, a new seven-piece Multipurpose Router Bit Set and three new Multipurpose and EZ SpeedClic accessory sets. The DSM20 Compact Saw Accessory Cutting Set comprises seven high-quality accessories, including a SM500 multipurpose carbide cutting disc and a SM600 multipurpose carbide flush cut blade.

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Trend is excited to announce a very special new product range, which will leave Trade professional tools super sharp and back to their best. The Diamond Cross Sharpening range is now available from Trend and the products can be used to sharpen chisels and plane irons and are specially designed for router cutter sharpening. This sharpening range is ideal for shaped router cutters, chisels and woodturning as well as for sharpening larger bladed gardening tools. Diamond Cross Technology provides the perfect balance between diamond and recess, maximising abrasion rates and clearance of debris. The range includes a Credit Card Stone, Router Cutter Stone, 125mm File, Twin Handle File, 200mm Workshop Stone and bench holder.

Trend has also just launched its 2015 Routing and Woodworking Catalogue, which is packed with Trend products, including router cutter ranges, power tools and tables, routing jigs and accessories, saw blades, the Trend Snappy Drill System as well as sharpening and clamping products.

To get your hands on the brand-new catalogue, visit your local Trend Routing Centre or download/request a copy online. Alternatively, you can call the number below to request your own copy.

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CRUSHED STONE PEN BLANKS NOW AVAILABLE FROM BEAUFORT INK

Already well known for their high quality refills for pen turners, Beaufort Ink continues to expand their online shop with the recent addition of Yunstone pen blanks. Made from dyed real crushed stone powder set in acrylic, they are available in six colours with more coming online within the next few days.

For legal reasons, Beaufort Ink will not say that Yunstone is the same as the well known Trustone blanks, but they will say they are very similar indeed without the high price tag. Yunstone can be turned on a normal woodturning lathe using standard tools, or tungsten carbide tools if you've got them, and a short video showing their use will be available soon.

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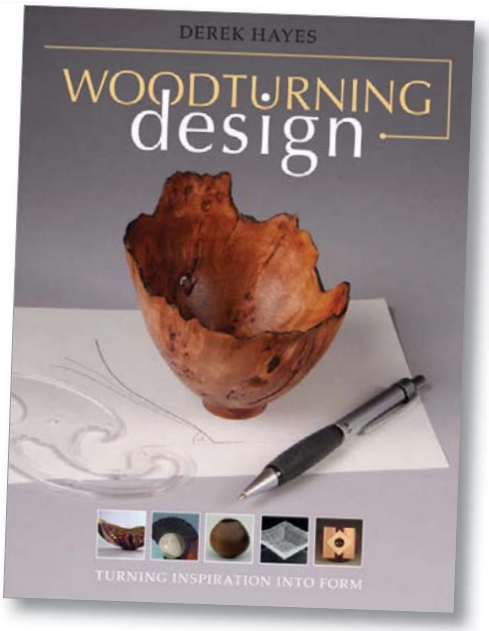
Book of the month – *Woodturning Design* by Derek Hayes



In this inspiring book, Derek Hayes investigates the process and practice of design in woodturning. Design is rarely a priority for the beginner woodturner and most turners in their early work begin by concentrating on technique rather than shape or form, which can prove counter-productive. While aiming to instil confidence in appreciating, criticising and selecting sources of inspiration, Derek doesn't tell you what is good or bad, but rather questions why we may find one turning attractive and another ugly. He looks closely at design elements, sketching, proportion, pattern, open forms, enclosed forms, the foot, the rim, using wood, decoration and colour; with instructive diagrams and photographs that will guide the reader to a better understanding of design. Readers are encouraged to question and fine-tune this understanding and experiment with ways of applying the approaches of other designers to their own work. Where inspiration is found is not important, but how we transform what is seen into something which is definitely our own is what matters. Each chapter starts with a photographic example of what Derek sees as good design in a medium other than woodturning. The pieces are not 'deconstructed' to justify his choice, but are there to serve as a reminder to the turner, as David Ellsworth has said, "…to look for design choices with critical awareness."

DETAILS

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Vinny Luciani – 'Ocean Series'

Vinny Luciani shares this piece with us, which is influenced by his love of the ocean

PHOTOGRAPH BY VINNY LUCIANI

'Ocean Series', gambel oak *(Quercus gambelii)*, end grain turned with the pith in the middle, 380 × 190mm

Having worked in custom furniture and restoration shops my whole life, with all the necessary constraints of plans and measurements, I now just love the free-form aspect of sculpted turning. I find it very satisfying: the gradual uncovering of form and the freedom to add textures and themes at will. The lathe has opened a world of new possibilities for me. After honing my lathe skills, the search for inspiration led me to seed pods and ocean life. These natural forms offer endless possibilities for organic designs. I grew up near the ocean and spent lots of time with family and friends enjoying all things 'ocean', so this is a comfortable area of reference for me.

This form is an evolution in my 'Ocean' series. It is turned and hollowed on the lathe and then carved to form. I use many of the tools now available for carvers, including the Arbortech, Saburr Tooth burrs and various methods of sanding – lots of sanding! The burning was done using a homemade 'wood vaporiser' type of tool and burned highlights were added using a propane torch.

This is a fun series for me and I am enjoying the process of evolution involved, although there is lots more to be done!

Email: looch730@msn.com
Web: www.vinnyluciani.com

Axminster Skill Centre tutor and professional woodturner, Colwin Way finishes the last of a batch of bowls.

He is turning the inside of a sycamore bowl using a 9mm (3/8") bowl gouge. The bowl has a 230mm (9") diameter. The lathe will turn pieces with a diameter of up to 300mm(12").

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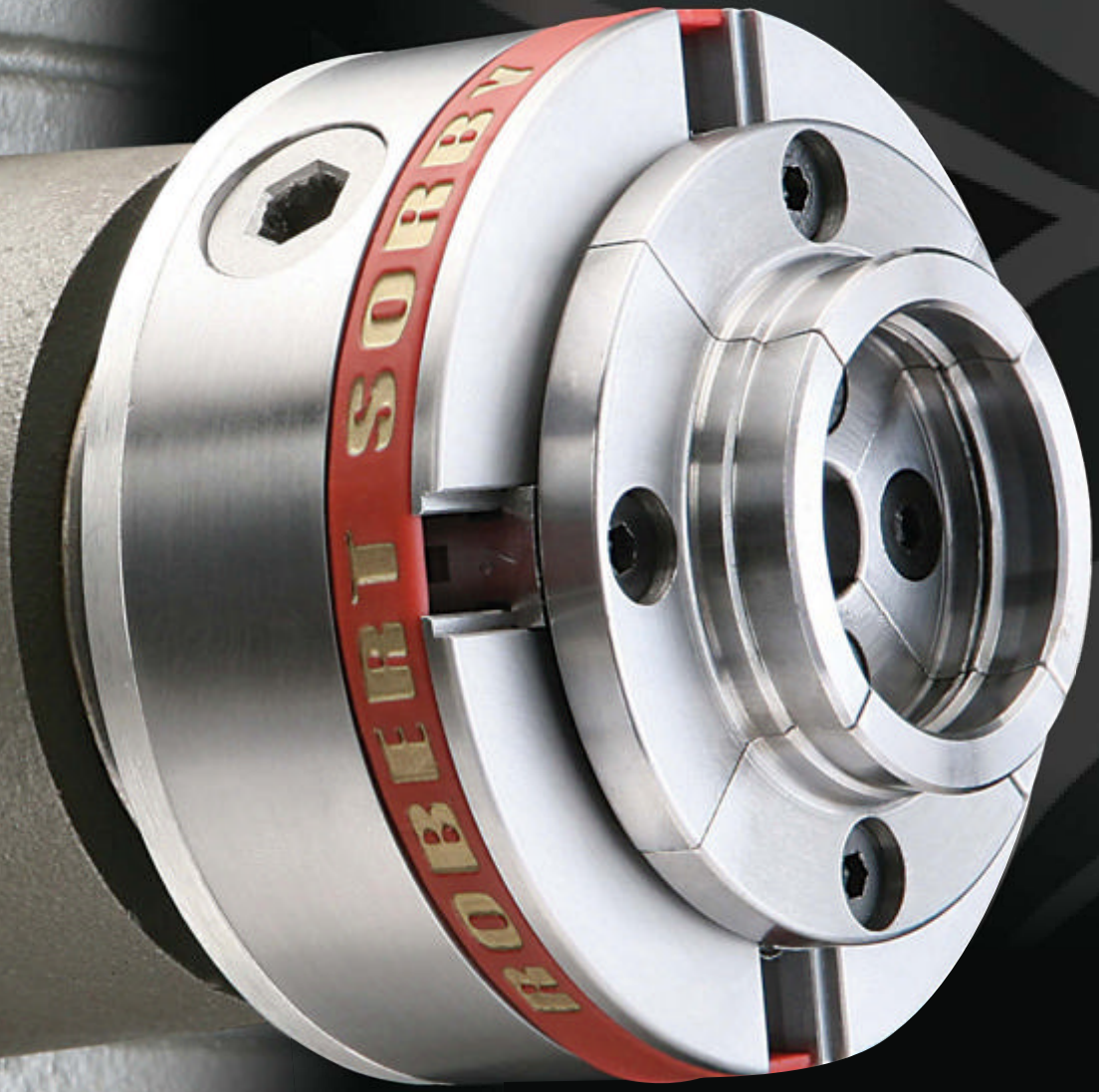

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