Solution to the last issue's Wudoku

2	6	8	5	7	4	3	9	1
7	9	4	1	2	3	8	5	6
3	5	1	9	6	8	7	4	2
6	2	5	7	3	1	9	8	4
8	1	9	4	5	2	6	7	3
4	3	7	8	9	6	2	1	5
5	7	3	2	1	9	4	6	8
9	4	2	6	8	5	1	3	7
1	8	6	3	4	7	5	2	9

Forthcoming Attractions

November 4th – Demo by Anne Hayes
December 2nd – Hands-on, Christmas special

Committee Contact Names & Numbers

Chairman	Nick Milton	01926 777961
Vice-Chairman	John Davies	01926 499675
Secretary	Clare Stringer	07792 008256
Membership Sec.	Pete Moralee	petemoralee@btconnect.com
Demo Organiser	Ken Croft	kennorma@talktalk.net
Treasurer	David Tilley	02476 302508
Editor Dave Mason	01295 660508	davemason9@talk21.com

Woody's World

The Newsletter of

October 2010

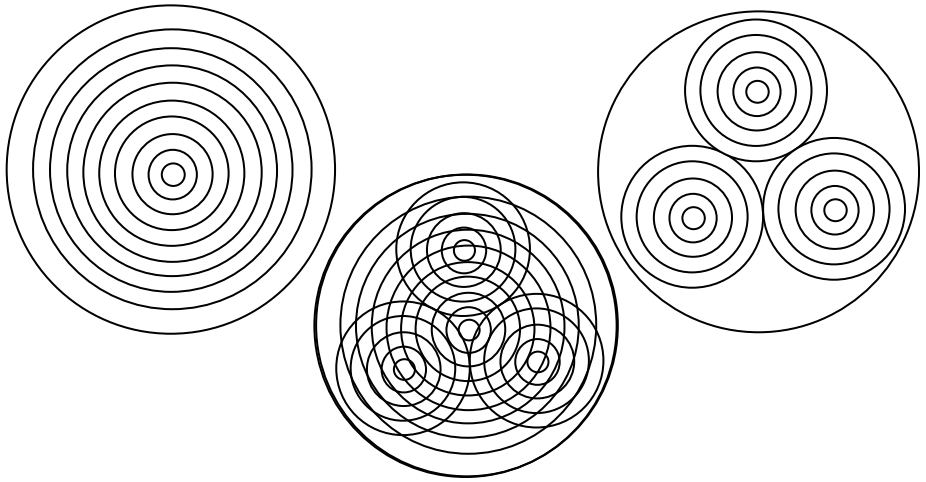
The October meeting is a hands-on evening with a bit of a twist, an evening to play with various chisel sharpening techniques, jigs and equipment. We also welcome our friends from the Warwickshire Pole Lathe Turners for a cake eating re-match.

September bought the welcome return of David Springett. David demonstrated a range of skills, from latticework to elliptical turning, to marking out 12 points on a sphere for subsequent production of a star within a sphere.

Not being present at the meeting I'm reliant on the video that was shot at the meeting to produce the notes included here. I had hoped to be able to use stills taken from the video for the photos but my ancient video camera can't produce photos that are of good enough quality, so alas no photos this month. That'll teach me to be away for the meeting. It was my silver wedding anniversary though, so it was probably best that I didn't turn up…

I'll start by describing the latticework. The nice thing about the way that David works and describes the process is that he breaks the exercise down into simple steps. He uses various tricks to make each stage as simple as he can so that a dig at the wrong time won't mess up a complicated piece. In this instance, the turning of a box lid with some latticework in it is just that, the latticework part is done separately and let into the lid afterwards.

Hardwoods work best for latticework, since they have the strength to hold themselves together and the edges are less likely to break away. In this demonstration, Maple was used, but Walnut is another good one to use, as is Laburnum.



The object of the demonstration was to produce in a 6mm thick disc, a series of concentric rings 3mm thick, 3mm deep on one side, then on the other side to produce three sets of concentric rings with centres differently placed from the original rings, also 3mm deep, such that the rings would break through into one another so that in places you could see from one side through to the other.

So to start with, you need a friendly fellow woodworker with a planer to make you a nice flat piece of wood 6mm thick. A friendly woodworker is required, because of the appalling rates of pay for such work. In this instance we need it to end up 76mm diameter, so cut it out a bit larger and draw a diameter 76mm circle on it. Using this centre indentation, draw another circle of radius 28mm.

Now to produce a series of arcs on this 28 radius circle, to divide it equally into 6. Put the compass point (still set at 28mm) on the circle and draw an arc to cross it. Then put the point on the circle where the arc crosses it, draw another arc and repeat until you get back to the original point. This gives you 6 equispaced points round the circle. We're only interested in every other point for this demo, so drill three 3mm through holes at alternate intersections. Also drill another 3mm through hole at the centre point.

Use a faceplate with a nice soft flat bit of Pine on it, place the disk on the faceplate, locate it centrally using the tailstock and screw it to the faceplate pine using the three screw holes. Use pan head screws, as these won't tend to mark the wood.

David tends to buy cheap Chinese chisels and grind them to the shape that he needs. In this instance the desired shape is 3mm wide, 40° angle at the front and with relief both sides so that small diameter rings can be cut in the workpiece by going in straight. Mark out your concentric rings, and make a clear line just within the diameter of the pan head screws, so you go into the screws with the chisels. Make sure that the screw holes on the 28 radius circle are where you intend to have the trough of the rings, so they'll disappear when you cut the rings.

Put a Tippex mark on the top of the chisel at 3mm from the end as a depth gauge. David uses a shelf type tool rest to guide the chisel. The tip of the chisel should be on the centreline. Turn out the rings as far as the screw holes, then turn the outside diameter down to the required size. Cut a 3mm deep rebate on the outside edge of the outside diameter.

Next, the screws are removed one at a time from the workpiece and repositioned so that they clamp down on the rebate on the

outside diameter instead of the original holes. You may want to put an additional screw through the centre of the disk to make sure that it doesn't move when you do this.

Now cut out the remaining concentric rings until you've gone out as far as you need. Now the rings can be sanded. David recommends folding the sanding paper in half and bending it into a gull wing shape, so that when you run the folded edge round the rings you don't risk catching an edge and spoiling your day.

Next, the disk can be removed and reversed on the faceplate to cut the reverse side rings. These will end up breaking through to the rings on the first side. On this side though, the rings will have different centres to the first side, so the whole thing won't fall to pieces (in theory).

Use the tailstock centre to push the disk to the faceplate, this time using one of the three holes (on the 28mm radius) as the centre. You still have three securing holes to screw to the faceplate, one of which is the original centre hole.

Now mark out this new set of concentric rings. You're going to have three sets of rings, each set centring around the three holes on the 28mm radius. Is that how you spell *centring*? My PC seems to think so but it wasn't my first guess. Anyway, it's important these three sets of rings are the same as it'll scream at you otherwise, so make a template to show you where the rings are to go.

Cut these sets of concentric rings very carefully and gently, as you'll be breaking through to the bottom of the rings on the other side. Then sand them up, again using the gull-wing folded paper.

Then remove all but the central screw and rotate the disk to centralise the next centre hole.
Complete the rings on the second side, sanding as you go. Once it's all sanded up remove if from the faceplate, sand up the bottom of the grooves on the other side again if necessary finish with Danish oil or similar on both sides.

There, an interesting latticed disk to let into a box lid or similar. Sounds really easy doesn't it? I bet it's a good deal trickier than David made it look. Must have a go, now that the weather's horrible again.

The next thing that David demonstrated was **elliptical turning**. Now I've watched the video through several times and I still can't work out how the elliptical turning jig thing worked. I had a look at the website David mentioned, www.volmer---ovaldrehen.de/englisch.htm This site includes a document which explains in great detail the history, the process and geometry of "oval" turning, so is well worth a look. I've printed out a copy of the document, Clare Stringer bound it up and it'll be available for loaning out at meetings.

Next, came the turning of a twelve point star within a sphere. Now you may remember back in May last year David showed us how to do a 6 point star in a cube, well this is a variation on that.

Having made your 62mm diameter sphere, using all kinds

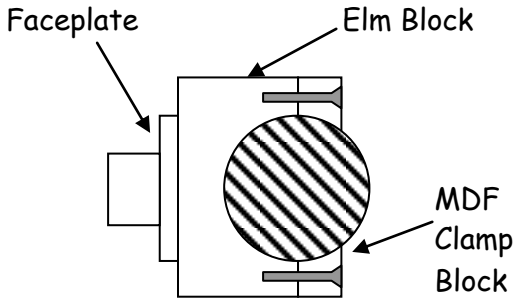
of dark magic and devious trickery, you mark it out such that it has 12 equally spaced points around it. To do this measure the diameter accurately and multiply the diameter by 0.526. Set a pair of compasses to 0.526 x the diameter and place the point of the compass at a point as close to the centre of the end grain as you can make it (we'll call this point the North pole), and draw a circle on the sphere.

Now place the point exactly somewhere on this circle and draw another circle. Now continue drawing circles around the sphere with your compass point on the circle intersections as you make them. Eventually you'll end up with 12 intersections, one of which will be at the South pole.

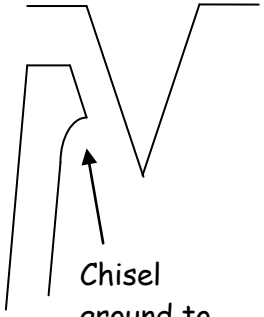
Each intersection will become a point of the star. The reason for wanting points at the North and South poles is that the first point you turn will be the North and South ones, and you'll want a good bulk of wood around the points as you're turning directly up to the end grain.

Mark each of the intersection points so that they show up clearly.

Make a block of wood with a hemisphere in one end to support the sphere and a clamp to hold it in place.

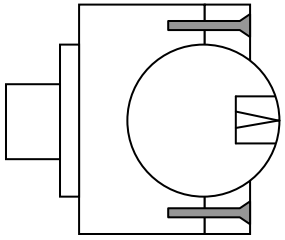


This will allow the sphere to be locked into position for turning each point in turn. Clamp in the sphere with the North or South pole facing exactly outwards, using the tailstock to ensure its exactly in place.



Now turn out the recess for each point of the star. Each recess will eventually have a temporary cap fitted to it, with a small recess in, the idea being to support each star point when you're doing the next one. Each cap will be 26mm diameter.

The base of the point of the star will be 6mm diameter, and the point will be 18mm deep. So again, using a chisel ground to the right shape turn the 26mm diameter recess leaving the cone's base 6mm diameter. Then cut the cone shape. Next the 26mm diameter is to be increased leaving a wall thickness as desired, so that once the last point is complete the star will break free. David had a special tool for doing this that I couldn't see very well, but he did mention that you can use a tool shaped for the purpose.



Now fine tune the outside diameter of the recess to fit the cap. If you end up with too loose a fit between the cap and the sphere you can stick in place with some hot melt glue. Hot melt glue will melt if the item is put in a microwave on full power for 10 seconds. David added a bead to the edge of the recess hole using a specially shaped chisel with a rounded surface to round off the outside

edge of the hole and a pointed section to add the bead. This means that all the beads will be uniform.

Finish sand the parts you can see being careful not to touch the point of the star as it'll be sharp. Don't apply any surface treatment at this stage as it'll gum everything up as you proceed.

Once the cap is in place you can move on to the next of the 12 points, fitting these point-supporting caps as you go. When you do the last of the points, the star will break free, but because the caps are in place it won't flop about.

Now everything is finished sanded, you can add the surface finish. Again David recommends Danish oil.

Again, sorry for the lack of photos, hopefully the explanations will make some kind of sense. If not, there's always the recycle bin.

Woody's Wudoku

Fill the grid with numbers 1-9 so that each column, each row, and each of the nine 3×3 sub-grids contain all of the digits from 1 to 9.

	1				2		7	
		2		5			6	
		9	7			4		
					9	7		
8		7		6		1		3
		4	8					
		3			7	2		
	2			8		9		
	8		3				5	7

Lathe for Sale

The following advert was sent to Woody's World HQ by David Tilley, who will be bravely swimming in the Adriatic during the October meeting.

Elderly man with wife in permanent care needs to sell:
ELECTRA BECHUM LATHE - as new condition
1hp motor, standard chuck, with copying attachment and various chisels.

Offers around £500 to 01926 811614.

Woodworker of the Month

A new feature this, each month I'll have a browse around and find examples of woodturners from around the world. There'll be examples of their work which hopefully will inspire and give a few ideas for projects.

This month's featured woodturner is Lynne Yamaguchi, who lives in South-Western Arizona, but was bought up in Kyoto, Japan. Here's an extract from her website, www.lynneyamaguchi.com:

"Much of what I bring to turning comes from my Japanese heritage: the philosophy of practice, as applied to crafts and more; a worldview that sees wood as an expression of living energy; an aesthetic, perhaps best expressed in the tea ceremony, that embraces the humble as well as the elegant."

Well, you can't say fairer than that. I like a nice cup of tea too.

Here's a nice 7" square bowl in Cherry.

A Maple pedestal bowl, about 5" across.

4" diameter apricot bowl with a natural edge.

Honey Locust Vessel with a Paduak collar. 4¾" diameter. Honey locust is apparently local to Southern Arizona.

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Please send me items to add into Woody's World.