Sculptured spirals on a bowl are a very effective way of enhancing some very ordinary pieces of timber, or on exotic species to really bring out the features to create an amazing piece. It looks difficult, but really it's all about careful layout and hand tools. Once you see how it's done, you will be able to give it a go yourself.
Tools required are a large compass capable of scribing a circle or around 24" or 60cm, either a vee chisel or some sort of power chisel arrangement and sandpaper. Also wood rasps, files and any other means of wood removal your comfortable with; but the first three are all that's really needed, oh and patience. Once you have worked out the basic shape off you go. I like to finish the shape to a fairly high degree as if it is to be left without any adornment, this avoids additional sanding later. I use random orbital or inertia type sanders as my go to sander especially on the outside. They are quick and efficient and the rotary action leaves a finish much higher than the grit being used.

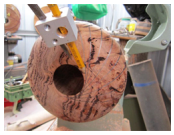
I am using a piece of Eucalyptus burl with resin veins through it and so I have poured CA in all the likely holes, crevices and cracks I can find. Then I will leave it for several hours to dry before hollowing.
I use the cheap CA from what we call reject shops in Australia, not unlike the 5 and Dime shops in the USA. I do this with low cost CA as much of it will be turned away and it's just to maintain the integrity of the bowl during turning and this is done prior to hollowing and the odd touch up as it's being turned if needed. This one was initially turned on a screw chuck and tailstock centre, as this is my preferred method on nearly all my bowls.

As you can see it will have a fairly wide opening, probably around 40mm or 1-1/2". I have yet to be successful with a small opening, it never looks right. The down side is you will have sand the inside to a good finish. I have made some special tools to help with this problem.

A shop made extended power sanding head, its approx. 6” or 150mm over all with a 6mm dia shank. The head is 1” or 25mm in dia. As you can see its design to sand on the side rather than the conventional end sanding head
Hollowing is done with a straight forward Oland type tool with some square HSS set at 45’ to give me access under the lip plus a simple laser set up, but use whatever you’re comfortable with. The wall thickness cannot be very thin or uniform as the depth of the spirals or flutes varies. As I carve the spirals deeper at the centre and also the depth at the top and bottom of the bowl varies as well. This is all for aesthetics, just as I often prefer to have one end of the spiral pass the centre of the bowl.
But in general I try and aim for minimum 6mm or ¼” after the spiral is fully carved. The opening will be around 3-4mm as a thick edge here looks cumbersome and ugly in my book. Bowls that are top heavy I will add more to the base to give better stability, around ¾” or 20mm for a small foot. I see no point in having a vessel or bowl that won’t stand up or falls over with the slightest breeze.
When laying out the spirals I use the banjo and dowel as a pivot point. This is the simplest way which allows a huge amount of variation. Even if you vary the height of the dowel this will greatly affect the arc as it’s scribed across the surface.

Here I am using an old set of 12” engineering dividers with a slight mod to carry a pencil

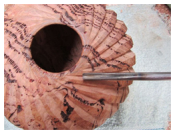
The position of the swing point of the compass and height of it, all have a bearing on the scribed arc. I use the banjo with a hardwood peg elevated inthe toolrest hole. The hard wood pin, I split up quickly and have been meaning to turn up a more professional looking pin. But it does show you don't need anything fancy here.



Again here I have gone for the swing past; on top of the bowl as this makes the finishing of the arc very simple. The bottom will have a near swing past the foot which is still easy to manage. If you bring the spiral had up against a lip its very time consuming to finish it off and you tend to lose the fluid aspect of the spiral along with a sense of movement. The spacing is directly off the lathe indexing set up, 24 positions.

I used here my Dremel with a reciprocating head and a vee gouge and homemade hand vee gouge to tidy up the ends of the spirals. The reciprocating head handles the Eucalyptus hard spots well. The hand gouge is made from drill rod and the vee filed with a 3 cornered file. The Dremel can handle about half the depth required. But it can cut an accurate preliminary cut which is important. If cut away from or off the line you will have made your job much harder. Small deviations can corrected and hidden, larger ones can and will ruin the whole effect. Take your time here to get it right, go around the bowl as many times as required. I normally here go around 5-6 times on soft wood and for hardwood it can be as high as 10 with this one 6 or 7. The important thing here is your laying the foundation and so it's crucial to get right and keep it right, I can't emphasize this enough. When you're done with the main body go around and tidy up the ends, especially the top as this is where the eye starts as it follow the spirals.
If you're concerned about getting the fine details correct then do the ends first. Bringing each

end up about 1/3 of the bowl, later finish the centre and join the ends up. Accurate ends are important, as this is the area where the eye looks for variation or will see any variation. Plus there a good chance if you do the centre first with the all the handling that it entails, much of the pencil marks can get rubbed away on both ends. Likely? Yes, I have done at least once this month.



Now that we have tidied up the ends its time to refine the spirals to a finished shape and contour; I used several files and a Micromesh rasp to do this.
With this shape it's easy to fix up any minor mistakes. But unlike the more round shapes it's less forgiving, you must keep the edges sharp and pay particular attention the curve of each spiral; it's real easy to get off line. This will add a lot of extra work getting the spiral edges back in sync.

As you can see here a couple of the ends are out. All I have to do is drift the offending ones over and then go round the whole top with a few more minor adjustments.
This particular scalloped effect seems to go very well with the Eucalyptus burl. It looks very light here as I have been sanding to 400grit. The fine dust, I blow off with an air gun and it will darken up as the polish is applied or later with the DO.

Showing here the DIY vee gouge, drill rod steel ¼" dia and an old plastic roller for the handle

I use a shop made buff held in one of my SN2 chucks this is a calico loose leaf buff. The

polishing compound is a local variety, U'Beaut's EEE Ultra polish a water based Tripoli compound. I am pretty sure its water based as you can apply to any other finish straight over the top with no ill effects. Very handy here with all the voids, holes and resin veins etc, when the polishing is done I will simply blow all the voids etc with the air gun and apply the finish. As you can see it's started to darken up already.

One of the interesting effects you can get with this sort of burl is the antique look. I have not completely removed all the tooling marks. Instead sanded over them to 400 and then the polished finish will soften edges and gives it the well worn, much handled patina look and feel. The finish will be a WOP over Danish Oil. Danish Oil to seal the burl using about two coats followed by the WOP, hand buffing as required to maintain the antique finish.
If for any reason the residue of the polish won't move or you can't get it out of all the cracks and holes. Then give the surface a light scrubbing with a stiff brush [toothbrush is good] and DNA. As DNA evaporates rapidly and leaves a minimal residue, it's ideal for removing the polishing compound.
It pays to finish off the inside prior to finishing the outside as there maybe wicking through the body to the outer surface. A bit of wicking into the centre is not as bad as run down the outside from the inside sealer. I know of one turner who applies melted bees wax to the inside, it takes care of the rough surface and plugs the holes as well.

Here we have it with two coats of DO. Being a very dry burl the first coat simply disappeared in to the burl. The second did not fair too much better either

This is the finished vessel with a slight gloss finish from three coats of WOP. Personally with this type of wood, I find that a matt finish brings out the features much better, but the recipient wanted a gloss finish.
Just prior to applying the Wop I gave it a fine sanding with 400 grit paper, just to level out any lumps and bumps that might have been raised by the DO. Also a light rub after the first coat of WOP.

This type of burl is a hard one to finish with any real super fine finish due to the veins running through it and voids etc. It has a rugged feel and look to it, so much so often it's preferred by many to have an oil finish or satin that goes with general feel of it.
After thoughts:
Be wary if you use a Micromesh product as they cut very well, even the fine blades. A down side to them is that they will cut on two planes. So it's easy with this design to cut the both the vertical and horizontal planes and usually at the expense one of them unless your very careful. It's a good product it just needs careful handling when doing your spirals. The fine for me is not fine enough so I move onto sandpaper.

So I prefer to use a square rasp/coarse file with one face ground off smooth. This gives you a safe edge to work with and simplifies the smoothing as you only have to been concerned with one plane at a time. Something well worth considering if your just starting out with this sort of embellishments. But be careful as many rasp designs are very vicious and it's easy to ruin a spiral by their aggressive cutting action, been there and done that.
Old engineering files with a coarse cut [bastard cut] with these it's easy to grind a safe edge so it cuts on one plane only. I don't use much if any rotary burrs etc on finishing, as they are too prone to under cutting.
Another consideration is that when you're designing your layout, do it so that both ends of the design can't be seen from any single view point. This will increase the visual appeal and should enhance the suggestion of fluid movement.