

# How I Make Spiral or Twisted Finials

by

[Richard Madden](#)



From the first time I saw pictures of Stuart Mortimers signature twist work, I knew I wanted to try one myself, but I feared it was too difficult and time consuming. Stuarts book, *Techniques of Spiral Work- A Practical Guide to the Craft of Making Twists by Hand*, and an article in the May 2006 issue of *Woodturning* were the sources of inspiration and also great learning tools. It was when Mark Hubl showed his first spiral piece that I finally decided I would give it a try. There are many ways this work can be done, but here is the way I make twisted finials. As with any woodturning project, if something doesn't feel right to you, don't do it!!

## **Here's how I do it:**

I would suggest using a piece of wood with straight grain and no knots. I have used Sycamore, Walnut, Holly, Ebony, White Pear, and Hormigo Negro. For this tutorial I am using Holly so the pencil lines can be easily seen.



I have turned this piece to the shape I want, which is usually an elongated pear shape. I'm gradually trying to make these skinnier as I make more. The area to be cut out for the spiral is finish turned, the beads and teardrop are just roughed at this point. It's important to leave a little "meat" on the top portion at the tailstock end for now because of the stresses caused by sanding. You want to leave this between centers for the entire job, the disc on the end will eventually get turned away.



The layout consists of four evenly spaced horizontal lines called start lines. The index feature on most lathes makes this easy. The three vertical lines are pitch lines. These are easily done with the lathe running. On this example, the spokes, or bines as they are called, will make a  $\frac{1}{2}$  twist, This means when looking at the completed finial a bine will start at the bottom and stop half way around from where it began. You could also

layout four vertical pitch lines, which would produce a  $\frac{3}{4}$  twist. The spacing of these lines can be adjusted to change the pitch of the bines.



Here is where a decision needs to be made. Do you want a right or left hand twist? For this example I chose a right hand twist, but being a southpaw, a left hand is easier for me. Using a pencil I have started at the intersection of a pitch line and start line and draw diagonally to the next start/pitch line intersection. These are called the cut lines. At this time, for safety sake, you should unplug the lathe. It will be used for holding the piece in a still position only.



Using brad point bits, I have drilled holes on the cut lines. It's important that each hole be drilled toward the center of the piece. I used a 4mm bit for the four holes at the top

of the finial. All the others are 5mm. The reason for the 4mm holes at the top is to insure I have left enough wood where the diameter is smaller. You can always remove wood where necessary, but I haven't figured out how to add it! I used Bosch bits that have a nice sharp point. This helps to stick the bit where you want and not run the risk of having the bit "skate". One other thing to include is the importance of spacing the holes well apart. I've had more than one occasion where I drilled a hole too close to another and the chip out was bad enough to scrap the piece.



The next thing I do is to route a shallow trough connecting the holes. Here is a close-up of the bit I use in a Dremel tool. It looks like a Roto-Zip bit, I'm not sure, but it was included with the Dremel. A 1/8" drill bit could also be used. The reason for the trough is to help prevent the bit from jumping out and skating across the surface. I hold the Dremel on a low angle and gently route a channel from hole to hole.





Here, the shallow channels are completed and I'm ready to open things up between the holes using the same Roto-zip type bit. This bit cuts aggressively, so a light touch is best.



All opened and ready for refining the shape of what will become the bines. The inside will be cleaned up also.

A tungsten carbide burr works good for cleaning up the bines. I also use a needle rasp and some coarse rifflers to reach the inside of each bine. A microplane is handy to

round over the tops of the bines, it will lay between two bines and round both.



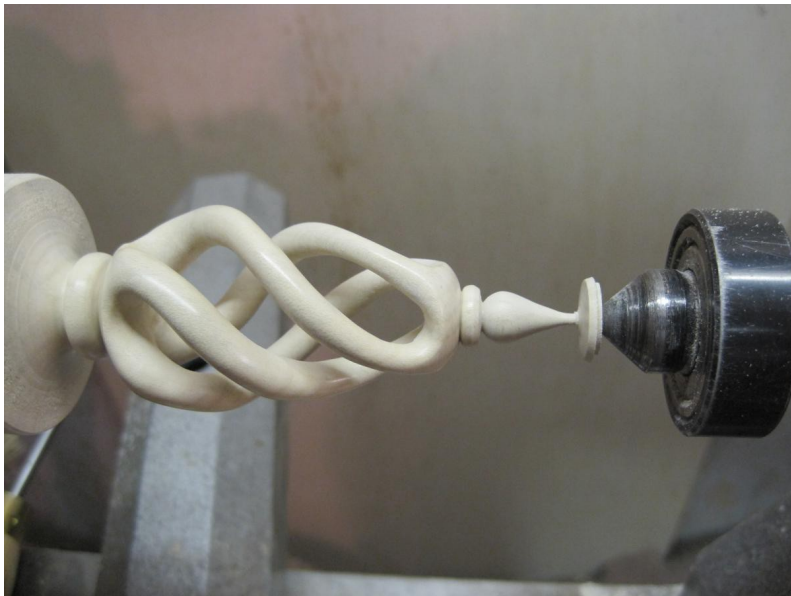
The bines are starting to take shape and almost ready for sanding, but not yet. You want to be careful to keep the bines equal in size. The tools used can be seen (although blurry) sitting on the lathe bed.



Sanding has begun starting with 80 grit cloth backed sanding strips. I tear the strips to about 1/4" or 3/8" in width. Continue through the grits removing scratches from the previous grit.



The sanding is finished. On this piece I sanded to 1200 grit, then I buffed each bine with 2,000 and 4,000 grit Abralon.



The next step is to refine the beads and teardrop. A vortex tool or small skew is needed to finish off the beads. As the point is formed on the teardrop the disc will eventually fall off.



A little sanding on the beads and teardrop, and it's done! The base can now be shaped to suit, or a tenon can be turned beneath the bead if it's to be used on a different lid. That about does it. Hope you enjoyed, and if you have any questions, don't hesitate to ask