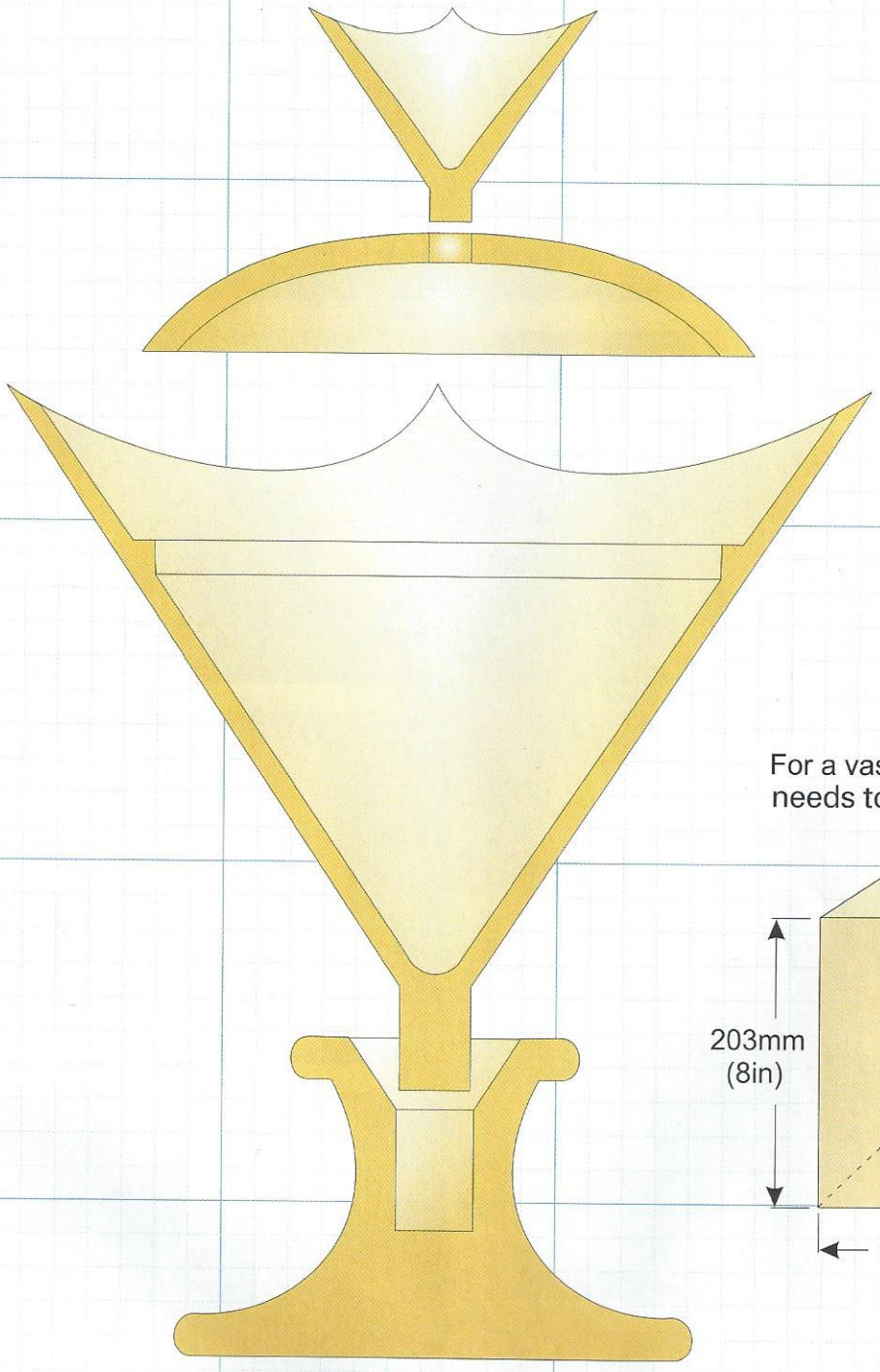
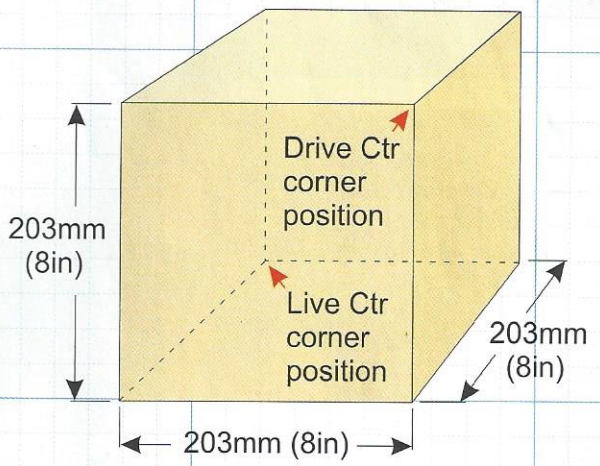
TRI-POINTED BOX DESIGN AND DIMENSIONS

"A close-grained hardwood will give you a sharper finish"

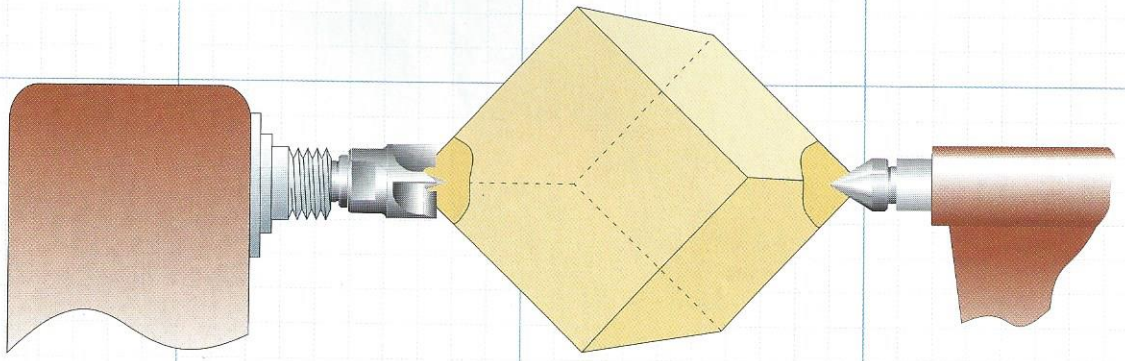
ILLUSTRATIONS BY JOHN LOVATT



For a vase with equal size points, each side needs to be the same size (a true cube).



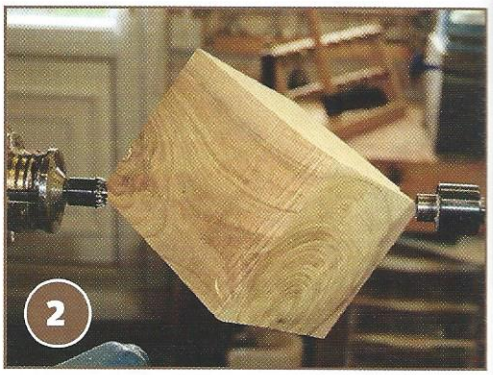
The Driving Centre and Tailstock Centre embedded in diagonally opposite corners.



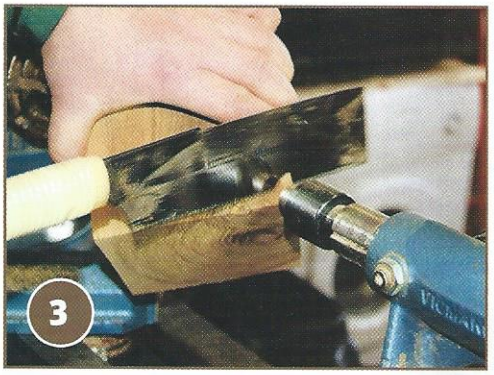
Tri-pointed lidded box

1 With a chisel, take a tiny piece off the opposing diagonal corners and drill a small hole, just big enough to be able to locate the points of the drive and revolving centres. Note: Do not turn with it held like this

2 Mount the timber between centres. Keep the lathe switched off as these are not held in a safe enough way to be turned

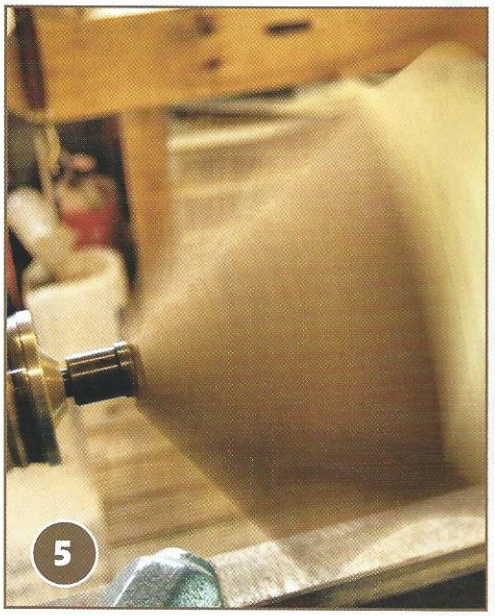


3 Hold it in the position shown so the two corners can be cut off giving you a safe holding grip at both ends and wide enough to take the drive or stebcentre and the revolving tail centre



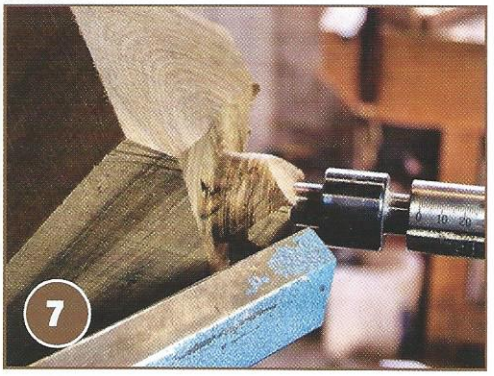
4 Drill a locating hole at each end

5 Ensure that the blank is held securely and when rotating, it is not catching the bed or tool rest. Now turn the speed up to a point where you feel safe. The faster the speed, the better the cut but safety must come first. If the lathe is shaking, turn the speed down



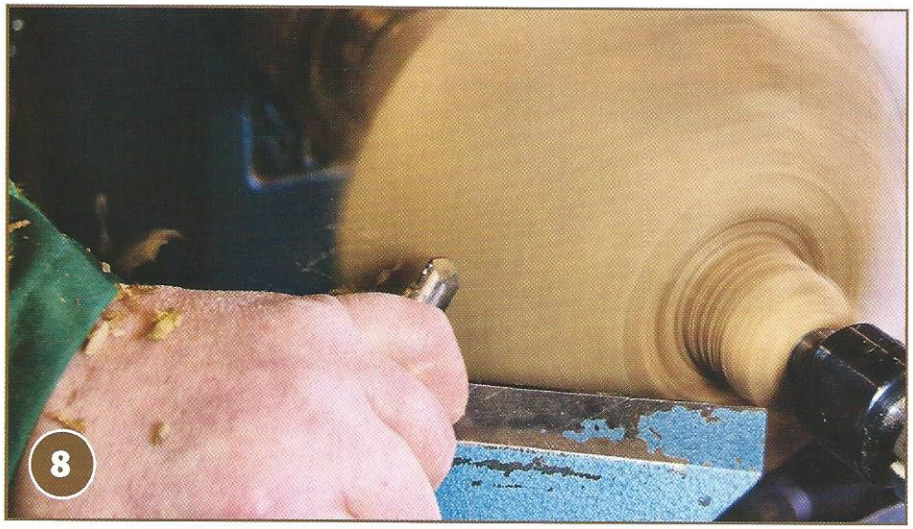
6 Use a pull cut to start shaping the vase and to create a spigot that can be held safely in the jaws of the chuck

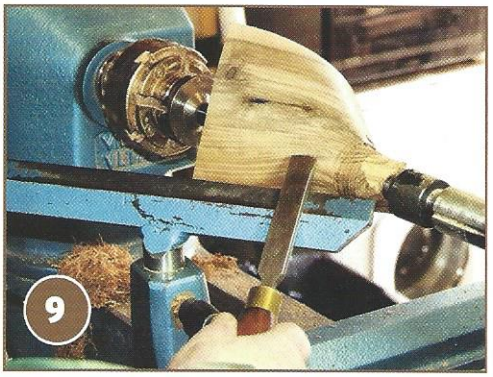
7 Using 35mm (1 3/8in) shark jaws or similiar, make the spigot a suitable size. You can use your normal dovetail jaws but ensure that your spigot will be perfect for it as this is a piece that can fly off the lathe if not held firmly

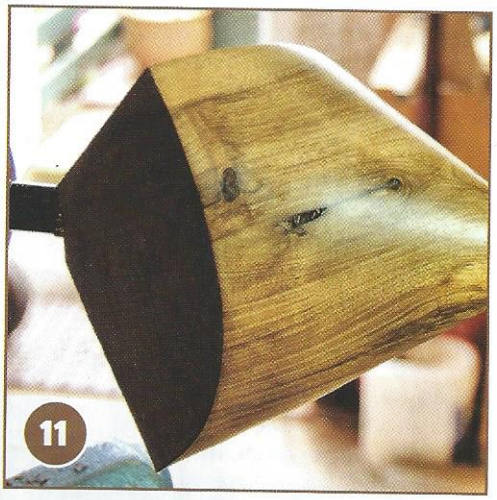


8 Continue to shape the underside of the box

9 Shape the underside of the piece. I used a shear scraper which gave no end grain tear out



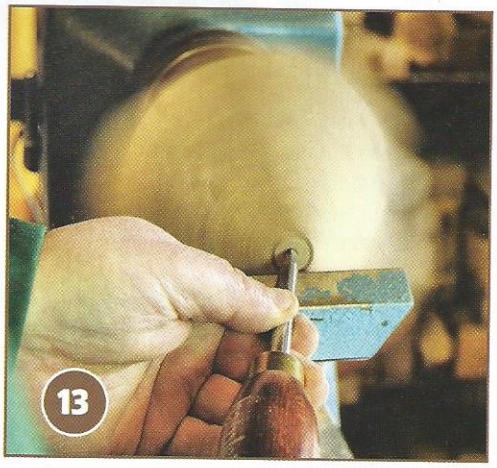




10 For the sanding at this point, protect your fingers by using a dense foam pad under the abrasives

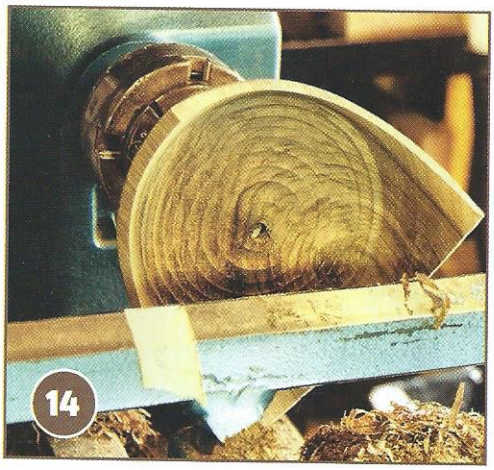
11 Apply a coat of wax onto the bare wood to give a gentle sheen to the finish

12 Reverse the blank holding your spigot tightly in the chuck



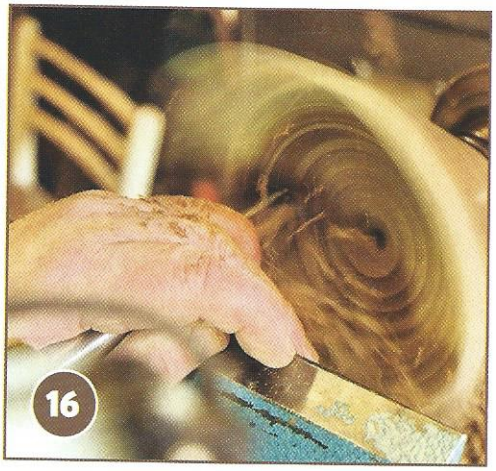
13 Use a 10mm (3/8in) spindle gouge to drill a hole three-quarters into the spinning blank

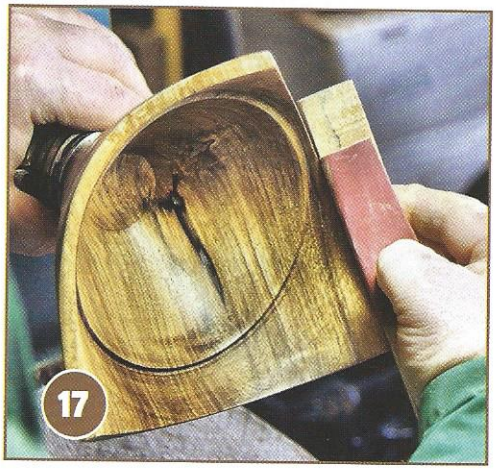
14 I like to have the lathe speed high when taking out the centre as this gives a far sharper cut. The interval between the points hitting the tool edge is far quicker and gives the tool less time to react and move before the next point arrives. At these speeds, it is difficult to see the points so I used some masking tape fastened on the tool rest to show me the last place I could cut



15 For the main shaping cuts on the inside, start at the centre and cut outwards into the side grain, rather than pushing forward into end grain. Once you have cut down past the points, clean and sand before going further

16 After sanding the inside of the points by hand, do the final shaping using a 55° angle 2mm (5/64in) primary bevel. Cut down and round to the centre in one cut





17 Cut a ridge to sit any lid on and sand using paste wax as a medium. I wrapped the abrasive around a pen blank so that the edges did not get rounded over and the edges were kept sharp ▶

18 Sand the inside using a sanding ball or Velcro-covered stick with abrasive attached. Do not put your hand inside the spinning piece. With the lathe stationary, apply a wax finish by hand if you wish

19 Shape a piece of plastic to fit over the live tail centre. Padding will provide support when turning the spigot on the bottom to fit into the base

20 Pull the bottom spigot forward a little from the jaws to cut a 12mm (½in) smaller spigot. This will locate into the base

21 Cut the piece from the jaws keeping the 12mm (½in) spigot

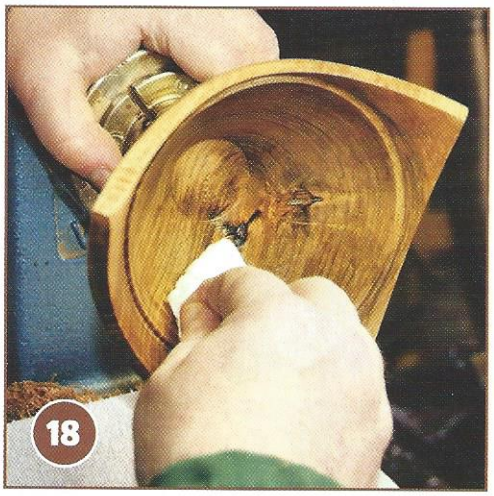
22 Now round off the lid to a diameter to fit the lip in the box

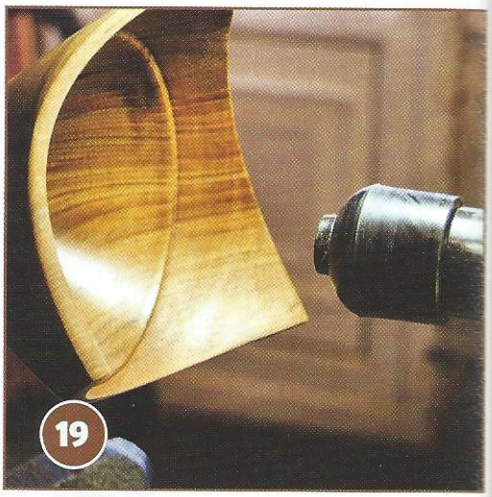
23 Sand, finish and wax the base as you would normally

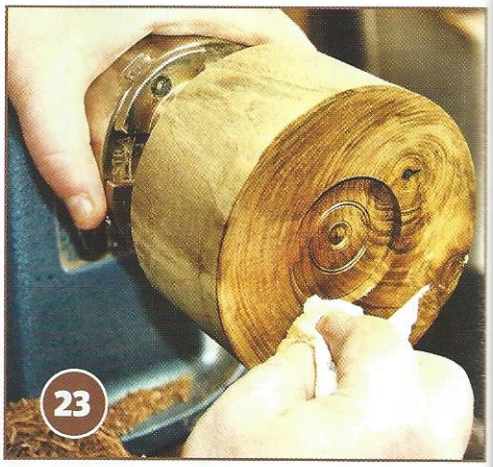
"The finial... is made in exactly the same way as the base"

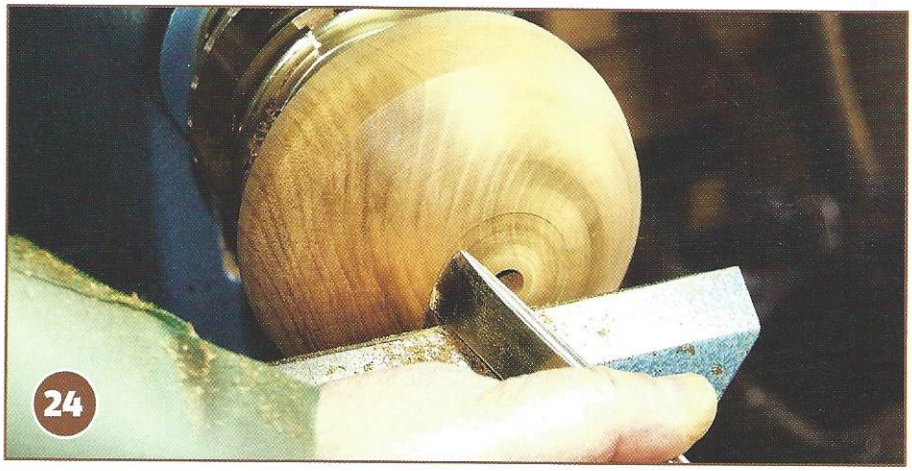
24 Shape the lid to suit the box. Make a hole in the centre that will accept the spigot on your finial. Do not go deeper than necessary. Then sand and wax the top

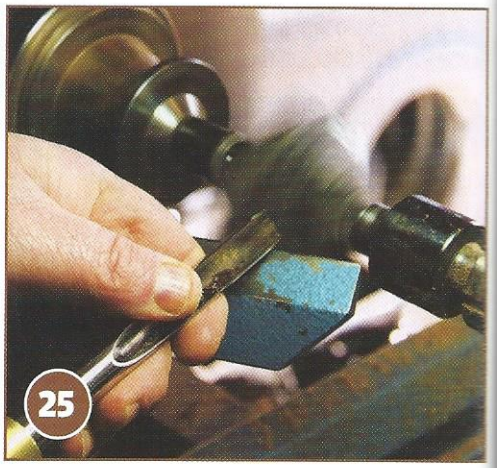
25 Now it's time to make the finial which is made in exactly the same way as the base. The holding points are at the diagonally opposite corners that have been cut to give a firm anchor for both drive and tailstock

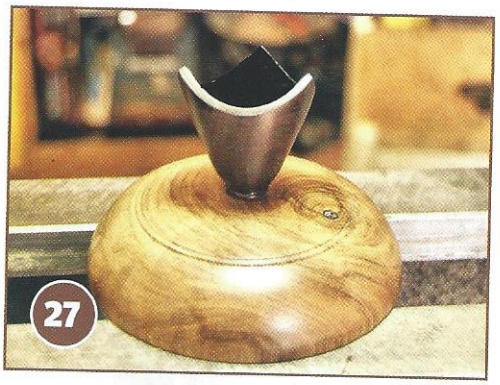








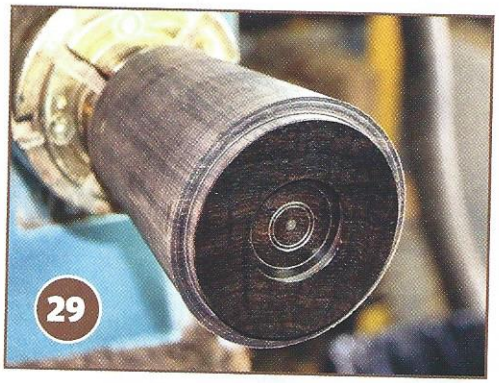


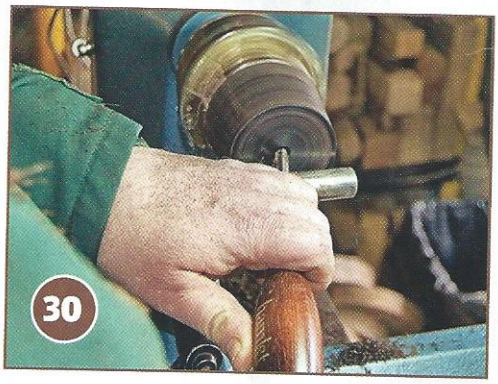


26 Make the points, a small bead and a spigot to fit in the lid of the box. Hold the spigot in the long nose jaws and remove the inside in exactly the same way as the bottom of the box

27 This is the finished lid and the finished finial

28 For the base, I used an African blackwood bell blank





29 It's time to round it off. I put a spigot at the wider end and a decorated recess to hold it whilst the shaping is carried out

30 Check it alongside the box to get an idea of the size required – the length only needs to be half of the size. Then make a hole for the vase spigot to fit in to

31 Ensure it is a good fit. Once you are happy with the fit, it is time to complete the base

32 Shape the base to suit the box. In this case, I wish I had made it smaller so next time, I will make it so

33 Do a final sand and polish ready for assembly

34 The completed piece •