

Plant stands

Walter Hall makes pair of plant stands with off-centre columns



Ever since I saw a demonstration by Pete Osborn RPT at the Northumbrian Woodturners Association in December 2016 I have been planning to make a plant stand inspired by his work. I did not, however, want to simply make a copy, but was looking for ideas for a variation of the classic form of Pete's demonstration piece. The inspiration for that variation came once again from Northumbrian Woodturners in the form of the January 2018 competition for an off-centre or multi-axis piece. Thus, the concept of a plant stand with simple

clean lines based on a classic design but featuring an off-centre main column was born. I used reclaimed mahogany, but any close-grained hardwood would be suitable. In the end I decided to make a pair, and while they are nominally plant stands, they could also be used to support candles if suitable fireproof material were placed on top to protect the wood from hot wax, or to display small decorative ornaments or even other turnings. Larger versions could support a table centrepiece, or form a small wine table

and they could even be fitted with bun feet or other additions.

I like to take other people's ideas and develop them or combine ideas from various makers into a single piece, so please don't feel that you must rigorously follow my design, but do feel free to amend the design to suit your needs and tastes or to use ideas from the project to create new projects of your own. The multi-axis section could form part of a candlestick, goblet, table lamp or many other items.

TOOLS AND MATERIALS

- Personal and respiratory protective equipment
- Beading and parting tool
- 10 or 13mm bowl gouge
- Parting tool
- 25mm Forstner bit
- Callipers
- Shear sanding tool
- Abrasive sheets 120-320 grit
- Abrasive pads 120-320 grit
- Tack cloth
- Face shield/respirator
- Dust extraction
- Steb and revolving centres
- Scroll chuck
- Small faceplate (for friction drive)

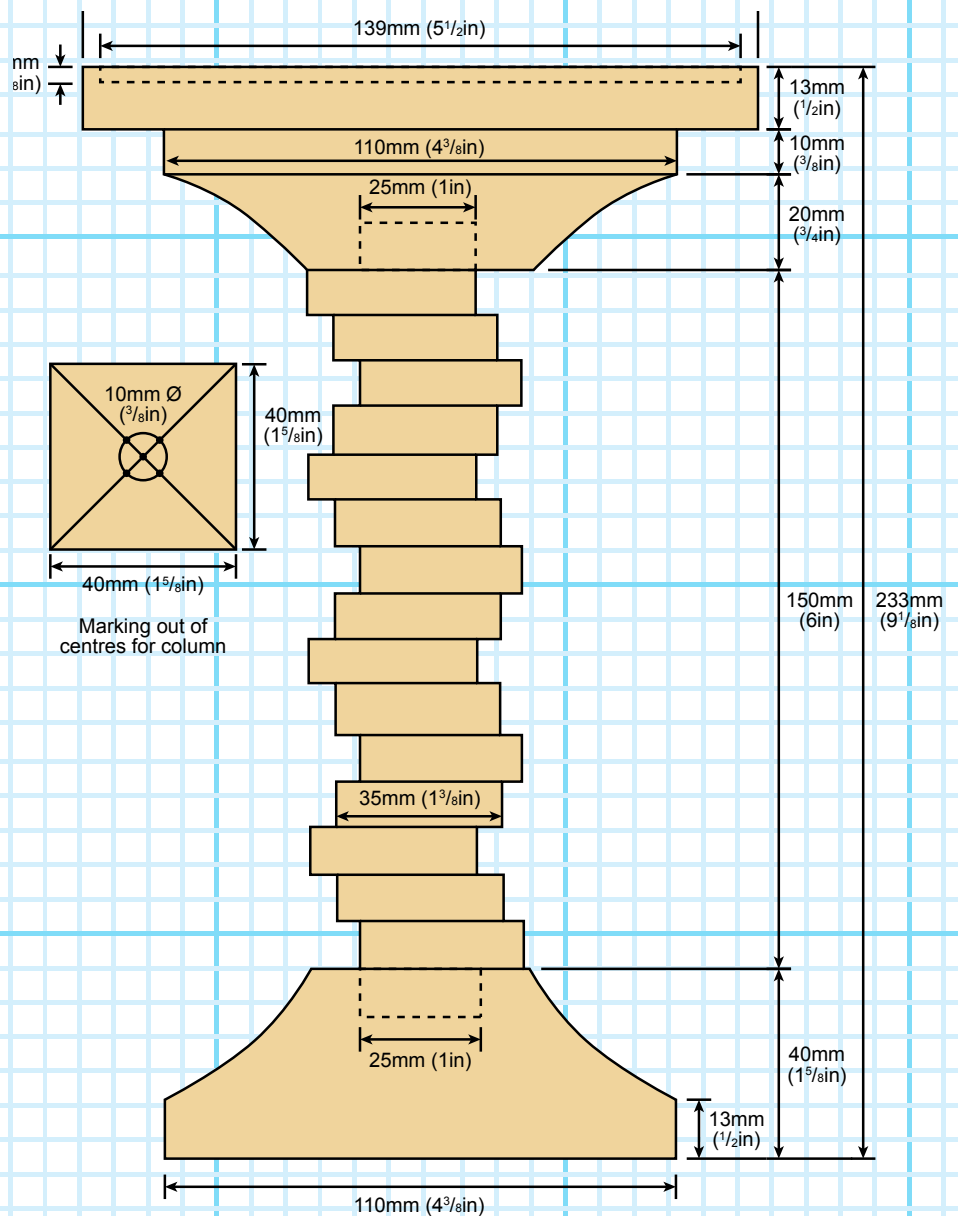
MATERIALS

- Hardwood spindle blank 40mm x 40mm x 200mm
- Hardwood bowl blank 150mm Ø x 45mm
- Hardwood bowl blank 120mm Ø x 45mm
- Finishing oil

HEALTH AND SAFETY

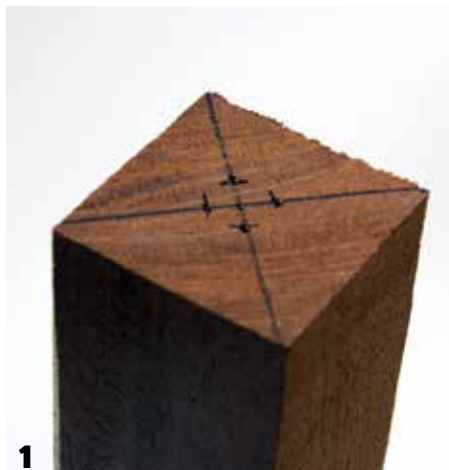
The friction drive method used in this article is a perfectly safe way of mounting work between centres if proper precautions are taken. It should only be used with work that has a flat face to engage with the friction drive and the tailstock must be firmly tightened to the lathe bed and the quill locked down to ensure there is no chance of it moving away from the work.

All off-centre work involves workpieces or parts thereof revolving in ways that may not be in line with the lathe axis or may cause vibration. Distance of parts of the work from the toolrest will most likely be inconsistent and there is therefore much greater risk of fingers or carelessly placed tools becoming trapped or coming into more violent contact with the revolving wood than was expected. It is vital that the work is revolving by hand before starting the lathe and to consider carefully the speed and direction of cut.



1 Select a straight-grained hardwood blank, about 40mm square and 175mm long, and carefully mark out the positions of the five centres on to each end. Draw the diagonals on both ends then mark 5mm out from the centre on each diagonal. Centre punch each of the five marked centres to help align them on the drive and revolving centre. You can number the centres to help identification.

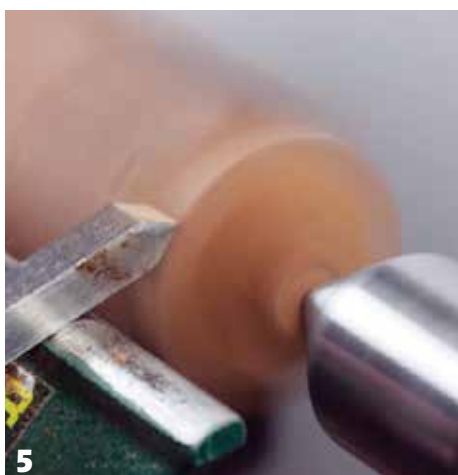
2 Mount the blank on the lathe on the centres marked at the intersection of the diagonals. A steb-type drive centre will facilitate the frequent changes of centre required during the turning process. A revolving centre in the tailstock completes the set-up. Position the toolrest on centre height and clear of the work when turned by hand.





3 Using a 10mm beading and parting tool, cut a spigot on the tailstock end of the blank. This will form the tenon that will be used to attach the column to the base of the plant stand. It needs to be exactly the same size as the Forstner bit used to drill out the mortise in the base, so set your callipers against the Forstner bit to ensure accuracy.

4 Once the tenon is cut to size, loosen off the tailstock quill and re-mount the work on one of the four pairs of centres. It does not really matter where you start, but do ensure that you use matching centres at each end. Turn the work by hand to ensure that it is revolving parallel to the lathe axis and adjust the toolrest so that it clears the work, which will now have an greater effective revolving diameter.



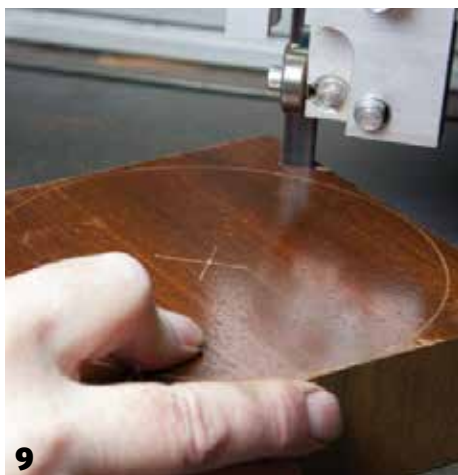
5 Using the beading and parting tool, cut the first of the off-centre cylinders. Arc the tool into the work just as you would with a parting tool, taking great care to align the tailstock-facing side of the tool with the edge of the spigot cut in step three. You will be 'cutting air' for part of the time so maintain a consistent downward pressure on the toolrest and move forward into the cut steadily. Complete the cut when a true cylinder is formed.

6 Loosen off the tailstock quill again, turn the work through 90° and re-mount on the next set of matching centres. Cut the next cylinder, taking great care with the alignment of the tool at the beginning of the cut to avoid damaging the previously cut cylinder. Continue to turn and re-mount the work on each of the centres until you have almost reached the headstock end of the blank.



7 The exact length of the column and number of cylinders is not critical, but depends upon the height you want your stand to be. I settled for about 150mm. Once you have completed all the cylinders, re-mount the work on the true centre and cut a tenon to match the one on the tailstock end of the piece. Any excess length can be parted off.

8 You should now have a column of 15-16 offset cylinders of even width and with cleanly cut edges and no breakout. Check the piece carefully for chipping. If necessary, the work can be re-mounted on the appropriate centre and individual cylinders carefully trimmed to remove damaged areas. Sanding can now be undertaken carefully by hand with the lathe turned off.



9 If, as I did, you start off with square blanks for the base and top, prepare them by marking out the finished diameter and cutting to rough size on the bandsaw. Keep fingers well way from the blade and use a push-stick wherever possible.

10 There are many ways to mount the base blank on the lathe. As the reclaimed wood being used had a flat face I was able to use a friction drive, comprising a rubber face glued to a plywood base mounted on a faceplate. You could also hot-melt glue the blank to a wooden-faced faceplate..

◀ **11** Mark the blank to delineate the extent of the cove to be cut and secure it to the friction drive by bringing up a revolving centre held in the tailstock to centre it and provide support. Make sure everything is secured and tailstock locked down so there is no risk of the workpiece flying off the lathe. Do not attempt this method of work holding with uneven or natural-edged blanks.



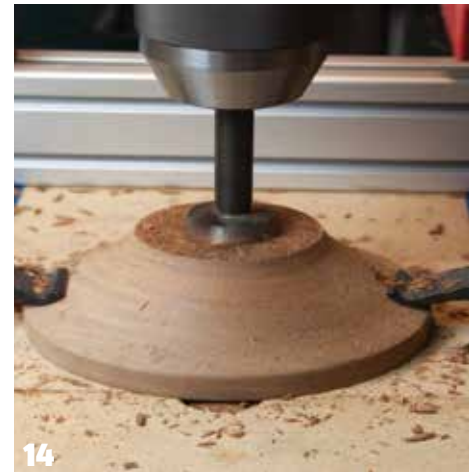
12 Turn the blank to the pre-marked diameter and mark the lower extent of the cove with a pencil line. Use a bowl gouge to form the cove shape down to the pre-marked lines, making sure you are forming an even curve with no lumps or bumps.



13 If you are using a swept-back grind gouge you can use the lower edge of the tool to shear scrape and refine the shape of the curve.



14 Now drill the mortise for the column with a Forstner bit. I used a pillar drill with the work firmly clamped to the table, but if you used hot-melt glue or some other fixed method of mounting the blank to the lathe, you could use a Jacobs chuck in the tailstock. Another possibility would be to re-mount the work in Cole jaws for the drilling.



15 Re-mount the work on the lathe and, using a shear sander or sanding pads in a cordless drill, sand through the grits from the coarsest needed to remove any tool marks through to 320 grit.



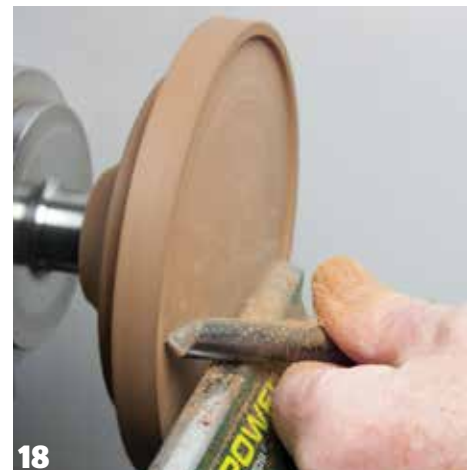
16 For the table, mark the overall diameter and the internal and external diameters of the cove and mount it on the lathe using the same mounting method as for the base. As for the base, ensure everything is secure and that the work clears the toolrest when turned by hand.



17 Use the bowl gouge to turn the top to the pre-marked diameter then turn away the waste to form the underside of the table section and the outer edge of the coved section. Take care to form a flat base and a neat square joint between the two planes. Mark the upper extent of the cove with a pencil line. Now, continuing to use the bowl gouge, form the shape of the cove, matching it to the shape of the cove on the base as closely as possible. Cut carefully to the marked sizes. Drill the mortise for the column as done for the base and then, using the mortise as a mounting point, re-mount the work on the lathe using a scroll chuck and suitably sized pin jaws or other small jaws to fit the mortise.



18 Use the bowl gouge to form a lip at the outer edge of the top surface and level off the surface using the lower edge of the gouge to shear scrape. You could use the beading and parting tool to begin to form the lip if you prefer.



Sand the piece all over to a fine finish. Now, glue the tenons of the column in place in the mortises of the top and base using a suitable adhesive. Once set, remove any surplus, clean up the joints and apply the finish of your choice, I used two coats of Osmo poly-x oil to give a semi-gloss finish. ●