

Making a Singapore ball

Refer to 'Woodturning Wizardry', David Springett, GMC Publications, pp 147-154.

Making the ball

- choice of timber: to take a good polish
not too brittle (problem with ebony)
fine grained
success with hawthorn, cocobolo, thuya burr
- ball turning jig
- we all know size doesn't matter, but around 70mm dia looks 'right'.

Marking out

- measure final diameter of ball
- *set compasses to 0.526 x diameter of ball*
- make sure any major blemish is covered by first hole
- mark first 12 'primary' holes
- mark 20 'secondary' holes by filling in between each three primary hole positions (trial & error).

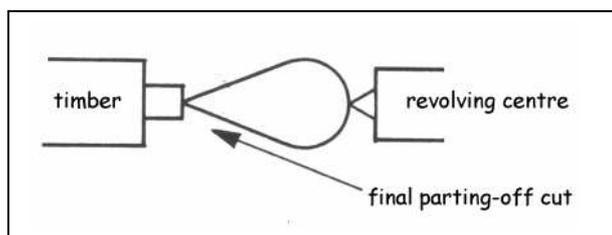
Holes

- *make holes 10mm dia x 18mm deep*
- holding the ball simple cage chuck with screw-on front
line up using point of revolving centre
- depth of hole important mark with tape or tippex on drill bit
- undercut hole special tool ground from small chisel
- must drill/undercut all 32 holes before continuing
- sand lightly to remove pencil marks, seal and polish.

Points

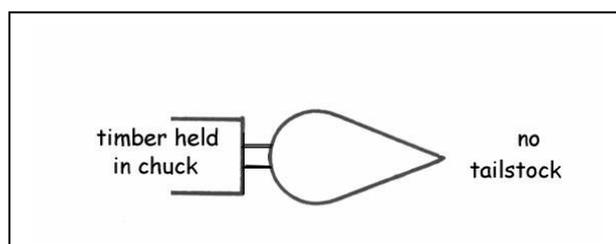
- choice of timber fine grained to take a good polish
hard
success with ebony, box, cocobolo
contrasting timbers work well.
- length of point fairly crucial, the points should 'retreat' completely into hole
- *make points approx 10mm dia (see later) x about 17½mm long*

David Springett turns them between centres with the point nearest the headstock:



but it is difficult to part off **and** get a good clean point this way.

Instead, hold the timber in a chuck, clear the tailstock out of the way, and turn the points the other way round:



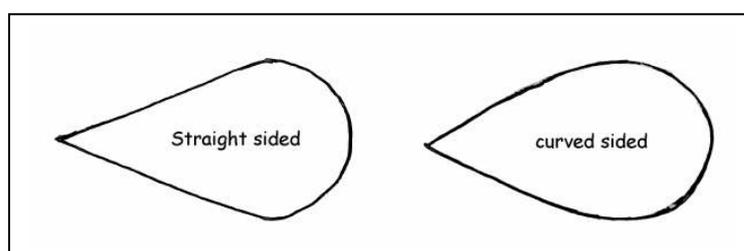
There are several advantages to doing it this way:

- it is easier to adjust the length of the point and it can be sanded and polished before parting off
- parting off is at the **back** of the point where any imperfection will be hidden in the hole
- the point can be **tried for size** in the hole, because the tailstock isn't in the way. This is very useful because although the holes were all drilled with the same drill, any random vibration will mean that they vary slightly in size, and this can make a critical difference. Make each point for a particular hole
- With care, a longer piece of timber can be held, allowing half a dozen or more points to be turned in quick succession.

The points are turned with a diameter a smidgin bigger than the hole they are to fit.

Shape of points

It's a subtle difference, but I think David Springett makes his points too 'straight-sided', too conical. I prefer a teardrop shape with gently curved sides:



Inserting the points

It's very important not to damage the points when inserting them, flattened points look awful and will spoil the job. Make an insertion tool with a padded conical hole so the points can be pushed in with no damage.

Insert the points as they are made and finally give the ball a wax and polish on a buffing wheel.

and finally...

Barring the first one, which was a disaster, and the second which I gave away, I have sold almost every Singapore ball I've made. They are steady, but not big sellers; at an average craft fair around Christmas time I might sell two or three. If you make one, it will take a long time - don't sell yourself short.

People always want to know how the points get into the holes and come up with all sorts of ingenious theories, usually involving heat, water or both. I always refuse to tell, unless they buy the ball!

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PS

These notes are made with all due respect to David Springett. I've met David on a couple of occasions and he seems a likeable sort of chap. It's easy, as I have done, to take someone else's efforts and make small improvements. Figuring it all out from scratch, as David has done, is a much more difficult matter entirely and he deserves full credit for having done so.