

Bowls on a Budget

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1 It is undoubtedly true that any job is easier if you have the right tools for it, but that doesn't necessarily mean it can't be done without them.

live centre. Nowadays these two accessories are often supplied as standard with many lathes.

In the June 2006 issue of Woodworker & Woodturner I made a bowl using a four-jaw scroll chuck and a vacuum chuck to hold the workpiece. However, these are expensive items, a scroll chuck can cost around £150 and a ready-to-use vacuum chucking system might set you back about £800. Even my home-made vacuum system cost about £140 to build.

I'm starting with a sycamore blank approximately 150mm diameter and 80mm thick (roughly 6" by 3"). It is spalted and a little soft in places, but I think it will make an attractive small bowl if handled carefully.

As the middle of the faceplate consists of a rather large hole, centring it on the blank can be tricky. Two pieces of tape stuck across the faceplate and 'halving' the screw-holes [1] should cross in the centre and help position the plate on the marked centre of the blank [2].



2 For many woodturners, especially those new to the craft, the cost of chucks like these would be a major expense, perhaps comparable to the cost of the lathe itself. Add the cost of a grinder, a bandsaw, pillar drill, gouges and so on, and it is likely that many beginners will have to make do, at least for a while, without some of the more expensive items.

Pilot holes are drilled [3] and the faceplate screwed down securely. Note the notch filed next to one of the screw holes and the arrow drawn on the blank [4]. This aids accurate replacement should it be necessary to remove the faceplate for any reason.



3 Necessity, as they say, is the mother of invention and for years before scroll chucks were invented turners had devised other ways of holding the wood when making a bowl. One of these, which I will demonstrate in this feature, utilises only a faceplate and

Always have a good look at the timber before you begin to turn. An almost invisible crack alerted me to this loose section [5] which might have had unpleasant consequences if it flew off at high speed.



6 The spigot size is marked, and shaping the bottom of the bowl is started. Use a pulling cut outwards from the centre [6] and change to a pushing cut [7] as you work around the curve of the bowl. In this case the cut is stopped short, forming a thicker rim on what will become the top edge of the bowl [8].





The tool rest is moved to the front of the bowl and the top edge is trued up with the gouge [9].

A wide parting tool is used to round over the top and bottom edges of the rim [10].

Returning to the foot of the bowl, the same chisel is used to form a parallel-sided spigot which will be used later to hold the bowl while the interior is excavated [11].

A straight scraper is used to ensure that the base of this spigot is perfectly flat [12]. Check it with a straight-edge [13].

With the rim and the spigot shaped, the outside of the bowl is sanded,

beginning with 120 grit and working down to at least 400 grit [14].

Seal the surface [15], wax and polish it with a soft cloth [16]. Take care not to wrap the cloth around your fingers - just in case.

Remove the bowl from the faceplate and replace it with a piece of scrap wood - in this case I used a piece of beech about 25mm (one inch) thick [17].

Cut a recess in the scrap which is a good fit for the spigot, taking care to get the bottom of the recess perfectly flat [18].

It always takes a bit of trial and error to get the recess the right size, so keep it shallow to start with. If you make it too big you can level the surface and start again. The base of the spigot and the bottom of the recess must make good contact with each other, so they must be flat. The sides of the recess are simply to locate the spigot accurately, so the recess does not need to be especially deep. In fact, if the spigot does not disappear entirely into the recess then you can be sure that the mating surfaces are definitely in contact.

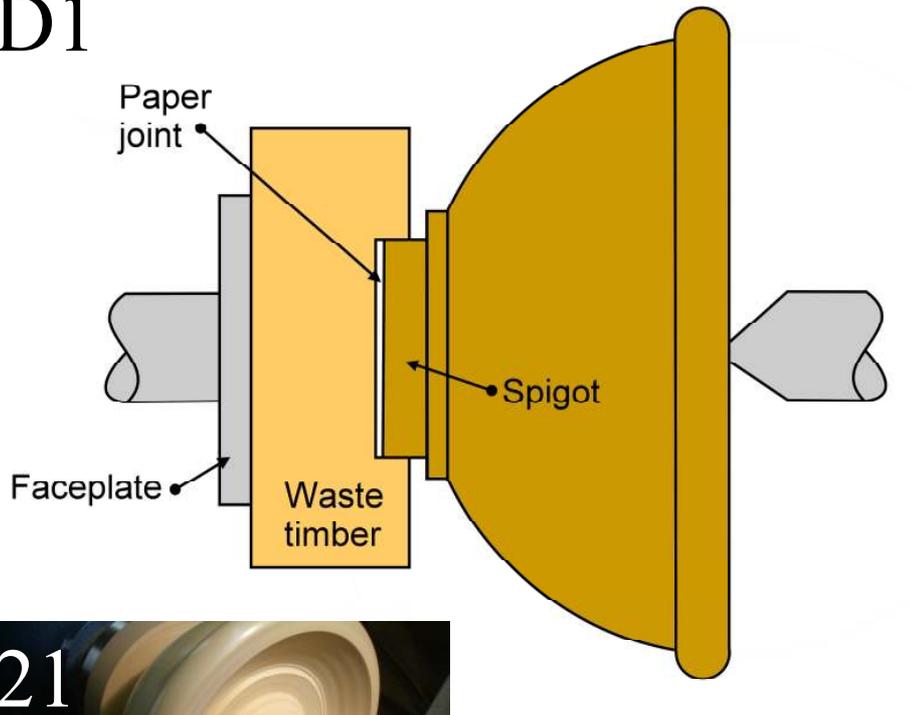


Using the spigot as a guide, cut a circle of a good quality, fairly thick, paper [19].

Spread a thin layer of PVA woodworking glue in the bottom of the recess and on the spigot. Press the two parts together with the paper disc sandwiched between them [20], using



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severely restricts access and not much can be achieved until it can be moved.

When the glue is set the tailstock is removed and the central 'boss' can be turned away allowing the inside of the bowl to be completed [22].

Check the wall thickness, especially near the bottom of the bowl [23].

At this point I remembered that the inner edge of the rim needed rounding over. This really should have been done earlier while the walls were thicker and offered more support. The truth is I forgot...but anyway...

...the wide parting tool managed the job without mishap [24].

The interior is power sanded as far as 400 grit [25], then sealed waxed with beeswax and carnauba wax and polished with a soft cloth [26].

The bowl must now be separated from its beech support. A narrow parting tool is used to cut away the beech around the spigot. Light cuts are taken to avoid knocking the bowl off prematurely [27].

Soon the paper joint is revealed [28].

With the lathe stopped a sharp knock with the heel of the hand splits the paper joint and frees the bowl [29]. A little of the paper is left on each surface.



21 the tailstock to apply pressure to the joint [D1].

The glue should be left overnight, at least, to set properly. Some work on the bowl interior can be started immediately [21] although the tailstock





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Use a centre-finder to mark the centre of the spigot [30].

A piece of MDF or similar is fixed to the faceplate, turned to round and a layer of foam rubber (in this case an old mouse-mat with the fabric pulled off) glued to it. It provides enough grip to hold the bowl, supported by pressure from the tailstock on the centre of the spigot [31].

The spigot is removed and the bowl foot reduced in size [32].

The corner of the foot is rounded to match the curved rim, and a couple of decorative rings are added with the corner of the wide parting tool [33].

Most of the foot can be sanded and then the bowl is removed from the

lathe and the remaining small spigot is removed with a sharp chisel. The foot is given a final hand sanding then sealed and polished off the lathe [34].

Tools used [35]:



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