Of Pottery Wheels and Old Fashioned Technology

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In the woodworking world, despite all the innovations and new tools that the vendors and tool suppliers would like to sell us, things actually change rather slowly. New technologies take a long time to diffuse into the workshops of hobbyists. Tools and machinery last a long time, and often outlive the owner. This is a welcome change from the modern world of appliances and computers which have a replacement cycle of three to five years. This is sometimes forced due to a lack of support and spare parts.

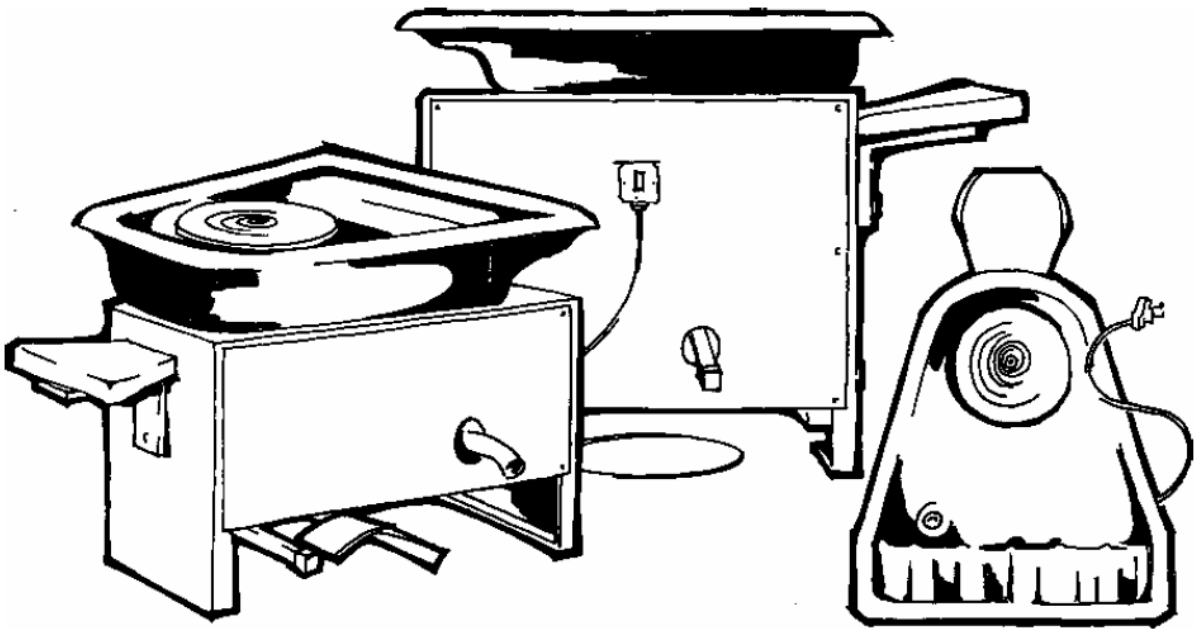
I think a lot of woodworkers like the relative permanency of the tools they use and wooden objects they make. It makes a nice change from our modern throw-away society. Most of the machines and appliances we use are imported, so it was nice to come across an example of Made-in-South-Africa machinery.

Like woodworking, pottery is an ancient craft. The pottery wheel is probably as old as the lathe, if not older. The first wheels were so-called kick-wheels that used a large flywheel that the potter kicked to make the wheel spin when throwing a pot. Nowadays, most wheels are motorised. Kick wheels are still used, but these are unusual. They are like a pole-lathe would be for wood-turners – usable, but not much used for production purposes these days.

I inherited a motorised pottery wheel that needed repairing. The drive disc has a poly-urethane tyre that had disintegrated. I should point out that the unit in question was made in 1985, so I wondered whether I would be able to source a replacement tyre, and if not, how I was going to make a new tyre. The drive disc is an aluminium disc with an approximately semi-circular section poly-urethane tyre bonded onto it. This wouldn't be a simple turning job.

Noting that it was branded a DABEB wheel, with Google, I searched and lo-and-behold – the company still exists. (See www.dabeb.co.za.)

I phoned and spoke to a very helpful lady: "Bring it in and they will fit a replacement, while I wait, for R875-. Alternatively, I can remove the drive wheel and they will exchange it for a new one, for R100-less." I opted for to take the wheel in, as I wasn't sure quite what was involved in the replacement process. Some mechanical dismantling was required, and without a parts breakdown drawing, I was unsure what had to be dismantled and the order of dismantling. I have encountered enough hidden grub-screws on shafts to be wary.



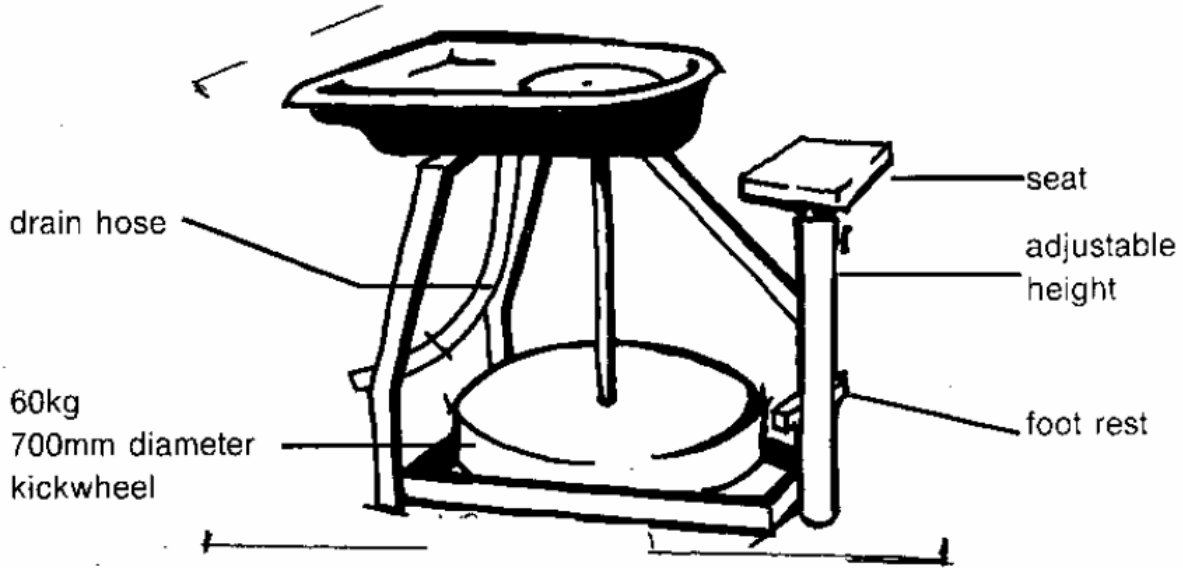
The wheel fits into the back of a station wagon, so at 7h30 one morning, I was waiting outside their factory in Randvaal, just off the R59 in Vereeniging. An hour later, I was on my way back to work.

The colour picture above is from their web site, and shows a slightly taller version of the one that I had repaired, but it is almost the same design, 26 years later. Apparently, they started making wheels to this design in 1979, and you can still buy one from them today. The man at Dabeb who repaired the wheel while I waited has been working on them for over 20 years now. I watched him do the job, and am confident I could do the job next time. However, I am pleased that I took it there, as he also adjusted and lubricated the wheel, and explained how to look after it. I didn't receive any written instructions with the wheel, so this was welcome.

To operate the wheel, you sit astride the wooden seat, and turn on the motor with the switch on the left-hand side. Then you press down on the pedal on the right-hand side, with your right foot. This causes the turn-table to rotate at a speed that depends on how far you push down the pedal. The speed can be varied from 30 to 300 rpm.

Underneath the turn-table, below the plastic tray, on the same shaft is the drive disc. This has a polyurethane tyre, which had disintegrated due to age. The motor is a 250W (1/3 horsepower) 4 pole induction motor that spins at 1400 rpm. It has an aluminium drive cone fitted onto the shaft that engages the drive disc when you push down on the pedal. Initially, just the small end of the cone touches the drive disc, at the smallest diameter and the wheel head rotates at the slowest speed of 30 rpm. Pushing the pedal down to the full extent, moves the cone to the largest diameter for the fastest speed of 300 rpm. Any speed in between is also possible, depending on the pedal position. Apparently, in full time use, the life of the polyurethane tyre is 5 to 7 years. Given that the wheels will probably last a lifetime, there will be a steady stream of replacements required over the years.

Dabeb also make kick-wheels – I didn't see one there, but here is an illustration from their brochure.



DABEB KICK WHEEL — DKW

The only modern materials in the kick wheel seem to be used in the fibre-glass tray – the rest could have been made at any time over the last two millennia using wood and iron.

The cabinet is powder-coated, which will greatly help durability in the continuously wet working environment of a pottery studio. This is mostly old-fashioned technology, backed up with old fashioned good service! And all made here in South Africa.

(They also make kilns and clay processing equipment.)