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## Restoration of Historic Machines

12 seat Row Boat of 1868 found as just metalwork with no wood remaining



Bent axles needed heating and bending back with a specially built mini jim crow.



You never find complete undamaged machines, wood rots, metal rusts. The remains have been driven into, parts have been scattered, cannibalised or scrapped.

You sometimes have to wait years to find missing parts, hunting through brambles, puddles, scrapyards and auctions.

You have to play detective tracing machines through generations of owners.

You have to memorise parts and spot potential under mud, rust, grease and occasionally paint.

Most restored working machines have new or donor parts.

All of the above applies to the two machines described.

Perfection is a myth.

We are happy to give advice and help if we can, just ask.



Experimenting in the back garden to find the correct length of the missing connecting rods, before fabricating a new ones.



Restored and ready to go, needs a very big trailer to shift it.

1890s Buda Velocipede was very neglected, it needed new wheels under the driver. A complete new bearing and a new pedal. With some parts needing building up with weld.



"Little One" the cat had to try it out for size when completed.



Old wheel had a touch of metal moth, replacement wheels were from another Buda.



The bearing cross section.



Original bearing



New one being split on the bard saw



New bearing, cup being turned and drilled

## Foot rest stirrup (Pedal)





Original BUDA parts, the other side was gone completely. The "Foot rest hanger V 26" was rusted away to a point with nothing on the end.

## **Fabrication from tube**

Because it is easier to flatten a circle into a curve than shape a curve out of a flat. I made a paper pattern from the real one, taped it to gas pipe and marked the metal. I centre popped and drilled two holes (to become the notches), then cut the blank out and "flattened" it to the desired curve.



Original BUDA cast one on the right fabrication (the middle one) from 1" gas pipe (on the left). The end curl upwards, to stop your foot slipping off, has yet to be forged. (I believe the 1" is the pipe's internal diameter).



The other part of the fabrication was from 10 mm mild steel. The two notches make the stirrups fit left and right at the correct angle, from the same pattern and castings.



I turned a bobbin from scrap to form the upturned end on the stirrup.



The bend area (discoloured) was heated to cherry red with an oxy-propane torch and knocked round, keeping the curve round the bend.



New finished Stirrup and bolt.