

Construction of the Mobile Bike Pump

1st Prototype

Built in the UK. A-shape frame design.

Photos available in my thesis

2nd Prototype

Orange and White frame. A-shape frame replaced by seat post and seat tube combo for height adjustment.

Built at Maya Pedal. Worked OK, but we refined the design a little in the 3rd prototype to make it easier to build.

Here are the photos:





















The Final Design!!

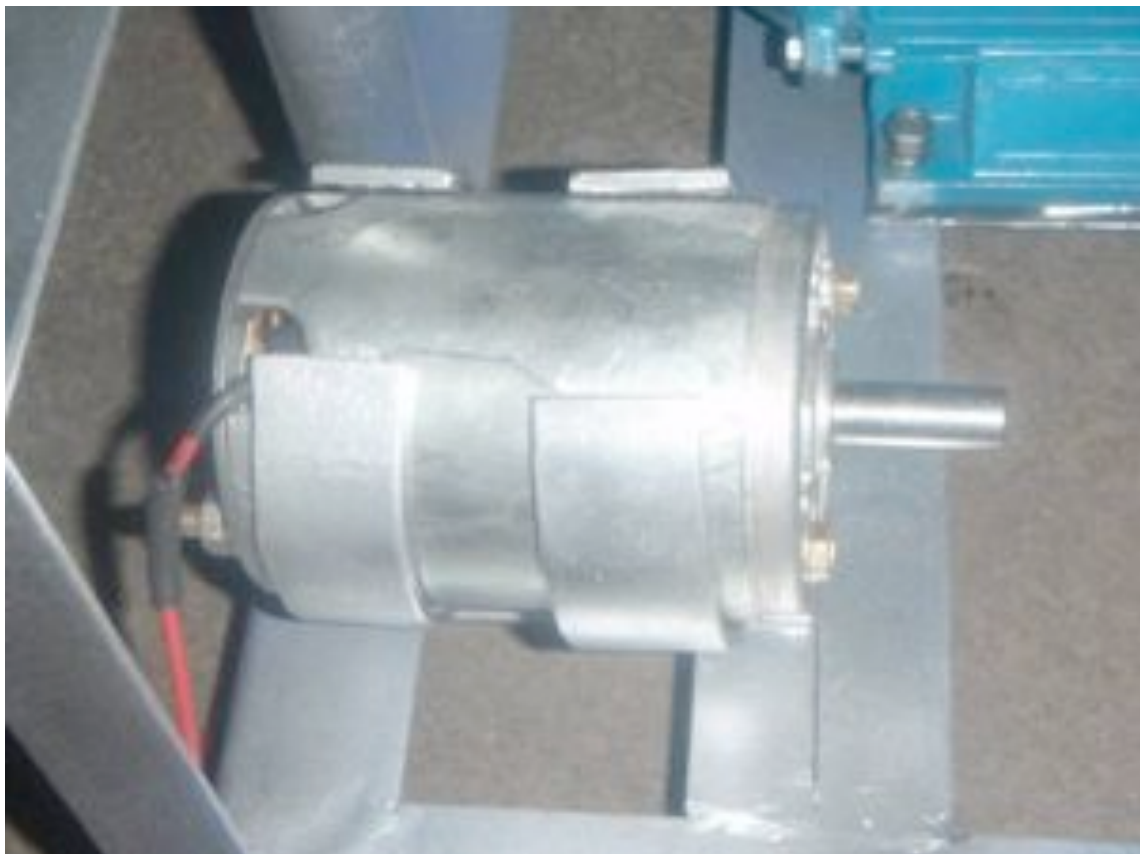
I've matched up the photos (where applicable) with the steps in the instruction manual I've also sent you.

Chrome finish frame. Frame design simplified for quicker manufacturing.

Pump lateral adjustment simplified.

Here are the photos:

If you see this cylindrical piece in any of the following photos, it shouldn't be there. Its a motor that we used asa generator to charge a battery as the guy who bought this machine also wanted a generator, so we stuck both the pump and the generator on the same frame. It worked fine, but is not necessary to make the pump:



Step 1 - Make the Base of the Frame





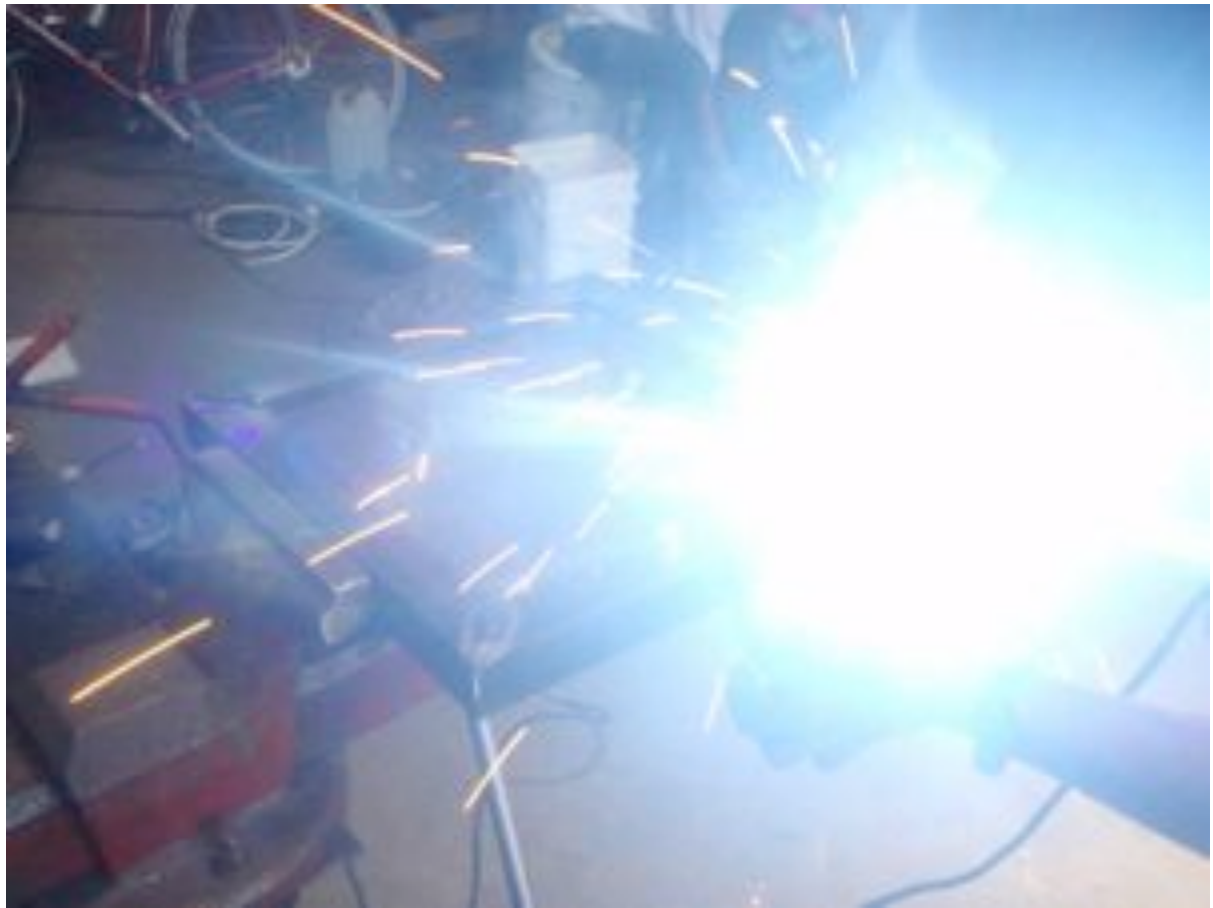


















Step 2 – Make the Sides of the Frame









Step 3 - Weld on Seat Tubes

































Step 4 – Weld Nuts to Seat Posts







Step 5 - Make the Axle Grips





Step 6 – Make the Pump Guide Rails

Step 7 – Assemble the Parts



Step 8 - Cut the Slot in the Frame











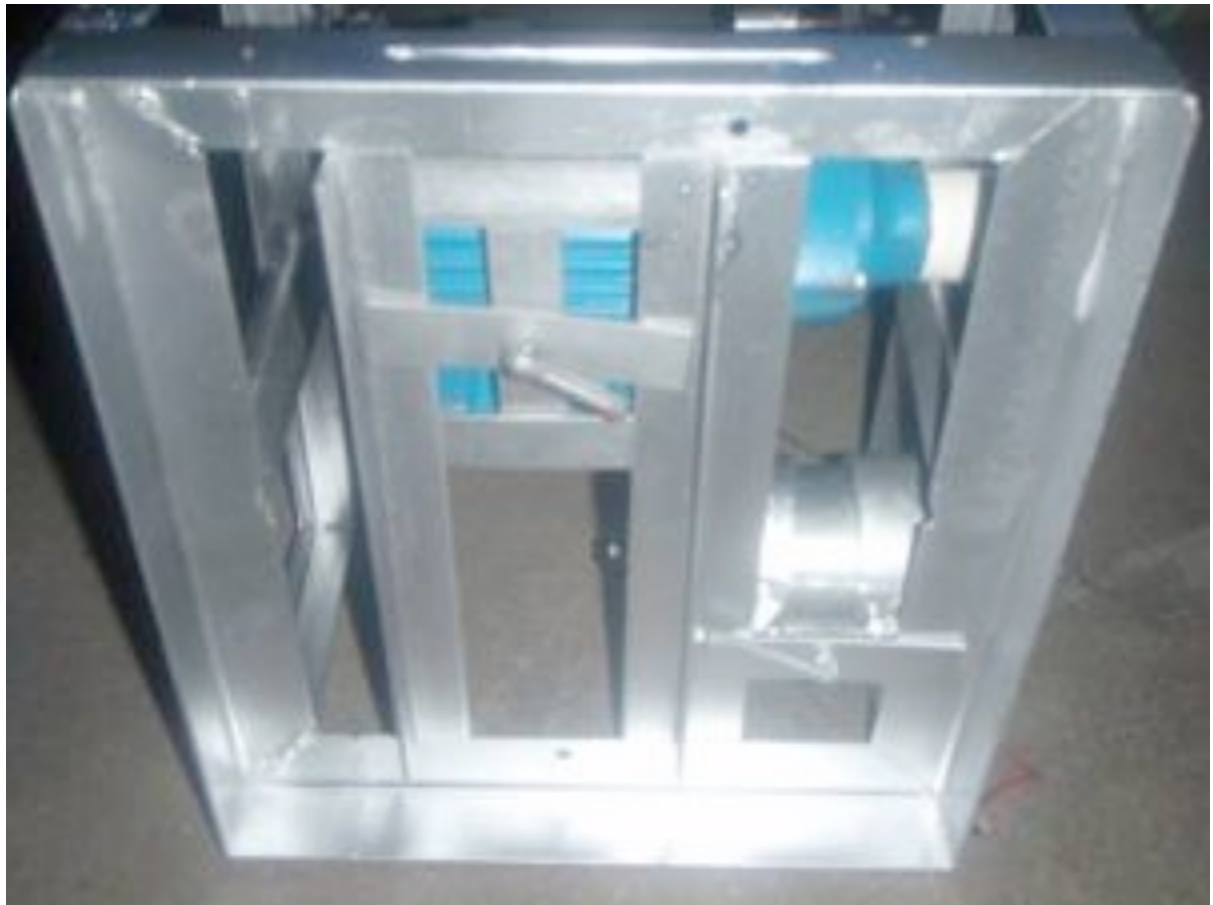






Step 9 - Make the Pump Base









**Step 10 – Cut Out the
Pump’s Electric Motor**

Step 11 - Cut the Slot into the Pump Casing





**Step 12 - Cover the Roller
in Rubber**

Step 13 - Reassemble the Parts









Step 14 – Testing the System



Step 15 - Painting







General Photos of the Finished Machine

















