

A pedal crank assembly that generates double the torque under similar force compared to traditional

The technology is a simple crank pedal assembly that facilitates to elongate effective length of the crank arm. This helps to produce almost double the torque generated by a traditional pedal crank in a manually driven vehicles under the same force.

The subject pedal crank assembly gives rise to almost double the torque compared to that of a traditional one under same force. It can be fitted on a bicycle, rickshaw, and many other equipment which are manually driven. Higher torque can be used to increase the comfort of driving, increase speed of the vehicle that it drives, increase the amount of load that can be pulled by such vehicle without any other change or any other source of power. The increased torque will give rise to many other possibilities such as vehicles for several specialized purposes particularly for rural areas.

Salient Features:

It saves energy and/or increase output under same force. Doubling of torque will give rise to doubling of output by all manually driven equipments across the globe from the existing level.

It will reduce use of fossil fuel as manually driven vehicle with subject technology will be faster; more people will use bicycle for short distance movement which is economical and healthy, (iii) people getting old within short period of taking to pulling rickshaws will find it much comfortable to drive – can carry more passengers with reduced efforts can drive faster making it attractive to passengers; will lead to healthier rickshaw puller across the globe, (iv) more and more people will take rickshaw pulling as profession, (v)reduced dependence on automated vehicles will cause less environmental pollution, (vi)reduce consumption of fossil fuel and add to economic advantage to countries depending on imported petroleum, (vii)will facilitate manually driven vehicle in hilly terrain, (viii)does not add many parts or complexity to the existing system, etc.

Major Application / End Users

All manufacturers of Bicycles, Rickshaws, and several other implements that can be operated manually with the increased torque. Manufacturers of several agricultural implements, some existing and some to be evolved will use the technology. Some popular technologies invented by grass root innovators will turn highly viable and relevant with the fixing of the new pedal-crank system. I am confident that within five years from now almost everybody will touch

this technology at some point of time in their life. Not sure if the racing cycle will be permitted to fit this pedal.