

LEVER DRIVE CHAINLESS BICYCLE

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ABSTRACT

The bicycle are one of the lever systems developed by humans, which are comfortable for land transport. This Bicycle consists of the following parts: oscillating leer, torsion spring and mounting plate. The lever is fixed on the bicycle frame and it is pivoted at a point, between the mounting plate and lever, a torsion spring are presented. The gear sector is mesh with freewheel to the lever end. The traditional drive mechanics are replaced by the oscillation of a lever in a rotational motion of the wheel, the performance by the oscillation of the drive. It is invented to design a bicycle through the rectilinear reciprocation of the pedals. This mechanism includes a crank lever which forced by the driver legs, the driver pushes the drive arm which allows the rotate drive wheel. Rotation of the drive wheel deliver torque rear wheel of the bicycles, by gearing mechanism. The position of the crank lever maintains through guide lever during the reciprocal cycle. The lever is driven downwards by human leg and torsion spring is used to bring it back or up. The main purpose of this project work is to decrease the effort required human for cycling and providing a medium of transportation for peoples with shorts legs and handicapped to his or her.

KEYWORDS: Bicycle, Human.

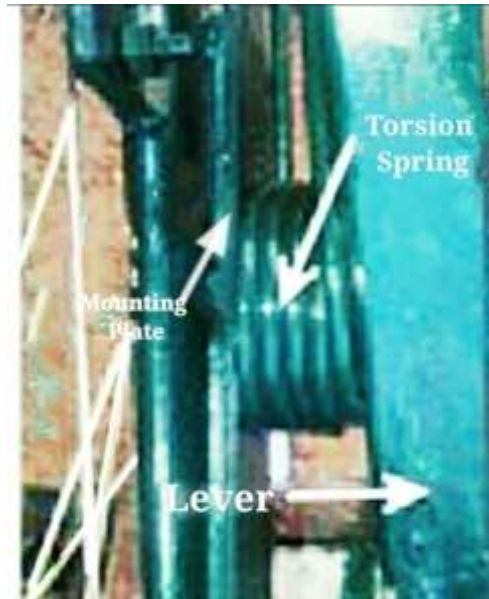
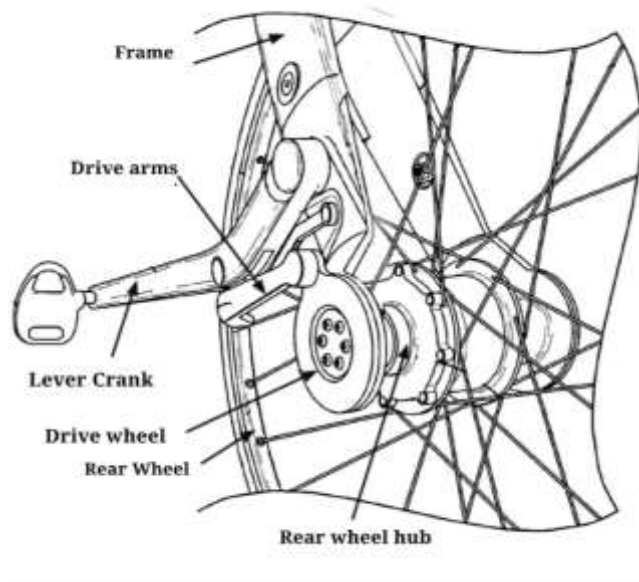
I. INTRODUCTION

Probably ever since the bicycle was first invented, people were looking for an alternative to the traditional pedaling approach. But we have used an option in this bicycle it is claims a chain-drive bike is not much efficient. That are the levers that run from the pedals to a linkage on the rear hub. These allow riders to push up and down pedals, which causes the rear wheel to spin. There are number of advantages to this setup. It is much efficient than a chain or belt-drive, because the levers is longer than cranks, riders are deliver more torque to the wheel for a less effort, because the pedals move up & down (vertically), Gravity force are more useful for riders to help move down lever crank and torsion spring pull then up. Additionally, this system is said to comfortable for driving hips, ankles and knees, plus it doesn't require users to pull an oil-stained while eliminate the rear wheel.

II. LITERATURE SURVEY

Koichi Tagawa. [1] An object of the invention is to provide a dense, low maintenance drive mechanism, particularly for addendum bicycle that will allow each rider to pedal at his own cadence, and that can also serve as a low maintenance, chainless drive for single bicycles and tricycles. Briefly, this invention involves a pedal drive shaft on the wheel axis, a planet gear carrier fitting is mounted and operated on pedal, Two ball braring are mounted on the pedal drive shaft and gear case also connected. with an integral cylindrical gear case squeeze to the bicycle frame so that the gear case cannot rotate.

III. METHDOLOGY



Drive wheel. [1] A bicycle mechanism said drive wheels by an internal gear hub and freewheel transmit torque to the rear wheel.

Crank lever. [2] To enhance the performance of the propulsion mechanism, more bends provide by the lever.

Drive arm. [3] Drive arm includes and adjusting its mounting position to the drive wheel and pitman arm do same work.

Propulsion mechanism is adapted for mounting to conventional bicycle frame

IV. RESULTS

It is able to go faster with less effort using the mechanical application of leverage and gravity. Longer pedal cranks provides power to the rear wheel for a longer period of time. Near vertical pedaling and gravity, attached with the riders weight and it's provides continuous force during the pedal stroke. There's less stress to the knees, ankles and hips and

it's easy to store safely. Simply put, this is more accomplished and these concepts works on the all bikes: Rickshaw, kids bikes, Mountain bikes and Beach Cruisers.

V. CONCLUSION

These bicycle are connected to the levers, that run from the pedals and it also connected to the linkage on the rear hub. These allow riders to push up and down pedals. Which causes the rear wheel to spin. There are a number of advantage to this setup. It's more accomplished than a belt-drive or chain, because the levers is longer than cranks, riders delivers the torque to the wheel with little effort by himself. Pedals just move up & down (vertically), riders can more emphatic use already seems to be gravity force pushes it down. Additionally, the lever-drive system is comfortable for driving hips, ankles and knees. This dose not require consumers to pull an oil-stained selection while removing the rear wheel.

FUTURE SCOPE

There is a new sport for India, its name is cycling and it is developing very fast. It grew very rapidly in the last 10 years. "cycle racing" India has own personal private cycling team. There has been a distinct jump in the number of bicycle sold in India. Just from firefox in 10 to 15 years ago now we have shwinn, scott, trek, cannondale, Btwin and Indian upstarts like Mach City are setting up factories in India. Yet most cycle's are imported from abroad (brand such as Fuji and Pinarella) and they suffer the heavy importing tax that the government charges. As the awareness about the cycling sports increases the number of fans. It will force every brand around the world to produce, keeping in view the demand of the people and its price will come down. Cycling in many areas like Chennai, Bangalore and Hyderabad due to heavy. From this it can be estimated that how good is its Future Scope.

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