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FITNESS BICYCLE

Shahil[1], Sandeep Kumar Kori[2], RadhyeShyam Maurya[3], ShailendraPratap Singh[4]

[1,2,3,4,]Undergraduate Students Department Of Mechanical Engineering
Buddha Institute Of Technology ,CL 1, Sec-7 GIDA, Gorakhpur, U.P.(India)

ABSTRACT

Fitness bicycle is new way of cycle with the help of treadmill. It is combination of treadmill and bicycle .when we use are walking on the treadmill, we push the treadmill backward with our feet. The chain and sprocket arrangement are help to go forward. The motion is generated by the human effort in the backward direction and this backward motion converted in to the forward motion by the mechanical arrangement. Fitness bicycle consist of the components i.e. three wheals, small motor, battery, and treadmill.

Keywords: Fitness bicycle, treadmill, chain and sprocket, human effort.

I.INTRODUCTION

It bicycle is helped to exercise also help to move one place to other place. Now a day the treadmill is use for walking at define speed as exercise and we also combine with bicycle treadmill bicycle which help both propose exercise as well as help to move one place to another place. The motion of treadmill generated by human effort due to which bicycle moving talked place from one place to another place. This fitness bicycle having less effort for driving than walking in the park.

II.LITERATURE REVIEW

KirtishBondre_et_al [2016]

In this paper we found conversion of a conventional bicycle into treadmill bicycle

SuhasineeRavinadra_et_al [2013]

In this paper with the electric assist it takes no more effort to walk then “a walk in the park”

III.OBJECTIVE

The objective of this project is to supply power input to bicycle with the help of treadmill, a chain and sprocket arrangement. This is helpful in walking on treadmill and to move from one place to another. The design is comfortable for people of all age groups.

IV. FIGURES AND TABLES

Sr.No.	Part	Material	Dimension(mm)
1	Frame	Mild steel	1320.8*546.1
2	Roller	Mild steel	L=427 D=45
3	Treadmill belt	Nylon rubber fabric	360*1120
4	Sprocket	Chrome steel	D=210
5	Free wheel	Chrome steel	D=80

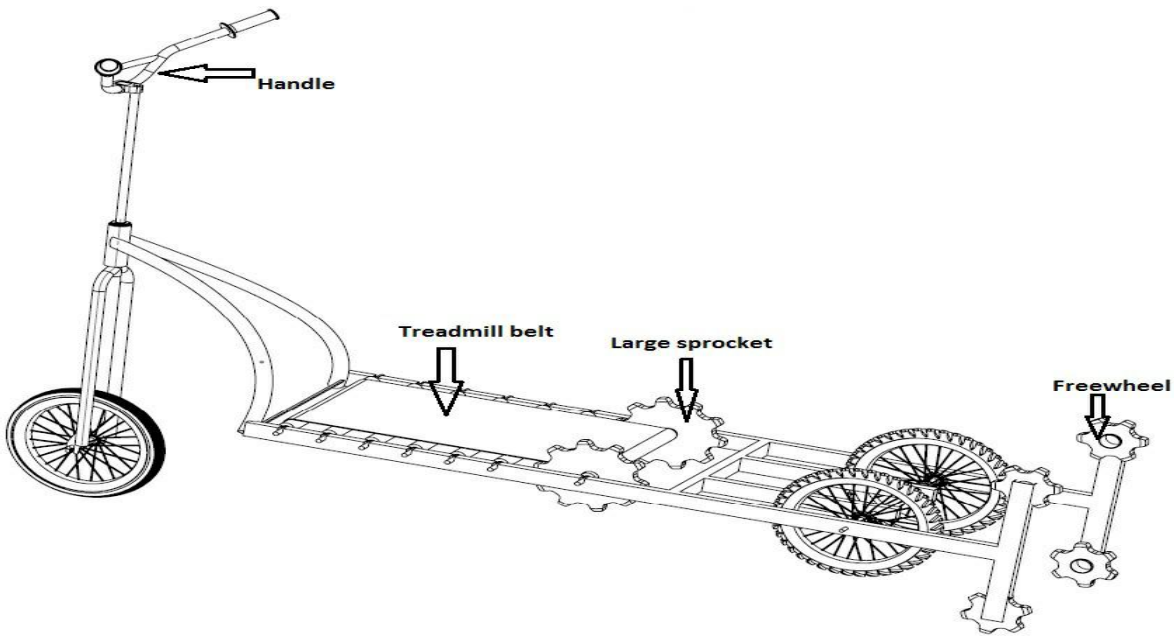

Fig1. Block diagram of model

V.COMPONENT

1. Roller
2. Frame
3. Wheel
4. Belt
5. Chain& sprocket
6. Handle

Treadmill bicycle is modified form of bicycle. We use the mild steel frame and with help of bearing we made the rollers, which use provides support on treadmill belt. Sprocket and two freewheel rotate in clockwise direction and a freewheel

VI. WORKING

The Working of the fitness bicycle is following steps-

1. Rollers rotate through belt by human effort.

2. Motor also drives the bicycle.

3. Bicycle run on the road.

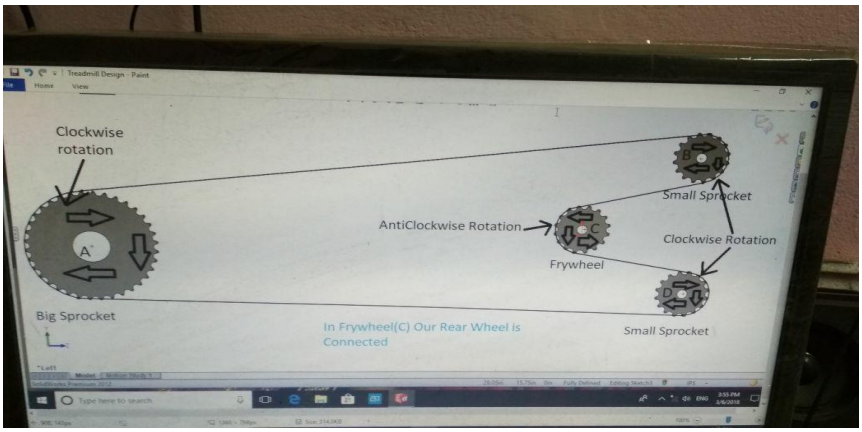

Fig: Mechanism use for power transmission in fitness bicycle

VII.MATERIAL SELECTION

The material used in this project is as follows-

1. Mild steel

2. Nylon rubber fabric

3. Chrome steel

1. MILD STEEL- The frame of treadmill & rollers are made of mild steel. Mild steel is high tensile strength. It has moderate factor of safety, because of factor of safety result in unnecessary wastage of material and heavy selection. It has good mechanical property i.e., it is easily machinable.

2. NYLON RUBBER FABRIC- The belt of treadmill bicycle is made up of nylon rubber fabric. It is easily available and less in cost and having property of wear resistance. It smooth surface and rotate on the rollers.

3. CHROME STEEL- The most common material for bearing is chrome steel, a material with approximately 1.5% chrome content. The bearing is use in roller which uses treadmill it supports the treadmill belt and helps to rotate easily.

VIII. CONCLUSION

Our project transforms treadmill into into a bicycle. It is human powered vehicle. It brings cycling up to a next level. This is helpful in travelling as well as for exercise purpose.

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