

MAGNO BICYCLE

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Abstract

The main aim of our project is to present the idea of harnessing the various energy and use it in today's existence of human life. Now-a-days there are so many vehicles on road, which consumes more fuel and also hazards our environment. It is our responsibility to reduce the consumption of fuel and its hazardous emission products. Taking this into consideration it is our small step towards reducing the use of more fuel consuming vehicles and attract the eye of people towards its alternatives i.e. Magno bicycle. So we intend to design a cycle which would run on an alternative source and also reducing human efforts. In our project we designed an alternative mode of transport for betterment of social and environment. Increasing demand for non-polluting mechanized transportation has revived the interest in our project "Magno bicycle". However, the use of bicycles has been limited to very short trips. This report describes the design of an magnetic assisted bicycle that will extend the range of a typical rider. The rate of improvements in technologies is at an exponential level so we came up with our project. The system design is based on magnets placed at the back wheel of the bicycle.

1. INTRODUCTION

In today's modernized world travelling is very essential for human beings in order to protract in this world. And to do so this travelling should be done in an easy way and in jiffy. The system which we innovated is "Magno bicycle". An magno bicycle is a type of vehicle based on a traditional bicycle to which an magnets has been added to propel.it is an ecological and urban means of transport and its source of energy is a magnets. This magno bicycle works with help of magnetic force produced in between the magnets which are placed in the cycle tyre. The main purpose of using this magno bicycle is that it is eco friendly and relatively cheap .The aim of the present work is to study the energy efficiency of the electric bicycle

and he possibilites for re-generating of energy in a short time.

2. RELATED WORK

This literature review highlights key finding from available research and is organized around common themes found across research, then the further categorized by identified concerns and concentrations. An electric bicycle is a motorized bicycle with an integrated electric motor used to assist propulsion. Many kinds of e-bikes are available worldwide, but they generally fall into two broad categories: bikes that assist the rider's pedal-power and bikes that add a throttle, integrating moped-style functionality. An electric bicycle (e-bike, eBike, etc.) is a motorized bicycle with an integrated electric motor used to assist propulsion. Many kinds of e-bikes are

available worldwide, but they generally fall into two broad categories: bikes that assist the rider's pedal-power (i.e. pedelecs) and bikes that add a throttle, integrating moped-style functionality. Both retain the ability to be pedaled by the rider and are therefore not electric motorcycles. E-bikes use rechargeable batteries and typically travel up to 25 to 32 km/h (16 to 20 mph). High-powered varieties can often travel more than 45 km/h (28 mph). In some markets, such as Germany as of 2013, they are gaining in popularity and taking some market share away from conventional bicycles,[2] while in others, such as China as of 2010, they are replacing fossil fuel-powered mopeds and small motorcycles. The first thing you should know about e-bikes is that they're here to stay. Electric bike sales jumped by an incredible 240 percent over a 12-month period as of September 2021, compared to two years prior, according to the market research firm NPD Group. It's a nearly \$27 billion industry as of last year, and there's no sign of a slowdown. Some view the rise of e-bikes as a threat, as though standard bikes will go the way of the penny-farthing once everyone goes electric. But fear not: E-bikes aren't here to rob us of our human-powered way of life. In fact, they may very well enhance it—especially as travel and commuting habits change following the coronavirus pandemic and shift of work commuting. So as we roll our way into peak riding season, here's everything you need to know about the electric bike revolution. A bicycle, also called a pedal cycle, bike or cycle, is a human-powered or motor-powered assisted, pedal-driven, single-

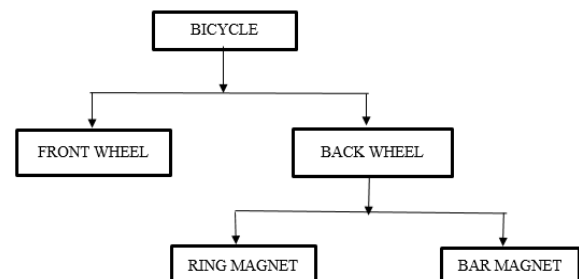
track vehicle, having two wheels attached to a frame, one behind the other. A bicycle rider is called a cyclist, or bicyclist. Bicycles were introduced in the 19th century in Europe. By the early 21st century, more than 1 billion were in existence. These numbers far exceed the number of cars, both in total and ranked by the number of individual models produced. They are the principal means of transportation in many regions. They also provide a popular form of recreation, and have been adapted for use as children's toys, general fitness, military and police applications, courier services, bicycle racing, and bicycle stunts. The basic shape and configuration of a typical upright or "safety bicycle", has changed little since the first chain-driven model was developed around 1885. However, many details have been improved, especially since the advent of modern materials and computer-aided design. These have allowed for a proliferation of specialized designs for many types of cycling. The bicycle's invention has had an enormous effect on society, both in terms of culture and of advancing modern industrial methods. Several components that played a key role in the development of the automobile were initially invented for use in the bicycle, including ball bearings, pneumatic tires, chain-driven sprockets and tension-spoked wheels.

3. IMPLEMENTATION

In future electricity charges may become burden to maintain all e-vehicles as well as home appliances. To enhance the quality of life a new energy needed to be planned. The main objective of our project is to create a eco-friendly bicycle and very budget friendly with less manual power to

travel long distances. So to implement something new we came up with this idea “Magno bicycle”. **RING MAGNET:** A thin flat circular magnet where the thickness does not exceed the diameter and there is a hole through the center. Ring magnets are commonly used when a mechanical attachment method is needed to secure the magnet. Ring magnets are usually used in science experiments such as demonstration of magnetic repulsion where the magnetic rings are threaded through a wooden pole. When the same poles of the magnets face each other they won’t touch .Ring magnets are also occasionally used in medicine.Now-a-days we see that we have electric bicycles and e-bikes, In future electricity charges become burden to maintain all e-vehicles so to reduce that we have got a new source of energy in to existence that is Magno bicycle.In today’s modernized world travelling is very essential for human beings in order to protract in this world. And to do so this travelling should be done in an easy way and in jiffy. The system which we innovated is “Magno bicycle”. This Magno bicycle works with help of magnetic force produced in between the magnets which are placed in the cycle tyre. The main purpose of using this Magno bicycle is that it is eco-friendly and relatively cheap.For the project, we propose to design a Magno bicycle, to create a eco-friendly bicycle, and to do so this traveling should be done in an so easy way and in jiffy. This will not take more human energy, the magnetic force help to produce to run the bicycle.The project “MAGNO BICYCLE” is very useful for the students.It helps many people who cannot afford much human power to run

the bicycle, by magnets it will run as much as need.It is also to the people mainly for senior citizens.



4. EXPERIMENTAL RESULTS

The working model of our project is that we fix ring magnets and bar magnets to the back wheel of the bicycle so that when we pedal the bicycle it moves and due to motion ,magnetic force is produced in between the magnets. As we give some motion to it with the help of the magnetic force produced in between the magnets the bicycle continues to ride even if there is no manual power applied by the user. If we want to stop the bicycle we need to apply the brake then the bicycle stops automatically.



5. CONCLUSION

By the end of the project we have used the energy that is supplied due to force

between two magnets to ride a bicycle without need of manual energy.

6. REFERENCE

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