

Power Generation from Gym Equipment

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Abstract

Currently, there is a shortage of traditional energy sources, so renewable energy sources must be used. This project will deal with systems that use fitness equipment to develop electricity. We use people as power sources to operate fitness equipment. This device is designed to serve as a training device and as a source of power generation. This operation converts the device's lifting piston movement using rack and pinion arrangement into a rotating movement, and uses chain drives to increase speed as a way to reduce gear. Additional alternators are used to convert rotary movement into electrical energy.

Key Words: By simply pull up & pull down, non-conventional, converting mechanical energy into electrical energy, human powered electricity generation.

INTRODUCTION

Pulling up pulling down power is the energy transfer of human sources using racks and rack systems. This technique is most frequently used in gymnastics centres and at home. Fitness Studio is not used much to supply and generate electricity to farming and hand tools. Some applications include battery loading equipment. The article on this page is many great applications for power generation with gymnastics disc technology. Whenever that person is allowed to cross the gym, they will be pulled down. When springs are attached to fitness devices, they are compressed and the rack mounted under the rod moves the movement of the rack at a certain speed by a chain drive to the dynamo, which converts mechanical energy into electrical energy. Now the wheel is turned in one

direction by supplying waves, while others can rotate freely on the shaft while the freewheel is inserted into the gear.

Man has needed and used energy at an increasing rate for his sustenance and well-being ever since he came on earth for few million years ago. Due to this lot of energy resources have been exhausted and wasted. Proposal for the utilization of waste energy of power generation by gym pulley is very much relevant and important for highly populated countries like India and china the people are crazy about gym. In this project we are generating electrical power as non-conventional method by simply pull up and pull down.

Since coming to Earth million of year ago, humans have needed energy for their food and wells and have increased their wells. This amount of energy resources has exhausted and wasted resources. Proposal for the use of waste energy in power generation by fitness rollers are very important and important for highly used countries such as India and China. This project electric performance as a non-traditional by simply pulling up and down. This project involves the conservation of strength into electrical energy. The use of human power has been efficient for generations due to modern technology. Pullup pulldown power is a great source of energy, with 95% of the energy being converted into energy and converted into energy. People run by humans have been announced by society. With this device, the user must pull down the gym equipment to create electricity.

IDENTIFIED ISSUE

Use the gym (pull-up) to create electricity. In addition to the devices, there are voice transformers for batteries, racks and pinions, chain drives, alternators, rectifiers, inverters and voice transformers to complete the project. The main goal of this project is to generate electricity during fitness equipment training.

A.Target

1. It uses human effort to generate electrical energy.
2. Find new sources of renewable energy.

LITERATURE REVIEW

Generation by producing Ansari Saddam Hussain, Guja Govardhan, Gand Kumar, Maud Ahmad, Vivek Tiwari, Yakub Khan, fitness equipment. In this paper, the main goal is to develop electricity using fitness equipment. Performance is below 30-40 W and power generation is not continuous. They used more mechanical parts that led to lower generation.

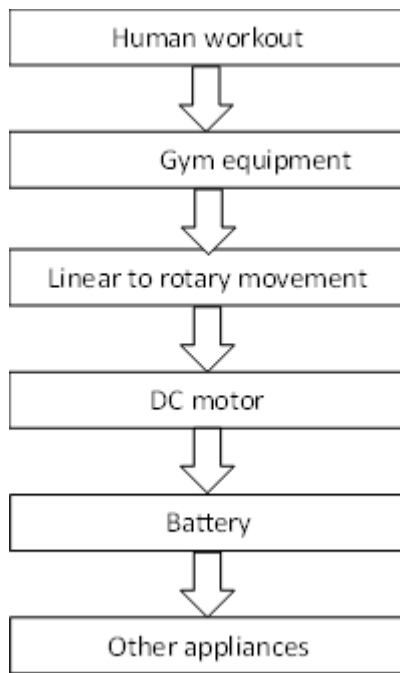
M. Muttu Subash, S. Parthiban, (2016), International Journal of Engineering Science and Computing. Many calculation methods are used to design waves, chains and chainwheels to get the required output performance. The manufactured models are virtually tested, corresponding diagrams are obtained and more performance fitness centres are created.

Madhup Kumar, Dr. GS Mundada, (2017), Innovative research in International Journal of Electrical, Electronics, Instrumental, and Control Engineering. The main goal of this paper is to harvest energy from fitness equipment. For ceiling fans, electricity saves Rs 288 per month.

METHODOLOGY

We create and manufacture completely unique systems for electrical production, combining foam and convenient solutions. With a fixed puller machine to generate power and charge a 12 volt battery, you will receive around 60 watts of power and a large amount of power for the lights, amplifiers, iPod chargers, and all the unexpected additional loads that a student group can install later. The system offers approximately 5 hours of fully loaded use and requires claim compensation.

1. The system is comprised of several subsystems that will work collectively to efficiently produce the desired 50 to 150 watts of power.
2. The first subsystem is the mechanical connection which is will transfer the kinetic energy from pulling to the generator.
3. The second subsystem is the electrical generator. This subsystem transfers the rotational movement created when puller machine is in use to the rotor of a generator which will in turn output an AC voltage.
4. The third subsystem is the rectifier, which convert AC power to DC.



APPLICATIONS

1. Power Generation High School devices can be used in schools, universities, fitness centres, homes, parks, and more.
2. This device can be used to light up LED lights and charge electrical devices. It also stores electricity.

CONCLUSION

In summary, software can be used to design and create models, determine software and maximum limits, and estimate the performance quantities created. As a result of simulation tests, a US-selected material and a model made of this material offers a variation of 0.34 mm after lifting the weight, with a deviation and deviation of 0.34 mm that is proportional to the weight, and no one can increase for a long time. Secondly, based on calculations, when 100 people go to the gym every day, we get enough power to operate the gym and start powering it in the future. On the other hand, if you can use a more powerful amplifier, you can also charge your phone, laptop and other electronic devices. Using this type of power reduces environmental pollution and helps to preserve fossil resources. We're one step closer to environmental protection.

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