



Electricity Generation by Using Gravity & Magnetism

Gautam Singh¹, Yash Chunara², Vishal Rajput³, Utkarsh Prajapati⁴

^{1,2,3}, UG Student, Mechanical Department, Sigma Institute of Engineering, Vadodara, Gujarat, India.

⁴ Assistant professor, Mechanical Department, Sigma Institute of Engineering, Vadodara, Gujarat, India.

Abstract —We used weights mounted on a disk which can rotate due to falling of the weight from top of the wheel to a position where it is perpendicular to the shaft axis. The weights remain folded and nearer to center of the wheel for half of the rotation cycle of the disc and for other half it expands by falling from top of the wheel to position where it is perpendicular to shaft axis generating torque to rotate the wheel because of moment of the extended weight from the center of the wheel and hence the wheel rotates due to angular acceleration produced by torque generated and magnets are placed at center of the two supports of shaft on which the disk or wheel is mounted to support the rotation of the wheel and also counters friction and helps the wheel or disc to rotate freely. This freely rotating wheel is coupled with alternator using a belt and hence electricity is generated. And also, this is environment friendly as this system does not pollute the environment.

Keywords- rotating disk, moment, angular acceleration, electricity, magnetism, alternator

I. INTRODUCTION

As all the electricity generation resources like thermal (which uses coal as fuel), Nuclear (which uses radioactive atoms), wind (windmills), Hydro Power Plants etc. require external sources or external forms of energy and then only they can generate electricity, and also release so many harmful wastes. And till today there are so many remote areas and villages where electrical power cannot reach. Main problems with present day electricity generation systems are as follows: -

- Waste is generated which is harmful to environment.
- Pollution occurs due to burning of fossil fuels.
- Very large area is required.
- Heavy mechanism and components are used and so maintenance is high.
- Input energy is required.

Thus, to eliminate above mentioned problems in nowadays energy generation we built a device which can generate electricity using gravity (which is present all over the earth's surface and is unlimited) and magnetic force or magnetism and named it as "Electricity generation by gravity and magnetism". And also, this prototype or model is portable and very easy to install and it can be useful to people's livings in remote areas and villages where there is no provision for electricity. Following are the advantages we gain from our device: -

- This is pollution free, environment friendly,
- Very less maintenance required,
- The cost of the setup is low and
- This is free energy using gravity and magnetic force.
- This is an excellent scope to research in future.

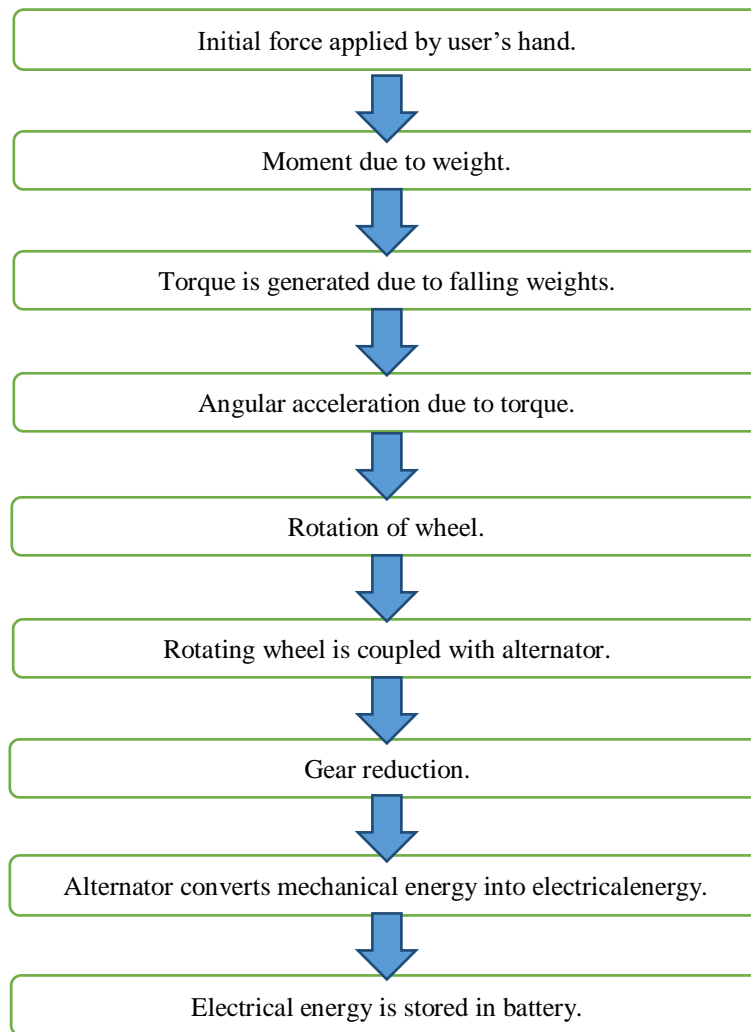
II. METHODOLOGY

II.1 DESIGN METHODOLOGY

We used weights mounted on a disk on a shaft which can rotate due to falling of the weight from top of the wheel to a position where it is perpendicular to the shaft axis. The weights remain folded and nearer to center of the wheel for half of the rotation cycle of the disc and for other half it expands by falling from top of the wheel to position where it is perpendicular to shaft axis generating torque to rotate the wheel because of moment of the extended weight from the center of the wheel and hence the wheel rotates due to angular acceleration produced by torque generated and magnets are placed at center of the two supports of shaft on which the disk or wheel is mounted to support the rotation of the wheel and also counters friction and helps the wheel or disc to rotate freely. We have arranged the weights on an overbalanced wheel with a profile. This freely rotating wheel is coupled with alternator using a belt and hence electricity is generated. And also, this is environment friendly as this system does not pollute the environment. To start

the wheel at first it requires a starting torque which is provided by hand of the user. And rest of the working can be understood from work flow diagram below: -

II.II WORK FLOW DIAGRAM



II.III AIM AND OBJECTIVES

- To generate electricity by using gravity and magnetism (which is free energy generation using perpetual motion of the wheel)
- To motivate new generation to work towards the field of free energy and perpetual motion machine.
- For emergency purpose.
- This model or prototype can be used in remote areas and villages where there is no provision for electricity.
- To make our model affordable to poor people.

As shown in figure 1.0 we made 2D drawing

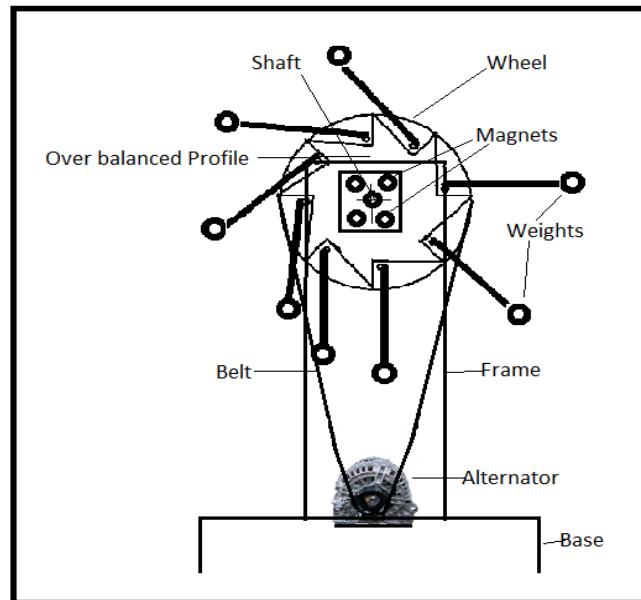


Figure 1.0. Basic 2D Diagram.

II.IV COMPONENTS USED

- I. Wooden profiled wheel (Balanced Wheel)
- II. Weights
- III. Permanent ring magnets
- IV. Shaft
- V. Belt
- VI. Alternator
- VII. Battery
- VIII. Led Lights

Note: Whole setup is mounted on a shaft which is supported on magnets and magnets help the shaft to rotate freely without friction and also helps in smooth rotation of the wheel. As shown in fig. central shaft is mounted between magnetic setup.

II.V CALCULATION (METHODOLOGY): -

II.V.I DESIGN OF LOADS AND MOMENT

As you can see above in the concept of folded loads from that moment and torque generated and required are calculated.
Moments

Forces can cause objects to turn. This turning effect is called a moment.

- A lever can be used to multiply (increase) the size of a force.
- A pivot (fulcrum) is the name given to the point the lever (force) turns around.

To calculate a moment, you need to use the following:

$$\text{Moment} = \text{Force} \times \text{distance from the pivot} = F \times d$$

Units for moments are Ncm or Nm.

The further the force is from the pivot = the larger the moment (turning force).

Total torque generated due to single mass can be calculated as below: -

Moment * Weight = $F * d * m * g$

II.V.II DESIGN OF ALTERNATOR OUTPUT

Faraday's Law of induction, written for an alternator with a DC (permanent magnet) two-pole stator, is

N = number of turns on the armature

A = area of coil on the armature (in meter square).

RPM = armature rotation speed.

B = DC magnetic field (in tesla)

V= volts out (volts @ 60 Hz)

Therefore, $V = - N A (2 \pi \text{RPM}/60) B$

III. CONCLUSION

The work and research till now we did it concludes that generating free electricity can be revolutionary in the energy field. By such arrangements, the magnetic power generation mechanism not only has the advantages such as more simplified structure higher conversion ratio and more environment friendly but also it only requires a little initial torque to perform a long time energy conversion and stable energy output, it can independently generate electricity.

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