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Gravity Powered Electric Power Generation

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ABSTRACT: A gravity power generation mechanism utilizes a gravity energy conversion unit to convert the gravity potential energy into the kinetic energy. The gravity energy conversion unit produces positive torques by adopting outward-spreading single directional swing arms and reduces the negative torques by cooperating with the folding action of the single directional swing arms, so as to perform a long-time, effective and continuous energy conversion of converting gravity potential energy into the kinetic energy. There are various types of non-renewable and renewable resources present on our planet. Many of them are being utilized in the generation process. Now a day the need of electrical energy is increasing vigorously and hence we must have to increase our generation capacity of electrical energy. But as maximum generation is done using renewable resources which are the limited source of energy. Hence the need of new kind of resource is increasing which must be constant and never ending resource of energy, so the Gravity or Gravitational energy is the aid for this need of resource. It is limitless form of energy present all over the earth. It can be utilized in the form of energy resource and can be converted in the electrical form of energy.

KEYWORDS: Power generation, renewable energy, gear drive, generator, supply and demand, gravity.

I INTRODUCTION

In this contemporary era, as pollution is increasing day by day. Global warming is the measure of the cause of pollution. Nonrenewable resources are also responsible for global warming. If we talk about electricity generation, then non-renewable sources like coal and diesel are used, but the availability of such resources is very less and predictors predicted that in the coming 30years non-renewable resources will vanish. To overcome the problem of pollution and availability of nonrenewable resources, there is one solution which is renewable resources, for example, solar energy, gravitational energy, tidal energy, geothermal energy, wind energy, etc. These resources are available in an abundant amount also they are pollution-free. It is possible to deflect gravitational action away from an object so that the object is partially deviated. That effect makes it possible to extract energy from the gravitational field, which makes the generation of gravitational electric power technologically feasible. Such plants would be near about similar to hydro-electric plants. Gravitational

electric power plant has advantages over the hydro-electric plant, such as not needing of fuel and not polluting the environment. However, the gravitational electric plant would be much smaller than hydro-electric plants. The location of that plant would not be restricted to suitable water elevations and gravitational electric power plants and their produced energy would be much expensive. If the gravitational power electric generation comes under operation and working then it can replace all existing nuclear and fossil fuel plants and it would essentially solve the problem of global warming to the extent it is caused by fossil fuel used.

II PROBLEM FORMULATION

Gravity can not be used as an infinite energy source. In fact, strictly speaking, gravity itself can not be used as an energy source at all. We are confusing forces with energy, which are very different things. Energy is a property of objects, such as balls, atoms, light beams, or batteries. In contrast, forces describe the interaction between objects. Forces are the way that energy is transferred from one object to another when they interact, but forces are not the energy itself. Gravity is a force, so it just provides one way for objects to exchange and transform energy to different states. This concept is true of all forces, and not just gravity.

As we know that two magnets attract each other and fly together, speeding up and seeming to gain energy. You may think that the energy has come from the magnetic force. In truth, the energy comes from your hand pulling the two magnets apart against the magnetic force. The magnetic force just provides a way for potential energy to be stored in the magnet (by virtue of you pulling them apart, not just by virtue of them being magnets), and then converted from



potential energy to kinetic energy. Any time you push an object to a new location against a force, you are giving it potential energy.

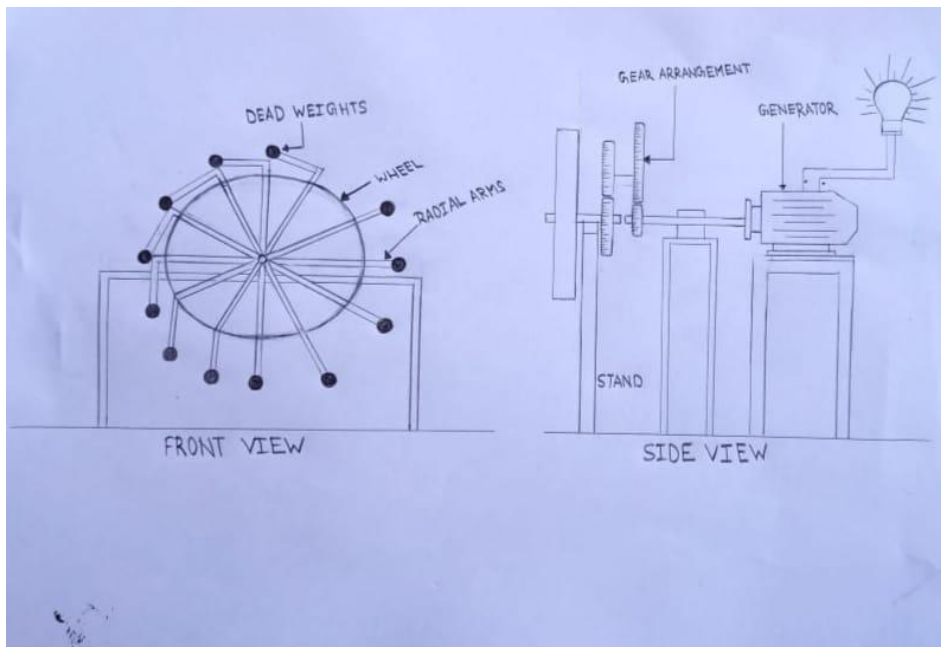
III.LITERATURE SURVEY

The motion of celestial bodies such as a moon, the earth, the planets etc. has been a subject of great interest for a long time. Famous Indian Astronomer and mathematician, this motion and wrote his conclusion. About a thousand years after Aryabhat, the brilliant combination of Tycho Brahe[1546-1601] and Johanaase Kepler[1571-1630] studied the planetary motion in great detail. They all came to point that there must be a force responsible for such a motion. The year 1665 was very fruitful as a question strike before Sir Issac Newton, that what is the force that produces this acceleration? Thus this force that pulls objects toward center of the earth was found out and proved, to be named as, Gravitational force. Various mechanisms are further developed to utilize this gravitational force for producing required power. Maximo Gomez-Nacer have designed a system of obtaining electricity by means of use of the force of gravity, by incorporating pendulums whose weight and velocity provide energy for electricity generation. Another such mechanism is developed by Chun-Chan Wang [Kaohsiung City] which generates energy using gravity conversion unit that produces positive torques by adopting outward-spreading single directional swing arms and reduces the negative torques by cooperating with folding action of single directional swing arms.

III.PROPOSED METHODOLOGY

There are different experimental methodologies to generate power from gravitational force. In this paper we are basically explaining about dead weight, wheel,radial arm mechanism using gear arrangement and generator. This mechanism is used in gravity engine as explained below to harness electricity.

IV.BLOCK DIAGRAM



A.COMPONENTS

1 - GEAR ARRANGEMENT

A gear arrangement is a rotating machine part having cut teeth, or cogs, which mesh with another toothed part to transmit torque. Geared devices can change the speed, torque, and direction of a power source. Gears almost always produce a change in torque, creating a mechanical advantage, through their gear ratio, and thus may be considered a simple machine. The teeth on the two meshing gears all have the same shape. Two or more meshing gears, working in a



sequence, are called a gear train or a transmission. A gear can mesh with a linear toothed part, called a rack, thereby producing translation instead of rotation.



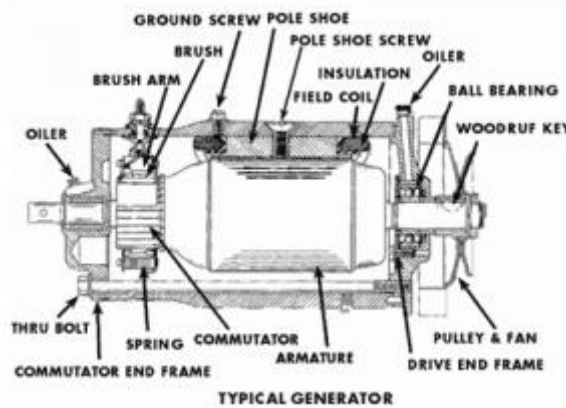
2 – DEAD WEIGHT

Dead weight is a metal solid block with calibrated weight as per standards. Deadweight (DWT) or tons of deadweight (DWT) is a measure of how much weight a ship can carry, not its weight, empty or in any degree of load. DWT is the sum of the weights of cargo, fuel, fresh water, ballast water, provisions, passengers, and crew.



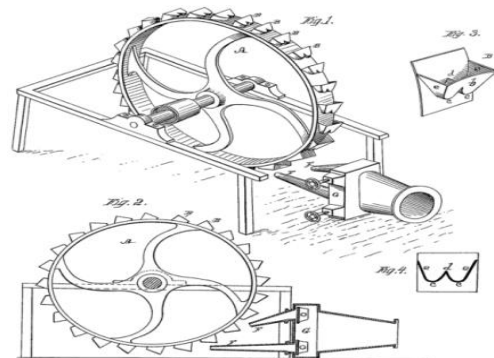
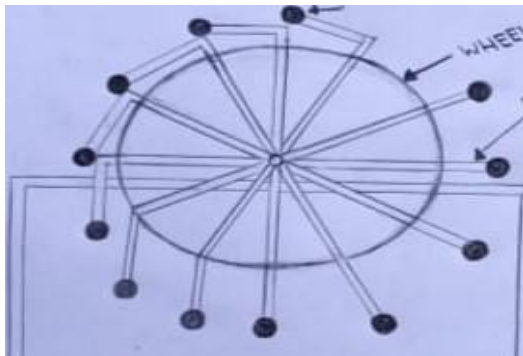
3– GENERATOR

Electric generator, also called dynamo, any machine that converts mechanical energy to electricity for transmission and distribution over power lines to domestic, commercial, and industrial customers. Generators also produce the electrical power required for automobiles, aircraft, ships, and trains. It works based on the principle of the faraday law of electromagnetic induction. So the important elements of a generator are: Magnetic field and The motion of the conductor in a magnetic field.



4– PELTON WHEEL

The Pelton wheel extracts energy from the impulse of moving water, as opposed to water's dead weight like the traditional overshot water wheel. Many earlier variations of impulse turbines existed, but they were less efficient than Pelton's design. Water leaving those wheels typically still had high speed, carrying away much of the dynamic energy brought to the wheels. Pelton's paddle geometry was designed so that when the rim ran at half the speed of the water jet, the water left the wheel with very little speed; thus his design extracted almost all of the water's impulse energy—which allowed for a very efficient turbine.



Schematic Diagram

V.RESULT

- 1 - The mechanism is completely eco friendly
- 2 - Source uses by the system is limitless
- 3 - It can be available 24*7
- 4 - The small amount of investment for long term generation of power
- 5 - Efficiency is more as compared to another gravity-based system

VII.DISCUSSION

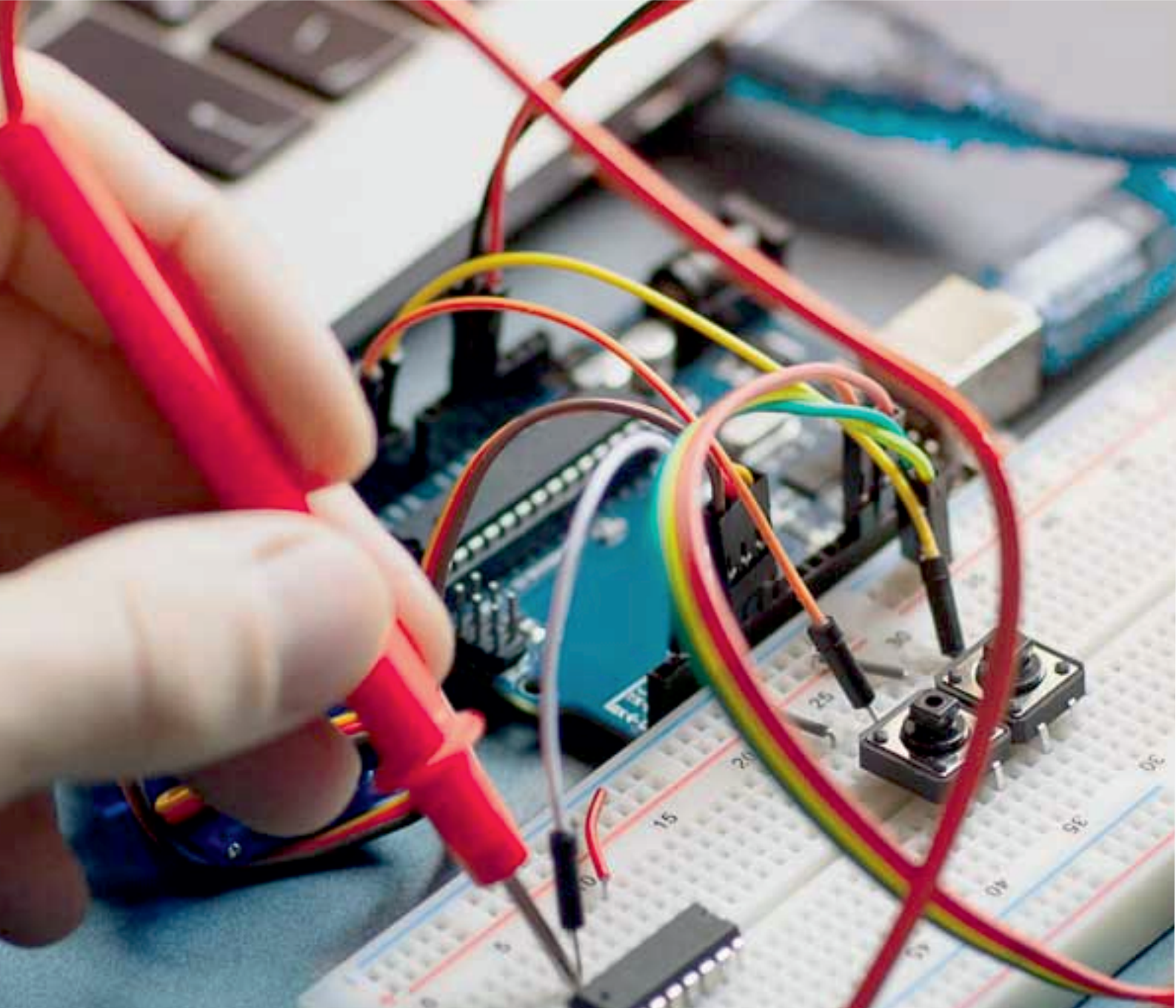
The gravity power generation mechanism of the present invention utilizes a gravity energy conversion unit to which can provide a continuous and stable operation to continuously convert the gravity potential energy into the kinetic energy and then into electric energy so as to perform a long-time, effective and stable energy output. The present invention not only can independently generate electricity but can be parallel connected to the Wind power and the solar power generation systems to generate electricity. And also the Gravity based power generation system gives many advantages such as the use of eco-friendly source which eliminates many problems such as pollution, non-hazardous, simplified mechanism, etc. It can generate electricity independently as it does not need any external sources such as water, coal, etc. The method of power generation is through kinetic energy which obtains from gravity. Thus in this paper we studied a power generation mechanism that produces power from gravity having a simplified structure as well as is eco friendly and which would overcome the present problems of pollution and global warming faced by other power generation methods.

VII.ACKNOWLEDGEMENT

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