Abstract:

A MACHINERY FOR CONVERTING MECHANICAL ENERGY INTO ELECTRICAL ENERGY

Title:

A top and bottom weighted fulcrum lever (6,4) consists of a mechanism which converts the oscillation force into mechanical energy. The obtained mechanical energy is converted into electrical energy. It is able to deliver controlled, and continuous by rotating the shaft with uniform torque, through an assembly of fulcrum cylinder (5), double sided clutch (7) along with springs (8) and spring supporting plate (9) and a gear box (13). This function is made continuous by means of hydraulic piston (17) with alternator (14) and power pack, and return spring (19) which drives the entire system. This system sustains the axial force of the shaft and is working continuously.
A Machinery for converting Mechanical Energy into Electrical Energy

TECHNICAL FIELD:

This invention relates to the Machinery for converting Mechanical Energy into electrical Energy. This invention is an alternate system of power generation by means the maintained oscillation force converts into Electrical Energy with the help of a top and bottom weighted fulcrum lever mechanism.

If a lever moves back and forth repeatedly about a mean position, it is said to possess Oscillatory motion. Vibrations of guitar strings, vibration of tuning fork, oscillation of mass suspended from a spring are few example of oscillatory motion.

Oscillations are several types such as (I) Free oscillations (ii) Damped Oscillations (iii) Maintained Oscillations (iv) Forced Oscillations (v) Resonance, among these Maintained Oscillations are very constant by feeding some energy to a specified system.

BACKGROUND ART:

The amplitude of an oscillating system can be made constant by feeding some energy to the system. If energy is fed to the system to compensate the energy it has lost, the amplitude will be a constant. Such oscillations are called maintained oscillations.

Now a day, the power supply becomes a very critical problem to the public, industries and agriculture. The Public & industries have suffered a lot due to the lack of power supply which affected their regular and routine life. This invention will provide an improvement by using Mechanical device and Generated Power as output. This will provide a dynamic growth on industrial and agricultural Economy.
Modern Investors, Researchers and scientists have found out various inventions of power generation. The new forms of alternate energy which are generated from the source of Hydroelectric, solar, lignite, goober, wind, atomic biogas, water, plants etc. All this alternate energy conservation is getting predominant success with higher cost and in a non-polluted way.

**Details of invention:**

The proposed concept of the maintained oscillation force converts into Mechanical Energy with the help of top and bottom weighted fulcrum-lever mechanism is producing continuous generation of energy with lower cost. The proposed type of energy generation reducing the overhead such as maintenance, replacement of spares, repairs, and other input costs.

The proposed concept is to recognize and able to guaranteed for larger size to small size particularly from industry to domestic use.

The proposed concept is to recognize to have more power continuously without any interruption.

The Machinery for converting Mechanical Energy into Electrical Energy is an assembly of mechanism has the top and bottom weighted fulcrum lever drive turbine consists of four top and bottom weighted fulcrum lever and a hydraulic system which drives the top and bottom weighted fulcrum lever continuously.

The top and bottom weighted fulcrum levers drive turbine are connected by means of a horizontal shaft called the main connecting shaft to a gear box. Three armed weighted rotating leaver is coupled on the main shaft in front of the gear box. This will support to make continuous rotation of the main shaft. The loaded RPM from the main connecting shaft is received by gear box which converts into the required RPM to run an alternator.
Initially the top and bottom weighted fulcrum levers are driven manually one by one at one end and when they reached the other end, it will be pushed by the piston arm which are driven by a hydraulic power pack to have a continuous operation.

The hydraulic power pack is driven by an electric motor which pressurizes the hydraulic fluid in the tank. It is enabling to move the piston stroke. Initially power pack is operated by external power supply for five minutes. During this operation it will obtain the constant and maintained oscillation flow.

Once it gets sustained loaded power to drive the alternator, it will automatically cut the external power supply by timer setup. It takes internal power consumption from its alternator for its operation and produce power. The generated excess power transferred for utility.

**Brief description of drawings**

The fig 1 shows the drawings derives the self explanations specifications and guidance which have been described above. The detailed sketch and specifications have been given in these drawings does not limit this invention. These drawing is subject to modifications and alterations due to advanced technology which will widens the scope of the invention.

**Detailed Description of the preferred embodiments referring to fig 1.**

The whole setup is arranged on the base frame -1 side frame-2 base plate-3. Inside the frame- 1,2&3, the bottom weighted lever-4 is hanging from fulcrum cylinder-5. On top of fulcrum cylinder-5 the top weighted lever-6, is pivoted. Top & bottom weighted lever-4 & 6 pivoted to the fulcrum cylinder -5 which is connected by two identical clutch-7 on both sides along with spring-8 the movement of spring-8 are sustained by spring support plate-9. Item number 4,5,6,7,8 & 9 are assembled in a network which connected to main shaft 10.
The bearing block 11 is connected on main shaft. Three armed weighted rotating leaver-20 is coupled on the main shaft in front of the gear box-13. This will support to make continuous rotation of the main shaft. Gear box -13 is connected to the main shaft by means of coupling -12. Alternator- 14 is connected through coupling -12 to the gear box-13. The limiting switch supporting frame -15 is attached to the base plate- 3. On frame- 15 or frame 18 the limiting switch -16 is fixed. Piston -17 is fixed on the piston frame- 18. This set up 17 & 18 are arranged on the base frame- 1.

This arrangement is positioned at the end of the bottom weighted lever -4. Piston 17 is acted as a pushing movement and returning spring action 19 is acted as a pulling movement of bottom weight lever. The returning spring action- 19 is fixed just opposite to the piston- 17

The Machinery assembled with Top and bottom weighted lever- 6 & 4 is connected to the fulcrum cylinder-5 which is connected by two identical clutch-7 on both sides along with springs-8 which are sustained by spring supporting plate-9. Piston -17 is fixed on the piston frame-18. This piston frame is arranged on a base frame-1 this arrangement is positioned at the end of the bottom weighted lever-4 this whole assembly forms a network. The number of network required minimum four in number and maximum may be increased to the capacity of the required power generation. The size of the shaft-10 and the bearing blocks- 11 is ascertained according to the required power production. The hydraulic power pack (not shown), gear box-13, alternator- 14 and returning spring action arrangement- 18 are all based on the capacity of the power generation.

The Machinery assembled with the weighted setup, which has minimum four in numbers of top and bottom weighted levers- 6 & 4 connected to the main connecting shaft-10 by means of pivot centre fulcrum cylinder-5 and clutch-7 on both the sides along with springs-8 the movement of springs are sustained by spring supporting plate-9.
Top and bottom weighted fulcrum levers drive turbine - 6 & 4 has a horizontal main connecting shaft-10 which axially drives the alternator -14 using loaded RPM at the end through a gear box-13.

Bottom weighted fulcrum lever drive turbine -4 is an operational lever with a spin action which in turn rotates itself to a certain degree of clock and anti clock wise movement. Top weighted levers-6 is a security lever which avoid the vibration and safe guard the piston-17. The Top and bottom weighted lever-6&4 is a weighted setup which has been driven by the piston - 17 which in turn by hydraulic power pack which consists of motor, pump, oil, solenoid and control valves. This system is pumping the pressurized fluid inside the tank and accelerate the back and forth movement of the piston. This function is a continuous process. Bottom weighted lever-4 operation is made by piston -17 on one side and return spring action-19 on other side.

The bottom weighted lever-4 has a Return Spring Action system-19 which has fixed on the opposite side of the piston-17 which will give force in anticlock wise movement of the bottom weighted lever-4.

The Top and bottom weighted-6&4 lever has activated by limit switch-16 and a Timer 9(not shown).

The limit switch-16 is fixed on the top of the frame by means of limit switch connecting frame-15. Once it sense the top weighted lever, the automatic back and forth movement of piston will takes place.

Power back will be started by external power supply to run only five minutes. During this operation it will obtain the constant and maintained oscillation flow. Once it getting sufficient power generation, it will automatically cut the external power supply by timer setup. It takes internal power consumption from its alternator for its operation and to produce power. The generated power transferred for utility.
This is the advanced version of wind mill. Wind Mill will not generate power continuously due to the monsoon, but Top & Bottom Weighted Fulcrum Lever Drive is a constant and continuous process. It can be utilized for small and large scale industries.
Claims

1. A machinery for converting mechanical energy into Electrical Energy is arranged on the base frame -1 side frame-2 and base plate-3, inside the frame- 1,2&3 the bottom weighted lever-4 is hanging from fulcrum cylinder-5, on top of fulcrum cylinder-5 the top weighted lever-6 is pivoted, top & bottom weighted lever-4 & 6 pivoted to the fulcrum cylinder -5 which is connected by two identical clutch-7 on both sides along with spring-8, the movement of spring-8 are sustained by spring support plate-9, item number 4,5,6,7,8 & 9 are assembled in a network which connected to main shaft-10, the bearing block-11 is connected on main shaft-10, three armed weighted rotating lever-20 is coupled on the main shaft in front of the gear box-13 which support to make continuous rotation of the main shaft, gear box -13 is connected to the main shaft by means of coupling -12, alternator-14 is connected through coupling -12 to the gear box-13, the limiting switch supporting frame -15 is attached to the base plate- 3, the limiting switch -16 is fixed either on supporting frame-15 or piston frame-18, piston -17 is fixed on the piston frame-18, this set up 17 & 18 are arranged on the base frame-1, the piston arrangement is positioned at the end of the bottom weighted lever -4, piston 17 is acted as a pushing movement, returning spring -19 is acted as a pulling movement of bottom weighted lever, the returning spring action-19 is fixed just opposite to the piston-17.

2. According to claim 1, the top and bottom weighted fulcrum pivoted setup wherein top and bottom weighted lever, fulcrum Cylinder, both side Clutch, Spring, Spring supporting plate; one alternator connected at the end of the main connecting shaft through a gear box; one hydraulic power pack with 4 - 16 piston arms, 4-16 returning spring action, a main control panel connects all electric circuits in the entire machinery.

3. according to claim 2 the machinery wherein a weighted system containing 4-16 top and Bottom weighted lever connected to a main shaft by means of pivot
centre fulcrum cylinder and clutch on both the sides along with the springs; the movement of springs are sustained by spring supporting plate.

4. according to claim 3 the machinery wherein a horizontal main connecting shaft which axially drives the alternator using loaded RPM at the end through a gear box.

5. according to claim 2 the machinery wherein the arrangement of piston positioned at the end of the bottom weighted lever; the return spring action is fixed just opposite to the piston.

6. according to claim 1 the machinery wherein a hydraulic power pack consists of motor, pump, oil solenoid and control valves to pump the pressurized fluid inside the tank and continuously accelerate the back and forth movement of the piston, the piston is activated by limit switch and a timer.

7. according to claim 1 the entire machinery setup has a control panel which controls, starting electric motor on the hydraulic power pack; ensuring the sustaining of oscillations which cuts the external power supply; it gives a portion of the generated power from the alternator to the electric motor consumption; it transfers the remaining generated power for utility.
A machinery for converting mechanical energy into Electrical Energy comprising of:

1. Top and bottom weighted fulcrum pivoted setup wherein minimum four maximum sixteen top and bottom lever, fulcrum Cylinder, both side Clutch, Spring, Spring supporting plate; one alternator connected at the end of the main connecting shaft through a gear box; one hydraulic power pack with 4—16 piston arms, 4-16 returning spring action, a main control panel connects all electric circuits in the entire machinery.

2. according to claim 1 the machinery wherein a weighted system containing 4-16 Top and Bottom weighted lever connected to a main shaft by means of pivot centre fulcrum cylinder and clutch on both the sides along with the springs; the movement of springs are sustained by spring supporting plate.

3. according to claim 2 the machinery wherein a horizontal main connecting shaft which axially drives the alternator using loaded RPM at the end through a gear box.

4. according to claim 1 the machinery wherein the arrangement of piston positioned at the end of the bottom weighted lever; the return spring action is fixed just opposite to the piston.

5. according to claim 1 the machinery wherein a hydraulic power pack consists of motor, pump, oil solenoid and control valves to pump the pressurized fluid inside the tank and continuously accelerate the back and forth movement of the piston.
6. according to claim 4 the piston is activated by limit switch and a Timer.

7. according to claim 1 the entire machinery setup has a control panel which controls, starting electric motor on the hydraulic power pack; ensuring the sustaining of oscillations which cuts the external power supply; it gives a portion of the generated power from the alternator to the electric motor consumption; it transfers the remaining generated power for utility.

8. according to claim 1 the top and bottom weighted fulcrum pivoted setup wherein the top and bottom weighted levers fixed with specially designed two supporting weights; it is also an operating weight and an input weight; the required supporting weights will enable to rotate the main shaft of the machine with the help of top and bottom weighted levers; the value of the two supporting weights will vary with each other; the supporting weights enable to operate the mechanical device after disconnecting the external power supply.
This amendment is providing predominant future to my invention.

In the **amended claim No 8**, wherein I have explained the supporting weight. It is also an operating weight and an input weight which will enable to operate the entire mechanical device. The required value of supporting weights will enable to rotate the main shaft of the machine with the help of the top and bottom weighted levers. The value of the two supporting weights will vary with each other. It will create the Industrial applicability to my invention. It will enable the mechanical device continuously converting the oscillation energy of a pendulum into electrical energy by use of top and bottom weighted levers after disconnecting the external power supply.

**Difference between Claims filed & Claims amended:**

The Claim is new

Where originally there were 7 claims and after amendment of one claim there are 8 claims.

Claims 1 to 7 unchanged new claim No 8 added

As per written opinion of the International Searching Authority, I have amended one more new claim to establish the ability of industrial applicability to my invention. As per replacement sheet the total claim will be 8 claims.

<table>
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<tr>
<td>7 Claims</td>
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Known Futures and Characterized Futures:

**Known Futures:**

The Principle of the claimed invention is continuously converting the oscillation energy of the pendulum into electrical energy by the use of top and bottom weighted levers after disconnecting the system from external power supply.

**Characterized Futures:**

The Principle of the claimed invention is continuously converting the oscillation energy into electrical energy by using the top and bottom weighted fulcrum pivoted setup wherein the top and bottom weighted levers fixed with specially designed two supporting weights. It is also an operating weight and an input weight. The required value of supporting weights will enable to rotate the main shaft of the machine with the help of the top and bottom weighted levers. The value of the two supporting weights will vary with each other. It will create the Industrial applicability to my invention. It will enable the mechanical device continuously converting the oscillation energy of a pendulum into electrical energy by use of top and bottom weighted levers after disconnecting the external power supply.
**INTERNATIONAL SEARCH REPORT**

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC: **F03G 3/06** (2006.01); **F03G 7/10** (2006.01)

According to International Patent Classification (IPC) or to both national classification and IPC.

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC: F03G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic database consulted during the international search (name of data base and, where practicable, search terms used)

EPOQUE Fulltext

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

<table>
<thead>
<tr>
<th>Category*</th>
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<td>US 2005/248159 A1 (SEOANE); 10 November 2005 (10.11.2005) paragraphs [0037] - [0060]; fig. 1 - 5</td>
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* Special categories of cited documents:
- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed
- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Further documents are listed in the continuation of Box C. See patent family annex.

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7 July 2009 (07.07.2009)

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