



(22) Date de dépôt/Filing Date: 2010/01/04
(41) Mise à la disp. pub./Open to Public Insp.: 2011/07/04

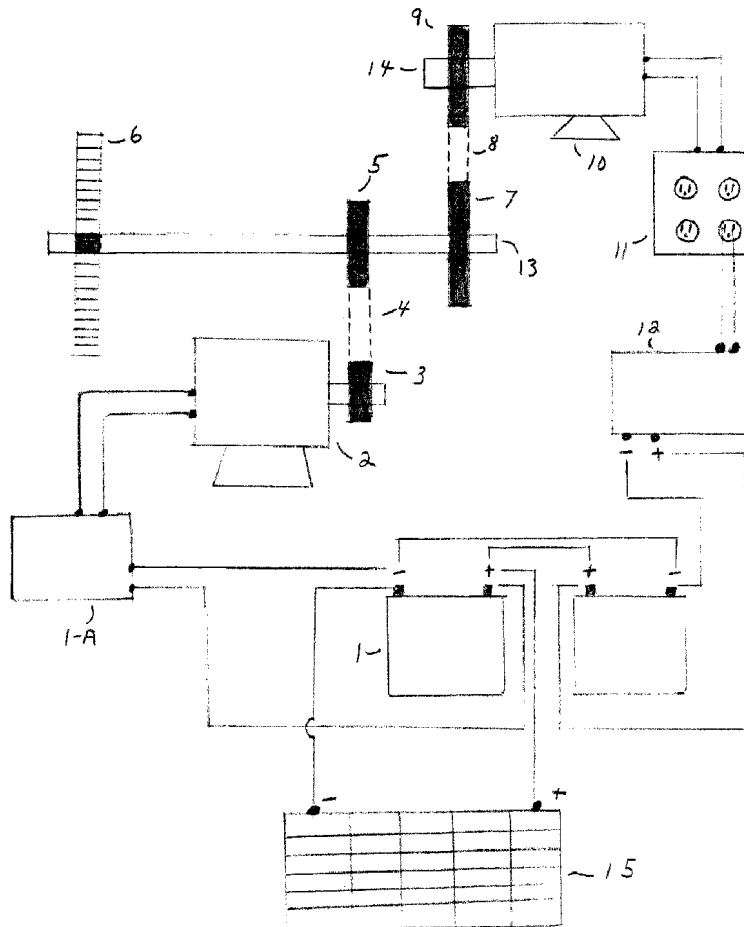
(51) Cl.Int./Int.Cl. *H02K 53/00* (2006.01),
H02J 7/00 (2006.01)

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(54) Titre : PROCÉDE DE GENERATION D'ELECTRICITE A L'AIDE D'UNE FORME D'ENERGIE N'UTILISANT PAS DE CARBURANT

(54) Title: METHOD OF GENERATING ELECTRICITY USING FUEL-LESS ENERGY



(57) Abrégé/Abstract:

A method of generating electricity using fuel-less energy where as a rechargeable battery or rechargeable batteries wired in series, parallel or both running an electric AC (alternating current) motor connected to a DC (direct current) to AC (alternating current)



(57) **Abrégé(suite)/Abstract(continued):**

inverter or an electric DC (direct current) motor whereas a pulley or pulleys attached to the motor is/are connected to another pulley or pulleys attached to an initial shaft by a belt or belts having about 40% to 60% of the tension typically applied to a belt or belts in which an object or objects may be attached to the initial shaft where an additional object or objects may be attached to another shaft or shafts in which the initial shaft and another shaft or shafts is/are inter connected by means of a belt and pulley system or systems whereas a shaft that the rotor of a generator is attached to will be connected to the initial shaft or to another shaft by means of a pulley and belt system or systems. The shaft which the rotor of the generator is attached to may have an object or objects attached to it. The rotating object or objects creates enough horsepower to operate a generator to its full potential and a small percentage of the generated electricity is utilized in the charging of the battery or array of batteries and the remaining percentage of the electricity can be used to run electrical items such as a furnace motor, water pump, electric lights and a motor vehicle. A solar panel or panels is to be used for charging the battery or batteries when the generator is not operating.

METHOD OF GENERATING ELECTRICITY USING FUEL-LESS ENERGY

Abstract

A method of generating electricity using fuel-less energy where as a rechargeable battery or rechargeable batteries wired in series, parallel or both running an electric AC (alternating current) motor connected to a DC (direct current) to AC (alternating current) inverter or an electric DC (direct current) motor whereas a pulley or pulleys attached to the motor is/are connected to another pulley or pulleys attached to an initial shaft by a belt or belts having about 40% to 60% of the tension typically applied to a belt or belts in which an object or objects may be attached to the initial shaft where an additional object or objects may be attached to another shaft or shafts in which the initial shaft and another shaft or shafts is/are inter connected by means of a belt and pulley system or systems whereas a shaft that the rotor of a generator is attached to will be connected to the initial shaft or to another shaft by means of a pulley and belt system or systems. The shaft which the rotor of the generator is attached to may have an object or objects attached to it.

The rotating object or objects creates enough horsepower to operate a generator to its full potential and a small percentage of the generated electricity is utilized in the charging of the battery or array of batteries and the remaining percentage of the electricity can be used to run electrical items such as a furnace motor, water pump, electric lights and a motor vehicle. A solar panel or panels is to be used for charging the battery or batteries when the generator is not operating.

METHOD OF GENERATING ELECTRICITY USING FUEL-LESS ENERGY

Field Of Search:

Canadian Patent Application Numbers

CA 2638516	2008-08-04	Moteurs-Leroy-Somer
CA 2600644	2007-12-11	Leininger, Jon J.
CA 2599089	2007-08-27	Morris-David C.
CA 2549194	2006-05-31	Regan, Colin, Hoffman, Johann
CA 2510255	2005-12-22	Oshiro, Kenei
CA 2589097	2005-12-05	Coman, John Herbert
CA 2447269	2003-03-20	Tahara, Masahiko

Canadian Patent Numbers

CA 1191535	1985-08-06	Meszaros, Leslie G.
CA 1098723	1981-04-07	Palazzetti, Mario

SPECIFICATION

1. Field of the Invention

The invention relates to a new method of generating electricity without burning any type of fuel.

2. Description of the Prior Art

It is desirable to generate electricity as cheaply as possible and without burning any sort of fuel but it is also desirable to be able to generate electricity when the main circuit is inoperative or one is located in a remote area where no electricity is available.

The prior art does not teach a method to generate a continuous source of electricity by means of a battery or batteries, electric motor and the rotating an object or objects in order to produce enough horsepower to operate a generator at full capacity and charging the battery or batteries simultaneously with a small percentage of the electricity developed when the system is operating.

OBJECTS OF THE INVENTION

It is an object of this invention to generate electricity cheaply without the use of any type of fuel. It is further object of this invention to generate enough electricity needed to run a typical household. These and further objects of this invention will become more apparent as the description of the invention proceeds.

SUMMARY OF THE INVENTION

The foregoing and further objects and advantages are obtained by producing electricity continuously and cheaply without the need of liquid or gaseous fuels. Electricity is produced using a battery or batteries connected in series, parallel or both and an AC electric motor connected to a DC to AC inverter or to an electric DC electric motor that rotates an object or objects having mass at a high RPM (revolutions per minute) by means of a pulley and belt system or system that connect an initial shaft or series of shafts which may have an object or objects attached to them whereas the initial shaft and the other connected shaft or shafts is/are connected to a shaft which the rotor of a generator is attached to and this shaft is also connected to the initial shaft or to another

shaft by means of a pulley and belt system or systems. The shaft that the rotor of the generator is attached to may have an object or series of objects attached to it.

The belt or belts that is/are connected to the pulley or pulleys that is/are attached to the electric motor and that is/are connected to the pulley or pulleys that is/are attached to the first or initial shaft in which an object or objects may be attached to it will have about 40% to 60% of the tension typically applied to a belt or belts.

A small percentage of the produced electricity is used in the continuous charging of the battery or batteries and the remaining electricity is used in the conventional manner.

A solar panel system may also be used in the battery charging system when the generator is not operating.

BRIEF DESCRIPTION OF THE DRAWINGS

In the accompany drawings

FIG. 1 illustrates the components of the invention if the electric motor is a direct current motor

FIG. 2 illustrates the components of the invention if the electric motor is an alternating current motor

FIG. 3 illustrates the belt pulley system of the electric motor connecting the shaft that the rotating object or objects is/are connected to

FIG. 4 illustrates the two preferred objects of the invention to be rotated at a high RPM

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The current invention achieves the desired results without the use of liquid or gaseous fuels and being connected to the main power grid.

Two rechargeable batteries Fig. 1 (1) wired in parallel were connected to an electric AC motor. The electric motor was an alternating current (AC) type of electric motor Fig.1 (2), so a DC to AC inverter was also used Fig. 2 (1A).

The electric motor rotated a shaft that included an object attached to it Fig.1 (6 & 13). A belt and pulley system connected the electric motor and the shaft that included a rotating object Fig.1 (4) In this example of an preferred embodiment, the electric motor was an AC 120 volt/15 amp type having a 2 horsepower (HP) rating and having a rotational speed of 3450 RPMS and a suitable 12 volt DC to 120 volt AC inverter was used.

A 3 inch pulley was attached to the electric motor Fig. 1(3) and a 5 inch pulley Fig. 1(5) was attached to the shaft that the rotating object was attached to.

It should be noted that the preferred object to be rotated will be a single circular disc having a constant thickness of 2.5 centimeters and in this example the circular disc was constructed out of

aluminum. The disc had a diameter of about .47 meters and had a mass of about 12.27 kilograms Fig.1 (6). It is very important that the object or objects to be rotated is/are balanced as to much vibration will be observed and potentially tear the system apart during peak rotational velocity.

The rotational speed of the electric motor was 3450 RPM and had a 3 inch pulley attached to it and the shaft with the aluminum disc had a 5 inch pulley attached to it, the rotational speed of the shaft and the disc was 2070 RPM, $3450 \text{ times } 3 \text{ divided by } 5$.

The shaft with the aluminum disc was connected to the shaft of an AC generator (Fig.1 (10)) by means of a belt and pulley system Fig.1 (8 & 9). This pulley system had a 7 inch attached to the shaft with the aluminum disc and the shaft of the generator had a 4 inch pulley attached to it. It should be noted that the AC generator required a RPM of about 3600 in order to achieve the frequency that it operated at.

The final rotational speed of the AC generator was as follows, $2070 \text{ times } 7 \text{ divided by } 4 \text{ equals } 3622 \text{ RPM}$.

It was found that if the belt that connects the electric motor to the shaft that the rotating aluminum disc is attached to is assembled in the conventional manner, without slack, circuit breakers up 30 amps would be tripped within seconds of operation and the electric motor would come very hot in a very short period of time.

It was found that if the electric motor was brought closer the shaft being rotated and causing slack in the belt, the breakers in a 15 amp breaker would not be tripped when the electric motor was turned on.

It was found that the shaft with the aluminum disc attached to it would start to rotate slowly and gradually pickup rotational speed and eventually achieve a maximum speed of 2070 RPM. This was confirmed by using a digital laser tachometer.

The electric motor kept relatively cool and no breakers was tripped during a test run of 6 hours. It should be noted that if the belt was attached to about 40% to 60% of the tension applied in a typical conventional set-up Fig.3 (2), the electric motor would generate enough torque to start rotating the shaft with the attached aluminum disc as well as the AC generator shaft and rotor and the belt would not have a tendency to slip off the pulleys while rotating and the circuit breakers would not trip. It should be noted that the rating of the AC generator was 5000 watts and have a 6500 watts surge rating.

A 12 volt DC 30A output with a 7 amp 108 volt input converter/charger Fig.1 (12) was plugged in one of the generator outlets Fig.1 (11) and that output leads were attached to the battery system. This converter/charger system charged the batteries as needed while the generator was being used. A solar battery charger Fig.1 (15) was also connected to the battery system. The solar charger had maintained the battery system at full charge even if the generator had not been used for a long period of time.

The watts required to maintain a suitable charge on the battery system was about 775 watts (15%) well short of the 5000 watts the AC generator produced.

Various other items were plugged in the other outlets of the generator while the DC 30A charger was working and it was noted no circuit breakers were tripped during this demonstration. Items such as a furnace motor, a water pump and 100 watt lights were tested successfully while the battery charger was plugged in one of the outlets.

It was found that the rotating aluminum disc produced enough horsepower to maintain the proper operation of the small AC generator. The actual horsepower achieved by the rotating aluminum disc was calculated using the following formulae:

Energy of a rotating disc = $\frac{1}{2} I \times W$ squared where I is moment of inertia and W is angular velocity in radians per second.

$I = \frac{1}{2} \text{ mass} \times \text{the radius of the disc squared}$ (for a disc having a constant thickness) Fig. 4 (1)

$I = \text{mass} \times \text{the radius of the disc squared}$ (for a disc having most of its mass concentrated on its outer rim) Fig.4 (2).

In my example, the disc had a constant thickness, therefore the formula $I = \frac{1}{2} \text{ mass} \times \text{the radius squared}$ will be used.

Energy of a rotating disc is as follows:

= $\frac{1}{2} \times \frac{1}{2} \text{ mass (kg) times the radius (meters) of the disc squared} \times \text{angular velocity (radians per second) squared}$.

= $.25 \times \text{mass of disc} \times \text{the radius of the disc squared} \times \text{the angular velocity squared}$

Mass of aluminum disc = 12.27 kg

Radius of aluminum disc = .2349 meters

Angular velocity of rotating aluminum disc in radians per second = 2070 divided by 60 times 360 divided by 59.29 = 209.48 radians per second

Note: there are 59.29 in a complete rotation of a disc (360 divided by 2 Pi)

Energy of the rotating aluminum disc = $.25 \times 12.27 \times .2349 \times .2349 \times 209.48 \times 209.48$
= 7427.4 joules per second or watts

There are 745.7 watts in one horsepower, so the total horsepower created by the aluminum disc rotating at a velocity of 2070 RPM = 7427.4 divided by 745.7 = 9.96 HP

The recommended gas engine needed to properly operate a 5000 watts AC generator should have 10 HP of power.

Based on this information, if an iron disc had a diameter of 30 inches and a thickness of 1 inch and was rotated at an angular velocity of 2070 RPM, a considerable amount of horsepower would be developed.

Mass of iron disc = $3.14 \times 15 \times 15 \times 1 \times 16.38 \times 7.8$ divided by 454 divided by 2.2 = 90.37 kg

Radius of iron disc = 15 divided by 39.37 = .381 meters

Angular velocity of rotating iron disc = 209.48 radians per second

Energy of rotating iron disc = $.25 \times 90.37 \times .381 \times .381 \times 209.48 \times 209.48 = 143,912.8$ watts = 143,912.8 divided by 745.7 = 193 HP

It is conceivable that a rechargeable battery or series of batteries that are used to power an electric automobile could be charged using the method this invention teaches.

A rotating disc would need to have enough power to charge the batteries using an AC generator.

Some of the batteries would be used in the rotating of the disc which in turn would rotate the generator at the required RPM. Any surplus electricity the generator would produce could be used directly by the automobile.

It should be noted that the object or objects to be rotated may be attached to the same shaft the rotor of the generator is connected to and therefore eliminating one shaft and pulley belt system.

Also, it should be noted that the object or objects to be rotated may be attached to more than one shaft where each additional shafts are inter connected by means of a pulley and belt system or systems.

However, it was found that the initial shaft being rotated by the electric motor may have an object or series of objects attached to it and the tension of the belt or belts connecting the motor and the initial shaft must only have 40 to 60 percent of the tension typically applied to a belt or belts.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

- 1) A method of generating electricity using fuel-less energy, comprising of a rechargeable battery or an array of rechargeable batteries wired in series, parallel or both running a DC electric motor or an AC electric motor connected to a DC to AC inverter whereas a pulley or pulleys attached to the motor is/are connected to another pulley or pulleys attached to a first shaft by a belt or belts having 40 to 60 percent of the tension typically applied to a belt or belts whereas an object or objects is/are also attached to the shaft in which this shaft is connected by means of a second pulley and belt system to a second shaft that turns the rotor of a generator whereas the rotating object or objects develop enough horsepower to operate the generator to its maximum capability and a small percent of the generated electricity is used to continuously charge the battery or batteries while operating and a solar panel battery charger maintains the battery or batteries at full charge when the generator is not operating
- 2) The method according to claim 1, whereas the object or objects is a circular disc or discs having the dimensional thickness/thicknesses constant
- 3) The method according to claim 1, whereas the object of objects is a circular disc or discs having most of its/their mass/masses concentrated around the edge of its/their outer rim
- 4) A method of generating electricity using fuel-less energy, comprising of a rechargeable battery or an array of rechargeable batteries wired in series, parallel or both running a DC electric motor or an AC electric motor connected to a DC to AC inverter whereas a pulley or pulleys attached to an electric motor is/are connected to another pulley or pulleys attached to a shaft by a belt or belts having 40 to 60 percent of the tension typically applied to a belt or belts whereas an object or objects as well as the rotor of a generator are connected to the same shaft and the rotating object or objects develop enough horsepower to operate the generator to its maximum capacity and a small percent of the generated electricity is used to continuously charge the battery or batteries while operating and a solar panel battery charger maintains the battery or batteries at full charge when the generator is not operating
- 5) The method according to claim 4, whereas the object or objects is a circular disc or discs having the dimensional thickness/thicknesses constant
- 6) The method according to claim 4, whereas the object or objects is a circular disc or discs having most of its/their mass/masses concentrated around the edge of its/their outer rim
- 7) A method of generating electricity using fuel-less energy, comprising of a rechargeable battery or an array of rechargeable batteries wired in series, parallel or both running a DC electric motor or an AC electric motor connected to a DC to AC inverter in which a pulley or pulleys attached to the motor is/are connected to another pulley or pulleys attached to a first shaft by a belt or belts having 40 to 60 percent of the tension typically applied to a belt or belts where an a object or objects may be connected to this first shaft and this first shaft may be connected to another shaft or series of shafts that are inter connected by a pulley and belt system or systems that may have an object or objects attached to them whereas the initial shaft with or without an object or objects attached to it as well as other shafts with or without an object or series of objects attached to them will be connected to a shaft

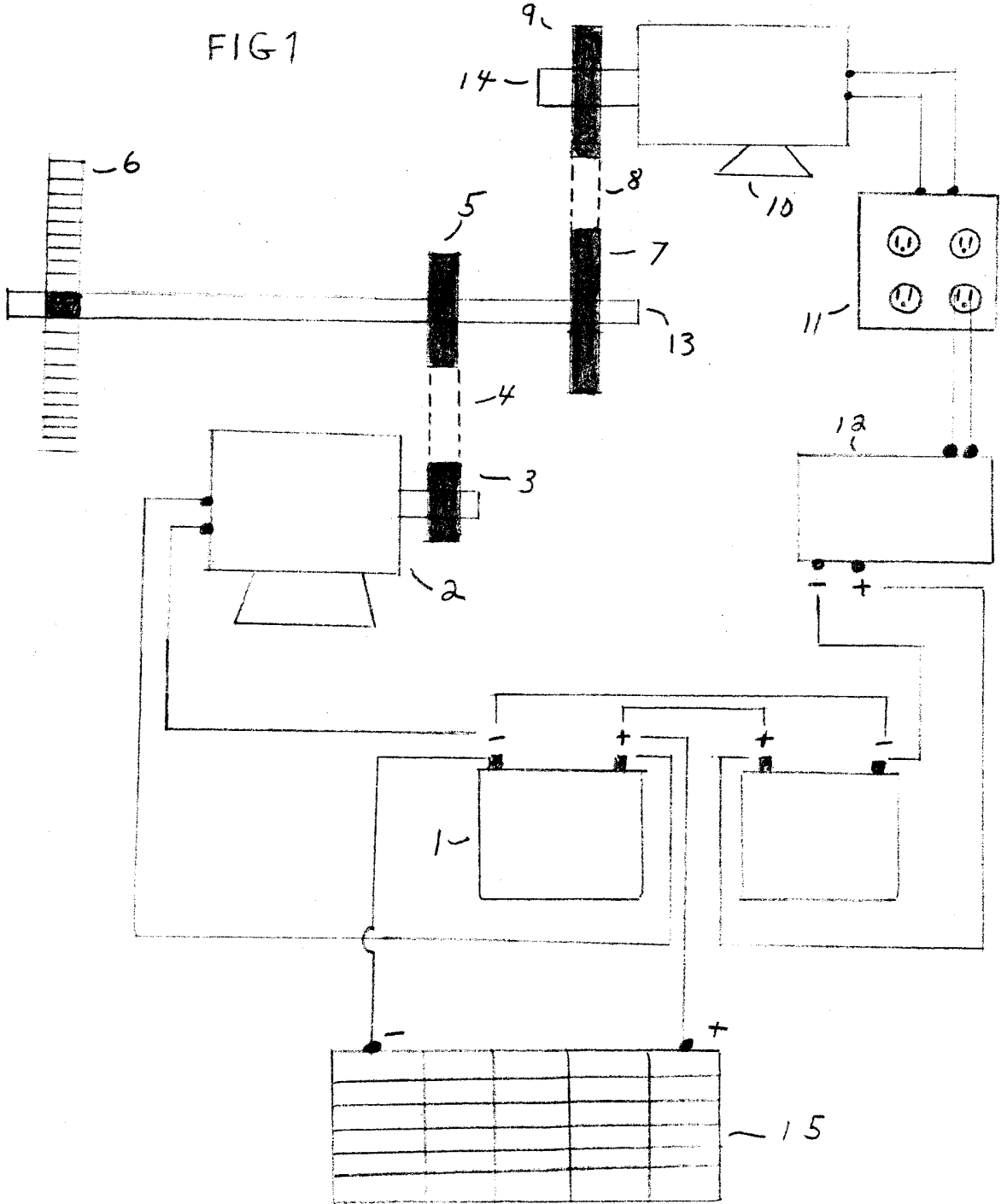
by means of a pulley and belt system or systems where the rotor of a generator is attached to which may have an object or objects attached to the same shaft the generator rotor is attached to whereas the rotating object or objects develop enough horsepower to operate the generator to its maximum capability and a small percent of the generated electricity is used to continuously charge the battery or batteries while operating and a solar panel battery charger maintains the battery or batteries at full charge when the generator is not operating

8) The method according to claim 7, whereas the object or objects is a circular disc or discs having the dimensional thickness/thicknesses constant

9) The method according to claim 7, whereas the object or objects is a circular disc or discs having most of its/their mass/masses concentrated around the edge of its/their outer rim

10) The methods according to claims 1, 4, and 7 whereas the surplus electricity produced could be used to charge a battery or a series of batteries that are used to power an electric automobile

FIG 1



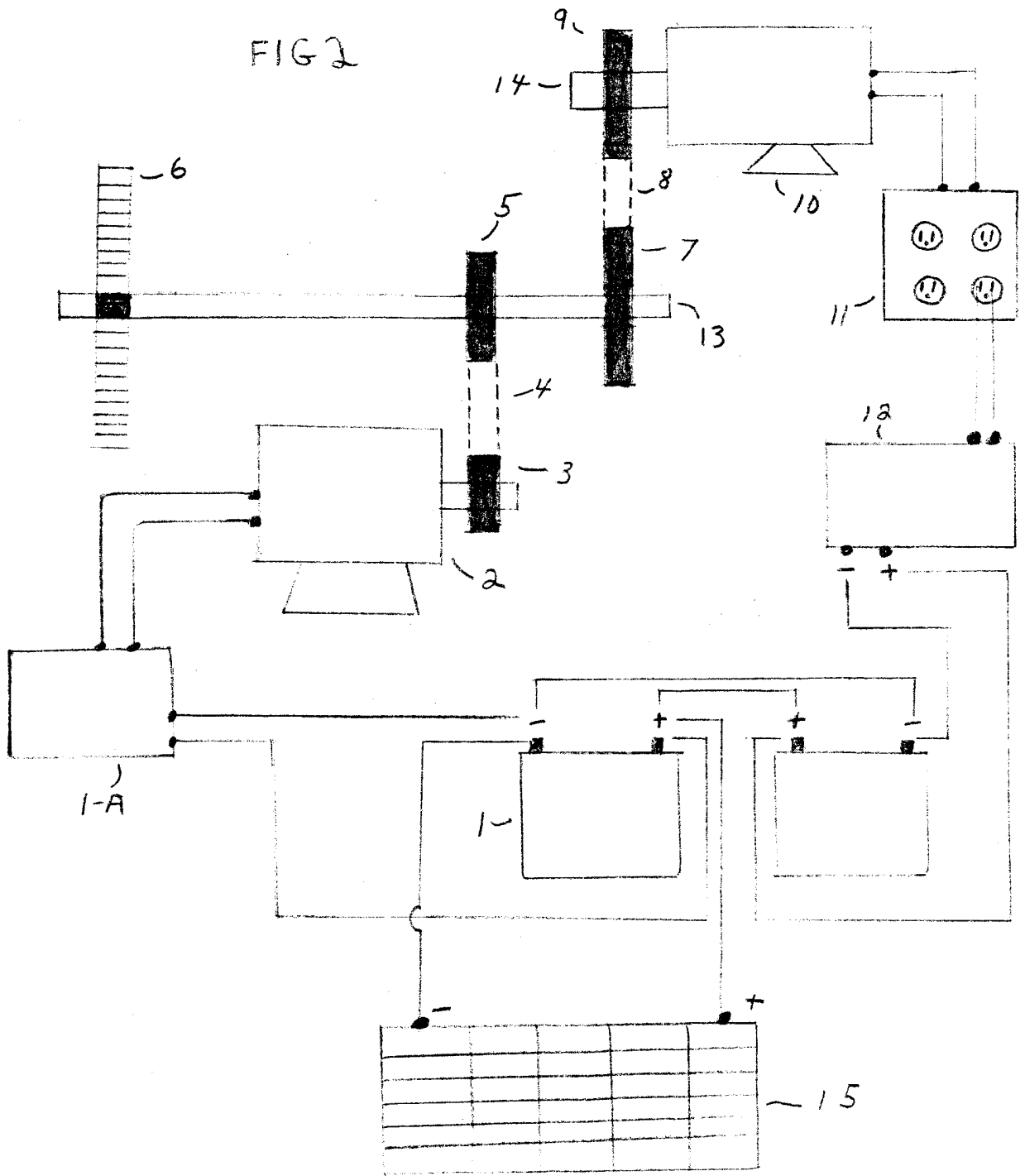
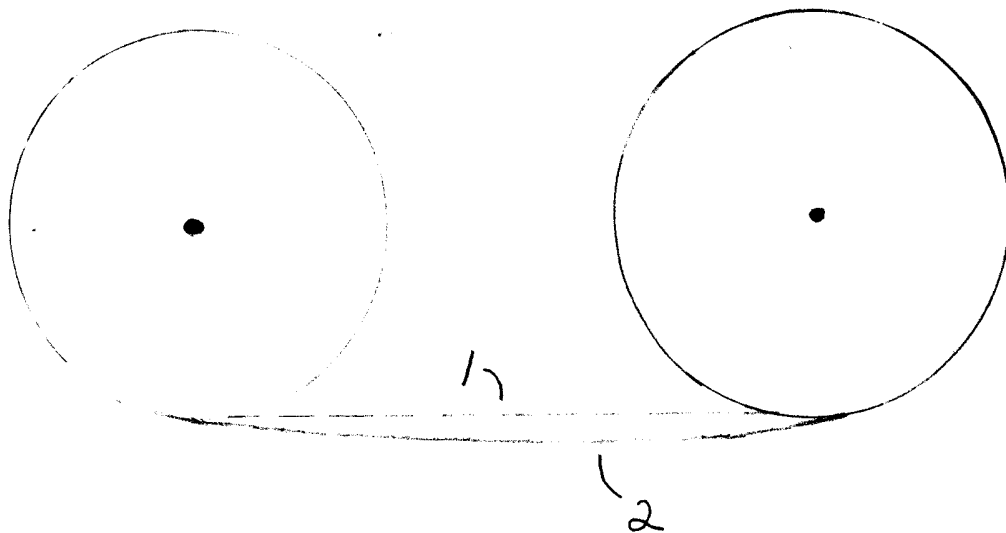


FIG 3



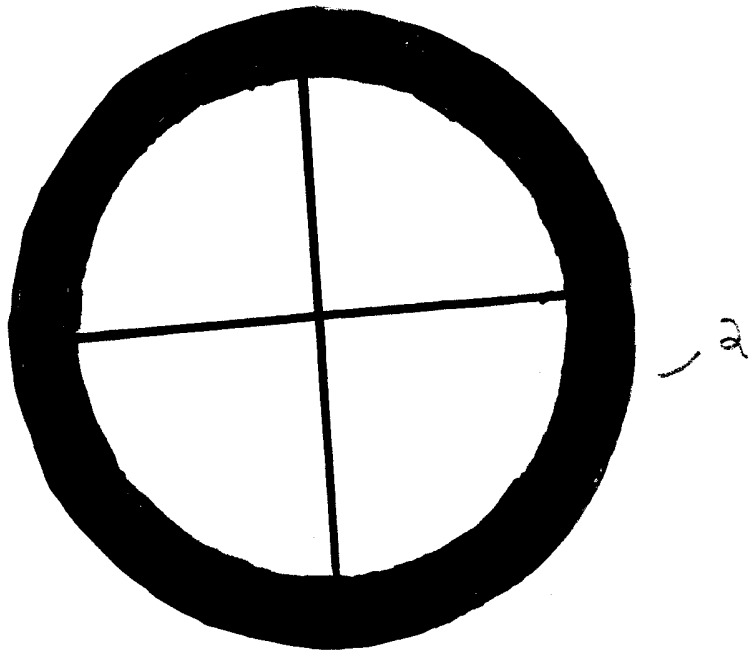
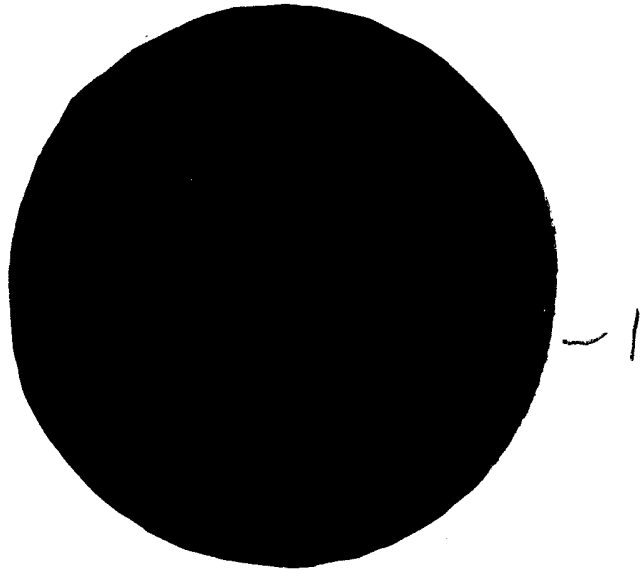


FIG 4

