

"Free Energy" Devices versus "Perpetuum Mobile" Devices- what is the difference?

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Abstract:- In the paper is explained the main physical difference between the "perpetuum mobile" type devices and the "free energy" type devices, which consists in the fact that a free energy device with magnet(s) may convert the quantum and sub-quantum free energy of the quantum vacuum into mechanical work or/and electric energy in accordance with the energy conservation law, in accordance with the property of ergodic system of the elementary atomic particles. There are presented also some essential differences between the known categories of „free energy" devices and a variant of magneto-electric generator which may generate also rotation driving force.

Keywords: free energy device; perpetuum mobile device; magneto-electric generator; driving force; quantum vacuum energy

1. INTRODUCTION

The so-called "free energy" devices are claimed as devices capable of producing mechanical work or electricity by converting into these forms of quantum energy energy and under -country of space through the magnetic or electromagnetic field.

- From the information existed in the international media and to the Internet (including short films), it appears that several types of such devices have been successfully reproduced, such as:

a) electro-magnetic generators, which consume electricity but which output more power than the technically supplied at the entrance, eg: generator Thomas Bearden;

(b) magnetic motors which operate exclusively with magnetic interaction energy asymmetrically realised between statoric magnets and rotoric magnets to generate rotation power;

c) Magneto-electric generators that consume electricity for maintain the rotation of a motor-generator assembly or of a magnetic motor but which produce a mechanical or electrical output higher than the consumed power, as in the case of the Bedini generator, for example;

d) Electro-chemical or thermo-electro-chemical "free energy" devices, eg.- Karpen's battery.

-The following free energy devices are representative:

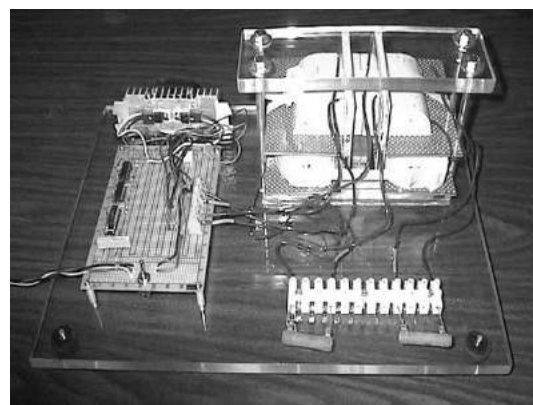
a) The electromagnetic generator made and patented by T.Bearden, J.C. Hayes, J.L.Kenny, K.D.Moore and S. Patrick at the Magnetic Energy Limited Institute in Huntsville, U.S.A. (U.S. Patent 6,627,718 B1 / 2002), based

on a principle published by R.J. Radus in the magazine "Engineer's Digest," (July 23rd. 1963), by which extra energy can be extracted from the electromagnetic vacuum using a bar-shaped permanent magnet (14), the magnetic flux of which is closed by two magnetic parts (18 and 20) which are arranged in parallel with the central magnet, with two secondary coils (29 and 30) for collecting the electric current induced by the magnetic flux variation generated by two primary solenoidal windings (26 and 28) connected to a source of pulsed electric current produced by a battery (38) and an electronic circuit;

With an input voltage of 100V, an input power of 14 Watts and an oscillator frequency of 87.5 KHz, the device generated a power of the output current collected at the coils (29 and 30), 48 Watts, so- of 3.44 times higher. In this case, by an additional winding (126), a portion of the current induced by one of the coils (29 and 30) on a magnetic part (18, 20) can be used to vary the magnetic flux in the neighboring magnetic part by the appropriate pulse supply of the primary bobbin (28, 26) thereof.

This "free energy" generator has been successfully reproduced by universities and various researchers.

- The producing of supplementary energy is explained by the Sachs theory of electrodynamics [3] which indicates the possibility of extracting energy from the quantum vacuum through the magnetic field and by the magnet's property to maintain its magnetic field intensity even if it participates in the production of electrical energy in the solenoid windings. In an improved version were used four permanent magnet with inductive solenoid circuits, arranged in a carriage or circle assembly.



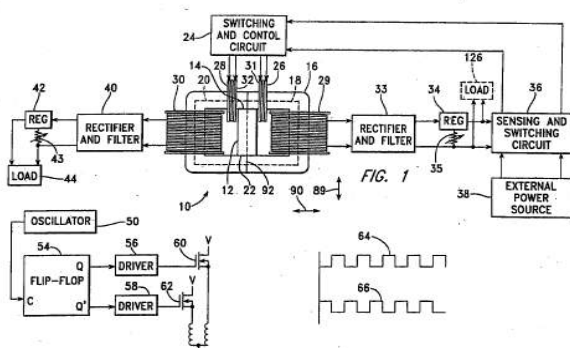


Figure 1, a, b- The electromagnetic free energy generator

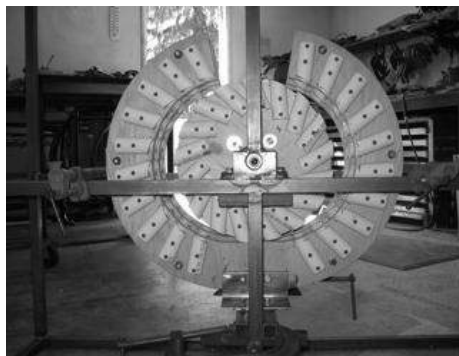


Figure 2- The Perendev magnetic motor

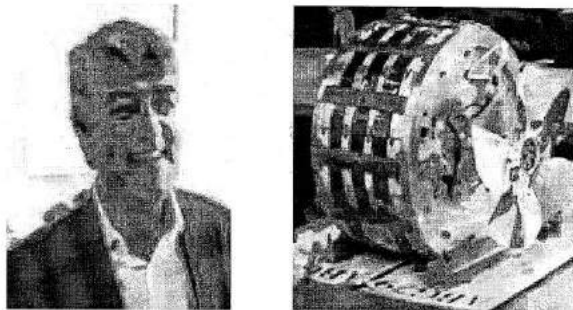


Figure 3- The Muammer Yildiz's magnetic motor

b) The best known "free energy" device of second category is the engine produced by Michael J. Brady from Johannesburg (international patent application: WO2006 /045333) within his company: Perendev Power Development Ltd., presented also on German television, (fig. 2).

The characteristic feature of this magnetic motor, also shown in the Fig. 2 consists in the non-radial and repulsive disposing of rotoric magnets and statoric magnets and in the use of diamagnetic materials (pyrolytic graphite) combined with a ferromagnetic material for asymmetrical shielding, which generates a tangent component of the magnetic repulsion force. The engine also uses three modules of stator -rotor assembly with N rotoric magnets angularly shifted by 1/3 of the angle $360^\circ/N$, so that when the rotoric magnets of a module are in the braking position (of entering in the

repulsive field of a statoric magnet), the rotoric magnets of the other two modules are in the acceleration position.

- A magnetic motor known as functional with a similar principle, with a power over 1 kW, was presented at some universities (of Turkey and the Netherlands) by Turkish inventor Muammer Yildiz, (EP2153515, DE102007037186 B3, fig.3, www [4]), the existent informations indicating that at Geneva exhibition for invention in 2013, the motor was running continuously for 4.5 hours, [5].

c) An unconventional design of a magneto-electric generator suitable for the "free energy" functioning is presented in the Patrick Kelly's "Practical Guide to Free Energy Devices" [2], (p. 3.27) and represents a magneto electric generator (author: Donald Lee Smith) using two discoidal statoric parts with cylindrical magnets circularly disposed in plastic tubes, perpendicular to the plane of the statoric disc and in reciprocal repulsion of the coaxial magnets, with some solenoids arranged on the statoric magnets, between the two statoric parts with magnets and solenoids being rotated a plastic disc with holes arranged circularly and equidistant at a distance from the axle equal with the distance where statoric magnets are located, between the holes of this disk being made magnetic screens of magnetic material such as neodymium powder, (fig.4).

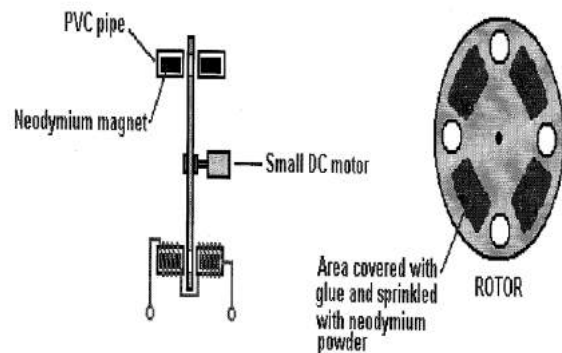
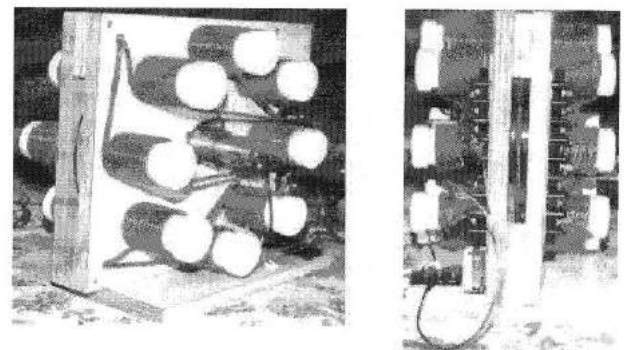


Figure 4, a, b -The Don Smith's free energy Generator

At the relatively easy rotation of the disk, these magnetic screens periodically interrupt the magnetic field lines between the coaxial magnets of the two statoric parts, generating a variable magnetic flux and an electric

current at the level of the solenoids disposed on the statoric magnets. Magnetic zirconate W (terfelon D) is the ideal material for these magnetic screens. In order to eliminate this inconvenience, either the MF moment of the rotation brake force for a given speed or the inertia moment of the magnet rotor, or preferably both, should be reduced. Although it is stated that this generator has been made at commercial level, no details are given on the power of the generator, but it is mentioned that there is a high efficiency of this generator compared to the classic version of the electric generator and the commercialization of this generator in Russia [2].

2. THE DIFFERENCE BETWEEN THE "FREE ENERGY" DEVICES AND THE "PERPETUUM MOBILE" DEVICES

As is known, the "perpetuum mobile" devices are considered devices whose operation is clearly contrary to the laws of physics, respectively- contrary to the energy conservation law, mainly, and are considered to be devoid of susceptibility to industrial application, according to the Patent Law. As an example of a "perpetuum mobile" device, is the "balls wheel" type device (Figure 5), which apparently would work by modifying the force momentum of the weight ball, , but which does not really work because the lifting a weight from the left from the minimum position to the maximum position requires a mechanical work equal to the maximum mechanical work generated by the gravitational force acting on a weight of the right side, so the wheel will stop as a result of the friction.

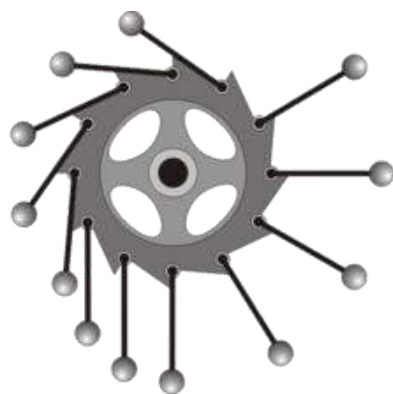


Figure 5 –The Balls wheel system

By extrapolating the conclusion regarding the contradiction with the law of energy conservation of the functioning of "perpetuum mobile" devices to the functioning of the magnetic and magneto-electric „free energy" devices, there is a tendency to apply the energy conservation law, in the form of:

$$\text{Energy produced} \leq \text{Energy consumed},$$

and to include the "free energy" inventions into the category of "perpetuum mobile" inventions.

The question that inevitably arises is whether this classification is correct or not.

The conclusion is that this classification is not correct for the following reasons:

- a) The operation of „free energy" devices that have proved to be functional can not be and are not contrary to the energy conservation law.

Their denomination resulted by the conclusion that they convert quantum and sub-quantum energy of space into useful energy, the accepted explanatory theory relying on the fact that the magnitude of the wave function Ψ in quantum mechanics approximates the real density ρ of a quantum and sub-quantum fluid-which also determines the particle's interaction with the quantum vacuum, according to the "hidden thermodynamics" of the particle, developed by Louis de Broglie [6, 7], which shows that the elementary particles exchange mass, energy and entropy with this quantum and sub-quantum medium, resulting that the elementary particles are - relative to this medium-open (ergodic) systems.

This explains the fact that the electrical and the nuclear charges and the magnetic moments of the particles do not decrease their value over time, no matter how many interactions (with mechanical work producing and thus with energy consumption) would carry out the particle, because the quantum and sub-quantum medium restore quasi-instantaneously its quantum energy loss, by taking it from sub-quantum medium.

Because a particle is an open system, the second law of thermodynamics (valid for closed systems) cannot be applied for an elementary particle, for which is characteristic the relation of I. Prigogine (Nobel prize for chemistry, 1977), specific to the ergodic systems:

$$\frac{dS}{dt} = \frac{dS_e}{dt} + \frac{dS_i}{dt}$$

which shows that in such systems the total entropy varies due to the entropy exchanged with the outside, S_e (+, 0, -), which is added to the internal entropy, S_i (+), generated by the irreversible processes.

Negative entropy $S_e(-) = -S_e(+)$ represents a "negentropy", which shows the degree of the particle's structural organization, obtained on the basis of the negentropy taken from the quantum and sub-quantum medium, in the mentioned case. According to Bohm-Vigier's interpretation of the wave function Ψ of quantum mechanics, at the microphysical level of the particle, the internal vorticity of its structure is a measure of the particle's negentropy, and the degree of destruction of its vorticity is a measure of the particle's entropy, [8].

The possibility of capitalizing the quantum and sub-quantum energy of the space through "free energy" devices results from the elementary particle property

of quasi-instantly regenerating of its vorticity [8] and of its field quantum energy lost in electrical and magnetic interactions by its conversion into mechanical interaction work, by the negentropy of the sub-quantum medium, by the mentioned mechanism, according to the "hidden thermodynamics" of the particle of L. de Broglie and in concordance with the relation (1).

Such devices cannot therefore be considered as "perpetuum mobile" devices that violate the law of energy conservation, because the basic principle of their operation involves the conversion of the quantum and sub-quantum energy of the space into mechanical work or into electricity through the quantum self-regeneration property of the elementary particles, previously explained, in full agreement with the law on energy conservation.

-For example, in the case of a magnetic "free energy" device, the fundamental functional principle consists in the converting of the potential energy of magnetic interaction asymmetrically realised by asymmetrically positioned magnetic screens and angular arrangement of the magnets, into kinetic rotation energy - an option that respects the energy conservation law as long as the magnets are not de-magnetized (Those of NdFeB being guaranteed for 4-5 years by the producers, usually).

3. A NEW TYPE OF MAGNETO-ELECTRIC GENERATOR WITH REDUCED MAGNETIC BRAKING

A raised problem in the domain of „free energy” devices refers to the possibility to modify a classical magneto-electric generator in a way which may generate also driving force for sustaining its rotation.

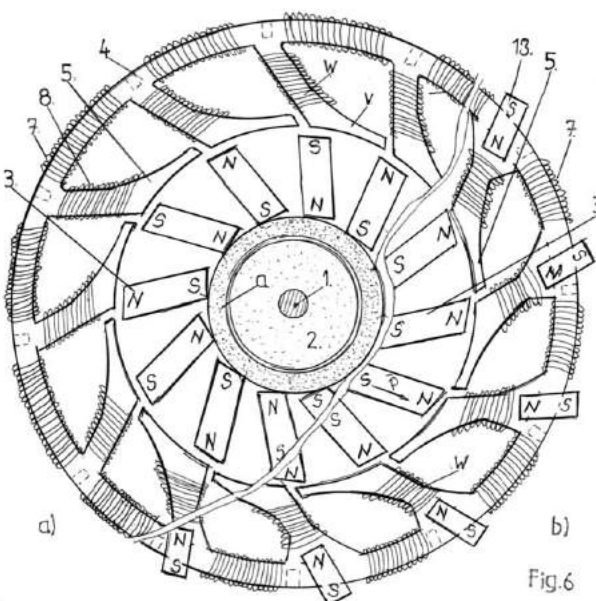


Figure 6- Magneto-electric generator which generates also driving force

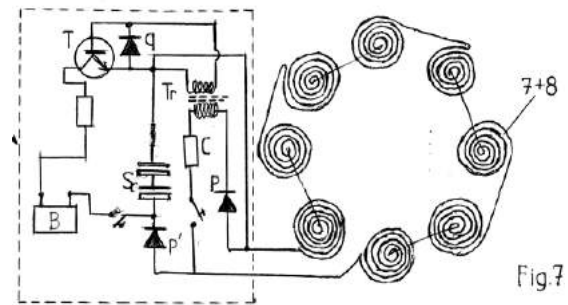


Figure 7- Electronic automatic switcher for the generator

In the patent application: R02017-00089 of the author is presented a new type of magneto-electric generator with reduced magnetic braking, (Figure 6) which consists of a rotor (R) with 2n rotor magnets (3, 3') axially polarized, of bar-type, with NS poles on ends, fixed at an angle of 15-45 ° relative to the radial direction, in a ferromagnetic ring (a) fixed on a rotoric support (2, 2') through which an axis (1) passes perpendicularly to it and of a stator (S) with a circular core (4) having inductors (H) formed from a ferromagnetic L-part (5) with a base (v) and with its straight side (w) at an angle of 15-45° relative to the radial direction, similar to the rotoric magnets (3, 3') and which is fixed to the circular core (4), with a coil (8) disposed on its right side (w) and continued with a coil (7) made on the corresponding part of the circular core (4), the connecting to a consumer (C) of the set of coils (7 + 8) interconnected suitably in series or in parallel being realized by an electronic switcher (9) which realizes the charging of a capacitors set (S_c) in the second half of the magnetic field variation's period (when the magnetic field decreases) and their discharging in the first half of the field variation's period, when the main consumer (C) is electrically powered, (figures 6, 7).

The generator can be made double or multi-modular, with united rotors.

According to the invention, by generating a tangential component, of driving force, in the first half of the magnetic flux variation' period, as a result of the angular arrangement of the rotoric magnets (3, 3') and of the straight parts (w) of the statoric L- parts (5) and by the disconnecting of the consumer in the second half of the magnetic flux variation' period, the generator can operate in a "free energy" mode, as motor-generator, after an initial impulse.

3. CONCLUSIONS

It is deduced in the paper that between a "perpetuum mobile" device of gravitational type and a device of " free energy" type such as a magnetic motor, made only with asymmetrically disposed and screened permanent magnets, although both are based on the conversion of a field energy (of a gravitational or magnetic field) into mechanical work or in electrical

energy, there is an essential difference which consists in the fact that in the case of a gravitational "perpetuum mobile" device, the gravitational field energy cannot be used by a perpetual motion of a „weight wheel” type device, due to the lack of the possibility of locally shielding the gravitational field (such screens cannot be produced), whereas in the case of a magnetic motor, for example, the field source (the magnet) is artificially produced with a relatively long duration (at least 4-5 years) and can be shielded in an adjustable mode which allows the realization of functional variants of "free energy" devices of magnetic motor type, if certain conditions of functionality such as the appropriate calibration condition of the shielding and the condition that for each rotoric magnet entered in the braking position two other rotoric magnets are in the accelerating position (of driving force generation) so that the driving force results always greater than the braking force. In consequence, some of these devices may be a solution for the future.

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