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— *of inventorship (Rule 4.17(iv))*

Published:
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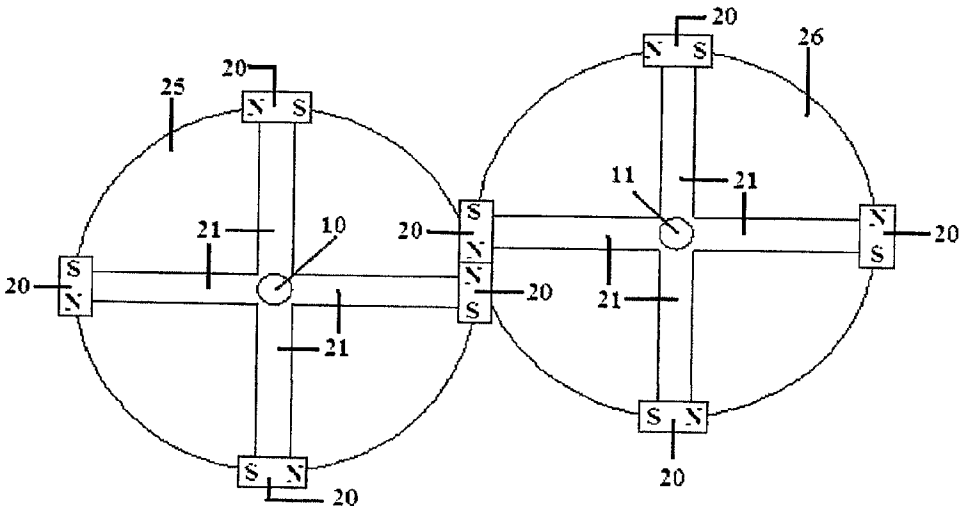
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(54) **Title:** THE CLEVELAND TORQUE ENGINE



(57) **Abstract:** This invention pertains to the magnetic motors field and comprises a number of parallel, rotatable shafts (10, 11) whereon are affixed a number of equally spaced, perpendicular extensions (21) which also comprise a number of permanent magnets (20) affixed thereon and arranged so as to allow repelling magnetic interaction as the magnets (20) pass a center point between the shafts (10, 11). Shafts (10, 11) also comprise a number of gears of differing lengths (25, 26) to maintain rotational timing of magnets (20) when shaft (10) is repositioned and to ensure said magnets (20) interact in extremely close rotational proximity a number of times per rotation causing perpetual movement. Conventional magnetic motors problems eliminated are; impedance of rotation caused by permanent magnet use on both rotor and stator, and the additional expense realized using external electrical source, electromagnets on stator, and sensors to route external electricity to the stator's electromagnets.

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THE CLEVELAND TORQUE ENGINE

DESCRIPTION

Technical Field of the Invention:

The technical field of the present invention generally relates to magnetic motors and more particularly to magnetic motors that produce rotational torque.

Background Art:

Background art that may be useful for understanding, searching, and examination of the current invention are as follows; U.S. Patent No. 6,954,019, U.S. Patent No. 7,075,200, U.S. Patent No. 7,148,596, and U.S. Patent No. 6,433,452.

Disclosure of the Invention:

The technical problems confronted and resolved by The Cleveland Torque Engine are the production of rotational torque without requirement for or consideration of energy sources from outside of the engine itself, and the elimination of impedance of rotational torque. Currently, all other magnetic motors employ one or more of the following; rotors (rotational motor part) and stators (stationary motor part), permanent magnets and/or electromagnets, an external electrical current source, and a kind of sensor.

In one example, motors employing permanent magnets on both stator and rotor may encounter design difficulties. The desired rotational torque may become impeded by one of the two following; the attraction forces of the stator magnets as the rotor and its magnets attempt each rotation, or the repelling forces of the stator magnets as the rotor magnets attempt to approach and pass the stator magnet...causing an impasse if you will, in both cases.

In one final example, electromagnets are used on the stator member which also incurs the added expense of both a required source of external electrical current and a kind of sensor device to determine the precise time at which to send an electric charge to the electromagnets of the stator creating the magnetic field required to produce a repelling force between stator electromagnet and the rotor permanent magnet thereby causing desired rotational torque. The Cleveland Torque Engine employs a plurality of rotor shafts and no stator members, each shaft with permanent magnets that interact one shaft's with the other's to cause rotation of all shafts, and each shaft with interacting gears to ensure magnets interact precisely at each rotation so as to achieve the full or desired amount of repelling force. The added expense as defined in the final example above is resolved by use of permanent magnets on a plurality of

rotors, eliminating the requirement for electromagnets and external energy sources. The employment of gears eliminates the requirement for sensors of any sort. The overall design of The Cleveland Engine eliminates any impedance of rotational torque as all rotor shafts are fully motive.

Brief Description of Drawings:

The drawings constitute a part of this specification and include exemplary embodiments to the invention, which may be embodied in various forms. It is to be understood that in some instances various aspects of the invention may be shown exaggerated or enlarged to facilitate an understanding of the invention.

FIG. 1 depicts a top view of the magnetic motor without the motor frame according to this invention;

FIG. 2 depicts a front view of the magnetic motor without the motor frame according to this invention;

FIG. 3 depicts a top view of the magnetic motor with the motor frame according to this invention;

FIG. 4 depicts a front view of the magnetic motor with the motor frame according to this invention;

FIG. 5 depicts a top view of the magnetic motor with frame sleeves fully extended according to this invention;

FIG. 6 depicts one of a plurality of possible embodiments of the magnet motor according to this invention;

Detailed Description of Drawings

Detailed descriptions of the preferred embodiment are provided herein. It is to be understood, however, that the present invention may be embodied in various forms. Therefore, specific details disclosed herein are not to be interpreted as limiting, but rather as a basis for the claims and as a representative basis for teaching one skilled in the art to employ the present invention in virtually any appropriately detailed system, structure or manner.

It is already well known that when the same "poles" of two magnets interact, they cause a repelling force one on the other. As shown in FIG 1 and 2, this embodiment of The Cleveland Torque Engine comprises a number of parallel, rotatable shafts (10, 11) where thereon are affixed a number of equally spaced, perpendicular extensions (21). Said

extensions (21) comprise a number of permanent magnets (20) affixed thereon and arranged so as to allow repelling magnetic interaction as the magnets (20) pass a center point between the shafts (10, 11) per rotation of said magnets (20). The rotatable shafts (10, 11) are the motor's rotors. The motor has no stator members. The shafts (10, 11) in this embodiment also comprise a number of gears of differing lengths (25, 26) to maintain rotational timing. Said gears (25, 26) are aligned to ensure said magnets are interacting in extremely close proximity a number of times per rotation causing perpetual movement. Therefore, an electric generator and/or other machine requiring rotational force in order to function (75) can be connected to this invention's output shaft (11) to receive said force. Figures 1 and 2 were intentionally displayed without the M-shaped base frame (40) to give a more clear view of internal parts.

FIG. 3 and 4 shows said embodiment above using an M-shaped base frame (40) whereas the sections of said M-shaped base frame (40) are identical on each end of said shafts (10, 11) whereas sections of said M-shaped base frame (40) contain identical measurements and parts disposed therein with the exception of pull handle (31) and stop pin (32) being located only on sleeve (30) supporting the front end of shaft (10). Inside said M-shaped base frame (40) are two slidably disposed sleeves (30) and four bearings (38) which, in this embodiment, the four bearings 38 act as a means to allow rotation of said shafts (10, 11) and where the sleeves (30) act as a means to allow only shaft (10) to slide to different positions within said M-shaped base frame (40). Used together, the M-shaped base frame (40), the sleeves (30), and the bearings (38) are the means by which rotatable shafts (10, 11) are supported in a manner such as to maintain required spacing and allow gears (25, 26) and magnets (20) interaction between said shafts when interaction is intended.

The opposing surfaces of said magnets (20) of a rotary shaft (10) interact with opposing surfaces of magnets (20) of another shaft (11) at a point in between the shafts (10, 11) which causes movement of said extensions (21) to which magnets (20) are affixed. Movement of said extensions (21) transforms repelling magnetic interaction into a rotational movement of shafts (10, 11). Rotational movement of shaft (10, 11) then causes rotation of gears (25, 26) thereon firmly affixed. The gears (25, 26) in turn ensure that the rotation of shafts (10, 11), extensions (21), and magnets (20) occur with precision so as to ensure maximum force can be achieved from the opposing surfaces of repelling magnets (20). Connected beforehand to the output shaft (11) of this motor, an electric generator and/or

other machine requiring mechanical torque for operation (75) can be operated without consideration for need of outside electric pulses, fuel, etc. of any kind.

Now, please turn your attention to FIG. 5, which depicts use of said sleeves (30) to slide shaft (10), its extensions (21), and its magnets (20) into differing positions using pull handle (31). Stop pin (32) prevents sleeve (30) from being pulled completely out of the M-shaped frame (40). It is also noteworthy here that gears (25, 26) are of differing lengths which allows this motor to maintain prescribed precise rotational timing of said magnets (20) as shaft (10) and its gear (25), extensions (21), and magnets (20) are being repositioned or also while said shaft (10) is at rest in differing positions. The bearings (38) contained on all four ends of the shafts (10, 11) allow continued rotation even as shaft (10) is being repositioned. Therefore, sleeves (30), bearings (38), and gears (25, 26) act as the means by which shaft (10) can rotate while sliding or while at rest in differing positions. Drawing the pull handle (31) away from the M-shaped frame (40) decreases the proximity of magnets (20) and thereby causes a decrease in the amount of repulsive force between said magnets (20) as they continue to spin or a cessation of force altogether. Consequently, pushing the handle (31) towards the M-shaped base frame 40 increases the proximity of magnets (20) and in so doing causes the start of shafts (10, 11) rotation or an increase thereof. This is advantageous because it allows control of the engines output and/or allows for output stoppage so that routine maintenance of parts can be achieved.

Moving now to FIG. 6, we see a schematic embodiment of this invention where the output from said invention can be configured and coupled with a plurality of beveled gears (50) to power a number of generators or machines (75) requiring such force. This rotary invention with its plurality of rotors is designed to have no stator, doesn't bring into itself or receive external sources of electrical or other energy.

While the invention has been described in connection with a preferred embodiment, it is not intended to limit the scope of the invention to the particular form set forth, but on the contrary, it is intended to cover such alternatives, modifications, and equivalents as may be included within the spirit and scope of the invention as defined by the appended claims.

Best Mode for Carrying Out the Invention:

The best mode for carrying out this invention really depends on the desired application. I.E., if the desired application is for this invention to operate a plurality of electric generators which will be used to power an electric vehicle, watercraft, aircraft, or spacecraft, or other

thing, then the most appropriate mode would be Figure 6 of the drawings where the Engine is configured to operate a number of electric generators (75) from which electricity can then be used to operate the electric vehicle, watercraft, aircraft, or spacecraft. However, Figure 3 may prove to be the best mode if the desired output is to be purely torque to, I.E., the drive train (75) of a normal vehicle, watercraft, aircraft, or spacecraft or industrial machine.

Industrial Applicability:

In consideration that this invention can be produced and configured in an unlimited number of shapes, sizes and configurations, and considering its potential for portability, and further considering its direct product of torque and indirect product of electricity, this invention's industrial applicability is boundless.

CLAIMS

What is claimed is:

1. The magnetic motor wherein the improvement comprises a number of parallel, rotatable shafts (10, 11) thereon affixed a number of equally spaced, perpendicular extensions (21) comprising permanent magnets (20) attached to said extensions (21) and arranged so as to allow repelling magnetic interaction; and where said shafts (10, 11) also comprise a means of maintaining required spacing and rotational timing to allow said magnets (20) to interact a number of times per rotation causing perpetual movement.

2. A magnetic motor according to claim 1 wherein said motor comprises a number of rotors (10, 11) and no stator.

3. A magnetic motor according to claim 1 wherein said rotatable shafts (10, 11) comprise a number of gears (25, 26) of differing lengths.

4. A magnetic motor according to claim 1 wherein said gears (25, 26) maintain rotational timing.

5. A magnetic motor according to claim 1 wherein said rotatable shafts (10, 11) comprise a number of equally spaced, perpendicular extensions (21).

6. A magnetic motor according to claim 1 wherein said extensions comprise a number of permanent magnets (20) affixed thereon to.

7. A magnetic motor according to claim 1 where said rotatable shafts (10, 11) are supported in a manner such as to allow gear and magnet interaction between shafts when interaction is intended.

8. A magnetic motor according to claim 1 wherein shaft(s) (10) can rotate while sliding or at rest in differing positions.

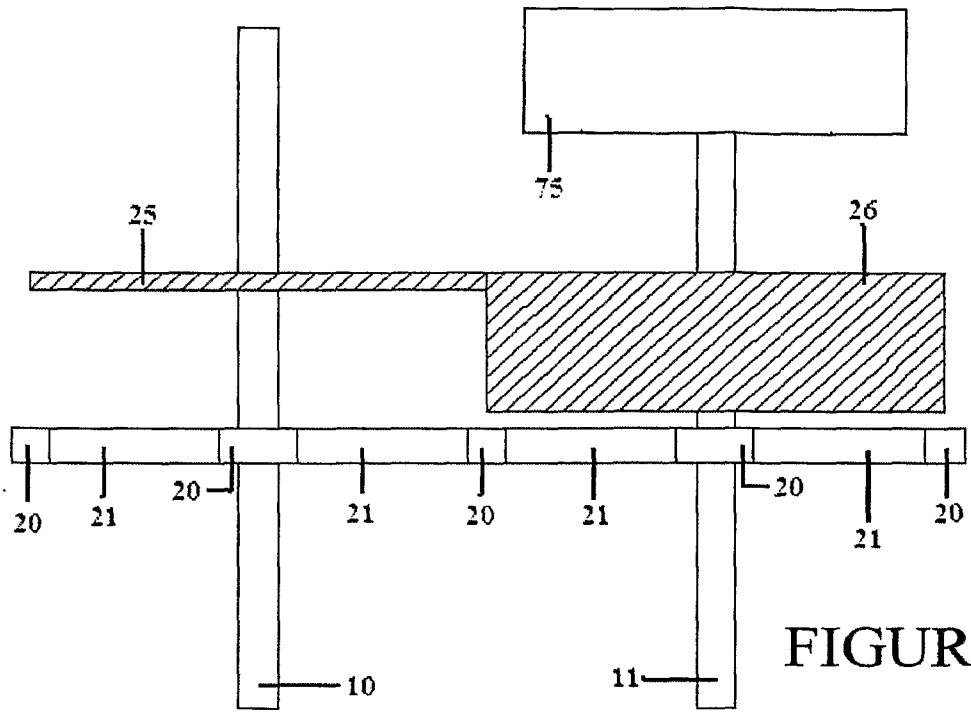

FIGURE 1

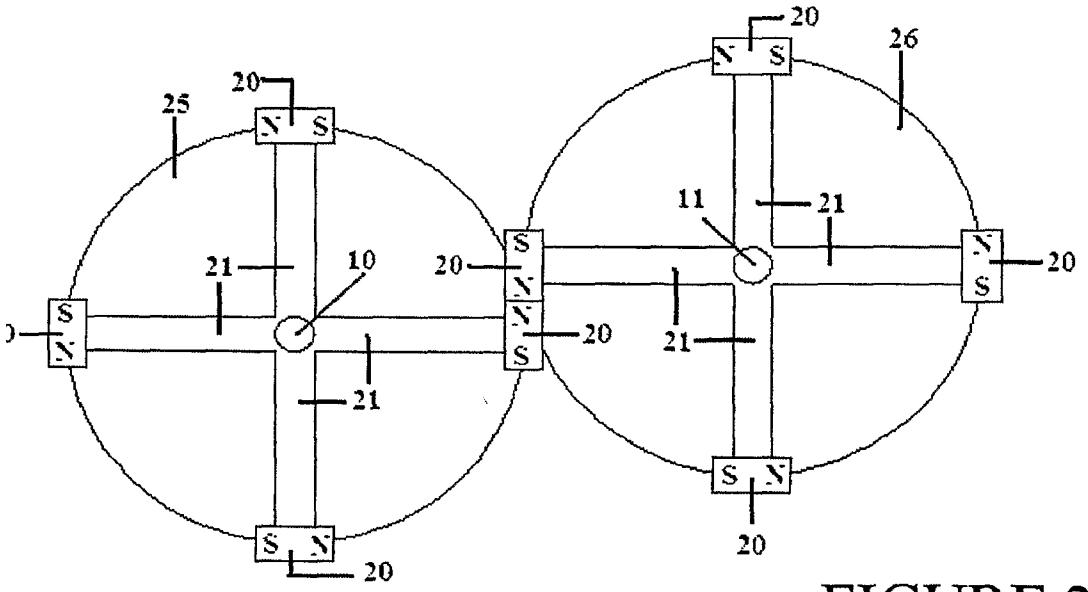

FIGURE 2

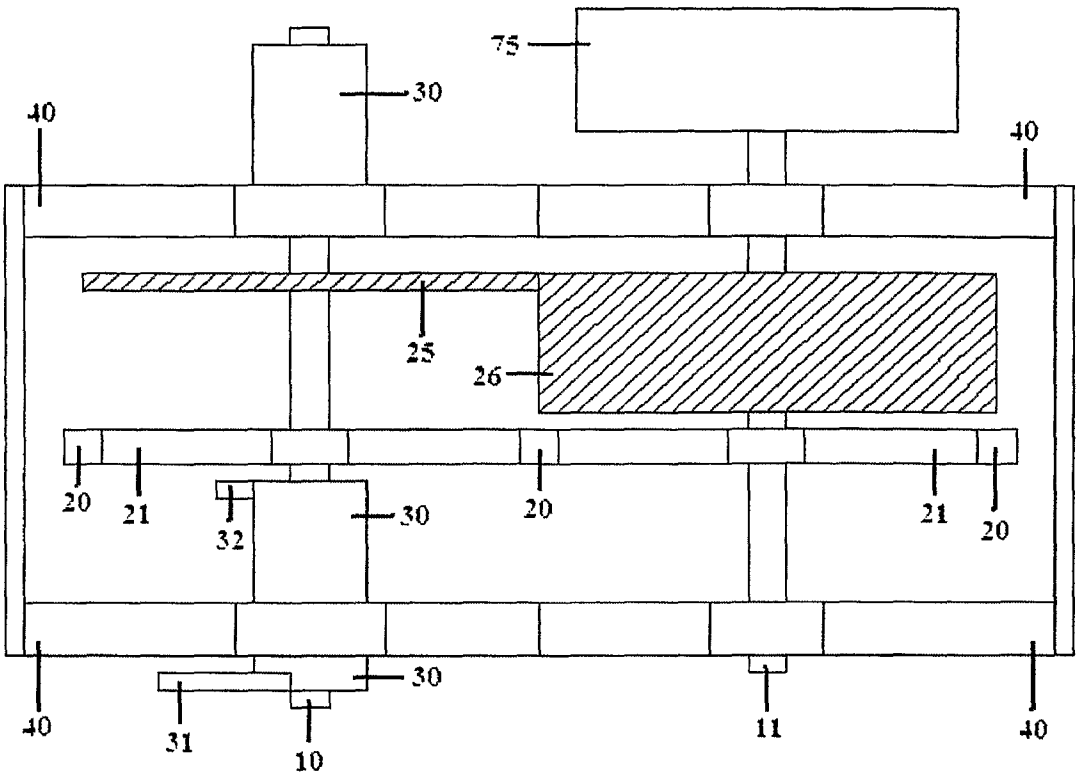

FIGURE 3

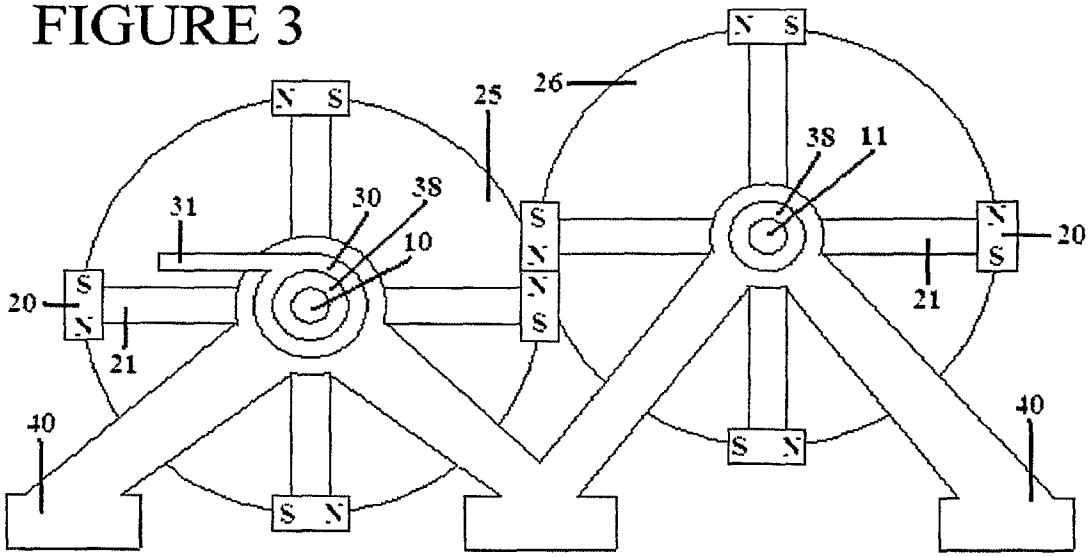

FIGURE 4

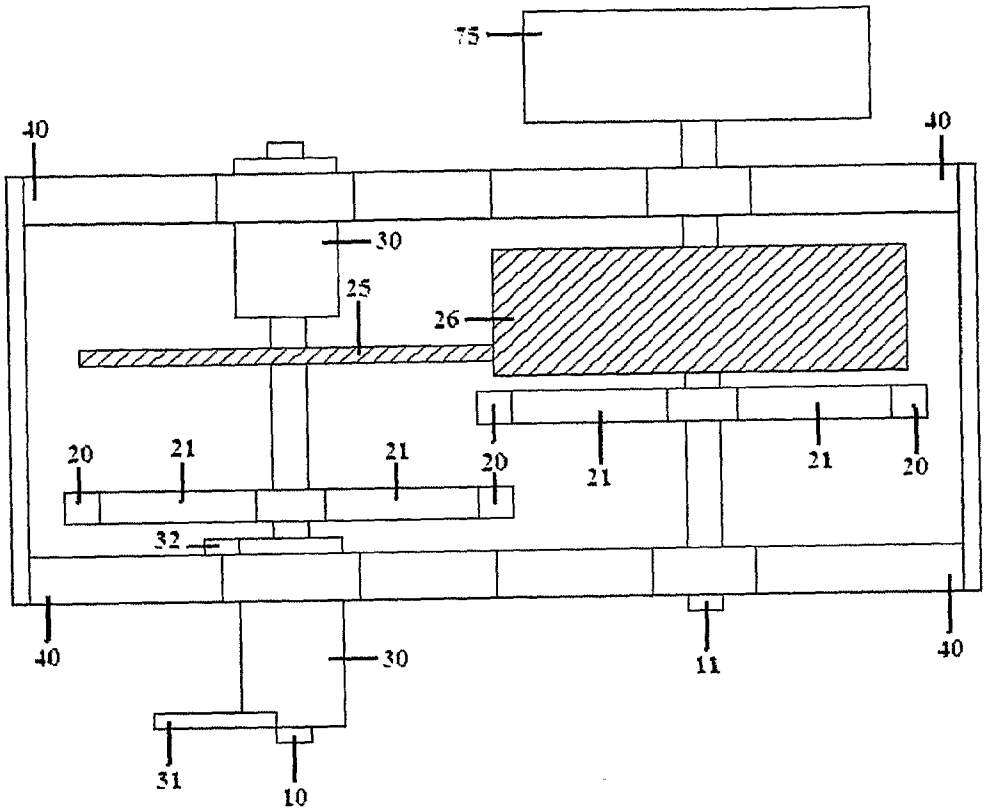

FIGURE 5

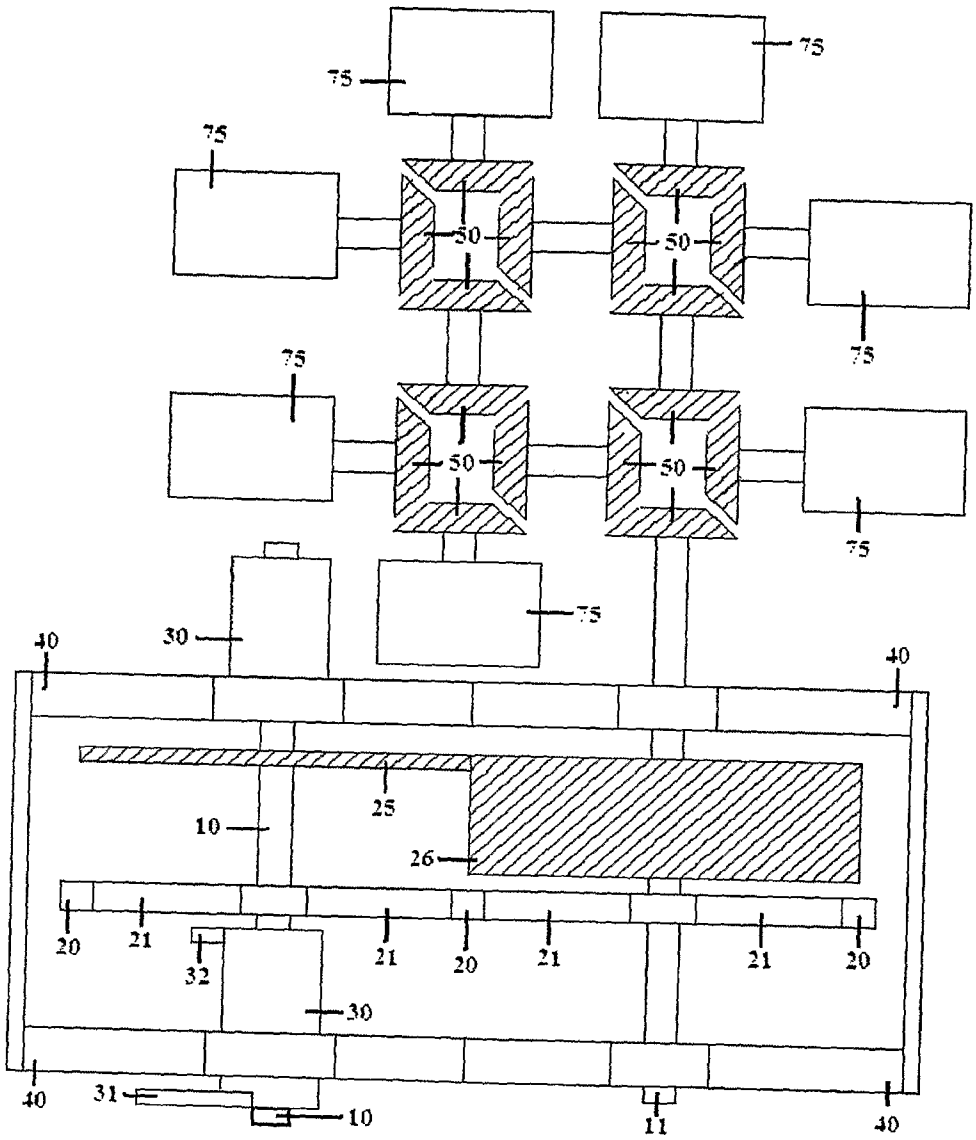
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FIGURE 6

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 07/60315

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8): H02K 37/00 (2007.01)
USPC: 310/46
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)
USPC: 310/46

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC: 310/117, 118; 310 (search term limited)

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

WEST (DB= USPAT, USPGPB, EPAB, JPAB); Google search,
terms including: motor, magnet, rotors, gears, perpetual, timing, shaft, plural rotors

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 6,084,322 A (ROUNDS) 04 July 2000 (04.07.2000) col 3, ln 3-65; col 4, ln 3-19 and col 5, ln 8-26.	1-4, 6-8 --- 5
Y	US 4,751,486 A (MINATO) 14 June 1988 (14.06.1988) col 2, ln 25-55.	5
A	US 4,169,983 A (FELDER) 02 October 1979 (02.10.1979) abstract.	1-8

☐ Further documents are listed in the continuation of Box C. ☐

* 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

Date of the actual completion of the international search	Date of mailing of the international search report
17 July 2007 (17.07.2007)	19 MAY 2008
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (April 2007)