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Editor IRVIN R. BARROWS

Will the 21st Century Repeal the Laws of Nature?

A systems engineer warns that the 21st century may rewrite the Laws of Nature as understood by 20th century science. Thus technologies that today are "scientifically impossible" may some day come into being.

By Jay Mendell

In looking 50 or 100 years ahead, a forecaster will likely dismiss a technology that is strictly prohibited by the Laws of Nature as they are now understood. Who, in 1885, would have forecast weapons and power plants based on splitting the "unsplittable" atom?

The Laws of Nature are re-written as our understanding of the universe deepens and broadens. Thus an expert knowledge of **today's** science may actually preclude an accurate forecast of **tomorrow's** technology.

As an example of the perishability of the Laws of Nature, we may take Newton's laws for the motion of bodies. At the beginning of the 20th century, Newton's laws must have seemed as close to absolute truth as any scientist could desire. For 200 years, they had described with complete precision the trajectories of every sort of body studied by experimental science. But when atomic and nuclear physics developed, Newton's laws proved less than all-encompassing. In predicting the motion of superfast particles coming out of transmuting matter, Newton's laws failed miserably, and had to be replaced by Einstein's Theory of Relativity.

No matter how accurate and how venerable a theory may be, it may one day turn out to be invalid in some area of application. The theory need not be discarded altogether; it may simply be labeled "not suitable for use in all regimes."

A case in point is the First Law of Thermodynamics. This law states: (1) heat and work are forms of energy and (2) work—including electricity—can be obtained only if energy or heat is used up. This principle is also called the Law of the Conservation of Energy.

The First Law of Thermodynamics was formulated about 1840 and enjoyed great success until the early 1900's. Naturally, the physicists of 1895 would be perplexed by our modern nuclear power plants, which (from their viewpoint) consume no fuel, and therefore generate electricity in a manner contrary to the First Law.

Thus the First Law, after more than 50 years of success, had to be revised because a new energy source—the decomposition of matter—had been discovered.

Since we know that our 1968 nuclear industry is impossible by the canons of 19th century physics, we may well expect to see technology in the 21st century that will violate our 1968 science.

For instance, there may be a possibility of manufacturing power in some sort of device that will violate the Second Law of Thermodynamics. The Second Law holds that in any energy conversion—as from light energy into energy of motion—some energy is wasted, that is, converted to heat that is dissipated in the environment.

The Second Law is a stricture against certain processes that most

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engineers would dearly love to accomplish, such as building a machine that manufactures steam and ice by taking in cool water and nothing else.

The Second Law obstructs the operation of fuel-less power plants. Nothing in the First Law prohibits us from building an engine that takes heat from the ocean waters and turns all this heat to electricity, but the Second Law warns us that:

1. Only a portion of the heat can be made into electricity.
2. The remaining portion must be rejected.
3. If the engine is to work at all, the outgoing heat must be put into a region of the ocean that is colder than the original heat source.
4. The engine will not work efficiently unless the original heat source is considerably warmer than the region where waste heat is dumped.

In "pumping" heat out of food, a refrigerator consumes electricity. It would be nice to operate the refrigerator on the heat coming out of the food, thereby cutting down the electric bill, but the Second Law forbids it.

The Second Law does more than debunk the dreams of mechanical engineers. It forms, along with the First Law, the basis of thermodynamic theory, which has guided the design of almost every engine and chemical plant.

Successful applications of the Second Law appear to validate it, but it may be that the regime of invalidity has simply not yet been encountered in practice.

Violations of Second Law Are Foreseen

Such a regime was identified in theory as long ago as 1871 by James Clark Maxwell, the British theoretical physicist. In his *Theory of Heat*, Maxwell pointed out that the energy of matter is in its molecules. By manipulating individual molecules, Maxwell suggested, one might carry out "unnatural processes" that violate the Second Law.

In ordinary engines, of course, we do not manipulate individual molecules, but thousands of billions of molecules. Maxwell talked about a different regime in which individual molecules receive individual attention.

Imagine a vessel of air at uniform temperature. The individual molecules are moving at various speeds, from very slow to rather fast, and most of the energy is in the faster molecules. Let us suppose that the vessel is divided into two portions, A and B, separated by a small hole, and that there is a small demon that can open or close this hole with negligible expenditure of his own energy.

The demon sets out to trap fast molecules in compartment A, slow molecules in compartment B. He does this by slamming shut the hole whenever (1) a fast molecule in A tries to leave A, or (2) a slow molecule in B tries to enter A. In time he succeeds in trapping so much energy in compartment A that it is quite hot while compartment B is cold.

Scientists have never agreed whether "Maxwell's demon" is merely a clever paradox or a true body blow to the Second Law. In recent years, much more sophisticated variations of Maxwell's scheme have been conceived, and scientists are hard pressed to explain why the schemes are not feasible, at least in principle.

The usual method of disposing of the paradox is to say that the trapdoor can't work for this or that reason, but one can jury-rig variations of the trapdoor to circumvent an opponent's argument. (See W. Ehrenberg's article, "Maxwell's Demon" in *Scientific American*, November, 1967.)

The simple fact, as I see it, is that individual molecules (and even very small groups of molecules) are not subject to the Second Law. Furthermore, I feel that the logical foundations of molecular thermodynamics are quite shaky and that no one will come forth with a single theoretical argument that settles this matter once and for all. There is the possibility that a demon-like device might be built and demonstrated in a laboratory somewhere. Failure would prove nothing, but success would mean that the old thermodynamics would have to be reformulated. Engineers would then be encouraged to re-open the investigation of so-called "unnatural" engines and refrigerators. There would still be no sense in trying to process great gobs of molecules in the machines;

the Second Law quite clearly opposes that line of attack. But demon-like machines, based on processing of individual molecules might be worth a look-see. As a matter of fact, the Russians have already set up an institute to study the "limitedness of the Second Law of Thermodynamics," according to *Scientific Research* (April, 1968).

The Second Law may withstand all assaults for a long while to come, and even if it is proven experimentally to have limitations, new industrial applications based on such limitations may be even longer in coming. But when we think 50 to 100 years ahead, we should allow for the **possibility** that there may be machines that will violate the 1968-style Laws of Nature.

I have no wish to tout demon-like energy conversion as the power system of the future. I merely wish to suggest that there is no theory so high-and-mighty that it can't have regimes of inapplicability.

This suggests that the long-range forecaster trying to guess, let us say, the state of engineering in 2020 is in a predicament. He cannot predict the state of scientific knowledge in 2020, but he can be sure that by the standards of that era, his 1968-style knowledge will be laughably antique.

What should he do? I think this is a question that we futurists need to address ourselves to.

(Mendell's address is: 21 King Edward Road, West Hartford, Connecticut 06117.)

This article by Dr. Mendell is from the October 1968 issue of The FUTURIST and was printed by special permission of the WORLD FUTURE SOCIETY,P.O. Box 19285, Twentieth Street Station, Washington D.C. 20036.
The FUTURIST is a very scholarly publication which attempts to predict the future by careful analysis of present trends. It does not carry articles about perpetual motion. Most of its authors have Doctorate degrees and many of its readers are corporation executives. Subscription is $5.00 a year for 6 issues. A sample current or back issue is one dollar.

Dr. Mendell is a very busy writer and lecturer on technology and the future and does not have any time to answer letters from inventors or amateurs. Scientist with advanced degrees who are attempting to violate the second law of thermodynamics may write to him.

MAGNETIC PERPETUAL MOTION?

by Gaston Burridge

Perpetual motion: what do we mean by "perpetual"? What do we mean by "motion"? All presently know matter is believed to have had a definite beginning and will have a definite ending--even the entire universe. I find it very difficult to conceive of getting "something" for nothing" out of such a setup. A relative price must be attached to all things, animal, vegetable, mineral, physical, mental, psychic or energy. So, let us begin by not looking "forever"!

One interesting natural "motion" is magnetic--but this one proves a long, long way from "perpetual". Though it may function over extended periods it ceases far short of a perpetual status--as I understand the word "perpetual". Present spohisticated measuring devices indicate magnetic fields created by permanent magnets definitely grow weaker and smaller with time. Electromagnetic fields, of course, cease almost as soon as the potentials creating and feeding them stop.

Over the last seventy five years considerable experimenting has been done with permanent magnetic motors--that is, attempts to create rotory motion using permanent magnets as the source of power. Several such motors have received U. S. Government patents. All of these issued patents, at present, have become "public property" by virtue of time limitations applied to all issued patents. I have made extended search of patent files and have located the following patent numbers which appear to cover the extent of this type of magnetic motor possibilities. There are likely others existing which I have missed. The method of listing patents is quite complicated, requiring much searching and little finding. The listed patent numbers may be obtained in copy form from the U. S. Patent Office, Washington, D.C., at fifty cents per copy. Some time may be required to fill orders covering these items because of their age, consequently their small reserve number of copies.

U. S. Patent #1,835,721 for a permanent magnet motor was issued to Arthur Powell of Drumright, Oklahoma, December 8, 1931. His filing for this patent was made December 5, 1929. Half interest in this patent as assigned to James W. Honey, also of Drumright, Oklahoma. As far as known no attempt was or had been subsequently made to manufacture any of these devices nor were further patents indicated.

U. S. Patent #1,963,213 for a magnetic motor was issued to J. W. Poysa of Hollywood, California, June 19, 1934. This is a much more complicated machine than the Powell one and involves electromagnetics rather than permanent ones, hence, in one sense, perhaps it should not be included here at all because many electric motors are, of course, "magnetic motors" of this type. But there are some points in this motor which might well be applied to permanent magnet motors so it is included. As far as known, Mr. Poysa formed no corporation to manufacture his motor.

Mr. Harry L. Worthington of San Francisco, California, was awarded U. S. Patent #1,859,643, on May 24, 1932, covering a magnetic motor of the permanent magnet type. Mr. Worthington appears to have formed two corporations to exploit his inventions; The Magnetic Motors Corporation, and the Fuelless Magnetic Motors, Ltd. He also appears to have been issued other patents for similar or improved devices of this same nature. Mr. Worthington passed away many years ago and as far as known his corporations have shut up shop long since.

A very early magnetic motor is described in the March 1879 issue of Harper's Magazine. This same motor was also written up in "The Theosophist" for November 1879, pages 54, 55, 56. While this motor was not patented, the Harper's article did carry several drawings illustrating some interesting aspects of the device and if one were inclined towards experimenting he might well duplicate this machine and see if it really performs as described. The writer of this article says he saw the device operating. However, present day physicists who have reviewed the article recently say the devices "cannot work".

Another U. S. Patent, #1,859,764, was awarded to Geroge H. Bougon, May 24, 1932, for a magnetic device having several "motion" possibilities which were, according to word to me from Bougon himself, applied to a "motor" concept. Bougon was the victim of tragic circumstances as far as his life and his magnetic inventions were concerned. During the later part of his days I had considerable correspondence with him concerning these devices and their applications. As his life ebbed he sent me many drawings and descriptions of his work.Among the things he wrote was that a model of his magnetic motor ran for more than nine months without stopping and would have run longer but was destroyed in a mine fire which burned down his shop and all that was in it. Bougon was the mine's machinist. This fire swept away his work of a lifetime in magnetics. All he had left was what he could remember, and he had no money to get started again. My own experiments with several of his devices--ones he had sent me and ones I had made--indicated to me that the basics of Bougon's claims were justified. I have hoped that someday I would be in a position to experiment fully along these lines and perhaps, posthumously, bring some sort of recognition to his long efforts.

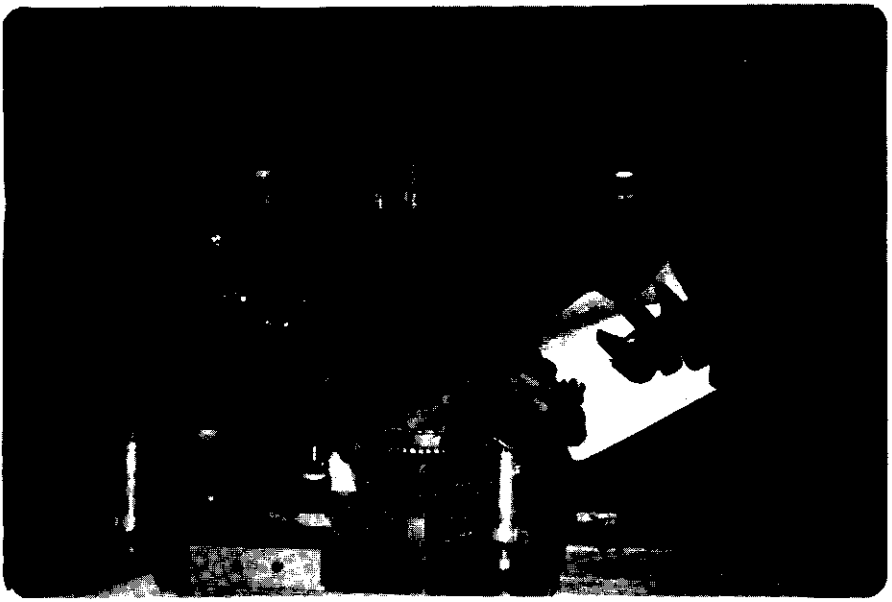
All the patent numbers given above have passed into "Public Property" status, a position into which all U.S. Patents pass with time--seventeen years. Anyone may build, use, apply, any of the ideas covered in these patents now without fear of infringement suits. Both magnetic materials and non-magnetic ones have improved greatly in the last few years. This reason alone should make experimenting with permanent magnet motors of high interest.

One of the great difficulties with past permanent magnetic motors has been that they became "soaked" with their own magnetism and thereby gradually turned inoperative.

A great deal of new information covering magnetism and magnetic materials has come to light recently. The Scientific American, in its highly important issue of September, 1967, on "materials" contains, on page 222, a good article titled, "The Magnetic Properties of Materials".

It is not impossible that as our knowledge along these lines increases mankind will be able to build permanent magnetically propelled motors which, while not approaching the "perpetual" state, will operate long enough to make them economically feasable. And, of course, there are many places where such a motor would be a godsend to man's machines.

Below is an amazing picture showing a Hendershodt type of motor or energy converter built by one of our subscribers. One can see hundreds of hours spent in building this carefully designed device. From correspondence I have learned that he has had more success than Hendershodt, the woman in the picture is Hendershodt's widow, and that he would prefer not to have his name in the journal. He has sent some of the original drawings of Hendershodt and though I can't understand them I will have some of the clearer photocopies in future issues of the journal. Color photos the same size as below or 35 mm slides of this picture can be obtained by using the order blank.



Patented May 24, 1932 1,859,764

UNITED STATES PATENT OFFICE

GEORGES H. BOUGON, OF SAN FRANCISCO, CALIFORNIA

MAGNETIC DEVICE

Application filed January 19, 1931. Serial No. 509,736.

My present invention relates to a magnetic device and more particularly to a magnetic device wherein a plurality of individual magnets are disposed in a novel manner to influence a movable member of magnetic material and effect a movement thereof.

The object of my invention is to provide a novel type of apparatus for employing a phenomenon which I have discovered exists when a plurality of magnets are disposed in staggared relation with respect to each other and adjacent a freely movable member of magnetic material.

My invention accordingly consists in the features of construction, combination of parts, and in the unique relation of the various members and the relative proportioning and dispositioning thereof, all as more clearly outlined herein.

two rows of permanent magnets 10. The upper row of magnets 10 is shown as laid upon a sheet of glass or other non-magnetic materail 11 which is spaced from a similar piece of glass or other material 12 by means of suitable spacing blocks 13 and the lower row of magnets 10 is shown as disposed against the lower surface of the glass 12. Each of the magnets 10 is arranged as illustrated with its poles contacting with the back of the next adjacent magnet. It will be noted that the magnets 10 are all arranged as designated with their corresponding poles all in the same relative positions. In other words, they are all disposed in the same positions with respect to their polarity. As here illustrated the sheets of glass 11 and 12 are spaced sufficiently far apart to permit a member 14 of magnetic material to move free-

correspond to the arrangement described above I may notch the members 39 and 40 as at 41 and 42 and thus definitely control the direction of the magnetic flux and the movement of an armature thereover as will be understood in connection with the description of operation to follow.

In order to facilitate a description of the operation of my invention I have illustrated in Figure 5 only two of the magnets which go to make up the more complex magnetic fields referred to above. In this description when I refer to a number of magnets in a line, unless otherwise specifically pointed out, it is to be understood that I refer to the arrangement shown in Figure 1.

By referring now to Figure 5 it will be seen that the upper magnet which I shall here designate by the letter A is advanced to the right so that it is disposed substantially centrally over the poles of the lower magnet, designated by the letter B. The magnet A is also disposed directly above the magnet B and the poles of the two magnets and all the magnets of the devices described are laid in the same direction with respect to polarity. Disposed between the magnets A and B, I show an armature C which is adapted to move between the magnets. In this description it will be assumed that the armature C is adapted to roll over a suitable support become attracted thereby, as was the case with the magnet B.

As the armature C continues in motion it will come under the attracting influence of the poles of the magnet A and will be moved, as suggested above with respect to this latter magnet, in the same manner as in the case of the magnet B. If it is assumed that there are a number of magnets A and B arranged in two parallel spaced lines as illustrated in Figure 1 it will be understood that the armature C will continue to move between the lines of magnets as each adjacent pair operates thereupon as above.

While I have, for the sake of clearness and in order to disclose my invention so that the same can be readily understood, described and illustrated specific devices and arrangements, I desire to have it understood that this invention is not limited to the specific means disclosed but may be embodied in other ways that will suggest themselves, in view of this broad disclosure, to persons skilled in the art. It is believed that this invention is broadly new and it is desired to claim it as such so that all such changes as come within the scope of the appended claims are to be considered as part of this invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

midway between the magnets A and B. It is to be here understood that this armature may be supported in any suitable manner and need not necessarily roll on its support.

As far as I have been able to determine the individual magnets, when arranged as described, first exert an attracting and then a repelling force upon the moving magnetic member C.

I shall now describe what I believe to be the action which takes place during the travel of the armature over the magnets A and B. It is to be understood that a similar action takes place throughout a complete row of magnets.

When the armature C is in the position illustrated a certain amount of the flux circulating through the magnet B between the south and north poles will be shunted through the armature C in the direction of the arrow. This will cause the armature C to be attracted by these latter poles, however, as it continues to approach the poles of the magnet B it will retain a certain amount of residual magnetism which will tend to constitute the near end of the armature a north pole. Consequently when the movement and mass of the armature C is sufficient to carry it only a slight distance beyond the end of the poles of the magnet B it will then be repelled by these poles and influenced so as to be moved into a position where it will form a shunt path for some of the flux of the magnet A and

1. In a magnetic device of the character described, the combination of a row of permanent magnets arranged end to end with respect to each other in a straight line and in the same positions with respect to polarity, a second row of magnets similar to said first row disposed in a plane parallel with the plane of said first magnets and spaced therefrom, and a freely movable member of magnetic material disposed between said rows of magnets adapted to move therebetween in response to magnetic forces exerted thereupon by said magnets.

2. In a magnetic device of the character described, the combination of a row of U-shaped magnets arranged in a straight line in contact with each other and in the same positions with respect to polarity, a second row of magnets similar to said first row disposed in a plane parallel with the plane of said first magnets and in spaced and staggered relation therewith, and a freely movable member of magnetic material disposed between said rows of magnets adapted to move therebetween in response to magnetic forces exerted thereupon by said magnets.

3. In a magnetic device, the combination of a plurality of straight rows of permanent magnets arranged side by side with the magnets laid end to end with each other and in the same positions with respect to polarity, a second row of magnets similar to said first row disposed in a plane parallel with the plane of said first magnets and spaced there-

from, and a member of magnetic material disposed between said rows of magnets adapted to move therebetween in response to magnetic forces exerted thereupon by said magnets.

4. In a magnetic device of the character described, the combination of a row of permanent horseshoe magnets arranged in a line in contact with each other and in the same positions with respect to polarity, a second row of magnets similar to said first row disposed in spaced relation with said first magnets, the poles of the magnets of said second row being located between poles of similar polarity on the magnets of the first row, and a member of magnetic material disposed between said rows of magnets adapted to bridge the poles of the magnets in each row and to move therebetween in response to magnetic forces exerted thereupon by said magnets.

5. A magnetic device of the character described, comprising a pair of complex magnetic fields, each field being formed by arranging a plurality of U-shaped magnets in a right line with all their poles pointing in the same direction and in the same positions with respect to polarity, and a member of magnetic material disposed between said magnetic fields adapted to move therebetween in response to forces exerted by said fields.

being supported substantially midway between said rows of magnets and adapted to move between said rows of magnets as it is successively attracted and repelled by said magnets.

9. A linear motor, comprising spaced rows of permanent horseshoe magnets arranged poles to back in a right line with the poles disposed in the same direction with respect to polarity, the individual magnets of each row being staggered with relation to those of the adjacent row, and an armature of magnetic material disposed between said rows of magnets and out of contact therewith adapted to extend across the poles of the magnets as it moves there adjacent, said armature being supported substantially midway between said rows of magnets and adapted to move therebetween as it is successively attracted and repelled by a magnet in first one row and then the other.

10. A magnetic motor, comprising two spaced rows of U-shaped magnets arranged poles to back in a right line with the poles disposed in the same direction with respect to polarity, the individual magnets of each row being staggered with relation to those of the adjacent row, and an armature of magnetic material disposed between said rows of magnets adapted to extend across the poles of the magnets as it moves thereacross, said

6. A magnetic device of the character described, comprising a pair of complex magnetic fields, each field being formed by arranging a plurality of permanent horseshoe magnets in a right line with their poles in the same plane and in the same positions with respect to polarity, and a member of magnetic material disposed between said magnetic fields adapted to extend over both poles of each line of magnets and move between said fields in response to forces exerted thereby.

7. A magnetic device of the character described, comprising a pair of complex magnetic fields, said fields being formed by arranging a plurality of rows of horseshoe magnets side by side with similar poles in a right line, the magnets of each row being disposed in the same positions with respect to polarity, and a member of magnetic material disposed between said magnetic fields adapted to bridge the poles of each of said magnets and move between said fields in response to forces exerted by said magnets.

8. A linear motor, comprising two spaced rows of U-shaped magnets arranged poles to back in a right line with the poles disposed in the same direction with respect to polarity, the individual magnets of each row being staggered with relation to those of the adjacent row, and an armature of magnetic material disposed between said rows of magnets adapted to extend across the poles of the magnets as it moves thereacross, said armature armature being supported substantially midway between said rows of magnets having sufficient mass to carry it when in motion beyond the influence of the attracting magnet and adapted to move between said rows of magnets as it is successively attracted and repelled by said magnets.

GEORGES H. BOUGON.

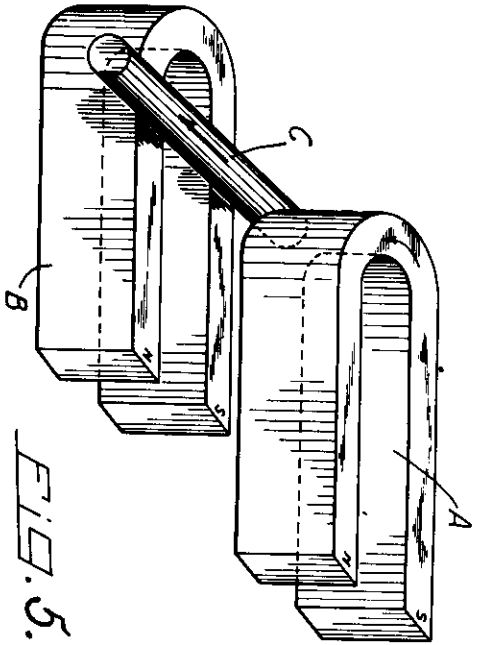


Fig. 6.

May 24, 1932. G. H. BOUGON 1,859,764

MAGNETIC DEVICE

Filed Jan. 19, 1931 2 Sheets-Sheet 1

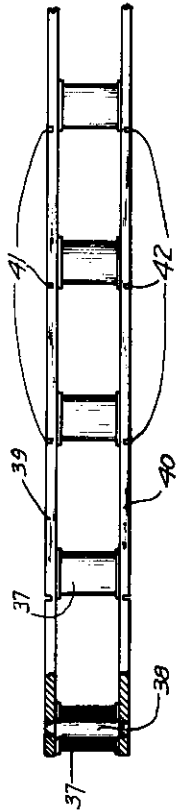


Fig. 4.

Fig. 1

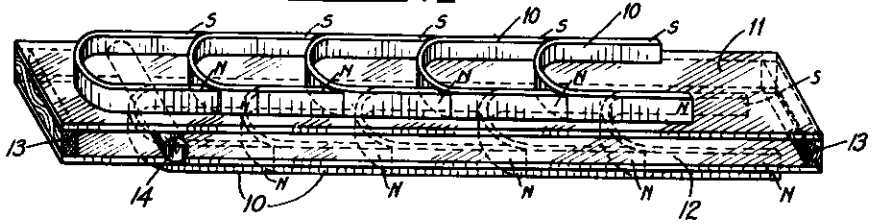


Fig. 2

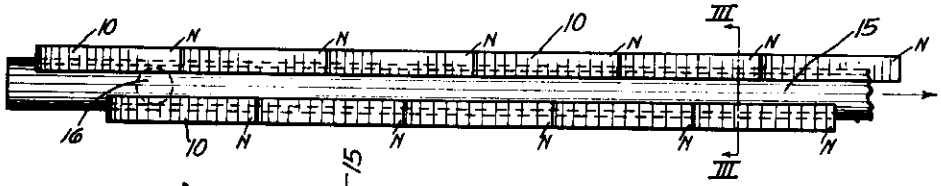
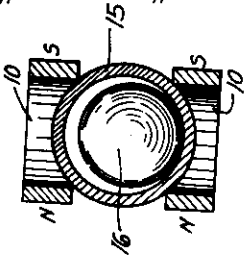


Fig. 3



GEORGES H. BOUGON
INVENTOR.

BY W. H. Atkinson
ATTORNEY

A NEW PERPETUAL MOTION CONCEPT

PARAMAGNETIC GAS DRIVE THEORY

The theoretical aspect was mentioned in a letter sent to subscribers with the 3rd. journal in Aug. of 1968. Since then the editor and one reader have made experiments using oxegeon,which is a paramagnetic gas, and some 2000 gauss magnets but all results have been failures. Oxegeon is a gas which can be attracted by a magnet so some was placed in a balloon and suspended from the ceiling and a powerful magnet brought at an angle next to it. It was hoped that the molecules of gas in being attracted to the magnet would strike the inside of the balloon at an angle and cause the balloon to rotate. The balloon did rotate because of twist of the string and static electrical charges on the surface of the balloon. While the editor considers the theory to be good he realizes that either the gas molecules must be slowed down or a different gas found or a more powerful magnet used or something substituted for the rubber balloon. Some other change of which he is not aware might result in a successful working model.

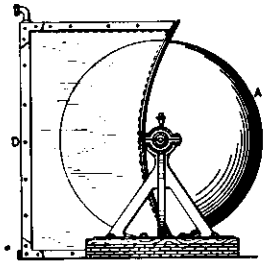


FIG. 6

one, a wheel with floats on its periphery, or a sphere or cylinder *A*. Fig. 6 is mounted so that one-half of it is in a tank *D* of water while the other half is outside the tank, or in a vacuum chamber. The upward pressure of the water on the part immersed in it produces rotation.

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Inventors of Perpetual Motion Machines.

30. PERPETUUM MOBILE by Adalbert Bela Brosan. This 24 page booklet is written in German and has never been translated into English. Published in 1966. Pictures give impression it involves sun power and ocean waves.

31. GALAXY Science Fiction, March 1969 pages 145&146.
Interesting presentation of the law of conservation of energy and how a perpetual motion machine could be made from a teleportation machine and interesting result if the power produced were not used.

Patented Dec. 8, 1931 1,835,721

UNITED STATES PATENT OFFICE

ARTHUR POWELL, OF DRUMRIGHT, OKLAHOMA, ASSIGNOR OF ONE-HALF TO JAMES W. HONEY, OF DRUMRIGHT, OKLAHOMA

PERMANENT MAGNET MAGNETIC MOTOR

Application filed December 5, 1929. Serial No. 411,862.

This invention relates to a magnetic motor and it aims to provide an exceedingly inexpensive magnetic motor from the standpoint of cost of operation as well as manufacture.

A particular object toward the end stated is to provide a motor wherein the field is provided by permanent magnetic means.

A further object is to provide a novel construction wherein the rotor has arms terminally provided with solenoids that when deenergized the cores provide armatures that are attracted by the permanent magnets, and are so wound that when energized the poles of the solenoids or electro-magnets are identical with the poles of the permanent magnets and continuation of rotation of the rotor is the result.

Various additional objects and advantages will become apparent from a consideration of the description following taken in connec-

16 carried by horizontally disposed solenoids or electro-magnets 17 of any desired type. The arms 15 are preferably removably disposed in sockets in the disk 14 and held against displacement by screws 18. The shaft 11 also carries a suitable commutator which may consist of an annular body 19 provided with conducting segments 20 insulated from each other and corresponding in number to the electro-magnets 17. The segments 20 are wiped by diametrically opposed brushes 21 slidably mounted in holders 22 urged toward the commutator segments by expansive springs 23 in the holders. The holders 22 of course do not turn but are rigid with a conductor ring 24 removably clamped or otherwise fastened as at 25 to a mounting ring or device 26 for instance forming part of or connected to one of the bearings 12.

tion with accompanying drawings illustrating an operative embodiment.

In said drawings:—

Figure 1 is a view of the motor in side elevation,

Figure 2 is an end view thereof looking from the left in Figure 1,

Figure 3 is a plan view of the motor,

Figure 4 is a cross sectional view taken on the line 4—4 of Figure 3,

Figure 5 is an electrical diagram of the different parts, and

Figure 6 is a fragmentary detail of a modified form of means for mounting the solenoids on the rotor arms.

Referring specifically to the drawings, the various parts constituting the motor are supported on a conventional base or the like as at 10.

The rotor of the motor may consist of a shaft 11 which is horizontally disposed and journaled in suitable bearings 12 rising from the base 10. In the bearings 12 ball bearings or friction reducing means 13 are interposed so that the shaft 11 may turn freely and with as little resistance as practical. On the shaft 11 a rotor disk 14 is fixed which has any suitable number of equi-distantly spaced arms 15 radiating therefrom, the outer ends of which are fastened to collars or the like

The solenoids 17 are adapted to be moved between legs 27 and 28, respectively, of upper and lower horseshoe or permanent magnets 29 and 30. Such magnets 29 and 30 are supported horizontally and one hundred and eighty degrees apart, and in any desired way from the base or support 10. For instance, such magnets may rest in brackets 31 and 32, respectively, being adjustably positioned and rigidly clamped by means of screws 33 and 34, respectively. The bracket or holder 31 is mounted at the proper height by skeleton supports or legs 35 and the holder 32 is mounted from the support 10 by skeleton legs or brackets 36, considerably shorter than those at 35.

The power necessary for operating the motor is taken from any suitable battery for instance an ordinary dry cell battery of two volts or less as suggested at 37, one terminal 38 thereof being grounded and a conductor 39 extending from the other terminal to the ring 24 and thus to the brushes 21. Each segment or contact 20 is connected by a conductor 40 to the winding of a separate solenoid 17, such winding being grounded to the base or frame of the motor, as shown.

The operation of the commutator is so timed that while a solenoid is approaching one of the magnets 29 or 30 it is deenergized

and the core of the solenoid is an armature attracted by the magnet and the solenoid is then energized and being wound so that the poles of the solenoid are the same as the poles of the magnet the solenoid is repelled by the magnet to provide for continued rotation of the rotor.

The power from the motor may be taken off in any desired manner and applied to any work preferred and for instance from a pulley 50 keyed to the shaft 11, such pulley for instance being adapted to drive a grinding machine or other work. It may also if desired, be used to operate an electric generator as suggested at 51, the latter being geared to the shaft 11 through spur gears 52 and 53, respectively. The current generated may be supplied through suitable lead wires from the generator 51 to any source of use.

Various changes may be resorted to provided they fall within the spirit and scope of the invention. For instance, any suitable means may be used to secure the solenoids to the arms. For instance, a modified form is shown in Figure 6 where the equivalent of one of the arms 15 is shown at 15′ and the equivalent of the solenoids 17 is shown at 17′. Such arm 15′ has a cross head 60 and the solenoid has depending lugs 61 which are screwed as at 62 to the cross head.

2. A magnetic motor comprising spaced bearings, a shaft journaled in said bearings, a ring carried by one of said bearings, a commutator on said shaft, brushes carried by the ring and coacting with the commutator, a rotor on the shaft spaced from the ring and located between the bearings, substantially T-shaped arms extending from the rotor having horizontally disposed solenoids at their outer ends, permanent magnets arranged one hundred and eighty degrees apart with their open ends innermost and mainly on opposite sides of the axis of said shaft, said solenoids being grounded, holder elements engaging said magnets and being horizontally disposed, legs supporting said holder elements, and said commutator being provided with spaced conducting segments each connected with a solenoid and arranged to alternately engage the brushes aforesaid so as to energize the solenoid with a polarity opposite to that of the permanent magnet upon registration therewith.

In testimony whereof I affix my signature.

ARTHUR POWELL.

It will be realized that the motor will operate as long as the permanent magnets 29 and 30 retain their magnetism and that such magnets may be removed in order to be remagnetized when desired.

I claim as my invention:—

1. A magnetic motor comprising spaced bearings, a shaft journaled in said bearings, a ring carried by one of said bearings, a commutator on said shaft, brushes carried by the ring and coacting with the commutator, a rotor on the shaft spaced from the ring and located between the bearings, substantially T-shaped arms extending from the rotor having horizontally disposed solenoids at their outer ends, permanent magnets arranged one hundred and eighty degrees apart with their open ends innermost and mainly on opposite sides of the axis of said shaft, said solenoids being grounded, and said commutator being provided with spaced conducting segments each connected with a solenoid and arranged to alternately engage the brushes aforesaid so as to energize the solenoid with a polarity opposite to that of the permanent magnet upon registration therewith.

EDITORIAL NOTE - PERPETUAL MOTION JOURNAL

In this issue of the Perpetual Motion Journal we have reprinted two of the four patents mentioned by Mr. Gaston Burridge in his article - MAGNETIC PERPETUAL MOTION. The other two patents will be reproduced in the 5th journal.

Some may honestly question if these patents should be considered perpetual motion. In my opinion they are perpetual motion because: Patent number 1,835,721 - On lines 88,89, and 90 of the first page of the patent it is mentioned that an " ordinary dry cell battery of two volts or less" be used. On lines 11 - 14 on page two of the patent we read that the power can be used to run a grinder or power a generator. It is obvious that the inventor expected more power than a flashlight battery can deliver so the invention would have to create extra power and this is perpetual motion.
In patent 1,859,764 by G.H. Bougon there is no mention of power input but it is obvious he expects power output and of course this is perpetual motion.

Dec. 8, 1931. A. POWELL 1,835,721

PERMANENT MAGNET MAGNETIC MOTOR

Filed Dec. 5, 1929 2 Sheets-Sheet 1

Fig. 1.

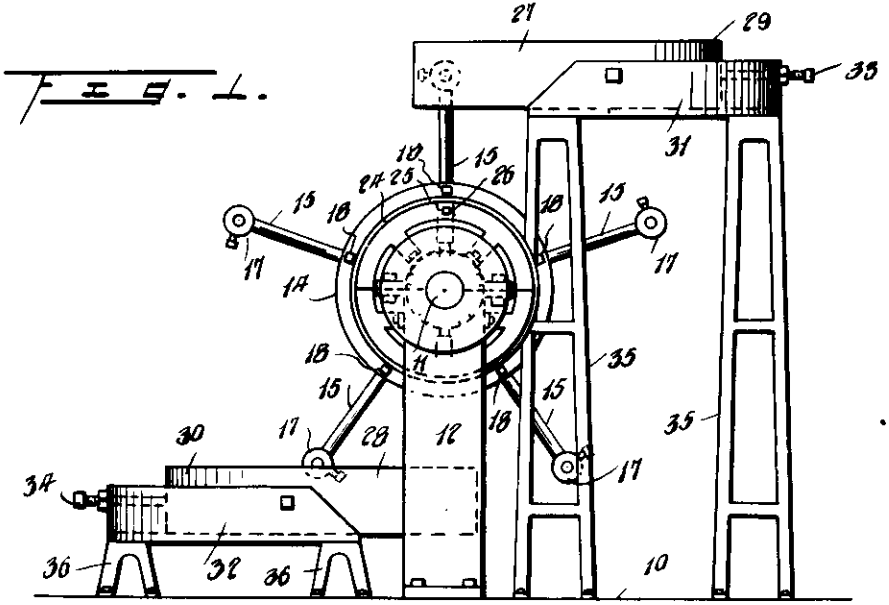
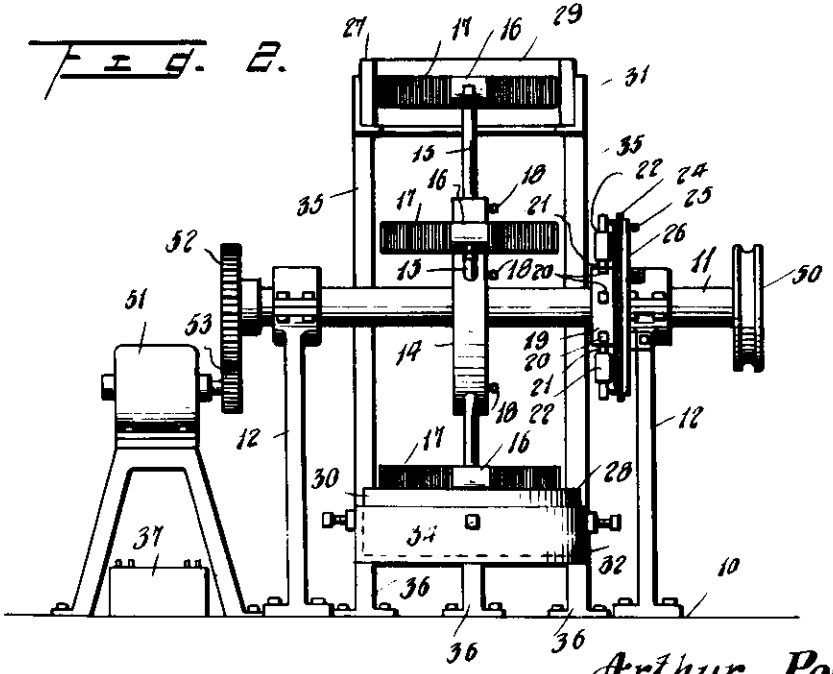


Fig. 2.



Inventor
Arthur Powell.

By L. F. Kenworthy Jr.
Attorney

Dec. 8, 1931. A. POWELL 1,835,721

PERMANENT MAGNET MAGNETIC MOTOR

Filed Dec. 5, 1929 2 Sheets-Sheet 2

Fig. 3.

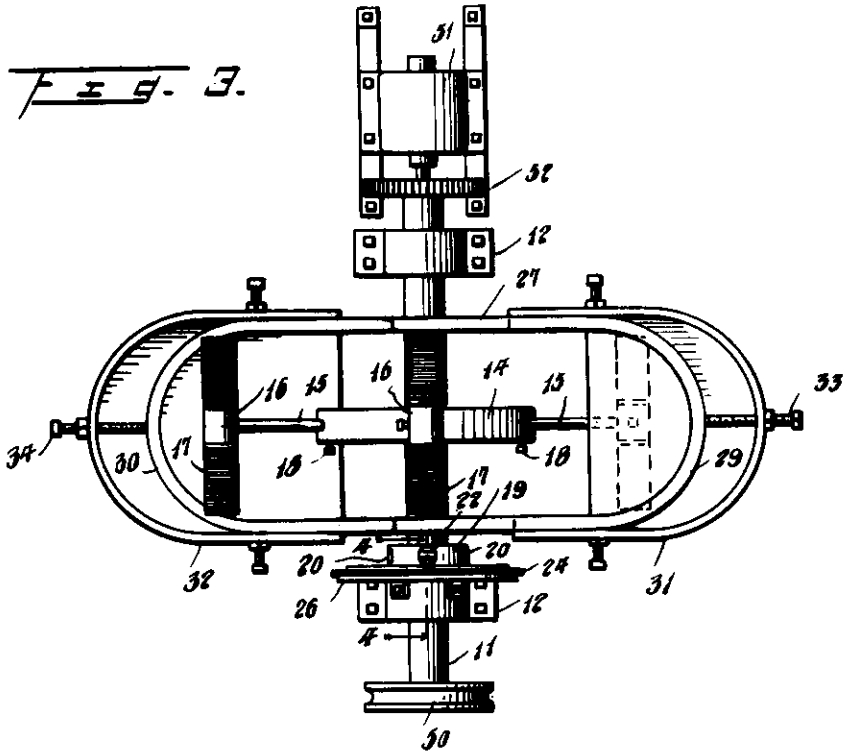


Fig. 5.

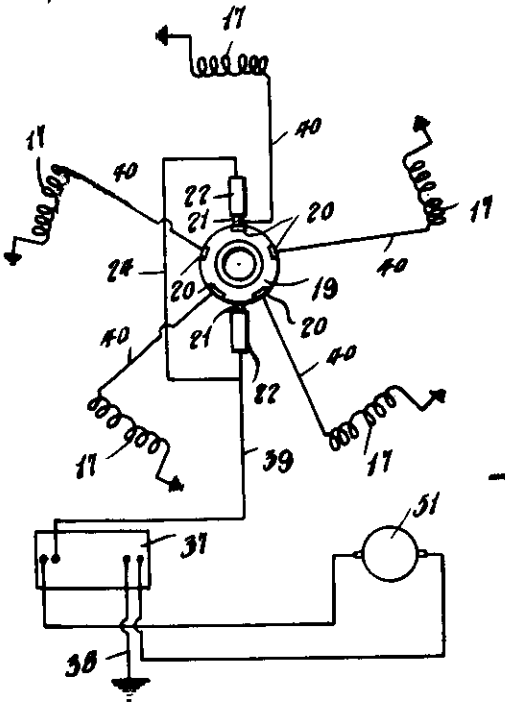
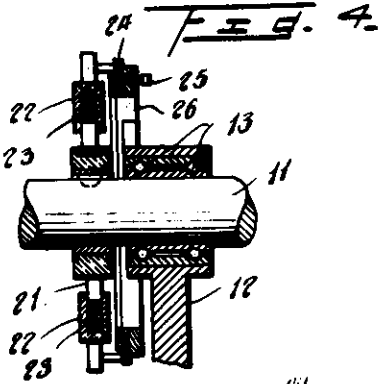


Fig. 4.



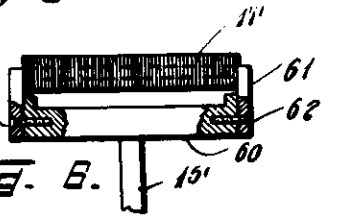


Fig. 6.

Inventor
Arthur Powell.

By L. F. Randolph Jr.
Attorney

Continued from third journal

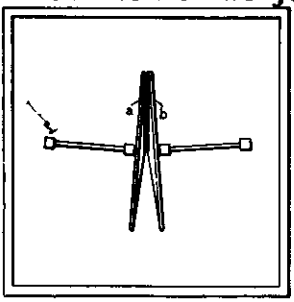


FIG. 18

There is an invention based on the principle that "if a frictionless or nearly frictionless piston is shot by atmospheric pressure and energy into a cylinder in which a vacuum exists, the force of impact, after the piston has traveled a short distance and strikes a solid surface, is greater than that required to bring back the shot piston to its original position." Two cylinders are used, each provided with a shot piston and with a second piston for receiving the impact through an air-buffer arrangement to drive the shaft. The pistons are connected to the moving parts of the engine to return them to their original positions.

Another idea is that of having a high-speed electric motor, started by an accumulator, to store up mechanical energy in fly-wheels, and by means of reducing gearing, to drive two slow-speed dynamos, which are stated to generate sufficient current for external work and to supply the motor.

In another arrangement, a vapour engine drives compressors which compress gas and pass it through cooling tubes to be liquefied. The liquefied gas is pumped into a reservoir and is again evaporated at atmospheric pressure to drive the vapour engine.

Another invention is stated to depend upon a revised statement of the first and second laws of thermodynamics, and to consist of a special

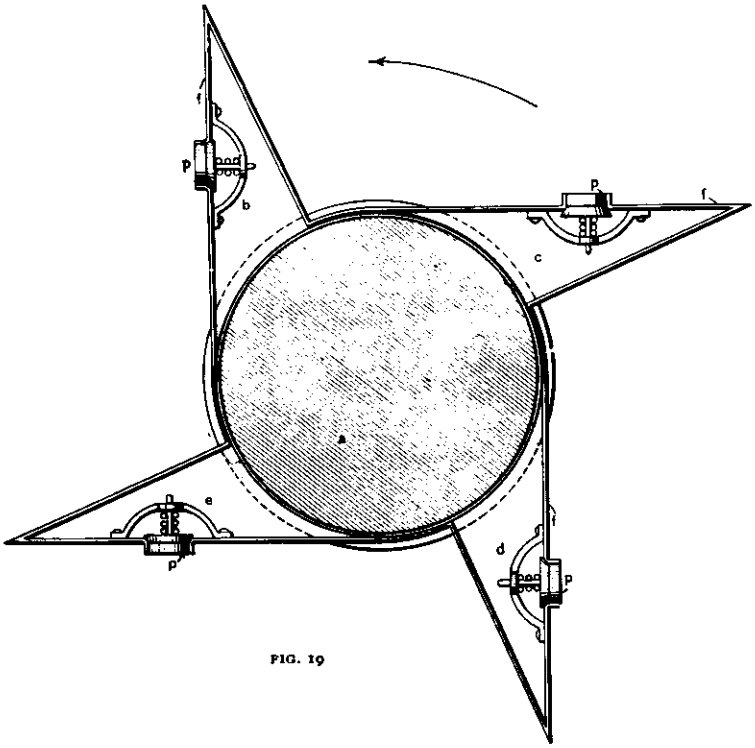


FIG. 19

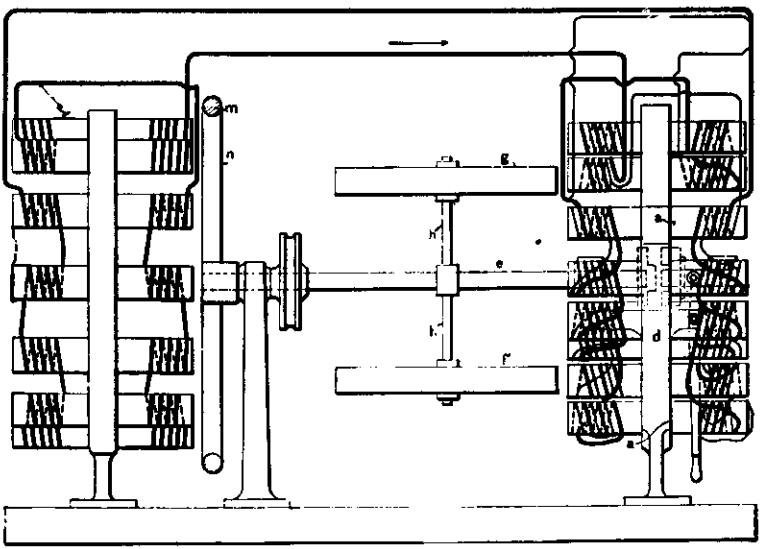


FIG. 20

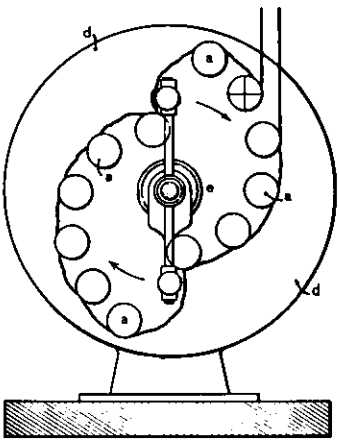


FIG. 21

cycle of working in which the heat rejected in the Carnot cycle is intercepted and returned to the source, thus making it possible to convert into motive power the diffused heat at ordinary temperatures that exists in the atmosphere or elsewhere.

The motor shown in Fig. 19 was invented in 1902. The vessels *b*, *c*, *d*, and *e* are mounted on a shaft *a*, and have one side *f* tangential to the shaft, and the other side radial. Compressed air is forced into each vessel through the valves *p*. It is stated that "under the action of the internal pressure of the vessels, and after a slight impulse has been given to same, in the direction of the arrow, the whole apparatus will begin to move and continue to do so without ever stopping, the velocity corresponding to the pressure established within the vessels."

The magnetic motor is another form of perpetual motion machine. A good example, invented in 1894, is shown in Fig. 20. A series of permanent magnets *a* are mounted on a fixed frame *d* so as to form two semi-circles eccentric to the shaft *e*, and the like poles of the magnets

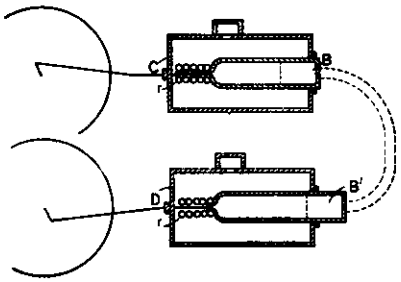


FIG. 22

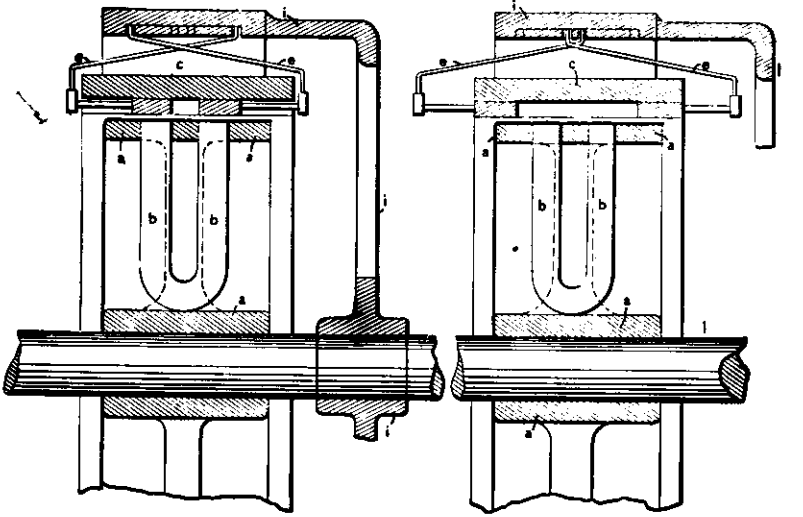


FIG. 23

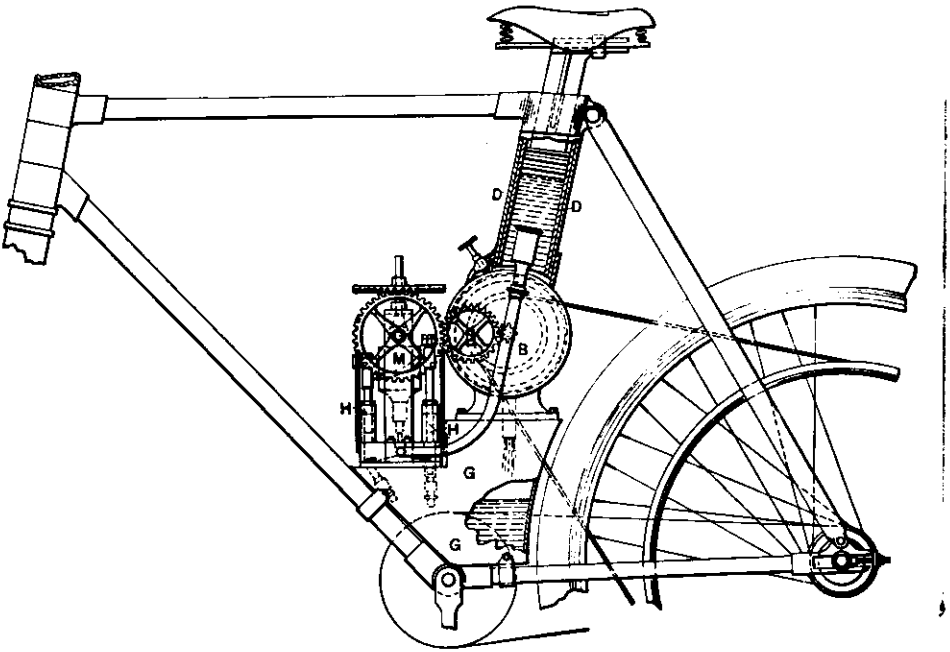


FIG. 24

face one way. Two permanent magnets *g* are mounted on arms *h* on the shaft, their similar poles facing toward the magnets *a*. The action of the magnets *a* causes the magnets *g* to rotate as shown in the end view, Fig. 21. The magnetization of the magnets *a* is increased by means of the windings shown, current being generated in the coils by means of an armature *n*. The armature is carried by a wheel *m* on the shaft *e* which rotates in front of the magnets *i*.

Another form is shown in Fig. 23. A wheel *a* is fitted with a number of permanent magnets *b*. Around the wheel is a fixed ring *c* fitted with iron blocks sliding in grooves and moved by means of rods *e*, the opposite ends of which run in cam grooves in a wheel *i* mounted loosely on the shaft. On turning the wheel *i*, the blocks slide successively into the positions shown in the two figures, and rotate the wheel *a*.

A peculiar motor is shown in Fig. 22. Two pistons *BB'*, capable of collapsing, work in opposite directions in the cylinders *C D* and communicate with each other. The inner ends of the pistons are flattened to pass between the rollers *r*, and when flattened, are of the same section as the piston-rods by which they and the connecting-rods are connected to the cranks shown, so that, as the pistons move in and out, no displacement takes place in the cylinders. In operation, one cylinder is first opened to a source of pressure and the other cylinder to the atmosphere. The piston in the cylinder under pressure moves outward, the other piston moves inward, and the liquid in one piston passes to the other. The cylinder originally open to the atmosphere is now opened to the source of pressure, the other cylinder is opened to the atmosphere, and the reverse motion of the pistons ensues. These operations are repeated continuously to produce perpetual motion.

The motor shown in Fig. 24 should be particularly interesting to motor cyclists, for all expense in connection with petrol, electricity, and other sources of power is thereby removed. The weight of the rider on the saddle places a pressure on the water in the hollow bar *D*. This water passes through nozzles and drives a turbine wheel *B;* it then passes to a chamber *G* from which it is pumped back to the bar *D* by pumps *H*. The pumps are driven from the wheel *B* through the spur gearing shown, the vertical spindle *M* having a cam groove into which blocks on each pump rod engage. The cycle is driven by a belted connection with the turbine.

From the foregoing examples, it is evident that much ingenuity and thought have been spent upon the subject of perpetual motion, and that in many cases it would be foolish to suppose that the inventors are cranks; on the contrary, the care and thought as to principle and detail in many of the inventions, demonstrate that many men still cling to the idea that perpetual motion is possible, and that they themselves are successfully solving the problem.

R. G. LeTOURNEAU
Inventions and Patents
April 1, 1950

Because I have made application for letters patent on hundreds of inventions and have the reputation for being a pace setter in the earth moving industry, I get a tremendous amount of mail from inventors seeking my advice, my opinion and financial help. Some people want me to buy their ideas and some want to make me a present of them. Because of this I would like to make a few comments about invention to our "NOW" readers. These letters and personal request, many of them long distance phone calls, come from men and women in all walks of life, yes, a lot of preachers too. I hope my remarks will not discourage anyone in going ahead with their invention, especially those who feel the Lord has given them the idea. I know a number of people who have set about to build and market the machines they have invented and have made a real success of it. But outside of those who have been mechanics to go ahead and develop the idea themselves; those who have studied and know the laws of friction, the strength of material, machine design etc., I do not know of anyone who has made anything out of their invention. (Of course there probably are some, but out of the many thousands I have just never run across one.) What the average person does not seem to realize is that no one can really tell whether an invention is good, bad, or indifferent until it has been manufactured, marketed and accepted by the public, and even then someone else may come along with one so much better it becomes worthless, Even when many machines have been put into satisfactory service and millions have been spent on it, I have seen a prior idea gradually take precedence over it. In other words, it took many millions to prove which was the best idea. On the other hand, many a good idea is lost because the man who holds the patent cannot develop it, and the man who could develop it, would be foolish to spend large sums developing the other man's invention when, nine times out of ten, he has plenty ideas of his own which he could more profitably be working on. I have scores of patentable ideas that I dare not think too much

about, because I have already spent more money to develop, and there isn't much use patenting an item unless you are going to develop it.

History proves that the man who invents something is generally considered crazy until his invention is accepted and the public is willing to pay the cost of it. And because of that fact, many people who do not understand the laws of force and motion think they have discovered perpetual motion.

My contention is that if in my own field and in the particular type of machinery that I have worked in all my life, I cannot tell whether a new idea will be a success or not without spending large sums of money developing it, then how can I look at the other man's invention, probably in a diffrent field from mine, and give him a worth while opinion. Then if it was in my field, I wouldn't dare look at it because I might be developing something similar.

People don't realize that patents generally come, and should come, after a certain amount of developmen has been done. You work towards the accomplishment of a problem, and when you find a way to do it, you apply for a patent. Too many people apply for a patent and then try to find out how to do it, and that makes it hard, because it simply becomes an obstacle which the man doing the developing has to get around and generally does overcome, because nine-tenths of a successful invention is development. When it comes to the mere conception of an idea; that's just a seed you plow, plant, irrigate, and cultivate and then, nine times out of ten, after all that work, you find it was a weed seed. The trouble is today, when a manufacturer starts to build a machine, he doesn't go to the patent office to find out how to build it; but he does go there to find out how NOT to build it

I understand the word patent, means " to make public." I'm patenting my ideas on the Power of the Gospel of Jesus Christ, not for my protection altogether, but for the protection of all those who accept it. END

This journal has increased from 24 pages to 28 pages with a paper cover instead of our previous cover. This was done because we found a large printer who was able to also do the collating, stiching and trimming if we ordered this form. We anticipate sending with the 5th journal a cover to hold several journals.

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PUBLICATION THE EDITOR HAS FOUND OF INTEREST

ANTI-GRAVITY POWER Aero Space Propulsion System of the future. In the Second Edition 5th printing on pages 4 & 5 is an interesting article about the Biefeld-Brown experiments showing a possible link between gravitynulification and the amount of mass between condensor plates. Weight loss is small but experiments are continuing and from a little seed a great oak may grow. The rest of the book is a collection of various conflicting theories on what gravity is and how to neutralize it. Send $1.00 to ANTI-GRAVITY RESEARCH 8635 Kittyhawk, Box 734 Los Angeles, California 90045

VORTEX ATOM BOOKLET by C. F. Craft is a real buy at only 25¢ for those who have had some college atomic physics or chemistry. Since he loses money on every copy he sell he only advertises in publications such as Science Digest. His proofs that the atom does not have a nucleas are more convincing than I expected. If you have ever studied the duality of particle and wave you will find his book chalanging.