

The Truth about Fuelless Motors

An Illuminating View of the Latest Claims of Power Out of Nothing—The History of Perpetual Motion Hoaxes

By E. E. FREE

THE Hendershot "fuelless motor" announced recently by Lester J. Hendershot, of a suburb of Pittsburgh, has brought numerous similar proposals in its train.

A Brazilian priest, Father Antonio d'Angelo, has declared his "ionic motor" runs by some mysterious property of the iron cores and magnets it contains. D. E. Lane and J. A. Townsend, of Clearwater, Fla., make similar claim for their device. Alfred M. Hubbard, of Seattle, claims to have invented a motor driven by some equally novel "energy" of the air. Two Bavarian inventors, Frederick Brandhuber and A. Altschaeffl, describe a motor tapping the same source of energy claimed for the Hendershot motor, the magnetism of the earth.

The Hendershot motor operates, he says, by "the same force that pulls the needle of the compass around. I learned that by cutting the same line of magnetic force north and south I had an indicator of the true north and that by cutting the magnetic field east and west I could develop a rotary motion. I now have a motor built on that principle that will rotate at a constant speed, a speed predetermined when the motor is built. It can be built for any desired speed, and a reliable constant speed motor is one of the greatest needs of aviation."



Lester J. Hendershot, inventor of the "fuelless motor," who says it operates by the same force that affects a compass needle. The "heart" of the motor is said to be a magnet wound with special coils

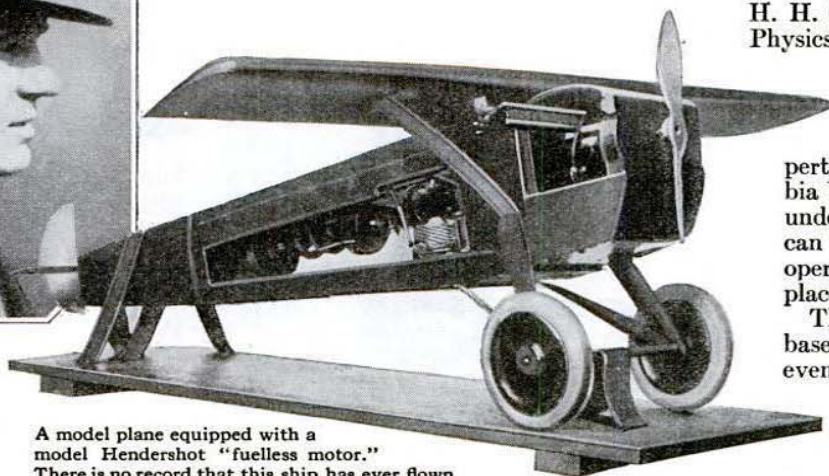
IF JAMES WATT had died of whooping cough as a child, would the steam engine have been invented? If the Morses had had no son Samuel, would telegraphic communication be unknown? Do great inventions hang upon individual genius or upon an accumulation of knowledge?

¶ Before you decide, read this article by Dr. Free, president of the New York Electrical Society. Tracing man's quest for a fuelless motor, he concludes that if success comes, it will be through many experimenters advancing step by step, rather than by individual geniuses.

¶ Great inventions grow like a coral island, instead of suddenly like a volcanic peak thrust above the sea. They are built of innumerable small discoveries by many men. Science expects long, patient plodding before the fuelless motor can be a reality.

Barr Peat, friend and manager of Hendershot, asserts that the device contains a special magnet so wound with wire coils that the motor rotates in a direction opposite to the rotation of the earth beneath it. This magnet will have to be "recharged," according to Peat, after 2,000 hours of operation. Absence of heat when the motor is running is due, Peat says, to the fact that "magnetic forces are cold"—a statement with which most scientists would disagree.

That is the sum total of information given the scientific world by Hendershot and his friends; that and the fact that a



A model plane equipped with a model Hendershot "fuelless motor." There is no record that this ship has ever flown



D. E. Lane (left) and J. A. Townsend with the original model of their "magnetic motor," which they say uses magnetic energy stored in hard steel

small model has actually been seen to run by persons of unquestioned integrity. As this article is written no independent expert of recognized scientific qualifications is known to have taken the motor apart or to have subjected it to complete engineering tests.

CONCERNING the magnetic theory, and other theories recently urged by the several inventors of fuelless motors, scientific opinion has been severely skeptical. Prof. Alexander Klemin, head of the Guggenheim School of Aeronautics at New York University, has expressed doubt of the possibility of any such motor. So has Dr. J. B. Whitehead, Dean of the Engineering School of Johns Hopkins University. President S. W. Stratton, of the Massachusetts Institute of Technology, remarks that even if a motor to operate on the earth's magnetic field could be constructed, it would probably weigh at least a thousand times as much as a complete airplane.

Prof. W. B. Hall, of Yale University; William H. Meadowcroft, assistant to Thomas A. Edison, and a distinguished electrical expert in his own right; Prof. H. H. Sheldon of the Department of Physics of New York University, and many others, share the doubt.

America's most distinguished electrical expert, Prof. M. I. Pupin, of Columbia University, has said, "I cannot understand how sufficient power can be generated in this manner to operate a heavy object. I fail to place any confidence in it."

This skepticism of science is not based upon mere conservatism, nor even upon recollection of the thousands of power-from-nothing devices which have been proposed and found want-

ing. It rests upon the fact that such theories are believed definitely contrary to known facts.

It is quite true that the earth is a great magnet. If a pair of giants could wave a thousand-mile wire back and forth across the magnetic pole of the earth, as scientists move small wires past the poles of magnets in the laboratory, they might obtain a few horsepower—no more—of electric current, pulsing through the wire. In a small space like that which could be occupied by an airplane motor or from which electric or magnetic forces could be tapped by wires or rods attached to the airplane, the amount of the earth's magnetic force available would have to be measured in gnat power, not horsepower.

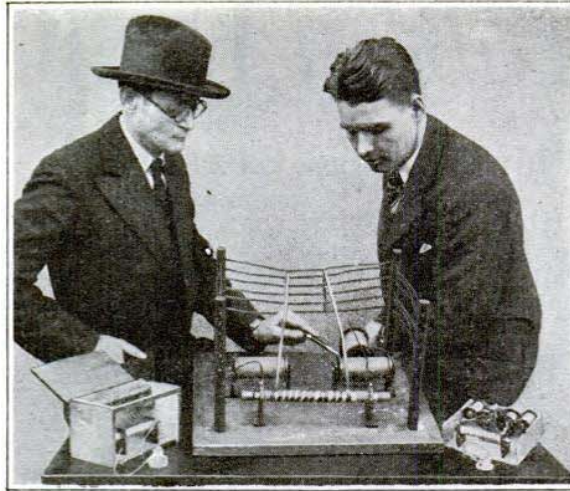
THIS conclusion rests on many thousands of measurements of the magnetic forces of the earth made by scores of scientists in every civilized country and carried around the world and even over the oceans.

But to criticize this magnetic theory all one needs is an ordinary woodsman's compass. Take off the glass top and touch the moving needle. Note the tiny force that will keep it from pointing toward the north. The weight of a feather is ample. Yet the compass is as efficient a magnetic engine as any well-tested device known to science. If any fuelless motor really works on the earth's magnetic energies, the greatest power it can develop is believed to be the power shown by a magnetic needle of equal size.

The electric forces of the earth might seem more probable sources of power than the magnetic ones. Sometimes these electric potentials run into millions of volts, as is apparent when lightning strikes. Anyone who has nerve enough to repeat Benjamin Franklin's experiment of bringing down lightning on a kite string can use it to light a tiny lamp or to turn a small motor.

ONE ingenious device that is really a motor run by atmospheric electricity rings a small bell, hung a few yards above the ground and so arranged that it collects a little of the atmospheric electricity. The attractive force of this electricity, like the force by which electrified rods pick up bits of paper, is then made to drive the small clapper of the bell. Never, except perhaps for a few moments while the electricity of the air is changing, will the tinkle cease so long as the apparatus is in working order.

Although much more powerful than the earth's magnetic forces, these electric forces are still far too weak usefully to operate a motor. In a recent statement the Department of Terrestrial Magnetism of the Carnegie Institution of



R. W. Hochstetter, (left), Pittsburgh research expert, shows how tiny hidden batteries run "fuelless motors" which he has built to demonstrate how easy it is to hoax observers with these devices

Washington calculated that the energy obtainable in theory by catching the electricity of the atmosphere over the entire state of Wisconsin would total only twenty kilowatts of power—enough, at its dangerously high voltage, for one dim electric lamp.

The record of attempts to find some source of free power or perpetual motion goes back at least seven centuries, for there is preserved in Paris a drawing of a "self moving wheel" devised by Wilars de Honcourt about 1250. About 1648 Edward Somerset, Sixth Earl of Worcester, invented a similar device, and so did Jean Ernest Elie-Bessler Orffyreus, of Cassel, in Germany, in 1718.

Early in the last century Charles Redhoffer, of Philadelphia, constructed a "fuelless motor" the fraud of which was exposed by Robert Fulton, inventor of the steamboat. It was operated by a cunningly hidden string. The famous Keely motor in Philadelphia was a fake worked by compressed air.

Two years ago in the House of Representatives in Washington there was debated the merits of a free-power motor invented by Garabed T. K. Giragossian, of Boston. The

Patent Office had declined to consider this device until an operating model was submitted, a policy now followed in all claims for devices producing perpetual motion or power out of nothing. So far no American inventor has met this demand.

Is the quest for a fuelless motor, then, entirely hopeless? Not at all. Sources of unharnessed energy do exist, all scientists believe. The power of the winds is almost untapped, the waves likewise. Greater still are the energy of the tides and of the earth's motion. Sunlight is still very little used. But if these theoretical sources of fuelless power are ever reached for man's benefit, it will probably be by the labor of trained scientists slowly advancing step by step, not by accident.

When someone comes to you with a fuelless motor, seeking approval or investment, the first question to ask is: Has the device the backing of reputable scientific men who are personally expert in whatever forces the device purports to use? The next query is whether the device really produces power to run other machines? And can its power output be measured on standard meters of some kind? And is this power output greater than any power put in?

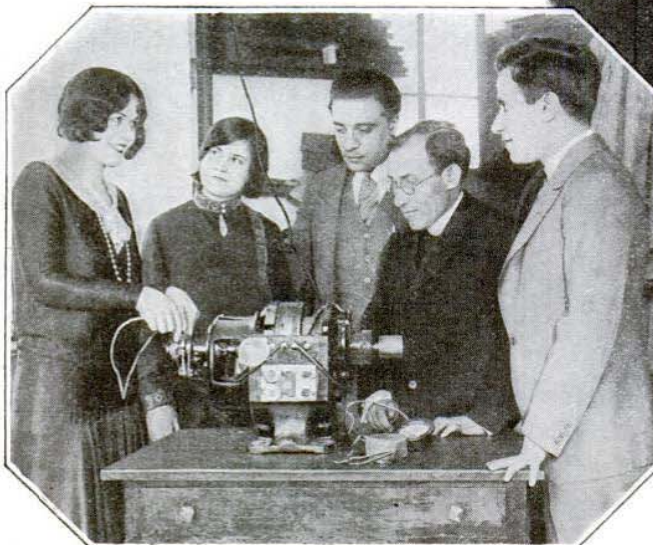
Even if a motor meets these tests, you must still watch for plain fraud, like the concealed storage batteries said to have been hidden in the cushions of the engineless automobile exposed not long ago in Kansas City.

With any alleged fuelless motor it is necessary to be suspicious of all supports, rods, belts, wires, and other connections to walls or floor, no matter how innocent these seem. Each one should be disconnected and examined. What appear to be solid pieces of wood or metal used as bases, magnets and so forth should be examined for hollow spaces concealing batteries or reservoirs of compressed air or other powers. Possible supplies of electromagnetic energy from coils concealed in walls,

floors, or tables must be looked for and excluded. Remembering how many hoaxes of the past have fooled men of average high general intelligence, who nevertheless lacked the special and technical knowledge that can be gained only by years of study; and remembering how the hoaxes have puzzled even experts who, though their

knowledge of natural forces made them suspect trickery, were unable to discover that trickery—you should not depend upon your own judgment and your own ability to detect deceit unless you are yourself an expert in the subjects which the invention concerns. Only a scientist is fit to judge a scientific invention.

Any day it may be proved that man's ingenuity has contrived a real fuelless motor, but meanwhile man's ingenuity will contrive device after device based on nothing but clever fraud.



Father Antonio d'Angelo showing his "ionic motor," which still must pass tests of science. Above: G. Reutter and his clock that rewinds itself