

METHOD AND MEANS OF CONVERTING ATOMIC ENERGY INTO UTILIZABLE KINETIC ENERGY

This invention is directed to a source of energy such as an engine wherein the energy is derived from rearrangements within an atom or atoms. Since such rearrangements are reversible, the utilization of suitably charged elements or atoms which are capable of rearrangement permits the conversion of potential energy into kinetic energy over very long prolonged periods of time with a single charge of atoms or elements of suitable composition. The invention is postulated upon the premise that when a substance is exposed to conditions under which the absorption of energy is possible (as by the use of suitable electric charge or discharge), the electrons which are in their lowest energy or ground state take up energy and pass into the states of higher energy or excited state. The return of electrons to the lower state liberates energy. By the use of atoms of suitable electronic configuration and by the periodic subjection of such atoms to an electric charge or discharge, the electrons may be caused to rapidly move from one arrangement into another thereby permitting the utilization of the energy liberated by the movement of the electrons from one orbit or energy level to another.

Under the conditions here described, the quantum yield is maintained high and by maintaining the radiation above the level at which the molecules stay intact, the electronic energy is utilized as heat. This is attained, in part at least, by the use of substances capable of emitting gamma and beta rays and electrons, and the generation of visible light and fluorescence whereby large numbers of photons are made available. These substances and conditions, together with cyclic changes in magnetic field, polarity and potential supplied to activating cells to stimulate radiation, and cyclic generation and condensation of vapors in a trapped volume of noble and other gases capable of existing in higher energy states, produce expansion and contraction or condensation of such trapped gases in a controlled cyclic manner, the energy thus produced being capable of use in generating power which can be converted into rotative or linear forces.

Since theorists in quantum mechanics may come to conflicting opinions and explanations of the same observed results, applicant will state facts and observations and describe an operative and tested embodiment without excessive discussion of theory, applicant being willing to adopt that explanation of some aspects of operation which will stand the test of time. Data contained in this application was largely derived from a document prepared by applicant in the Hungarian language and translated to English by a person who was not knowledgeable in science or the subject matter.

Among the objects of this invention, I list:

1. To provide a virtually sealed telescoping chamber of variable volume provided with a precharged energy supply having a long life, and composed essentially of noble gases and substances capable of emitting beta and gamma rays and electrons, said chamber being capable of forcibly expanding and contracting in volume under the influence of electrical timing to thereby be used as a source of controlled energy and power.
2. To provide a two cycle reciprocating engine which does not use fuel intake valves or exhaust valves, does not require an air supply and does not emit exhaust gases.
3. To provide a precharged engine of the character stated in item 2 capable of generating power for a period of from 2,000 to over 10,000 hours continuously or until mechanical breakdown without the addition of fuel, injection of air or discharge of gases.
4. To provide a low temperature system of converting potential energy into kinetic energy
5. To provide a system or method of generating power by the use of mixtures of gases and substances (referred to in item 1) wherein the reactions are cyclic and under control.
6. To disclose and provide the constructions, elements and components, molecular and atomic fuel compositions and method of preparation and operation which exemplify the teachings of this invention.

The invention may be utilized in many fields of endeavor for many industrial, scientific and military purposes, both terrestrial, in space and under water. For purposes of illustration and to facilitate understanding, an exemplary reciprocating engine will be described by reference to the following drawings in which:

FIG. 1 is a top or plan view of a single cylinder (of an in-line assembly) of an engine embodying aspects of this invention;

FIG. 2 is a transverse section taken along the plane II—II in FIG. 1, some parts being in partial elevation;

FIG. 3 is a section taken along the plane III—III of FIG. 1;

FIG. 4 is a diagrammatic representation illustrating one form of an electric supply and timing control system.

FIGS. 1 and 2 illustrate a motor block 1 provided with or mounted upon a crankcase housing 2; the crankshaft, transmission and other conventional elements are not illustrated. The block 1 is provided with a plurality of parallel bores such as 3, each being adapted to receive a cylinder providing a variable volume chamber 5. Each cylinder 4 comprises a stationary upper, hollow head portion 6 firmly attached by its enlarged head end to the upper surface of the block 1, and a movable portion 7 in telescopic relation to the skirt 6' of the head portion 6. The lower end of the movable portion 7 is closed and is shown provided with an inwardly extending domed surface 7'; this movable portion of the hollow cylinder which forms the enclosed chamber 5 is shown attached to a lower extension 8 which carries the wristpin 9 to which the piston rod 9' is connected. It is to be understood that the parts 7 and 8 may be made integral although a removable threaded connection facilitates assembly. In FIG. 2, the chamber is shown in its substantially expanded position; in actual practice, the chamber is precharged with a mixture of gases and an aqueous component and such gases are caused to forcibly expand and contract in a repetitive and controlled manner as hereafter described.

The chamber 5 should be substantially gas-tight; in order to facilitate the attainment of a gas-tight seal, the lower portion 7 is shown provided with a steel liner 11 preferably having a highly polished or burnished, reflecting internal surface. The exterior of the lower end of skirt 6' of the stationary portion 6 is shown provided with a series of grooves carrying O-rings of suitable material adapted to produce a hermetic seal as at 12. The exterior of lower portion 7 is provided with a plurality of oil grooves 12' for distribution of lubricating oil.

In the form of construction illustrated, the head end of cylinder portion 6 is shown connected to the upper end of the movable portion 7 by means of a gas retaining bellows 14 which may be made of any non-oxidizing, flexible and resilient sheet metal, the upper and lower ends of such bellows being suitably attached to the head and to the upper end of movable cylinder portion 7 as by means of threaded internal rings indicated at 14' and 14''. A split expansion ring 7' carried by the upper edge of movable portion 7 may be used to prevent separation of the chamber portions during installation. The skirt wall 6' of the upper portion is preferably provided with a plurality of check valves such as 15 at different distances from the head for preventing internal pressure in chamber 5 (or within the bellows) from rupturing the bellows.

The head of the stationary portion 6 is shown provided with internally threaded ports adapted to receive and hold in gas-tight relation the upper terminal portions of an anode 20, a cathode 21, terminals 23 and 23' of an electrode generally indicated at 22, and a centrally located gas inlet fitting indicated at 24. Since the polarity and potential of current supplied to 20 and 21 is cyclically varied to control the expansion and contraction of the trapped charge within chamber 5, the devices 20 and 21 will be generally referred to as activating cells, the current supplied thereto affecting the direction and velocity of electrons and rays emanating from the cells.

It has been found that under the conditions hereinafter disclosed, many of the noble gases and elements found in the periodic table, and particularly their isotopes from periods 2, 3, 4 and 5 of the periodic table, are capable of being utilized as