Original

PRELIMINARY
PATENT DESCRIPTION

" ELECTRICAL SOURCE "

T. Townsend Brown

Sunnyvale, California
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ELECTRICAL SOURCE

BACKGROUND:

Caretul observations, conducted over a period ot years, have revealed the existence ot a "steady state" electrical self-potential spontaneously developed by certain semi-conductors. Exploratory work with various semi-conducting material has revealed that massive high-K dielectrics, being heavy semi-conducting materials with high dielectric constant, produce the greatest self-potential. Solid dielectrics such as barium titanate, lead zirconate titanate and certain natural rocks (granite, basalt, etc.) are found to produce this electrical self-potential. The origin of the self-potential referred to in this application is believed to be not hitherto known or identified. It is not piezoelectric, pyroelectric or electrochemical in origin.

Whereas, it appears to be a fact of nature that rocks and similar dielectric and semi-conducting materials spontaneously produce electricity, it is the purpose of this invention to apply the means to extract that electricity so that it may be utilized. This application specifically excludes piezoelectric (pressure related) and pyroelectric (heat related) effects commonly observed in materials of this type and well known in the art. This application relates exclusively to the phenomenon of "petroelectricity" (a new terminology) which is relatively "steady state" and not dependent upon temperature, pressure or chemical action. The origin of petroelectric energy is not presently known. It is obvious that this energy does not reside in the material itself but must, it appears, have an external, perhaps even extraterrestrial origin. Incident radiation from space (neutrino flux or optical-frequency gravitational radiation has been proposed) but, at present, no adequate explanation exists.

The earmarks of the incoming radiant energy which appear to cause the petrovoltaic effect are the clearly-evident diurnal cycles and occasional strong pulses of short duration. A research program is presently underway to study the possibility that a new energy source (perhaps cosmic in nature) may have been discovered.

This invention relates to the method of tapping the self-potential generated by such dielectric or semi-conducting material. It relates to the placing upon, or attaching thereto, of electrodes upon such material so as to conduct away and utilize the electrical potential developed therein. It relates to the preparation of the dielectric surface so as to effectively receive said electrodes. The invention further relates to the use of conductors or circuitry to convey said electrical energy from said electrodes to the ultimate (end-use) of said electrical energy.

This invention, therefore, relates to the extraction and practical utilization of petroelectric energy (so-called "rock electricity") by the application of suitable electrodes and circuitry to semi-conducting materials.

The invention further relates to the inter-connecting of several masses of semi-conducting materials so as to increase the total electrical output. It relates to systems of dielectric or semi-conducting masses interconnected to produce large output of electrical energy.

SPECIFICATIONS:

Fig. 1 illustrates the simplest form of the invention. Massive (high density) semi-conducting material 1, preferably of high specific inductive capacity (high K) is adapted to receive electrodes 2 and 3, the surfaces having been cleaned for good contact. Conductors 4 and 5 convey the potential difference present in material 1 to resistive load 6.

Fig. 2 illustrates a system of two or more masses 1a, 1b, 1c, 1d, etc. in series to provide higher output voltage.

Fig. 3 illustrates a system, in parallel connection, to provide higher output current.

Fig. 4 illustrates the use of additional electrodes 7,8,9,10,11,12, etc. for effective electrical contact, interconnecting electrical domains of a semi-conducting material.

In the foregoing specification, it is to be understood that the use of semi-conducting masses, wired and interconnected as shown, is fully covered in the present art of piezoelectric and pyroelectric sensors and electrochemical batteries and, therefore, is not patentable. In such cases, the energy converted into electricity is derived from kinetic energy, thermal energy or battery-action, as the case may be. No external source of energy other than kinetic, thermal or electrochemical is known to the art.

In the present application, the external source of energy is newly discovered and not, as yet, fully identified or understood. The circuitry by which this newly-discovered energy is removed from the receptor material and utilized is the same as that employed in piezoelectric, pyroelectric or galvanic systems. Hence, it is necessary to distinguish between the systems in the invention herein claimed.

CLAIMS:

I claim:

1. Method for making available for utilization the electrical self-potential exhibited by massive high-K dielectrics, other than that from piezoelectric, pyroelectric or electrochemical action, consisting in attaching electrodes to said dielectrics, attaching conductors to said electrodes and conveying the electrical potential to a useful load.

2. Method for removing and utilizing the electrical potential from petrologic materials, other than that from piezoelectric or pyroelectric or galvanic sources, consisting in attaching electrodes to said materials, connecting conductors to said electrodes and conveying said electrical potential to a utilizing load.

3. Method for removing for purposes of utilization electrical energy from rock-like materials, other than that from kinetic, thermal or electrochemical sources, consisting in attaching conductors to said electrodes and conveying said electrical energy to a utilizing load.

4. Method of extracting electrical energy from massive high-K dielectrics, other than that produced by mechanical strains, heat or electrochemical conversion, consisting in attaching electrodes to said dielectrics, providing conductors from said electrodes thereby to convey the extracted electrical energy for utilization in a load.

5. Method of utilizing petroelectric energy, other than that derived from piezoelectric, pyroelectric or galvanic sources, consisting in attaching two or more electrodes to a rock, applying conductors to said electrodes and removing the petroelectric energy to a useful load.

6. Method according to Claim 1, consisting of two or more dielectrics wired in series to provide higher voltage.

7. Method according to Claim 1, consisting of two or more dielectrics wired in parallel to provide higher current.

8. Method according to Claim 1, consisting of dielectrics formed from barium titanate, lead zirconate titanate, lead monoxide-glycerine compound or other high-density high-K material.

9. Method according to Claim 3, consisting of rock-like materials such as granite, basalt and metallic ores.

10. An electrical source, other than that provided by piezoelectric, pyroelectric and electrochemical factors, comprising massive high-K dielectrics with electrodes attached thereto and conducting output leads attached to said electrodes.

T. Townsend Brown
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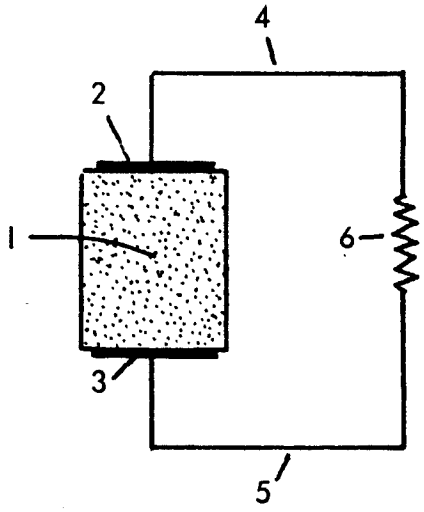

FIG. 1

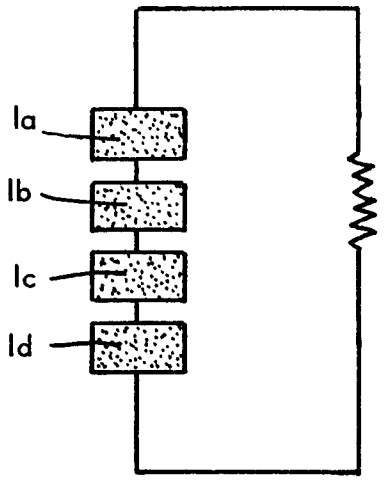

FIG. 2

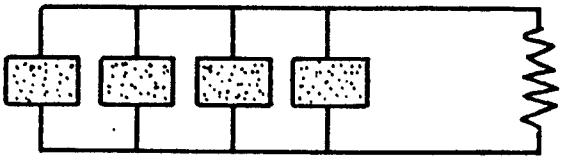

FIG. 3

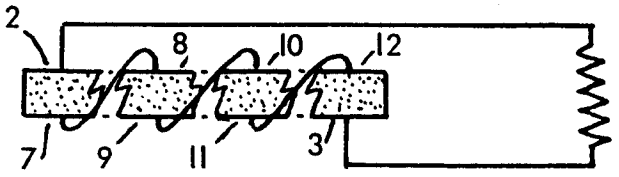

FIG. 4

ELECTRICAL SOURCE

Inventor

H. Townsend Brown

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