"Electric Clock"

Preliminary Patent Application

August 27, 1978
Sunnyvale, California

Description:

This invention relates to a novel electrically-powered time-keeping device, the novelty of which lies in its self-contained electric power source. The invention further relates to the method and means by which electrical energy is derived.

Based upon studies made by the inventor over a period of many years, and reported in detail in the attached documents, it has been discovered that certain dielectric materials, including rocks, reveal an electric self-potential depending upon their dielectric constant, density and certain other physical properties. These materials generate a dc potential spontaneously and continuously with no (as yet) observable tendency to diminish. The source of this energy is not known. All that is known is that energy conversion takes place which produces a small but usable amount of electricity. The action is similar to that of a photocell, except that it operates in darkness as well as in light.

This invention, therefore, relates to the use of this electrical output to power a timepiece. The novelty and usefulness of the invention lies in the observed fact that the generation of electricity by rocks or rock-like materials (so-called "petroelectricity") is continuous and apparently perpetual and ever-lasting. As such, it appears to be of special in powering clocks. No battery-replacement is indicated.

In this connection, it is to be pointed out that all tests to date of the "petroelectric" effect show no diminution with time. Variations in output occur from day to day or year to year but no systematic reduction over long periods of time has ever been observed. Diurnal variations of relatively small magnitude occur and occasionally there are "bursts" of electrical output, the origin of which is unknown at the present time. But generally, the potential is continuously maintained by the rock specimen as if it were an "ever-lasting" battery. It can be said, without fear of contradiction, based on evidence so far, that rocks and rock-like dielectric materials have been generating (or converting) petrovoltaic energy for countless millions of years.

The object of the present invention is to utilize this new form of "ever-lasting battery" to power a clock or any other similar application such as heart-pacer or nerve stimulant. Such applications require extremely low power and benefit from the fact that renewal is not required.

Note to the Patent Council:

This patent application should probably take the form of a "combination patent." Rocks (per se) are not patentable, nor are electronic (digital) clock circuits, but the combination, providing a "new and useful" result, probably is patentable.

As a source of electricity, rocks or rock-like dielectric materials may be independently patentable and claims may be written to so include. In other words, a rock (by itself), of course, is not patentable, but the inclusion of electrodes upon the surface of the rock, to provide a new and useful output of electricity may be claimed.

It is to be understood that the petrovoltaic effect has only recently become known thru research currently underway and that it is not related to or explained by well-known piezoelectric or pyroelectric principles.