

A small opening 74 in the top of the housing 60 will be used to evacuate enough of the air from that housing to reduce the pressure within that housing to about six inches of mercury. Thereafter, sufficient inert gas, such as argon or carbon dioxide, will be introduced into that opening to provide a positive pressure within that housing of three inches of mercury. While that positive pressure is being maintained, the opening 74 will be closed; and thereupon the housing 60 will be hermetically sealed and will have a super-atmospheric pressure of three inches of mercury therein. The pressurized inert gas within housing 60 will tend to minimize the loss of any liquid from any mass in any of the cells in any plural-cell source of electricity which might experience a breakdown in any part of the methylene chloride seals thereof.

The sources of electricity of the present invention which, like the sources of electricity of Examples 1-8, have diverse and discrete masses in engagement with each other tend to develop voltage-time curves under "load" that differ from the voltage-time curves of primary batteries under "load." Specifically, the voltages of those sources of electricity increase under "load" for a period of time before they begin to decrease, whereas the voltages of primary batteries under "load" begin to decrease immediately and then continue to decrease. One such source of electricity had (1) an aluminum electrode, (2) a planar mass constituted of seven grams of aluminum oxide, one gram of phosphorus, two grams of aluminum powder, and sufficient de-ionized water and gelatin and sodium chlorate (in the ratio of 100-14-1) to form a smooth putty-like paste, (3) a planar mass constituted of seven grams of aluminum oxide, four grams of copper powder, and sufficient de-ionized water and gelatin and sodium chlorate (in the ratio of 100-14-1) to form a smooth putty-like paste, and (4) a copper electrode; and that source was connected to a ten thousand ohm load for thirty-two days, was then disconnected from that load for sixty days, and had a "dead short" connected across it for seven days. At the time it was made, that source of electricity had a "no load" voltage of six-tenths (0.6) of a volt and a "no load" current of six (6) milliamperes, and at the time the "dead short" was disconnected from it, that source had a "no load" voltage of one and one-quarter (1.25) volts and a "no load" current of sixty (60) milliamperes; and it was then delivered to a testing group for formal testing. During that formal testing, that source of electricity was connected across a two hundred (200) ohm resistive load; and the voltage supplied by that source increased under load from about thirty-five hundredths (0.35) of a volt to about fifty-three hundredths (0.53) of a volt. The voltage of that source of electricity increased to four tenths (0.4) of a volt in less than forty hours after the beginning of that testing, increased to forty-four hundredths (0.44) of a volt by eighty hours, increased to five tenths (0.5) of a volt by two hundred hours, increased to fifty-three hundredths (0.53) of a volt between six hundred and eighty and seven hundred and sixty hours, and did not decrease to thirty-two hundredths (0.32) of a volt until (2400) twenty-four hundred hours after the beginning of that testing.

Another source of electricity, which had identical electrodes and masses, was connected to a ten thousand ohm load for three months on a two week "on" and a two week "off" schedule. At the time it was made, that source of electricity had a "no load" voltage of six-tenths (0.6) of a volt and a "no load" current of ten (10)

milliamperes, and at the end of the three months that source of electricity had a "no load" voltage of eighty-five hundredths (0.85) of a volt and a "no load" current of fifty (50) milliamperes; and it was then delivered to the testing group for formal testing. During that formal testing, that source of electricity was connected across a fifty (50) ohm resistive load; and the voltage supplied by that source increased under load from about thirty-three hundredths (0.33) of a volt to about forty-four hundredths (0.44) of a volt. The voltage of that source of electricity increased to thirty-five hundredths (0.35) of a volt in less than ten hours after the beginning of that testing, increased to four tenths (0.4) of a volt by thirty hours, increased to forty-five hundredths (0.44) of a volt between one hundred and twenty to one hundred and sixty hours, and did not decrease to sixteen hundredths (0.16) of a volt until eleven hundred and eighty (1180) hours after the beginning of that testing.

A ten cell source of electricity had (1) a zinc electrode of the size and configuration of electrode 31, (2) a planar mass of the size and configuration of the mass 31 which was constituted by seven grams of aluminum oxide, one gram of phosphorus, one-tenth gram of mercuric oxide, two grams of graphite, and sufficient de-ionized water and gelatin and sodium chlorate (in the ratio of 100-14-1) to form a smooth putty-like paste, (3) a planar mass of the size and configuration of the mass 41 which was constituted by seven grams of aluminum oxide, two grams of graphite, two grams of copper sulfate, and sufficient de-ionized water and gelatin and sodium chlorate (in the ratio of 100-14-1) to form a smooth putty-like paste, and (4) a copper electrode of the size and configuration of electrode 27; and that source had a "no load" voltage of nine and one-half (9.5) volts and a "no load" current of one hundred and eighty milliamperes. That source was connected across a two volt Calectro G. C. Electronics incandescent lamp which had a "cold" ohmic resistance of two thousand (2000) ohms; and, after being connected across that lamp continuously for forty (40) days, was still brightly illuminating that lamp. As a result, it should be apparent that the sources of electricity have substantial current-supplying capabilities.

Although they are referred to herein and in the appended claims as particulates, some of the components of the masses of the various sources of electricity of the present invention may dissolve or ionize when the liquid of their mass is added. Also some of those components may dissolve or ionize during the operation of those sources of electricity. Hence, it should be understood that "particulates" comprehend materials in dissolved or ionized form as well as in solid form.

Whereas the drawing and accompanying description have shown and described a number of embodiments of the present invention, it should be apparent to those skilled in the art that various changes may be made in the form of the invention without affecting the scope thereof.

What I claim is:

1. A source of electricity which comprises a first electrode, a second electrode that is spaced from said first electrode, said electrodes being made of metals that are spaced apart in the electromotive series, a first mass which contains particulates and liquid and which is electrically conductive, said mass abutting, and being in electrically-conducting engagement with, the inner surface of said first electrode, a second mass which contains particulates and liquid and which is electrically