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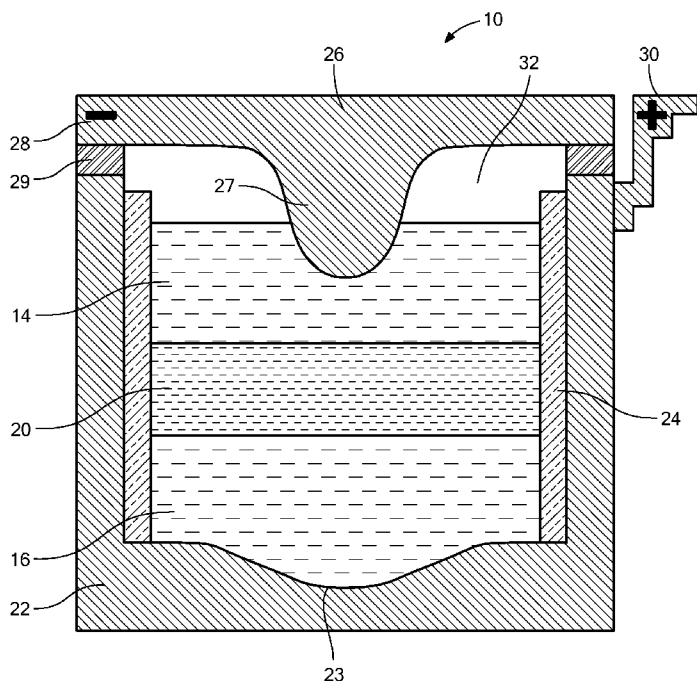


FIG. 1

(57) Abstract: An electrochemical cell and its method of operation includes an electrolyte having a binary salt system of an alkali hydroxide and a second alkali salt. The anode, cathode, and electrolyte may be in the molten phase. The cell is operational for both storing electrical energy and as a source of electrical energy as part of an uninterruptible power system. The cell is particularly suited to store electrical energy produced by a renewable energy source. The positive electrode may comprise a metal selected from Cd, Sn, Hg, Pb, sb, Bi and any combination thereof, the electrolyte may be a binary salt system comprising an hydroxide and a halide, and the negative electrode may comprise an alkali metal such as sodium (Na).

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