

# DEFENSIVE PUBLICATION

## UNITED STATES PATENT OFFICE

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Defensive Publication applications have not been examined as to the merits of alleged invention. The Patent Office makes no assertion as to the novelty of the disclosed subject matter.

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### ENERGY CONVERSION DEVICE

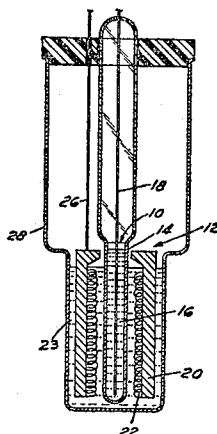
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1 Sheet Drawing, 4 Pages Specification



A secondary battery is made by using a cationically conductive ceramic separator to separate a molten alkali metal anode from a cathode compartment containing a metallic material in a non-aqueous solvent. Useful alkali metals include sodium, potassium, etc., and compositions useful in the cathode compartment include copper chloride, copper sulfide, nickel fluoride, etc., dissolved in solvents such as dimethylsulphoxide N-dimethyl formamide, propylene carbonate, etc. Other salts can be added to the electrolyte to increase its conductivity. Cations of the alkali metal pass through the separator easily but the separator blocks passage of the materials and anions in the cathode compartment. Graphite felt can be used in the cathode compartment as an energy collector. Useful separator materials include those disclosed in U.S. Pat. 3,404,036. The battery has an extremely high theoretical energy density and exhibits excellent charge and recharge capability.

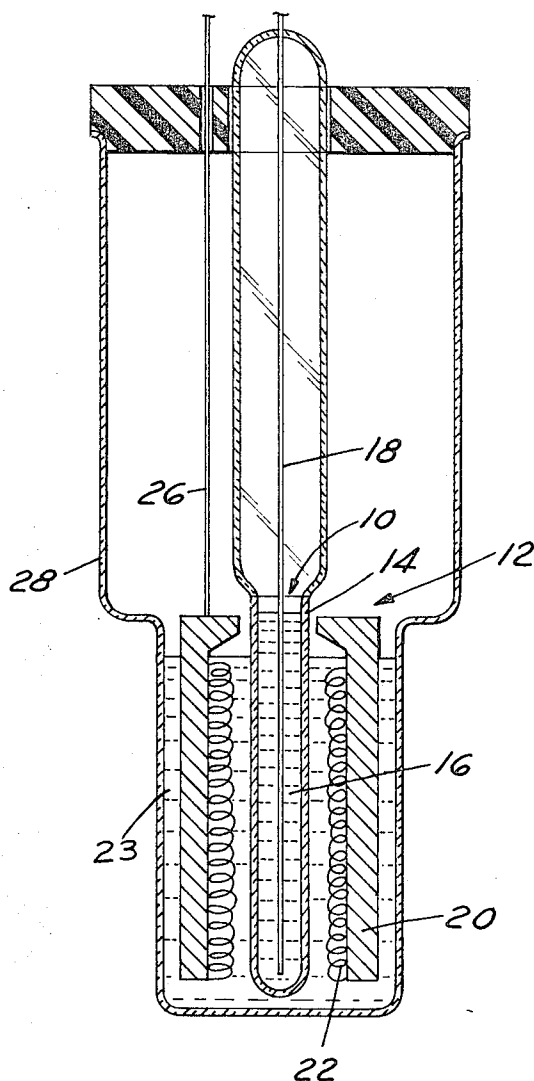
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ENERGY CONVERSION DEVICE

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