

[54] **ELECTRICALLY RECHARGEABLE BATTERY**

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[21] Appl. No.: **928,785**

[22] Filed: **Jul. 28, 1978**

**Related U.S. Application Data**

[63] Continuation-in-part of Ser. No. 861,535, Dec. 19, 1977, abandoned.

[51] Int. Cl.<sup>2</sup> ..... **H01M 8/18**

[52] U.S. Cl. .... **429/21; 429/70; 429/107; 429/229**

[58] Field of Search ..... **429/21, 67, 70, 107, 429/206, 207, 210, 229-231, 247**

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[57] **ABSTRACT**

An electrically rechargeable battery comprising an inert cathode, a zinc anode and an aqueous alkaline electrolyte, for example, NaOH, in which said anode and cathode are immersed. The alkaline electrolyte in the vicinity of the cathode contains an alkali metal ferricyanide salt, such as  $K_3Fe(CN)_6$  or  $Na_3Fe(CN)_6$ . Optionally, a mechanical separator is utilized between the anode and cathode to prevent gross mixing of the saturated electrolyte at the cathode with the electrolyte in the vicinity of the anode. Preferably, the separator is of the ion exchange type. During electrical discharge, at the anode and cathode, the battery produces soluble reaction products which are transported in the electrolyte to respective external storage tanks which increase battery capacity. During the charge cycle, the reverse conditions occur.

**11 Claims, 3 Drawing Figures**

