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(71) Applicant: BATTERY TECHNOLOGIES INC. [CA/CA]; 30 Pollard Street, Richmond Hill, Ontario L4B 1C3 (CA).		Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>	
(72) Inventors: TOMANTSCHGER, Klaus; 6197 Montevideo Road, Mississauga, Ontario L5N 2E8 (CA). BOOK, R., James; 1771 Sherwood Forrest Circle, Mississauga, Ontario L5K 2H7 (CA). DANIEL-IVAD, Josef; 54 Old Hill Street, Richmond Hill, Ontario L4C 9T9 (CA).			
(74) Agent: HEWSON, Donald, E.; Suite 13, 2145 Dunwin Drive, Mississauga, Ontario L5L 4L9 (CA).			

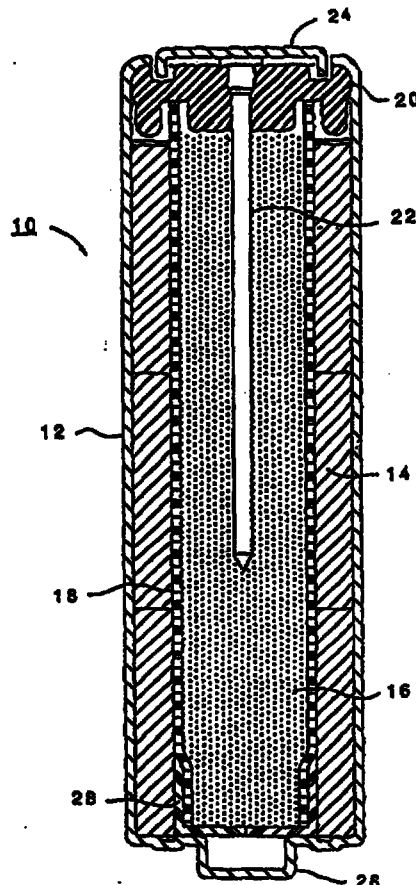
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(54) Title: **HIGH CAPACITY RECHARGEABLE CELL HAVING MANGANESE DIOXIDE ELECTRODE**

(57) Abstract

A rechargeable manganese dioxide/zinc cell (10) is provided, where the cell has high capacity, high volumetric and gravimetric energy densities, high cycle life, and is capable of continued charge-discharge cycles following an overdischarge. The cell comprises a zinc negative electrode (16), a manganese dioxide positive electrode (14), a separator (18), and terminal means (24, 26). The cell has an aqueous electrolyte, wherein the solute may be potassium hydroxide, or the solute may also be a mixture of zinc chloride and ammonium chloride. The electrode balance as determined by the ratio of the theoretical discharge capacity of the zinc and the theoretical one electron discharge capacity of the manganese dioxide ranges from greater than 65 % up to 110 %. On the 15th discharge, a cell of the present invention will deliver a discharge capacity of at least 20 % of the discharge capacity delivered on the first discharge. A cell according to the present invention is capable of continued charge-discharge cycles after overdischarge or voltage reversal.



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