

**Klein Martin** Brookfield, CT, UNITED STATES  
assigned to Electro Energy Inc

The subject invention relates to electrode structures that are adaptable for primary and electrically rechargeable electrochemical wafer cells. A flat wafer cell is disclosed that includes conductive, carbon-filled polymeric outer layers that serve as electrode contacts and as a means of containment of the cell. Multi-cell, higher voltage batteries may be constructed by stacking individual cells. Specially formulated electrodes and processing techniques that are compatible with the wafer cell construction are disclosed for a nickel-metal hydride battery system. The cell design and electrode formulations provide for individual operation of a vented or low pressure sealed cell and/or for operation of these cells in a stacked array in an outer battery housing.

**5478665**

#### **BATTERY WITH STRENGTH INDICATOR**

**Burroughs James; O'Kain Alan N** Encino, CA,  
UNITED STATES assigned to Strategic Electronics

A battery strength tester used on a battery which has indicating means to indicate the strength of the battery and switching means which can easily be employed to complete a circuit so as to place the indicator means across the terminals of the battery and display the charge of the battery and wherein said switch, after a predetermined interval or temperature is reached, automatically opens to break the electrical contact across the battery terminals. A light emitting material employed as the indicator material is another special feature of the battery strength tester.

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#### **HEAT DISSIPATING CURRENT COLLECTOR FOR A BATTERY**

**Shackle Dale R; Morris Jerry L; McAleavey Michael E**  
Morgan Hill, CA, 95037, UNITED STATES

A current collector in electrical contact with an anode of a battery is extended beyond the anode to serve as a heat sink and presents a substantial surface area through

which heat is dissipated from inside the battery to the atmosphere. When multiple battery cells are stacked, the current collectors extend to form fins across which air flows to efficiently dissipate heat.

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#### **CURRENT COLLECTOR HAVING A CONDUCTIVE PRIMER LAYER**

**Turi Eran; Ray Marie B** Springfield, MA, UNITED STATES assigned to Rexam Graphics

A current collector which uses a conductive primer layer under an electrode layer to improve the contact and adhesion of the electrode layer to a supporting member, wherein the conductive primer layer is composed of a polymeric material having pendant carboxylic acid groups crosslinked with a multifunctional crosslinking agent, and a conductive filler. The current collector may be used inter alia for making batteries.

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#### **COMPOSITE GAUNTLET/SEPARATOR**

**Choi Wai M; Schmidt Ingo W** Newton, MA, UNITED STATES assigned to Daramic Inc

A battery separator for tubular positive electrodes composed of a microporous, composite sheet product having first and second major surface, formed from a uniform mixture of a polymer, a filler, a processing aid a porous form stable layer at least partially embedded in either the first or second major surface and having a series of vertical tubes arranged across its surface. The tubular sleeve/separator can be formed of individual tubes, flat sheets formed into a series of tubes or sheets containing half tubes and which are aligned and bonded together to form the series of tubes.

**5478981**

#### **RESISTIVE ELECTRODE**

**Farmer John; Rotenberger Carl** St Petersburg, FL,  
UNITED STATES assigned to Farmer Mold &  
Machine Works Inc