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DiSanto et al.

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[54] **PORTABLE TELECOMMUNICATION DEVICE WITH REMOVABLE ELECTROPHORETIC DISPLAY**

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[52] **U.S. Cl.** **345/169**; 345/107

[58] **Field of Search** 345/174, 107, 345/30, 179, 182, 183, 173, 169, 905; 340/825.69; 382/13; 395/111

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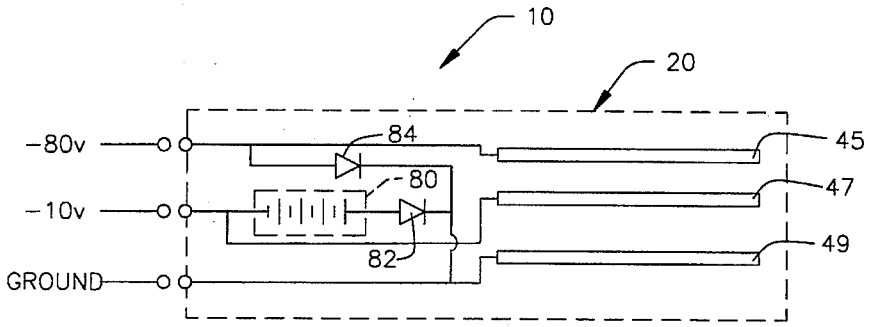
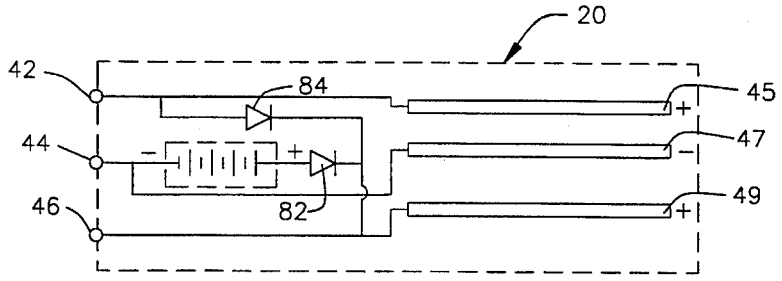
[57] **ABSTRACT**

The present invention is a modular electrophoretic display that can be selectively attached or detached from a larger assembly. The modular electrophoretic display includes a small, low voltage battery that provides a small bias to the anode, cathode and grid electrode of the electrophoretic display when no other power is present. As a result of the bias of the battery, the electrophoretic display is capable of retaining any image formed upon the display by the larger assembly. Consequently, different displays with differing images can be removed from, or added to, the larger assembly as needed. This promotes ease in photocopying the electrophoretic display and enables the display to be mailed, stored or otherwise handled without the loss of the image.

18 Claims, 4 Drawing Sheets