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[54] **TRANSMISSIVE ELECTROPHORETIC DISPLAY WITH VERTICAL ELECTRODES**

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[58] **Field of Search** 345/107; 359/296

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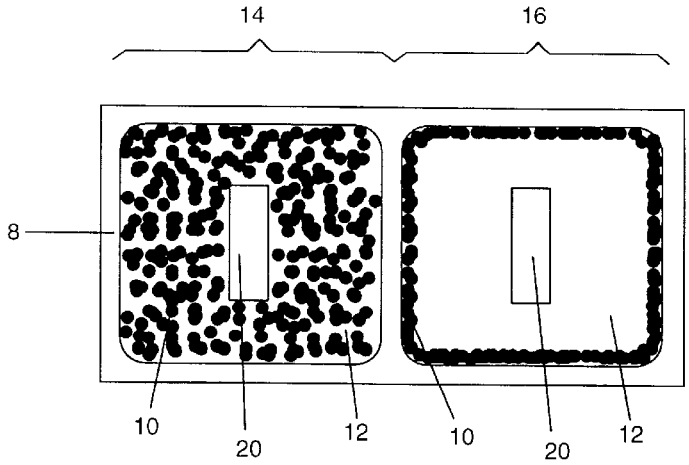
[57] **ABSTRACT**

A transmissive electrophoretic display is generally comprised of a regular lateral array of transmissive electrophoretic cells; each uniformly illuminated from the rear by a backlight. Each cell is comprised of a suspension of charged, black or colored light-absorbing pigment particles in a light-transmissive fluid. Each cell is also comprised of a light-transmissive front and rear window, at least one non-obstructing counter electrode, and at least one non-obstructing, vertically-disposed collecting electrode. With the application of appropriate voltages to the collecting and counter electrodes, each cell can be switched between a light and dark state. In the dark state, the light-absorbing pigment particles are distributed to cover the horizontal area of the cell, thus absorbing light from the backlight and preventing it from reaching the viewer. In the light state, the light-absorbing pigment particles are collected on vertical surfaces within the cell, thus allowing light from the backlight to pass through the cell and reach the viewer.

8 Claims, 3 Drawing Sheets