# United States Patent [19]

**Simpson et al.**

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[54] **PERISTALTIC ELECTROSTATIC BINARY DEVICE**


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**Related U.S. Application Data**

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[52] **U.S. Cl.** ..... **340/825.00**; 340/825.81; 340/815.17; 340/815.27; 340/783; 350/269

[58] **Field of Search** ..... 340/763, 764, 783, 796, 340/815.27, 825.81, 815.17, 815.24, 825.88, 825, 360, 825.79; 350/266, 269, 270, 260; 40/491, 488, 579, 513



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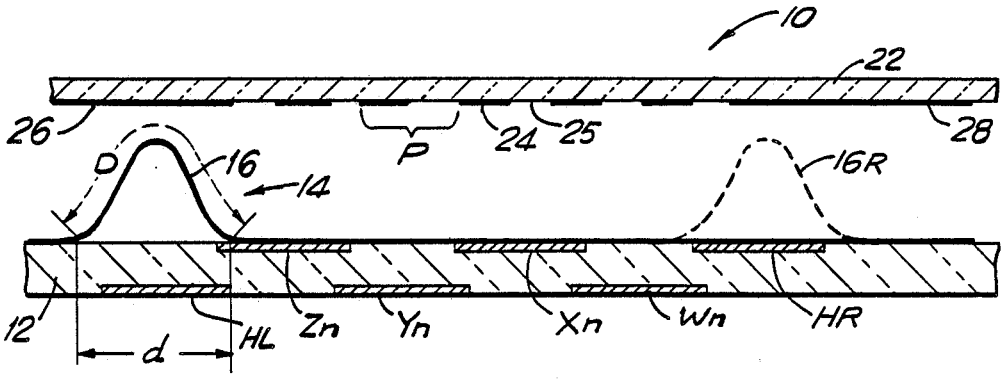
[57] **ABSTRACT**

An array of binary elements suitable for alphanumeric or graphic displays are electrostatically actuated. The elements have a flexible member overlying a stator member. The flexible member has a bulge which is transferred along the element by sequential de-energization of a plurality of electrostatic electrode regions. Transfer of the bulge linearly shifts the flexible member with respect to the stator member to alter the state or to change appearance, light transmission, or electrical characteristics of the element.


**16 Claims, 4 Drawing Sheets**