United States Patent [19]

Hansen

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[54] **FREESTANDING MULTIDIRECTIONAL ELECTRICAL CONTROL DEVICE**

[76] Inventor: **Ronald E. Hansen,** 918 River Bend Rd., NW., Salem, Oreg. 97304

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[52] **U.S. Cl.** ..... **200/52 R;** 200/6 A; 200/157; 200/182; 200/185; 200/187; 200/220; 200/224

[58] **Field of Search** ..... 200/6 A, 52 R, 61.47, 200/61.52, 157, 61.85, 183, 187, 185, 215–218, 219, 220, 224, 225

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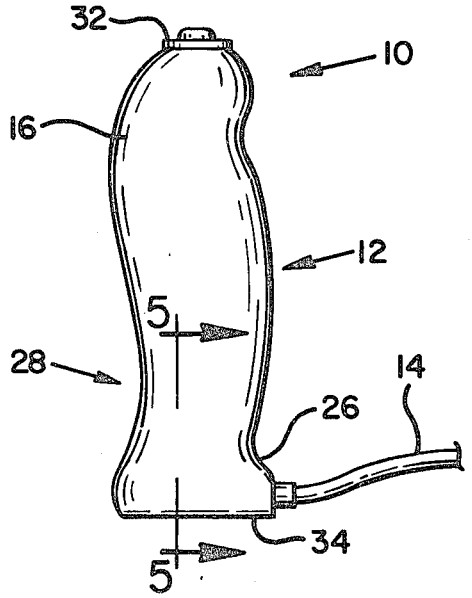
Primary Examiner—Scott: J. R.

Attorney, Agent, or Firm—Klarquist, Sparkman, Campbell, Leigh & Whinston

[57] **ABSTRACT**

A freestanding multidirectional control device for use in controlling video display images in electronic game machines comprises a handle member connected by a multiconductor cable to electric circuitry in the game machine. The handle member contains two pairs of gravity switches electrically connected to separate output signal conductors in the cable. The pairs of switches are mutually normal along the vertical axis of the handle member. The switches in each pair are oppositely inclined from vertical so that tilting the handle member one way produces an output signal on one of the conductors and tilting it in the opposite direction produces such a signal on a different conductor. The pairs of switches can be either single-ended, two-position tilt switches or double-ended, three-position tilt switches. At least one of the liquid contact switches may contain at least one electrode comprising a length of electrically resistive material to form a variable resistance electrical conduction path.

7 Claims, 9 Drawing Figures