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United States Patent [19]

Darbee

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[45] Date of Patent: * May 9, 1995

[54] **REMOTE CONTROL SYSTEM**

[75] Inventor: **Paul V. Darbee**, Santa Ana, Calif.

[73] Assignee: **Universal Electronics Inc.**, Twinsburg, Ohio

[*] Notice: The portion of the term of this patent subsequent to Jul. 13, 2010 has been disclaimed.

[21] Appl. No.: **134,086**

[22] Filed: **Oct. 8, 1993**

Related U.S. Application Data

[63] Continuation of Ser. No. 46,105, Apr. 8, 1993, Pat. No. 5,255,313, which is a continuation of Ser. No. 587,326, Sep. 24, 1990, Pat. No. 5,228,077, which is a continuation-in-part of Ser. No. 127,999, Dec. 2, 1987, Pat. No. 4,959,810, which is a continuation-in-part of Ser. No. 109,336, Oct. 14, 1987, abandoned.

[51] **Int. Cl.**[6] **H04M 11/00**; H04N 5/44

[52] **U.S. Cl.** **379/102**; 348/734

[58] **Field of Search** 379/102, 104, 105, 443, 379/444, 93, 97-99; 348/734, 478

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Attorney, Agent, or Firm—Thomas R. Vigil

[57] **ABSTRACT**

The remote control system includes a remote control and a computer having a memory and at least one of instruction codes or code data for creating appropriate IR lamp driver instructions for causing an infrared signal generator to emit infrared signals which will cause specific functions to occur in a specific controlled device, for operating a variety of devices to be controlled, stored in the memory of the computer. The remote control comprises: input circuitry including a set of keys or pushbuttons for inputting commands into the remote control, infrared signal output circuitry including IR lamp driver circuitry for supplying an infrared signal to a controlled device, a central processing unit (CPU) coupled to the input circuitry and to the signal output circuitry, a memory coupled to the CPU, and data coupling circuitry and structure for periodically coupling the computer to the remote control for inputting from the computer memory at least one of instruction codes or appropriate IR lamp driver instructions for causing the infrared signal output circuitry to emit infrared signals which will cause specific functions to occur in a specific controlled device, for operating a variety of devices to be controlled into the memory of the remote control to enable the remote control to control various devices to be controlled upon the inputting of commands to the keys of the input circuitry.

19 Claims, 18 Drawing Sheets

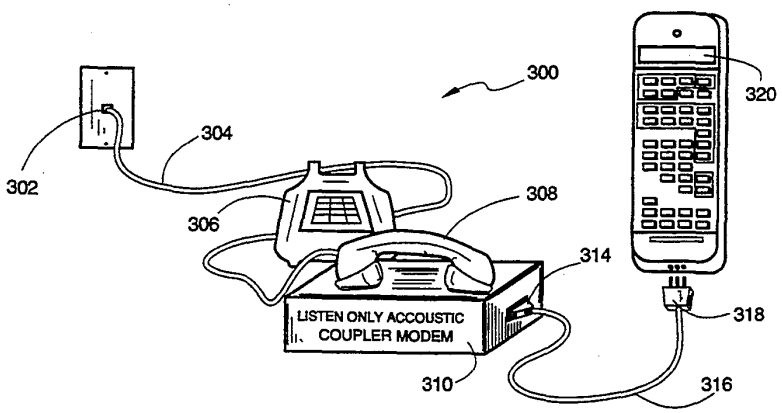

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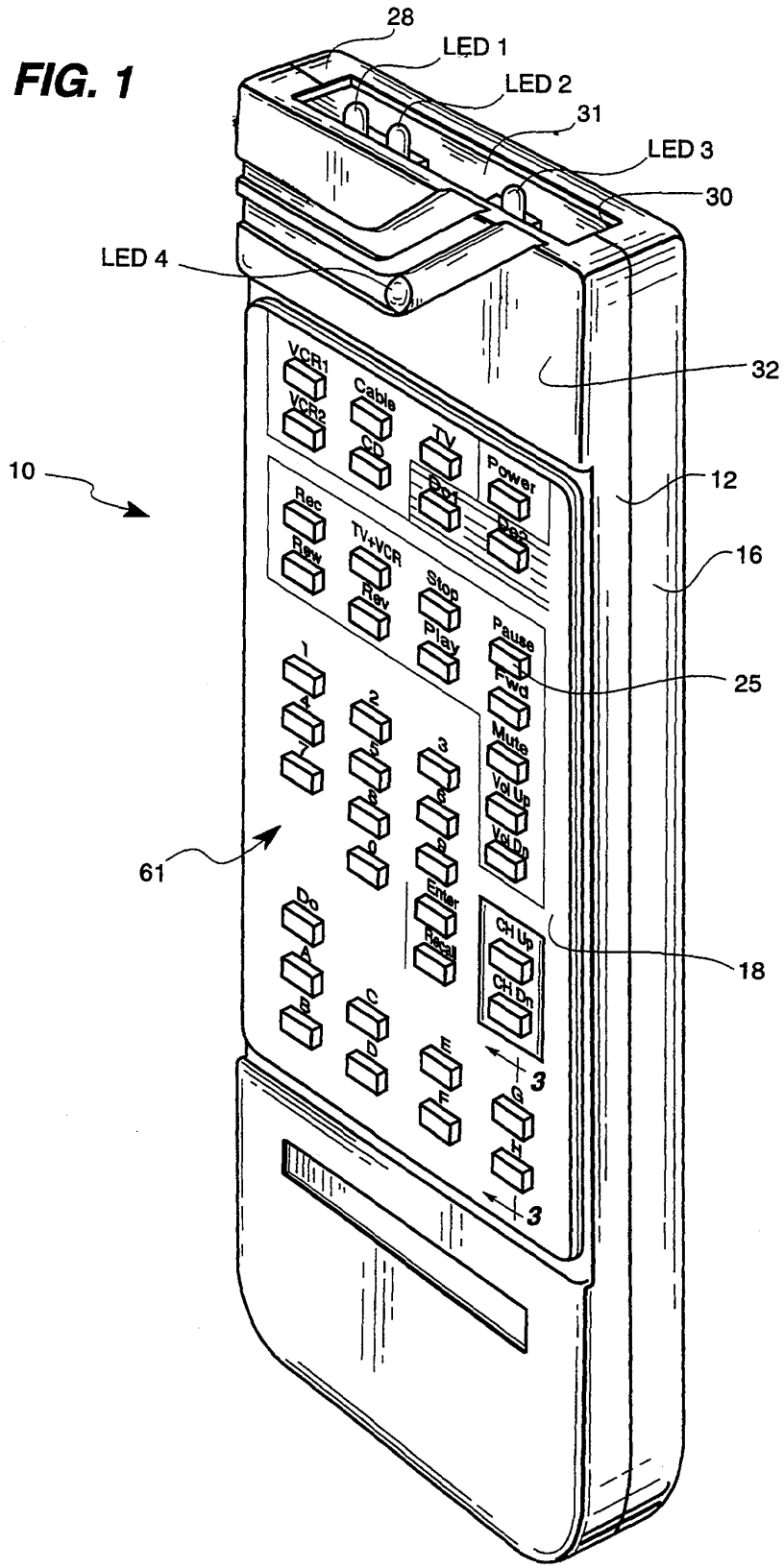
FIG. 1



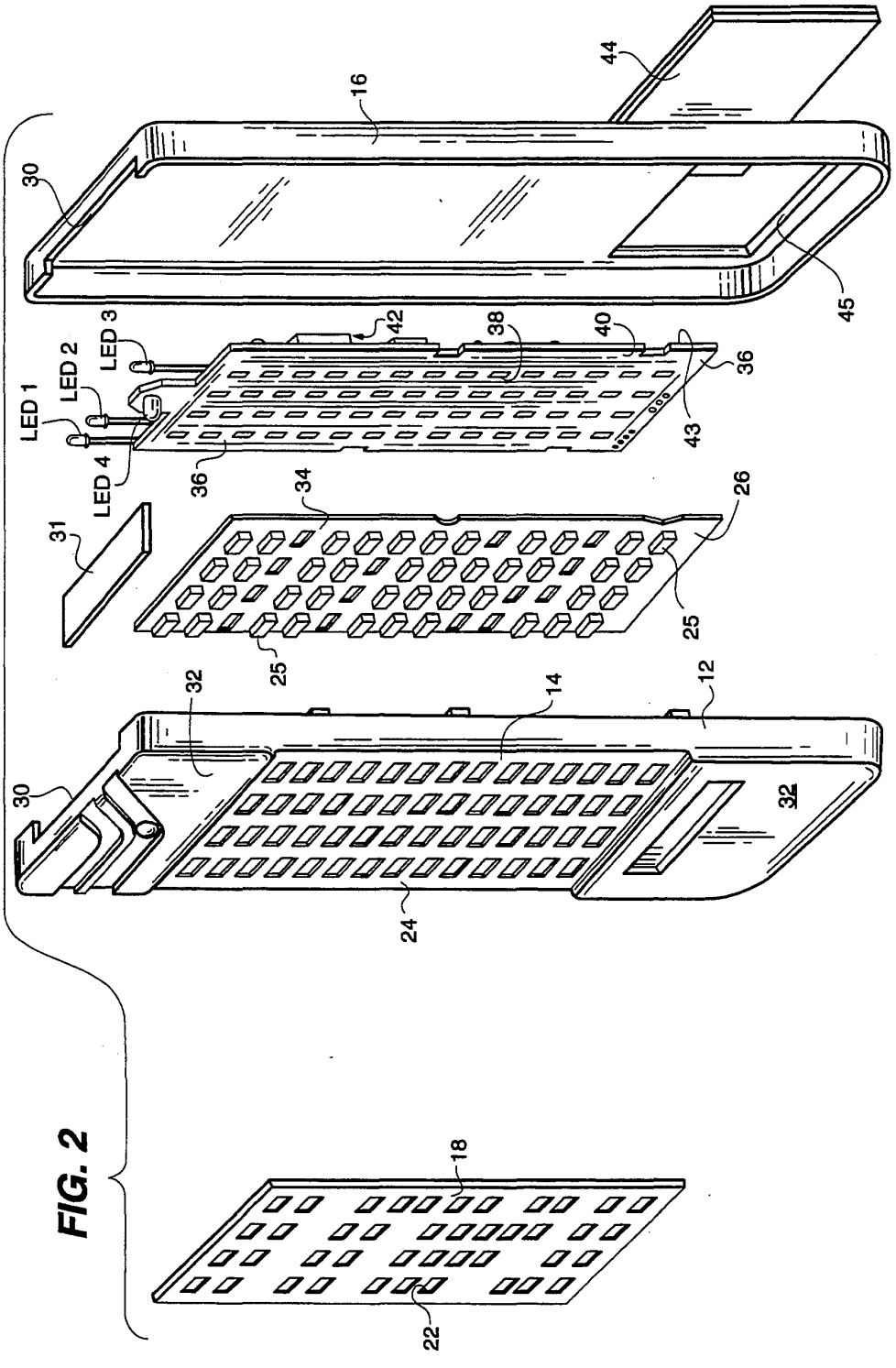


FIG. 2

FIG. 3

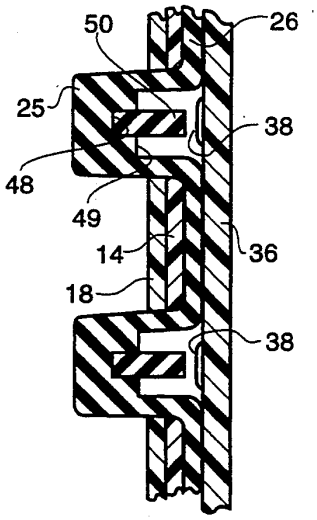


FIG. 4

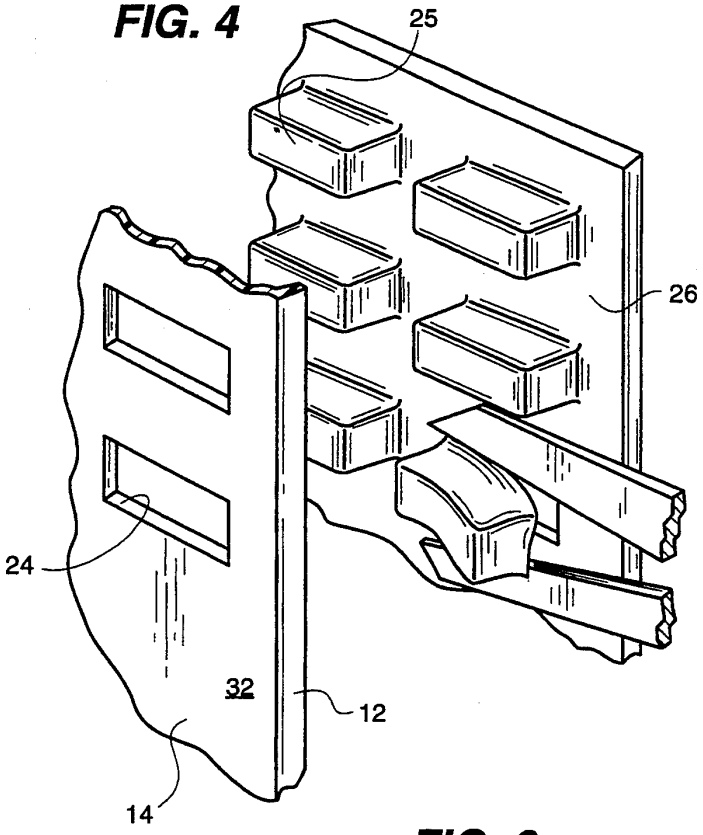


FIG. 5

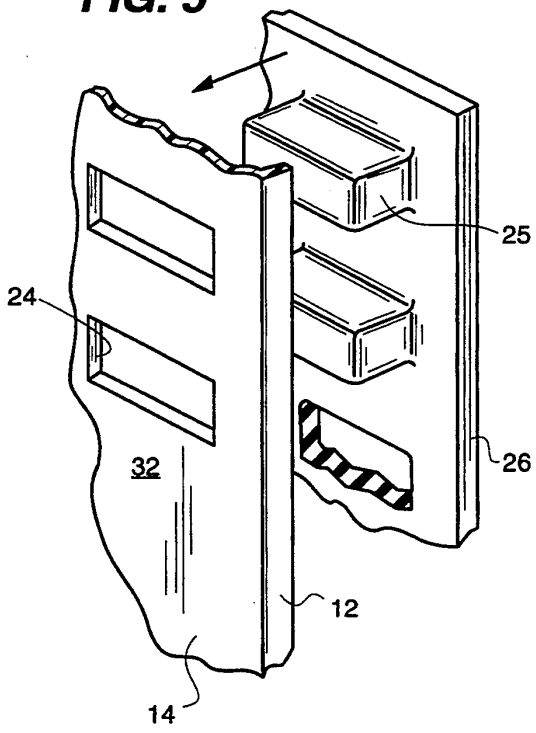
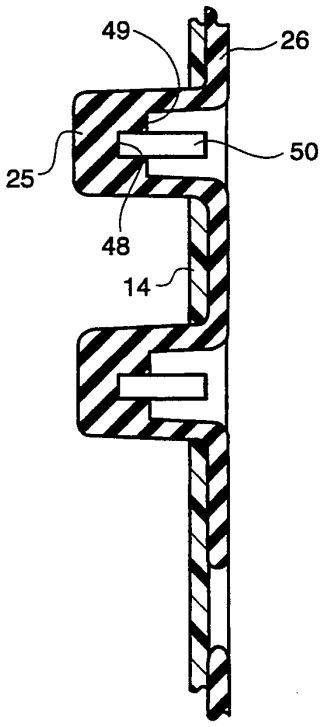


FIG. 6



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