

(12) **United States Patent**
Darbee et al.

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(54) **UNIVERSAL REMOTE CONTROL WITH
MACRO COMMAND CAPABILITIES**

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(List continued on next page.)

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(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
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(21) Appl. No.: **09/791,354**

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Related U.S. Application Data

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Jarosik

(63) Continuation of application No. 09/408,729, filed on Sep.
29, 1999, now Pat. No. 6,195,033, which is a continuation-
in-part of application No. 07/990,854, filed on Dec. 11,
1992, now Pat. No. 6,014,092, which is a continuation-in-
part of application No. 07/913,523, filed on Jul. 14, 1992,
now abandoned, which is a continuation-in-part of applica-
tion No. 07/586,957, filed on Sep. 24, 1990, now abandoned,
which is a continuation-in-part of application No. 07/127,
999, filed on Dec. 2, 1987, now Pat. No. 4,959,810, which
is a continuation-in-part of application No. 09/109,336, filed
on Oct. 14, 1987, now abandoned.

(57) **ABSTRACT**

A universal remote control comprising a keyboard having a
plurality of pushbuttons including a macro pushbutton and a
library of codes and data for use in transmitting operating
commands to a plurality of different home appliances of
different manufacturers. Instructions within the remote con-
trol are used to match the universal remote control to a
plurality of different home appliances of different manufac-
turers such that selected codes and data from the library are
used to transmit operating commands to the matched home
appliances in response to activation of selected pushbuttons
of the keyboard. The instructions are also used to assign to
the macro pushbutton a subset of the selected codes and data
from the library whereafter activation of the macro push-
button causes the universal remote control to use the subset
of selected codes and data from the library to transmit
operating commands to one or more of the matched home
appliances.

(51) **Int. Cl.**⁷ **H04L 17/02**

(52) **U.S. Cl.** **341/176; 341/173; 345/171;**
345/169; 359/146; 359/148

(58) **Field of Search** 341/173, 176;
348/734; 340/825.52, 825.72; 359/146,
148; 345/168, 169, 172

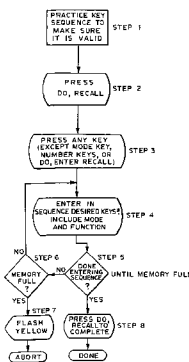
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6 Claims, 17 Drawing Sheets

SETTING A "DO" COMMAND MACRO



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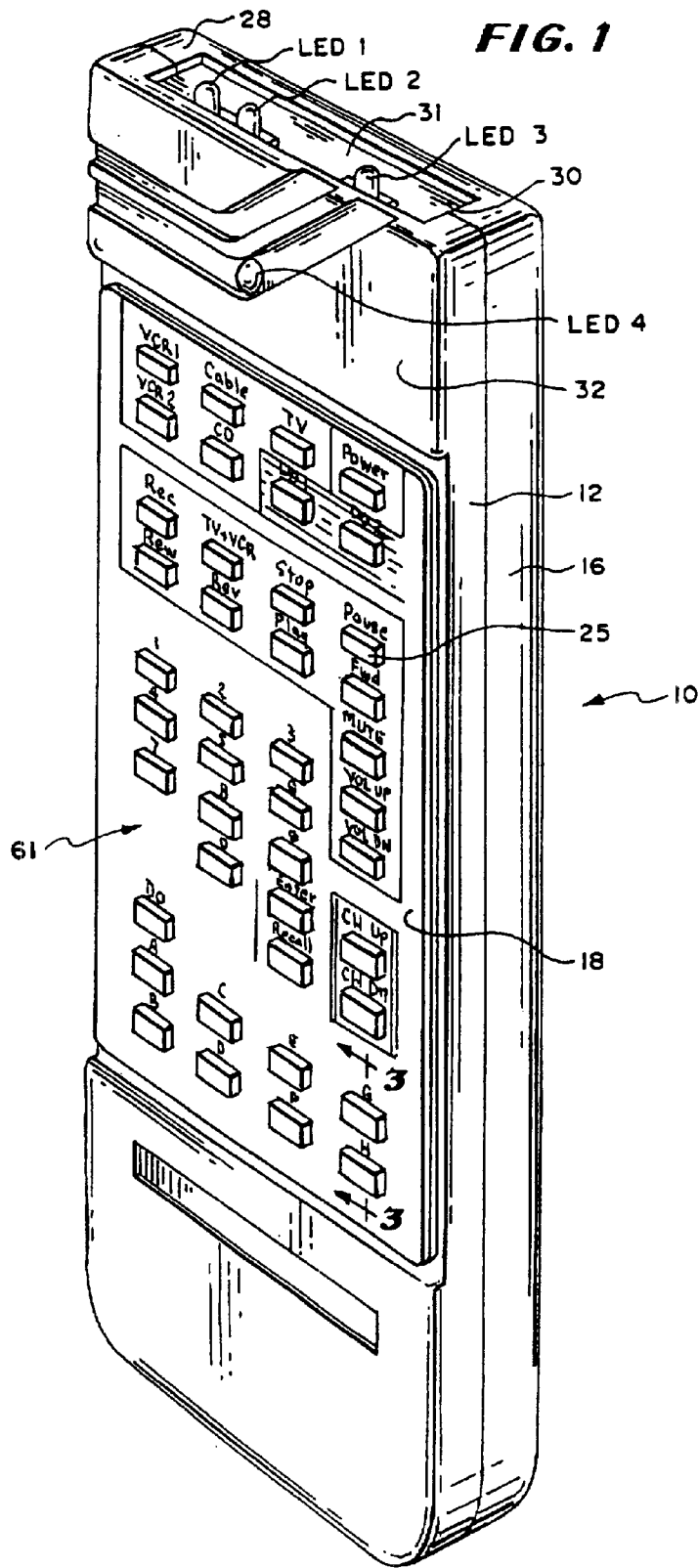
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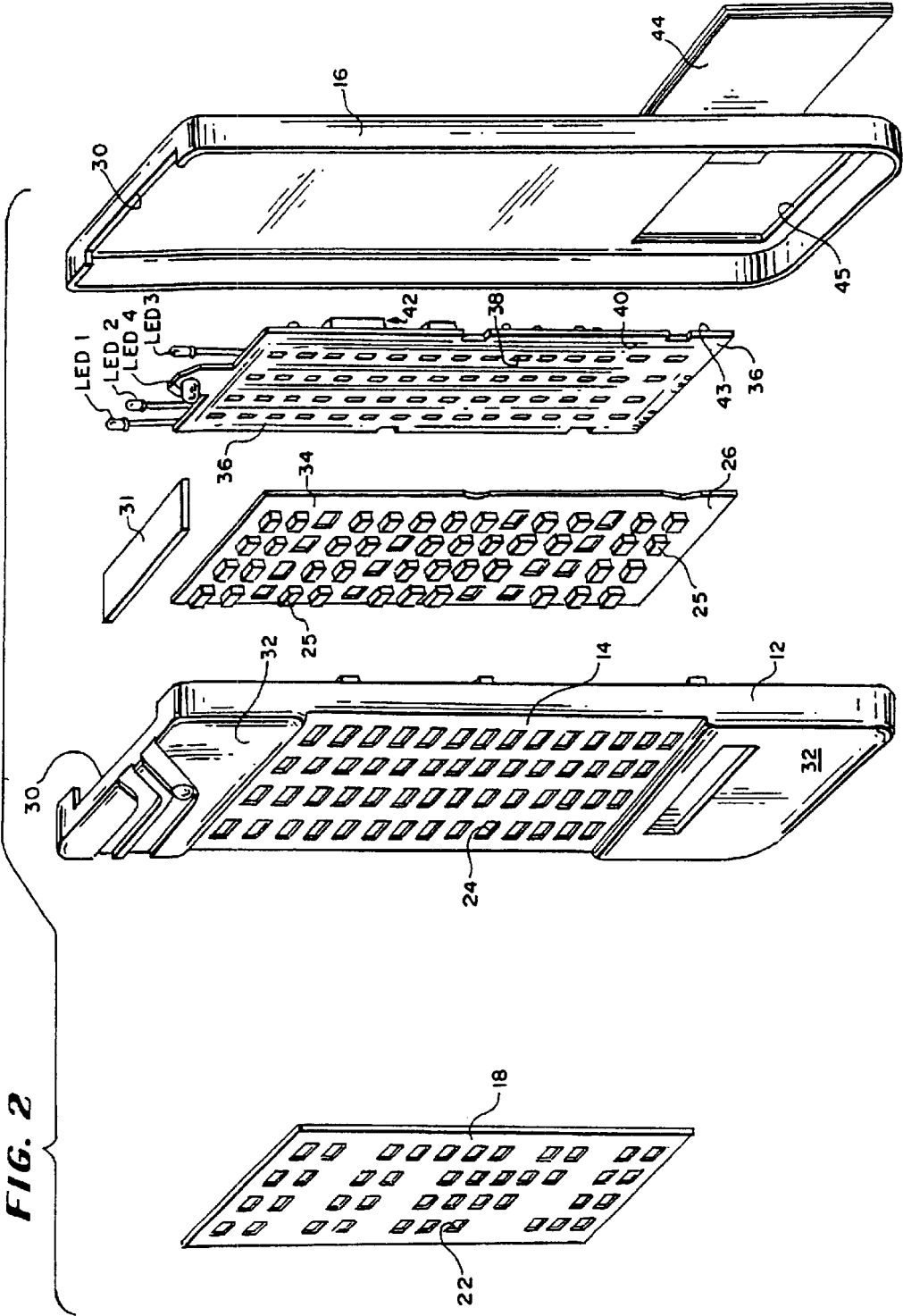


FIG. 3

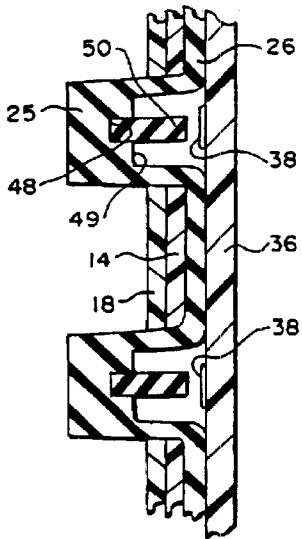


FIG. 4

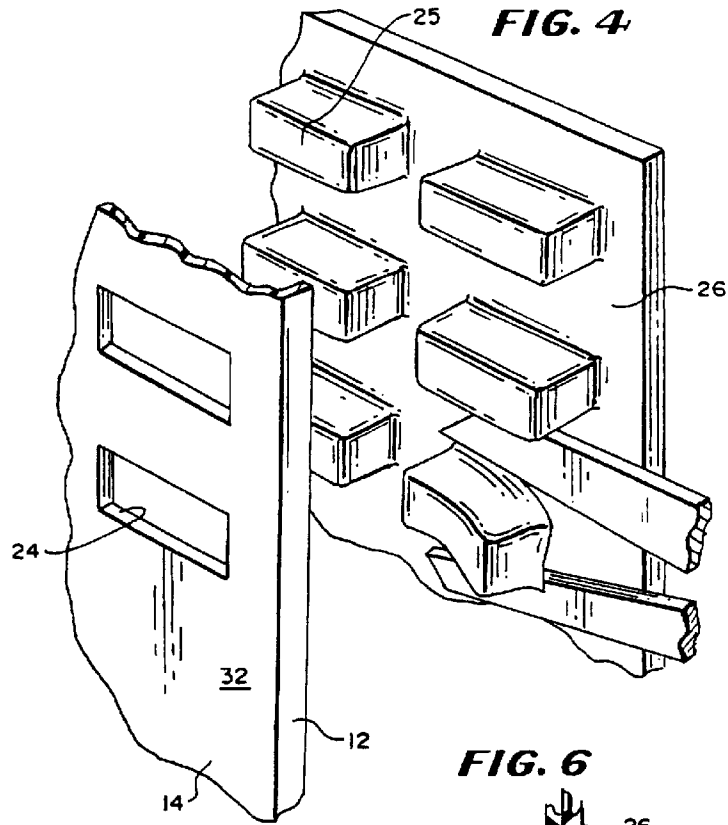


FIG. 5

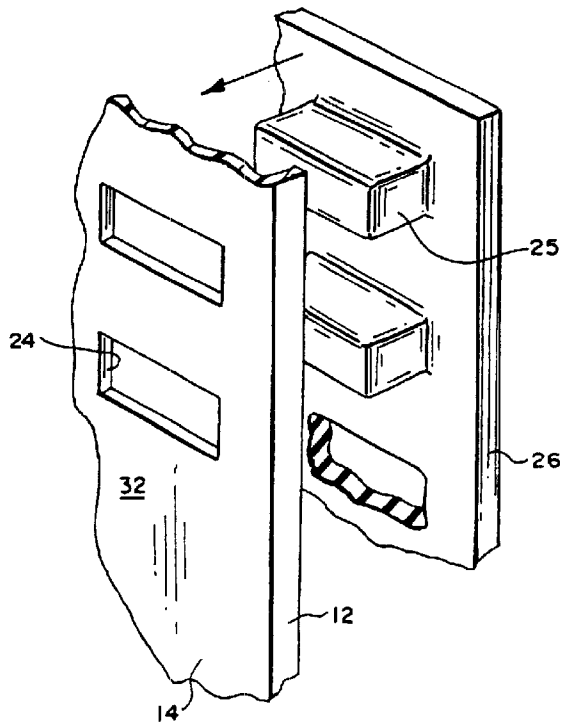
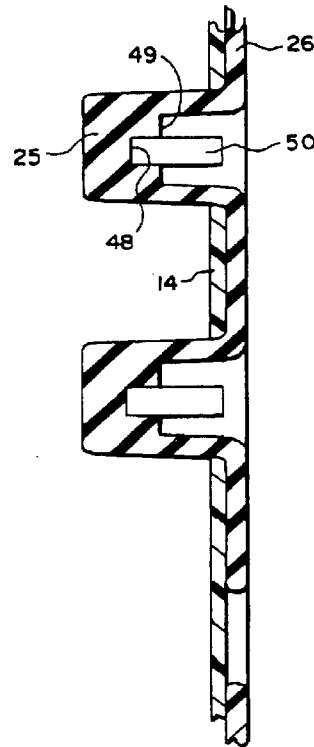


FIG. 6



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