[54] **TOUCH CONTROL LAMP SOCKET INTERIOR**

[76] Inventor: Charles A. Roudeski, 97 Willow Wood Cir., Urbana, Ohio 43078

[21] Appl. No.: 938,827

[22] Filed: Dec. 8, 1986

[51] Int. Cl.⁴ H01J 7/44; H01J 19/28; H01J 29/96; H01J 17/34
[52] U.S. Cl. 315/51; 315/53; 315/72; 315/149; 315/362; 315/DIG.4; 307/116; 307/125; 307/157; 307/308; 200/DIG.1
[58] Field of Search .... 307/116, 125, 157, 308, 307/247 R; 200/DIG. 1; 315/362, 74, 72, DIG. 4, 227 R, 51, 53, 149, 194

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Primary Examiner—David K. Moore
Assistant Examiner—Mark R. Powell
Attorney, Agent, or Firm—Killworth, Gottman, Hagan & Schaeff

[57] **ABSTRACT**

An electric touch control light socket used to convert a lamp to touch-sensitive use which includes a circuit housing and a light bulb insertion socket mounted thereto which together are adapted for installation within a standard light socket shell of a lamp in place of a standard light socket. A touch sensing circuit in the circuit housing has a self-compensating subcircuit to eliminate the effects of slower changing ambient capacitance of the lamp in order to detect touching of the lamp by monitoring rapid changes in lamp capacitance. A spring contact connected to the circuit is attached to the circuit housing and projects along a side thereof for placement between the circuit housing exterior and the interior surface of the light socket shell and in electrical contact with a conductive portion of the light socket shell when the circuit housing and insertion socket are installed within the light socket shell. The spring contact thereby is inaccessible from the exterior of the lamp and is adapted to convey to the circuit an electrical touch-responsive input signal generated when a person touches a conductive exterior portion of the lamp connected to the conductive portion of the light socket shell. The circuit has an operating mode control subcircuit actuable by a manually-operable control knob for selecting the operating mode of the circuit, e.g. ON/OFF, 4-Level, or 5-Level dimmer sequences.
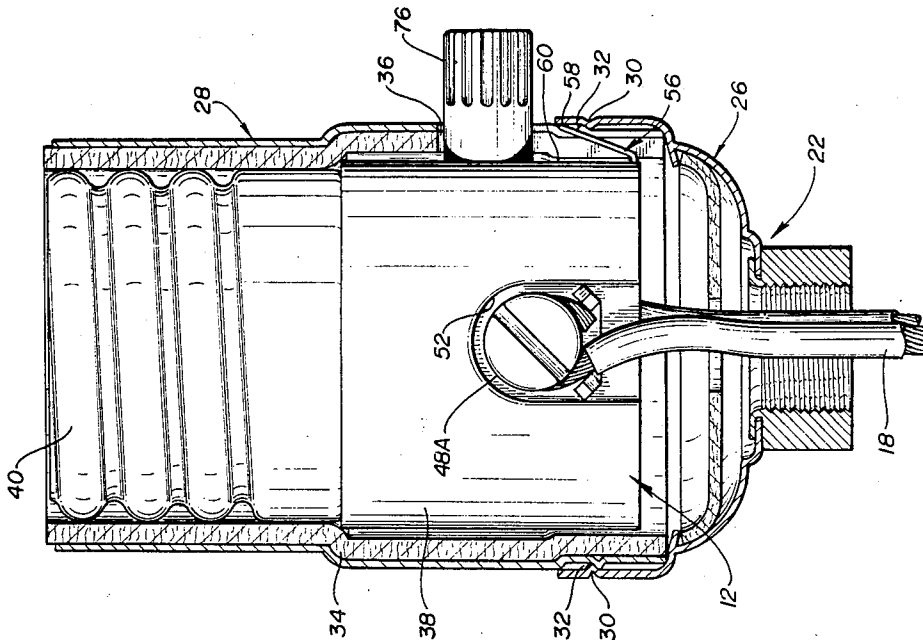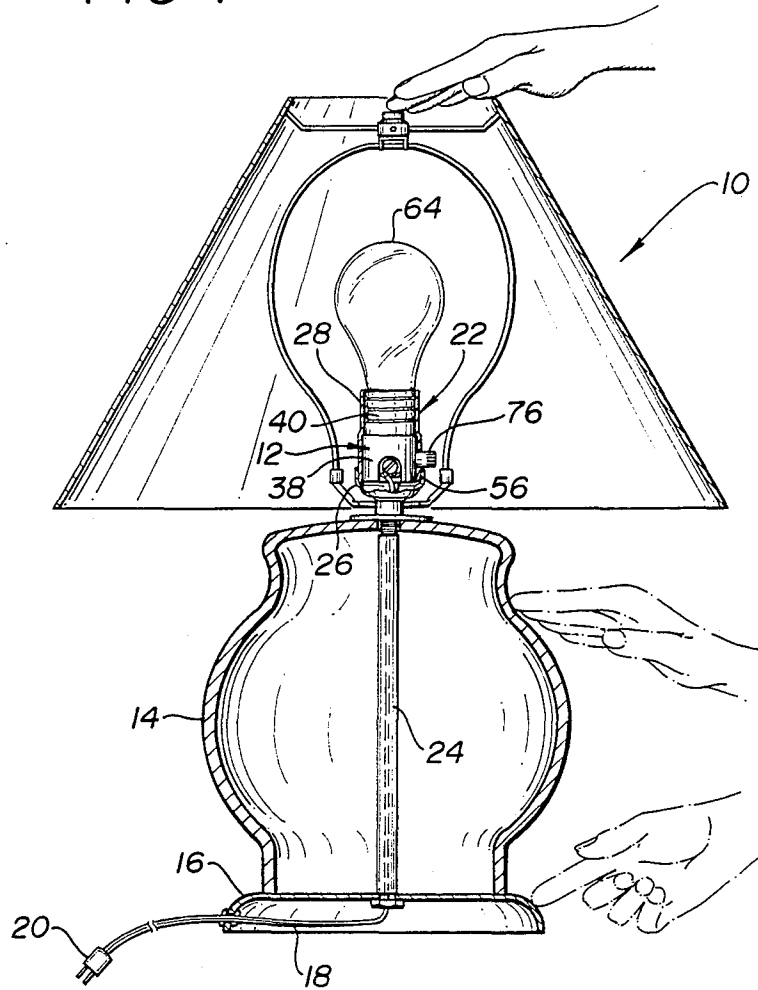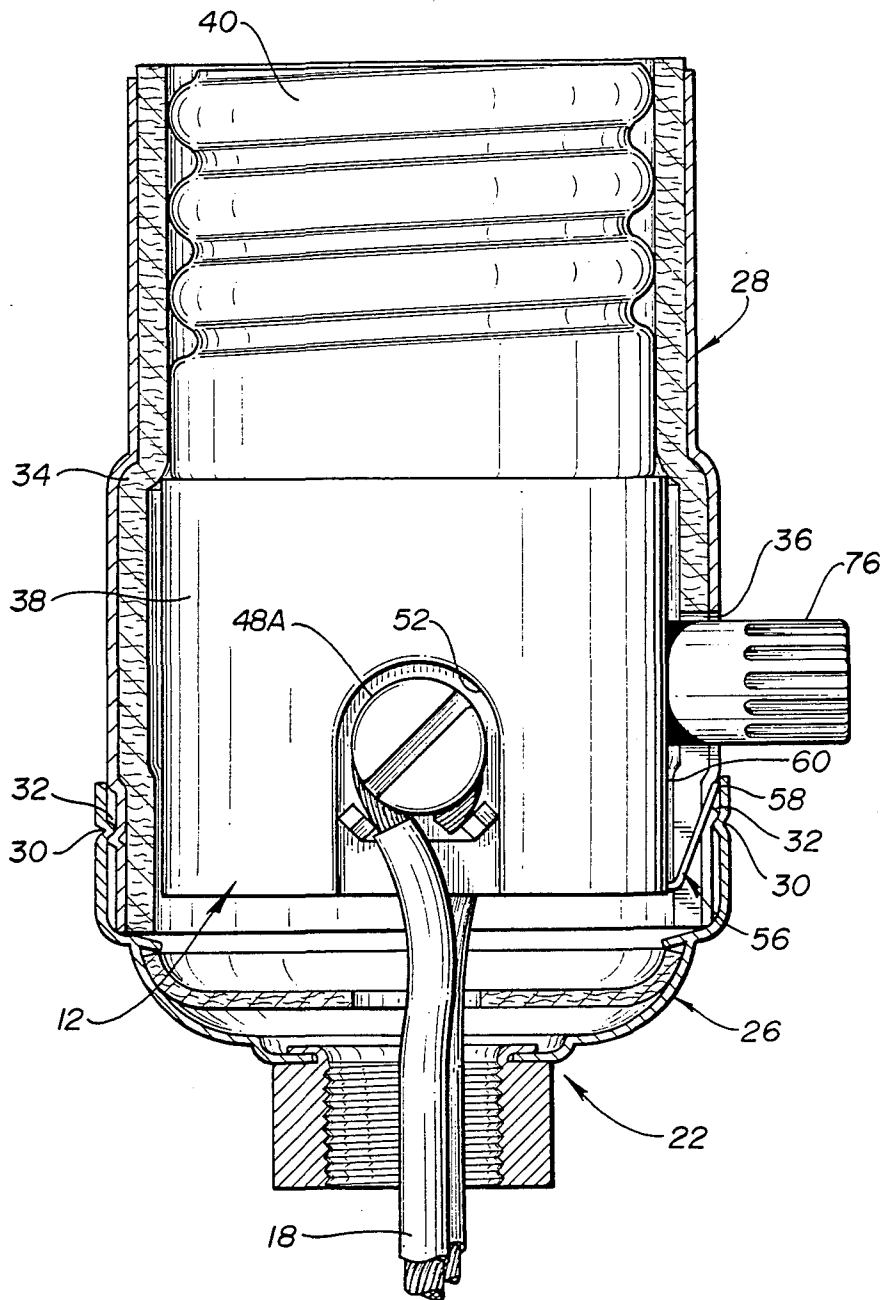
18 Claims, 4 Drawing Sheets

FIG-1

FIG-2

FIG-3

FIG-4

FIG-5

48A

"HOT" —○ 48A

115V
60Hz

TOUCH
INPUT

C_body

72   68   7

R3   C3   D2   R6   C2   R5

D1   70   C1   R4   TOUCH

62   Q2   VR1   C7   C6   C5

64   R9   SENS   CAP   VSS   3   1   5   MODE

LAMP   SYNC   U1   OUT   4   66   SLV   VDD   6   7
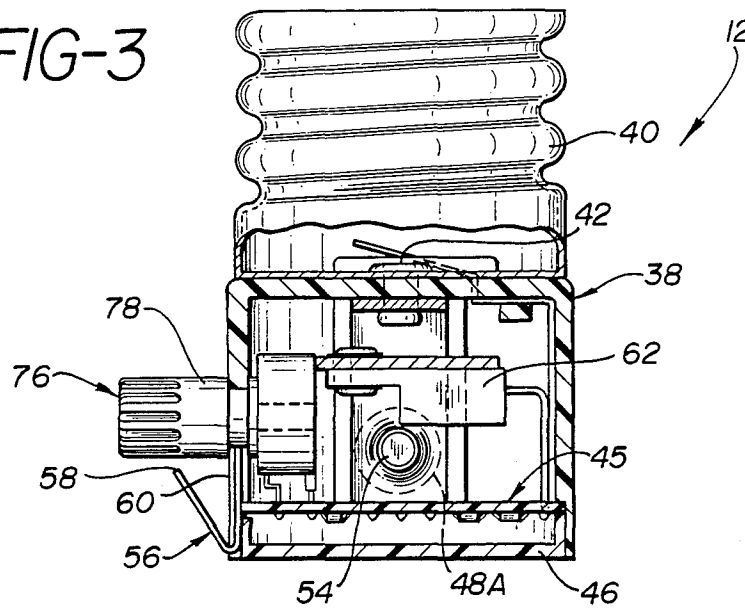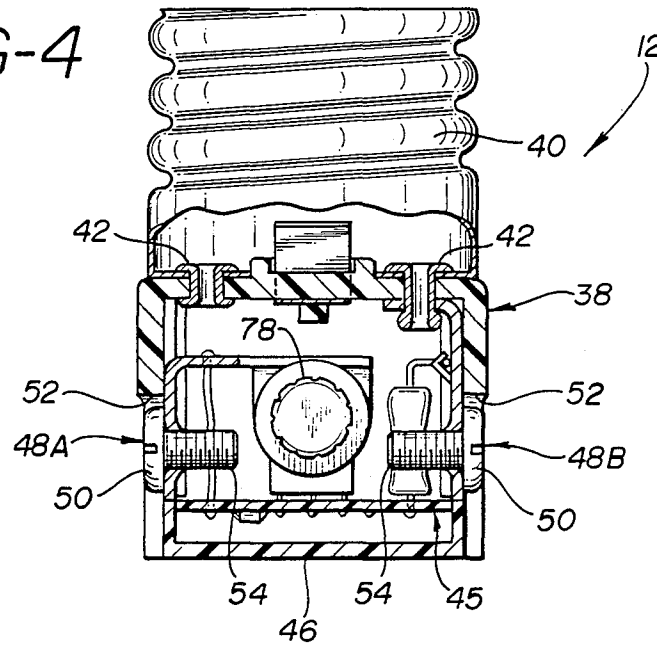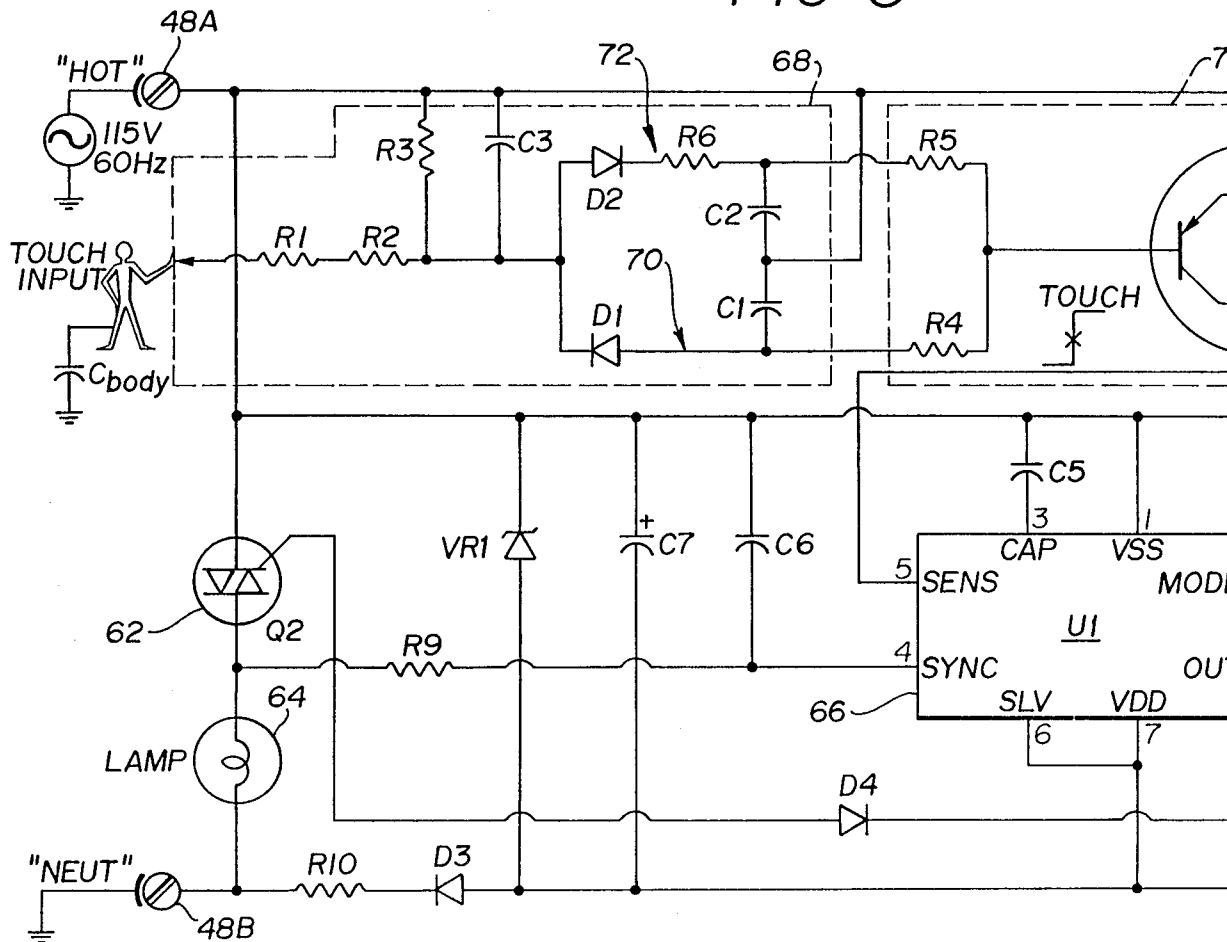
D4

"NEUT" —○ 48B   R10   D3

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