

[54] CRYSTAL BALL DISPLAY SYSTEM
HAVING TOUCH CONTROLLED
LIGHTS

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[51] Int. Cl. G08b 5/36, G08b 5/38

[58] Field of Search 340/280, 330, 331, 366

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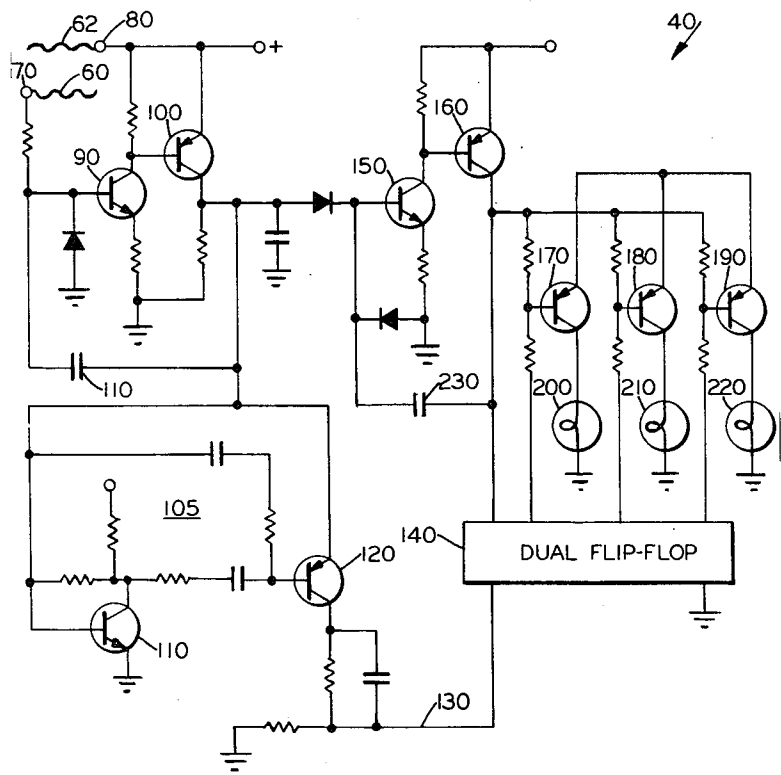
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[57] ABSTRACT

The display system includes a crystal ball having an operating circuit coupled thereto which includes electrode means in operative relation with the crystal ball and adapted to be energized by proximity or contact with the hands of an operator, whereby the associated circuit is energized and provides a desired response including, as an example, sequencing of lights. The circuit includes an amplifier operated by the electrode means connected (1) to means for energizing the lights and (2) to a multivibrator and flip-flop for sequencing the lights. The circuit includes a capacitor for storing charge and holding on one light after the operator removes his hands from the apparatus.

1 Claim, 2 Drawing Figures



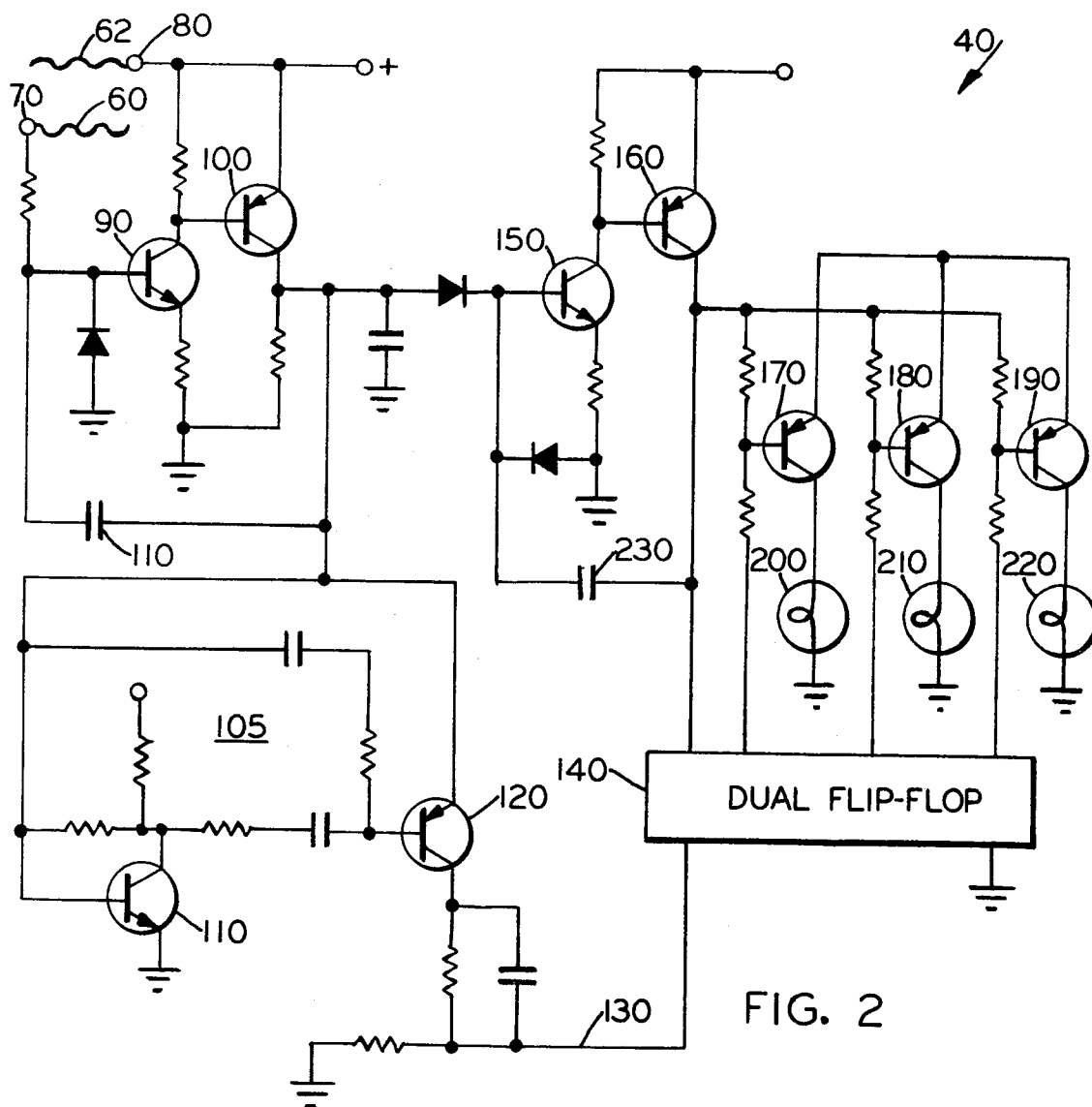
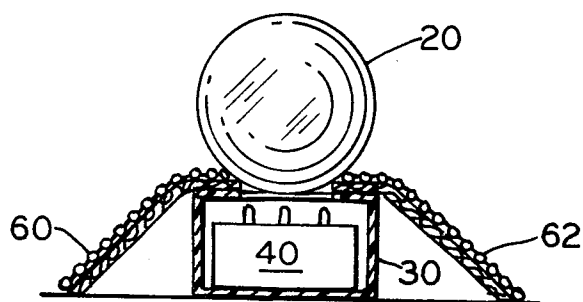


FIG. 1

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CRYSTAL BALL DISPLAY SYSTEM HAVING TOUCH CONTROLLED LIGHTS

BACKGROUND OF THE INVENTION

The apparatus of the invention can be used as a novelty device for adults or as a toy for children, and it can be used in the nature of a question and answer apparatus or the like.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is an elevational view of apparatus embodying the invention; and

FIG. 2 is a schematic representation of a circuit which can be used in practicing the invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Apparatus 10 embodying the invention includes a crystal ball 20 seated on a support 30 which carries the electronic circuit portion 40 of the invention. The support 30 is preferably covered with a decorative cloth 50 or the like which conceals the operating circuit from view and at least two decorative conductive strips or chains 60 and 62.

The circuit of the invention 40, referring to FIG. 2, includes a pair of spaced-apart electrical contact terminals 70 and 80, one of which is secured to metal chain 60 or a group of such chains, and the other of which is secured to metal chain or chains 62. One terminal 80 is connected to a positive power source, and the other is connected to the base of a transistor 90 which is connected in series with transistor 100, as shown, to form a power amplifier. A capacitor 110 is connected between the collector of transistor 100 and the base of transistor 90.

The output of transistor 100 is also connected to a multivibrator 105 made up of two transistors 110 and 120 connected as shown. The output of the multivibrator is coupled by lead 130 to the input of a dual flip-flop.

The output of the second transistor 100 of the first power amplifier is also connected to a second power amplifier including third and fourth series-connected transistors 150 and 160, respectively, the output of the second of which is connected to a plurality of transistors 170, 180, 190 including lamps 200, 210, 220 in their output circuits and having their inputs coupled to the outputs of the flip-flop 140. The output

of transistor 160 is also connected through a capacitor 230 to the input of transistor 150.

In operation of the invention, an operator peers into the crystal ball and simultaneously touches the chains 60 and 62. This turns on the transistors 90 and 100 which then turn on the multivibrator 105.

At the same time, the output of transistor 100 turns on transistors 150 and 160, and this operation energizes the lights 200, 210, 220 and the flip-flop 140. The multivibrator 105 delivers pulses to the flip-flop 140, and this causes the series of lights 200, 210, 220, which may be of different colors, to operate successively in flashing mode. When the operator's hands are removed, the capacitor 230 holds the circuit on for a time and keeps the lights flashing. When transistors 90 and 100 turn off, the multivibrator 105 is disabled and the flip-flop 140 is disabled. The delay in turn-off of transistors 150 and 160 caused by capacitor 230 then keeps one or two lamps on steadily.

Thus, the sequence comprises, first seeing a series of flashing colored lights and then a steady light of a particular color.

The lights are suitable positioned in the support 30 so that their light diffuses through ball 20 to the operator.

What is claimed is:

1. A crystal ball
- a pair of contact chains disposed beneath said crystal ball and adapted to be contacted by the hands of the user to short said chains together,
- a series of electrically operated lights,
- first transistor means coupled to said chains and adapted to be turned on when said chains are shorted together,
- second transistor means coupled to said first transistor means and adapted to be turned on thereby to energize said series of lights,
- a multivibrator also coupled to said first transistor means and adapted to be turned on thereby,
- a flip-flop coupled between said multivibrator and said series of lights and adapted to turn each light on in turn and in series, and
- capacitor means in said circuit which is charged when said first transistor means turns on, said capacitor holding on one light for a period of time when said first power means is turned off, said one light then remaining visible through said crystal ball.

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