

[54] **NOVELTY TYPE LIGHT DEVICE**

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[51] Int. Cl. **F21v 33/00**

[58] Field of Search **240/2 R, 10 R; 84/94 C, 84/95 C, 102, 464**

[56] **References Cited**

UNITED STATES PATENTS

3,720,128 3/1973 Frank..... 84/94

2,963,572 12/1960 Rullo..... 240/10 UX

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[57] **ABSTRACT**

A novelty type light device in combination with a music box for providing a peculiar "infinity" effect. A switching means is provided for alternately illuminating and extinguishing a plurality of miniature incandescent light bulbs, and said means comprises a plurality of contact strips, a particular one of which is disposed for engagement with the path of rotation of a cam wheel mounted on a drive shaft driving a pinned barrel in the music box.

3 Claims, 2 Drawing Figures

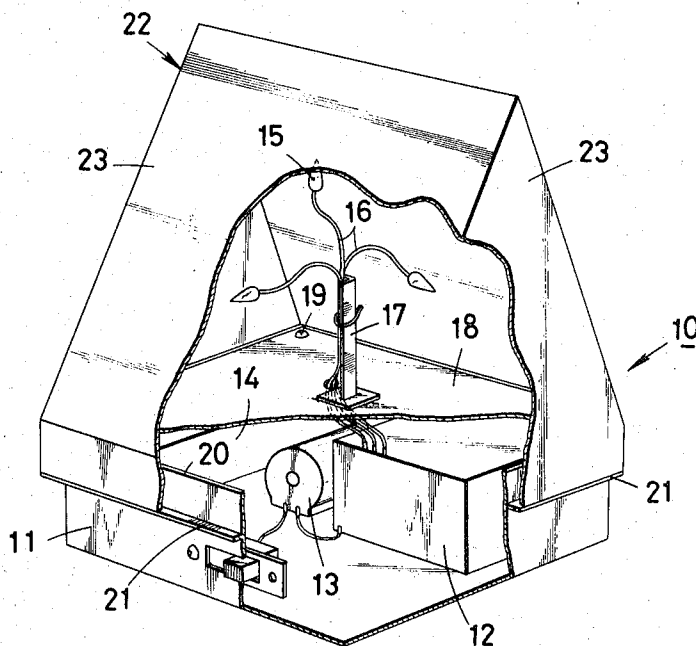


FIG. 1

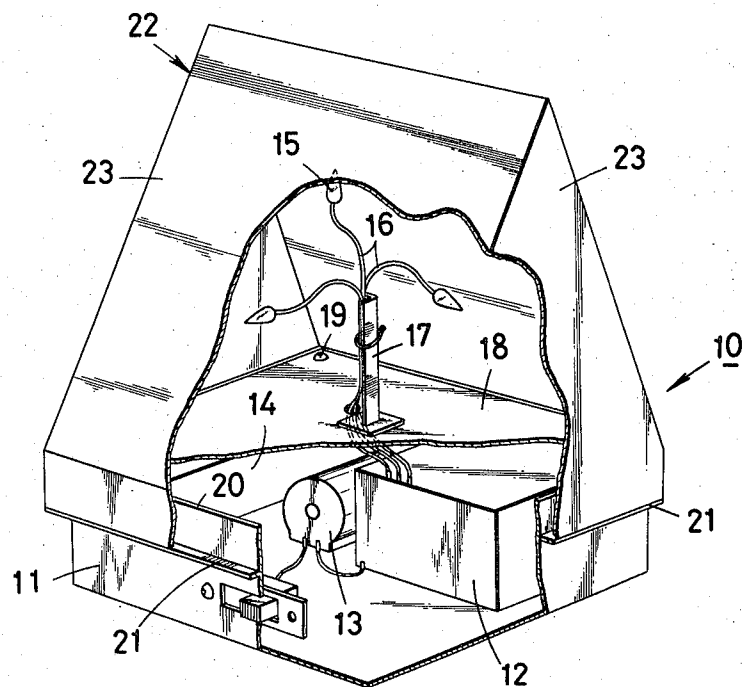


FIG. 2

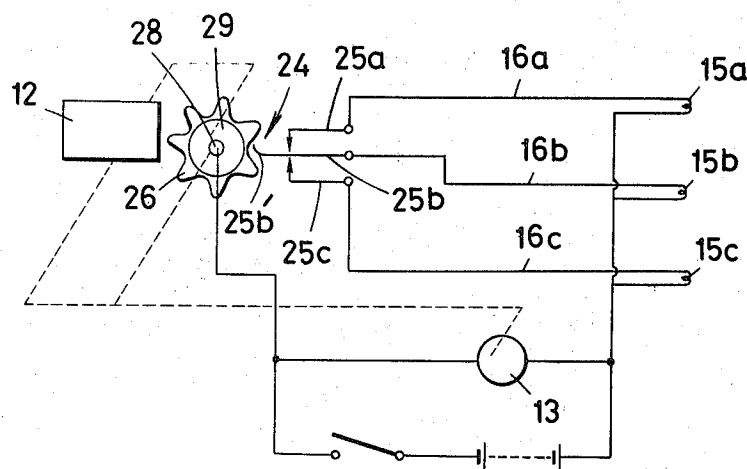
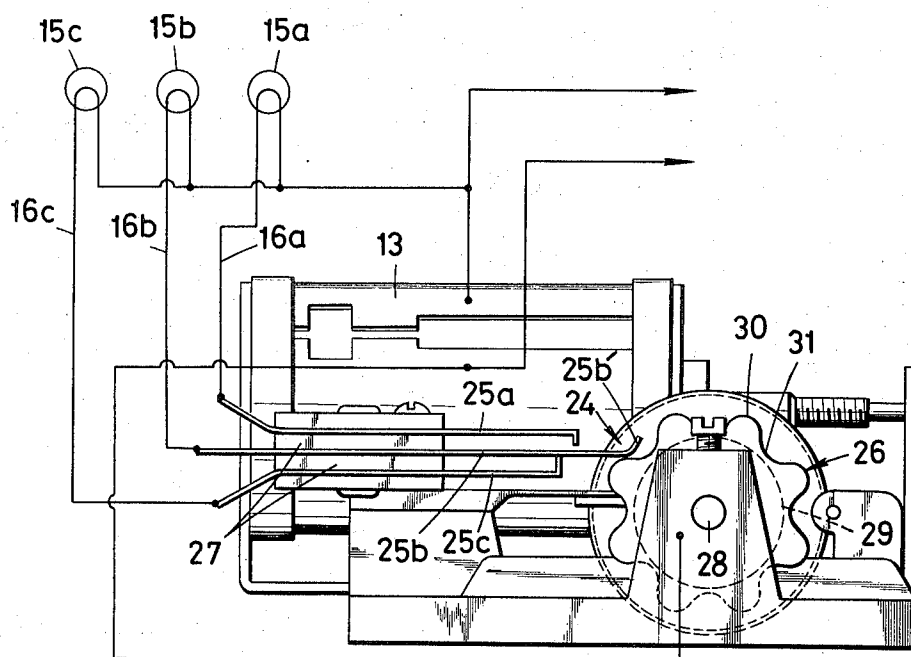


FIG. 3



NOVELTY TYPE LIGHT DEVICE

This invention relates to an ornamental display device of the novelty type wherein a video effect is reconciled with an audio effect.

It is the primary object of the present invention to provide a new ornamental display device which comprises the combination with a music box of an illumination means for providing enhanced "infinity effect."

Another object of the invention is to provide a switching means operatively connected with the said box for alternately illuminating and extinguishing a plurality of light bulbs accommodated in a hollow body.

These objects and other features of the invention will be apparent during the course of the following description taken in conjunction with the accompanying drawings in which:

FIG. 1 is a perspective view, partially broken away, of a display device embodying the invention;

FIG. 2 is an electrical wiring diagram for the incandescent light bulbs employed in accordance with the invention; and

FIG. 3 is a side elevational view, on enlarged scale, of part of the interior of the device of FIG. 1, showing the switching means embodying the invention.

Referring now to the drawings and FIG. 2 in particular, there is shown a combination audio and video display device 10 according to the invention, which device comprises a generally rectangular hollow housing 11 accommodating therein a music box 12 of conventional construction, a motor 13 driving the same, a dry cell compartment 14 supplying power to the motor, and a plurality of miniature incandescent light bulbs electrically connected through lead wires 16 to the motor 13 and a switching means hereinafter described. The incandescent light bulbs 15 are oriented in random directions within the space of a hollow body later described and have their respective lead wires 16 bundled together and carried by an upright support member 17 secured to the covering plate 18 which is removably connected by bolts 19 to the upper marginal edges 20 of the rectangular hollow housing 11. At each of the four sides of the housing 11 is formed an integral support rib 21 for mounting thereon a cubic hollow body generally designated 22. The hollow body 22 is defined by four planar sections or panels 23 which are held together in edge-to-edge relation as by an adhesive so as to form a triangular prism as shown in FIG. 1.

Each of the panels 23 is fabricated of a suitable transparent or translucent plastic or glass and the inner surface thereof is silvered or tinned to provide a so-called "half-mirror" effect. The covering plate 18 is similarly treated. This arrangement is known in the art and disclosed for example by U.S. Pat. No. 3,610,918, wherein multiple reflections from the panels of the hollow body 22 are given of the light source to provide an "infinity" effect to the viewer.

A desired number of light bulbs 15, three bulbs 15a, 15b and 15c as in the illustrated embodiment, are alternately illuminated and extinguished thereby to create the illusion of an infinite number of light sources when looking into the hollow body 22 through any one of the four side panels 23. The alternate illuminating and extinguishing of the miniature incandescent light bulbs 15 is effected by a switching means 24 which comprises a plurality of resilient contact strips 25a, 25b and 25c and a cam wheel 26 operatively associated therewith. The contact strips functioning as switching elements are

electrically insulated relative to each other by interposed insulation pieces 27 and connected at one ends to the light bulbs 15a, 15b and 15c through the respective lead wires 16a, 16b and 16c. The cam wheel 26 is mounted on and electrically connected to the drive shaft 28 of the pinned barrel 29 of the music box 12. The cam wheel 26 is provided around its periphery with alternate ridges 30 and grooves 31 of a wavy form as seen in FIG. 3. A particular one of the contact strips 25a, 25b and 25c is selected for engagement with the cam wheel 26, for which purpose the particular strip 25c in the illustrated embodiment is elongated so as to extend into the path of rotation of the cam wheel 26. The elongated free end 25b' thus disposed in the rotation path of the cam wheel 26 engages with rounded ridges 30 and disengages therefrom in succession as the cam rotates with the shaft 28 of the music box 12 in a clockwise direction as viewed in FIG. 2.

As shown in FIGS. 2 and 3, the contact strips 25b and 25c are normally held in contact with each other. Hence, the cycle of switching operation commences with a first phase wherein the strips 25b and 25c close the illumination circuit for an instantaneous length of time during which the operative strip 25b engages one of the ridges 30, whereby the corresponding light bulbs 15b and 15c are illuminated. In the second phase of the cycle, the operative contact strip 25b is moved upwardly apart from the strip 25c as it ascends along one side of the contour of the ridge 30 towards the apex thereof, with rotation of the cam wheel 26 at which moment the bulb 25b corresponding to the operative strip 25b alone is illuminated. This is followed by the third phase of the cycle wherein the operative strip 25b continues to ascend along the ridge 30 and sides over the apex thereof so that it comes into contact with the strip 25a, when the circuit is closed to illuminate the bulbs 25a and 25b at the same time.

In the final or fourth phase of the cycle of switching operation, the operative strip 25b begins to descend along the opposite side of the contour of the ridge 30 and enters into the groove or recess 31 between adjacent ridges when the circuit is held open instantaneously to extinguish all of the three light bulbs 25a, 25b and 25c. The operative strip 25b thereafter begins to ascend along the contour of ensuing ridge 30, thus repeating the switching cycle as better understood from the wiring diagram of FIG. 3.

What is claimed is:

1. A combination video and audio novelty display device which comprises a generally rectangular housing, a cubic hollow body defined by a plurality of planar panels and mounted on said housing, a music box of conventional construction within said housing including a pinned barrel and a drive shaft therefor, said housing further accommodating therein a motor driving said shaft, a power supply source and a plurality of miniature incandescent light bulbs connected via lead wires to said power source, and a switching means comprising a plurality of resilient contact strips and a cam wheel operatively associated with a particular one of said contact strips and provided around its periphery with alternate ridges and grooves, said cam wheel being mounted on said shaft for rotation therewith, said particular contact strip engageable with the path of rotation of said cam wheel that is, alternately with said ridges and grooves so that it closes and opens the illumination circuit to selectively illuminate said plurality of

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light bulbs, said plurality of planar pannels being silvered and held together in edge-to-edge relation so as to form a triangular prism.

2. The device as claimed in claim 1 where the number of said contact strips corresponds to the number of said light bulbs.

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3. The device as claimed in claim 1 wherein said ridges each have a rounded contour along which said particular contact strip moves with the rotation of said cam wheel.

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