The present invention is directed to the provision of decorative displays, more particularly to illuminated displays with changing color or light patterns serving to attract the attention of the viewer.

A variety of situations exist in which it is desirable to provide changing light and color patterns to attract the desired viewer's attention. Thus in connection with advertising or the like commercial presentations, it is found that the viewer's attention may be more readily drawn to the advertising copy or indicia by illuminating the advertising material in a decorative and colorful way to set it off from the surrounding environment. In addition to commercial display, other situations in which it is desirable to provide varying light and color patterns. Thus in primarily decorative installations such as in connection with Christmas trees or other holiday trimmings, there is a widespread use of varicolored lights.

In providing a varicolored illuminated display it is necessary to be able to support in a simple efficient manner a plurality of light sources such as light bulbs or the like. It is further desirable to be able to control the energization of the light sources to provide for desired changes in the intensity or color of the illumination provided.

It is with the foregoing noted considerations and desiderata in mind that the present means, including both method and apparatus, have been evolved, means implementing the provision of an illuminated decorative display in which the color patterns and lighting may be continuously changed to provide a dynamic ever-varying pattern of changing light thereby increasing the attractiveness or attention getting quality of the display.

It is accordingly among the objects of this invention to provide a decorative display with continuously changing light patterns.

Another object of the invention is to provide a display with changing color patterns.

A further object of the invention is to provide means for supporting a plurality of light bulbs as a unit to implement their use in an illuminated display.

It is also an object to provide an illuminated display unit, adapted for use with a variety of like units to obtain a changing light and color effect.

A further object is to provide an illuminated display unit adapted to enhance the attractiveness of a commercial presentation.

Another object is to provide an illuminated display unit suitable for use in a decorative arrangement as on Christmas trees or as part of other holiday decorations.

These and other objects of the invention which will become hereafter apparent are achieved by forming a display unit with a base having recesses therein for the receipt of a plurality of light bulbs. It is preferred that these light bulbs be of different colors. A switch preferably of the thermal type is arranged in a circuit with at least one of the bulbs, and the switch cyclically activated to make and break the circuit to its associated bulb.

The base and the bulbs mounted thereon are enclosed in a light transmitting housing which may be of any desired shape. Where the display unit is employed as a Christmas tree decoration, a snow ball effect may be obtained by forming the housing of white polystyrene of a spherical shape hollowed out to accommodate the bulbs. Where the display unit is employed in connection with a commercial presentation, various indicia may be applied to the cover or housing. As a result of the periodic de-energization of one or more of the light bulbs on the base, the color and intensity of the light transmitted by the cover or housing is periodically changed thus providing a dynamic continuously changing display.

The specific details of the invention, and their mode of functioning will be made manifest, and particularly pointed out in clear, concise and exact terms in conjunction with the accompanying drawings in which:

FIG. 1 is an exploded perspective view of a display unit formed in accordance with the instant invention and provided with a spherical cover member; and

FIG. 2 is a cross-sectional view through a display unit of the type shown in FIG. 1 with a modified form of cover housing shown partly in perspective; and

FIG. 3 is a schematic wiring diagram of an electrical circuit showing how the bulbs of a plurality of display units of the type shown in FIGS. 1 and 2 are interconnected; and

FIG. 4 is a cross-sectional view of another embodiment of the display unit; and

FIG. 5 is a perspective view showing how the display units may be employed in connection with a commercial presentation; and

FIG. 6 is a perspective view showing how the display units may be employed as a Christmas decoration.

Referring now more particularly to the drawings, like numerals in the various figures will be employed to designate like parts. As best seen in FIGS. 1 and 2, the display unit 10 comprises a base 12 formed of two substantially symmetrical halves 13 and 14.

A channel-shaped passage 15 is formed to extend through the base halves 13 and 14. At the lower end thereof as viewed in the drawings, Passage 15 is dimensioned to permit the passage therethrough of a multiwire conductor C as best seen in FIGS. 1 and 2. In one wall of passage 15 a plurality of inward projections 16 are formed, one for each wire of the conductor C. Thus in the illustrated embodiment showing a three wire conductor, three projections 16 are provided (labelled 16', 16'', and 16''' on FIG. 2). These projections extend into the path of the conductor so that each wire of the conductor is intercepted by a projection 16.

A bulb receiving recess 19 is formed in the base halves 13 and 14, said recess being dimensioned to receive and retain the base of the electric bulbs B employed in the display. In the illustrated embodiment of the invention three bulbs are employed, and accordingly three recesses (labelled 19', 19'' and 19''' in FIG. 2) are provided. As
shown it is preferred that the upper wall of the base be stepped between each bulb, thereby implementing the facility with which the bulbs may be manually gripped for insertion and removal from recesses 19.

Extending between a wire of conductor C, which is interrupted by projection 16" beneath the recess 19", is a first base contact strip 22 bent over as viewed in FIGS. 1 and 2 so that the base terminal of the bulb will make contact with this first contact strip 22 when the bulb is inserted in recess 19". A socket contact strip 23 extends from the wire contacted by the base contact strip 22, up along the side wall of recess 19" in a position to be contacted by the lateral socket terminal of the bulb in recess 19". Contact strip 22 is formed with projection 24 at the lower end. Projection 24 extends a distance such as to pierce the conventional insulation of conductor C to effect an electrical connection with a wire of the conductor C.

A single set of contact strips 22 and 23 has been described; however, it will be understood that a set of like contact strips is provided for each bulb mounted on the base, with the contact strips extending between one of the wires of conductor C and the terminals of the bulb. Projections 16 which extend into the path of conductor C serve to provide a spacing between the contact strips 22 and 23 and also interrupt the wire with which said contacts are spaced, thereby providing a series electrical connection between the bulbs and the wire to which they are connected in the illustrated embodiment.

It will however be apparent to those skilled in the art that the connectors may be arranged to provide a parallel electrical connection between the bulbs and the conductor wire.

The base halves 13 and 14 are maintained in assembled relationship by means of fastening members 26 illustratively shown as U-shaped spring clips arranged in grooves 27 formed in the outer wall of the base halves.

The contact strip 22 with its associated bulb is arranged in a light transmitting cover housing 30 which is preferably formed of a translucent material subject to ready shaping to desired configuration. The housing 30 is formed with an interior recess dimensioned to accommodate the bulbs entirely within the housing, and preferably encompassing the base so as to enclose same.

In FIG. 1 a spherically shaped configuration is provided for housing 30 which is formed of a white styrofoam having a snow ball appearance.

In FIG. 2, the housing is shown as of a rectilinear configuration and is provided with indicia 5.

Another arrangement embodying the instant inventive concept is shown in FIG. 4 wherein the display device 110 is shown as comprising a base 126 having sockets 127 and 128 to accommodate bulbs above the base, while socket 131 accommodates a bulb beneath the base 126.

The housing is formed in two parts with an upper part 133 encompassing the bulbs in sockets 127 and 128, while a lower housing part 134 encompasses the bulb in lower socket 131. Spring clips 135 extend between the housing parts 133 and 134 to maintain them in operative position with respect to the base 126.

As is apparent from FIG. 4, when the housing halves are formed of hollow spheroids of white styroform a snow man shape may be obtained. Depending on the shape employed a variety of other decorative effects may be produced. The clips 135 when the snow man effect is desired may be formed of pipe cleaners. The bulb sockets 126, 128, and 131 may be electrically coupled either in series or parallel, though as will become hereafter apparent a parallel connection between the bulbs is preferred thereby permitting one of the bulbs on the base to be deenergized without effecting the other bulbs to obtain a desired change of color or light.

Where a single display unit 10, or 110 is employed, one or more of the bulbs on the base is associated with a switch in its circuit to permit periodic or cyclical deenergization of at least one of the bulbs to thereby provide for a change in intensity of the light transmitted through the cover housing 30. Where desired a switching arrangement may be provided in a variety of ways. As shown, it may most readily be obtained by employing a so-called flasher bulb having a thermally responsive element 150 in series with the filament 151, so that as the filament heats up the heat thereof is transferred to element 150 which distorts to break the circuit to the filament. A plurality of display units 10 or 110 may be arranged in a circuit as shown in FIG. 3, with one of the bulbs of one base arranged in series with one of the bulbs of another base, and a second of the bulbs of one base in series with a second bulb on another base. It will be understood that a switch is arranged in each of the bulb circuits. This may be accomplished by employing only flasher bulbs, or preferably a single flasher bulb in each circuit.

As shown in the schematic circuit 1 plug 163 suitable for coupling to a conventional receptacle has one of its leads 165 connected to common connection 168 from which lines 171, 172, and 173 extend in parallel. Each of lines 171, 172, and 173 has series connected bulbs arranged therein. The flasher bulbs are selected to flash at different time intervals so that at least one of the circuits is always illuminated. They, like the other bulbs, are preferably of different colors, the primary colors red, blue and green being preferred.

Operation

In use, the display unit 10 may be employed singly in which case the bulbs provided are of the flasher type, and if a colored display is desired, the bulbs are of different colors. After appropriate electrical connections are made to the display unit one or more of the bulbs will always be illuminated. As any one of the switches or thermal elements 150 is moved to a circuit breaking position the bulb goes off with a resulting change in the light intensity and color of the display unit.

Where a commercial presentation is formed by the display units as shown in FIG. 5 the housing is shaped as desired and desired indicia are formed on the surface of the housing.

Where a decorative effect is desired the ball shaped housing may be employed as shown in FIG. 6.

It is thus seen that a simple illuminated display unit has been provided serving to provide a continuously changing light and color pattern which may be incorporated either with commercial presentations or in connection with holiday or for the like decorations to increase the attractiveness thereof to the desired viewer.

The above disclosure has been given by way of illustration and elucidation and not by way of limitation, and it is desired to protect all embodiments of the here-described inventive concept within the scope of the appended claims.

What is claimed is:

1. An illuminated decorative unit comprising a substantially flat base, at least one light socket mounted in said base and extending upwardly therefrom, at least one light socket mounted in said base and extending downwardly therefrom, a hollow substantially transparent spheroid open at one end and mounted on one side of said base, a second hollow substantially transparent spheroid open at one end and mounted on the opposite side of said base, differently colored light bulbs in said sockets extending into their respective spheroids, at least one of said bulbs being a flasher having a thermal responsive element, a plurality of spring clips bridging said base, the ends of said clips being anchored in the faces of said spheroids, the points of anchorage being adjacent to said base and at the inward curvature of said spheroids.

2. A decorative unit, in accordance with claim 1 in which said light bulbs are coupled in parallel,
3. A decorative unit, in accordance with claim 2, in which means are provided for periodically deenergizing each of said bulbs.

References Cited by the Examiner

<table>
<thead>
<tr>
<th>UNITED STATES PATENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,105,653 8/1914 Hanggi 40—131 X</td>
</tr>
<tr>
<td>1,283,751 11/1918 Hay 40—132 X</td>
</tr>
<tr>
<td>1,833,295 11/1931 McCutchen 339—162</td>
</tr>
<tr>
<td>2,229,403 1/1941 Benander 240—10 X</td>
</tr>
<tr>
<td>2,620,374 12/1952 Benander 240—10</td>
</tr>
<tr>
<td>2,620,376 12/1952 Benander 240—10 X</td>
</tr>
<tr>
<td>2,644,883 7/1953 Schoenherr 240—10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FOREIGN PATENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,764,751 9/1956 Gnadke 40—63 X</td>
</tr>
<tr>
<td>2,901,667 8/1959 Kotsch 40—130 X</td>
</tr>
<tr>
<td>2,963,572 12/1960 Rullo 240—10</td>
</tr>
<tr>
<td>3,003,056 10/1961 Resch 240—10</td>
</tr>
<tr>
<td>3,014,124 12/1961 Yakem 240—10</td>
</tr>
<tr>
<td>460,648 1937 Great Britain</td>
</tr>
</tbody>
</table>

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