

[54] ILLUMINATED CANDLE STRUCTURE 3,749,904 7/1973 Graff..... 240/2 R
 3,753,643 8/1973 Golden..... 431/288
 [76] Inventor: Frits J. Andeweg, 7737 Royal Ln., 3,761,702 9/1973 Andeweg..... 240/2 R
 Dallas, Tex. 75230 3,762,857 10/1973 Andeweg..... 431/289

[22] Filed: Sept. 24, 1973

FOREIGN PATENTS OR APPLICATIONS

[21] Appl. No.: 400,203

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Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 212,107, Dec. 27, 1971, Pat. No. 3,761,702.

Primary Examiner—Carroll B. Dority, Jr.
 Attorney, Agent, or Firm—Richards, Harris & Medlock

[52] U.S. Cl. 431/125; 431/289; 431/291; 240/10 B; 240/13

[51] Int. Cl. F23q 2/32

[58] Field of Search 240/2 R, 10 B, 10.64, 13; 431/125, 126, 288, 289, 291

[57] ABSTRACT

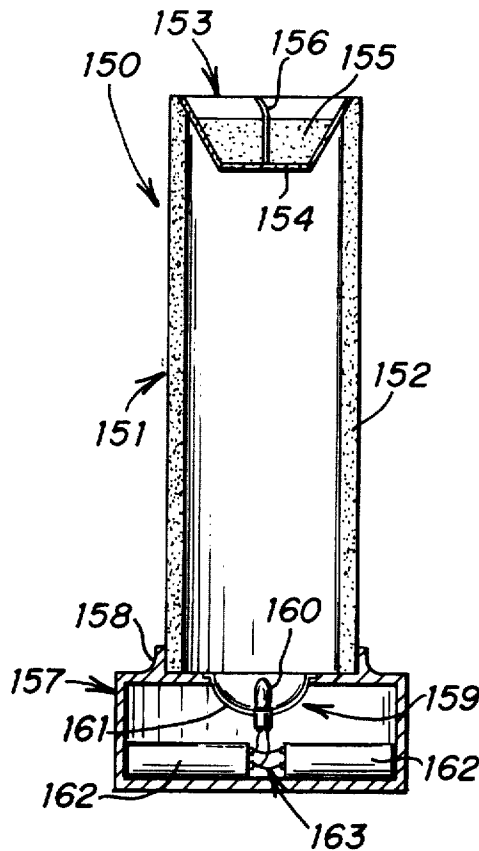
An illuminated candle structure includes a translucent body portion formed from wax or plastic and apparatus for illuminating the translucent body portion to provide an esthetically pleasing appearance. In certain embodiments the candle structure further includes a burnable portion which may comprise either part of the translucent body portion or a votive. The translucent portion may also include one or more hollow portions and may be provided with fiber optics in order to vary and enhance the illumination effect.

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14 Claims, 26 Drawing Figures



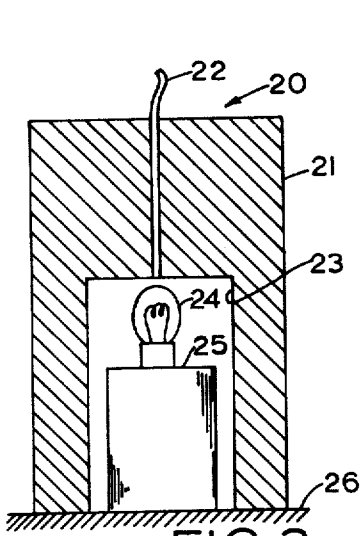


FIG. 3.

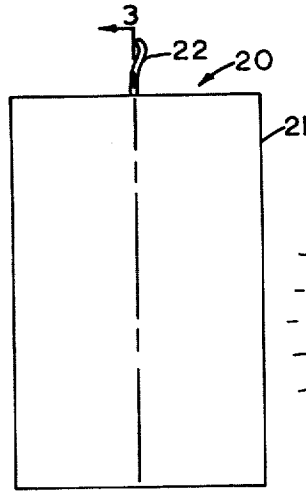


FIG. 1.

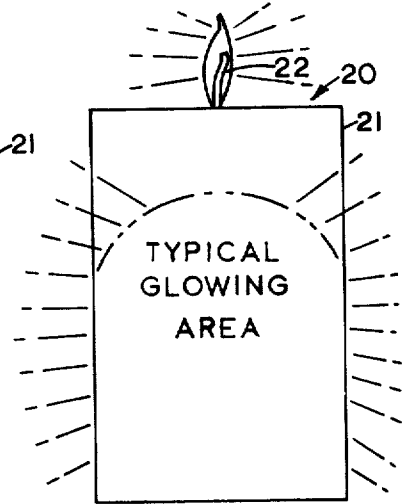


FIG. 2.

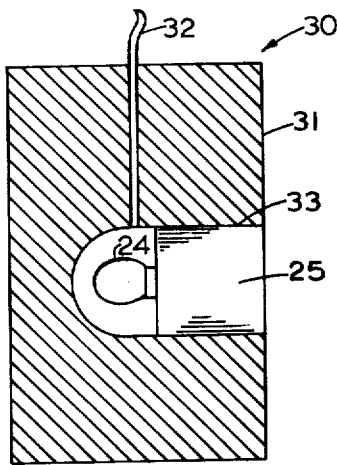


FIG. 5.

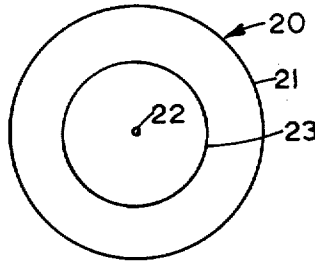


FIG. 4.

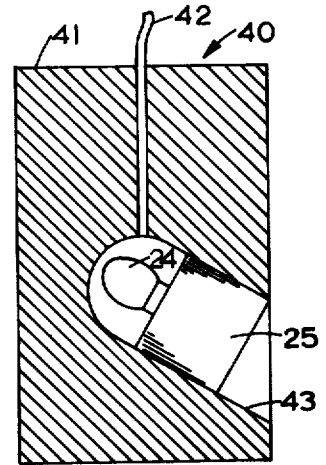


FIG. 6.

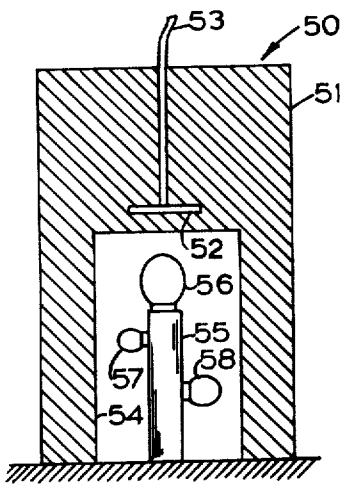


FIG. 7.

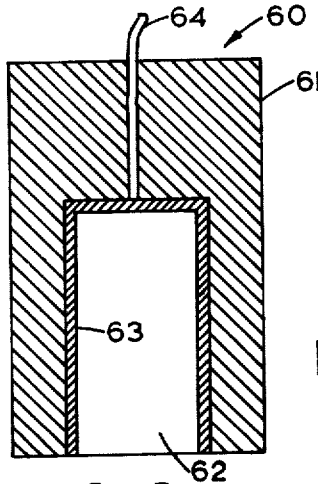


FIG. 8.

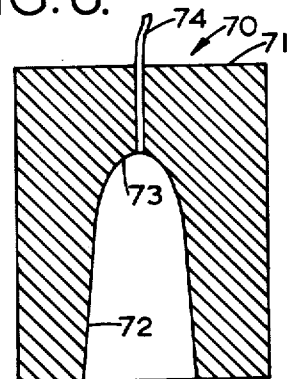
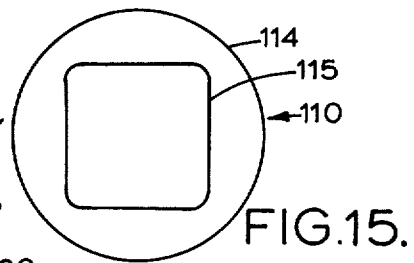
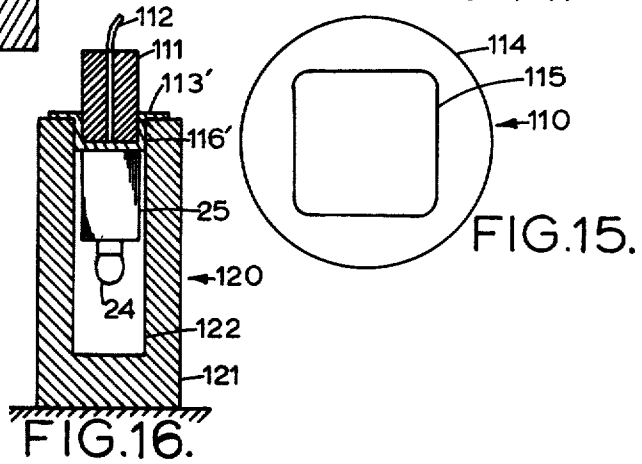
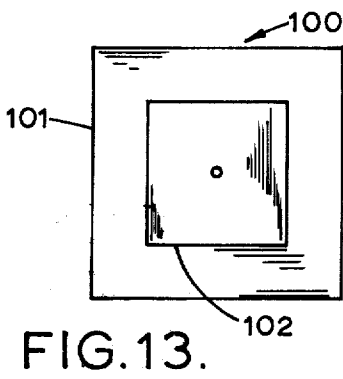
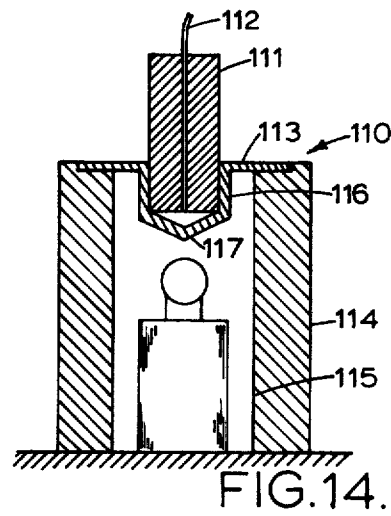
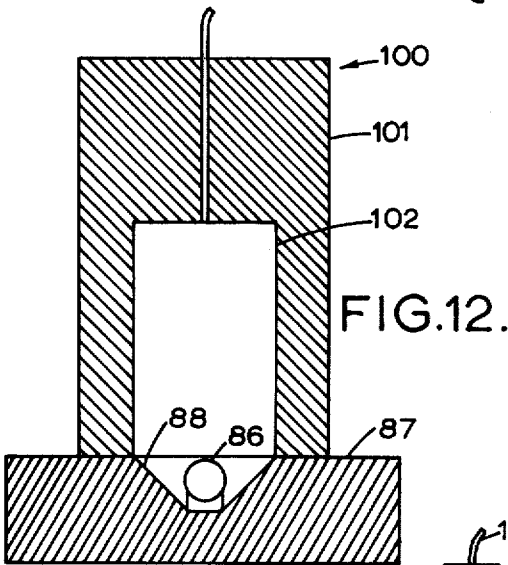
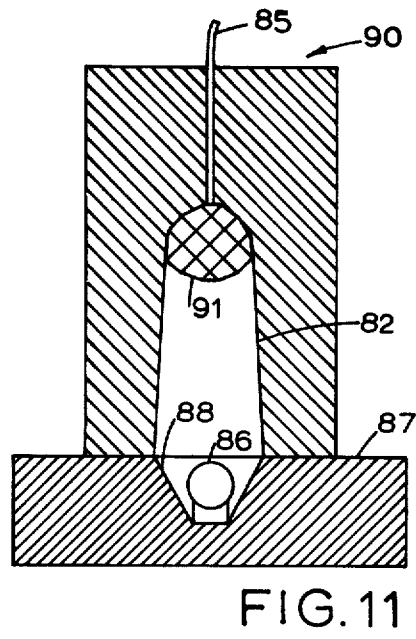
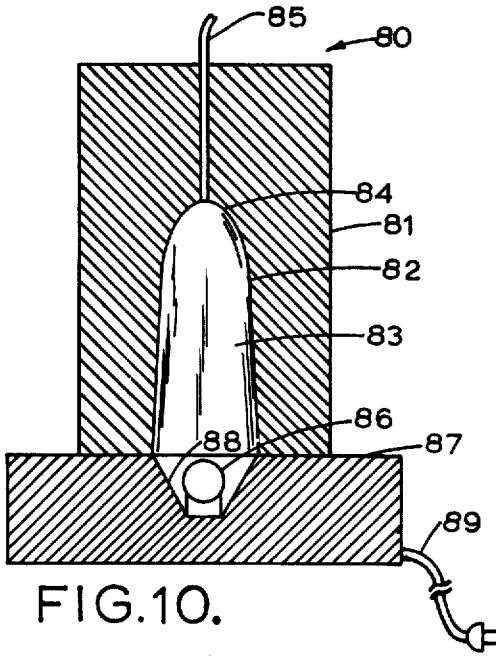


FIG. 9.



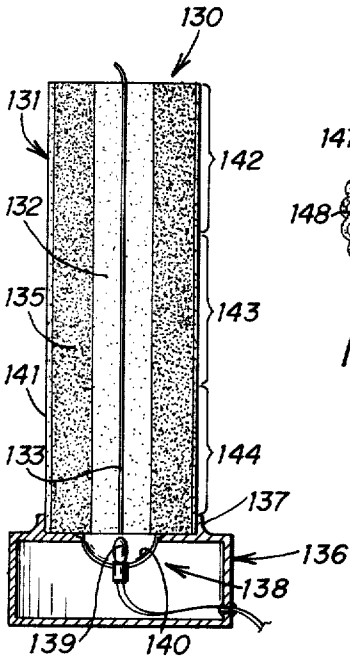


FIG. 17

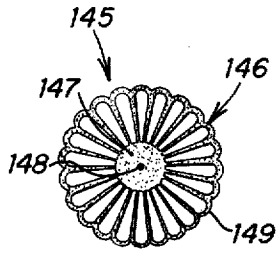


FIG. 18

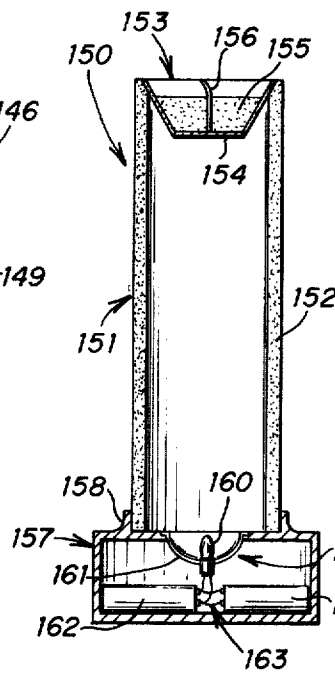


FIG. 19

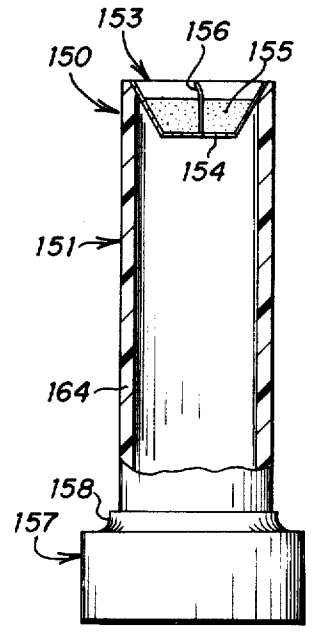


FIG. 20

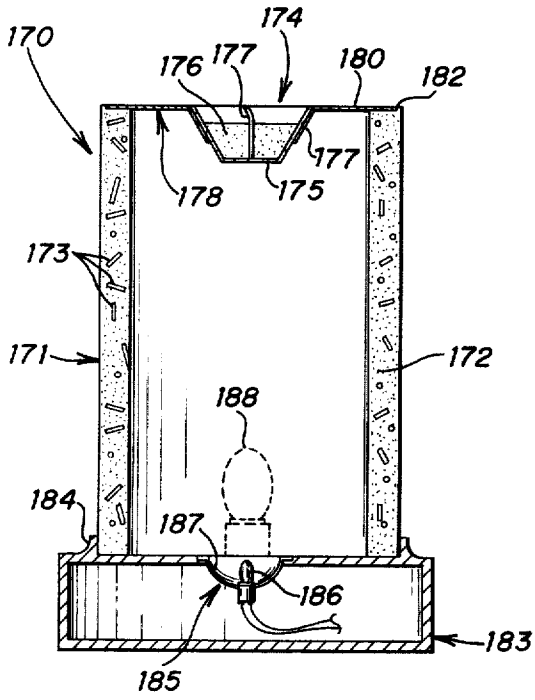


FIG. 21

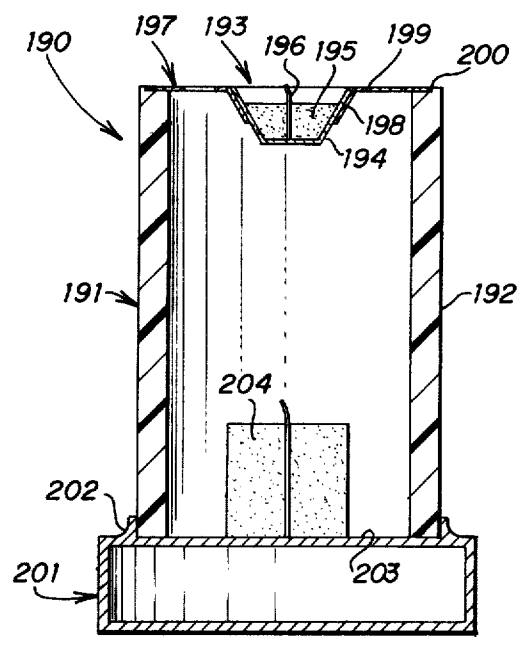


FIG. 22

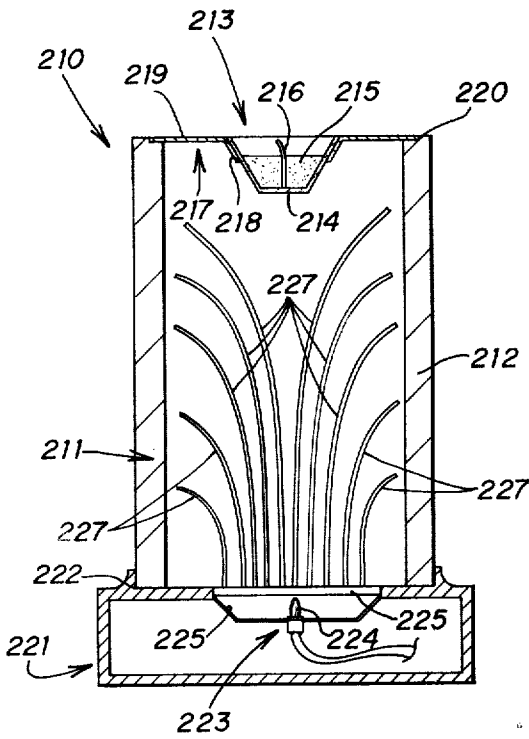


FIG. 23

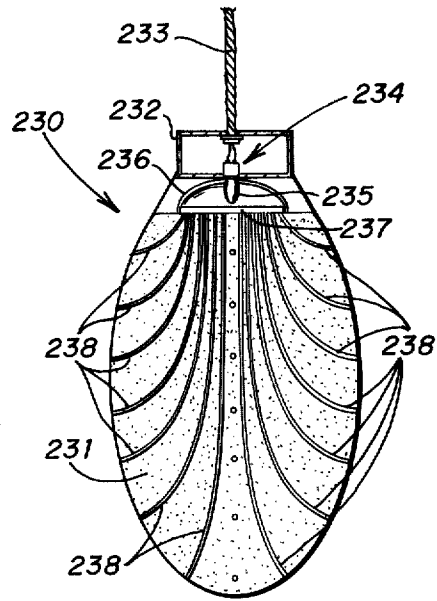


FIG. 24

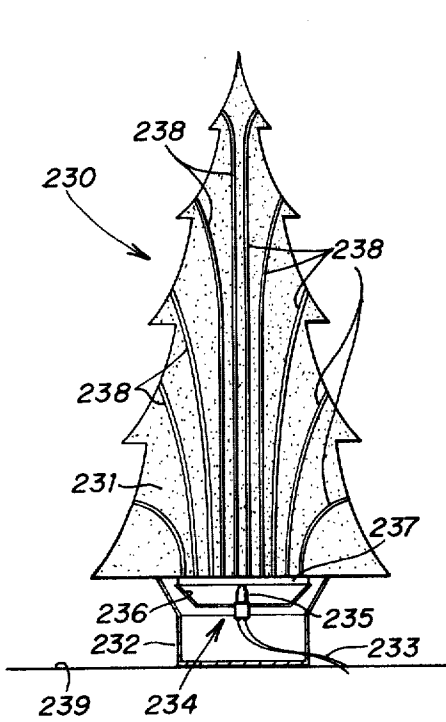


FIG. 25

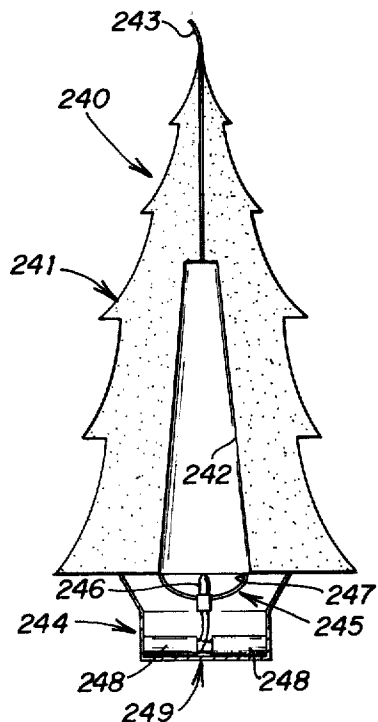


FIG. 26

ILLUMINATED CANDLE STRUCTURE**CROSS REFERENCE TO RELATED APPLICATION**

This application is a continuation-in-part of co-pending application Ser. No. 212,107, filed Dec. 27, 1971, and now U.S. Pat. No. 3,761,702 for ILLUMINATED CANDLE STRUCTURE.

BACKGROUND AND SUMMARY OF THE INVENTION

This invention relates generally to candles, and more particularly to illuminated candle structures including a translucent body portion and apparatus for illuminating the translucent body portion regardless of whether the candle is lighted.

Candles come in many shapes and sizes that are very attractive indeed. Visualize, if you will, how much more beautiful most, if not all, candles would be if, in addition to a burnable top portion, they were made to glow from within. Such internal illumination through the candle would greatly enhance the esthetic beauty of candles whether they are burning or not. Candles so illuminated may employ flashing or otherwise varied lighting, including color-varied internal lighting to provide infinitely variable illuminated candles beautiful as centerpiece candles and as candle mood lamps. By this means the marketability of candles can be greatly enhanced over that which is presently experienced with conventional candles not having internal illumination.

It is therefore a principal object of this invention to provide candle structure adapted for internal illumination.

A further object is to provide illumination apparatus comprising any of a variety of light generating devices adapted for generating the internal illumination for such candle structure.

Another object is that the illumination apparatus includes a power source such as a battery with the illumination apparatus and a battery contained as a unit.

A further object is to provide for light diffusion within a candle and to provide illumination means external to the candle and directed into the candle interior and diffusion within the candle for the desired internally illuminated effect.

Features of the invention useful in accomplishing the above objects include, in illuminated candle structures, an internal cavity within the body of the candle and illumination apparatus that supplies light diffused through the material of the candle body. The internal cavity may protrude into the candle body from the base, or in some versions from a side of the candle body depending on the different structural candle shapes and possible applications desired. Further, the cavity may be shaped as desired for different candle body thickness and thickness-varied intensity of internal illumination. The illumination apparatus may be a light bulb inserted within the candle cavity along with a power supply or may have electric leads extending to an exterior to a power source. The illumination apparatus may also be external to the candle structure with focusing structure for directing a beam of light to light diffusing or reflecting structure within the candle body. Light diffusion within the candle structure may be one or more hollow portions within the candle body; plastic, glass or other inserts molded into the candle structure; light reflectors or multi-faceted crystals within the candle structure; or by means of fiber optics.

In accordance with specific embodiments of the invention, the illuminated candle structure includes a translucent body portion formed from wax, plastic or the like, and apparatus for illuminating the interior of the translucent body portion. The candle structure may also include a burnable portion which may comprise either a part of the translucent body portion or a votive supported by the body portion. The exterior of the body portion may have any desired shape, and fiber optics may be employed to enhance the illumination effect.

DESCRIPTION OF THE DRAWINGS

A more complete understanding of the invention may be had by referring to the following detailed description when taken in conjunction with the accompanying Drawings, wherein:

FIG. 1 is a side view of an illuminated candle structure incorporating a first embodiment of the invention;

FIG. 2 is an illustration of the illumination of the candle structure shown in FIG. 1;

FIG. 3 is a sectional view taken generally along the line 3—3 in FIG. 1 in the direction of the arrows;

FIG. 4 is a bottom view of the candle structure shown in FIG. 1;

FIG. 5 is a sectional view of an illuminated candle structure incorporating a second embodiment of the invention;

FIG. 6 is a sectional view of an illuminated candle structure incorporating a third embodiment of the invention;

FIG. 7 is a sectional view of an illuminated candle structure incorporating a fourth embodiment of the invention;

FIG. 8 is a sectional view of an illuminated candle structure incorporating a fifth embodiment of the invention;

FIG. 9 is a sectional view of an illuminated candle structure incorporating a sixth embodiment of the invention;

FIG. 10 is a sectional view of an illuminated candle structure incorporating a seventh embodiment of the invention;

FIG. 11 is a sectional view of an illuminated candle structure incorporating an eighth embodiment of the invention;

FIG. 12 is a sectional view of an illuminated candle structure incorporating a ninth embodiment of the invention;

FIG. 13 is a bottom view of the illuminated candle structure shown in FIG. 12;

FIG. 14 is a sectional view of an illuminated candle structure incorporating a tenth embodiment of the invention;

FIG. 15 is a bottom view of a portion of the illuminated candle structure shown in FIG. 14;

FIG. 16 is a sectional view of an illuminated candle structure incorporating an eleventh embodiment of the invention;

FIG. 17 is a sectional view of an illuminated candle structure incorporating a twelfth embodiment of the invention;

FIG. 18 is a top view of an illuminated candle structure incorporating a thirteenth embodiment of the invention;

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FIG. 19 is a sectional view of an illuminated candle structure incorporating a fourteenth embodiment of the invention;

FIG. 20 is a sectional view of an illuminated candle structure incorporating a fifteenth embodiment of the invention;

FIG. 21 is a sectional view of an illuminated candle structure incorporating a sixteenth embodiment of the invention;

FIG. 22 is a sectional view of an illuminated candle structure incorporating a seventeenth embodiment of the invention;

FIG. 23 is a sectional view of an illuminated candle structure incorporating an eighteenth embodiment of the invention;

FIG. 24 is a sectional view of an illuminated candle structure incorporating a nineteenth embodiment of the invention;

FIG. 25 is a sectional view of an illuminated candle structure incorporating a twentieth embodiment of the invention; and

FIG. 26 is a sectional view of an illuminated candle structure incorporating a twenty-first embodiment of the invention.

DETAILED DESCRIPTION

Referring now to the drawings, and particularly to FIGS. 1-4, there is shown an illustrated candle structure 20 incorporating a first embodiment of the invention. The candle structure 20 has a wax body 21 and a burnable wick 22 extended from the top of the wax body 21. The candle structure 20, in addition to having a burnable top wick 22, is equipped to glow from within with a typical glowing area such as that illustrated in FIG. 2. In order that the candle structure 20 may have such an internal glow, the wax body 21 is equipped with an internal cavity 23 extending upwardly within the body 21 as shown in FIG. 3. The cavity 23 is of adequate size and extends upwardly for a material distance such that a light bulb 24 and a self-contained rechargeable battery power pack assembly 25 are completely contained therein over a candle supporting surface 26. The internal cavity 23 is circular in cross-section, as shown in the bottom view of FIG. 4, although it could be rectangular or any other shape if required for a desired lighting effect or other purposes as may be imposed. The candle body 21 may also have a rectangular or other cross-section, as desired.

Referring to FIG. 5, there is shown an illuminated candle structure 30 having a wax body 31 and a burnable top wick 32. An internal cavity 33 extends horizontally from the side of the body 31 into the interior. A light bulb 24 and a rechargeable battery power pack assembly 25, such as used with the candle 20 of FIG. 3, are housed within the lateral cavity 33.

A candle structure 40 comprising a third embodiment of the invention is shown in FIG. 6. The candle structure 40 is quite similar to that of FIG. 5 with a candle wax body 41 having a wick 42 and a cavity 43 extending to the interior of the body at a slant from the side. The light bulb 24 and the battery power pack assembly 25 may also be used with this embodiment.

Referring to FIG. 7, there is shown an illuminated candle structure 50 wherein a candle body 51 includes a nonflammable disc 52 at the lower end of a wick 53 to prevent burning of the wick into an internal cavity 54 with resultant dropping of melted wax and wick

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remnants into the cavity 54. An internal light source structure 55 is shown including a plurality of electric light bulbs 56, 57, and 58 of different sizes and shapes. The bulbs 56, 57, and 58 may also be of the same size and power, or may be of different colors as may be desired for particular illumination effects. While the internal light source structure 55 may include a self-contained battery power pack, conventional power supply connections may also be provided.

A candle structure 60 comprising a fifth embodiment of the invention is shown in FIG. 8. The candle structure 60 includes a wax body 61 having an internal cavity 62 lined by a sheath of non-flammable translucent material 63 about which the candle wax may be poured as the candle is formed. The sheath of non-flammable translucent material 63 prevents a wick 64 from burning down into the internal cavity 62. Further, the sheath 63 may have special light distributing or filtering qualities for light emanating from a light source contained therewithin, or for light directed into the cavity from an external source.

In the embodiment of the invention illustrated in FIG. 9, an illuminated candle structure 70 includes a wax body 71. The candle body 71 has a tapered cavity 72 extending from the bottom of the body and ending in a domed top 73 at the bottom of a wick 74. The candle structure 70 is adapted for illumination by a light source positioned within or below the cavity 72.

A candle structure 80 incorporating a seventh embodiment of the invention is shown in FIG. 10. The candle structure 80 includes a wax body 81 having a cavity 82 filled by a tapered body of transparent or translucent material 83 terminating in a domed top 84 extending under the bottom of a wick 85. The tapered body 83 in some instances would also be wax having greater light transmitting and distributing qualities than the wax of the body 81. The tapered body 83 may also be a glass or plastic body either inserted into the cavity, or the candle wax may be poured about the body 83 as the candle is formed. In any event, the body 83 may be any of various colors, and may assume other shapes such as to fit other candle body cavities.

FIG. 10 further illustrates a candle illumination apparatus 86 mounted in a candle mounting base 87 which may comprise a self-contained power source for the illumination apparatus 86. A reflector 88 is positioned to direct light up through the body of material 83. The base 87 may also have a power line 89 for supplying power from an external source.

An illuminated candle structure 90 comprising a variation of the candle structure 80 is shown in FIG. 11. To this end the same reference numerals are used in FIG. 10 and FIG. 11 to designate the same or similar parts. In the embodiment of FIG. 11, a multi-faceted crystalline body 91 is inserted in the cavity 82. Light from the light source 86 is focused by the reflector 88 and illuminates the crystalline body 91 for responsive crystalline body internal illumination of the candle wax body 81.

Referring to FIG. 12, an illuminated candle structure 100 is much the same as the candle structure 20 of FIGS. 1-4. However, a body 101 has an internal cavity 102 which is illuminated from below by the light source 86 such as that used with the candle structures 80 and 90 of FIGS. 10 and 11. The candle mounting base 87 uses a light source positioned within a reflector 88 for directing light upwardly into the cavity 102 in FIG. 13. The candle body 101 and the cavity 102 of the candle

structure 100 are shown to be both rectangular in cross-section. However, either the candle body or the cavity could be square, rectangular, round, or of any other shape, or any mixture thereof, as desired.

FIGS. 14 and 15 illustrate an illuminated candle structure 110 comprising a tenth embodiment of the invention. The candle structure 110 has a burnable wax portion 11, including a wick 112. The burnable portion is mounted in a holder 113 supported on the top of a wax body 114. The wax body 114 has a center cavity 115 extending therethrough from top to bottom into which a downward depending bottom portion 116 of holder 113 extends from the top. A bottom surface 117 of the holder 113 may be a highly reflective surface shaped to optimize reflected light to the candle body wall for optimized internal illumination of the candle. While the candle body 114 and the cavity 115 could both be circular in cross-section, or both rectangular, the body 114 is shown to be circular and the cavity 115 rectangular in the bottom view of FIG. 15. Furthermore, the illumination apparatus may comprise any of those shown in the embodiments of FIGS. 1-4, 1, or 10-12.

In FIG. 16 there is shown a candle structure 120 having a wax body 121. An internal cavity 122 extends downwardly from the top of the body 121 and the bottom extension 116' of the holder 113' is received therein. The holder 113' supports a burnable wax candle 111 having a wick 112 on the top of the wax body 121, and supports a self-contained rechargeable battery power pack assembly 25' supplying power for a light bulb 24', with a bonding adhesive holding the assembly 25' on the bottom of the extension 116'.

Referring now to FIG. 17, there is shown an illuminated candle structure 130 incorporating a twelfth embodiment of the invention. The candle structure 130 includes a translucent body portion 131 comprising a central core 132 formed from a wax having a low melting temperature, it being understood that as used herein the term translucent means any structure capable of transmitting light, and as such includes structure which might otherwise be considered to be either substantially opaque or substantially transparent. A burnable wick 133 extends through the core 132.

The translucent body portion 131 of the candle structure 130 further comprises a cylindrical shell 135 surrounding the core 132. The shell 135 may be formed from plastic or from a wax having a relatively high melting temperature. Moreover, the shell 135 may comprise any desired color and may have a varying thickness circumferentially and/or axially of the candle structure 130.

The illuminated candle structure 130 is mounted on a base 136 having a rim 137 which functions to receive and position the candle structure. The base 136 further includes illumination apparatus 138 comprising a lamp 139 mounted in a reflector 140 and adapted for actuation by an external power source. The illumination apparatus 138 functions to direct light into the interior of the candle structure 130 to provide an esthetically pleasing appearance.

The candle structure 130 further comprises a coating 141 extending over the exterior of the shell 135 of the translucent body portion 131. It will be appreciated that the coating may comprise any desired color and/or texture. It has been found, however, that a highly satisfactory result is achieved if the coating 141 is provided

with relatively opaque portions 142 and 143 located adjacent the upper and lower ends of the candle structure, and with a relatively transparent portion 144 situated beneath the relatively opaque portions. By this means the illumination apparatus 138 of the base 136 and the lighted wick 133 function to provide substantially uniform illumination throughout the entire axial length of the translucent body portion 131 of the candle structure 130.

An illuminated candle structure 145 comprising a variation of the embodiment shown in FIG. 17 is illustrated in FIG. 18. The candle structure 145 includes a translucent body portion 146 having a solid wax core 147. A burnable wick 148 extends through the core 152.

The translucent body portion 146 of the candle structure 145 further includes a shell 149 extending around the core 147. The shell 149 comprises a series of axially extending passageways which are hollow in nature. The passageways are separated by solid portions, whereby the combined effect of the light provided by the illumination apparatus 138 of the base 136 and the burning of the candle provides a very pleasing appearance.

In FIG. 19, there is shown an illuminated candle structure 150 comprising another embodiment of the invention. The candle structure 150 includes a translucent body portion 151 comprising a hollow cylinder 152 formed from wax. Again, it will be understood that as used herein the term translucent includes structure which might otherwise be considered either substantially opaque or substantially transparent. The particular cylinder 152 illustrated in FIG. 19 is circular in cross-section, however, it will be understood that the translucent body portion 151 of the candle structure may have any desired cross-sectional configuration.

The candle structure 150 further includes a votive 153 mounted in the upper end of the cylinder 152. The votive 153 comprises a glass shell 154 which receives a quantity of wax 155 and a burnable wick 156. The shell 154 of the votive 153 is tapered, and the upper interior portion of the cylinder 152 is similarly tapered to receive the votive 153. By this means the votive 153 is substantially hidden from view, and the candle structure 150 has the appearance of a conventional candle of the type comprising a solid wax cylinder.

The illuminated candle structure 150 is supported on a mounting base 157. The mounting base 157 includes an upper rim 158 which functions to receive and position the candle structure. The base 157 is provided with illumination apparatus 159 including a lamp 160 positioned in a reflector 161 and adapted for actuation by means of batteries 162 and appropriate circuitry 163 mounted within the base 157. The illumination apparatus 159 functions to direct light into the interior of the translucent body portion 151 of the candle structure 150. The light in turn passes outwardly through the wax cylinder 152 to provide a very esthetically pleasing appearance. It will be appreciated that part of the light generated by the illumination apparatus is reflected by the under surface of the shell 154 of the votive 153, thereby providing more uniform interior illumination. Moreover, if the votive 153 is lighted, light from the flame further enhances the appearance of the candle structure 150.

Referring now to FIG. 20, there is shown an illuminated candle structure comprising a variation of the embodiment of the invention shown in FIG. 19. To this

end, the same reference numerals are utilized in FIGS. 19 and 20 to designate the same or similar part. The principal difference between the embodiments of the invention illustrated in FIGS. 19 and 20 relates to the fact that the translucent body portion 151 of the latter embodiment comprises a plastic cylinder 164.

It is noted that recent advances in the petrochemical industry have tended to blur the distinction between wax and plastic. As used herein, the term plastic is intended to mean the various commercially available plastic materials which are physically tough and relatively temperature stable, and are therefore adapted for long-term usage. To this end, the embodiment of the invention illustrated in FIG. 20 may be preferable for use in restaurants and similar commercial applications, as opposed to the embodiment shown in FIG. 19 which may be preferable for use in and about the home.

An illuminated candle structure 170 comprising a sixteenth embodiment of the invention is shown in FIG. 21. The candle structure 170 includes a translucent body portion 171 comprising a relatively large diameter, hollow wax cylinder 172. It is contemplated that the wax of the cylinder 172 may be provided with small lengths of fiber optics 173 or with other light dispersing or light reflecting particles during the molding process.

The candle structure 170 further includes a votive 174 comprising a glass shell 175 which receives a quantity of wax 176 and a burnable wick 177. The votive 174 is supported by a bracket 178 comprising a rim 179 which receives the shell 175 of the votive 174 and a plurality of arms 180 extending outwardly from the rim 179 and resting on the upper surface of the cylinder 172. The cylinder 172 may be provided with an upper rim 182 adapted to substantially hide the arms 180, thereby providing the candle structure 170 with the appearance of a conventional candle of the type comprising a solid wax cylinder.

The illuminated candle structure 170 is supported on a mounting base 183. The base 183 includes a rim 184 which receives and positions the candle structure. The base 183 further includes illumination apparatus 185 adapted to direct light into the interior of the candle structure 170.

The illumination apparatus 185 may comprise a lamp 186 mounted in a reflector 187 and adapted for actuation by means of an external power source. As is indicated in dashed lines, the illumination apparatus may also include a lamp 188 extending into the interior of the translucent body portion 171 of the candle structure 170. The illumination apparatus 175 may also be provided for actuation by means of a power source contained entirely within the base 183, if desired.

An illuminated candle structure 190 comprising yet another embodiment of the invention is illustrated in FIG. 22. The illuminated candle structure 190 includes a translucent body portion 191 comprising a relatively large diameter plastic cylinder 192. The candle structure 190 further includes a votive 193 comprising a glass shell 194 which receives a quantity of wax 195 and a burnable wick 196. The votive 193 is supported in the upper end of the cylinder 192 by means of the bracket 197 comprising a rim 198 which receives the shell 194 of the votive 193 and a plurality of arms 199 extending outwardly from the rim 198 and engaging the upper end of the cylinder 192. The cylinder 192 may be provided with a rim 200 serving to hide the bracket 197 from view.

The illuminated candle structure 190 is supported on a mounting base 201 including a rim 202 which receives and positions the candle structure. The mounting base 201 further includes an upper surface 203 which supports both the candle structure and a conventional candle 204. The candle 204 is thus positioned within the translucent body portion 191 of the candle structure.

It will be appreciated that in the use of the illuminated candle structure 190, the votive 193 and the candle 204 may be burned simultaneously. By this means the interior of the translucent body portion 191 of the candle structure is illuminated by means of a constantly flickering light, to provide an esthetically pleasing appearance. It is contemplated that the illuminated candle structure 190 is highly suitable for use in restaurants and similar applications, wherein the candle 204 would be burned substantially continuously, and the votive 193 would be lit following the seating of patrons at a particular table.

An illuminated candle structure 210 incorporating an eighteenth embodiment of the invention is illustrated in FIG. 23. The candle structure 210 includes a translucent body portion 211 comprising a relatively large diameter, hollow cylinder 212 formed from wax or plastic. The candle structure 210 further includes a votive 213 comprising a glass shell 214 which receives a quantity of wax 215 and a burnable wick 216. The votive 213 is supported by a bracket 217 including a rim 218 which receives the shell 214 of the votive 213 and a plurality of arms 219 which extend outwardly from the rim 218 and are supported by the upper end of the cylinder 212. The cylinder 212 may comprise a rim 220 serving to hide the arms of the bracket 217 from view.

The illuminated candle structure 210 is supported on a mounting base 221 including a rim 222 which receives and positions the candle structure. The mounting base 221 includes illumination apparatus 223 including a lamp 224 adapted for actuation by an external power source.

The illumination apparatus 223 further includes a reflector 225 and a transparent plate 226 overlying the reflector 225 and the lamp 224. Lengths of fiber optics material 227 are embedded in the plate 226 and extend upwardly and outwardly therefrom into the interior of the translucent body portion 211 of the illuminated candle structure 210. The lengths of fiber optics material 227 have distal ends located adjacent to the interior of the cylinder 212, and may extend through the cylinder 212, if desired.

In the use of the illuminated candle structure 210, the illumination apparatus 223 directs light into the interior of the translucent body portion 211. Moreover, the lengths of fiber optics material 217 function to provide relatively bright points of light at their distal ends. By this means the visual effect provided by the illumination apparatus 223 is substantially varied and enhanced.

The embodiments of the invention illustrated in FIGS. 24, 25, and 26 all relate to Christmas ornaments. Thus, in FIG. 24 there is shown an illuminated candle structure 230 comprising a Christmas tree ornament. The candle structure 230 includes a translucent body portion 231 which is preferably formed from a scented wax material. The translucent body portion 231 of the candle structure is supported by a metal or plastic fix-

ture 232 which is in turn supported by a power cord 233 in the usual manner.

The fixture 232 further comprises illumination apparatus 234 including a lamp 235 mounted in a reflector 236 for actuation by electrical power supplied through the cord 233. A transparent plate 237 overlies the reflector 236 and the lamp 235. Lengths of fiber optics material 238 are embedded in the plate 237 and extend therefrom through the transparent body portion 231 of the candle structure 230 to exposed distal ends. In use, the illuminated candle structure 230 is mounted on a Christmas tree in the usual manner, and the cord 233 is connected to a source of electrical power. The transparent body portion 231 may have a desired color, and as has been indicated, preferably comprises a scented wax material. The illumination apparatus 234 directs light into the interior of the translucent body portion 231, thereby illuminating the candle structure and also partially heats the wax so that the scent emanates therefrom. Moreover, the lengths of fiber optics material 238 function to provide points of light at the surface of the translucent body portion 231, thereby further enhancing the visual effect provided by internal illumination of the candle structure.

FIG. 25 illustrates an embodiment of the invention which is substantially identical to the embodiment shown in FIG. 24. To this end, the same reference numerals have been used in FIGS. 24 and 25 to designate the same or similar component parts. One difference between the two embodiments relates to the fact that whereas the embodiment illustrated in FIG. 24 is adapted to be suspended from a Christmas tree or the like, the embodiment illustrated in FIG. 25 is adapted for support on a horizontally disposed surface 239, such as a mantle or a table.

An illuminated candle structure 240 comprising a twenty-first embodiment of the invention is shown in FIG. 26. The candle structure 240 comprises a translucent body portion 241 having an internal cavity 242 formed therein. A vertical wick 243 is disposed in the upper part of the translucent body portion 241 above the cavity 242.

The candle structure 240 is supported on a mounting base 244. The base 244 includes illumination apparatus 245 comprising a lamp 246 and a reflector 247. The lamp 246 is adapted for actuation by a power supply situated within the base 244 and comprising rechargeable batteries 248 and suitable circuitry 249.

It will be understood that in the use of the illuminated candle structure 240, the illumination apparatus 245 is actuated to direct light upwardly into the cavity 242. The light is in turn dispersed outwardly through the translucent body portion 241 to provide a highly pleasing visual effect. This effect is enhanced if the wick 243 is ignited to provide a flame which illuminates the upper portion of the candle structure. As will be apparent, the translucent body portion 241 preferably comprises a suitable color, and may be impregnated with a suitable material whereby the candle structure 240 exudes a pleasant fragrance during the use thereof.

From the foregoing, it will be understood that in accordance with the present invention, there is provided an illuminated candle structure characterized by an esthetically pleasing appearance regardless of whether or not the candle is actually lighted. The use of the invention is advantageous principally due to the fact that by facilitating a novel and highly desirable visual effect,

the invention substantially enhances the marketability of candle structures over that which has heretofore been experienced in connection with conventional, non-illuminated candles. A further advantage to the use of the invention relates to the fact that in accordance with particular embodiments thereof, the adaptation of illuminated candle structures to restaurant and other commercial uses is facilitated. Finally, in accordance with certain embodiments of the invention, fiber optics are employed to further enhance the striking visual effect which is achieved by means of the invention.

Although particular embodiments of the invention have been illustrated in the accompanying drawings and described in the foregoing detailed description, it will be understood that the invention is not limited to the embodiments disclosed, but is capable of numerous rearrangements, modifications, and substitutions of parts and elements without departing from the spirit of the invention.

What is claimed is:

1. In a candle structure adapted for burning in the upper portion and for illumination within the lower portion:

- a translucent body portion;
- a burnable wax portion supported by said translucent body portion generally at the top thereof;
- wick means imbedded within said burnable wax portion and extending from the top of said burnable wax portion;
- a cavity of substantial size within said translucent body portion generally below said burnable wax portion;
- non-flammable barrier means positioned below the bottom of said wick in the region of the top of said cavity;
- said translucent body portion substantially surrounding said cavity;
- said cavity being of sufficient size and shape and being positioned to receive light for internal illumination of substantially the entire translucent body portion from a light source independent of said wick means at the top of the candle structure;
- a votive comprising a non-flammable shell defining the barrier means and having the burnable wax portion and the wick means received therein;
- said translucent body portion of the illuminated candle structure comprising a hollow structure; a light source below said votive and communicating with said cavity;
- said votive being supported in the upper portion of the structure with the upper edge of the votive substantially aligned with the upper end of the structure so that the votive is substantially enclosed by the structure;
- said non-flammable shell of the votive being outwardly tapered at the upper end thereof; and
- the interior of the upper end of the hollow structure comprising the translucent body portion of the candle structure being tapered to receive the shell of the votive such that the votive is supported at the top of the translucent body portion of the illuminated candle structure.

2. An illuminated structure comprising:

- a translucent body portion comprising an elongate hollow cylinder having a relatively thin wall thickness as compared with its outside diameter so as to

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provide an internal cavity extending the entire length of the cylinder;

a votive mounted in the upper part of the inner cavity of the cylinder comprising the translucent body portion and including a non-flammable shell having a quantity of burnable wax and wick means received therein; and

means for directing light into the lower part of the internal cavity of the cylinder comprising the translucent body portion and thereby illuminating the candle structure independently of the votive.

3. The illuminated structure according to claim 2 further including a mounting base for supporting the cylinder comprising the translucent body portion in an upright orientation, and wherein the means for illuminating the lower part of the internal cavity of the cylinder is supported by the mounting base.

4. The illuminated structure according to claim 2 wherein at least the upper part of the shell of the votive is outwardly tapered and wherein the upper end of the cylinder comprising the translucent body portion is tapered to receive the shell of the votive with the upper edge of the votive substantially aligned with the upper end of the cylinder.

5. The illuminated structure according to claim 2 further including bracket means for supporting the votive in the upper part of the cylinder comprising the translucent body portion and including rim means for receiving the votive and a plurality of arms extending outwardly from the rim means into engagement with the cylinder and thereby supporting the votive with the upper edge thereof substantially aligned with the upper end of the cylinder.

6. The illuminated structure according to claim 2 wherein the illuminating means comprises lamp means and reflecting means positioned beneath the bottom of the cylinder comprising the translucent body portion for directing light upwardly into the internal cavity of the cylinder.

7. The illuminated candle structure according to claim 2 wherein the illumination means comprises a candle positioned within the internal cavity of the hollow cylinder comprising the translucent body portion beneath the votive for burning to illuminate the lower part of the translucent body portion.

8. The illuminated candle structure according to claim 2 wherein the hollow cylinder comprising the translucent body portion is formed from plastic.

9. The illuminated structure according to claim 2 wherein the translucent body portion is substantially transparent.

10. The illuminated structure according to claim 2 wherein the translucent body portion is substantially opaque.

11. The illuminated candle structure according to claim 2 wherein the hollow cylinder comprising the translucent body portion is formed from wax.

12. In a candle structure adapted for burning in the upper portion and for illumination within the lower portion:

a translucent body portion;

a burnable wax portion supported by said translucent body portion generally at the top thereof;

wick means imbedded within said burnable wax portion and extending from the top of said burnable wax portion;

a cavity of substantial size within said translucent body portion generally below said burnable wax portion;

non-flammable barrier means positioned below the bottom of said wick in the region of the top of said cavity;

said translucent body portion substantially surrounding said cavity;

said cavity being of sufficient size and shape and being positioned to receive light for internal illumination of substantially the entire translucent body portion from a light source independent of said wick means at the top of the candle structure;

a votive comprising a non-flammable shell defining the barrier means and having the burnable wax portion and the wick means received therein;

said translucent body portion of the illuminated candle structure comprising a hollow structure;

said votive being received in the upper portion of the structure with the upper edge of the votive substantially aligned with the upper end of the structure a light source below said votive and communicating with said cavity so that the votive is substantially enclosed by the structure; and

bracket means including rim means for receiving the votive and arm means extending outwardly from the rim means into engagement with the upper end of the hollow structure comprising the translucent body portion of the candle structure such that the votive is supported at the top of the translucent body portion of the illuminated candle structure.

13. In a candle structure adapted for burning in the upper portion and for illumination within the lower portion;

a translucent body portion;

a burnable wax portion supported by said translucent body portion generally at the top thereof;

wick means imbedded within said burnable wax portion and extending from the top of said burnable wax portion;

a cavity of substantial size within said translucent body portion generally below said burnable wax portion;

non-flammable barrier means positioned below the bottom of said wick in the region of the top of said cavity;

said translucent body portion substantially surrounding said cavity;

said cavity being of sufficient size and shape and being positioned to receive light for internal illumination of substantially the entire translucent body portion from a light source independent of said wick means at the top of the candle structure;

a votive comprising a non-flammable shell defining the barrier means and having the burnable wax portion and the wick means received therein;

means supporting the votive at the top of the translucent body portion of the illuminated candle structure;

said translucent body portion of the illuminated candle structure comprising a hollow structure;

said votive being received in the upper portion of the structure with the upper edge of the votive substantially aligned with the upper end of the structure so that the votive is substantially enclosed by the structure;

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a mounting base comprising locating means for receiving and positioning the hollow structure comprising the translucent body portion of the illuminated candle structure; and
 said illumination apparatus being positioned in the mounting base and comprising an electric lamp and reflecting means for directing light from the lamp into the interior of the hollow structure comprising the translucent body portion of the candle structure.

14. In a candle structure adapted for burning in the upper portion and for illumination within the lower portion:

- a translucent body portion;
- a burnable wax portion supported by said translucent body portion generally at the top thereof;
- wick means imbedded within said burnable wax portion and extending from the top of said burnable wax portion;
- a cavity of substantial size within said translucent body portion generally below said burnable wax portion;
- non-flammable barrier means positioned below the bottom of said wick in the region of the top of said cavity;
- said translucent body portion substantially surrounding said cavity;
- said cavity being of sufficient size and shape and

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being positioned to receive light for internal illumination of substantially the entire translucent body portion from a light source independent of said wick means at the top of the candle structure;

a votive comprising a non-flammable shell defining the barrier means and having the burnable wax portion and the wick means received therein; means supporting the votive at the top of the translucent body portion of the illuminated candle structure;

said translucent body portion of the illuminated candle structure comprising a hollow structure;

said votive being received in the upper portion of the structure with the upper edge of the votive substantially aligned with the upper end of the structure so that the votive is substantially enclosed by the structure;

a mounting base comprising locating means for receiving and positioning the hollow structure comprising the translucent body portion of the illuminated candle structure; and

said illumination apparatus comprising secondary candle means supported on the mounting base within the interior of the hollow structure comprising the translucent body portion of the candle structure.

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