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Nicholl

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[54] **MEANS FOR PRODUCING COLORED LIGHT**

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[52] **U.S. Cl.**..... **240/10.63,** 240/10.6 SD, 240/46.59, 340/321

[51] **Int. Cl.**..... **F21l 11/00**

[58] **Field of Search**..... 240/10.63, 46.55, 46.57, 240/46.59, 10.6 SD; 340/321, 90, 379

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[57] **ABSTRACT**

Means for producing colored light includes a bulb sleeve mounted on a bulb holder for a lantern having a housing, battery and electrical means to energize a bulb in the bulb holder for producing a light wherein the bulb holder is removably mounted in sealed relation in an elongated guide passage through a reflector or a reflector-lens assembly. The guide passage and the bulb holder have cooperating portions to adjustably position the light producing bulb and the bulb sleeve along the axis of the reflector relative to the focal point thereof. The bulb holder is preferably molded of a non-conductor material and in hingedly connected halves that have cavities for electrical terminals and which may be quickly and easily assembled and closed for insertion into said passage or removed for change of bulbs. The bulb sleeve is preferably translucent and of a selected color and mounted on the bulb holder and surrounding all or a portion of the bulb mounted therein whereby at least one portion of light produced by the bulb and reflector is of the selected color and the remaining portion is of white light or other color or colors as determined by position and color of portions of the bulb sleeve.

7 Claims, 8 Drawing Figures

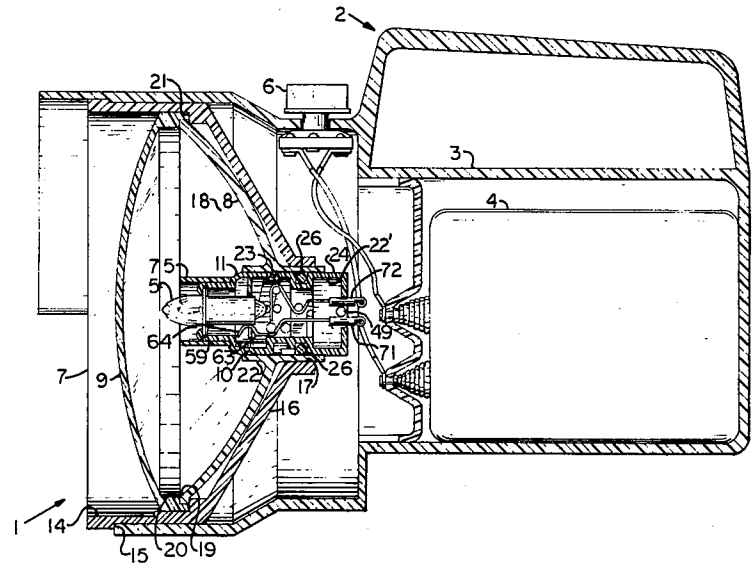


Fig. 1.

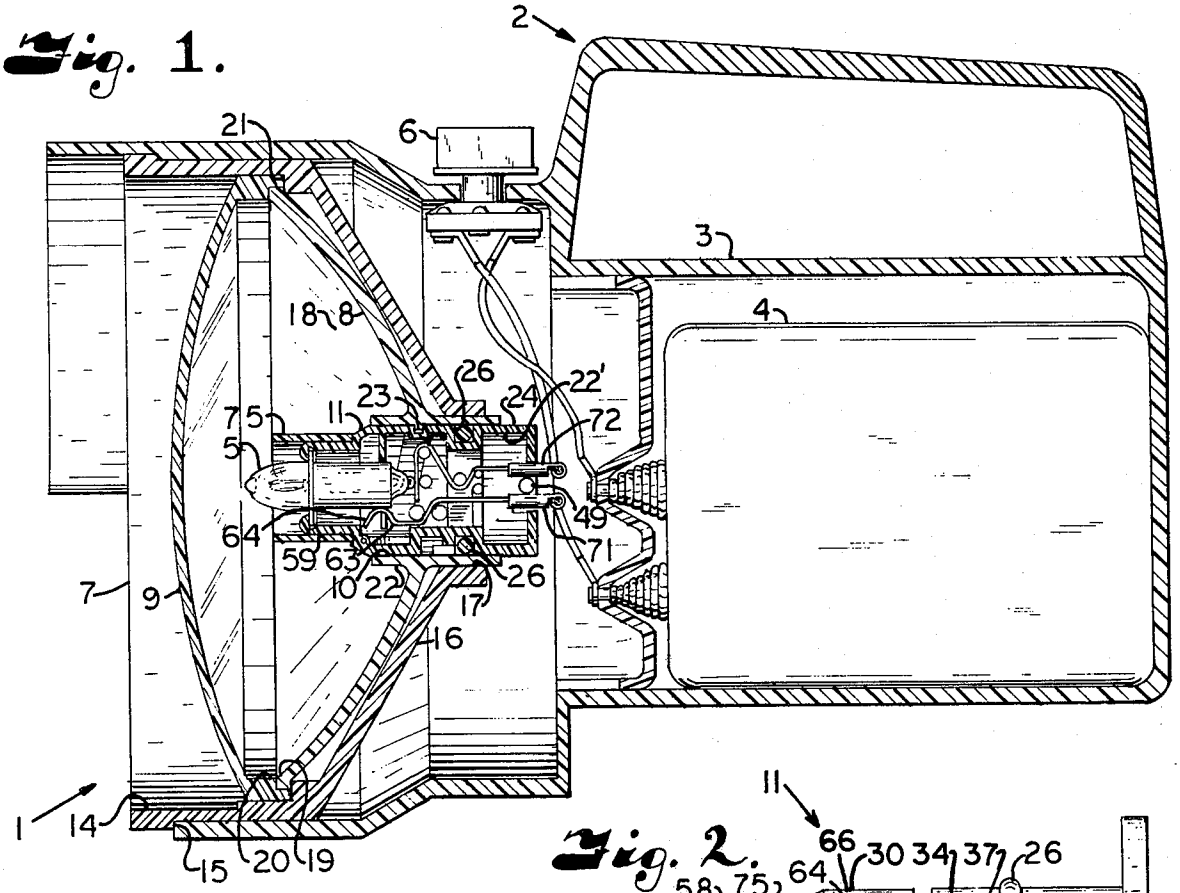


Fig. 2.

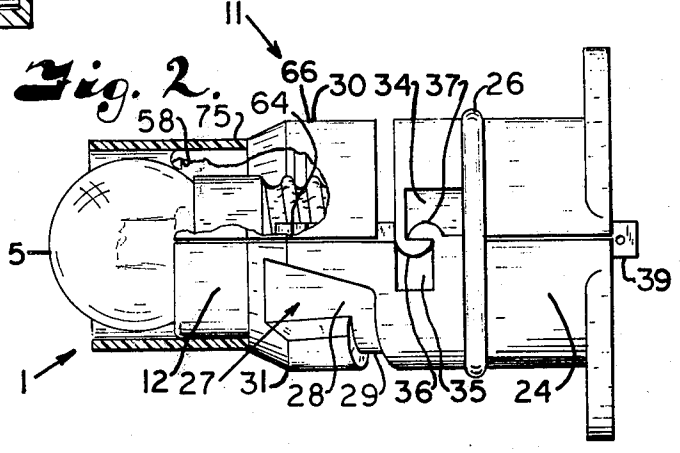


Fig. 4.

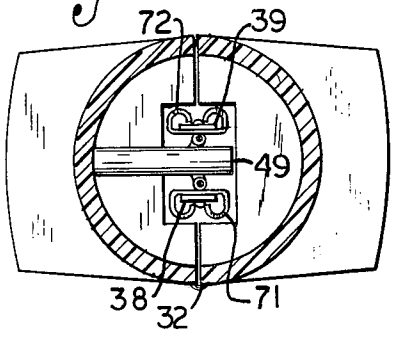


Fig. 3.

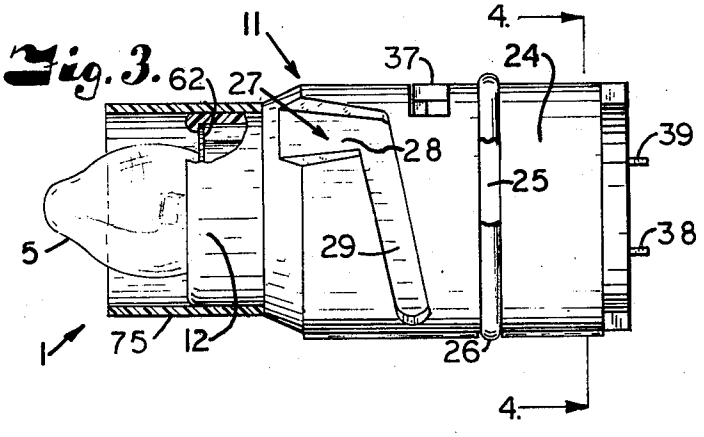


Fig. 5.

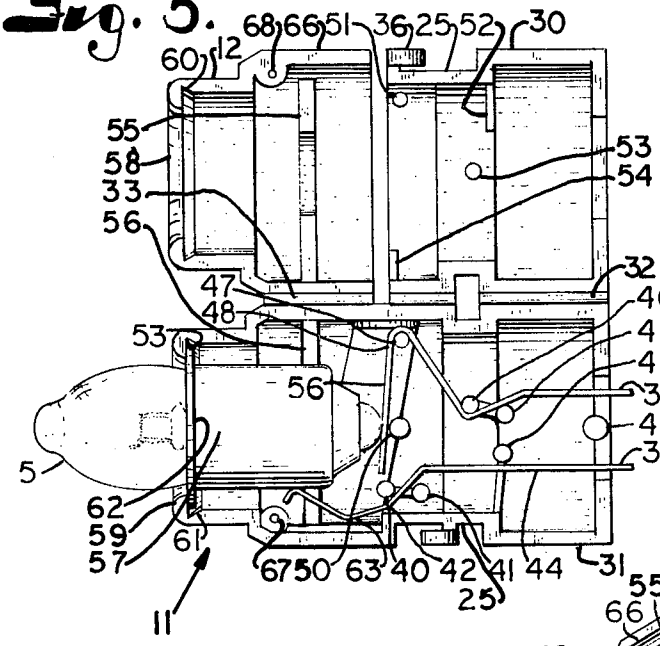


Fig. 6.

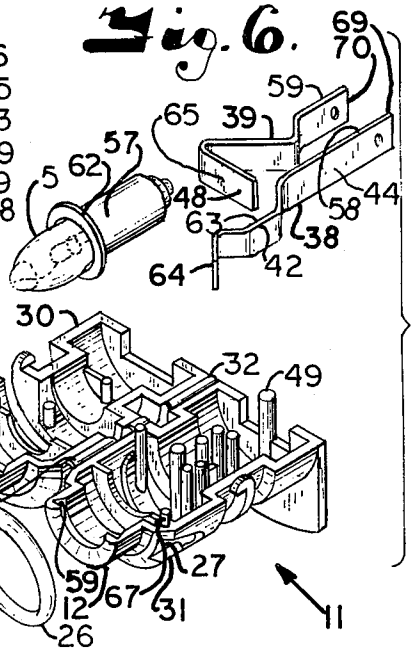


Fig. 7.

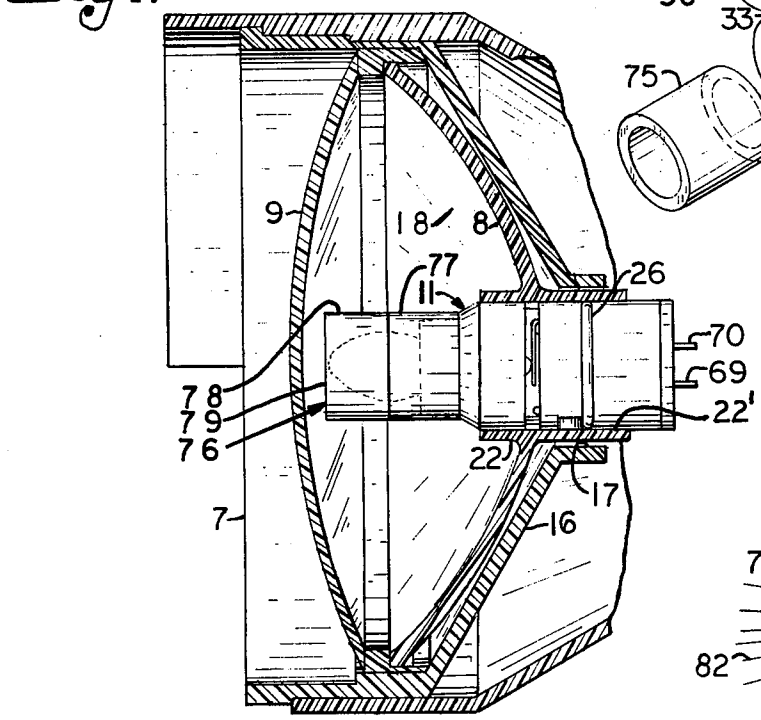
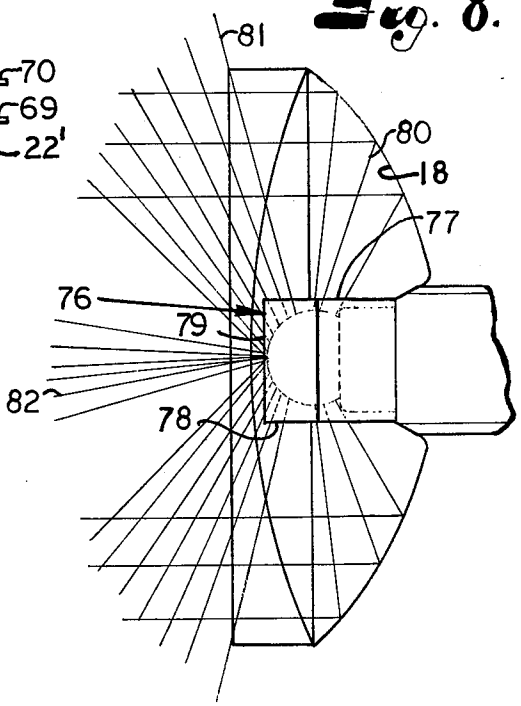


Fig. 8.



MEANS FOR PRODUCING COLORED LIGHT

The present invention relates to lanterns to be used by sportsmen, automobile owners, and the like and more particularly to a battery powered lantern to serve as a source of illumination. It also relates to such a lantern used as a signal light wherein at least one portion of light produced by the lantern is of a selected color and the remaining portion is of white light for illumination or an other color or colors as desired for signals.

The principal objects of the present invention are: to provide means for producing colored light in a lantern having a bulb holder therefor wherein the bulb holder is movable longitudinally of the lantern to adjust the focus of light produced by the lantern; to provide such colored light producing means wherein the lantern and bulb holder therefor is easily and quickly assembled or disassembled for removal of the bulb or change of bulb sleeves for change of color; to provide such colored light producing means adapted to produce different colors of light visible from preselected angles; to provide such colored light producing means adapted for use as a signal device, traffic control, flood light, spot light, combination of flood light and a spot light, such as flood light of white light for walking along a highway and a beam or spot of colored light, such as red, as a signal for traffic; to provide such colored light producing means wherein the lantern and bulb holder therefor which is substantially dust-proof and moisture-proof when assembled; to provide such colored light producing means wherein the lantern and bulb holder therefor is adapted to receive either a screw-type bulb or a flange-type bulb in a sealed relation; and to provide such means for producing colored light with a lantern and bulb holder therefor which is economical to manufacture, sturdy and efficient in use, adapted to produce light of at least two different colors of light, and which is particularly well adapted for the proposed use.

Other objects and advantages of this invention will become apparent from the following description taken in connection with the accompanying drawings wherein are set forth, by way of illustration and example, certain embodiments of this invention.

The drawings constitute a part of this specification and include exemplary embodiments illustrating various objects and features of the means for producing colored light in a lantern and bulb holder therefor of the present invention.

FIG. **1** is a longitudinal sectional view of means for producing colored light in a lantern having a bulb holder therein embodying features of the present invention.

FIG. **2** is an enlarged plan view of the bulb holder and bulb sleeve with portions broken away to show mounting of a screw-type bulb therein.

FIG. **3** is an enlarged side elevational view of the bulb sleeve and bulb holder with portions broken away to show mounting of a flange-type bulb therein.

FIG. **4** is an enlarged transverse sectional view through the bulb holder taken on Line 4—4, FIG. 3 and showing electrical terminals maintained in position within the bulb holder.

FIG. **5** is an enlarged plan view of the bulb holder showing mating portions thereof in an open position.

FIG. **6** is an exploded perspective view of the bulb sleeve and bulb holder showing electrical terminals for mounting therein and a seal ring for mounting thereon.

FIG. **7** is a fragmentary longitudinal sectional view of a bezel portion of a lantern and showing an extension of the bulb sleeve mounted on the bulb holder with the extension being of at least one additional color to produce light having portions thereof of at least two different colors.

FIG. **8** is a schematic diagram showing the light pattern effected in accordance with the bulb sleeve and extension shown in FIG. **7.**

Referring more in detail to the drawings:

As required, detailed embodiments of the present invention are disclosed herein, however, it is to be understood that the disclosed embodiments are merely exemplary of the invention which may be embodied in various forms. Therefore, specific structural and functional details disclosed herein are not to be interpreted as limiting but merely as a basis for the claims actually defining the scope of this invention. In this regard, it is to be recognized that lanterns and bulb holders therefor, in accordance herewith, may be embodied in various forms and, furthermore, that such lanterns and bulb holders therefor may be variously powered and have various type switches, such as to effect a steady beam or an intermittent flashing beam. However, the disclosure hereof is presented only as a representative basis for teaching one skilled in the art to variously employ the present invention in virtually any appropriate detailed structure.

In the disclosed embodiment of the present invention, the reference numeral **1** generally designates means for producing colored light mounted on a bulb holder for a lantern **2** having a housing **3** enclosing a battery **4** and electrical means connecting the battery **4** and a light producing bulb **5** mounted in the bulb holder to energize the light producing bulb **5** upon operation of a suitable switch **6.** In the structure illustrated, a bezel **7** is removably mounted on the lantern housing **3** and has a reflector **8** and a lens **9** assembly mounted therein. An elongated guide passage **10** extends through the reflector **8** and is coaxial therewith to receive an elongated bulb holding housing **11** having a bulb receiver structure in a forward end **12** thereof.

The bezel **7** may be any suitable structure adapted to be removably mounted on a forward end of the housing **3** of the lantern **2.** In the illustrated structure, the bezel **7** has a flange portion **14** having a rearwardly facing shoulder **15** on an exterior surface thereof which is engageable with a corresponding forwardly facing shoulder on an interior surface of a forward portion of the housing **3.** The bezel **7** has a web portion **16** formed in a generally truncated conical shape and having an aperture **17** therethrough and coaxial therewith.

The reflector **8** is illustrated as having a parabolic reflecting surface **18** and a peripheral edge portion **19** suitably secured to a peripheral edge portion **20** of the lens **9,** as by adhesive, to form a reflector-lens assembly with the reflector **8** and the lens **9** hermetically sealed at the peripheral edge portions thereof.

The bezel **7** is preferably formed of flexible or resilient material and the flange portion **14** of the bezel **7** has a forwardly facing shoulder **21** on an interior surface thereof and positioned to be engaged by a portion of the reflector **8** adjacent the peripheral edge portion **19** thereof. The flange portion **14** of the bezel **7** is slightly smaller than the outside dimension of the reflector-lens assembly to provide a resilient frictional engagement with the peripheral edge portions **19** and

20 of the reflector-lens assembly when assembled whereby the reflector-lens assembly is resiliently and removably mounted in the bezel 7.

The guide passage 10 is illustrated as being in a generally cylindrical member 22 preferably formed integrally with the reflector 8 and coaxial therewith and having an inner surface 22' defining the guide passage 10. A lug 23 extends inwardly and preferably radially into the guide passage 10 and is positioned intermediate the ends of the guide passage 10, for a purpose later described.

The bulb holding housing 11 is preferably of one-piece construction and formed of a non-conductor material which is resilient and mountable within the guide passage 10 and in a position coaxial with the reflector 8. The bulb holding housing 11 is slightly larger than the guide passage 10 and the housing 11 has an exterior surface 24 which is resiliently and frictionally engageable with the inner surface 22' defining the guide passage 10 to thereby seal the guide passage and maintain the beam or light producing bulb 5 at a selected location relative to the focal point of the reflector 8. The exterior surface 24 of the bulb holding housing 11 has wall surfaces defining a groove 25 extending around the circumference of the housing 11 to receive a suitable seal member, such as an O-ring 26, therein which engages the inner surface 22' of the cylindrical member 22 to effect a positive seal between the housing 11 and the guide passage 10.

The bulb holding housing 11 has wall surfaces defining a bayonet slot 27 in the exterior surface 24 thereof and the wall surfaces which define the bayonet slot 27 are engageable with the lug 23 to effect movement of the bulb holding housing 11 along the guide passage 10 in response to turning the bulb holding housing 11 relative to the reflector 8. The bayonet slot 27 has wall surfaces defining an entrance portion 28 extending generally longitudinally of the bulb holding housing 11 and wall surfaces defining a movement effecting portion 29 communicating with the entrance portion 28 and extending therefrom and at an angle with a longitudinal axis of the bulb holding housing 11 whereby the longitudinal position of the bulb holding housing 11 and the beam bulb 5 therein may be adjusted longitudinally along the axis of the reflector 8 relative to the focal point thereof to thereby adjust the focus of a beam produced by the lantern 2.

The bulb holding housing 11 is preferably molded in one piece of non-conductor material, such as synthetic resin, and has mating portions or halves 30 and 31 connected together by integral hinge strips 32 and 33 that have thin portions providing flexing along a line between the portions 30 and 31 to permit the mating portions 30 and 31 to be moveable between an open position and a closed position engaging the beam bulb 5 therebetween.

The mating portions 30 and 31 are quickly and easily assembled and closed for insertion into the guide passage 10 or removed for change of bulbs 5, as later described. In the illustrated embodiment, the mating portions 30 and 31 have slots 34 and 35 respectively formed in the exterior surface 24 thereof. The slots 34 and 35 are offset and extend circumferentially from respective free edges of the mating portions 30 and 31. Keeper members 36 and 37 extend substantially parallel with the free edges of the respective mating portions 30 and 31 and into the slots 34 and 35 respectively and have outwardly facing surfaces which are operative to maintain the mating portions 30 and 31 in the closed position when in engagement one with the other.

The mating portions 30 and 31 have cooperating cavities therein, as later described, to receive the beam bulb 5 and to receive and position electrical contact strips 38 and 39 in spaced apart relation and in engagement with a side and end of a base portion of the beam bulb 5 to energize same upon operation of the switch 6, as best seen in FIG. 5.

The bulb holding housing 11 has means therein for positioning and maintaining the pair of electrical contact strips 38 and 39 in engagement with the beam bulb 5 when the mating portions 30 and 31 are in the closed position. The electrical contact strips 38 and 39 are electrically connected to the battery 4 and to the switch 6. The bulb holding housing 11 has cavities therein for the electrical contact strips 38 and 39 and one of the mating portions, for example mating portion 31 has means for positioning the electrical contact strips 38 and 39 in the housing 11 and in the illustrated embodiment, the mating portion 31 has a first pair of spaced positioning or guide posts 40 and 41 positioned to have an intermediate portion 42 of one of the electrical contact strips extending therebetween, for example electrical contact strip 38. A rear guide post 43 is spaced from the pair of guide posts 40 and 41 and is positioned to have a rearward portion 44 of the electrical contact strip 38 engageable with one edge thereof to direct the electrical contact strip 38 toward the forward end 12 and properly position same therein, for a purpose as later described.

A second pair of spaced positioning or guide posts 45 and 46 are spaced apart and positioned to have the other electrical contact strip 39 extending therebetween and in engagement therewith. A forward guide post 47 is spaced from the second pair of guide posts 45 and 46 and is positioned to have a forward portion 48 of the other electrical contact strip 39 engageable with one edge thereof to direct the other electrical contact strip 39 toward the forward end 12 of the housing 11 and properly position same therein, for a purpose as later described.

The mating portion 31 of the bulb holding housing 11 includes a rear post 49 positioned to provide positive separation of the rear end portions of the electrical contact strips 38 and 39. A forward post 50 is positioned to provide positive separation of the forward end portions of the electrical contact strips 38 and 39.

The other mating portion 30 has means for retaining the electrical contact strips 38 and 39 in the first mating portion 31 when the mating portions 30 and 31 are in the closed position and in the illustrated embodiment, the other mating portion 30 has a forward retainer post 51 positioned to be engageable by the portion of the electrical contact strip 38 between the guide posts 40 and 41. A rear retainer member 52 in the form of a rib positioned to be engageable by the rearward portion 44 of the electrical contact strip 38 and the rear retainer member 52 is aligned with the rearward guide post 43 on the mating portion 31.

The other mating portion 30 also has means engageable by the other electrical contact strip 39 including an intermediate retainer member 53 positioned to be engageable by the portion of the other electrical contact strip 39 between the second pair of guide posts 45 and 46. A forward retainer member 54 in the form

of a rib is positioned to be engageable by the forward portion **48** of the other electrical contact strip **39** and the forward retainer member **54** is aligned with the forward guide post **47** on the mating portion **31.**

The bulb holding housing **11** has a bulb receiver structure in the form of a tubular forward portion adapted to removably receive the beam bulb **5** therein and the mating portions **30** and **31** have rib portions **55** and **56** respectively extending inwardly from an interior surface thereof to be engaged by a base portion **57** of a beam bulb **5,** as best shown in FIGS. **2** and **5.**

The bulb holding housing **11** has a bulb receiver structure in the form of a tubular forward portion adapted to removably receive the beam bulb **5** therein and the mating portions **30** and **31** have rib portions **55** and **56** respectively extending inwardly from an interior surface thereof to be engaged by a base portion **57** of a beam bulb **5,** as best shown in FIGS. **2** and **5.**

The bulb holding housing **11** and the electrical contact strips **38** and **39** are shaped and adapted to operatively engage and retain either a screw type bulb or a flange type bulb. The mating portions **30** and **31** have end flanges **58** and **59** respectively positioned at the forward end **12** thereof to be engaged by a bulb portion of the beam bulb and the mating portions **30** and **31** have recesses **60** and **61** respectively adjacent the end flanges **58** and **59** and extending into the interior surface of the tubular forward portion of the housing **11** to receive a flange portion **62** of a flange type beam bulb, as best shown in FIG. **3.**

A forward portion **63** of the electrical contact strip **38** has a corrugated portion **64** adapted to be engaged by the base portion **57** of a screw-type beam bulb whereby the corrugated portion **64** of the electrical contact strip **38** and the rib portions **55** and **56** cooperate to permit a screw-type beam bulb to be easily installed in and removed from the bulb holding housing **11.** The other electrical contact strip **39** has an end portion **65** engageable with an end of either a screw-type or a flange-type beam bulb and the corrugated portion **64** of the electrical contact strip **38** is engageable with a side surface of a base portion **57** of a screw-type beam bulb and with a side surface of a plain base portion of a flange-type beam bulb whereby the electrical contact strips **38** and **39** complete an electrical circuit to either type of a beam bulb upon operation of the switch **6.**

It is desirable to provide means for quickly and easily installing and removing either a screw-type or a flange-type beam bulb without opening the mating portions **30** and **31** of the housing **11,** therefore, one of the mating portions, for example the other mating portion **30,** has a door portion **66** to provide access to the bulb receiver structure in the forward end **12** of the bulb holding housing **11.** The illustrated door portion **66** is hingedly connected to the mating portion **31** by one of the hinge strips, for example hinge strip **33** whereby the bulb holding housing **11** is of one-piece construction.

The door portion **66** and the mating portion **31** have cooperating means to position the recess **60** and the rib portion **55** on the door portion **66** in alignment with the recess **61** and the rib portion **56** respectively on the mating portion **31.** In the illustrated embodiment, one of the door portion **66** and the mating portion **31** have a guide pin or projection **67** adapted to be received in a corresponding recess **68** in the other of the door portion **66** and the mating portion **31.**

The electrical contact strips **38** and **39** are electrically connected to the battery **4** and to the switch **6.** It is desirable that the bulb holding housing **11** be quickly removable from the guide passage **10** and quickly disconnected from the battery **4** and switch **6,** therefore, the electrical contact strips **38** and **39** have rear end portions **69** and **70** respectively to removably receive suitable slipon connectors **71** and **72.**

In using a bulb holder constructed as illustrated and described, the bezel unit or portion including the bezel **7,** reflector **8,** and lens **9** is removed from the lantern **2** and the bulb holding housing **11** is removed from the guide passage **10.** Either a screw-type beam bulb or a flange-type beam bulb may be mounted in the bulb holding housing **11.** The screw-type beam bulb may be inserted through the forward end **12** and into engagement with the rib portions **55** and **56** and the corrugated portion **64** of the electrical contact strip **38.** The screw-type bulb is then turned until an end thereof is moved into engagement with the end portion **65** of the electrical contact strip **39.** When a flange-type beam bulb is to be mounted in the bulb holding housing **11,** the door portion **66** is opened and the flange portion **62** of the beam bulb **5** is positioned in one of the recesses **60** or **61,** preferably recess **61** in mating portion **31** and in engagement with the electrical contact strips **38** and **39,** and the door portion **66** is closed to secure the flange-type beam bulb therein. The bulb holding housing **11** is positioned in the guide passage **10** and the entrance portion **28** of the bayonet slot **27** is aligned with the lug **23** on the inner surface **22'** of the generally cylindrical number **22** and the bulb holding housing **11** is moved forwardly until the lug **23** engages the wall surfaces defining the movement effecting portion **29** of the bayonet slot **27.** The bulb holding housing **11** is turned relative to the bezel **7** to move the housing **11** longitudinally forward along the axis of the reflector **8** by turning the movement effecting portion **29** of the bayonet slot **27** relative to the lug **23** to thereby adjust the focus of the beam bulb **5** at a desired position. The bezel unit is then mounted in the lantern **2** and the switch **6** is operated in a conventional manner to energize the beam bulb **5.**

The bulb holder **1** and the lantern **2** is particularly adapted to be employed as a signal device wherein at least two colors of light are employed. Therefore, translucent members are spaced from the beam bulb **5** and are of at least one selected color such as red, green, amber, blue, yellow and the like, to impart the selected color to at least one portion of a beam of light produced by the lantern **2** with the remaining portion of light being of another color. In the illustrated structure, the forward end **12** of the bulb holding housing **11** has a generally cylindrical exterior surface adapted to have a bulb sleeve **75** mounted thereon and positioned to surround at least a portion of the beam bulb **5** mounted therein, as best shown in FIGS. **1, 2** and **3.** The bulb sleeve **75** is a translucent member of a selected color and has a free end thereof positioned rearwardly of a free end of the beam bulb **5** whereby a portion of a beam produced by the lantern **2** is of the selected color. The beam bulb **75** may be of transparent material or have a frosted surface for maximum beam spread. The bulb sleeve **75** may also be formed of clear plastic or the like having a surface adapted to diffuse the light and thereby produce a larger diffused beam of clear or white light.

In the structure illustrated in FIG. 1, at least a major portion of the bulb sleeve 75 is positioned within the reflector 8 whereby the portion of light from the beam bulb 5 passing through the bulb sleeve 75 is reflected generally forwardly from the reflecting surface 18 of the reflector 8 and the portion of light from the beam or light producing bulb 5 extending forwardly from the end of the bulb sleeve 75 will pass outwardly through the lens 9 whereby the bulb holder 1 and the bulb sleeve 75 mounted thereon are operative to produce a light beam having at least two different colors.

The bulb sleeve 75 effects a colored spot of the same color as the sleeve 75, however, white or clear light would be seen when viewing the bezel 7 from the side of the lantern 2. That portion of the beam bulb 5 extending beyond the bulb sleeve 75 directs white or clear light onto a ground surface below the lantern 2 and the amount of the white or clear light on the ground surface is determined by the length of the bulb sleeve 75 and the amount of the beam bulb 5 positioned forwardly of the forwardedge of the sleeve 75 and the forward edge of the reflector 8.

The structure illustrated in FIG. 1 is adapted to be used as a dock light, channel marker, traffic control signal or the like which use employs a combination of colored lights and an adjustable beam wherein the focus can be varied by sliding the bulb holder longitudinally of the axis of the reflector 8.

The exterior surface of the bulb holding housing 11 and the interior surface of the bulb sleeve 75 have cooperating portions thereon to position and hold or retain the bulb sleeve 75 on the bulb holding housing 11, such as projections extending from one of the sleeve 75 and the housing 11 and each received in respective elongated ways or grooves in the other of the sleeve 75 and housing 11.

FIG. 7 illustrates means for effecting a beam of light having at least two different colors. A bulb sleeve 76 has a first portion 77 thereof mounted on the forward end 12 of the bulb holding housing 11. The first portion 77 of the bulb sleeve 76 is positioned within the reflector 8 and the first portion 77 of the bulb sleeve 76 surrounds the portion of a beam bulb mounted in the bulb holding housing 11 and positioned within the reflector 8 and the first portion 77 of the bulb sleeve 76 is a translucent member of a selected color, such as red, green, amber, yellow, blue or the like, whereby one portion of a beam produced by the lantern is of the selected color.

The remaining portion of the beam bulb extends beyond the reflector 8 and a second portion or sleeve extension 78 is secured to the first portion 77 of the bulb sleeve 76 and surrounds the remaining portion of the beam bulb and is a translucent member of at least one color and the color is different from the color of the first portion 77 of the bulb sleeve 76 whereby the remaining portion of the beam produced by the lantern is of the color of the sleeve extension 78. In the illustrated structure, the sleeve extension 78 has an end member or portion 79 closing the free end thereof and suitably secured thereto, as by adhesive. The end member 79 is preferably of the same color as the sleeve extension 78, however, the color of the end member 79 may be different than either of the portions 77 and 78 of the bulb sleeve 76, as desired.

The bulb holding housing 11, the first portion 77 and the second portion or sleeve extension 78 and the end member 79 of the bulb sleeve 76 cooperate to produce a beam of at least two different colors. The bulb holding housing 11 is adjustable longitudinally along the axis of the reflector 8 thereby controlling the amount of light from the beam bulb 5 passing through the first portion 77 of the bulb sleeve 76 and reflected from the reflecting surface 18. As illustrated in FIG. 8, a first group of light rays 80 pass through the first portion 77 of the bulb sleeve 76 and are reflected from the surface 18. A second group of light rays 81 pass through the sleeve extension 78 and are not reflected from the surface 18. A third group of light rays 82 pass through the end member 79 on the sleeve extension 78 and also do not reflect from the surface 18 whereby the groups of light rays 80, 81 and 82 may each be of a different color, as determined by the color of the respective portion of the bulb sleeve 76.

The end member 79 is effective to increase the size of the spot or to provide a two color spot when the end member 79 and the first portion 77 of the bulb sleeve 76 are of different colors. The first group of rays 80 and the third group of rays 82 join to produce one large spot or a spot of two concentric rings of different colors as desired.

The bulb holder with the bulb sleeve 75 or the bulb sleeve 76 mounted thereon may be used in a lens assembly as disclosed in U.S. Pat. No. 3,395,272 issued July 30, 1968, to Thomas H. Nicholl for Apparatus for controlling light rays.

It is to be understood that while I have illustrated and described certain forms of my invention, it is not to be limited to these specific forms or arrangement of parts herein described and shown.

I claim:

1. In combination:

a. a lantern housing enclosing a battery and electrical means connecting the battery and a light producing bulb to energize the bulb upon operation of a switch;

b. a bezel removably mounted on said lantern housing and having a reflector and a lens hermetically sealed therein;

c. a surface defining an elongated passage through the reflector and coaxial therewith;

d. an elongated bulb holding housing removably mounted in sealing engagement within said guide passage and coaxial with the reflector and having a forward end;

e. means on the forward end of said bulb holding housing for mounting a light producing bulb therein with the bulb extending therefrom;

f. means on said bulb holding housing and in said guide passage to mount said bulb holding housing within said passage and to maintain a bulb in said bulb holding housing at a selected location relative to the reflector and having cooperating means operative to effect adjustment of the longitudinal position of the bulb along the axis of the reflector relative to a focal point thereof to thereby adjust the focus of the bulb; and

g. means removably mounted on the forward end of said bulb holding housing and surrounding at least one portion of the bulb mounted therein for imparting a selected color to at least one portion of light produced by said bulb and reflector.

2. A combination as set forth in claim 1 wherein:

a. said means for imparting a selected color to at least one portion of light produced by said bulb and reflector comprises a bulb sleeve mounted on the forward end of said bulb holding housing; and

b. said bulb sleeve is of a translucent material of a selected color whereby one portion of light produced by said bulb and reflector is of the selected color.

3. A combination as set forth in claim **1** including means mounted on said first named means for imparting a selected color to at least one portion of light produced by said bulb and reflector for imparting a different color to an other portion of light produced by said bulb and reflector.

4. A combination as set forth in claim **3** wherein:

a. said first named means for imparting a selected color to at least one portion of light produced by said bulb and reflector comprises a bulb sleeve mounted on the forward end of said bulb holding housing;

b. said bulb sleeve is of a translucent material of a selected color whereby at least one portion of the light produced by said bulb and reflector is of the selected color; and

c. said means for imparting a different color to an other portion of light produced by the bulb and reflector comprises a sleeve extension mounted on said bulb sleeve and surrounding the remaining portion of the bulb and being of a translucent material of at least one color with the color being different from the color of said bulb sleeve whereby at least a portion of the remaining portion of light produced by the bulb and reflector is of the color of said sleeve extension.

5. A combination as set forth in claim **4** wherein said sleeve extension has an end closure member on the other end thereof and being spaced from said light producing bulb and being formed of a translucent material of a color different from the color of said bulb sleeve whereby the remaining portion of light produced by the bulb and reflector is of the color of the sleeve extension and end closure member.

6. In combination:

a. a lantern housing enclosing a battery and electrical means connecting the battery and a light producing bulb to energize the bulb upon operation of a switch;

b. a reflector and lens mounted on said lantern housing, said reflector being concave and having a forward edge;

c. a surface defining an elongated passage through the reflector and coaxial therewith;

d. an elongated bulb holding housing removably mounted in sealing engagement within said guide passage and coaxial with the reflector and having a forward end;

e. means on the forward end of said bulb holding housing for mounting a light producing bulb therein with the bulb extending therefrom;

f. means on said bulb holding housing and in said guide passage to mount said bulb holding housing within said passage and to maintain a bulb in said bulb holding housing at a selected location relative to the reflector and having cooperating means operative to effect adjustment of the longitudinal position of the bulb along the axis of the reflector relative to a focal point thereof, to thereby adjust the focus of the bulb;

g. a sleeve means removably mounted on the forward end of said bulb holding housing and surrounding at least one portion of the bulb mounted therein for imparting a selected color to at least one portion of light produced by said bulb and reflector; and

h. said sleeve normally being positioned to terminate within the reflector rearwardly of said reflector forward edge with the distribution of the portions of the light from the bulb being variable by adjustment of the longitudinal position of the bulb holding housing relative to the reflector.

7. In combination:

a. a portable lantern having a housing enclosing a battery and electrical means connected to the battery and a light producing bulb to energize the bulb upon operation of a switch;

b. a reflector and a lens mounted on said lantern housing;

c. means mounted in the reflector for positioning the light producing bulb at a selected location relative to the reflector;

d. means mounted on said bulb positioning means and spaced from the light producing bulb for imparting a selected color to at least one portion of light produced by the bulb and reflector;

e. means spaced from the light producing bulb for imparting a different color to an other portion of light produced by the bulb and reflector;

f. said means for positioning the light producing bulb at a selected location relative to the reflector comprises a bulb holding housing having opposite ends and removably mounted in said reflector and coaxial therewith;

g. said means for imparting a selected color to at least one portion of light produced by the bulb and reflector comprises a bulb sleeve mounted on said bulb holding housing and surrounding at least one portion of the bulb mounted therein;

h. said bulb sleeve is of a translucent material of a selected color whereby at least one portion of light produced by the bulb and reflector is of the selected color; and

i. said means for imparting a different color to an other portion of light produced by the bulb and reflector comprises a sleeve extension mounted on said bulb sleeve and surrounding the remaining portion of the bulb and being of a translucent material of at least one color and the color being different from the color of said bulb sleeve whereby the remaining portion of light produced by the bulb and reflector is of the color of said sleeve extension.

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