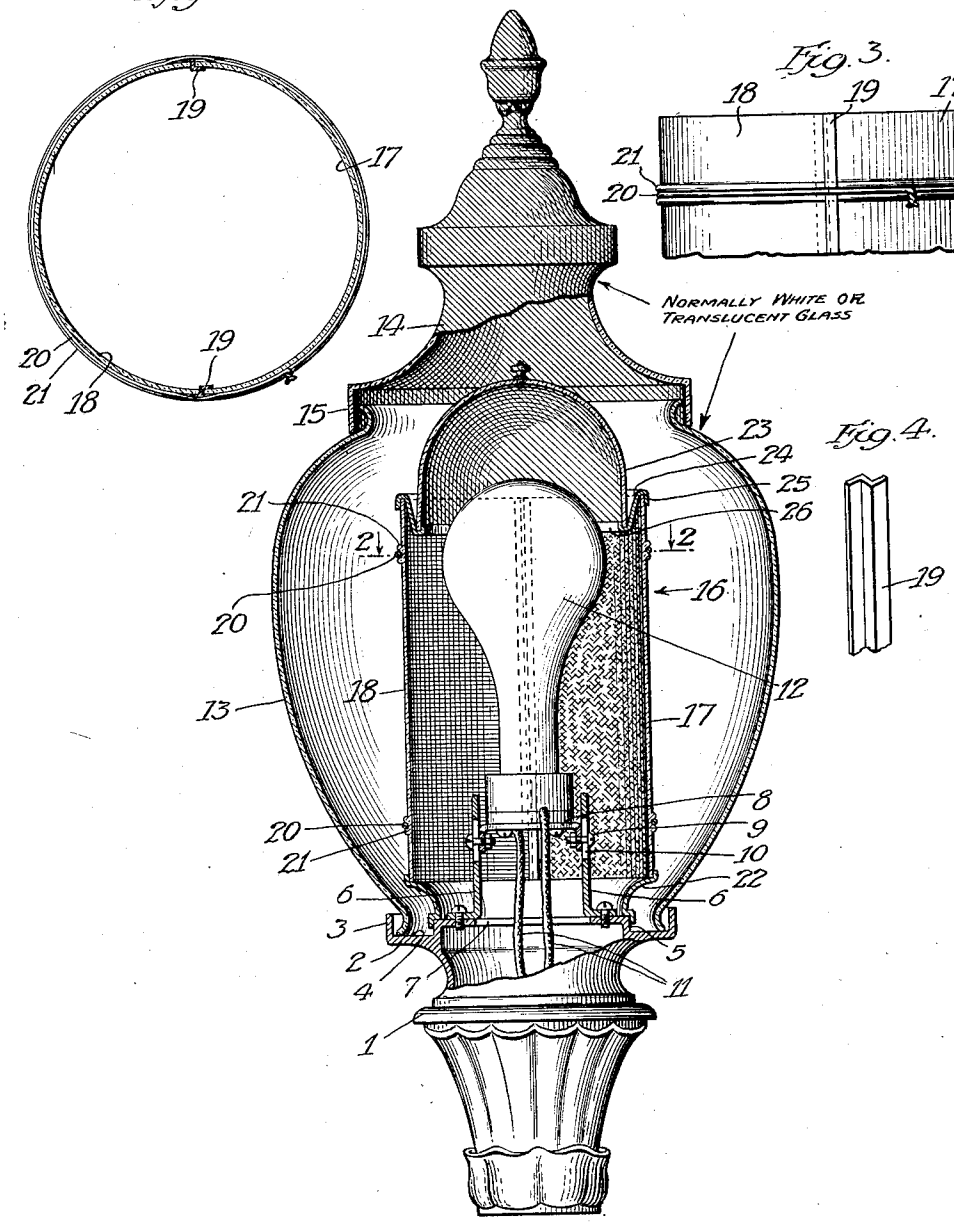
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COLOR LAMP

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Fig. 1.



Witness
Martin A. Olsen

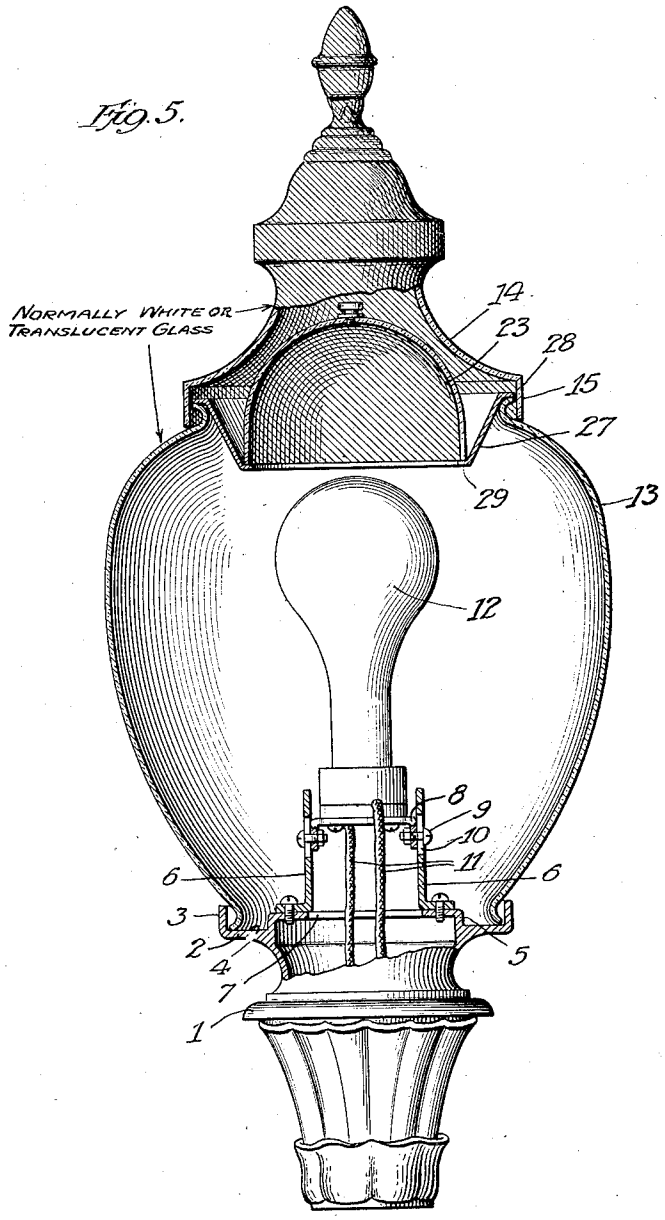
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Filed March 11, 1929 2 Sheets-Sheet 2

Fig. 5.



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Patented Nov. 24, 1931 1,833,122

UNITED STATES PATENT OFFICE

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COLOR LAMP

Application filed March 11, 1929. Serial No. 346,075.

This invention relates to color lamps or lighting devices adapted to be used for producing or obtaining colored lights or lighting effects.

The invention relates more particularly to lamps of the class commonly known as color lamps, having a case or globe formed of or containing glass and adapted to enclose or cover and protect a light, such, for example, as an incandescent electric light, or other source of light, and provided with coloring means, for imparting a desired color or colors to rays of light emanating from such enclosed or covered source of light, for coloring and illuminating the light-enclosing glass case or globe and surrounding objects.

The principal object of this invention is to provide a simple, economical and efficient color lamp or lighting device, adapted to be used for producing or obtaining colored lights or lighting effects; and more particularly, to provide an improved color lamp having an outer case or globe formed of or comprising translucent glass or semi-transparent material, adapted to enclose and cover or protect a light, and having coloring means adapted to enable the rays of light emanating from within the case or globe, to be colored and caused to pass through and radiate from the case or globe, for coloring and illuminating the globe and surrounding objects.

My improved color lamp, constructed in accordance with this invention, is provided with means for enabling a case or globe formed of or containing white translucent glass, such, for example, as translucent glass of the kind which is in common use in lamps for street lighting or other purposes, or similar translucent material, to be colored and illuminated and cause to glow with any desired color or a plurality of different colors or shades, by causing colored rays of light produced and colored within the case or globe or light-enclosing member to pass through and to radiate from the latter. My improved lamp also includes means for enabling the colors to be changed as desired without changing the translucent light-enclosing member or globe.

Other and further objects of the invention will appear from the following description and claims and from an inspection of the accompanying drawings which are made a part hereof.

The invention consists in the features, combinations, details of construction and arrangement and mode of operation of parts, as herein described and claimed.

In the accompanying drawings—

Figure 1 is a view in central vertical section of an improved color lamp constructed in accordance with my invention;

Fig. 2 is an enlarged detail view in horizontal section taken on line 2—2 of Fig. 1, looking downward, and showing the cylindrical colored glass light screen which surrounds the light within the translucent light-enclosing case or globe, for coloring the latter by means of colored light from within;

Fig. 3 is an enlarged detail view in elevation of the upper portion of the colored light screen shown in Fig. 2;

Fig. 4 is a detail view in perspective of an angular metallic strip for uniting the sections of the colored light screen shown in Figs. 2 and 3; and

Fig. 5 is a view in central vertical section of a modified form of my improved lamp and coloring means or light screen.

In constructing an improved lamp in accordance with this invention, I provide a base 1 which may be on or form a part of a lamp post or other suitable stationary support. The upper part 2 of the base is, by preference annular and provided with an upwardly projecting annular peripheral flange 3 which surrounds an annular depression or groove 4. An annular inner rim or shoulder 5 forms the inner wall of the groove 4; and upright lamp-supporting frame members 6 are mounted on the top face of an upper inner annular top portion 7 of the base which is hollow. A flanged upwardly and downwardly adjustable lamp-supporting frame or socket member 8 is mounted on and between the upright frame members 6, and adjustably secured in position by means of horizontal headed bolts or screws 9 anchored in depending side flanges

in the socket member 8 and extending through and in adjustable relation to upright elongated openings 10 in the upright frame members 6. The hollow base and annular top portion 7 of the base provide a central opening through which suitable insulated electric wires 11 extend, one end of each of said wires being connected with the lamp socket 8 in the usual manner, and the opposite ends being connected with the line or source of electric supply which may be of any ordinary and well known or desired form.

Suitable light-producing or emitting means is provided, which, in the form shown in the accompanying drawings, comprises, by preference, an incandescent electric lamp bulb 12 adapted to be mounted in the socket 8 and connected with the source of electric supply by means of the wires 11, or equivalent lighting means.

An outer light-enclosing member or case 13, which, by preference, comprises a globe formed of translucent glass having an annular bottom rim mounted in the flanged base 1, and an annular flanged top rim on the upper open end of the globe, which is covered by a top outer hood or canopy 14, which is, by preference, formed of the same or similar suitable translucent material and has a bottom annular peripheral flange 15, is provided and mounted in position to surround and enclose the light-producing means and light. The annular bottom flange 15 of the canopy surrounds the flanged top rim of the globe member 13 on which the cover or canopy is supported.

Suitable light-coloring means is provided which, by preference, comprises a colored light screen 16 formed of translucent or transparent colored glass, and mounted inside of the outer translucent case or globe in position to cover and surround or cover or surround the light-producing means and light within the globe, or to extend between the light-producing means and translucent case or globe, so as to color the rays of light produced within the latter and cause the translucent case or globe member to be colored and illuminated and caused to glow with any desired color or colors thus imparted by the colored rays of light produced and colored within and caused to pass outward through and to radiate from the translucent globe or case, for coloring and illuminating the same and surrounding objects.

In the form of lamp shown in Fig. 1 of the accompanying drawings, the light-coloring means or light screen 16 comprises a cylindrical main body portion formed in two substantially semi-cylindrical sections 17 and 18 of colored glass secured together by means of upright angular double flanged metallic strips 19 which are Z-shaped in cross section and interposed between the adjacent straight upright edges of said semi-cylindrical glass sections, so that the outer upright flange of each of said strips overlaps the adjacent margin of one of said glass sections and the inner flange of each of said angular strips overlaps the inner margin of the other one of said glass sections; both of said semi-cylindrical sections being bound together by a plurality of wire binding rings 20 which are seated in circumferential grooves formed between circumferential beads 21 on the peripheral surfaces of said sections 17 and 18. The wire binding rings are adapted to be tightened by twisting the ends of the wires forming each ring together; and the sections thus secured together form a cylinder or light-screen of colored glass, the bottom end of which is seated in the upper open flanged end or rim of an annular collar 22 the bottom peripherally flanged end of which fits over the annular upper shoulder 5 on the base top 7, and the upper flanged rim of which surrounds the bottom edge of said cylindrical colored light-screen 16. (See Fig. 1.)

An inner color hood 23, formed of translucent or transparent colored glass of any desired color, is mounted on the inside of the outer translucent case or globe 13 in position to cover the light-producing means or electric lamp bulb, or to extend between the latter and the outer translucent globe 13 or canopy 14, or any desired part of the translucent light-enclosing outer case or globe, for coloring and illuminating the same by coloring the light which emanates from within and passes through the light-coloring means or light-screen formed by said colored glass hood and through said translucent outer light-enclosing member or case. The hood 23 may be used in connection with the cylindrical light-coloring screen comprising the connected colored glass sections 17 and 18, as shown in Fig. 1, or independently and without said sections or cylindrical color screen, as shown in Fig. 5, in which the outer light-enclosing globe or case including the globe 13 and canopy 14 of translucent glass are identically the same as shown in Fig. 1.

In Fig. 1, however, the hood member 23 of the colored glass light screen or light-coloring means 16 is supported on the cylindrical light screen formed by the colored glass sections 17 and 18 to which said hood member is removably attached.

A tapered truncated-cone shaped annular collar 24, formed of sheet metal and having a depending outer circumferential flange 25 on its upper rim adapted to encircle and overlap the upper end margins of the connected light-screen sections 17 and 18, and having an inwardly projecting annular bottom hood-supporting flange 26 on the relatively small bottom annular rim and adapted to extend under the bottom annular rim of the inverted cup-shaped hood 23, is adapted

to support said hood on the cylindrical main body portion of the colored glass light-screen and form a connection between said parts of the light-coloring means or light-screen. The glass hood 23 is of smaller diameter than the cylinder formed of the two connected colored light-screen sections 17 and 18; and the tapered truncated-cone shaped body portion of the collar 24 extends upward and outward at an angle between the bottom end of the hood and the top end rim of the cylinder formed by said connected sections 17 and 18 and converges toward the center of the source of light, so as to cast a narrow shadow and obscure the light as little as possible, and form a partition or dividing wall between the said cylindrical part of the light-screen and the colored glass hood 23. The merging of different colors which it is desirable to keep separate and distinct from each other at their meeting edges, is thus prevented, so that one color may be imparted to the canopy 14, and one or more other colors may be imparted to the globe member 13, as desired.

When a single color is to be imparted to the entire translucent light-enclosing case or globe, including the parts 13 and 14, or any desired form of light-enclosing translucent member to be colored and illuminated by rays of light passing through the color screen within the light-enclosing translucent member, the glass parts of the color-screen or light-screen are made of glass of one and the same color, which may be any desired color.

When the translucent light-enclosing means or globe is to be colored a plurality of different colors imparted thereto by means of colored rays of light emanating from the same source and colored within the translucent light-enclosing case or globe, the coloring means or light-coloring screen is formed of sections of glass of a plurality of different colors. For example, as shown in Fig. 1, glass section 17 is of orange or amber colored glass; glass section 18 is of blue colored glass; and the cup-shaped inner hood or top color-screen member 23 is of green glass. The outer canopy 14 of translucent glass normally white, is colored green by the green rays of light passing through the top color screen member or hood 23; one half of the normally white translucent glass globe member 13 is colored orange or amber by the colored rays of light passing through the semi-cylindrical orange or amber glass section 17; and the other half of the normally white translucent glass globe member 13 is colored blue by the blue rays of light passing through and colored by the semi-cylindrical blue glass section 18 of the color-screen 16. The color-screen 16 is adapted to be readily removed and replaced by another of any desired color or colors, without changing the outer translucent light-enclosing case or globe. Any desired color or colors may thus be imparted to the same light-enclosing case or globe of white or other translucent glass or its equivalent.

In Fig. 5 the light-coloring means comprises a cup-shaped color-screen or light-screen in the form of a colored glass hood 23 mounted inside of the light-enclosing outer case or globe member 13 of white translucent glass, covered by the outer canopy 14 of the same or any suitable translucent glass or equivalent material.

The hood-shaped color-screen or light-screen member 23 shown in Fig. 5 is supported by the outer translucent glass globe 13 in position to extend over the light-producing means or electric light bulb 12, and between the latter and the canopy 14, so that said canopy will be colored by the colored rays of light passing through said hood-shaped light-coloring means or light screen.

A tapered truncated-cone-shaped annular collar 27, formed of sheet metal and having a peripherally projecting outer circumferential flange 28 on its upper annular rim adapted to rest upon the top rim of the glass globe member 13, and having an inwardly projecting annular bottom color-screen supporting or hood-supporting flange 29 on the relatively small bottom annular rim of said tapered collar and adapted to extend under and in supporting engagement with the bottom annular rim of the inverted cup-shaped hood or color screen 23, is adapted to removably support said hood-shaped color-screen member 23 in position; and the tapered truncated-cone shaped body of said collar 27 extends upward and outward at an angle between the bottom end of the hood-shaped color screen 23 and the annular upper end rim of the globe 13, and converges toward the center of the source of light, so as to cast as narrow a shadow as possible, and obscure the light as little as possible, and form a partition or dividing diaphragm between the glass globe member 13 and the canopy 14. The merging of the colored rays of light passing through the color screen 23 and canopy 14 above the diaphragm or tapered hood-supporting collar 27 with the rays of light passing from the source of light 12 through the translucent glass globe 13 below said collar or diaphragm is thus prevented. By thus preventing the blending of the colored and white rays of light the desired contrast is obtained and preserved.

I claim:

1. In a color lamp, the combination of a base, a translucent glass light-enclosing globe mounted on said base a translucent glass canopy mounted on and forming a translucent cover for said globe member, light-producing means located inside of the translucent globe, and coloring means comprising a cylin-

drical colored glass light-screen mounted on said base and surrounding said light-producing means on the inside of said translucent globe, and acting to color the rays of light passing through said globe, and an upper colored glass light-screen extending over said light-producing means and across said cylindrical light-screen, said last-mentioned light-screen member being of a different color from that of said canopy and adapted to impart a color to the canopy which is different from the color of the globe body.

2. In a color lamp, the combination of a base, a cylindrical translucent glass light-enclosing globe mounted on said base, a translucent glass canopy mounted on and forming a translucent cover for said globe member, light-producing means located inside of the globe, an inverted cup-shaped colored glass light-screen member adapted to extend over said light-producing means on the inside of the globe, for coloring rays of light emanating from said light-producing means, said cup-shaped light-screen member being of a different color from that of said canopy and acting to impart a color to the canopy which is different from the color of the globe body, and means for supporting said colored light-screen member in position within the globe.

3. In a color lamp, the combination of a base, a translucent glass light-enclosing globe mounted on said base, a glass cover for said globe, means for supporting a light-producing element on the inside of the globe, an inverted cup-shaped colored glass light screen member adapted to extend over said light-producing means on the inside of the globe, and an annular tapered truncated-cone shaped collar mounted inside of the globe in supporting engagement with the bottom annular rim of said cup-shaped light-screen member and extending upward and outward radially at an incline from said rim toward the upper rim of the globe.

4. In a color lamp, the combination of a base, a translucent glass light-enclosing globe mounted on said base, a glass cover for said globe, means for supporting an electric light bulb on the inside of said globe, a cylindrical colored glass light-screen comprising a plurality of segmental glass light-screen sections adapted to surround said light on the inside of said globe, metallic connecting means on and forming a connection between said light-screen sections, a top colored glass light-screen member adapted to extend over said light on the inside of said globe, and means for detachably connecting said top light screen member with the connected sections of said cylindrical light screen.

5. In a color lamp, the combination of a base, a translucent glass light-enclosing globe mounted on said base, a glass cover for said globe, means for supporting an electric lighting device on the inside of said globe, a cylindrical colored glass light screen comprising a plurality of segmental glass light-screen comprising a plurality of segmental glass light-screen sections mounted on the inside of said globe and adapted to surround said electric lighting device, connecting means on and forming a connection between said light-screen sections, a top colored glass light-screen member adapted to cover said light on the inside of said globe, and a tapered annular metallic supporting member mounted in supporting engagement with the peripheral rim of said top glass light-screen member and extending upward and outward at an incline from said rim and over the top annular rim of said cylindrical colored glass light screen.

6. In a color lamp, the combination of a base, a glass globe mounted on said base, a glass cover for said globe, means for supporting an electric lighting device on the inside of said globe, a cylindrical colored glass light screen comprising a plurality of segmental glass-light-screen sections mounted on the inside of said globe and adapted to surround said electric lighting device, connecting means on and forming a connection between said light-screen sections, an inverted cup-shaped colored glass light-screen member adapted to extend over said electric lighting device on the inside of said globe, and a tapered annular truncated cone-shaped supporting collar in supporting engagement with the bottom annular rim of said cup-shaped light-screen member and extending upward and outward at an incline from said rim and removably attached to the upper rim of said cylindrical colored glass light-screen.

Signed at Chicago, in the county of Cook and State of Illinois, this 28th day of February, 1929.

EBEN F. OLIVER.