

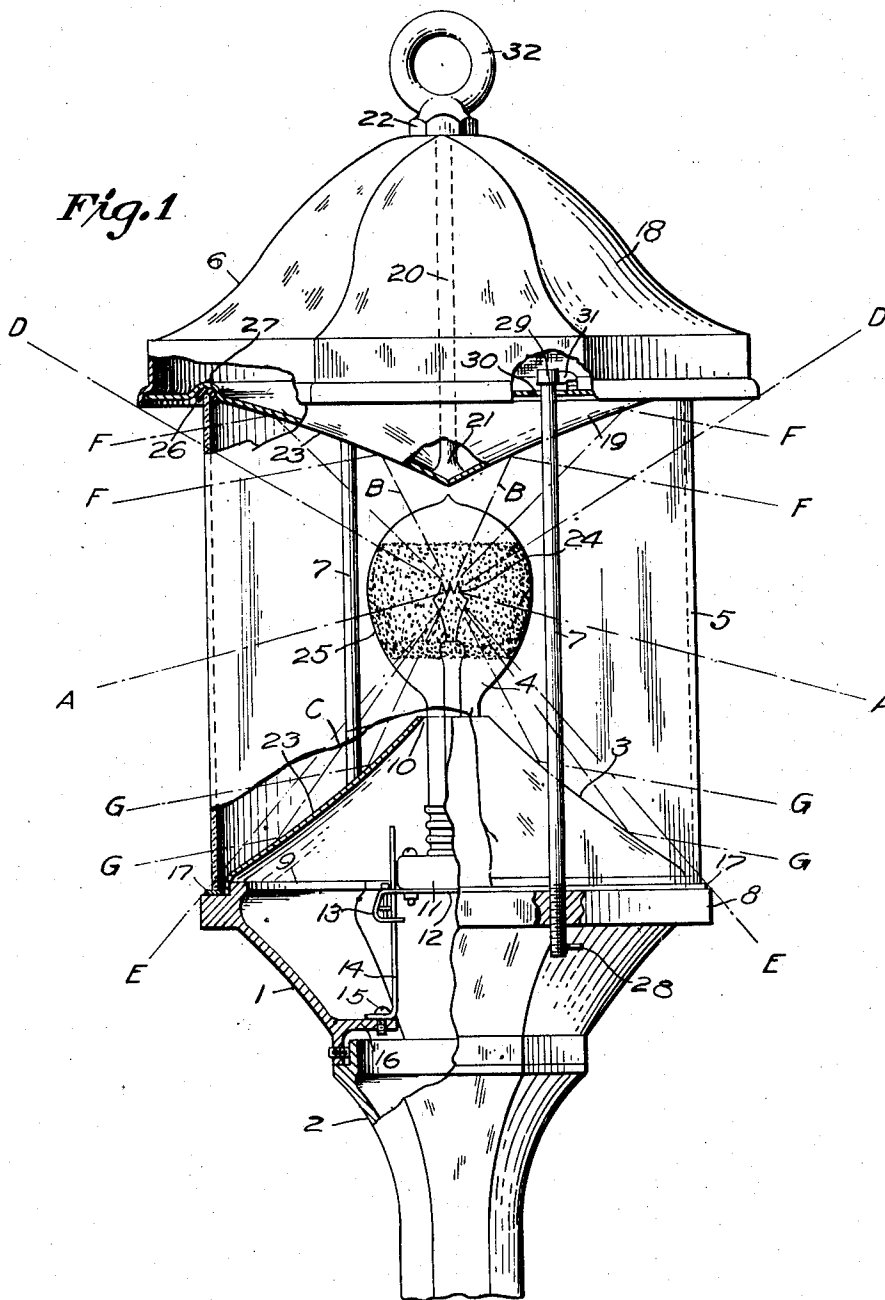
July 14, 1925.

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J. R. TOWNSEND
ELECTRIC LAMP STRUCTURE

Filed Jan. 5, 1921

2 Sheets-Sheet 1



WITNESSES:

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H. Miller

INVENTOR

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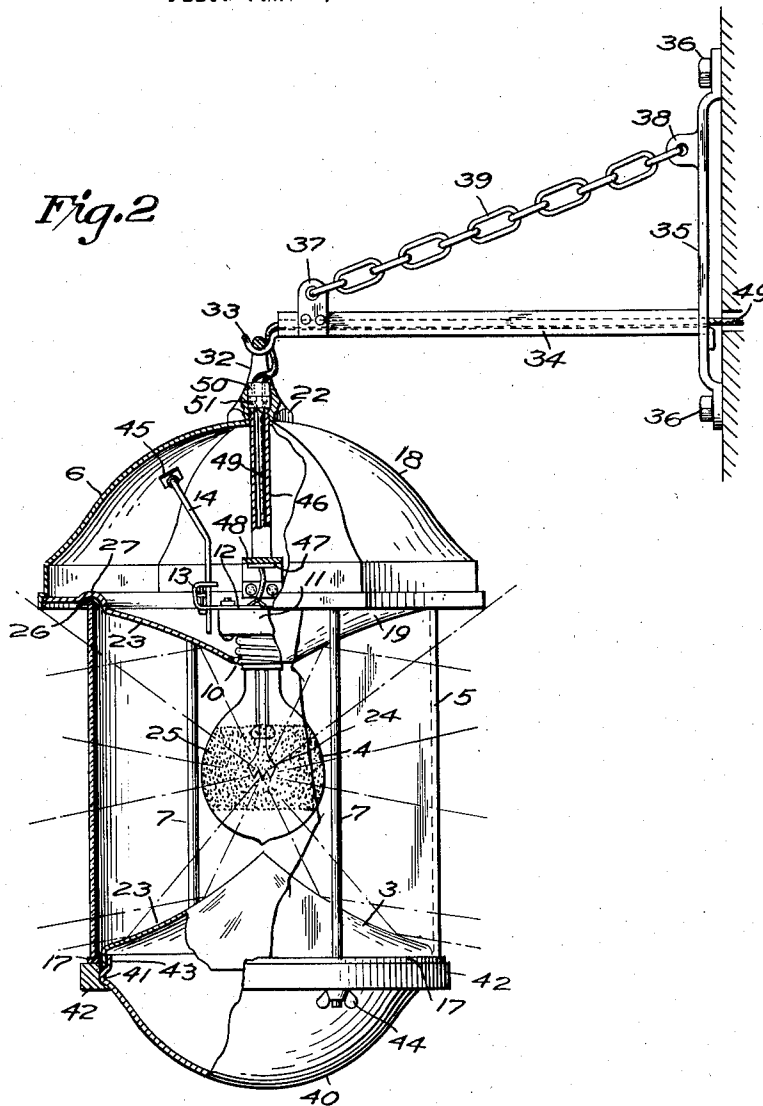
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Fig. 2



WITNESSES:

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UNITED STATES PATENT OFFICE.

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ELECTRIC-LAMP STRUCTURE

Application filed January 5, 1921. Serial No. 435,213.

To all whom it may concern:

Be it known that I, JOHN R. TOWNSEND, a citizen of the United States, and a resident of South Bend, in the county of St. Joseph and State of Indiana, have invented a new and useful Improvement in Electric-Lamp Structures, of which the following is a specification.

My invention relates to lamp structures and particularly to electric-lamp structures of the post or pendant type.

One object of my invention is to provide a lamp structure, of the above indicated character, that shall be simple and durable in construction, economical to manufacture, effective in operation and attractive in appearance.

Another object of my invention is to provide a non-glare lamp structure that shall be of substantially maximum light-giving qualities for a lamp of this type.

A further object of my invention is to provide a lamp structure of the post or pendant type that shall be protected against the weather, that shall embody a combination cover-and-reflector structure and that shall be constructed of interfitting and interlocking parts to render the latter readily accessible and renewable.

In practicing my invention, I provide an ornamental lamp structure having a supporting base portion upon which a cylindrical or tubular globe is vertically disposed to support a combination cover-and-reflector structure at its upper end.

Locking rods, supported vertically in the base portion, are provided with operating means at their lower ends and with means, at their upper ends, to secure the cover structure to the globe and to hold the cover and the globe in position.

Reflectors of substantially cone shape are disposed in point-to-point relation above and below an incandescent lamp that may be mounted at the tip or apex of one of the reflectors. The reflectors, while of substantially cone shape, have inversely-curved parabolic sides having a common focal point at which the light-giving element is disposed.

A translucent or diffusing band on the lamp bulb is provided to prevent the direct emission of light rays and is so shaped

and related to the reflectors as to direct the light toward the latter and to, thereby, effectively utilize substantially all of the reflecting surface area.

Figure 1 of the accompanying drawings is a view, partially in section and partially in elevation, of the top portion of a lamp post or pedestal forming a part of a lamp structure constructed in accordance with my invention and

Fig. 2 is a similar view of a modified form of my invention as applied to a lamp structure of the pendant type.

As shown in Fig. 1, my device comprises, in general, a base member 1 mounted on a post or pedestal 2, a lower reflector 3, mounted on the base member 1, a lamp 4, a globe 5, supported on the base member 1, and a combination cover-and-reflector structure 6 secured in position and adapted to hold the globe 5 in position by co-operation with locking or clamping rods 7 that are mounted in the base member.

The base member 1 has a top portion 8 of relatively great area on which a flange 9 is formed to position the reflector 3. The latter is, preferably, constructed of relatively thin sheet material of substantially conical shape and may be provided with an opening 10, at its apex, for the reception of the lamp 4 that is mounted in a usual insulating socket 11. The socket 11 is adjustably mounted by means of a bridging member 12 having clamp or clutch end portions 13 for co-operation with vertical rods 14 secured, as by screws 15, to an internal flange 16 on the base member 1. An annular ring or seat member 17, of felt, or other suitable material, may be provided on the portion 8 around the base of the reflector 3 for the reception of the globe 5 that is, preferably, of plain cylindrical, or other tubular, form throughout its length.

The structure 6 has a hollow dome, or shell, cover portion 18, preferably constructed of relatively thin sheet metal, to which a depending reflector member 19, of substantially inverted cone shape and, also, of relatively thin material, may be secured by a bolt 20. The bolt 20 may be secured, at its lower end 21, to the reflector 19, as by welding, and, at its upper end, may be held in position by a nut 22.

The reflectors 3 and 19, while of substantially cone shape, have annular inversely-curved reflecting surfaces 23 of parabolic contour that are developed from a common focal point, at which an incandescent light-giving element 24 of the lamp 4 is disposed. The reflectors 3 and 19 are disposed in point-to-point relation and coaxially aligned with a lamp 4. The bulb of the lamp 4 may be frosted, enameled or otherwise provided with a translucent or light-retarding band 25 to prevent the emission of certain light rays, such as indicated by lines A, to, thereby, render the lamp non-glaring and to direct incident light rays, as indicated by lines B and C, toward the reflectors 19 and 3, respectively. The upper and lower edges of the band 25 are disposed to limit the incident light rays so as to substantially just cover the entire reflecting areas of the reflectors 19 and 3, as indicated by lines D and E. The reflectors 19 and 3 may be arranged to direct reflected light rays, as indicated by lines F and G, in any desired direction, depending on the area and height of the conical reflectors and their relation to the element 24.

A ring 26 of felt, or other material, may be disposed in a depressed annular groove 27, in the reflector member 19, for positioning the structure 6 on the globe 5. The clamping rods 7, preferably of relatively small diameter to avoid obstructing the light rays, are supported in screw-threaded relation to the portion 8 of the base member 1 and are provided with handles 28 at their lower ends. The upper ends 29 of the rods 7 are adapted to extend through openings 30 in the reflector member 19 and are provided with laterally-extending clamping-key or locking projections 31 adapted to bind the structure 6 of the globe 5 and the member 1 longitudinally together, when the rods 7 are turned by means of the handles 28. The openings 30 and the projections 31 have substantially lock-and-key relation that, in certain angular positions of the rods, permit the free mounting or dismounting of the structure 6 and that both lock and clamp the members together when the rods 7 are turned.

An eyelet 32, or other device, may be formed integral with the nut 22 for convenience of manipulation of the structure 6.

As shown in Fig. 2, in which corresponding parts are designated by corresponding reference numerals, the structure is similar to the above described structure, but is adapted as a pendant lamp in which it is suspended, by the eyelet 32, from a hook 33 secured to one end of a channel beam or other device 34. The latter may be secured, at its other end, to a wall plate 35

that is adapted to be suitably positioned, as by bolts 36. Eye members or portions 37 and 38 on the members 34 and 35, respectively, are adapted for the reception of a chain 39 to reinforce the beam 34.

In the place of the post 2 and the base member 1, of the structure shown in Fig. 1, a pressed-metal member 40, of substantially bowl shape and having an annular flange or projecting bead 41 fitted into a ring 42 may be provided. The upper edge 43 of the member 40 takes the place of the flange 9 for positioning the lower reflector 3 and the rods 7, instead of being turnable, may be rigidly secured, at their upper ends, to the structure 6 and extend loosely through openings in the ring 42 for the reception of thumb nuts 44.

In this form, the opening 10 is provided in the upper reflector 19, instead of in the lower reflector 3, and the rods 14 are secured to the member 18, as by socket members 45. Also, in the place of the bolt 20, a tube 46, having a threaded upper end co-operating with the nut 22, and a flanged lower end 47 may be provided. A bridging member 48 embraces, at its center, the flanged end 47 of the tube 46 and has its ends secured to the under side of the groove 27. This structure is occasioned by reason of the fact that the lamp, in this form, occupies part of the space occupied by the bolt 20 in the form shown in Fig. 1. Conducting leads 49 may be provided with plug and socket members 50 and 51, respectively, adjacent to the upper end of the tube 46 to permit the circuit to be disconnected and the lamp structure lifted from the hook 33.

While I have shown my invention in its preferred forms, it is to be understood that it is susceptible of various modifications by those skilled in the art without departing from the spirit and scope thereof as set forth in the appended claims.

I claim as my invention:—

1. A lamp fixture comprising a light source provided with a transparent portion for permitting free passage of light rays upwardly and downwardly and an intermediate portion for restricting the direct passage of horizontally projected light rays therethrough, a pair of curved reflectors arranged inversely to each other disposed above and below said light source for reflecting all such direct rays as pass through said transparent portions of said light source, said reflectors being so shaped as to direct all reflected rays downwardly in planes at a small angle to the horizontal.

2. A lamp fixture comprising a base member, a globe and a canopy, means for locking said globe and canopy to said base comprising a rod, one end of which is threaded in said base and the other end of which is provided with a key member, means

in said canopy for admitting said key member and means for rotating said rod to lock said base, globe and canopy together. threaded at one end in said base, a key on the other end of said rod and means for manually operating said rod. 10

3. A lamp fixture comprising a base member, a lamp and a globe supported thereon, a cover member provided with a key receiving means disposed over said globe, a rod In testimony whereof, I have hereunto subscribed my name this 23rd day of Dec., 1920.

JOHN R. TOWNSEND.