J. MERSING.

ELECTRIC LAMP.

APPLICATION FILED MAY 10, 1916.

1,249,652.

Patented Dec. 11, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

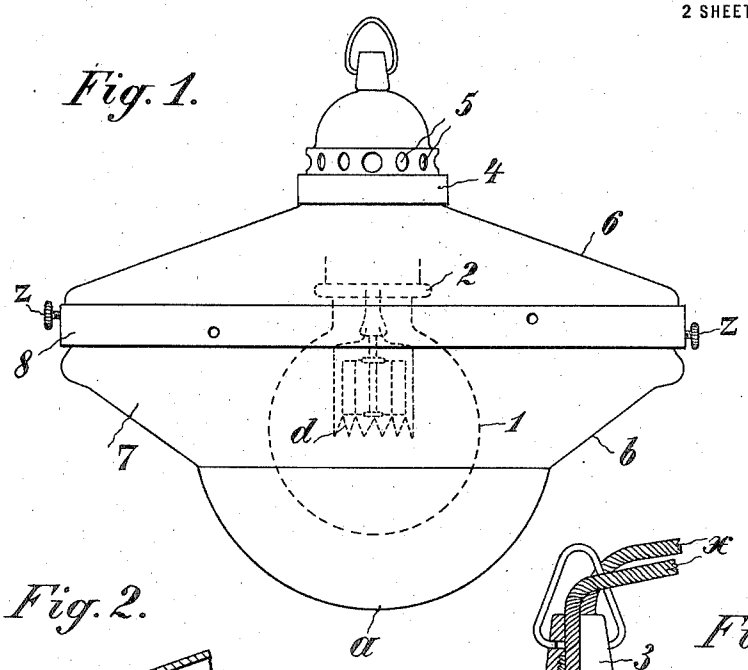


Fig. 2.

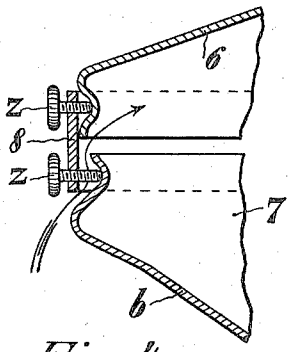


Fig. 3.

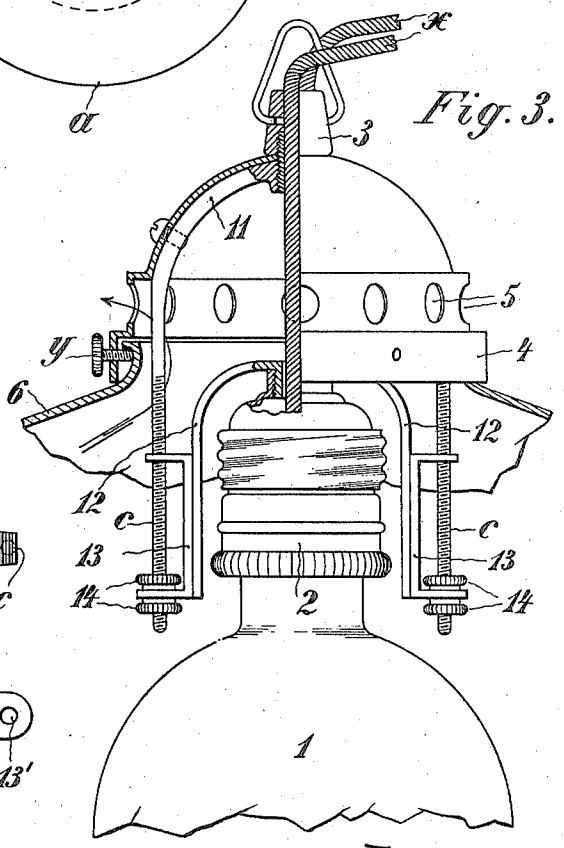


Fig. 4.

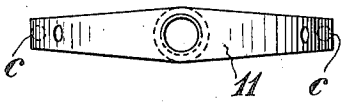
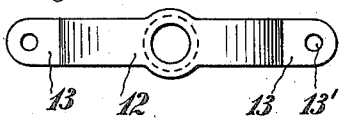


Fig. 5.



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Inventor:—
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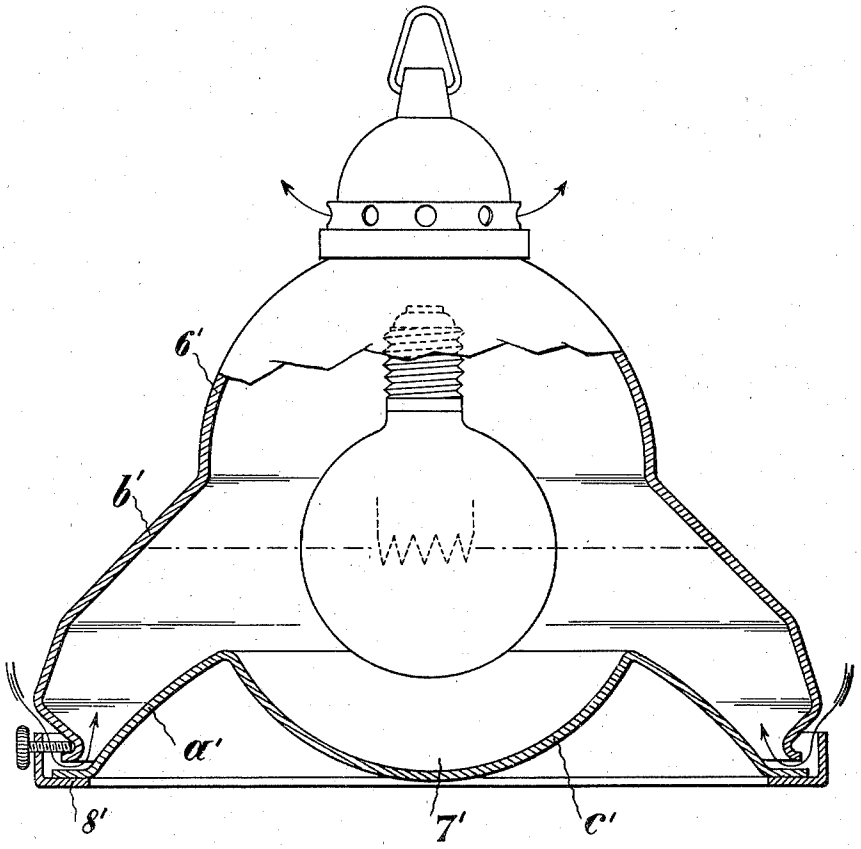
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2 SHEETS—SHEET 2.

Fig. 6.



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UNITED STATES PATENT OFFICE.

JOSEF MERSING, OF ZOLLIKON, NEAR ZURICH, SWITZERLAND.

ELECTRIC LAMP.

1,249,652. Specification of Letters Patent. Patented Dec. 11, 1917.

Application filed May 10, 1916. Serial No. 96,545.

To all whom it may concern:

Be it known that I, JOSEF MERSING, a citizen of the Swiss Confederation, and residing at Zollikon, near Zurich, Switzerland, have invented certain new and useful Improvements in Electric Lamps, of which the following is a specification.

The present invention has reference to improvements in electric lamps, and relates more particularly to reflectors for electric lamps of the incandescent filament type, and the invention essentially has for its object to provide improved reflecting means in connection with such lamps for enhancing the luminous effect by controlling especially the more or less horizontally directed light rays emanating from the incandescent filament.

The nature of my invention will best be understood when described in connection with the accompanying drawings, in which Figure 1 shows a side elevation of a preferred form of reflector housing construction; Fig. 2 represents a section through the rim of the assembled reflector halves; Fig. 3 shows a section, partly in elevation, of the upper part of the lamp housing; Figs. 4 and 5 show top views of detail parts used for adjusting the position of the bulb relative to the reflecting surfaces, and Fig. 6 represents a side elevation, partly in section, of a modification.

Referring to Figs. 1–5, the lamp proper 1 with its filament d is retained in the socket 2, to which the wires x are connected up in well known manner. The lamp is entirely inclosed in the two-part reflector housing, whose upper part, the hood 6, is secured to the metal dome 4 in any suitable manner, for instance by the thumb screws y, and the dome 4 is provided with air vents 5 and is rigidly secured to the suspension nipple 3. The lower, substantially dish-shaped part 7 of the reflector is suspended from the upper hood 6 by means of a carrier annulus 8, thumb screws z engaging the profiled facing rims of the two halves and retaining them in such relative position that a circumferential slit is obtained for allowing the ingress of cooling air, which rises and passes out again through the orifices 5 in the dome, as indicated by the arrows in Figs. 2 and 3. The bottom glass 7 comprises a lower, semiglobular portion a and a truncated cone portion b. The latter portion constitutes the actual reflecting surface, and the central portion a may be clear or frosted.

To the dome 4 and the nipple 3 is rigidly secured a yoke member 11, whose two depending shanks are in the form of screw bolts c, and into the central passage of the socket 2 is screwed from above a yoke member 12, the two depending legs of which present laterally extending guide brackets 13 (Figs. 3 and 5) with end holes 13′ for loosely receiving the screw bolts c. Nuts 14 on the latter serve to adjust the relative vertical position of the lamp within the reflector housing for correctly focusing the bulb.

The upper hood 6 is translucent, so that the light rays emanating more or less horizontally from the filament d are deflected upwardly onto the ceiling or a special reflecting surface above the lamp housing, not shown, whence they are reflected downwardly into the space to be illuminated.

In the modification, shown in Fig. 6, the hood 6′ is of opaque material, for instance opal glass, and its conical portion b' serves as reflector proper, for deflecting the horizontal light rays in downward direction. To the beaded or fluted rim of the cover glass 6′ is secured the angular supporting annulus 8′, which serves to retain the lower cover glass 7′ in relative position with due allowance for the ingress of cooling air. This bottom glass 7′ comprises an upwardly curved transparent portion a', and a central, globular portion c', preferably frosted on its inner face and polished on its outer face, to prevent the outside accumulation of dust and the like. The rays thrown downwardly by the reflector b' pass through the transparent portion a' and are more or less diffused thereby, depending upon its curvature. The focusing mechanism, not shown in this figure, is advantageously the same as above described with reference to Fig. 3.

The bulb 1 in the two constructions of reflector housing shown and described is so adjusted by manipulation of the nuts 14 that a horizontal plane passing through the center of the incandescent filament passes also through the circumferential center of the reflecting portion b (b'), as indicated by the broken line in Fig. 6.

By reason of the adjustability of the bulb within the reflector housing, one and the

same housing can readily accommodate different sizes of lamps.

It is obvious that by thus taking care of the horizontally directed filament rays, which in other types of reflectors are more or less neglected, the actual output in light is greatly enhanced.

What I claim is:—

1. A reflector housing for incandescent lamps comprising in combination with the lamp a hood, a reflector portion, means for connecting the upper and lower portions thereof, an adjustable means supported within the hood for moving the lamp therein, for directing the light rays from the lamp in different directions.

2. In a reflector housing for electric incandescent lamps, means for focusing the lamp proper relative to the reflector, comprising in combination with the suspension nipple and the socket, a yoke member secured to said nipple and its two depending shanks constituting screw bolts, a second yoke member secured to said socket and its two depending shanks presenting laterally extending guide brackets adapted to be guided on said screw bolts, and means for adjustably retaining the said two yoke members in relative operative position.

3. In a reflector housing for electric incandescent lamps, in combination, a suspension nipple, a dome thereon having air vents, a yoke member on said dome and its depending shanks constituting screw bolts, a lamp socket, a yoke member on said socket and its depending shanks constituting guide brackets in relative operative position, a screw bolts, means in connection with the latter for adjustably retaining said guide brackets in relative operative position, a transparent upper housing part secured to said dome, a lower housing part presenting a reflecting annulus of truncated cone shape, and means for spacedly interconnecting the said two housing parts.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEF MERSING.

Witnesses:
CARL GUBLER,
BERTHA C. GROB.