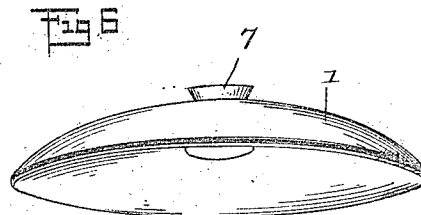
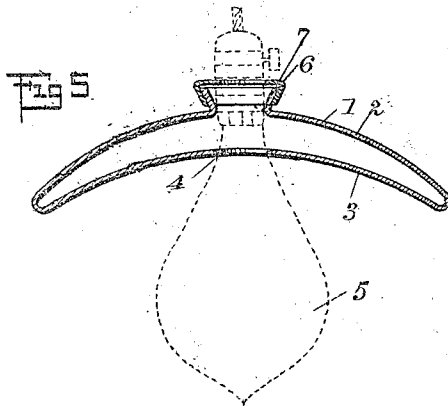
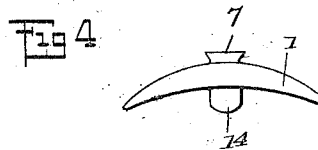
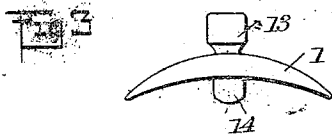
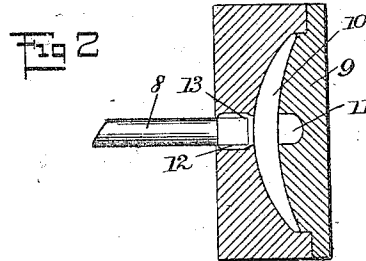
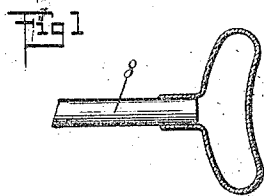


L. KAUFFELD.
METHOD OF MAKING REFLECTORS.
APPLICATION FILED APR. 15, 1911.

1,024,264.

Patented Apr. 23, 1912.



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LOUIS KAUFFELD, OF STAR CITY, WEST VIRGINIA.

METHOD OF MAKING REFLECTORS.

1,024,264.

Specification of Letters Patent.

Patented Apr. 23, 1912.

Application filed April 15, 1911. Serial No. 621,270.

To all whom it may concern:

Be it known that I, LOUIS KAUFFELD, a citizen of the United States, and a resident of Star City, in the county of Monongalia and State of West Virginia, have invented a new and Improved Method of Making a Reflector, of which the following is a full, clear, and exact description.

This invention relates to a new and improved method of making reflectors for lamps of any character, such as electrical or gas.

An object of this invention consists in a new and improved method for manufacturing a hollow curved reflector.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a sectional view showing one step in the method; Fig. 2 is a sectional view showing another step in the method; Figs. 3, 4, and 7 illustrate succeeding steps in the method of making the reflector; Fig. 5 is a section through a completed reflector, showing it in position on an electric lamp; and Fig. 6 is a perspective view of a completed reflector.

Referring more particularly to the separate parts of this invention as embodied in the form shown in the drawings, 1 indicates a completed reflector, which is shown as attached to an electric lamp in Fig. 5, but is adapted to be used in connection with any type of illuminating device.

As will be seen, this reflector which is the result of my improved process to be hereinafter fully described is in the form of a hollow concavo-convex member, having a top disk 2 with a convex outer surface and a concave inner surface, connected at its lower circumferential edge to a lower disk 3, having a convex inner surface and a concave outer surface. The disk 3 is shown as being provided with an aperture or opening 4, through which may extend any suitable illuminating device, such as the neck of the electric bulb indicated in dotted lines at 5 in Fig. 5. The disk 2 is also provided with an aperture or opening 6, substantially centrally located and also located in alinement with the opening 4, so that the same illuminating device can pass therethrough. Extending upwardly from the surface of the disk 2,

around the aperture 6, there is provided a flange 7, which preferably flares slightly, so as to form means whereby the reflector can be secured to an illuminating device of any character.

It will be noted that by reason of the hollow form of the concavo-convex reflector, the disks 2 and 3, which are integral with each other, have different radii of curvature; that is to say, the lower disk 3 has a shorter radius of curvature than the upper disk 2.

Having disclosed the article itself, the method of making the same will now be considered. A blow pipe 8 of any suitable character is dipped into a molten bath of any suitable material, such as glass, and the ball of glass adhered thereto is blown into the form of a hollow ball, which is flattened to substantially the form shown in Fig. 1, by rotating, poising and manipulating the blow pipe during the blowing operation. The bulb of glass blown in this form is then inserted in a mold provided with a movable bottom, indicated at 9, which is provided with a concavo-convex cavity 10, from the center of the convex side of which is provided a recess 11 of a bulbular form. The blow pipe itself extends into a passage 12 communicating with the cavity 10, and is of sufficient magnitude to permit a neck 13 to be formed on the reflector between the blow pipe 8 and the cavity 10. When the bulb is inserted in the mold 9, the blow pipe is held in a horizontal position, and the blowing operation continued, with a constant rotation of the blow pipe, so that the action of the air, in filling out the cavity 10 with the molten bulb of glass, will be aided by the centrifugal force due to the rotation and by compression of the bulb through the two portions of the mold being brought closer together. When the bulb has entirely filled the mold, the reflector will be in its incomplete form, and can be removed from the mold, on cooling. This form is shown in Fig. 3. The nipple, indicated at 13, can then be removed by cutting the same away from the body of the reflector with a diamond or other glass-cutter, so as to leave the flange 7 in the form of a neck having an opening therethrough, as clearly indicated in Fig. 4. The bulb, indicated at 14, which filled the cavity 11 in the mold 9, can then be cut away, leaving the opening 4, as indicated in Fig. 5, and reducing the reflector to the form shown in Figs. 6 and 7.

It will thus be seen that there is formed a new and improved hollow reflector, which will give a high efficiency and have an attractive appearance, by a new and improved method.

While I have shown one embodiment of my invention, I do not wish to be limited to the specific details thereof, but desire to be protected in various changes, alterations and modifications which may come within the scope of the appended claims.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. The method of making a reflector, which consists in forming, by blowing and manipulation of a bulb of molten glass, a double-walled hollow member of concavo-convex form, producing the true form of the reflector by filling out the cavities of a mold with the bulb of glass so as to form a concave outer face on one wall and a convex outer face on the other wall, forming a projection extending outwardly from said concave face, substantially at the center thereof, and subsequently removing said projection so as to form an opening through said wall having said concave outer face.

2. The method of making a reflector,

which consists in forming, by blowing and manipulation of a bulb of molten glass, a double-walled hollow member of concavo-convex form, producing the true form of the reflector by filling out the cavities of a mold with the bulb of glass so as to form a concave outer face on one wall and a convex outer face on the other wall, forming a projection extending outwardly from said concave face, substantially at the center thereof, also forming a projection extending outwardly from the concave outer face substantially at the center thereof, and subsequently removing the whole of said first-mentioned projection to form an opening through one of said walls, and removing a portion of said second-mentioned projection to form a lip extending upwardly from said convex face, with an opening therethrough extending in alinement with said first-mentioned opening.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LOUIS KAUFFELD.

Witnesses:

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L. A. SUNDMACHER.