

Feb. 12, 1924:

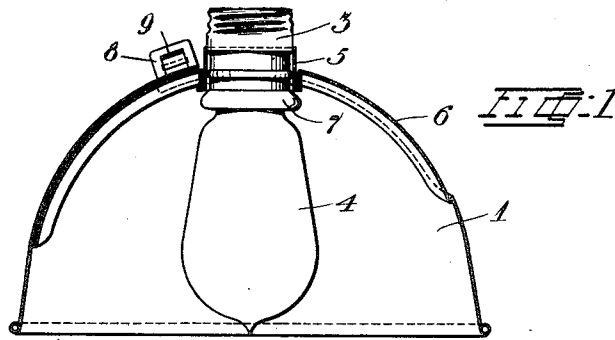
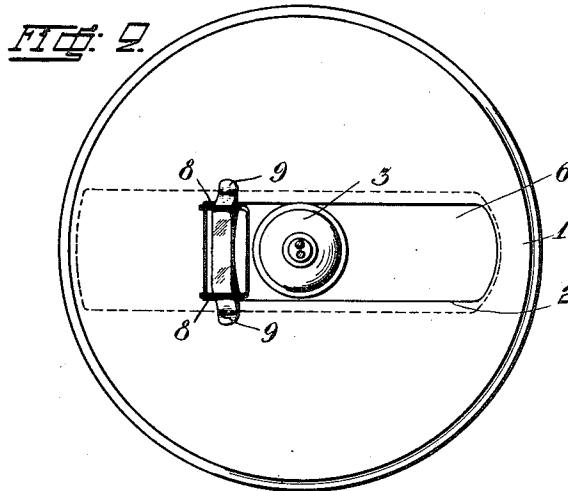
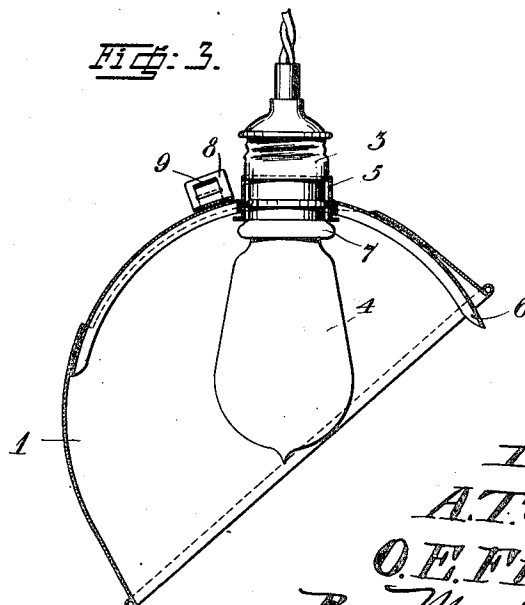
1,483,306

A. T. JULIN ET AL

ADJUSTABLE REFLECTOR FOR LAMPS AND THE LIKE

Filed April 21, 1922

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

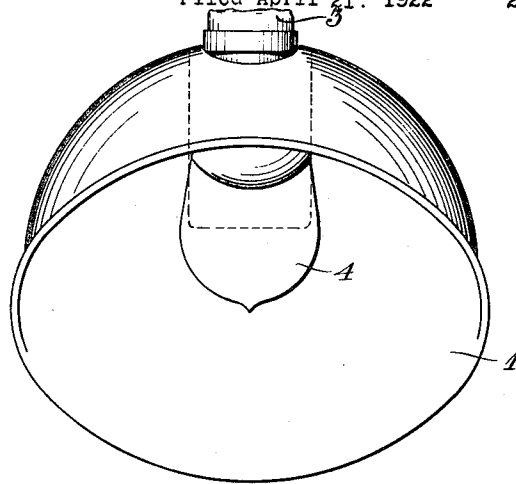


Fig. 5.

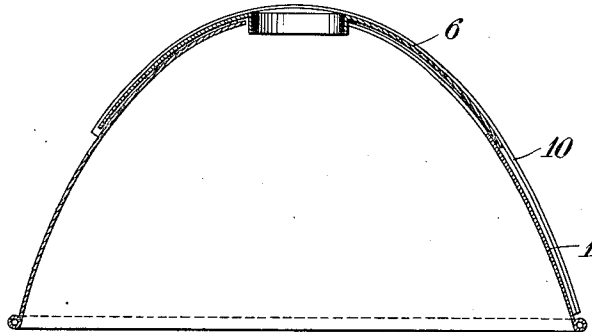
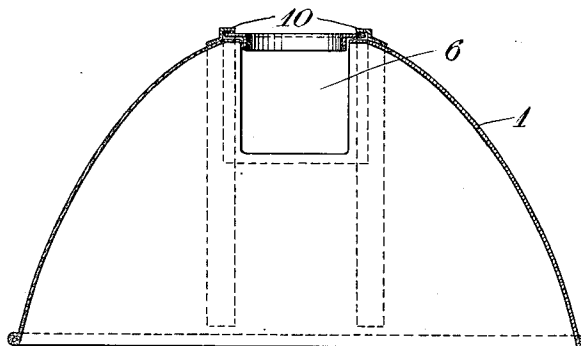


Fig. 6.



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Patented Feb. 12, 1924.

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UNITED STATES PATENT OFFICE.

AXEL THEODOR JULIN AND OLOF EINAR FRÖDING, OF ESKILSTUNA, SWEDEN, ASSIGNORS TO AKTIEBOLAGET SEPARATOR, OF STOCKHOLM, SWEDEN, A CORPORATION.

ADJUSTABLE REFLECTOR FOR LAMPS AND THE LIKE.

Application filed April 21, 1922. Serial No. 555,826.

To all whom it may concern:

Be it known that we, AXEL THEODOR JULIN and OLOF EINAR FRÖDING, subjects of the King of Sweden, residing at, respectively, Vestermarksgatan 26, Eskilstuna, Sweden, and Stensborg 12, Eskilstuna, Sweden, have invented certain new and useful Improvements in Adjustable Reflectors for Lamps and the like, of which the following is a specification.

The present invention has for its object to provide a reflector for lamps and the like which is adjustable in such a manner that the light reflected thereby may be directed in different directions. In the arrangements of this kind as heretofore known, the reflector, as a rule, is connected with the lamp in such a manner that the latter will take part in the movements of the reflector when it is adjusted to a certain, for instance an oblique position. In certain types of lamps, however, the action or the durability of the lamp is dependent on its always being permitted to maintain a vertical position. As is well known, this is the case for example with electrical incandescent lamps which, preferably, should have such a position that their filaments are as nearly as possible vertical, in that they will then better withstand shocks and vibrations. This is also the case with incandescent gas-light lamps.

The invention relates to an adjustable reflector which is so devised that it may be adjusted in various inclinations, without the position of the lamp having to be altered. For this purpose the invention principally consists therein that an opening is provided in the reflector through which the lamp or a lamp-carrying member extends, the said opening having such a range that the lamp or the carrying member is displaceable therein in a lateral direction. In order that no part of the useful reflecting portion of the reflector shall be lost through this opening, a cover plate may preferably be connected with the lamp or the carrying member thereof, said cover plate taking part in the displacement of the carrying member relatively to the reflector, and having such a width and length as to always cover those parts of the opening which are not occupied by the lamp or the carrying member.

In the accompanying drawing, two embodiments of the invention are shown by

way of example. Fig. 1 illustrates a reflector for an electric incandescent lamp in vertical section and arranged according to the invention, and Fig. 2 shows the same reflector in plan view. Figs. 3 and 4 show, in section and in elevation respectively, the reflector adjusted to another position relatively to the lamp. Figs. 5 and 6 show a somewhat modified embodiment of the reflector, in two vertical sections at right angles to each other.

In the embodiment shown in Figs. 1-4, 1 denotes the reflector proper, the upper portion of which is shaped as a spherical cap. In this part of the reflector there is provided an opening shaped as an oblong slot 2 of such a width that the holder 3 for the electric incandescent lamp 4 and the sleeve 5 surrounding the holder may be adapted in the opening and be displaced in the slot. The remaining portion of the slot is covered by a cover plate 6 arranged on the inside of the reflector, said cover plate being also spherically shaped with the same radius of curvature as the reflector, and of such a length that it will always cover the slot in different positions of the reflector relatively to the lamp holder. The cover plate is provided with a circular aperture for the sleeve 5 and rests on the flange thereof, said flange being in turn carried by the porcelain nut 7 of the lamp holder, so that the cover plate and thus the whole reflector may be rotated around the lamp holder.

Attached to the top side of the cover plate 6 is a sheet-metal strip having the ends 8 thereof turned upwardly, said ends protruding up through the slot in the reflector and being provided with narrow slits through which is threaded a spring leaf 9 which is bent so as to bear against the top side of the reflector with the ends thereof, and which keeps the cover plate in contact with the inside of the reflector through the resiliency thereof, without preventing the displacement of the two parts relatively to each other. The upwardly bent ends of the sheet-metal strip 8 serve, together with the sleeve 5, to guide the cover plate relatively to the reflector so that the slot of the latter is always covered. Fig. 3 shows a section of the reflector when a displacement between the two parts has taken place. The reflector then assumes an inclined position so that the light rays are reflected obliquely

downwards to the right, while the lamp proper maintains its vertical position. Furthermore, as the reflector may be turned around the lamp holder, as mentioned above, it will be easily understood that by this twofold movement, the light may be directed toward any point situated under a horizontal plane through the lamp without the lamp itself being moved from its place. Obviously, the cover plate 6 should also be polished, enameled or lacquered on the inside, so that it reflects the light in the same way as the remaining portions of the reflector.

Evidently, the embodiment described may be modified in many ways with respect to the shape of the reflector, the position of the cover plate on the in- or outside, and the guiding device of the cover plate. Thus the reflector need not necessarily be spherical in the portion wherein the slot is provided. If the cover plate is made resilient, it may be caused to follow a rather arbitrary shape of the reflector if suitably guided in its mounting on the in- or outside of the reflector. In this case the spring 9 will be omitted. Such an embodiment of the reflector, which is also intended for electric incandescent lamps, is shown in Figs. 5 and 6. According to these figures, the resilient cover plate 6 is guided in guides 10 disposed along the edges of the slot in the reflector 1.

If the holder of the light-producing body is of so small dimensions that the area of the slot provided in the reflector is of little consequence with respect to the whole surface of the reflector, the cover plate may be shortened so as not to cover the whole slot for all positions of the reflector, or it may be entirely replaced by a member having only for its purpose to support the reflector and to retain it in various positions.

What we claim as new and desire to secure by Letters Patent of the United States is:—

A reflector for lamps and the like including in combination with a lamp carrying member, a reflecting body provided with a slot for the displacement of the lamp carrying member, a plate connected with the lamp carrying member and covering the slot in the different positions of the reflector relative to the lamp carrying member, and a spring device connected with the cover plate the fore ends of which press on the side of the reflector body opposite to that with which the cover plate contacts, substantially as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

AXEL THEODOR JULIN.
OLOF EINAR FRÖDING.

Witnesses:

K. PETTERSSON,
G. LARSSON.