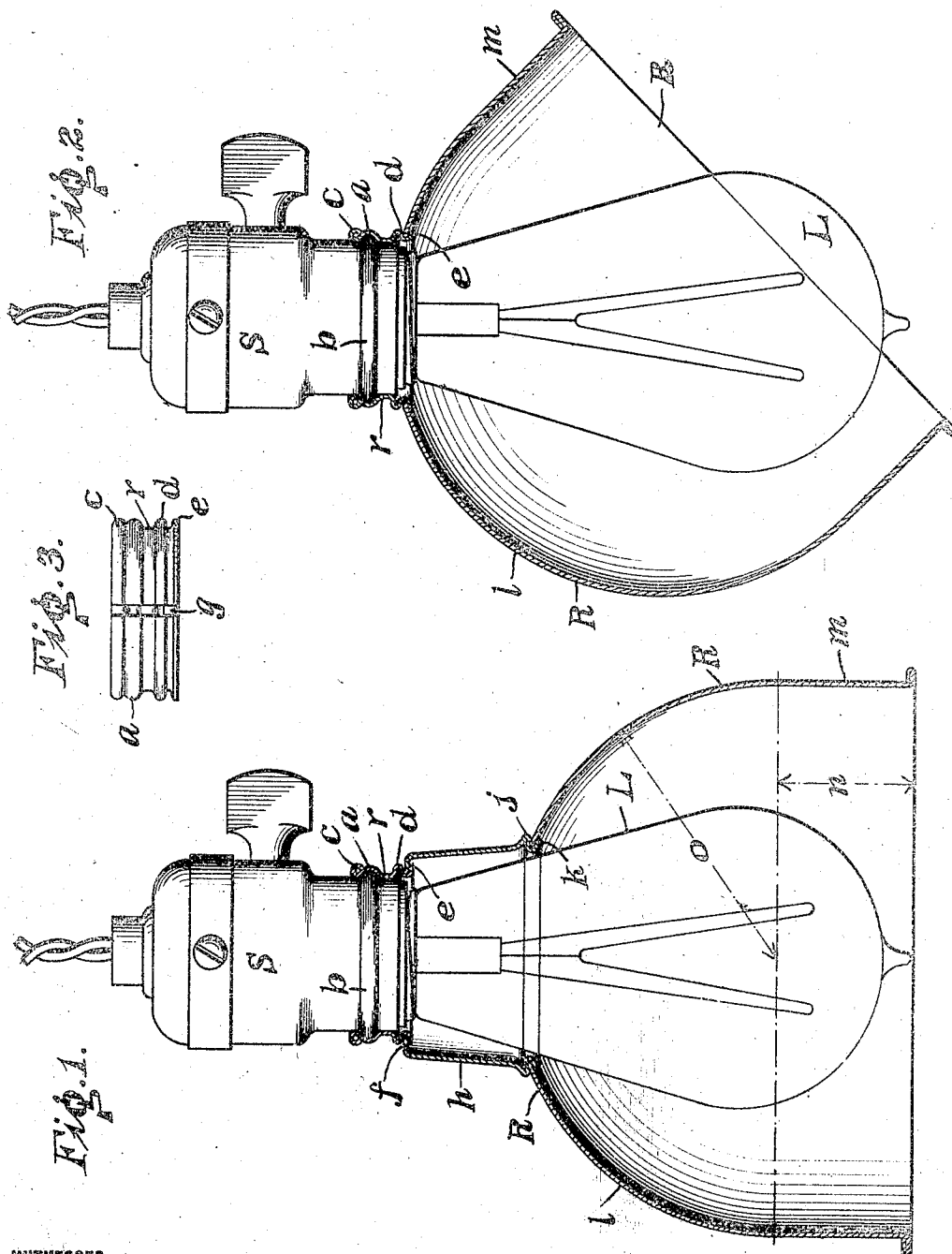


H. D'OLIER, JR.
REFLECTOR AND ATTACHMENT THEREFOR.
APPLICATION FILED APR. 15, 1909.

957,148.

Patented May 3, 1910.



WITNESSES

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UNITED STATES PATENT OFFICE.

HENRY D'OLIER, JR., OF RUTHERFORD, NEW JERSEY.

REFLECTOR AND ATTACHMENT THEREFOR.

957,148.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HENRY D'OLIER, JR., a citizen of the United States, residing at Rutherford, in the State of New Jersey, have invented certain new and useful Improvements in Reflectors and Attachments Therefor, of which the following is a specification.

My invention relates to a shade or reflector to be used in connection with electric incandescent lamps whose incandescing filaments are relatively long and so disposed as to have considerable length or extent as compared with the reflector dimensions.

My invention resides in a metallic shade or reflector for use in the relation above mentioned, and comprises a sheet metal shade or reflector having a hemispherical portion with an integral cylindrical extension, which may be spun or pressed out of sheet metal by any well known process. By a shade or reflector of such construction I procure an improved distribution of light from an ordinary incandescent lamp such as above described.

My invention resides in the features hereinafter described and claimed.

For an illustration of some of the forms my invention may take, reference is to be had to the accompanying drawing, in which:

Figure 1 is a vertical elevational view of an electric incandescent lamp and socket with the shade or reflector and attachment shown in section, the attachment being relatively long with the resultant concentration effect on the part of the reflector. Fig. 2 is a vertical elevational view of an electric incandescent lamp and its socket, the shade or reflector being attached with its axis at an angle with the axis of the lamp and with a shorter shade or reflector attachment whereby a diffusing and dispersing effect is obtained. Fig. 3 is a side elevation view of the split ring member.

The surface of the substantially hemispherical portion *l* and the surface of the substantially cylindrical extension *m* are both reflecting surfaces of substantially the same character.

In the drawing, *S* represents an incandescent lamp socket having a bead *b*. Within the socket engages the electric incandescent lamp *L*. A split resilient ring member *r*, shown in side elevation in Fig. 3, with the gap *g*, has a bead *a* which registers with the socket bead *b*. The ring member *r* has

a reinforcing or stiffening bead *c*. It also has the bead shoulder *d* between which and the flange *e* is adapted to engage the inverted flange *f* of the extension member *h*. The ring member *r* being split at *g* is circumferentially resilient and can be sprung into the opening in the upper end of the extension member *h*, so that the flange *f* is engaged between the shoulders *d* and *e*. And likewise the ring member is thus capable of being sprung over the socket bead *b*. The extension member *h* can turn or rotate relatively to the ring member *r*.

At the mouth of the extension member *h* is a shoulder bead *j* between which and the spun over flange or lip *k* is engaged and held the sheet metal or other suitable shade or reflector member *R*. This shade or reflector *R* has a substantially hemispherical portion *l* with a substantially cylindrical extension *m*. The length of the cylindrical portion *m*, represented by the distance *n*, is made substantially equal to one-half of the radius *o* of the hemisphere *l*. While this relation between the cylindrical extension and the hemispherical portion may vary within substantial limits, I have found that the relation stated makes an efficient reflector, especially in the case of an incandescent electric lamp, such as *L*, whose filament or light giving source *F* has considerable length or extent as compared with the length or diameter of the shade or reflector *R* formed as above stated. When such reflector is used with the extension *h* whereby the lamp is well up within the reflector, the reflected light is concentrated.

While I have shown the extension *h* applied to the reflector *R* so that the lamp axis coincides with the reflector axis, it is to be understood that the extension *h* may be applied so that the lamp axis shall be at an angle with the reflector axis as in the case of Fig. 2.

In Fig. 2, the lamp socket and lamp are the same as shown in Fig. 1 as is also the split ring member *r*. Here, however, it is sprung over the socket bead *b* into the aperture in the shade or reflector *R* which is of the same type as shown in Fig. 1. The reflector *R* is rotatable upon the split ring member *r*. Here, however, the lamp axis is at an angle with the reflector axis, and with the lamp relatively nearer the opening of the reflector the effect is a substantial dispersion or diffusion of the reflected light.

It is to be understood also that the aperture in the reflector R which receives the ring member r in Fig. 2 may be placed at other angles than that shown and may be so placed that the lamp axis shall coincide with the reflector axis. In such case, the action is one of substantial concentration.

As above stated, the arrangement shown in Fig. 1 will give a concentration of the reflected light, while that shown in Fig. 2 will give a substantial dispersion or diffusion of the reflected light. And whether the reflector shown is used for concentration or dispersion, the hemispherical end with cylindrical extension I have found to be particularly efficient in connection with electric incandescent lamps.

What I claim is:

1. The combination with an electric incandescent lamp, of a sheet metal reflector comprising a substantially hemispherical portion with a substantially cylindrical extension integral therewith, the interior surface of said substantially hemispherical portion and the interior surface of said substantially cylindrical extension being reflecting surfaces, and means for supporting said reflector in operative relation with respect to said lamp, the lamp filament having a considerable length or extent as compared with the reflector dimensions.

2. As an article of manufacture, a sheet metal reflector for electric incandescent lamps comprising a substantially hemispherical portion with a substantially cylindrical extension integral therewith, the interior surface of said substantially hemispherical portion and the interior surface of said substantially cylindrical extension being reflecting surfaces, said cylindrical extension having a length substantially equal to one-half the radius of said hemispherical portion.

3. The combination with an electric incandescent lamp, of a sheet metal reflector comprising a substantially hemispherical portion having a substantially cylindrical

extension integral therewith, the interior surface of said substantially hemispherical portion and the interior surface of said substantially cylindrical extension being reflecting surfaces, the substantially cylindrical extension having a length approximately equal to one-half the radius of the substantially hemispherical portion, and means for supporting said reflector in operative relation with respect to said lamp, the lamp filament having a considerable length or extent as compared with the reflector dimensions.

4. The combination with an electric incandescent lamp, of a sheet metal reflector attached thereto, the lamp axis being at an angle with the reflector axis, said reflector comprising a substantially hemispherical portion and a substantially cylindrical extension integral therewith, the interior surface of said substantially hemispherical portion and the interior surface of said substantially cylindrical extension being reflecting surfaces, the lamp filament having a considerable length or extent as compared with the reflector dimensions.

5. The combination with a lamp socket, of an electric incandescent lamp supported thereby, a sheet metal reflector having a substantially hemispherical portion and a substantially cylindrical extension integral therewith; the surface of said substantially hemispherical portion and the surface of said substantially cylindrical extension being reflecting surfaces, the lamp filament having a considerable length or extent as compared with the reflector dimensions, and means for rotatably supporting said reflector upon said socket with the axis of said lamp at an angle with the axis of said reflector.

In testimony whereof I have hereunto affixed my signature in the presence of the two subscribing witnesses.

HENRY D'OLIER, JR.

Witnesses:

EDW. S. HOPKINS,
S. L. SINCLAIR.