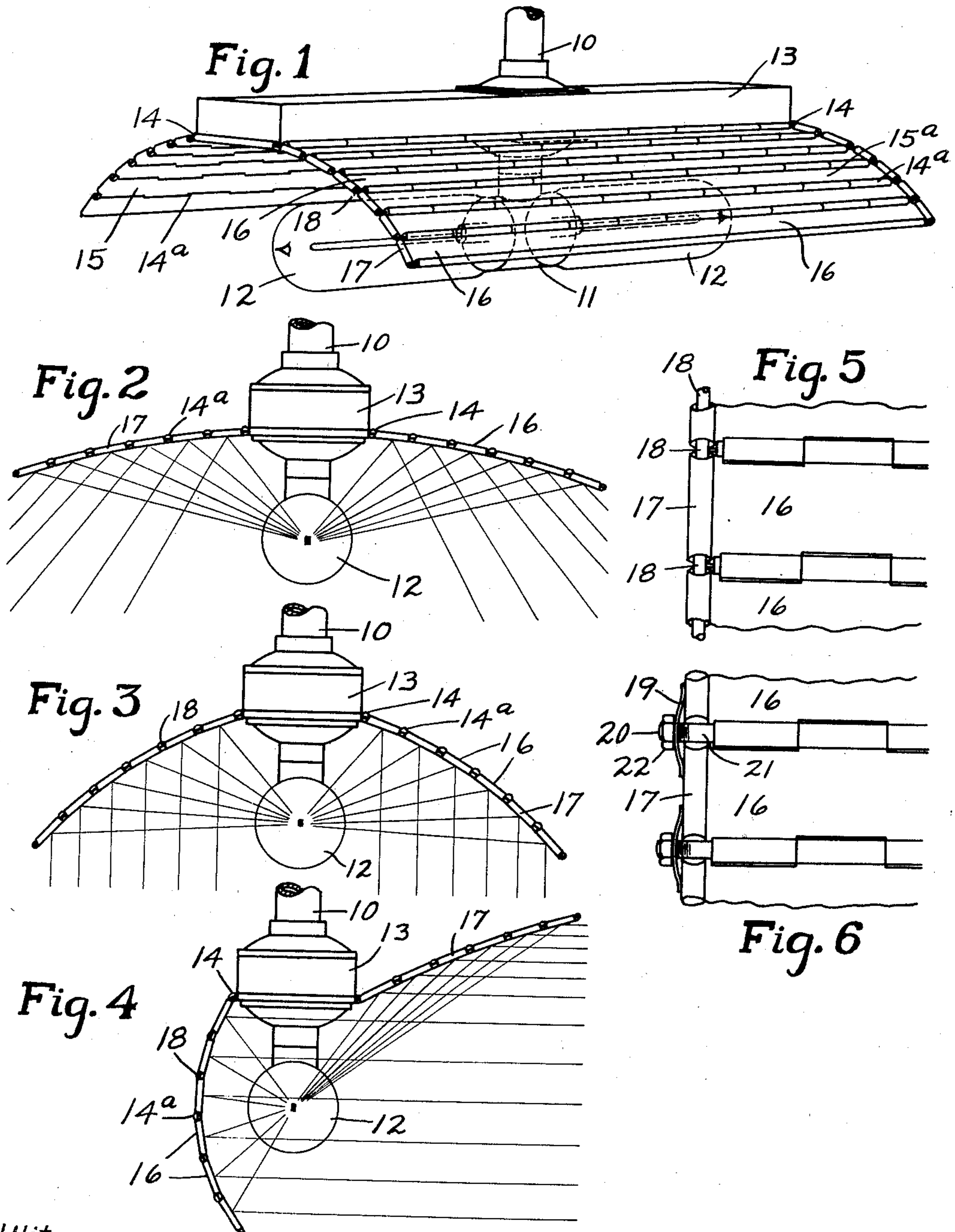


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REFLECTOR.  
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908,838.

Patented Jan. 5, 1909.



Witnesses.

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# UNITED STATES PATENT OFFICE.

ARTHUR J. BROWN, OF NORWOOD, OHIO.

## REFLECTOR.

No. 908,838.

Specification of Letters Patent.

Patented Jan. 5, 1909.

Application filed November 7, 1907. Serial No. 401,078.

*To all whom it may concern:*

Be it known that I, ARTHUR J. BROWN, a citizen of the United States, residing at Norwood, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Reflectors, of which the following is a full, clear, and exact specification.

My present invention relates to improvements in reflectors designed to be placed in proximity to and reflect the light from electric lamps or other similar sources of illumination.

The main object of my invention is to produce from a relatively fixed source of light, in an efficient and simple manner and at will, a diffused beam of light or a concentrated beam of light made up of parallel rays and capable of being directed as desired.

In carrying out the object of my invention I employ a reflector built up of a plurality of parts relatively adjustable to permit the rays of light being projected in any desired direction and in any desired form.

The invention comprises certain novel details of construction described hereinafter and specifically pointed out in the appended claims.

In the accompanying drawings, which illustrate the preferred embodiments of my invention, Figure 1 is a perspective view of my improved reflector in position adjacent to an incandescent lamp; Figs. 2, 3 and 4 are end elevations of the device shown in Fig. 1, showing the reflector in different positions of adjustment; Fig. 5 is a detail plan view of one end of the reflector showing one way of maintaining the parts of the reflector in their adjusted positions; and Fig. 6 is a detail plan view, similar to Fig. 5, showing a modification.

Referring now to the figures of the drawing, 10 indicates a support for the socket 11 of the lamps 12. Attached to this support 10 is a block 13 forming the middle member of my improved reflector. The under side of this block 13 is provided with a reflecting surface. Attached to the sides of this middle member 13, and adjustable relative thereto, preferably by being attached by hinged joints 14, are the side reflector members 15 and 15<sup>a</sup>. Each of these members 15 and 15<sup>a</sup> is made up of a plurality of rectangular shaped plates 16 having their inner surfaces polished or coated with a highly reflecting material. These plates are preferably

long and narrow strips of sheet metal. The plates are relatively adjustable, being hinged together at 14<sup>a</sup>. The ends 17 of each plate are rolled back to improve the appearance of and to assist in stiffening the reflector. These rolled back or tubular edges may form housings for the retaining rods 18 formed of non-resilient material of such nature and strength that they can be bent into any desired shape and will retain the members 15 and 15<sup>a</sup> in any form or position into which it may be found desirable to adjust them.

As a substitute for the rods 18, and to assist the friction of the hinged joints 14<sup>a</sup> in retaining the plates 16 in relatively adjusted position, the modification shown in Fig. 6 may be employed. This consists in placing spring disk members 19 on the extended ends 20 of the hinge pintles 21 between the nuts 22 on said pintles and the ends of said plates 16.

It will thus be seen that my improved reflector may assume any desired curvature dependent upon the nature and direction of light distribution that is required. Considering a pendent lamp support, such as is shown in the accompanying drawing, the reflector in Fig. 2 is adjusted to produce a diffusion of the light rays, in Fig. 3 to concentrate said rays in a parallel beam directed downwardly, and in Fig. 4, to concentrate said rays in a parallel beam directed at right angles to the support.

Certain modifications can be made without departing from the spirit and scope of my invention and I aim in the claims to cover all such modifications.

What I claim is:—

1. In combination, an electric lamp support, a reflector carried by said support, said reflector comprising a plurality of relatively adjustable plates, and means for fastening said plates together to permit the formation of a reflecting surface of any desired curvature.

2. In combination, an electric lamp support, a reflector carried by said support, said reflector comprising a plurality of relatively adjustable plates, means for fastening said plates together to permit the formation of a reflecting surface of any desired curvature, and means for retaining said plates in their adjusted position.

3. In combination, a supporting member, a lamp carried thereby, and independently adjustable reflecting members hinged to said supporting member on opposite sides of said



lamp, each reflecting member being made up of a plurality of long and narrow strips of sheet metal, and provided with means for fastening said strips together so that they may be movable relative to one another to permit being adjusted relative to said lamp and support to approximate any desired curvature of reflecting surface.

4. In combination, a supporting member, a reflecting member hinged to said supporting member, said reflecting member being made up of a plurality of long and narrow strips of sheet metal hinged together to permit their being adjusted to approximate any desired curvature, and means for retaining said strips in their adjusted position.

5. In combination, a supporting member, a reflecting member hinged to said supporting member, said reflecting member being made up of a plurality of long and narrow strips of sheet metal hinged together to permit their being adjusted to approximate any desired curvature, and rods of non-resilient material fastened to each of said sheet metal strips for the purpose of retaining same in adjusted position.

6. In combination, a supporting member, two reflecting members hinged independently to said supporting member, each of said reflecting members being made up of a plurality of long and narrow strips of sheet metal hinged together to permit their being adjusted to approximate any desired curvature, and rods of non-resilient material fastened to each of said sheet metal strips for the purpose of retaining same in adjusted position.

7. In combination, a supporting member, a reflecting member hinged to said support-

ing member, said reflecting member being made up of a plurality of long and narrow strips of sheet metal relatively hinged to permit their being adjusted to approximate any desired curvature, and means for assisting the hinged joints between said strips in holding same in any desired position.

8. In combination, a lamp support, a lamp carried thereby, and a reflector adjacent said lamp comprising members carried by said support on opposite sides of said lamp, each member of said reflector being formed of a plurality of relatively adjustable long and narrow plates having reflecting surfaces, said plates having their long edges hinged together whereby the rays from said lamp may be cast in any desired direction either as diffused rays or in a parallel beam by simply adjusting the relative positions of said plates.

9. In combination, a lamp support, a lamp carried thereby, a reflector adjacent said lamp and carried by said support, said reflector being formed of a plurality of long and narrow plates having reflecting surfaces, each plate being hinged to the next adjacent plate whereby the rays from said lamp may be cast in any desired direction either as diffused rays or in parallel beam by simply adjusting the relative positions of said plates, and means for assisting the friction in said hinged joints in retaining the desired adjustment of said plates.

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

ARTHUR J. BROWN.

Witnesses:

OLIVER W. SHARMAN,

FRED J. KINSEY.