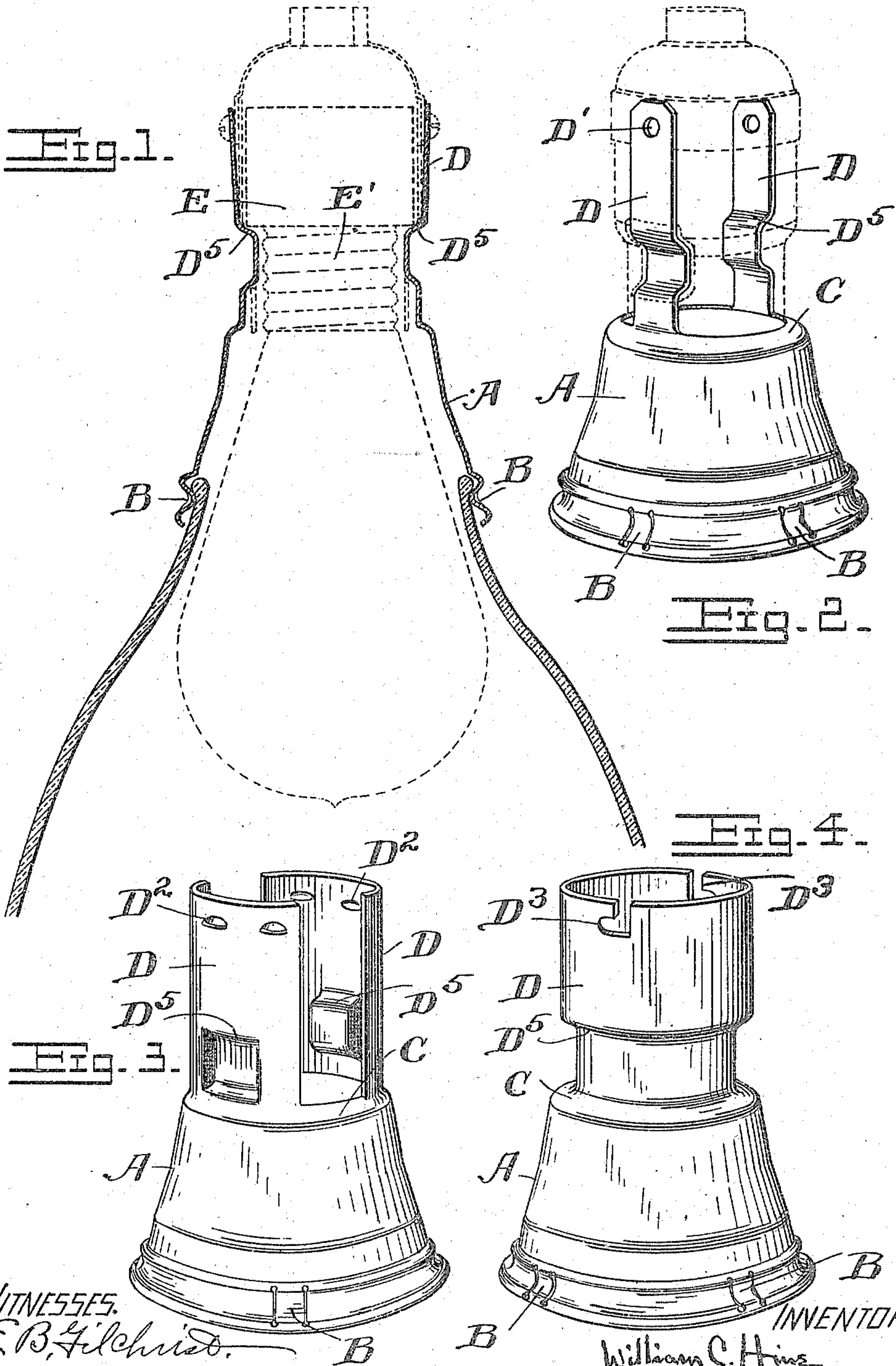


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SHADE AND REFLECTOR SUPPORT FOR LIGHTING FIXTURES.  
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Patented May 17, 1910.



WITNESSES.  
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# UNITED STATES PATENT OFFICE.

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## SHADE AND REFLECTOR SUPPORT FOR LIGHTING-FIXTURES.

957,956.

Specification of Letters Patent.

Patented May 17, 1910.

Application filed June 3, 1909. Serial No. 499,972.

*To all whom it may concern:*

Be it known that I, WILLIAM C. HINE, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Shade and Reflector Supports for Lighting-Fixtures, of which the following is a full, clear, and exact description.

The present invention is directed to supports for reflectors for incandescent lamps.

The object of the invention has been to provide a support which shall have features of construction that will permit of its being standardized so as to hold the reflectors at the point of their greatest efficiency.

In the art of lighting by incandescent lamps it has hitherto been regarded as of comparatively little consequence as to exactly where the reflector is held, relatively to the center of luminosity in the lamp, it being taken merely as a general necessity that the reflector be back of the light. The benefit of the most valuable improvements in reflectors is frequently lost owing to the difference in location, in actual use, from that for which the reflectors were designed in the experimental room. The reflectors are now designed to distribute the light in the exact zones desired, but in order to attain the effect for which they are designed it is necessary that these reflectors bear a fixed position with regard to the center of luminosity of the lamp. It has been assumed by practically all retailers and users of lamps that the use of most any of the well-known types of shade holder in conjunction with a reflector which itself is supposed to be theoretically correct would produce a satisfactory result. I have found, however, that the reflectors in common use are not at all certain and that many of them have variable elements in them which may or may not be intentionally variable but which are actually varied when in use. For example, there is a well-known shade support attached by screw threads to a collar which in turn is attached to a bead on the lamp socket. The possible variation in the adjustment of the support upon this screw thread is considerable. Furthermore, the location of the bead on the lamp socket is not at a standard distance. Consequently, it frequently happens that the center of luminosity of the lamp, which itself is fixed with relation to nothing

but the porcelain base plate to which a threaded receiving sleeve is fixed, may be frequently totally out of place with relation to a reflector held by such a support. Similar observance might be made of other well-known types of shade support but it is thought that the above example will sufficiently indicate what I desire to attain by the construction here disclosed.

Referring to the drawings illustrating several different embodiments of my invention, Figure 1 is a cross section of one form of the reflector support indicating the general relation which it bears to the porcelain base plate and the lamp when in position. Fig. 2 is a perspective view of the form illustrated in Fig. 1, the lamp socket being indicated in dotted lines so as to show the manner by which the porcelain base plate is held in fixed relationship to that portion of the support which grips the inner end of the reflector. Figs. 3 and 4 are perspective views of two other forms of the support in which the securing portions are different and stronger, the form shown in Figs. 1 and 2, perhaps, not being so well adapted for a lamp to be held in different positions.

The support here illustrated comprises a skirt A having means B at the lower edge thereof for gripping the usual flange at the inner end of a shade or reflector. The form of gripping means is immaterial, it being merely necessary that it be secure, so as to properly hold the reflector. The form of the skirt is likewise immaterial although I have here shown it solid throughout. At the upper or inner end of the skirt is a ring or band C which may or may not be a solid continuation of the skirt but in any event is fixed rigidly thereto. Projecting above this band and rigid therewith are attaching members D by which the shade holder may be secured directly to the cap of the socket member, here indicated in dotted lines as the said cap forms not a part of my invention. In the form shown in Fig. 1 the connecting means D is of simple form comprising a pair of legs with a hole D' through the end of each for passing over the shank of such an ordinary cap screw as is usually employed to secure the cap and sheath members of lamp sockets together. Any suitable securing means may be employed, however, depending merely upon the type of cap and securing means which it is preferred to



use therefor. For example, merely, I have indicated in Fig. 3 the use of a bur  $D^2$  struck up from the metal of the reflector support which is designed to have a snap engagement  
5 with the corresponding part on the cap. In Fig. 4 I illustrate a bayonet slot  $D^3$  to be used in the conventional manner; but as previously pointed out, the form of securing means by which the support may be attached  
10 to the cap is itself of no particular consequence.

The portion of the support extending from the skirt and attached to the band it will be seen embodies in each instance a supporting  
15 ing shoulder  $D^5$ . This shoulder is designed to receive a shoulder of the porcelain base plate E, (indicated in dotted lines) of a lamp socket for the express purpose of determining the exact relation of the lamp  
20 carried by the stopper to the gripping edge B of the supporting skirt. Where the attaching means above the skirt comprises nothing more than two legs such as that shown in Fig. 3, the shoulder  $D^5$  on the sup-  
25 port, for fixing the position of the porcelain base plate may be made by simply bending in or grooving the legs. The inwardly projecting shoulders formed in this manner may pass immediately underneath the lower or  
30 outer shoulder of the porcelain stopper when the outer sheath of the socket is cut away for the use of such support. In Fig. 3, which illustrates a form wherein I make the attaching portion of the support stronger and  
35 stiffer than that shown in Fig. 2, I have illustrated the supporting shoulder as formed by upsetting a lug in the body of the attaching portion, which lug operates in exactly the same manner as the bend shown in  
40 Fig. 2. In Fig. 4 I have illustrated a form in which the attaching portion of the support is solid and which will hold the support in any position, even at right angles to the vertical, with safety. In this form the  
45 shoulder  $D^5$  for determining the position of the base plate may be formed in the same manner as in that form shown in Fig. 2 by merely bending in the metal. In the use of this form the entire lower portion of the

socket sheath may be cut away or the sheath 50 omitted. Whatever form of attaching means be used, however, it will be seen that in manufacturing supports of this character they may all be standardized for use with the different standard forms of reflectors 55 designed to distribute the light in the different ways required by the trade. So long as the distance from the shoulder  $D^5$  to the gripping edge B is a standard fixed amount, the relation of the center of luminosity of 60 the lamp to the particular reflector carried will also be fixed and certain, since the position of the center of luminosity of the lamp relative to the base plate also is a standard predetermined amount. Therefore it will 65 be seen that by the use of my reflector holder the retailer and the consumer is not troubled with variable elements such as exist in the ordinary form of reflector support and will be enabled, without the making of adjust- 70 ments, to rely upon the standard reflector and the standard support for that reflector securing the results for which the reflector is adapted, with certainty and precision.

It may be noted that the support here 75 shown is of a construction which has no separable movable parts and therefore cannot be misfitted or attached in an improper manner and is of such construction that the relation of parts will always be the same re- 80 gardless of the individual factor of the person assembling the outfit.

Having thus described my invention, I claim:

A reflector support comprising a skirt 85 having holding means for a reflector at the outer edge thereof, means at the inner end of the skirt for attaching the same directly to the cap of a lamp socket, said attaching means having a shoulder adapted to take 90 against a shoulder of an ordinary porcelain base plate of a lamp socket.

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

WILLIAM C. HINE.

Witnesses:

H. R. SULLIVAN,  
J. M. WOODWARD.