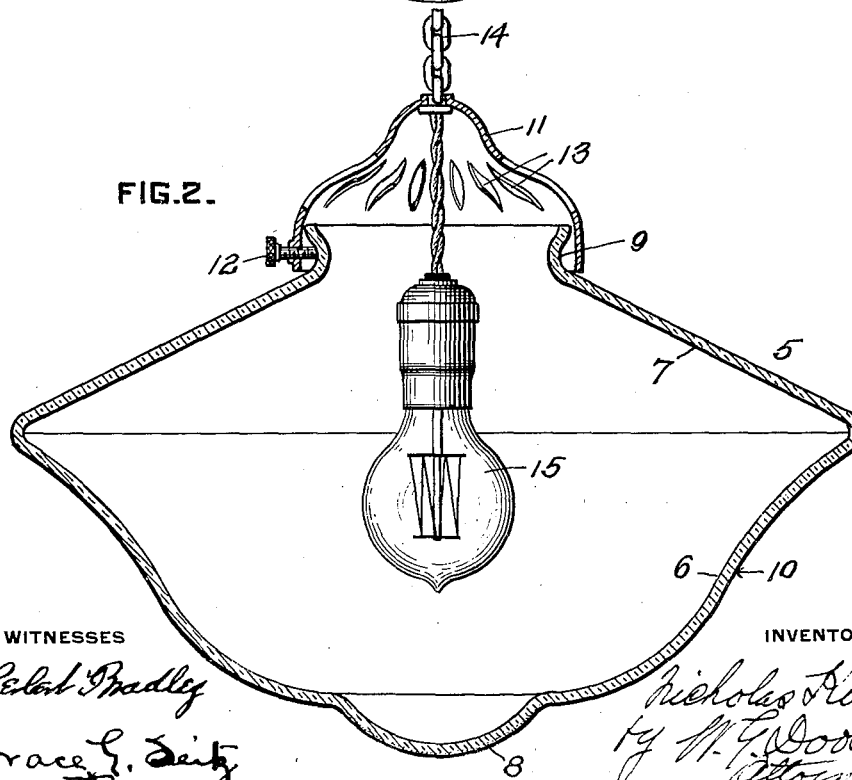
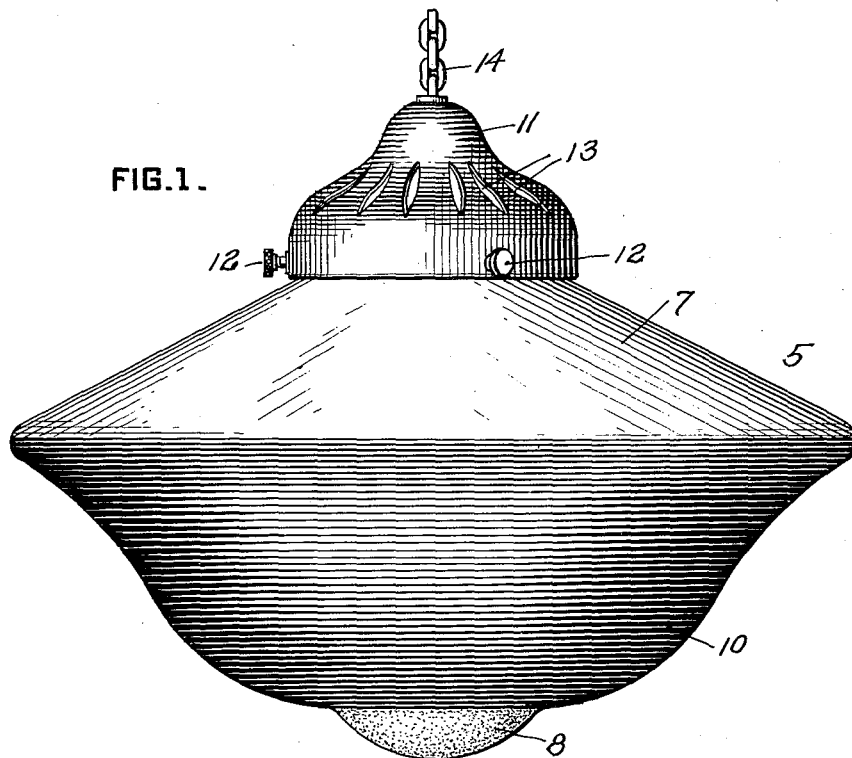


N. KOPP.  
SHADE STRUCTURE.  
APPLICATION FILED FEB. 16, 1915.

1,325,642.

Patented Dec. 23, 1919



WITNESSES

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# ED STATES PATENT OFFICE.

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## SHADE STRUCTURE.

1,325,642.

Specification of Letters Patent.

Patented Dec. 23, 1919.

Application filed February 16, 1915. Serial No. 8,527.

*To all whom it may concern:*

Be it known that I, NICHOLAS KOPP, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Shade Structures, of which the following is a specification.

This invention relates to improvements in shades, and more particularly to shades adapted for indirect lighting purposes, being especially adaptable for use in connection with electric lamps of the incandescent type.

The objects of the invention are:—(a) The formation of a single piece shade adapted for indirect lighting; (b) the formation of a shade unit in which the shade is supported from its top permitting the use of supporting means which may be suspended centrally; (c) the provision of a shade unit in which the lamp is free from contact with the shade; (d) the provision of a shade unit removably supported by a supporting cap or clamp; (e) the provision of a shade unit which restricts liability of dust deposits on the interior of the shade; (f) the provision of a shade structure formed of blown glass; and (g) the provision of a shade structure having a reflecting surface, and also having a portion adapted to provide for indirect lighting and a portion for direct lighting, said portions being separated by the reflecting surface.

Other objects are to provide a structure which is simple and efficient in operation, readily cleaned and manipulated, and which can be manufactured at a relatively low cost.

To these and other ends, the nature of which will be readily understood as the invention is hereinafter disclosed, my invention consists in the improved construction and combination of parts hereinafter fully described, illustrated in the accompanying drawings, and more particularly pointed out in the appended claims.

In the accompanying drawing, in which similar reference characters indicate similar parts in each of the views,

Figure 1 is a side elevation of a shade unit in position; and

Fig. 2 is a central vertical sectional view of the same.

In the drawing, 5 represents the shade, which is shown of a one-piece type. The

shade is shown as having substantially three main portions, viz., a reflecting portion 6, a clear or transparent portion 7, and a semi-transparent portion 8, the reflecting portion 6 having any preferred configuration in cross section, the form shown in the drawing being of a curvature of the ogee type. It will be obvious, however, that this particular curvature is not arbitrary, it being understood that the shape which may be employed will be such as to produce the desired efficiency, changes in shape being necessarily required in connection with different forms of lamps which may be employed. As shown, this reflecting surface is flared from the bottom of the shade upwardly.

The portion 7 which forms a ray-transmitting portion forms a continuation of the portion 6 but is flared in the opposite direction, this portion 7 being also of any desired contour. The portion 7 is preferably provided with an annular depression 9 by means of which the shade is supported, as presently described.

As shown in Fig. 2, the central part of portion 6 (the portion 8) is bulged and rounded. The portions 6, 7 and 8 are shown as formed as an integral structure, preferably formed of glass or other vitreous material. Its particular shape enables it to be blown in a mold, and, consequently, the shade itself may have comparatively thin walls and thus increase the lighting effects. The reflecting portion 6 has its reflecting surface formed in any suitable manner, a preferred arrangement being to coat the exterior with silver, as indicated at 10, this particular arrangement enabling the operation to be completed in a simple manner, as by dipping the shade and then wiping the silver from the portion 8 and any parts of the portion 7 on which it may have passed. Obviously, other methods of forming the reflecting surface may be employed.

The portion 7 is preferably clear and transparent to provide for ray-transmission from the lamp and from the reflecting surface. The portion 8 is preferably arranged to provide for a diffusion of light by forming its surface for this purpose. For instance, it may be frosted or otherwise rendered semi-transparent. The shade is adapted to be supported from a cap 11 having suitable shade securing devices, such as screws 12, to permit ready detachment of the shade from the cap. If desired, the cap may be pro-

vided with perforations 13 for the escape of heat. The cap may be supported by means of a supporting element 14, such as a chain or other suspending means, the device being preferably secured centrally of the cap, the chain arrangement permitting the support to be at a single point, instead of at a plurality of points as provided in structures heretofore employed.

The lamp indicated at 15 is preferably suspended from the cap, the cord extending into the unit the desired distance so as to locate the lamp at its proper point. This arrangement renders the lamp entirely independent of the shade, there being no physical connection or contact therebetween, both being supported by the cap structure. As will be obvious, the lamp may be raised or lowered within the shade unit as may be required to produce the best results.

As shown in Fig. 2, the lamp which forms the source of light is preferably positioned in the vicinity of the plane which extends through the point of juncture of the opposing flared portions of the globe. As shown in the drawings, this plane is slightly above the actual source of light, placing it at a point where the rays may be reflected directly toward the transmitting portion of the globe.

As will be readily understood, the structure restricts the entrance of dust, etc., within the shade structure, especially where the openings 13 are omitted. When it is necessary to clean the shade, loosening of the screws 12 will permit the shade to be withdrawn from position, and its particular shape is such as to enable it to be readily washed or otherwise cleansed.

The arrangement shown provides for transmission of a majority of the rays by reflection through the portion 7 and thus affords efficient indirect lighting. At the same time, the diffusing portion 8 will provide for direct lighting although of a diffused type, this particular portion being rendered prominent by reason of the inability of the rays to penetrate the reflecting surface which surrounds this diffused portion. Where the lamp is suspended overhead, the contrast between the portions 6 and 8 gives the diffusing portion an increased ornamental effect and since the diffused light of this portion differs from the reflected light providing the indirect lighting, the general lighting effect is enhanced.

Furthermore, the ability to provide the shade as a blown structure, renders it durable and at the same time enables the shade to be relatively thin without materially affecting the durability and thus increases the efficiency of the lamp, the particular shape and

integral structure causing the parts to mutually operate to increase the strength of the shade.

As will be obvious, the lamp 15 may be of any suitable type, and may be renewed by simply removing the shade through the manipulation of the screws 12.

While I have shown a preferred construction, it will be readily understood that changes and modifications therein may be required or desired to meet the exigencies of use, and I reserve the right to make all such changes and modifications as may be found necessary for these purposes, in so far as the same may fall within the spirit and scope of the invention as expressed in the accompanying claims.

What I claim is:—

1. A shade adapted for indirect lighting and having integral reflecting and transmitting portions flared in opposite directions, said transmitting portion forming the upper portion of the shade and having an opening for the passage of a lamp forming the source of light, said reflecting portion having concentric therewith a light diffusing portion, said reflecting and diffusing portions forming the closed bottom of the shade.

2. In indirect lighting apparatus and in combination, a source of light, and a shade having integral reflecting and transmitting portions flared in opposite directions toward a plane intersecting the shade axis in the vicinity of the source of light, said transmitting portion extending above the plane of the source of light and having an opening for the passage of a lamp forming the source of light, said shade also having a light-diffusing portion concentric with the reflecting portion, said diffusing portion forming a bulging continuation of the contour of the reflecting portion.

3. In indirect lighting apparatus and in combination, a source of light, and a shade having integral reflecting and transmitting portions flared in opposite directions toward a plane intersecting the shade axis in the vicinity of the source of light, said transmitting portion extending above the plane of the source of light and having an opening for the passage of a lamp forming the source of light, said shade also having a light-diffusing portion concentric with the reflecting portion, said diffusing portion being opposite said opening.

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

NICHOLAS KOPP.

Witnesses:

A. H. McNAMEE,  
W. G. DOOLITTLE.