P. D. PHILLIPS & E. G. K. ANDERSON.

LAMP GUARD.

APPLICATION FILED MAY 12, 1913.

1,205,011.

Patented Nov. 14, 1916.

2 SHEETS—SHEET 1.

Fig. 1.

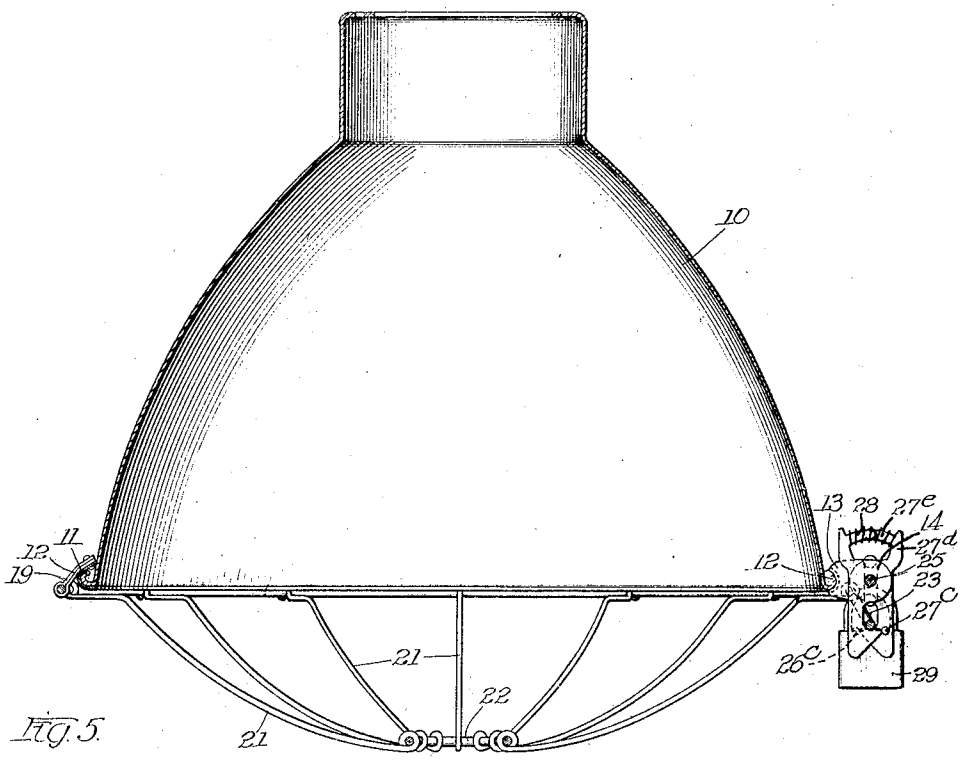


Fig. 5.

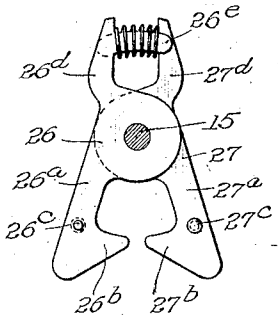
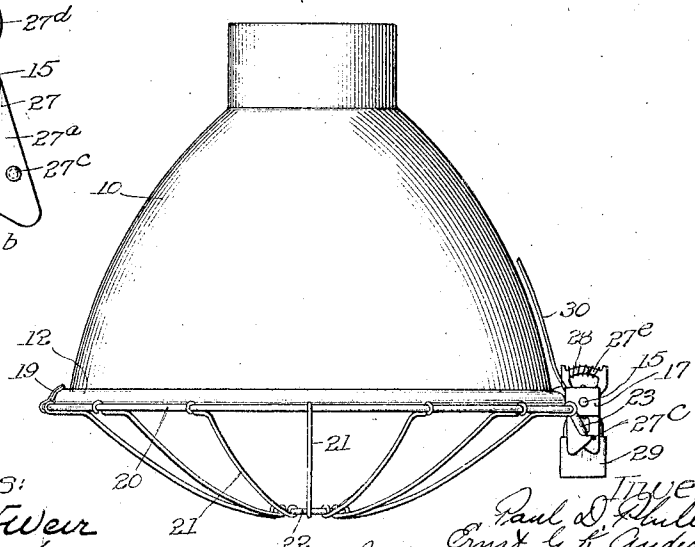


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

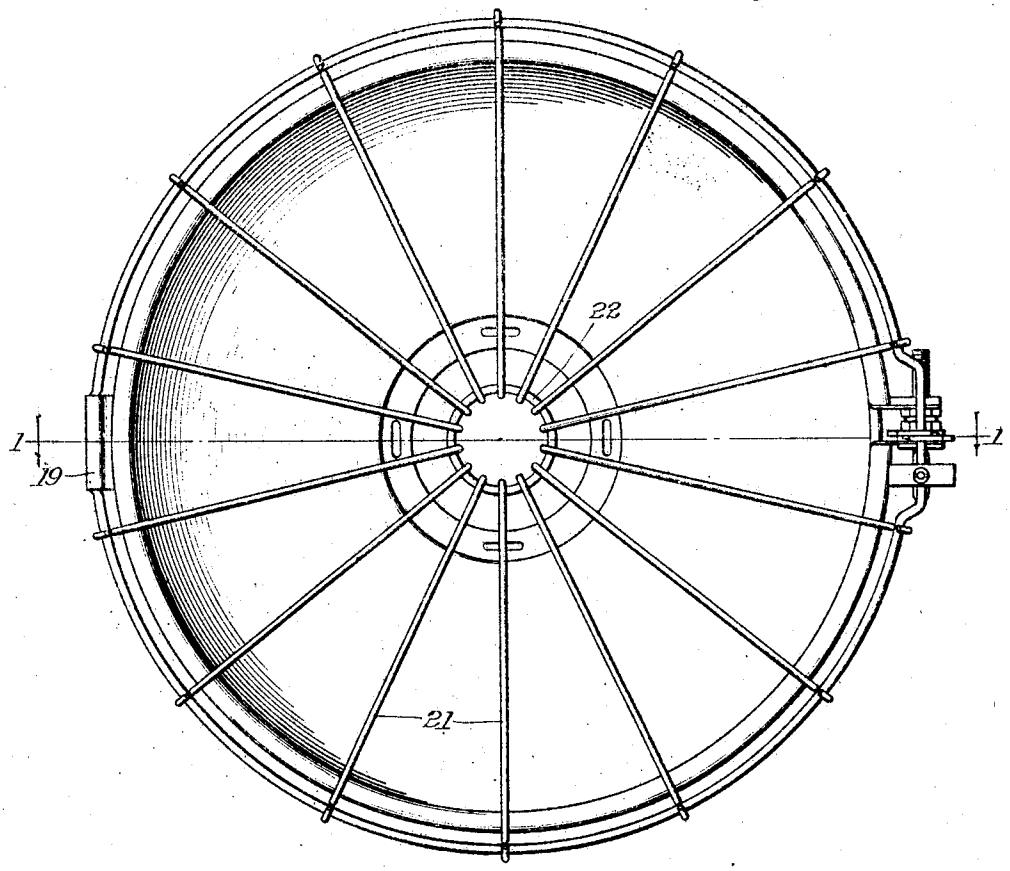
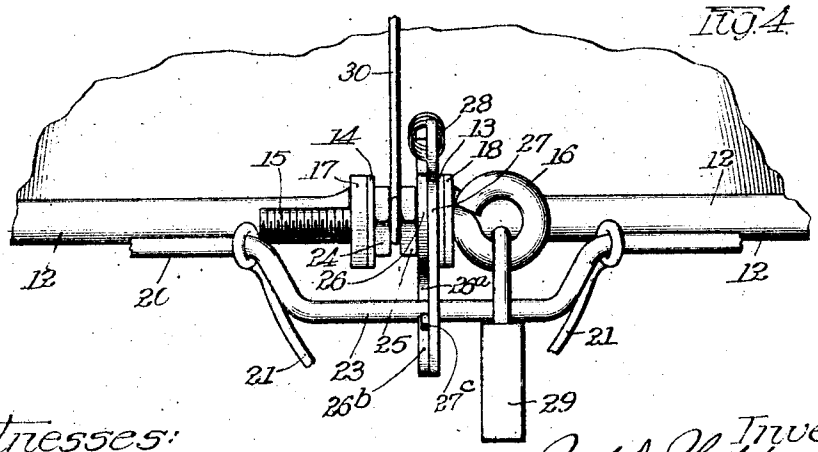


Fig. 4.



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UNITED STATES PATENT OFFICE.

PAUL D. PHILLIPS AND ERNST G. K. ANDERSON, OF CHICAGO, ILLINOIS, ASSIGNORS TO BENJAMIN ELECTRIC MFG. COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

LAMP-GUARD.

1,205,011. Specification of Letters Patent. Patented Nov. 14, 1916.

Application filed May 12, 1913. Serial No. 767,034.

To all whom it may concern:

Be it known that we, PAUL D. PHILLIPS and ERNST G. K. ANDERSON, both citizens of the United States, both residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Lamp-Guards, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawing, forming a part of this specification.

Our invention relates to lamp guards, and particularly to lamp guards for use in connection with reflector shades.

It is an object of our invention to produce a lamp guard which may be moved into and out of operative position with ease and speed.

It is another object of our invention to provide a simple and economical construction of lamp guard which may be locked in a position in which it will prevent unauthorized removal of the lamp from its support.

It is still another object of our invention to provide a lamp guard of simple construction which may easily and quickly be placed in position on, or removed from, a reflector shade or the like. And other and further objects of our invention will appear from the following specification taken in connection with the appended claims.

An embodiment of our invention, as applied to a bowl-shaped reflector shade is described, by way of example, in the following specification and shown in the accompanying drawings, in which:

Figure 1 is a longitudinal section through a shade having a guard, constructed in accordance with our invention, attached thereto, the section being taken on the line 1—1 of Fig. 3, looking in the direction of the arrows; Fig. 2 is a side elevation, on a reduced scale, of the same; Fig. 3 is an inverted plan of the same; Fig. 4 is a fragmentary front view, on an enlarged scale, showing the manner of securing the supporting ring to the shade, and the manner of locking the cage to such ring; and Fig. 5 is a detail side view, on an enlarged scale, showing the latch hooks which retain the cage in its closed condition.

Like reference characters refer to like parts throughout the following specification and the several figures of the accompanying drawings.

Referring now to the drawings, 10 indicates a bowl-shaped shade adapted to be secured, by suitable connecting means, to a lamp socket, the lamp bulb being inclosed in the shade. The shade 10 is formed with an outwardly extending peripheral bead 11, which serves to support the guard now to be described. The guard includes an open supporting ring 12 of a shape to embrace closely the bead 11, this ring being formed, at its ends, with outwardly extending ears 13 and 14 disposed oppositely to each other. An eye-bolt 15, having an eye 16 passes through the ears 13 and 14 and through a nut 17 which is disposed beyond the ear 14, a washer 18 being placed between the eye 16 and the ear 13. It will be seen that, by turning the eye-bolt 15, the ears 13 and 14 may be drawn toward each other, thereby to clamp the supporting ring 12 in position upon the bead 11. At a point thereon which is diametrically opposed to the ears 13 and 14, the supporting ring 12 is provided with a downwardly and outwardly extending tubular hinge member 19, which receives a circular wire 20 forming part of the cage. The remainder of the cage is constituted by a plurality of downwardly and inwardly curved radial wires 21 connected together, at their inner ends, by a small wire ring 22. At the part of the same which is opposite the ears 13 and 14, when the cage is swung upward about its hinge the wire 20 is bent to form a downwardly extending stirrup 23, which is adapted to be engaged by a pair of latch hooks carried by the supporting ring 12, as will now be described.

A pair of lock nuts 24 and 25 are threaded upon the eye-bolt 15, between the ears 13

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and 14. Between the nut 25 and the ear 13, a pair of latch hooks 26 and 27 are rockably mounted on the eye-bolt 15 in side by side contact with each other. The latch hook 26 is formed with a downwardly extending leg 26^a having a forwardly extending latching projection 26^b, and having a stop 26^c. The latch hook 26 is also formed with an upwardly extending arm 26^d having a forwardly extending tongue 26^e. The latch hook 27 is identical with the latch hook 26, having a downwardly extending leg 27^a with latching projections 27^b and stop 27^c, and having an upwardly extending arm 27^d and tongue 27^e (Fig. 5). The latch hooks 26 and 27 are placed on the eye-bolt 15 in such manner that the latching projections 26^b and 27^b, the lower sides of which are inclines, overlap each other, the projection 26^b striking against the stop 27^c and the projection 27^b striking against the stop 26^c. A spiral compression spring 28 surrounds the tongue 26^e and 27^e and abuts against the opposed faces of the arms 26^d and 27^d, thereby holding the projections in engagement with the stops as described above. It will be seen that, when pressure is applied to the inclined lower surfaces of the latching projections 26^b and 27^b the latch hooks will be forced apart against the action of the spring 28.

The latch hooks are of such lengths that when the cage is swung upwardly about its hinge, the stirrup 23 will engage between the latch hooks and cause them to spring apart to permit it to pass into the space above the latching projections 26^b and 27^b, the spring 28 then causing the latch hooks to close together again behind the stirrup. Thus it is possible to close the cage by simply swinging it upward between the latch hooks, by which hooks it is securely retained in position. When it is desired to open the cage, for the purpose of renewing or cleaning a lamp, etc., all that is necessary is to separate the latch hook manually whereupon the cage may be swung downwardly about its hinge.

When it is desired to provide against unauthorized removal or tampering with the lamp contained in the shade, a pad lock 29 is provided, the staple of which is passed around the stirrup 23 and through the eye 16 of the eye-bolt 15. In order to permit of the dissipation of any static charges of the shade or guard, a wire 30 is clamped between the lock nuts 24 and 25 and suitably connected to ground.

The guard described above may be attached to a shade very quickly and easily, and is extremely convenient in use. Moreover, the whole construction is such that the guard may be placed on the market at a reasonable price. In the use of the guard, the cage may be opened and closed, to permit of manipulation of the lamp, with the utmost ease; and, when the pad lock is employed, removal or tampering with the lamp is effectually prevented.

In the claims we have used the expression "outer rim" to indicate that rim of the shade which is distant from the shade holding means.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:

1. In a lamp guard, the combination with a clamping ring shaped and constructed to be clamped on the outer rim of the lamp shade, of a cage hinged thereto, and means for detachably connecting said cage with said ring.

2. In a lamp guard, the combination with a clamping ring shaped and constructed to be clamped on the outer rim of the lamp shade, of a cage hinged thereto and a releasable latch between said cage and said support.

3. The combination with a shade, of a lamp guard comprising a ring lying adjacent the outer rim of said shade, means for detachably connecting said ring to the outer rim of said shade, a cage hinged to said ring, and means for detachably connecting said cage with said ring.

4. The combination with a shade, of a lamp guard comprising a ring lying adjacent the outer rim of said shade, means for detachably connecting said ring to the outer rim of said shade, a cage hinged to said ring, and a releasable latch between said cage and said ring.

5. The combination with a shade, of an open ring surrounding said shade, a bolt for clamping said ring on said shade, a cage hinged to said ring, and a releasable latch, carried by said bolt, between said cage and said ring.

6. The combination with a shade, of an open ring surrounding said shade, a bolt for clamping said ring on said shade, a cage hinged to said ring, and a pair of latch hooks rockably mounted on said bolt and adapted to receive said cage between them.

7. A lamp shade having an outer rim distant from the portion engaging the shade holder, in combination with a lamp guard, and means for detachably securing said guard to said outer rim, said means including a ring engaging said rim.

8. A lamp shade having an outer rim distant from the portion engaging the shade holder, in combination with a lamp guard, means for detachably securing said guard to said outer rim, said means including a ring engaging said rim, and means for clamping said ring on said rim.

9. The combination with a bowl shaped shade for an electric lamp having an outer rim distant from the portion engaging the shade holder, of a guard pivotally mounted on said rim at one side and provided with means for automatically latching to said rim at the other side.

In witness whereof, we have hereunto subscribed our names in the presence of two witnesses.

PAUL D. PHILLIPS.
ERNST G. K. ANDERSON.

Witnesses:
M. J. CLEARY,
ARTHUR M. MILSOM.