J. KAUFMAN.

ELECTRIC LAMP GUARD.

APPLICATION FILED APR. 6, 1915.

1,159,682. Patented Nov. 9, 1915.

Fig. 1.

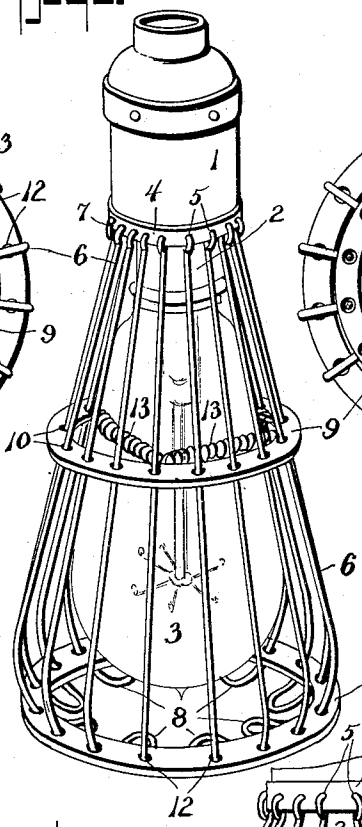


Fig. 3.

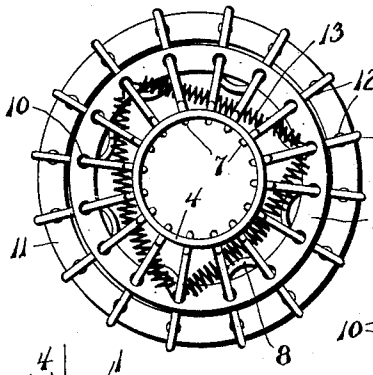


Fig. 4.

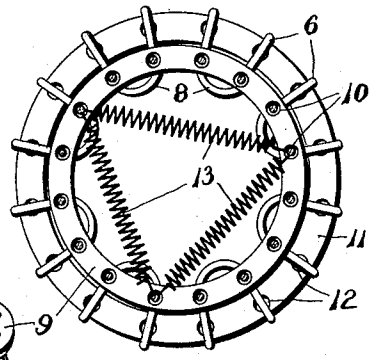


Fig. 6.

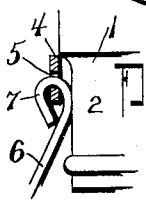


Fig. 7.

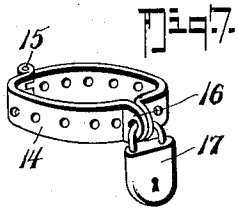


Fig. 2.

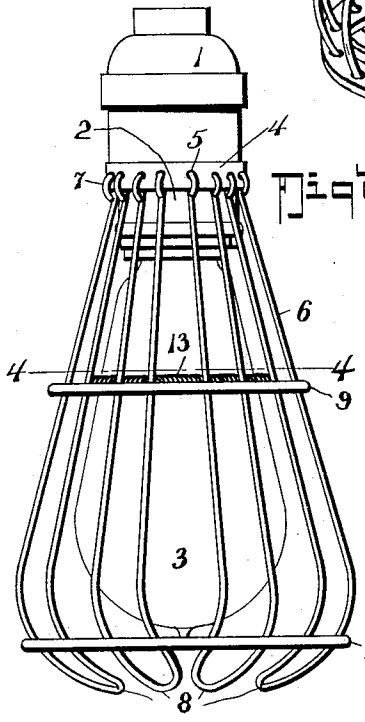
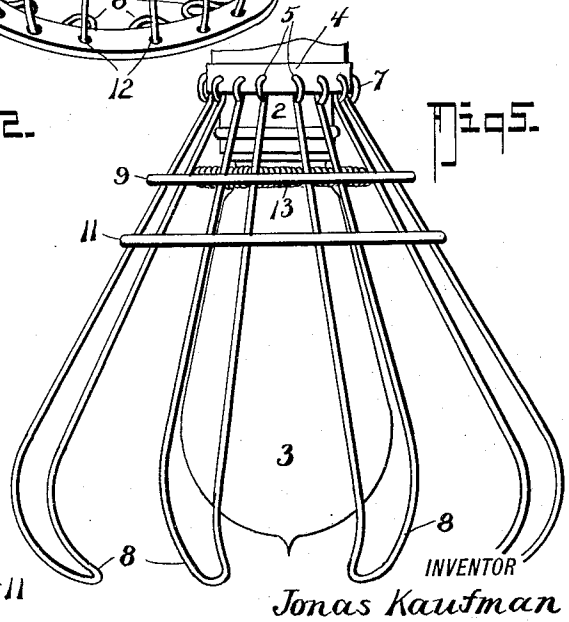


Fig. 5.



INVENTOR

Jonas Kaufman

BY

Fred G. Dieterich & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JONAS KAUFMAN, OF NEW CASTLE, PENNSYLVANIA.

ELECTRIC-LAMP GUARD.

1,159,682. Specification of Letters Patent. Patented Nov. 9, 1915.

Application filed April 6, 1915. Serial No. 19,471.

To all whom it may concern:

Be it known that I, JONAS KAUFMAN, residing at New Castle, in the county of Lawrence and State of Pennsylvania, have invented certain new and useful Improvements in Electric-Lamp Guards, of which the following is a specification.

My invention has for its object to provide certain new and useful improvements in electric lamp guards of the general type disclosed in my Patent #757,314, issued April 12, 1904, the present invention having for its object to provide certain improvements in the construction, arrangement and cooperation of parts over what is disclosed in my patent aforesaid.

The present invention provides a guard of the type stated in which the wire loops are connected by two rings, a holding ring and a combined holding and spreading ring, the holding ring being provided with yieldable elements to engage the lamp bulb to prevent contact between the rings and the bulb or between the loops and the bulb, and prevent the bulb from jarring loose in the socket.

A further object of the invention is to provide a construction in which the loop carried rings will not, in practice, become rusted to the loop members, as practice has demonstrated sometimes occurs with the wire ring employed in the construction shown in my previous patent above referred to.

The invention further resides in those novel details of construction, combination and arrangement of parts, all of which will be first fully described and then be specifically pointed out in the appended claims, and illustrated in the accompanying drawings, in which:

Figure 1 is a perspective view showing the invention in use. Fig. 2 is a side elevation of the same. Fig. 3 is a top plan view of the guard, *per se*. Fig. 4 is a section on the line 4—4 of Fig. 2, the bulb being omitted. Fig. 5 is a view similar to Fig. 2, illustrating the position of the parts when the guard is open. Fig. 6 is an enlarged detail section showing the cam gripping ends of the loop members. Fig. 7 is a detail perspective view showing a modified form of socket engaging ring.

In the drawings, in which like numerals and letters of reference indicate like parts in all of the figures, 1 represents the socket which is of the conventional type and is provided with the reduced neck 2 into which the bulb base is projected in the usual manner, and 3 designates the bulb which may be of the ordinary type.

4 designates what I term "a socket or base ring" which is designed to slip over the lower end of the socket 1 and engage the shoulder of the socket, the ring 4 being either a continuous ring, as shown in Figs. 1 to 5, inclusive, or a separable ring, as shown in Fig. 7. When a separable ring is provided, I prefer to make the ring in two sections 14 hinged together at 15 and provided with apertured ears 16, through which a pad-lock 17 may pass to lock the guard in the socket. The ring 4 is apertured at 5 to receive the hinge ends 7 of the loop members 6, the said hinge ends being bent to form cam-like members that grip the socket neck 2 when in the closed position in the same manner as in my patent hereinbefore referred to. The lower ends 8 of the loop members are designed to form a bottom guard for the bulb and hence they converge toward the central axis of the device.

9 designates what I term "the loop holding and bulb guarding ring" which is apertured at 10 to permit the free and easy passage of the loop members 6, the guard ring 9 carrying light coil springs 13 which are adapted to engage the lamp bulb 3 and space the ring 9 from contact with the same and hence prevent contact of the loop members 6 with the bulb.

11 is what I term the "holding and spreading ring" which is apertured at 12 to permit passage of the loop members 6. It will be observed that the ring 12 is so designed with relation to the curved lower ends of the loop members 6 that it may be moved either below the center of curvature, as shown in Fig. 2, to hold the loop members closed, or it may be moved above the center of curvature, as shown in Fig. 5, to spread the loop members, it being understood that by moving the ring 11 from the position shown in Fig. 2 to the position shown in Fig. 5, the ring 9 will be automatically elevated to bring the springs 13 into alinement with the neck of the bulb and disconnect the springs from the bulb as the space between the springs is designed to be greater than the diameter of the neck of the bulb, thus freeing the bulb, and permitting it to be readily unscrewed. Conversely when the parts are positioned as

shown in Fig. 5, and the ring 11 is moved downwardly, the ring 9 will follow automatically and come into the position shown in Fig. 2. The provision of the springs 13 also assists in the separation or spreading act when the ring 11 is moved to a position above the center of curvature of the lower ends of the lower members, owing to the upwardly tapering shape of the bulb.

It should be understood that the holes 10—12 are made sufficiently large to enable the rings 9—11 to be brought close enough together to effect an adequate separation of the loop members for the purpose of inserting or removing the bulb.

From the foregoing description taken in connection with the accompanying drawings, it is thought the complete construction, operation and advantages of my invention will be readily understood by those skilled in the art to which the invention relates.

What I claim is:

1. In a lamp guard, a fixedly held socket engaging ring, a series of wire members hingedly secured to said ring at their ends, a guard ring adapted to encircle the bulb and apertured to permit passage of said wire members, said guard ring adapted to have slidable movement along said wire members, spring elements carried by said guard ring to engage the bulb, and a holding and spreading ring apertured to permit passage of said wire elements, and adapted to be slid along said wire elements to separate or draw together said wire elements, substantially as shown and described.

2. In a lamp guard, a fixedly held socket engaging ring, a set of loop members pivotally secured at their ends to said ring and extending downwardly, the lower ends of said loop members being inwardly curved to converge toward the axial line of the device, a combined spreading and holding ring slidably mounted on said loop members and adapted to be moved to a position below the center of curvature of the lower ends of said loop members to hold the same in the closed position and to be moved above the center of curvature to spread said loop members, and a guard ring slidably mounted on said loop members between the aforesaid rings.

3. In a lamp guard, a fixedly held socket engaging ring, a set of loop members pivotally secured at their ends to said ring and extending downwardly, the lower ends of said loop members being inwardly curved to converge toward the axial line of the device, a combined spreading and holding ring slidably mounted on said loop members and adapted to be moved to a position below the center of curvature of the lower ends of said loop members to hold the same in the closed position and to be moved above the center of curvature to spread said loop members, a guard ring slidably mounted on said loop members between the aforesaid rings, said guard ring including elements for engaging the bulb to hold said loop members from contact with the same.

4. In a lamp guard, a ring arranged to encircle the lamp socket, a plurality of wire loops having their ends hingedly secured to said ring, said loops having cam portions for engaging and clamping the lamp socket to hold the guard in place, an adjustable ring mounted on said loops and adapted to hold said loops in their open or closed position, and a guard ring slidably mounted on said loops between said adjustable ring and said socket engaging ring and bulb engaging elements carried by said guard ring.

JONAS KAUFMAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."