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G. A. RUSSELL.

GUARD FOR ELECTRIC LAMPS.

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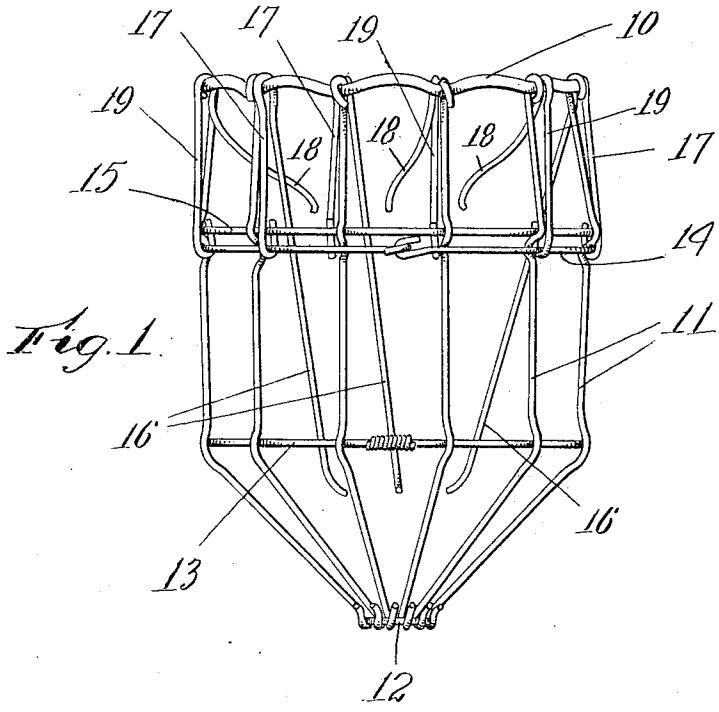


Fig. 1.

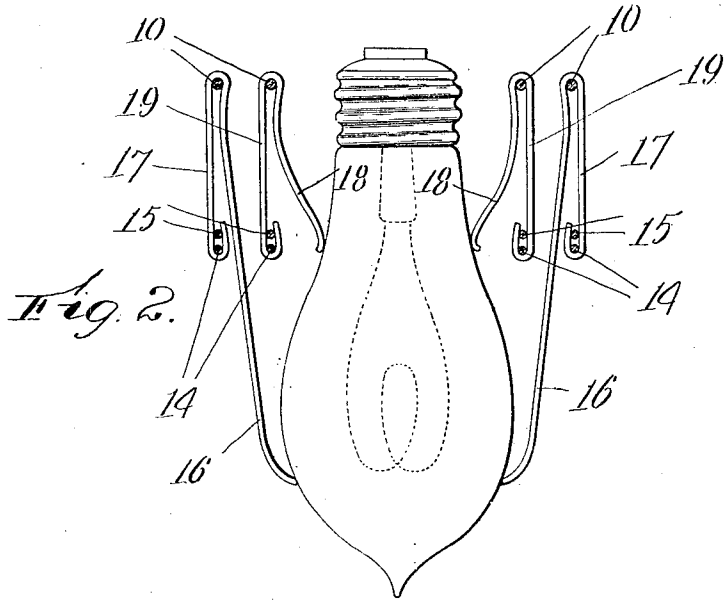


Fig. 2.

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UNITED STATES PATENT OFFICE.

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GUARD FOR ELECTRIC LAMPS.

No. 825,076. Specification of Letters Patent. Patented July 3, 1906.

Application filed November 9, 1903. Serial No. 180,294.

To all whom it may concern:

Be it known that I, GEORGE A. RUSSELL, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Guard for Electric Lamps, of which the following is a specification.

This invention relates to that class of lamp protectors or guards which are intended to fit over and be secured upon the bulbs of ordinary incandescent lamps.

The especial object of this invention is to provide a lamp protector or guard comprising a wire framework or cage with spring-fingers therein for centering the electric-light bulb within the cage and for adapting the construction to be used on bulbs of different sizes.

To these ends this invention consists of the electric-lamp protector or guard and of the combinations of parts therewith, as hereinafter described, and more particularly pointed out in the claims at the end of this specification.

In the accompanying drawings, Figure 1 is a side view of an electric-lamp protector or guard constructed according to this invention; and Fig. 2 is a view of an electric-lamp bulb, showing the engagement of the spring-fingers therewith.

In the use of that class of guards or lamp-protectors to which this invention relates considerable difficulty has been encountered in using prior forms of protectors upon the different-sized electric-light bulbs. This difficulty is constantly increasing with the increasing number of independent electric-lamp manufacturers and the variety of shapes of bulbs produced by such manufacturers—that is to say, when all incandescent-light bulbs were furnished from one or two manufacturers it was a comparatively easy matter to provide lamp-guards which could be readily and quickly secured to any of the ordinary forms of lamps, it being necessary to manufacture only comparatively few different sizes of lamp-protectors, all the twelve-candle-power lamps, for example, being of standard shape and all of the sixteen-candle-power lamps also being of another standard shape. I have found in practice, however, that a great variety of shapes and sizes of electric-light bulbs are now being manufactured.

One especial object of my present invention is to provide a protecting frame or guard for an electric lamp having spring-wires arranged therein which will serve the purpose of centering the guard or frame upon an electric-light bulb and which will also have sufficient resilience so that they will yield to fit onto a considerable variety of bulbs.

Referring to the accompanying drawings and in detail, the frame of an electric-lamp protector constructed according to this invention as herein illustrated comprises the ring 10 and the frame-wires 11, which extend from the ring 10 and are connected to a bottom washer 12. At different points in their lengths the frame-wires 11 are held in place by spreading-rings. In the present construction I employ three spreading-rings, the spreading 13 being located at the bend or crook of the frame-wires 11, from which the frame-wires are bent into the end washer 12, and spreading-rings 14 and 15, which are set close together and to which the frame-wires 11 are locked by double bends or S-curves.

The lamp-guard frame, as herein illustrated, is of substantially the same shape as shown in the patent to Garretson, No. 656,840, dated August 18, 1890, except that the frame-wires are not provided with bent-in sections for engaging the lamp-bulb nor is a hinged catch necessarily used in connection with this lamp-frame. The frame is centered upon and secured to an electric-lamp bulb by a number of spring-fingers. These fingers are preferably arranged in two sets, one set of spring-fingers engaging the lower or outer end of the lamp and a shorter set of spring-fingers engaging the neck or a contracted portion of the lamp.

As illustrated most clearly in Fig. 2, each of the longer spring-fingers 16 extends over the ring 10 and is provided with a return-bend 17, hooked onto the spreading-rings 14 and 15. In the same manner the shorter spring-wires 18 pass over the ring 10 and are provided with return-bends 19, also hooked onto the spreading-rings 14 and 15. The number of spring-fingers which may be used either in the upper or lower set of such fingers may be varied, although in practice I have found that three of the longer spring-fingers and three shorter spring-fingers will be sufficient to hold the protector securely in place, and in the use of this construction it will be seen that the frame is centered, so that the bulb of the lamp is not brought in contact with the protecting-frame itself. In the use of this

construction also it is not necessary to provide a hinged cage or cover for the frame, although, if desired, such an attachment may be applied to the frame of this protector in the same manner as in the construction shown in the Garretson patent before referred to.

I am aware that numerous changes may be made in the construction of lamp-guards without departing from the scope of this invention as expressed in the claims.

I do not wish, therefore, to be limited to the lamp-guard I have herein shown and described; but

What I do claim, and desire to secure by Letters Patent of the United States, is—

1. As an article of manufacture, a guard or protector for electric lamps, comprising a wire framework with two sets of spring centering-fingers inside the framework, one set of said fingers engaging the outer end of an electric-lamp bulb, and the second set of such spring-fingers engaging the contracted or neck portion of the electric-lamp bulb.

2. As an article of manufacture, an electric-light protector or guard comprising a ring, frame-wires, and spring centering-fingers, each of said centering-fingers having one end secured, and having its opposite end free and disconnected to center an electric lamp in position.

3. As an article of manufacture, a guard or protector for electric lamps, comprising a wire framework with two sets of spring-fingers extending into the wire framework with one end connected to the wire framework, while their free ends are adapted to engage an electric-lamp bulb, one set of spring-fingers engaging the outer end of an electric-lamp bulb, and the other set of spring-fingers engaging the contracted or neck portion of an electric-lamp bulb.

4. As an article of manufacture, a guard or protector for electric lamps, comprising a wire framework, consisting of a ring, frame-wires connecting the ring, with a washer and spreading-rings fastened to intermediate points of the frame-wires, and two sets of spring-fingers extending into the wire frame, the longer set of spring-fingers extending over the ring and having return-bends hooked onto the spreading-rings, and the shorter set of spring-fingers also extending over the ring and having return-bends hooked onto the spreading-rings.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

GEORGE A. RUSSELL.

Witnesses:

J. ELMER HALL,

PHILIP W. SOUTHGATE.