

No. 776,633.

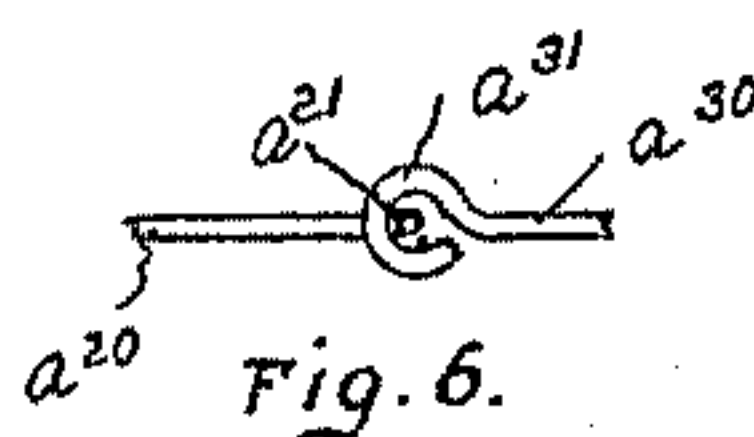
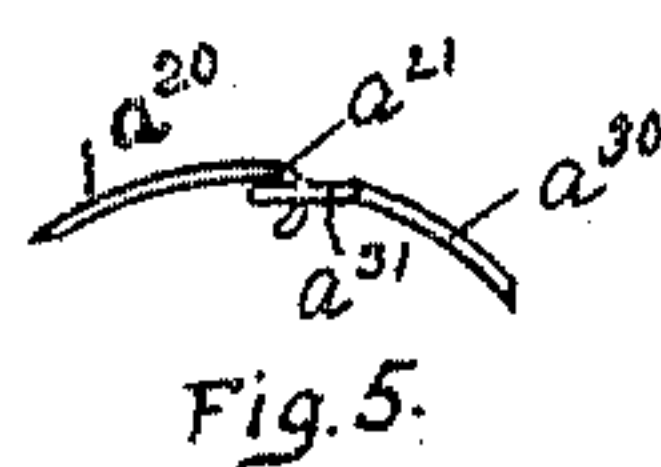
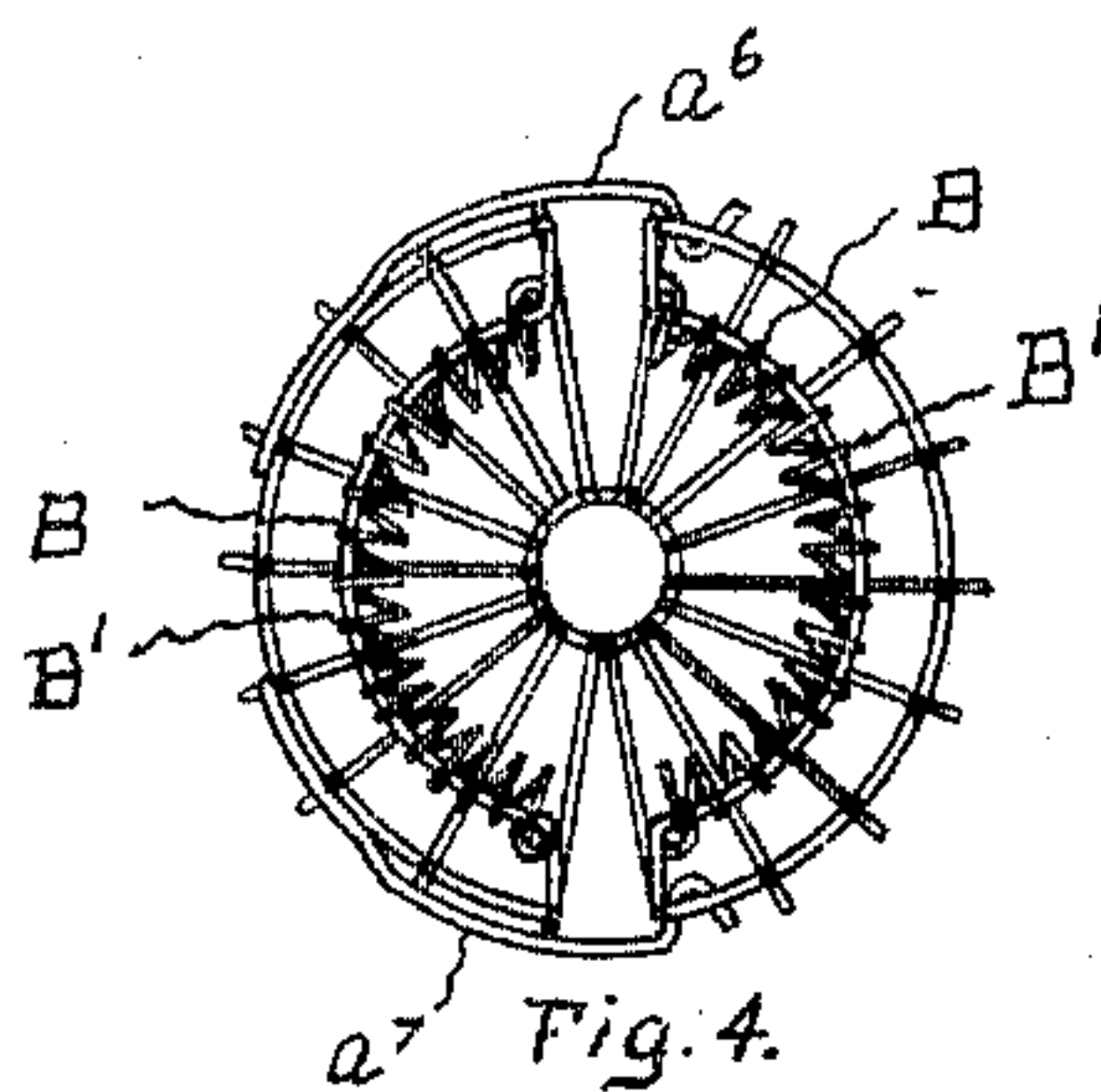
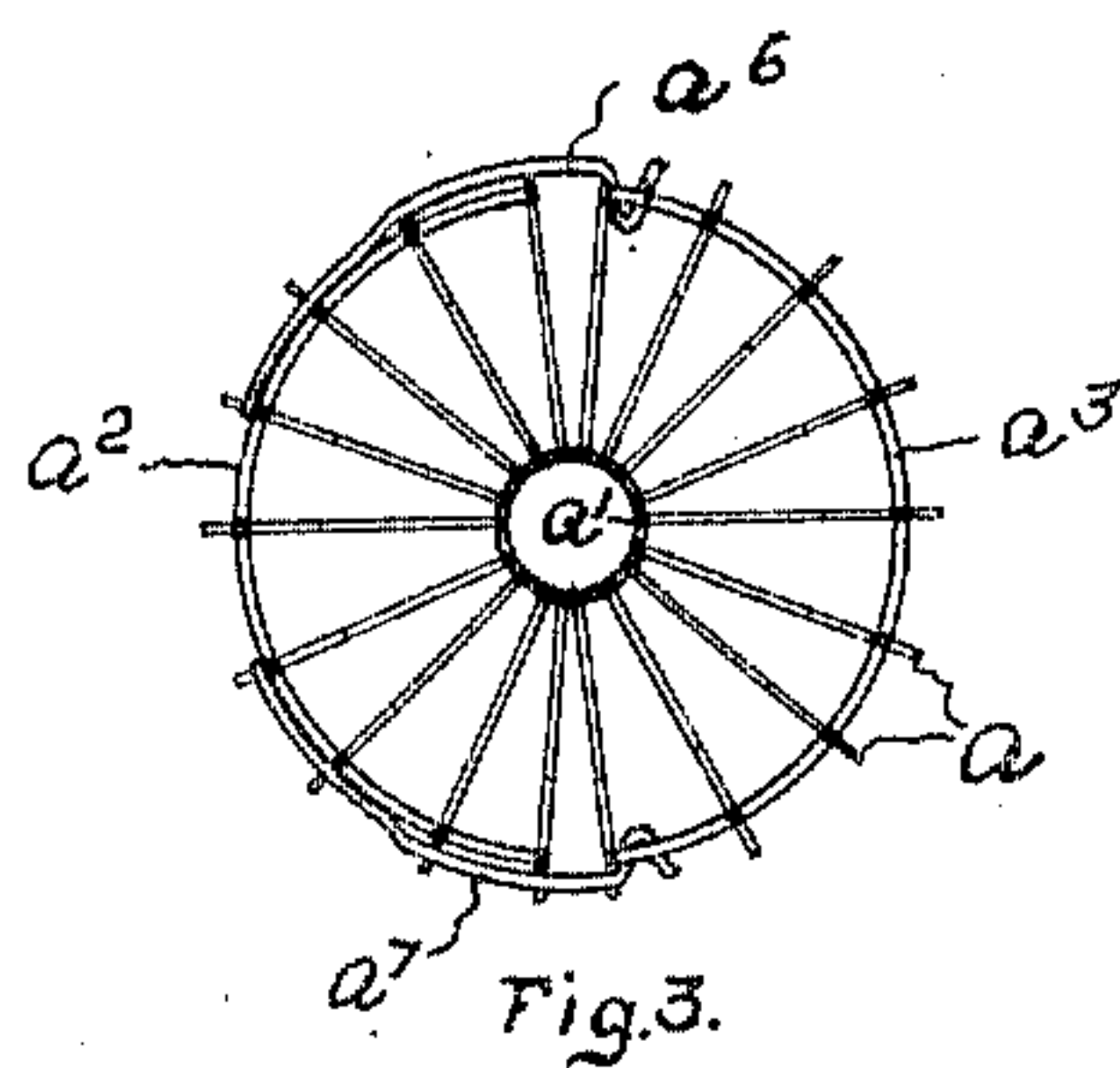
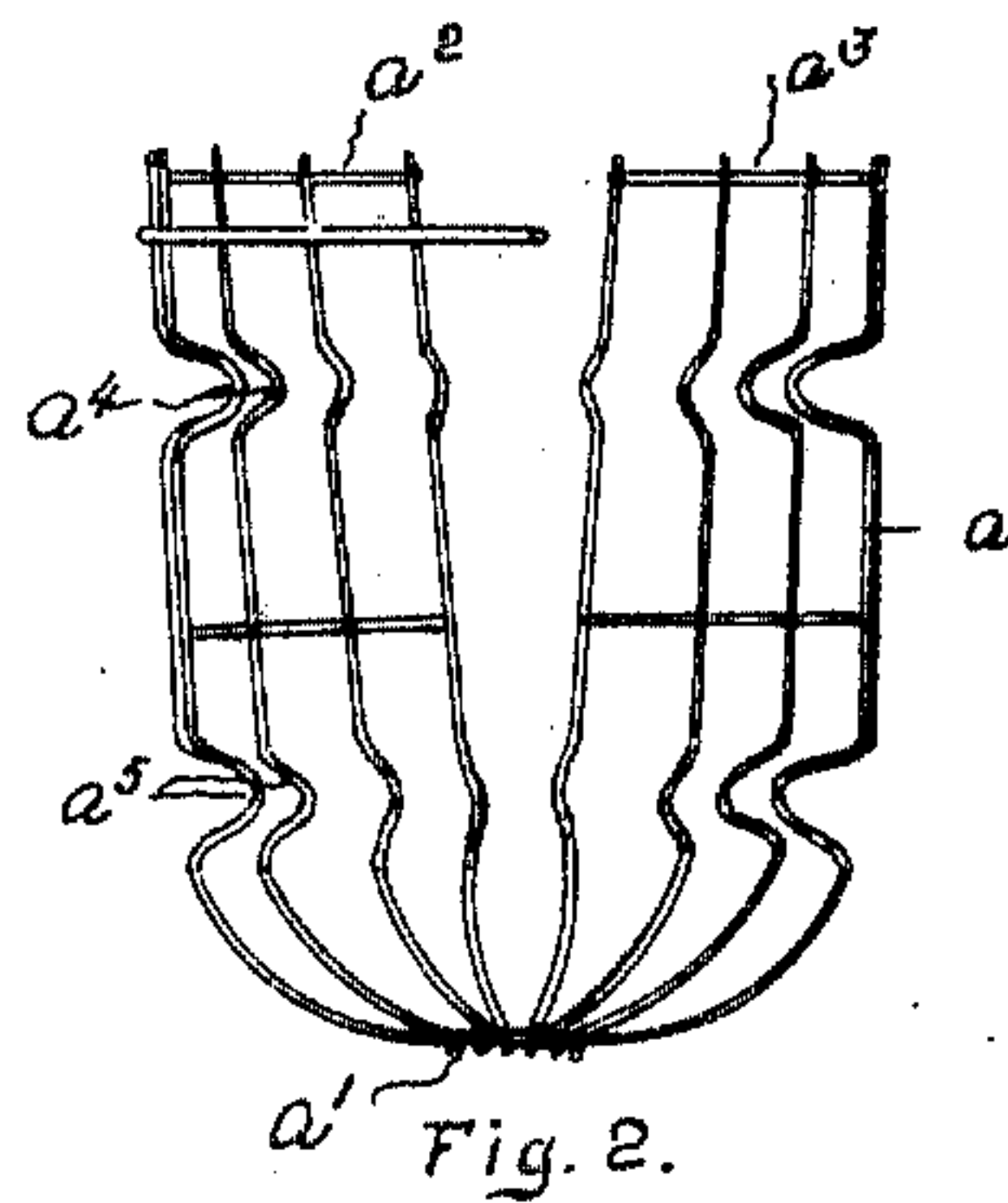
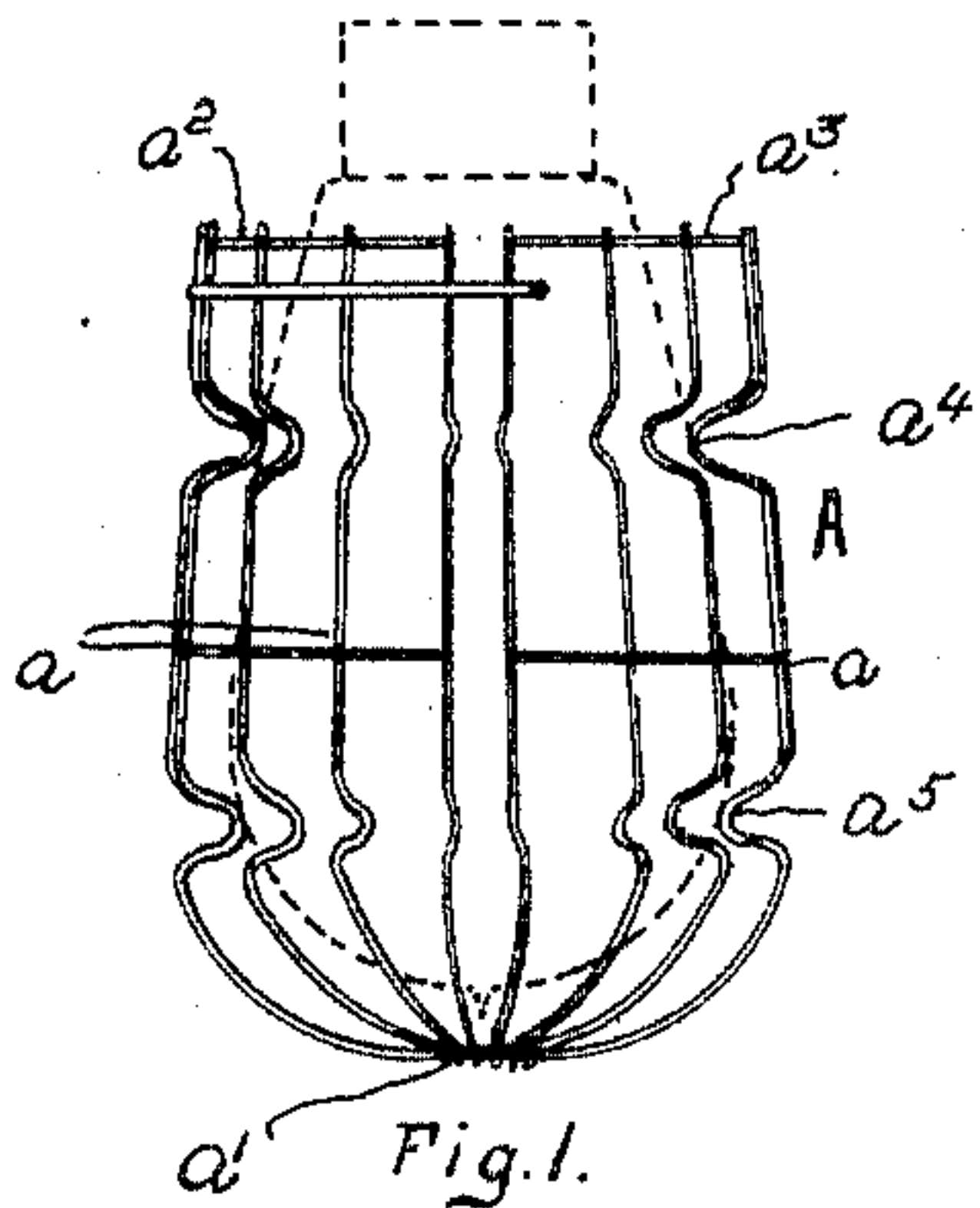
PATENTED DEC. 6, 1904.

F. W. WINBOLT.

LAMP GUARD.

APPLICATION FILED DEC. 26, 1903.

NO MODEL.



Witnesses

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# UNITED STATES PATENT OFFICE.

FRED W. WINBOLT, OF SPRINGFIELD, MASSACHUSETTS.

## LAMP-GUARD.

SPECIFICATION forming part of Letters Patent No. 776,633, dated December 6, 1904.

Application filed December 26, 1903. Serial No. 186,521. (No model.)

*To all whom it may concern:*

Be it known that I, FRED W. WINBOLT, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Lamp-Guards; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to guards for electric lamps.

Since the bulbs of incandescent lamps are very fragile, and consequently very liable to destruction through a slight blow, it is necessary to provide them with shields or guards to protect them from injury where the lamps are exposed to the danger of being struck by or against some object. Such shields or guards are usually made of wires secured in the form of a cage, which is supported so as to inclose the bulb of the lamp. It is desirable that these guards be so constructed that they may easily be placed in position or removed, at the same time being held firmly and securely in place, as well as that they should be so arranged with relation to the bulb that the bulb is prevented from coming into contact with any external object. For this reason guards have heretofore been designed to be clamped securely to the lamp-socket, the bulb extending downwardly into the guard, but not coming into contact therewith, and the guard being either held entirely free of the bulb or else being provided with abutments of some sort to space the bulb properly within the guard. Guards which are supported from the lamp-socket are objectionable in that although the guard may properly fit the socket, yet it may become slightly bent or otherwise distorted, so as to offer very little protection to the bulb, and, moreover, such a guard must be removed before the bulb can be unscrewed from the socket, thereby necessitating two operations whenever it is desired to remove the bulb from its socket. The latter defect has been overcome by supporting the guard wholly upon the bulb and securing it in position by means of a hinged ring or clasp adapted to

pass around the neck of the bulb; but this arrangement possesses the disadvantage that the guard cannot be removed from the lamp without first removing the lamp itself and then unclasping the guard. This construction has the further disadvantage of being inflexible, for the reason that if the ring of the clasp is made to fit closely upon the neck of a particular lamp it will be either too loose upon another lamp or else be too small to receive it, and consequently in order that the guard may be used upon any given class of lamps it is necessary that the ring of the clasp be made large enough to accommodate the neck of the largest lamp, the result being that the guard will be loose upon many of the lamps.

The object of the present invention is to provide a guard wholly supported upon the bulb and which may be removed from the bulb without releasing the bulb from its socket and which guard shall further be adapted to fit tightly upon lamp-bulbs varying somewhat in diameter.

The present invention is illustrated in the accompanying drawings, in which—

Figure 1 represents a side view of my improved guard and shows in dotted lines a lamp-bulb arranged within the guard. Fig. 2 is a side elevation of the improved guard, showing the catches released and the two halves of the guard swung apart ready to receive the lamp. Fig. 3 is a plan view of the guard when locked in position. Fig. 4 is a view similar to Fig. 3, illustrating a modified form of guard. Figs. 5 and 6 are views showing fragments of the upper ring of a guard provided with a modified form of catch.

Similar reference characters will be used to denote like parts throughout the specification and drawings.

The guard A consists of a number of longitudinal wires  $a$ , secured at their lower ends to a small ring  $a'$  and at their upper ends to two half-rings  $a^2$  and  $a^3$  of much greater radius. The wires are shaped so that they form a cage closed at the bottom and of such dimensions as to afford a proper amount of clearance between the sides of the cage and an inclosed lamp. Each wire is bent inward sharply at



two points in its length—namely, at the points  $a^4$  and  $a^5$ —these bends being of sufficient depth to take up the clearance between the sides of the cage and the bulb, whereby when the bulb is inserted within the cage or guard each wire bears against the bulb at the two points  $a^4$  and  $a^5$ . Although, as illustrated, each wire is provided with bends  $a^4$  and  $a^5$ , yet a very efficient arrangement consists in omitting these bends in alternate wires, which then serve to protect the lamp at the points where the adjacent wires are bent inward to engage the lamp.

Since the upper ring of the guard is split, the guard consists practically of two halves secured to the small lower ring  $a'$ , and is adapted to open and close somewhat in the manner of a clam-shell. The resiliency of the component wires is sufficient to permit the guard to be pressed open a sufficient distance for the passage of a lamp. This construction is deemed of particular importance, since the guard may be snapped upon the lamp and will be held fairly secure through its own resiliency, whereas where hinges are employed the two parts of the guard must first be adjusted upon the lamp and held there until the catches are set. Moreover, with hinges there is always a certain amount of play or looseness, which is a vital defect in a lamp-guard, which should be so rigidly secured to the lamp as to be practically a part thereof.

Near the upper end of the guard are arranged two spring-catches  $a^6$  and  $a^7$  to aid in holding the guard in place, these catches being mounted on one half of the guard and being adapted to engage the terminal wires of the other half, so that after the lamp has been inserted the catches may be snapped into position, firmly locking the guard upon the lamp.

The catches are preferably placed some distance above the upper bends  $a^4$  in the wires, so that the wires above their upper points of contact with the lamp may be sprung inwardly slightly in order that the engagement of the catches may be effected, although the diameter of the bulb happens to be slightly greater than that for which the guard was designed. These catches may be made integral with the upper ring, as shown at  $a^{21}$  and  $a^{31}$  in Figs. 5 and 6.

In Fig. 4 the guard is shown as having a pair of semicircular wires B secured to the two halves of the guard for the purpose of engaging the lamp, these wires taking the place of the upper bends  $a^4$ . Upon these wires there are preferably arranged spring-coils B' B', which act as cushions between the lamp and

guard and, furthermore, render the guard automatically adjustable to various-sized lamps.

It will be seen that the present guard is one which may be readily snapped into place upon a bulb and which may be as readily removed again without disturbing the bulb and, further, that since the guard is supported wholly upon the bulb it may be removed, together with the bulb, when the bulb is unscrewed from its socket. It will also be seen that by reason of the peculiar construction the guard is held very firmly upon the bulb, so as to be practically a part thereof, and that this is true notwithstanding variations in the diameters of respective bulbs, since the upper ends of the wires are adapted to be sprung inwardly to overcome any excess of the diameter in the bulb, and in the form shown in Fig. 4 the spring-coils afford additional adjustability. It will be further seen that because of its inherent resiliency the guard will remain upon the lamp even if the catches should fail.

Although the drawings disclose a preferred construction of my improved guard, yet it is of course understood that the wires of which the shell is composed need not be arranged substantially parallel with each other throughout the body of the shell, since any usual or desired arrangement of the wires forming the body portion of the shell may be employed. Having described my invention, I claim as new and desire to protect by Letters Patent of the United States—

1. A lamp-guard consisting of a shell formed of longitudinal wires secured at one end to a closed ring and at the other end to the members of a separated ring, said shell being provided with inwardly-projecting means for engaging a lamp-bulb at axially-separated points in order to support the guard wholly upon the lamp-bulb, substantially as described.

2. A lamp-guard consisting of a shell formed of longitudinal wires secured at one end to a closed ring and at the other end to the members of a separated ring, said shell being provided with inwardly-projecting means for engaging a lamp-bulb at axially-separated points, together with catches for holding the parts of the guard together, and locking the guard upon the lamp-bulb, substantially as described.

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

FRED W. WINBOLT.

Witnesses:

JOHN ALDRICH,

COLIN C. MORRISON.