

(No Model.)

N. W. CRANDALL & E. A. RUSSELL.
SHADE HOLDER FOR INCANDESCENT ELECTRIC LAMPS.

No. 530,751.

Patented Dec. 11, 1894.

Fig. 1

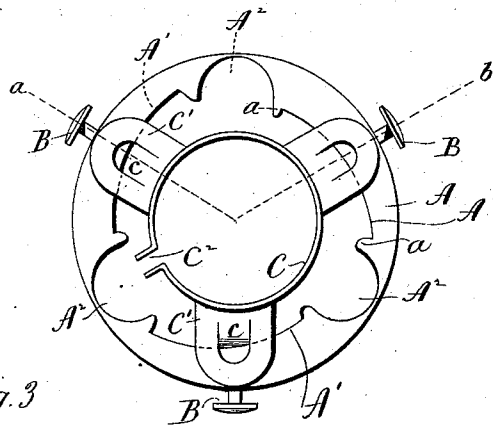


Fig. 3

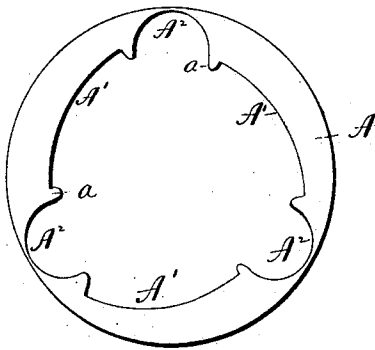


Fig. 4

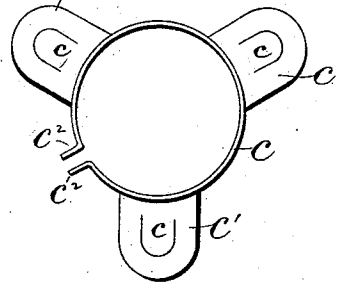


Fig. 2

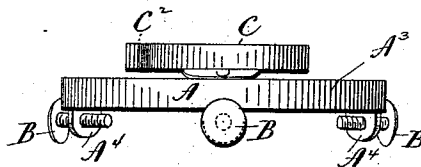
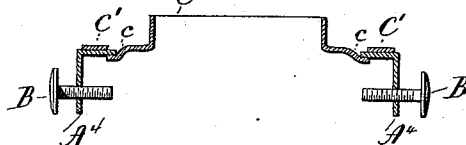


Fig. 5



Witnesses
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UNITED STATES PATENT OFFICE.

NATHAN W. CRANDALL AND EDGAR A. RUSSELL, OF WALLINGFORD, CONNECTICUT, ASSIGNORS TO THE HOUSATONIC MANUFACTURING COMPANY, OF SAME PLACE.

SHADE-HOLDER FOR INCANDESCENT ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 530,751, dated December 11, 1894.

Application filed June 18, 1894. Serial No. 514,936. (No model.)

To all whom it may concern:

Be it known that we, NATHAN W. CRANDALL and EDGAR A. RUSSELL, of Wallingford, in the county of New Haven and State of Connecticut, have invented a new Improvement in Shade-Holders for Incandescent Electric Lamps; and we do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a plan view of a shade-holder constructed in accordance with our invention; Fig. 2, a view thereof in side elevation; Fig. 3, a detached plan view of the shade-ring; Fig. 4, a detached plan view of the clamping-ring; Fig. 5, a view of the shade-holder in vertical section on line *a-b* of Fig. 1.

Our invention relates to an improvement in shade-holders for incandescent electric lamps, the object being to produce at a comparatively low cost for manufacture, a light, strong, convenient and attractive article.

With these ends in view, our invention consists in the combination, in a shade-holder, with a shade-ring, of a clamping-ring, one of the said parts being constructed with a cam, and the other adapted to coact therewith for adjusting the clamping-ring with which the shade-ring is permanently, though loosely, connected.

Our invention further consists in certain details of construction and combinations of parts as will be hereinafter described and pointed out in the claims.

In carrying out our invention, as herein shown, we construct the body *A* of the shade-ring with a large central opening, the walls of which are formed by three corresponding cams *A'* *A'* *A'*, separated from each other by three corresponding, radial clearance slots *A²* *A²*, which open inward, and extend outward beyond the cams. The end of each cam terminates in an inwardly projecting stop *a*, of which there are six in all. The flange *A³* of the shade-ring is made integral with the body *A* thereof, and provided, as shown, with three depending ears *A⁴*, *A⁴*, *A⁴*, which receive

clamping screws *B*, *B*, *B*. We do not limit ourselves, however, to the particular construction of the flange, or its adaptation to hold a shade.

The clamping-ring *C* is made from a single piece of sheet-metal, and constructed with three radial arms *C'* *C'* *C'*, each having a locking finger *c* made integral with and set down below its plane. The ring is also provided, as shown, with two ears *C²* *C²*, located at its ends. If desired, an ordinary adjusting-screw may be mounted in these ears, for assisting in regulating the contraction and expansion of the ring.

To connect the clamping-ring and shade-ring when constructed as shown, the locking-fingers *c c c* of the former are first bent downward at a right angle to the radial arms *C'* *C'* *C'*, thus adapting them to pass through the central opening of the shade-holder, after which they are bent outward again so as to permanently connect the two rings, which, however may be rotated on each other.

When now the clamping-ring and the shade-ring are rotated in opposite directions, or when either of the rings is rotated alone, the locking-fingers *c c c* will be caused to engage with the cams *A'* *A'* *A'* of the shade-ring in such a manner that the said cams will operate according to the direction in which the rings are rotated, either to contract the clamping-ring and bind the two rings together against rotation or to allow the clamping-ring to expand. The shade-ring and clamping-ring having been once assembled as described, may thus be adjusted on each other for the contraction or expansion of the clamping-ring, without separating them, their rotation being limited by the engagement of the said locking-fingers with the inwardly projecting stops *a* located at the ends of the cams.

We do not limit ourselves to making the shade-ring and clamping-ring in the exact form shown. Thus the number of cams of the shade-ring, and the number of arms of the clamping ring might be varied in correspondence. We would, therefore, have it understood that we do not limit ourselves to the exact construction herein shown and described, but hold ourselves at liberty to make such

changes and alterations as fairly fall within the spirit and scope of our invention. We are aware, however, that a shade-holder, in which jaws for clamping the edge of the globe are drawn toward and moved away from each other, through the medium of the long cam-slots formed in the body of the holder, is old.

The shade-holder shown, described, and claimed in this case follows the construction of the shade-holder made the subject of a prior application, filed May 31, 1894, and serially numbered 512,953, with the exception that the two rings of the shade-holder described herein are designed to be permanently, though loosely, connected. In this case, however, the claims are limited to a construction in which the two rings are non-separable, while on the other hand the prior case contains generic claims to separable and non-separable rings, and specific claims to separable rings, as well as to other features claimed therein, and shown, but not claimed herein.

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

1. In a shade holder for incandescent electric lamps, the combination with a shade-ring, of a clamping-ring made independently thereof, one of the said rings being constructed with a cam, and the other ring being adapted to engage with the same for adjusting the clamping-ring, and the two rings being permanently, though loosely, connected together substantially as described.

2. In a shade-holder for incandescent electric-lamps, the combination with a shade-ring constructed with a cam, and with two stops respectively located at the ends of the same; of a clamping-ring constructed with a locking-finger for engagement with the said cam to effect the adjustment of the clamping-ring and with the said stops to limit the rotation of the two rings on each other whereby they are permanently, though loosely, connected together, substantially as described.

3. In a shade-holder for incandescent electric-lamps, the combination with a shade-ring having its body constructed with a large central opening, the walls of which are formed in part by cams, of a clamping-ring provided with radial arms having locking-fingers which engage with the said cams for adjusting the clamping-ring which is permanently, though

loosely, connected with the shade ring, substantially as described.

4. In a shade-holder for incandescent electric lamps, the combination with a shade-ring having a central opening containing a cam, of a clamping-ring constructed with a locking finger passing through the said opening and extending outward and engaging with the said cam, whereby the two rings are permanently though loosely connected together, and whereby also the clamping-ring is adjusted through the action of the cam on the said finger, substantially as described.

5. In a shade holder for incandescent electric lamps, the combination with a shade-ring having its body constructed with a large central opening, the walls of which are formed by cams flanked at their ends by stops, of a clamping-ring constructed with locking-fingers arranged to pass down through the said opening and then bent outward, whereby the two rings are permanently though loosely connected together, and the clamping-ring adjusted by the co-action of the fingers and cams, and whereby also the rotation of the clamping ring in either direction is limited by the engagement of the locking-fingers with the said stops, substantially as described.

6. In a shade-holder for incandescent lamps, the combination with a shade-ring, of a clamping ring, the said rings being made independently of each other, and permanently though loosely connected together for rotation one upon the other to effect the contraction of the clamping-ring or to permit its expansion, substantially as described.

7. In a shade-holder for incandescent lamps, the combination with a shade-ring, of a clamping-ring, the said rings being permanently though loosely connected together for the rotation of one upon the other, and one of the parts being constructed with a cam with which the other part co-acts for the contraction of the clamping-ring, substantially as described.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

NATHAN W. CRANDALL.
EDGAR A. RUSSELL.

Witnesses:
MABELLE L. SMITH,
IMOGENE FOX.