

(No Model.)

2 Sheets—Sheet 1.

W. J. EDMOND & T. J. KEON.
SHADE FOR INCANDESCENT ELECTRIC LAMPS.

No. 479,207.

Patented July 19, 1892.

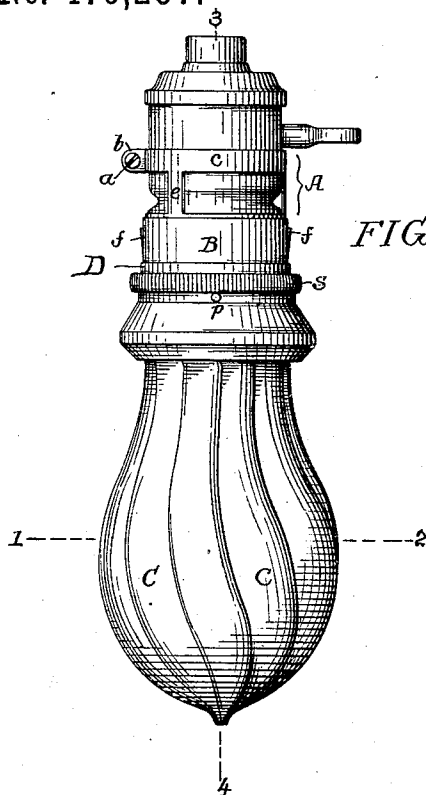


FIG. 1.

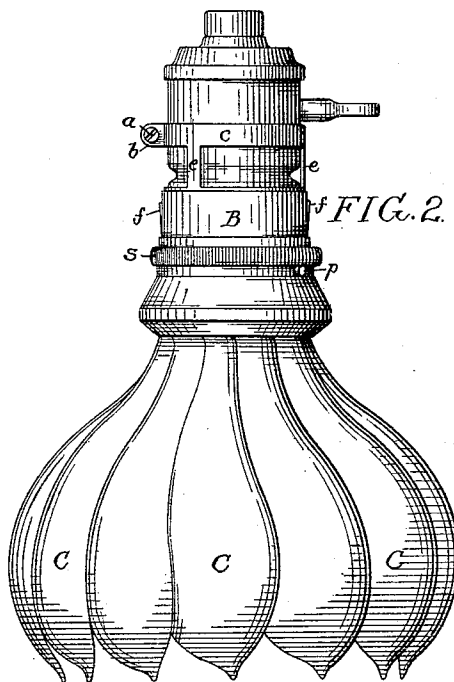


FIG. 2.

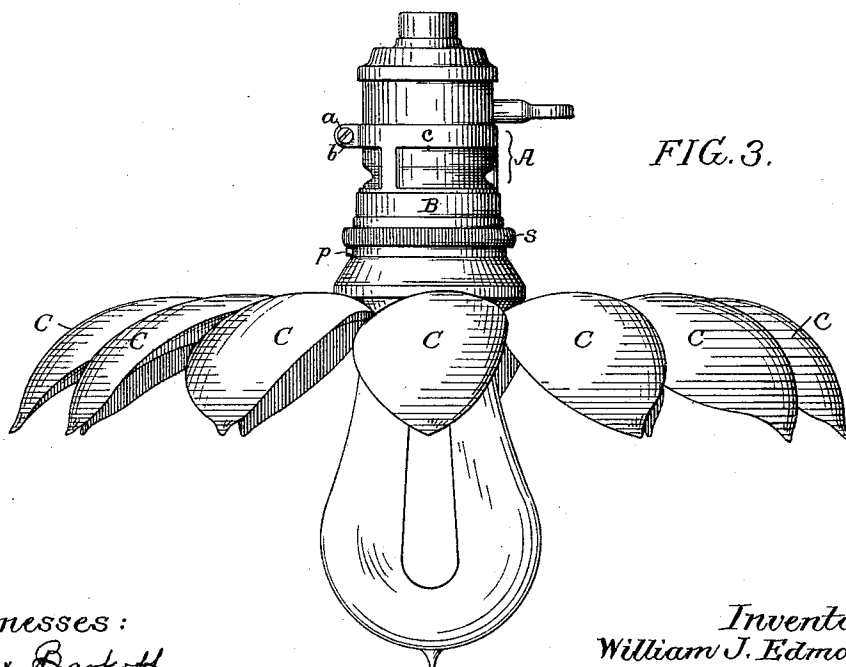


FIG. 3.

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FIG. 4.

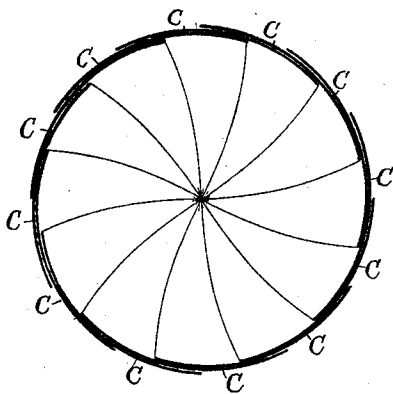


FIG. 7.

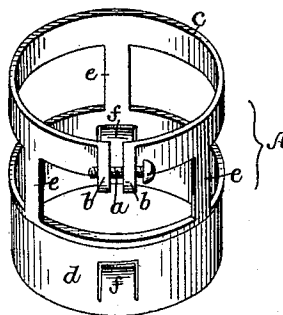


FIG. 6.

FIG. 5.

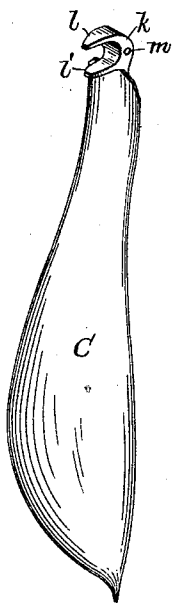
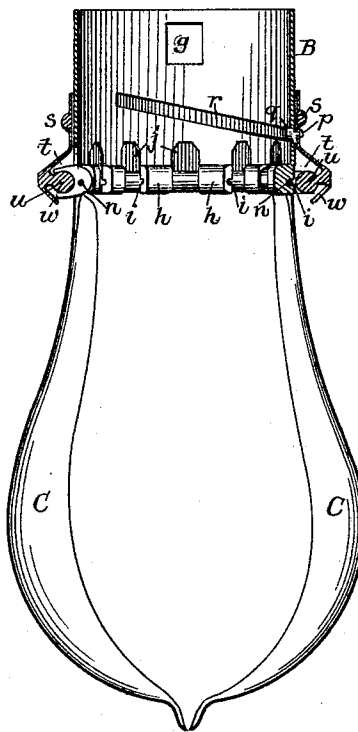
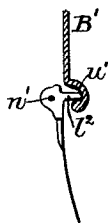


FIG. 8.



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UNITED STATES PATENT OFFICE.

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SHADE FOR INCANDESCENT ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 479,207, dated July 19, 1892.

Application filed February 29, 1892. Serial No. 423,234. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM J. EDMOND and THOMAS J. KEON, citizens of the United States, and residents of Philadelphia, Pennsylvania, have invented certain Improvements in Shades for Incandescent Electric Lamps, of which the following is a specification.

The object of our invention is to provide a combined shade and reflector for incandescent electric lamps or other lights, the device comprising a series of petal-like sections which may be folded partially or wholly together to soften or wholly exclude the light of the lamp, as more fully described herein-
after.

In the accompanying drawings, Figure 1 is an elevation of our improved shade applied to an incandescent electric lamp, the sections of the shade being folded together to wholly exclude the rays of light. Fig. 2 is a similar view showing the sections partly opened. Fig. 3 is a similar view showing the sections wholly opened. Fig. 4 is a sectional plan view on the line 1 2, Fig. 2, on a somewhat larger scale. Fig. 5 is a perspective view showing one of the sections detached from the shade. Fig. 6 is a transverse section on the line 3 4, Fig. 1, on an enlarged scale, showing but two of the sections. Fig. 7 is a perspective view of the detachable collar by which the shade may be applied to the socket of an ordinary incandescent electric lamp, and Fig. 8 is a view of a modification.

Our invention is principally intended for application to the sockets of incandescent lamps of ordinary construction, the attaching-collar A (shown in Fig. 7) being made of suitable shape to accommodate the socket for which it is intended and being clamped in position thereon by means of a screw *a*, passing through ears *b*, projecting from the opposite end of the split ring *c*, which forms the upper portion of the collar. This split ring supports a lower ring *d*, to which it is attached by a series of connecting-strips *e*, and the ring *d* is provided with one or more catches for the support of the shade, the simplest form of catch being illustrated in Fig. 7 and comprising tongues *f*, stamped out of the ring *d*, which is made of suitable material to give the tongues *f* a slight spring. If desired, how-

ever, the catches may be attached to the collar *d* in any other suitable manner.

Surrounding the collar A is a ring or collar B, held in position by the catches *f*, which pass through openings *g* in the ring B in such manner that the ring B may be readily removed by pressing on the catches *f* and forcing them out of engagement with the openings *g*. This ring B forms the base of the shade, and its lower end is provided with an internal flange *h*, in which is an annular groove *i*, extending through the body of the ring B, and through the ring and its flange is cut at regular intervals a series of notches *j*, in which are placed the upper ends or pivot-blocks of the petal-like sections C, each of the pivoting-blocks, as shown more clearly in Fig. 5, being in the form of a block *k*, having projecting tongues *l l'* and having an orifice *m*, through which the pivot-pin *n* passes. If desired, the pivot-pins *n* may be separate from each other and the opposite ends of the pins be carried by the flange *h*; but we prefer to make the pivot point or pin in the form of a ring which encircles the ring B and is adapted to fit within the annular groove *i*.

The shade is composed of a number of sections C, each in the form of a petal, and arranged in such a manner that their edges will overlap to a greater or less extent, depending upon the extent to which the shade is opened, and each petal is suitably curved to the shape of the globe of the lamp, so that when wholly closed they will entirely cover all portions thereof.

Surrounding the ring B is an operating-ring D, through the body of which passes a pin *p*, preferably carrying an anti-friction roller *q*, adapted to a cam-slot *r* in the ring B, so that as the ring D is turned the traversing of the cam *r* by the anti-friction roller *q* will effect the vertical movement of the ring D, and to facilitate movement of this ring it is preferably provided with an exterior ring *s*, having a serrated or roughened periphery, as shown in Figs. 1, 2, and 3. The lower end of the ring D flares outwardly, forming a groove *t*, and is provided with a flange *u*, substantially circular in cross-section, and adapted to fit between the tongues *l* and the tongues *l'* of

the sections C, so that as the ring D is moved vertically the flange will operate on the tongues positively in both directions and cause a simultaneous movement of all the petals on their pivot-points *n*, and as this movement of the ring is effected by a cam-slot on a comparatively slight incline the petal-like sections may be opened to any desired extent, and when opened will remain in any position to which they may have been moved. Beneath the flange *u* is a ring *w* to protect the tongues *l'*. The overlapping of the sections is such that even when the shade is fully opened, as shown in Fig. 3, the escape of light in a horizontal plane between the sections is prevented, and when the under surface of the sections are polished or provided with reflecting-surfaces the light may be concentrated as much as desired.

In Fig. 8 is illustrated a modification, in which the ring B' is provided with a groove *w'*, with which a single tongue *l''* in the petals engages. It is preferred to make the petals of sheet metal, which may be stamped in the proper form; but any material may of course be used—such, for instance, as paper, vulcanized fiber, celluloid, glass, or textile materials, if preferred.

Having thus described our invention, we claim and desire to secure by Letters Patent—

1. A shade comprising a series of sections pivoted to a base, a tongue or tongues projecting from each of said sections, a grooved operating-ring engaging with said tongue, and means for effecting the vertical movement of such grooved ring, substantially as specified.

2. A shade comprising a base-ring, a series of sections pivoted thereto, tongues projecting from said sections, a grooved operating-ring encircling said base-ring and adapted to engage with said tongues, and means for effecting the vertical movement of said grooved operating-ring, substantially as specified.

3. A shade comprising a base-ring, a series of sections pivoted thereto, tongues *l'* on each of said sections, an operating-ring, a flange thereon adapted to fit between said tongues, and means for effecting the vertical movement of said operating-ring, substantially as specified.

4. A shade comprising a base-ring, an internal flange *h* thereon, and having a peripheral groove *i*, a series of sections, pivot-blocks thereon, a pivot pin or ring passing through each of said blocks and adapted to said groove *i*, tongues projecting from said pivot-blocks, and a grooved operating-ring, to which said tongues are adapted, with means for effecting the vertical movement of said ring, substantially as specified.

5. A shade comprising a base-ring, an internal flange thereon, and having a peripheral groove *i*, a series of overlapping sections, pivot-blocks thereon, a pivot pin or ring pass-

ing through each of said blocks and adapted to said groove *i*, tongues *l'*, projecting from each of said sections, an operating-ring, a flange thereon adapted to fit between said tongues, and means for effecting the vertical movement of said operating-ring, substantially as specified.

6. A shade comprising a base-ring, an internal flange thereon, and having a peripheral groove *i*, a series of overlapping sections, pivot-blocks thereon, a pivot pin or ring passing through each of said blocks and adapted to said groove *i*, tongues *l'*, projecting from each of said blocks, an operating-ring, a flange thereon adapted to fit between said tongues, and a pin projecting from said operating-ring and adapted to a cam-groove in the base-ring, substantially as specified.

7. A shade comprising a base-ring B, having an inclined cam-groove *r*, a series of overlapping shade-sections pivoted to said base-ring, tongues projecting from each of said sections, a grooved operating-ring engaging with said tongue, and a pin carried by said grooved operating-ring and adapted to the cam-groove of the base-ring B, substantially as specified.

8. A shade comprising a series of sections, each of said sections having one of its edges so arranged as to overlap the edge of the next adjoining section and its opposite edge being overlapped by another of said sections, substantially as specified.

9. The combination of the base-ring, a series of overlapping sections pivoted thereto, means for operating said sections, and a holding-ring comprising an upper clamp-ring *c* and a lower ring *d*, and catches carried by said lower ring and adapted to engage with said base-ring, substantially as specified.

10. The combination of the base-ring, the shade carried thereby, openings in said ring, a holding-ring A, secured to the lamp-socket, and tongues *f*, projecting from said holding-ring and adapted to engage with the openings in the base-ring, substantially as specified.

11. The combination of the base-ring B, having openings, the shade carried by said base-ring, the holding-ring A, comprising an upper split ring *c*, a clamping-screw for holding said ring in position on the socket, and catches carried by said holding-ring and adapted to engage with the openings in the base-ring, substantially as specified.

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

WILLIAM J. EDMOND.
THOMAS J. KEON.

Witnesses:

JNO. E. PARKER,
EUGENE ELTERICH.