

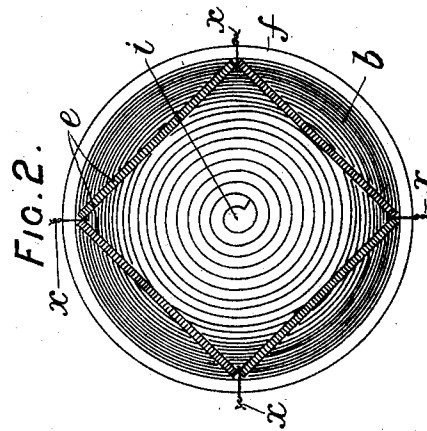
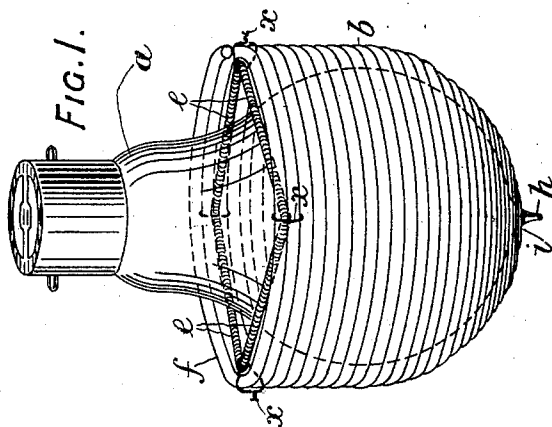
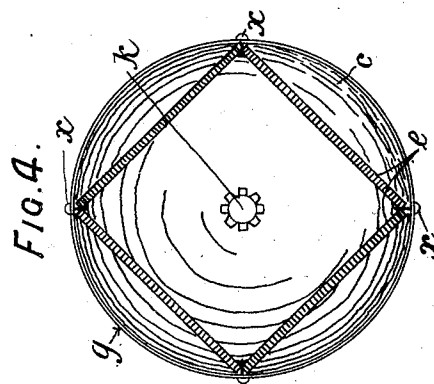
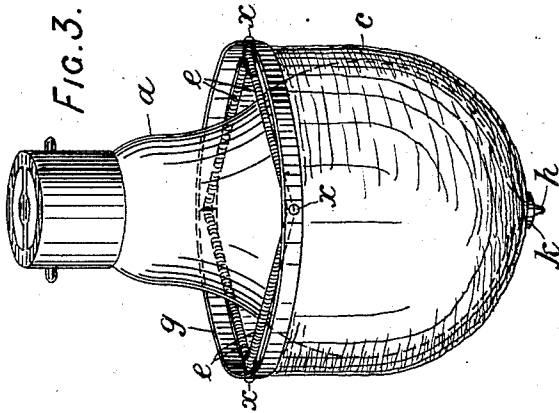
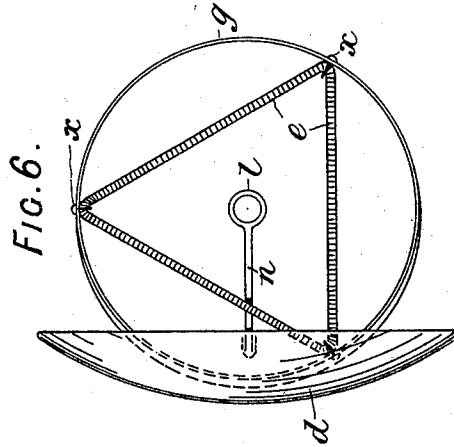
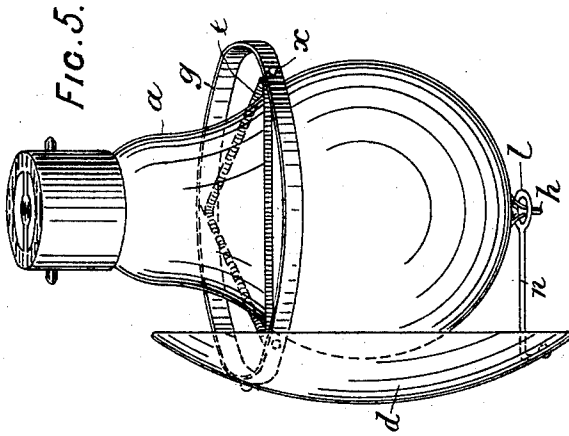
No. 707,433.

Patented Aug. 19, 1902.

**E. A. LIVET.
SHADE SUPPORT.**

(Application filed Mar. 19, 1901.)

(No Model.)



WITNESSES :
W. M. Avery
C. E. Holsen

INVENTOR
Ernest A. Livet
BY *Mum*
ATTORNEYS

UNITED STATES PATENT OFFICE.

ERNEST ANDRÉ LIVET, OF LONDON, ENGLAND, ASSIGNOR TO THE HIRAM MAXIM LAMP COMPANY, LIMITED, OF LONDON, ENGLAND.

SHADE-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 707,433, dated August 19, 1902.

Application filed March 19, 1901. Serial No. 51,891. (No model.)

To all whom it may concern:

Be it known that I, ERNEST ANDRÉ LIVET, a subject of the King of Great Britain, residing at 28 Bush Lane, Cannon street, in the city of London, have invented new and useful Shade-Supports, of which the following is a specification.

The object of this invention is to provide means for directly and detachably connecting to the bulb of an electric incandescent lamp a useful or ornamental article or one serving both an ornamental and useful purpose, such as a shade, transparency, or reflector; and the invention is more particularly designed to enable a light refracting and diffusing shade or globe, constituted by a spirally-coiled rod of glass, to be secured to the lower portion of an electric incandescent lamp bulb in such manner that the place of fastening shall be imperceptible and the light of the lamp in no way obscured.

The invention consists, essentially, in the combination, with the shade or other article, of means of attachment, consisting of light springs adapted to be sprung over the lamp-bulb, so as to embrace, clip, or engage therewith at a point above its greatest diameter, the said springs being attached to the inner side of the shade, so as to be concealed from view. The springs are preferably distended within the upper part of the shade or other article in the form of a contained square, triangular, or polygonal figure the sides of which, formed by the extensible spring members, may be readily deflected and stretched, so as to slip over the bulb and fit closely about the same after passing its greatest diameter. When this means of attachment is employed for the shade or globe made of a spirally-coiled glass rod, as above mentioned, the springs would be preferably attached to the upper convolution of said rod; but when the attachment is employed for a shade of silk or other material or for a reflector or other adjunct such shade or adjunct would be provided with a ring adapted to be passed over the equatorial or largest diameter of the bulb, the springs in either case being disposed in the plane of the ring or of the upper convolution, as the case may be, in such manner as to form together a symmetrical figure whose

sides are tangential to a circle of smaller diameter than the equatorial diameter of the bulb, the springs being adapted to yield laterally, so as to give passage to the bulb, and thereafter to contract about and press inwardly upon the bulb above its equator, so as to hold the ring, and consequently the shade or other adjunct connected thereto, in position on the lamp in such manner that while the shade or other article is secured against accidental displacement it can be readily removed from the lamp when so required and as readily replaced.

A characteristic feature of this invention is the fact that the globe, shade, reflector, or other adjunct with which the springs are combined is of practically universal application and may consequently be applied to lamps of all manufacturers. Moreover, owing to the neatness of the device it is adapted to be applied to lamps already furnished with shades or reflectors which project the light downwardly.

The invention is illustrated in the accompanying drawings, forming part of this specification, wherein—

Figures 1, 3, and 5 are perspective views respectively showing the device as used for attaching to the bulb of an electric incandescent lamp a light refracting and diffusing shade or globe constituted by a spirally-coiled rod of glass, as above referred to, a shade of silk or other material, and a lateral reflector or transparency, as the case may be. Figs. 2, 4, and 6 are plan views corresponding, respectively, to Figs. 1, 3, and 5 with the lamp removed.

Similar letters of reference denote like parts in all the figures.

a is the bulb of an electric incandescent lamp, to which in Fig. 1 is attached a light refracting and diffusing shade or globe constituted by a spirally-coiled rod of glass having lens-like properties and forming a cup-shaped screen whose internal diameter slightly exceeds the equatorial or greatest diameter of the lamp-bulb *a*, the depth of the screen being sufficient to reach from the outer end of the bulb to a point beyond the equator or plane of greatest diameter of the bulb. The shade or screen *b* is preferably cylindrical,

as shown, from its upper margin *f* to a plane coincident with the equator of the bulb, the lower portion of the cup being substantially hemispherical.

- 5 The means whereby the globe *b* is held attached to the bulb *a* consists of a series of light helical springs *e*, attached at points *x* around the margin of the shade *b*, so as to extend across and in the plane of the circle
10 formed by said margin, the points *x* being equidistant from one another and so disposed that the springs *e* together form a symmetrical figure whose sides are tangential to a circle of smaller diameter than the equatorial
15 diameter of the bulb *a*. The springs *e* might be attached to a metal or other ring fixed to the margin of the shade or screen *b*; but preferably they are, as shown, directly attached to the marginal convolution or con-
20 volutions *f* of the spiral coil composing the globe, the four springs being in one length and secured by means of loops of wire to the coil or coils *f* at the points of attachment thereto. By this means the fastening as a
25 whole is rendered practically invisible, the springs *e* lying within and being concealed by the globe *b*.

In order to prevent the shade *b* from becoming canted upon the bulb *a*, the point *h*
30 of the latter preferably engages in an aperture *i*, left at the center or commencement of the convolutions of the glass rod comprising the globe.

- In Figs. 3 and 4, *c* represents a shade composed of some translucent material, such as silk, of a shape and dimensions substantially similar to those of the shade *b* in Figs. 1 and 2. The margin of the shade *c* is distended upon a light ring of thin metal whose di-
40 ameter is sufficient to enable it to be passed over the equator of the lamp-bulb *a*, and the springs *e* are in this case attached to the ring *g*, so as to lie in the plane of and be concealed by the latter. The shade is prevented
45 from becoming canted by the point *h* of the bulb engaging in an eyeleted hole *k* in the center of the bag or cup of the shade.

In Figs. 5 and 6, *d* represents a reflector, a transparency, or other object affixed laterally
50 to the bulb *a* by being fastened to a ring *g* of a diameter sufficient to be passed over the

equator of the bulb *a*, the springs *e* being attached as before to the ring *g*. In this case the reflector or other object *d* is prevented
55 from canting by the point *h* of the bulb *a* engaging in an eye *l* on the end of a light bracket of wire or other rigid material attached to the reflector. It will be obvious that the reflector *d* being rigid the ring *g* need not be continuous across the surface of
60 the reflector, as shown, but might be interrupted for an angular distance corresponding to the breadth of the reflector, thus forming a segmental band whose ends would be fixed to the reflector at either side of the latter. 65

I claim—

1. The herein-described means for directly and detachably affixing a shade, reflector, or screen to an electric-lamp bulb, said means consisting of longitudinally-extensible helical
70 springs attached in tension and in one plane to the shade, reflector or screen, and occupying therein the position of the sides of an inscribed regular polygon, so as to be capable of being stretched and deflected in order to
75 pass over the part of the bulb of greatest diameter, and of contracting about the neck of the bulb so as to retain the shade, reflector or screen in position thereon, substantially, as specified. 80

2. The combination with means for attaching a shade, reflector, or screen to an electric-lamp bulb consisting of spiral springs distended in the form of a regular polygon and carried by the shade, reflector or screen, of
85 means of steadying the latter consisting of an eye carried by the shade, reflector or screen and adapted to receive the sealing-off point of the bulb, substantially, as specified.

3. The combination with a shade reflector
90 or screen for electric lamps, of spiral springs carried by the shade reflector or screen and distended in the form of a polygon so as to be capable of being stretched or deflected in order to pass over the part of the bulb of great-
95 est diameter and of contracting about the neck of the bulb, as set forth.

ERNEST ANDRÉ LIVET.

Witnesses:

WALTER J. SKERTEN,
G. F. WARREN.