(No Model.)

M. D. GREENGARD.

SHADE HOLDER.

No. 588,570. Patented Aug. 24, 1897.

Fig. 1.

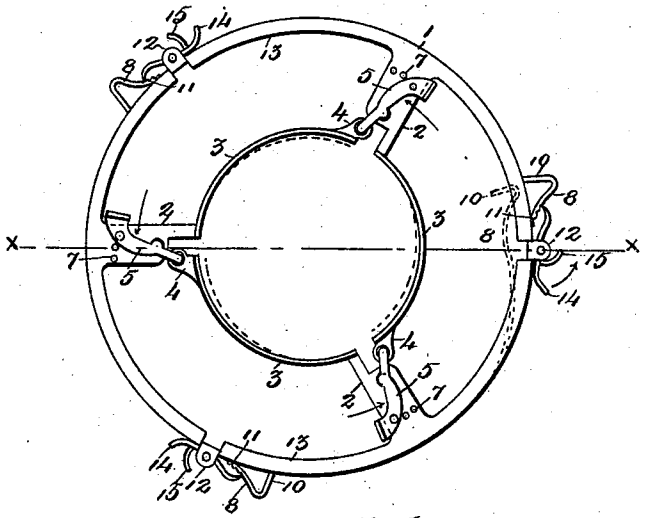


Fig. 2.

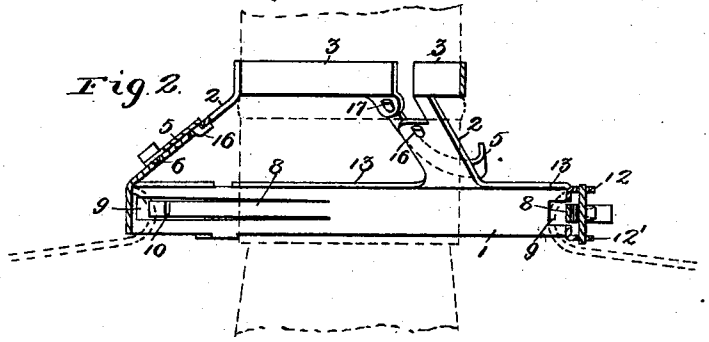


Fig. 3.

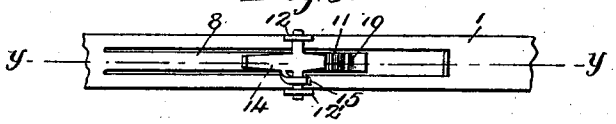


Fig. 4

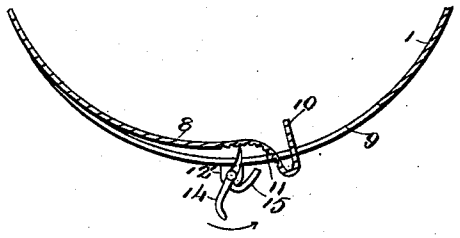
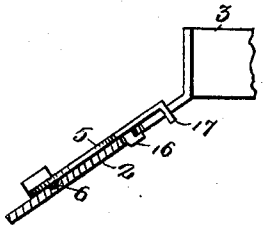


Fig. 5.



Witnesses.
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MORRIS D. GREENGARD, OF ST. LOUIS, MISSOURI.

SHADE-HOLDER.

SPECIFICATION forming part of Letters Patent No. 588,570, dated August 24, 1897.

Application filed November 12, 1896. Serial No. 611,879. (No model.)

To all whom it may concern:

Be it known that I, MORRIS D. GREENGARD, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Shade-Holders, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in shade-holders for electric incandescent lamps; and it consists in the novel arrangement and combination of parts more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a top plan view of the invention. Fig. 2 is a section on line *x x* of Fig. 1. Fig. 3 is an elevation of a portion of the outer periphery of the shade-ring. Fig. 4 is a section on line *y y* of Fig. 3, and Fig. 5 is a sectional detail showing the character of the controlling-lever by which the clamping-band is operated.

The object of my invention is to construct a shade-holder for electric incandescent lamps which can be secured to the socket of such lamp and to which the shade can be attached without the use of screws, one which is composed of a minimum number of parts, one which is durable, cheap, and inexpensive to manufacture, and one whose general frame can be struck or stamped from a single piece of metal, the latter being cut away, so as to materially reduce the weight of the resulting frame.

The advantages of the present invention will be better apparent from a detailed description of the same, which is as follows:

Referring to the drawings, 1 represents the shade-ring—that is, the ring to which the shade is directly secured—the said ring having formed integrally therewith a series of webs 2, inclined to the general plane of the circle or perimeter of the ring, the upper end of each web having secured thereto one end of a yielding band-section 3, the latter being preferably formed integrally with said web and the several sections taken collectively being adapted to form a clamping-band, by which the lamp-socket is adapted to be embraced. The shade-ring, the clamping-band, and the webs thus form a single integral frame. Pivoted to each web on that side which is adjacent or nearest to the free end of the band-section carried by the next succeeding web is an operating-lever 5, the long arm of which is extended toward the shade-ring and the short arm toward the clamping-band, the free end of the short arm of said lever being pivotally secured to the terminal lug 4, formed at the free end of the section 3, carried by or forming a part of the next succeeding web, whereby upon the tilting of the long arm of the lever in the direction indicated by the arrow in Fig. 1 the free end of the short arm will be drawn toward the adjacent edge of the web carrying the lever, thereby drawing the free end of the band-section in the same direction and contracting the size of the clamping-band as a whole. Normally the free end of each band-section 3 is removed a suitable distance from the adjacent edge of the next succeeding web, whereby when the several sections of the band are drawn toward the webs by the tilting action of the levers the socket of the lamp is firmly embraced. When once so embraced, the clamping-band is retained in its contracted position, (see dotted position of the clamping-band in Fig. 1)—that is, it is prevented from opening or expanding—by the inwardly-projecting knob 6, engaging one of a series of depressions 7, punched or formed in the path of said knob along the base of each web 2, the resiliency of the long arm of said lever effecting said engagement the moment it is released by the operator.

Cut from the body of the shade-ring along the vertically-depending portion or flange thereof and disposed in a plane corresponding with the general circle of the ring are a series of spring-tongues 8, the free end of each of which is bent outwardly, so as to project beyond the periphery of the shade-ring through the slit 9 thus formed therein, the end of the tongue being provided with an inwardly-deflected gripping portion or arm 10 for seizing the shade and the outer surface of a portion of the tongue adjacent to the gripping end being serrated or provided with teeth 11, for a purpose to be presently described. Pivoted between the lugs 12 (cut and bent outwardly from the upper rim 13 of the shade-ring) and 12′, located intermediate the webs 2, is a wing or vane 14, the inner tapering member of which is adapted to engage the teeth or serrations 11 of the tongue. Upon the tilting of the outer member of the

wing in the direction indicated by the arrow in Fig. 4 the inner member of the wing will ride over the serrations of the tongue, forcing the free end thereof inwardly and thus bringing the gripping-arm 10 nearer the center of the shade-ring, and when the entire series of gripping-arms are thus forced inwardly they serve to grip or hold the shade inserted between them, the release of the shade by any outward expansion of the tongues being prevented by reason of the frictional engagement between the several wings 14 and the serrations 11. It is to be understood that the resiliency of the tongues 8 is such as to cause the same to expand outwardly through the slots 9 and beyond the periphery of the shade-ring, this outward expansion to its full degree being permitted when the wings 14 occupy the position indicated in Fig. 1. When the outer member of said wing in said figure is tilted in the direction as shown by the arrow, it will force the tongue inwardly, (see dotted position of the tongue in Fig. 1)—that is, to a position corresponding to that shown in Fig. 4. To limit the movement or tilting of the same member of the wing in the direction by which the tongue 8 is forced inwardly, I provide the outer member of said wing adjacent to the pivotal line of the wing with an inwardly-curved limiting-arm 15, the free end of which is adapted to arrest the rotation of the wing at the proper time by coming in contact with the outer face of the adjacent limiting-wall of the slot 9. It is of course apparent that any other frictional contact between the wing 14 and tongue 8 could be substituted for the serrations formed along the outer surface of the tongue, and it is further apparent that the device may be altered in many details without departing from the spirit of my invention.

In Fig. 5 I have shown a section through the general contour of the operating-lever 5, which more clearly shows the detailed construction thereof, showing as it does the pivot 16 thereof and the inwardly-deflected inner end 17, by which the pivotal connection between it and the lug 4, carried at the free end of the band-section 3, is effected.

I do not of course limit myself to making the frame of the shade-holder of a single piece of metal.

Having described my invention, what I claim is—

1. In a shade-holder, a suitable shade-ring, a series of webs carried thereby, a band-section forming a continuation of each web, the free end of each section extending to within a suitable distance from the next succeeding web, a lever pivoted to each web, the free end of one arm thereof being connected to the free end of the band-section adjacent thereto, and means for retaining the lever in any of its tilted positions, substantially as set forth.

2. In a shade-holder, a suitable shade-ring, a series of webs carried thereby and formed integrally therewith, a band-section forming an integral continuation of each web, the free end of each section extending to within a suitable distance from the next succeeding web, a lever pivoted to each web the free end of one arm thereof being connected to the free end of the band-section, and means for retaining the lever in any of its tilted positions, substantially as set forth.

3. In a shade-holder, a suitable shade-ring having a series of cut-away portions or slits, tongues having their free ends normally projecting through the slits and beyond the periphery of the shade-ring and disposed in the general plane of the perimeter of said ring, and suitable wings pivoted along the periphery of the ring and adapted upon the rocking or tilting of the same to either force the tongues inwardly or permit the same to expand and resume their normal position, substantially as set forth.

4. In a shade-holder, a suitable shade-ring having a series of cut-away portions or slits, tongues resulting from the cutting of the slits having their free ends normally projecting through the slits and beyond the periphery of the shade-ring, suitable pivoted actuating-wings for said tongues, and means for retaining the wings in any tilted position, substantially as set forth.

5. In a shade-holder, a suitable shade-ring having a series of cut-away portions or slits, tongues resulting from the cutting of the slits having their free ends normally projecting through the slits and beyond the periphery of the ring, and operating in the general plane of the perimeter of the ring, gripping-arms formed at the free ends of the tongues, suitable serrations formed along the outer surfaces of the projecting ends of the tongues, suitable wings pivoted along the periphery or perimeter of the ring for actuating the tongues, the engaging member of each wing coöperating with the serrations on the tongue, and a suitable arm carried by each wing for limiting the tilting of the same in one direction, said limiting-arm being adapted to bear against one of the limiting-walls of the slit cut in the ring, substantially as set forth.

6. In a shade-holder, a suitable shade-ring having a series of cut-away portions or slits, tongues formed as a result of said slits and tending normally to project through the slits and beyond the periphery of the ring, suitable lugs cut from the ring and deflected outwardly, a wing pivoted between each pair of lugs, the said wing being adapted upon the tilting or rocking of the same to actuate the tongue opposite thereto inwardly, or permit its expansion outwardly, substantially as set forth.

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

MORRIS D. GREENGARD.

Witnesses:
EMIL STAREK,
ALFRED A. MATHEY.