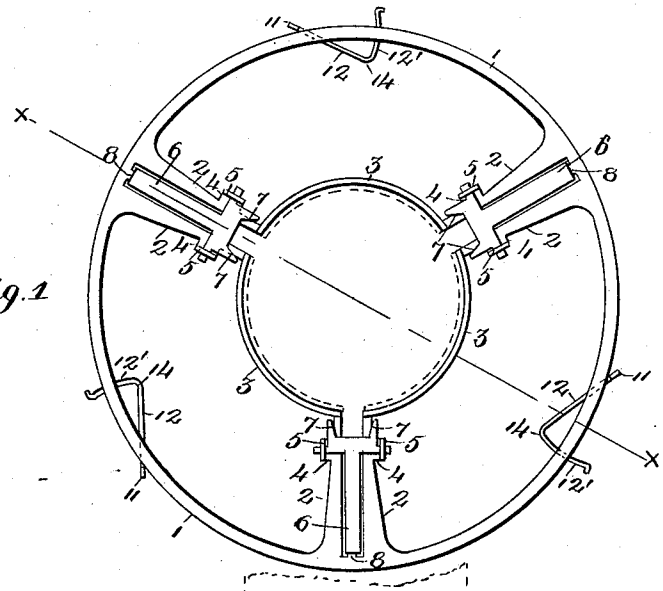
(No Model.)

M. D. GREENGARD.

SHADE HOLDER.

No. 588,571. Patented Aug. 24, 1897.

Fig. 1



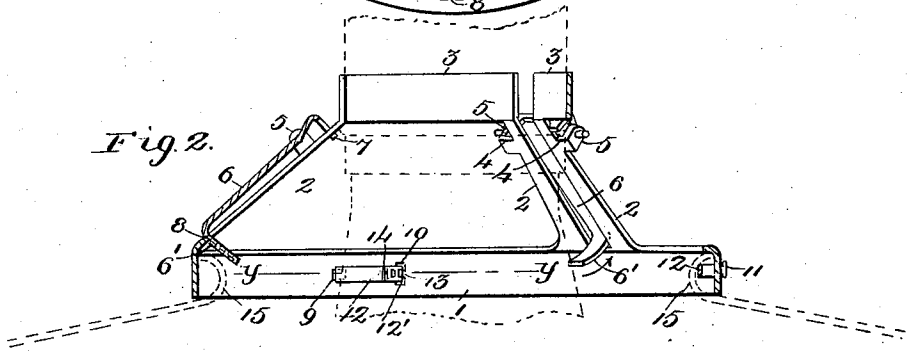


Fig. 2.

Fig. 3.

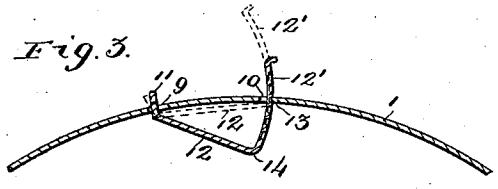


Fig. 5.

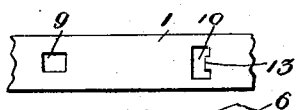


Fig. 7.

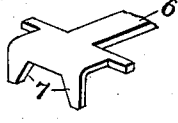


Fig. 4.

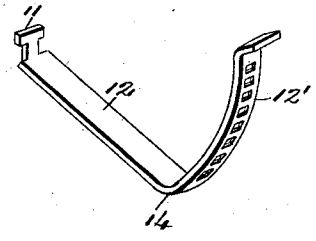
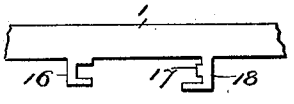


Fig. 6.



Witnesses
Alfred A. Mathey
H. B. Wells

Inventor
Morris D. Greengard.
By his Attorneys,
Keller & Steren

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

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

SHADE-HOLDER.

SPECIFICATION forming part of Letters Patent No. 588,571, dated August 24, 1897.

Application filed November 23, 1896. Serial No. 613,136. (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 my improved shade-holder. Fig. 2 is a vertical section on the line *x x* of Fig. 1. Fig. 3 is a horizontal section on line *y y* of Fig. 2. Fig. 4 is a perspective view of one of the shade-retaining arms. Fig. 5 is an elevation of a portion of the outside or periphery of the shade-ring, showing the openings for mounting the shade-retaining arms. Fig. 6 is a similar view of a modified form of shade-ring, and Fig. 7 is a perspective view of the forked end of one of the levers by which the clamping-band of the holder is controlled.

The object of my invention is to construct a shade-holder for electric lamps which can be secured to the socket of such lamps and to which the shade can be attached without the use of screws, one in which the mechanism for securing the holder to the lamp-socket is materially simplified and at the same time rendered thoroughly effective, one in which the devices for retaining the shade to the holder are materially reduced in weight, one in which the frame is preferably made of a single piece of metal, and one presenting further and other advantages more apparent from a detailed description of the device, which is as follows:

Referring to the drawings, 1 represents the shade-ring or the ring to which the shade is secured, said ring having formed (preferably) integrally therewith a series of pairs of webs 2, inclined inwardly to the general plane of the circle of the shade-ring, one member of each pair of webs being connected at its upper or free yielding end with the nearest member of the next adjacent pair by a clamping-band section 3, the several sections forming, collectively, a clamping-band by which the socket of the lamp can be seized or embraced. The shade-ring, the clamping-band, and the connecting-webs thus form a frame cut or stamped preferably from a single piece of metal.

The members of each pair of webs are provided at a point adjacent to or nearest the free or yielding end thereof with oppositely-extending lugs 4, from the free ends of which are deflected outwardly and in a plane substantially perpendicular to the plane of the shade-ring the ears 5, each pair of ears being adapted to receive the opposite extensions of the pivotal axis of a controlling or operating lever 6, swinging in a plane disposed in the line of the radius of the circle of the shade-ring and perpendicular to the plane thereof. The short arm of said controlling-lever is forked, the members of the said fork being rearwardly or inwardly deflected and normally embracing the outer edges of the webs at a point between the axis of the lever and the clamping-band, the embracing-fork members having inclined or outwardly-diverging contacting sides 7, whereby upon the rocking of the lever from the inside of the shade-frame outwardly, or as indicated by the arrows in Fig. 2, the said embracing sides 7 will draw the yielding ends of the webs together, thus contracting the clamping-band (see dotted position of same in Fig. 1) and causing it to firmly embrace the socket of the lamp.

To retain the lever in any position to which it has been tilted and thus prevent the clamping-band from being released from the lamp-socket, I provide each lever with an inwardly-directed extension 6′, serrated along its outer face, the serrated face being adapted to ride along the shade-ring at the base of the webs, it being remembered that said extension is springy or resilient, so that it always remains in engagement with the shade-ring. To more effectively engage the serrations, I form a tongue 8 on the ring. Other equivalent means, however, for retaining the operating-lever in position may be resorted to without departing from the spirit of my invention. Of course upon swinging the operating-lever inwardly the forked end of the short arm thereof will permit the webs to expand to their

normally separated position, thus releasing the shade-holder from the lamp-socket. It is, of course, within the spirit of my invention to deflect the extension 6′ outwardly instead of inwardly, but the form here shown is preferable.

Formed along the shade-ring are a series of pairs of openings 9 10, through the former of which is adapted to be inserted (lengthwise of the opening) the pivotal head 11 of a shade-retaining arm 12, the head 11, when the arm is in place, overlapping the sides of the opening 9 (see Fig. 2) on the outer periphery of the shade-ring, the arm 12 being thus directed toward the inside of the frame. The arm 12 has an outwardly-bent springy or resilient extension 12′, serrated along the outer surface, said extension being inserted from the inside of the shade-ring through the opening 10, permitting the serrations of the extension to ride over the tongue 13, formed along the adjacent side of the said opening 10. The frictional engagement between the serrations of the extension and the tongue 13 is sufficient to retain the arm 12 in any position to which it may be swung, the elbow 14, formed between the arm proper and its extension, serving to engage the shade-rim 15 and hold the shade within the holder. The dotted position in Fig. 3 shows the arm swung outwardly, or in a position either to release the shade or permit its insertion into the shade-ring. The arms 12 are preferably mounted, as here shown, to operate or swing in a plane parallel substantially to the plane of the circle of the shade-ring.

In case of a narrow shade-ring, where the punching of the metal for the formation of the openings 9 10 might weaken the ring, I may substitute the construction of ring shown in Fig. 6, where the base of the U-shaped cleat 16 serves to retain the pivotal head 11 of the arm 12, and where the basal tongue 17 of the cleat 18 serves as a bearing for the serrated extension 12′ of the shade-retaining arm.

To one skilled in the art other equivalent details of constructions not here shown might suggest themselves.

It is obvious that the device might be used as a globe-holder for gas-burners.

Having described my invention, what I claim is—

1. In a shade-holder, a suitable shade-ring, a series of pairs of webs carried thereby, a series of clamping-band sections connecting respectively the one member of one pair of webs with the nearest member of the next succeeding pair, a controlling-lever in pivotal connection with each pair of webs and swinging normally in a plane at right angles to the plane of the circle of the shade-ring, said lever being adapted to vary the distance between the free or yielding ends of the webs, substantially as set forth.

2. In a shade-holder, a shade-ring, a series of pairs of webs carried thereby, a series of clamping-band sections connecting the free yielding end of one member of each pair to the similar end of the nearest member of the next succeeding pair, a controlling-lever pivoted to the webs and swinging within the space formed between the members of each pair of said webs, and in a plane substantially at right angles to the plane of the circle of the shade-ring, substantially as set forth.

3. In a shade-holder, a suitable shade-ring, a series of pairs of webs carried thereby, a series of clamping-band sections connecting the yielding end of one member of each pair of webs to the corresponding end of the nearest member of the next succeeding pair, a controlling-lever pivoted in connection with each pair of webs and swinging in the space formed between the members of each pair, and in a plane substantially at right angles to the plane of the circle of the shade-ring, and means for retaining the lever in any of its adjusted positions, substantially as set forth.

4. In a shade-holder, a suitable shade-ring, a series of pairs of webs carried thereby, a series of clamping-band sections connecting respectively the yielding end of one member of each pair of webs with the corresponding end of the nearest member of the next succeeding pair, a controlling-lever pivoted between the members of each pair of webs and swinging in the space between the members of each pair of webs and in a plane both perpendicular to the plane of the circle of the shade-ring, and disposed in the radial line of the circle of said shade-ring, said lever being adapted to control the relative distance of the yielding ends of the webs and thus control the size of the clamping-band, the parts operating substantially as and for the purpose set forth.

5. In a shade-holder, a suitable shade-ring, a series of pairs of webs carried thereby, a series of clamping-band sections connecting respectively the yielding end of one member of each pair of webs with the corresponding end of the nearest member of the next succeeding pair, a controlling-lever pivoted between the members of each pair of webs and swinging in the space between the members of each pair of webs and in a plane disposed both perpendicularly to the plane of the circle of the shade-ring and on a radial line of the circle of the ring, said lever being adapted to control the relative distance between the yielding ends of the webs, and means for retaining the lever in any adjusted position, substantially as set forth.

6. In a shade-holder, a suitable shade-ring, a series of pairs of webs carried thereby, a series of clamping-band sections connecting the yielding end of one member of each pair of webs with the corresponding end of the nearest member of the next succeeding pair of webs, a controlling-lever pivoted between the members of each pair of webs and swinging in the space between the members of each pair and in a plane substantially perpendicular to the plane of the circle of the shade-

ring, and disposed in a radial line of the circle of the ring, the short arm of the lever being forked, and the members of the fork embracing the members of each pair of webs and adapted to bring together the yielding ends of said members of the webs upon the swinging of the lever in one direction, the long arm of the lever being adapted to ride along the shade-ring at the base of the web members and frictionally engage the same to hold the lever in any adjusted position, substantially as set forth.

7. In a shade-holder, a shade-ring, a series of pairs of webs carried thereby, a series of clamping-band sections connecting the yielding end of one member of each pair of webs with the corresponding end of the nearest member of the next succeeding pair of webs, a controlling-lever pivoted between the members of each pair of webs and swinging in a plane substantially perpendicular to the plane of the circle of the shade-ring, and across the space between the web members, and substantially in a line of the radius of the circle of the shade-ring, the short arm of the lever being forked, the adjacent sides of the fork members being inclined outwardly from the base of the fork, said inclined sides embracing the sides of the web members of each pair at a point between the pivotal axis of the lever and the free yielding ends of the web members, whereby upon the tilting of the lever in one direction the clamping-band will be contracted or operated in one direction, the long arm of the lever having an extension frictionally engaging the shade-ring at the base of the web members whereby the said lever will be retained in any position to which it may have been tilted, substantially as set forth.

8. In a shade-holder, a suitable shade-ring, a series of shade-retaining arms pivoted along the ring, each arm having a resilient extension adapted to engage with the ring simultaneously with the engagement of the arm with the shade introduced in the ring, substantially as set forth.

9. In a shade-holder, a suitable shade-ring, a series of shade-retaining arms pivoted along the periphery of the ring, a yielding extension forming a part of each arm and adapted to bear against the ring, an elbow formed between the arm proper and its extension, said elbow being adapted to engage the shade simultaneously with the engagement of the extension with the shade-ring, substantially as set forth.

10. In a shade-holder, a suitable shade-ring, a series of shade-retaining arms pivoted along the periphery of the ring, and adapted to swing in a plane substantially parallel with the plane of the circle of the ring, a yielding extension forming a part of each arm and adapted to bear against the ring, an elbow formed between the arm proper and its extension, said elbow being adapted to engage the shade simultaneously with the engagement of the extension with the shade-ring, substantially as set forth.

11. In a shade-holder, a suitable shade-ring, means for securing the same to a lamp, a series of pairs of openings formed along the periphery of the ring, an arm having a pivotal bearing in one of the openings of each pair, the arm being directed into the shade-ring, an extension forming a part of each arm and directed outwardly and adapted to project through the second opening of the pair and be operated from the outside of the ring, the extension being adapted to frictionally engage the side of the opening for retaining the arm in any position to which it may have been swung, substantially as set forth.

12. In a shade-holder, a suitable shade-retaining arm having a terminal head about which said arm is adapted to swing as a pivot, said head being adapted to be inserted into an opening cut from the shade-ring, from the inside of the ring to bring the head on the outside of the shade-ring, said head being adapted to overlap the longitudinal sides of the opening, a resilient extension forming a continuation of the arm, said extension being bent from the main arm so as to project outwardly through the shade-ring and be operated from the outside of the ring, the said extension being adapted to frictionally engage the walls of the opening through which it passes, and thus retain the arm in any position to which it may have been swung, substantially as set forth.

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

MORRIS D. GREENGARD.

Witnesses:
ALFRED A. MATHEY,
EMIL STAREK.