No. 824,978. PATENTED JULY 3, 1906.

C. W. DAUBER.

SHADE HOLDER.

APPLICATION FILED OCT. 15, 1904.

Fig. 1.

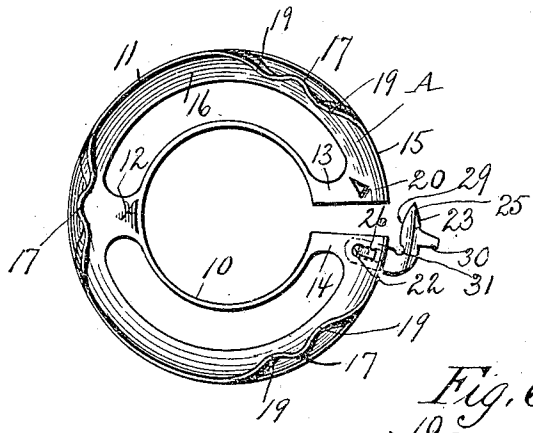


Fig. 2.

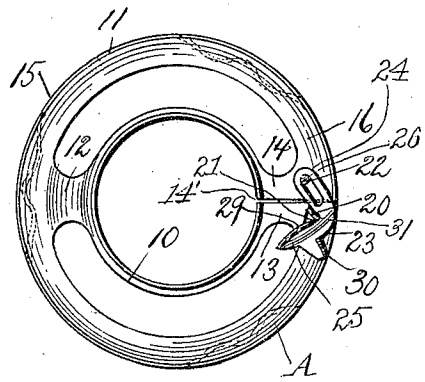


Fig. 6.

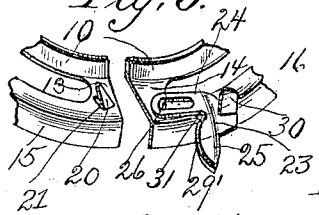


Fig. 3.

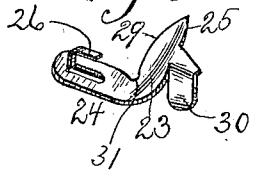


Fig. 4.

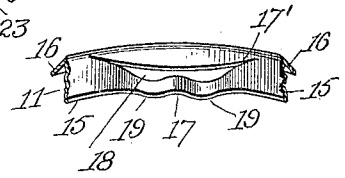
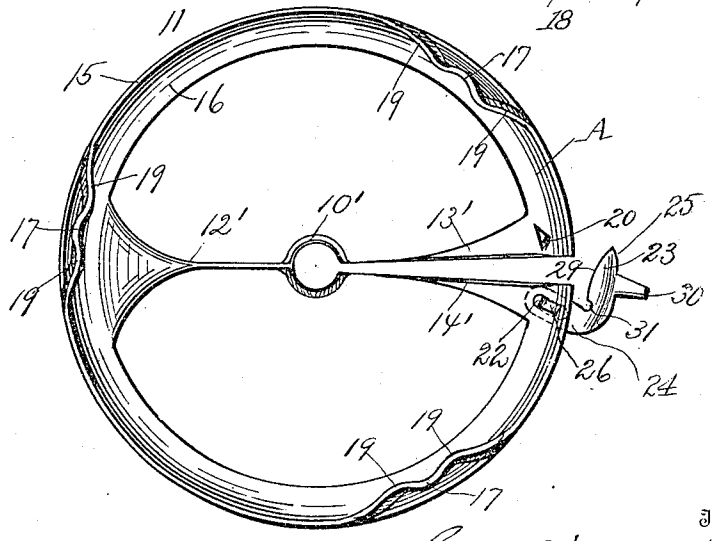


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

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SHADE-HOLDER.

No. 824,978. Specification of Letters Patent. Patented July 3, 1906.

Application filed October 15, 1904. Serial No. 228,549.

To all whom it may concern:

Be it known that I, CARL WILHELM DAUBER, a citizen of the United States, residing at the city of Washington, in the District of Columbia, have invented certain new and useful Improvements in Shade-Holders, of which the following is a specification.

This invention relates to base-holders for shades or globes that are especially adapted for employment in connection with gas and electric fixtures, though it may be used in connection with other types of lamps.

My invention has for its object to provide a base-holder that is simple in construction and that may be removably held in place to firmly embrace both the lamp-support and the shade and that is designed to dispense with the employment of set-screws and other separate auxiliary elements that add to the cost of the manufacture of the same.

To these ends my invention consists, essentially, of a pair of concentrically-arranged connected clamping-rings, one of which is provided with a series of laterally-yielding shade retaining or holding arms that in their application to a shade exert a spring-pressure in a direction to expand said clamping-rings, and a controlling-lever-locking means that is adapted to be operated by finger-pressure to overcome the opposed spring force of the yielding shade-holding arms to contract the clamping-rings and lock them in a contracted position.

Referring to the accompanying drawings, Figure 1 is a rear plan view of my novel shade-holder detached from a lamp and shown in an open position ready for attachment. Fig. 2 is a plan view of the same shown in a closed position. Fig. 3 is an enlarged perspective of the controlling-lever shown detached from the holder. Fig. 4 is a partial section of the outer shade-ring, showing the yielding arm. Fig. 5 is a rear plan view of a modified form of shade-holder constructed for use in connection with a gas-burner. Fig. 6 is an enlarged detail of the split portion.

Like characters of reference indicate like parts in the several figures.

In the construction shown in Figs. 1 and 2, A designates the base-holder, which comprises in its construction a centrally-arranged supporting band or ring 10, that is adapted to encircle and clasp the neck or pillar of a lamp (not shown) and that is surrounded by a concentrically-arranged shade-clamping ring 11, said rings being integrally connected to each other by a radially-extending arm 12 and a pair of opposing radially-extending arms 13 and 14, which are arranged in diametrical alinement with the arm 12, the combined widths of the arms 13 and 14 being preferably made equal to the width of the arm 12 to present a proportional or symmetrical appearance. The parts thus arranged are preferably struck-up from sheet metal that is cut by a slit 14′ to provide for the separation of the arms 13 and 14, thereby producing a clamping means that may be made itself structurally expansible and contractible, to admit of the normal spread of said rings, in order that they may be adapted to respectively encircle the lamp-neck and receive the flange of the shade to which they are applied.

The shade-holding rim 16 of the ring 11 is provided on its outer portion with an upturned circumferential flange 15, which serves, in conjunction with the annular rim 16, to seat and support the flange or neck of the shade or globe. (Not shown.) The circumferential flange 15 is provided with a series of laterally-yielding arms or loop members 17, that are formed integral with said flange 15 by cutting a curved slit 17′ longitudinally of the flange and pressing inwardly the lower marginal loop portion thus formed to provide said loop 17 and the clearance 18 therefor. The yielding loop member thus provided is crimped into a series of two or more successively-reversed loops 19 to form contacting fingers for engagement with the shade or globe. It will be observed that in forming a loop of this character by a curvilinear longitudinal cut the end portions thereof are made of greater width than the central portion, thereby strengethening the same at the points where otherwise it would be most liable to break. Such a construction also affords a resilient compression-loop that is adapted to yield outwardly and inwardly when in engagement with the shade to thereby compensate for the slight expansion and contraction

of the flange of said shade which is occasioned by the heating and cooling of same. Such a construction will also admit of the holder receiving and seating shades of varying thickness and diameter.

From the foregoing-described construction it will be observed that a holder is provided that will clamp the shade in its ring and the supporting-ring to the lamp neck or pillar by a simultaneous contraction of said rings in the drawing together of the adjacent arms 13 and 14, which in this invention is mechanically accomplished by the employment of a controlling-lever hook or latch 23 when the latter is pressed inwardly to the limit of its movement. The latch 23 is pivoted to the arm 14 in a plane parallel therewith and is adapted to swing into operative engagement with a keeper stud or tooth 20, that projects at a suitable angle from the arm 13. The latch is made preferably of stamped-up metal that is preferably corrugated longitudinally to add to its strength and which is substantially V-shaped to provide integrally-connected arms 24 and 25, that are provided at their inner point of junction with a retaining-notch or locking-socket 31.

30 designates an upturned thumb or finger piece that is located at a point intermediate of the ends of the wedge-arm 25, while near the extremity of the arm 24 is formed a struck-up tongue 26, that is bent to form a pivot-pin that is intended for introduction into the eye or hole 22, that is punched in the arm 14, which tongue is turned down to form an engaging flange, and allows the latch to lie flatwise against the outer face of the rim 16 and to be swung in the arc of a circle when finger-pressure is exerted on the finger-piece 30.

As shown in the drawings, the inner edge of the operating-arm 25 is provided with an upturned edge flange 29′, that is shown as being bowed out to form a cam-like working face; but the flange may be made perfectly straight without departing from the idea of means involved in this structure.

The keeper-tooth 20 is preferably struck up from the metal forming the arm 13 in such a manner as to project at a suitable angle and at a suitable distance from the pivot-axis of the latch 23—*i. e.*, so that it will lie flatwise against the inner edge of the arm 24 when the latter is moved to the limit of its inward throw—and the edge 21 thereof will engage with the retaining-notch 31 in a manner to prevent vertical displacement. By such a disposition of the tooth 20 there is provided an anchorage for the tooth that obtains an edge bearing in the line of the pull or thrust exerted by said latch. When the latch 23 is swung into engagement with the tooth 20, the inner working face of the nose portion of the arm 23 strikes against the base edge of the tooth 20, and by a continued finger-pressure the working face of said lever-arm is made to ride over the base edge of said tooth 20 until a point is reached where the retaining-notch 31 is brought into operative engagement with said tooth and the clamping-rings are locked in a contracted position by the drawing together in butt relationship in a common horizontal plane of the arms 13 and 14. By the employment of such a construction and arrangement of parts there is provided a locking means that possesses the mechanical advantage of employing the principle of a movable inclined plane accompanied with leverage to overcome the opposing spring force of the yielding arms 17 in their embracement of the shade. With the arms thus drawn together it will be observed that the controlling-latch is prevented from becoming accidentally displaced, as the notch 31 thereof is held in engagement with the tooth 20 by reason of the reaction or resistance of the spring-arms. Furthermore, by the employment of such a construction the shade is held in the holder and properly centered automatically without the employment of auxiliary parts, such as set-screws.

In Fig. 5 there is shown a modified structure in which the central band or ring 10′ is extended vertically to form a tubular portion or sleeve that fits telescopically on the burner-neck (not shown) and which is connected with the outer ring 11 by a radially-extending vertically-disposed arm 12′ and the opposing radially-extending and vertically-disposed arms 13′ and 14′, that are arranged in diametrical alinement with the arm 12′.

In applying the holder the central ring 10 is made to encircle the neck of the lamp, and then the flange or rim of the shade is introduced into the clamping-ring 11 and seated with its rim between the loop members 17 and the rim 16, whereupon the controlling-lever 23 is swung into engagement with the tooth 20 and by the force of the finger-pressure exerted is thrown to a point where the notch 31 is engaged by the keeper-tooth 20.

Having described my invention, what I desire to claim as new and useful is—

1. In a shade-holder, the combination of a pair of concentrically-arranged connected clamping-rings, one of which is provided with a series of laterally-yielding spring-fingers, that in their engagement with the shade exert a spring-pressure in a direction to expand said clamping-rings; and a means for contracting said rings, substantially as described.

2. In a shade-holder the combination of a pair of concentrically-arranged connected clamping-rings, the outer ring being provided with an upturned flange having loop members that are formed by cutting a curved slit

longitudinally of the flange, said loops being crimped into a series of successively-reversed loops to form contacting fingers; and a lever-locking means arranged substantially as described.

3. In a shade-holder the combination of concentrically-arranged clamping-rings, integrally connected by a radially-extending arm, and a pair of oppositely-disposed arms that radiate diametrically with respect to the first-mentioned arm, a lever-locking latch pivoted to one of said opposing arms, substantially V-shaped in its construction, and provided with an upturned flange on its inner working face, and a retaining-notch; a keeper-tooth arranged on the oppositely-disposed arm, and positioned at a suitable angle to the working face of the lever-latch, substantially as described.

4. In a shade-holder, a shade-clamping ring, having an upturned flange, a series of yielding shade-retaining arms cut from said flange and crimped in a series of reversed loops to form fingers, substantially as described.

5. In a shade-holder, the combination of a pair of concentrically-arranged clamping-rings, having an integral radially-extending arm, and a pair of opposing radially-extending arms arranged in a diametric alinement with the first-mentioned arm; and a controlling clamping-lever pivotally connected to one of said opposing arms and a tooth permanently attached to the other opposing arm, adapted to engage with said clamping-lever, substantially as described.

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

CARL WILHELM DAUBER.

Witnesses:

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DAVID ROTHSCHILD.