May 6, 1941. E. C. McKINNIE 2,240,659

HOLDER FOR REFLECTORS AND THE LIKE

Filed Sept. 29, 1938

Fig. 1

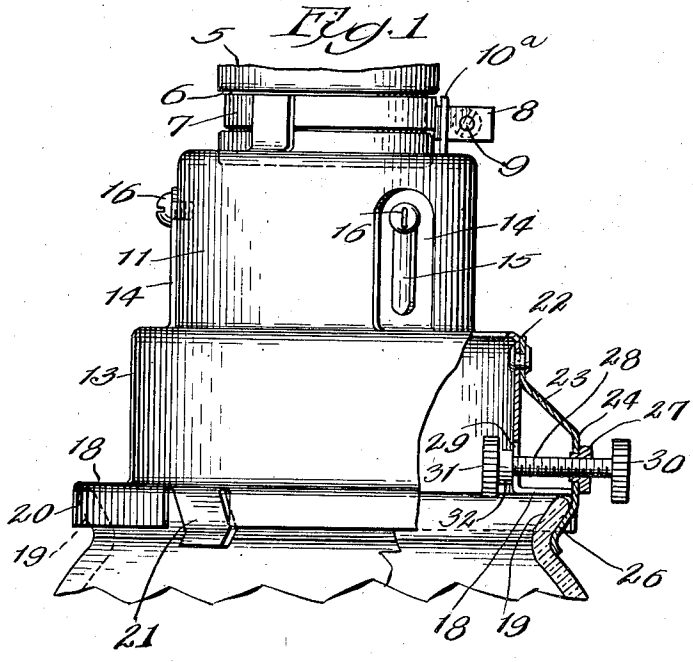


Fig. 3.

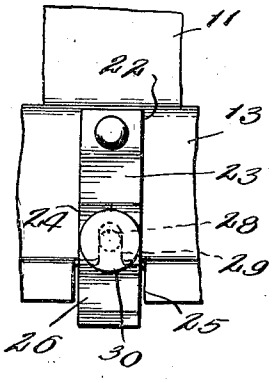


Fig. 2.

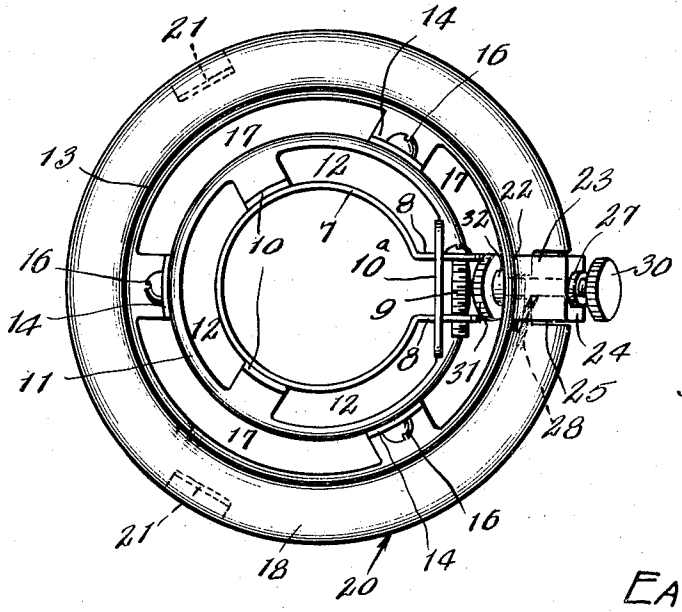
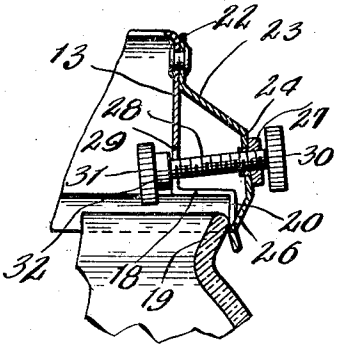


Fig. 4



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By E. K. Lundy Atty.

Patented May 6, 1941

2,240,659

UNITED STATES PATENT OFFICE

2,240,659

HOLDER FOR REFLECTORS AND THE LIKE

Earle C. McKinnie, Oak Park, Ill.

Application September 29, 1938, Serial No. 232,365

3 Claims. (Cl. 240—128)

My present invention relates to a supporting device for reflectors and the like, and it has particular reference to a holder that is capable of adjustment to yieldably and adjustably clamp the neck portions of reflectors or shades of different dimensions within a certain range. The primary object of my invention is to provide a holder of the character described wherein adjustment of one or more of the neck-engaging elements may be conveniently accomplished from either outside or inside the holder. This adjustment is adapted to urge the neck of the reflector or shade in the general direction of the axis of the holder in order to seat the neck against a suitable shoulder or shelf on the adjacent portion of the holder. This mode of dual-adjustment is especially desirable where the reflector and bulb is in a recess or is concealed back of a translucent plate that is flush with or across an opening in the outer surface of a wall or ceiling. Another object of my invention is to provide a holder that permits egress of heat and which may be adjusted for bulbs having different lengths in order to situate the so-called "point of light" at or near the focal point of the reflector surrounding the bulb.

Further objects of my invention are to provide a shade or reflector holder that is novel in construction, is economical to produce, is dependable in performing the functions assigned to it, and is capable of being readily operated after it is anchored to the electric lamp socket and the shade or reflector secured to it. I prefer to accomplish all of the foregoing objects in means of a structure made substantially in accordance with the following specification and as more particularly pointed out in the appended claims. Reference is herein made to the accompanying drawing that forms a part of this specification, and which, in a sense, is more or less schematic for the purpose of disclosing a typical or preferred embodiment of my shade or reflector holder.

In the drawing—

Figure 1 is a view in side elevation of my improved holder, a portion being in broken away section.

Figure 2 is a top plan of the holder removed from the socket and reflector.

Figure 3 is a fragmental detail looking at the right-hand side of Figure 1.

Figure 4 is a schematic view in section showing the operation of seating a reflector neck.

For the purpose of this description, a standard electric light socket element is shown which has a suitable porcelain housing member or skirt 5 disposed around and extended beyond the terminal elements, and which is provided with an annular channel or groove 6 near its outer edge with which a portion of my holder co-acts.

The co-acting portion of my holder is a split ring or band 7 of flat spring metal mounted at the top of the holder body, said band having lateral ears 8 at its end that are apertured to receive the shank of an elongated screw 9. One of these apertures is smooth and slightly elongated while the other is tapped to engage the threads of the screw, so that the ears may be drawn towards each other by rotating the screw in one direction to clamp the band in groove 6 of the socket member, while reverse rotation of the screw loosens the band to permit disconnection from the socket member.

The clamping ring or band 7 is secured to and supported upon the upper ends of spaced substantially L-shaped lugs 10 that project inwardly and upwardly from the top of the upper cylindrical section 11 of the adjustable body or shell of the holder, and the lateral ears 8 project through and are guided in the open portion of a bridge 10a on the top of the cylindrical section 11 of the holder body. The spacing of the lugs 10 provides between them the elongated segmental shaped openings 12 through which heated air will find egress. The lower cylindrical section 13 of the body or shell, which is of greater diameter than the upper section 11, is concentric thereto and is telescopically associated therewith so that vertical adjustment may be had in the general direction of the axis of the holder. To do this the section 13 is provided with upwardly disposed straps 14 that co-act with the adjacent surface of the upper section 11. These straps have elongated slots 15 through which tightening screws 16 are passed so that the threaded shanks of said screws will engage threaded apertures in the wall of the upper section. The lower ends of these straps have lateral portions that connect them to the upper edge of the lower section 13 of the holder body and the segmental openings 17 between adjacent portions of the sections provide for the egress of heat from within the holder.

The lower margin of the holder section 13 is flared outwardly to form a shoulder or seat 18 to receive the adjacent edge of the reflector neck 19 when the latter is in its desired position, and the outer edge of this shoulder or seat has a downwardly disposed lip or retainer flange 20 the continuity of which is interrupted by a plurality of spring tongues for assisting in maintaining the reflector neck in position. These spring

tongues, preferably, are made integral with the adjacent portion of the holder by cutting two pairs of parallel slits radially into the shoulder and lip and then bending the metal between each pair of slits inwardly in an oblique direction to form a wedge portion 21 that fits under the outwardly flared surface of the reflector neck to assist in guiding the reflector neck towards its seat 18. Two of these spring tongues are shown herein, and intermediate them is an adjustable element that is adapted for cooperation therewith for the purpose of securing the reflector neck in position and thereby assisting in the performance of the function just above mentioned.

This adjustable element embodies a spring clip 22 of irregular shape and anchored at its upper end to the upper portion of body section 13 of the holder shell. Below its anchorage, the clip has an outwardly disposed oblique portion 23 extending downwardly to about the vertical plane of the lip or retainer flange 20, where it is given a slight bend to provide a somewhat vertical portion 24 that is adapted for cooperation with a recess 25 cut into the seat and flange to permit the movable portion of the spring clip to be operated in a to-and-fro manner with respect to the axis of the holder and the reflector neck. At its lower end the clip 22 is provided with an inwardly disposed oblique wedge member 26 which is below the horizontal plane of the seat 18 and is similar in shape to the corresponding portions of the reflector engaging tongues. The vertical portion 24 of this clip is apertured to receive a bored and tapped bushing 27 and a bolt or screw 28 is threaded into said bushing so that it projects upon both sides of the clip and with its inner end portion extending through an opening or slot 29 in the vertical wall of the lower shell section of the holder. A suitable head 30 is secured to the outer end of this screw beyond the bushing, and another head 31 is secured to the inner end of said screw inside the cylindrical wall of the lower shell section. The head 31 has a small boss 32 that is wider than the slot 29 so that said boss will bear against the wall of the shell section. This construction and arrangement permits adjustment of the screw 28 by grasping and turning either the outer head 30 or the inner head 31, it being understood that in the latter instance the bulb or lamp should probably be removed from the socket.

When the clip 22 is in a released position as shown in Figure 4 its lower end is disposed so that the outwardly flared neck 19 of the reflector may be inserted into the space between the seat 18 and retainer flange 20 (Fig. 4), and in this position certain other portions of the neck will rest upon the inclined wedge portions 21 of the spring tongues. By properly rotating the screw from either the inside or the outside of the holder the clip will be moved into the recess 25, in order that its oblique wedge portion 26 engaged with reflector neck 19 will urge the reflector bodily in a trans-axial direction towards the wedge faces 21 of the spring tongues and the latter will tend to lift the reflector upwardly in the general direction of the axis of the holder until the neck 19 is firmly engaged in the seat 18.

This construction is quite effective in centering the reflector with relation to the light center of the bulb, and the telescopic up and down adjustment of the two sections of the shell readily permits interchange of bulbs having different light-centers whereby the greatest efficiency from the reflector is assured.

What I claim is:

1. A holder of the kind described embodying a supporting member, said member provided with a seat to receive a reflector and the like, said seat having a recess in a portion of its periphery; an element anchored at one end on said member and adapted at its free end for co-action with the neck of the reflector, said element having inherent resiliency from its point of anchorage to its free end and having its free end adapted to be moved towards said seat through said recess; threaded rotatable means disposed transversely through said resilient element and through an adjacent portion of said supporting member; and operating heads at the ends of said rotatable means, said heads disposed respectively outside said resilient element and inside said supporting member.

2. A holder of the kind described embodying a supporting shell, said shell provided with a well-defined seat to receive an outwardly flared neck of a reflector and the like and said seat having a clip receiving recess; a spring clip anchored at one end to said shell and extending continuous from its anchored end to its free end, the free end of said clip disposed in movable co-active relation to said seat and adapted to enter said recess; means for moving the free end of said clip towards and from the seat and the reflector neck; and two manually operable devices for actuating said means, the said manually operable devices being disposed respectively interiorly and exteriorly of said shell.

3. The combination with a reflector and like member having an outwardly flared neck; of a holder therefor embodying a hollow shell; and an annular seat on said shell adapted to receive said neck, said seat having a recess at one side; and radially disposed means in spaced portions of said seat adapted to engage said neck; one of said means embodying a spring clip anchored at one end on said shell and having its free end normally disposed adjacent said recess; an oblique member on the free portion of said clip and disposed normally outside said shell, said oblique member and the adjacent free portion of said clip adapted for bodily movement from the outside of said recess into and through the same whereby to engage said oblique member with the reflector neck; and threaded means operable from inside or outside said shell and cooperating with said shell and said clip, said means adapted to flex and release said clip whereby to move said clip and said oblique member in one direction through said recess to engage the reflector neck and in the opposite direction to release said reflector neck and also clear of said seat.

EARLE C. McKINNIE.