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1,648,167

H. B. DONLEY

LAMP

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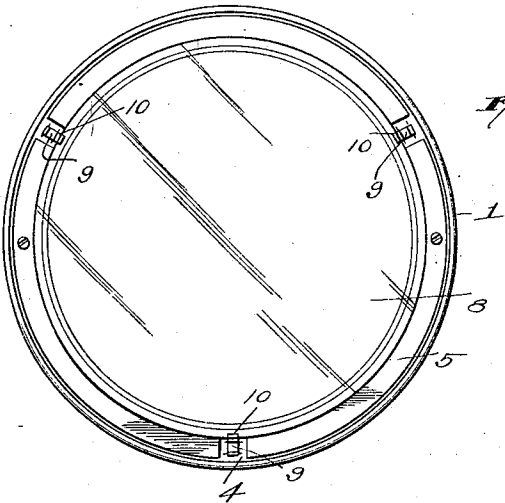


Fig. 1.

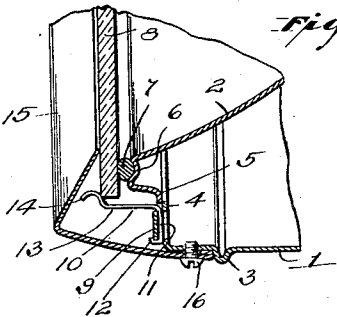


Fig. 2.

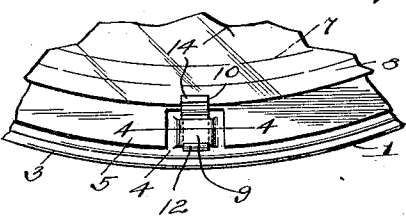


Fig. 3.

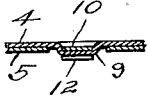


Fig. 4.

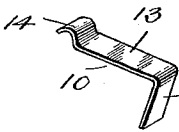


Fig. 5.

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LAMP.

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This invention relates to improvements in lamps and is especially directed to lamps employing a casing having an open front reflector mounted therein, which front is covered by a transparent or light emitting closure, the primary object of the invention being to provide an improved fastening structure so as to simplify and improve the means whereby the lamp casing or body, the reflector and closure are held in secured operative relation.

In many prior structures it has been the ordinary practice to retain these lamp parts together in operatively assembled relationship by means of what is termed a lens or closure ring, associated with the body or casing of the lamp in such manner as to exercise frictional pressure upon the closure and the outer edge of the reflector with the end in view of binding those elements in secured physical engagement with the lamp body. This prior construction is open to numerous objections which the present invention materially overcomes. Among these objections is the difficulty which is encountered in assembling or disassembling the units or elements of the lamp. Ordinarily, the ring has been provided with studs which engage with bayonet slots provided in the lamp body. The proper engagement of the studs with these slots and the twisting of the ring is a difficult matter to carry out, requiring considerable manual effort and likewise great difficulty is often encountered in removing the ring from the lamp body, due to the action of corrosion, dirt and the like after the elements of the lamp have been retained together for a considerable period of time. Again, the old method of locking the lamp parts together by the rotatable ring is open to the objection that when a prismatic, non-glare type of reflector is employed in the lamp, it is difficult to retain such lenses or reflectors in their proper operative positions of adjustment, so that the prismatic ribs of the lens or in other forms the reflector, will be positioned in true vertical order.

In order to overcome these objections, and others, and to generally simplify the construction of a vehicle lamp the present invention comprises a lamp consisting of a body or casing having mounted therein the usual parabolic reflector whose open front is covered by a lens or transparent closure of any

approved construction, and to provide in connection with these elements of the lamp a plurality of resilient fastening members, which are carried in connection with the outer edge portions of the lamp body or casing and have their resilient extremities cooperative with the peripheral portions of the lens or closure in such manner that the lens is securely supported in a position closing the open front of the reflector, and at the same time is resiliently pressed in an inward direction, the direction of this pressure being such that the lens or closure will be firmly pressed against a sealing gasket carried by the reflector and the latter in turn will have its outwardly directed flange firmly forced into retained and frictionally held physical engagement with an inturned portion of the lamp body. By this construction the three essential elements of the lamp are positively retained together without reliance upon a lens ring, which in this instance is merely employed to surround the peripheral portion of the lamp to exclude moisture and to present an ornamental appearance.

Other objects will be in part obvious and in part pointed out hereinafter.

For a further understanding of the invention reference is to be had to the following description and to the accompanying drawing, in which:

Figure 1 is a front elevation of a vehicle lamp constructed in accordance with the present invention, the lens ring being omitted in order to more clearly disclose the inner structure,

Figure 2 is an enlarged vertical sectional view taken through the vehicle lamp and illustrating more fully the means comprising the present invention for securing the casing, the reflector and the lens of the lamp in operative relation,

Figure 3 is an enlarged front elevation disclosing a fragmentary portion of the lamp, the lens ring being shown in section,

Figure 4 is a horizontal section on the line 4-4 of Figure 3, and

Figure 5 is a perspective view of one of the resilient members or spring clips.

Referring more particularly to the details of the invention, the numeral 1 designates the body or casing of a vehicle lamp. The term vehicle has been employed merely for purposes of description, and it will be understood that the principles of the invention

are applicable to any form of lamp embodying a body, a reflector and a transparent closure. In this instance the body is of pressed sheet metal and is formed with an open forward end so that the usual parabolic reflector may be positioned within the body or casing of the lamp for cooperation with a source of light (not shown). Adjacent to its forward open end the body of the casing is provided with an annular bead 3 and at the extreme forward end of the body, the wall of the latter is bent inwardly so as to lie in a substantially vertical plane, this inwardly bent portion of the body providing an annular flange 4. As is customary, the reflector 2 is formed beyond its parabolical surface with an outwardly directed flange 5, which is arranged to seat upon or engage with the outer surface of the flange 4, as is clearly shown in Figure 2. The flange 5 is also formed with a depression 6 of annular form which receives a gasket 7 against which is placed the inner wall of the transparent closure or lens 8. This lens may be either of the plain or prismatic type, as may be desired.

In order to secure these parts of the lamp together in operative relation, the flange 4, in accordance with the present invention, has struck outwardly therefrom integral strips 9 which lie in a plane outwardly offset with respect to the major portion of the flange 4. Arranged to be positioned between the flange 4 and the strips 9 is a plurality of resilient holding members 10, in this instance in the form of spring clips. These clips, as shown in Figure 5, have their rear ends formed with vertically extending portions 11, which fit within the sockets provided therefor between the strips 9 and the flange 4 of the body, and these clips may be held in this position by bending the outer extremities of the portions 11 outwardly as at 12 so as to engage with the outer edges of the strips 9. By this construction the said clips are firmly yet if necessary detachably connected with the body and project outwardly therefrom.

The outwardly projecting portions of the clips are designated by the numeral 13. These latter portions extend substantially horizontally and have their outer ends terminated in curved resilient lips or hook extremities 14, which by reason of their position are permitted to flex considerably. As shown in Figure 2, the positions of the clips 10 are such that when the lamp is assembled the hook extremities 14 will engage with the outer peripheral portions of the lens 8 in such a manner that the resilient effort which the clips exercise on the lens will be directed inwardly with respect to the lamp. As a result of this inwardly directed pressure, the lens is firmly pressed in engagement with the seating gasket 7 thereby, in turn, firmly pressing the flange 5 of the reflector toward and in engagement with the flange 4 of the body 1. By this construction it will be observed upon consideration that the body 1, the reflector 2 and the lens 8 are securely united in operative order or proper relative positions by the use of the spring members 10, which are carried by the body of the lamp. This arrangement produces an operative assembling without relation to the lens ring 15 which, as above stated, has been ordinarily employed in the past for this purpose.

In the present instance, the lens ring engages with the lamp body and its movement is limited by engagement with the bead 3, a fastening screw 16 being utilized to retain the lens ring in connection with the body and in cooperation with the outer wall of the lens 8. It will be noticed that the lens ring is secured by forcing the same inwardly and longitudinally upon the lamp, no rotary movement being imparted thereto. This materially simplifies the assembly of the lamp and overcomes many objections above noted. It will be observed that in the present construction it is possible in the assembling of the lamp to conveniently position the reflector so that in the event that the latter is ribbed for purposes of light diffusion no difficulty will be encountered in properly centering the reflector within the lamp body to secure its most effective operation. Similarly, ease and convenience in the placing of the lens ring is obtained which is accomplished by the mere pressing of the lens inwardly so that the same will snap over and be held by the hooked extremities of the clips 10. The lens ring may then be placed on the lamp body and secured by the screw 16, completing the operation of assembling the lamp. Not only does this construction overcome the difficulty heretofore encountered in locking the lamp parts together, but it admits of more facile and economical manufacture and a materially simplified construction.

While the present disclosure sets forth what I now consider to be a preferred form of the present invention it will be understood, however, by those versed in the art that various changes may be made in the specific design of the lamp from the form herein described and shown in detail without departing from the essential spirit or gist of the invention and I therefore desire the benefit of all such modifications that may be said to fall fairly within the scope of the following claim.

What is claimed is:

In a lamp, a body having the open outer end thereof formed with an inturned wall provided with integral clip sockets, a reflector arranged to occupy said body and having a notched peripheral flange adapted to seat

upon said wall, with the notches in said flange in registration with said wall sockets, a transparent closure peripherally engaging said reflector, and a plurality of resilient locking clips for securing said closure and reflector to said body, said clips comprising base portions removably positioned in said sockets and with outwardly extending locking portions, the latter having the free ends thereof disposed to resiliently engage the peripheral edge of said closure to force the closure and said reflector into secured frictional engagement with said wall. 10

In testimony whereof I affix my signature.

HAROLD B. DONLEY.