Sept. 12, 1939. C. E. MEYERHOEFER 2,172,925

LAMP

Filed March 13, 1937

Fig. 1

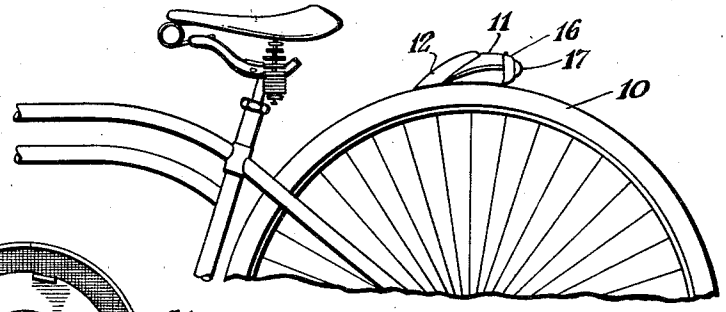


Fig. 6

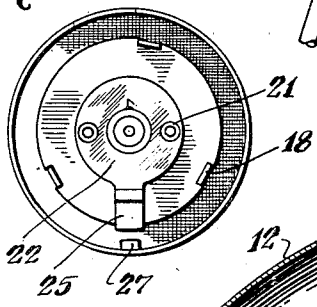


Fig. 2

Fig. 3

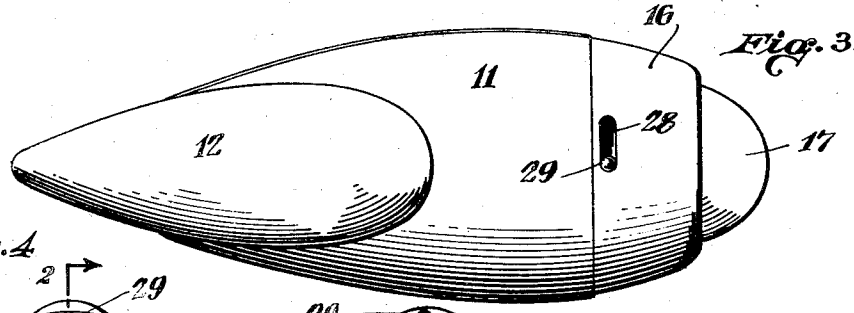


Fig. 4

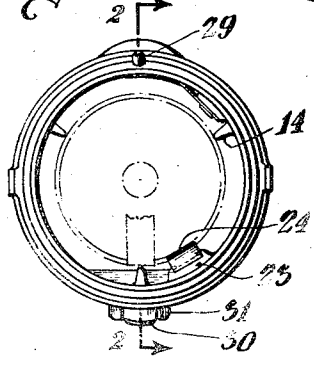
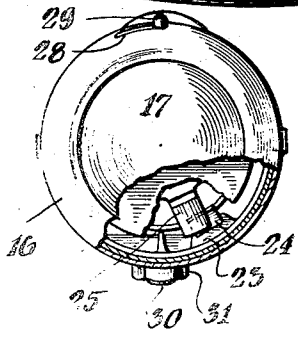


Fig. 5



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LAMP

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Application March 13, 1937, Serial No. 130,696

3 Claims. (Cl. 240—7.55)

This invention relates to a structurally and functionally improved lamp or signal appliance, capable of use in numerous different associations, but primarily intended to be employed in connection with vehicles.

It is an object of the invention to furnish a unit of this character which may readily be applied to, or mounted upon a vehicle or otherwise and which when so mounted will present an extremely neat appearance, completely harmonizing with the appearance and construction of the vehicle.

A further object of the invention is that of constructing a lamp which may readily be operated by an inexperienced and unskilled person and which moreover in its operation will be extremely economical. Additionally, by means of the present construction, a unit is furnished in which, when renewals are necessary, these may be accomplished with minimum effort. Moreover, even although the person making such renewals be entirely unskilled, the construction of a unit in accordance with the teachings of the present invention will be such that there will be no danger of the parts being re-assembled in improper relationship.

An additional object is that of providing a unit of this character which may readily be manufactured by quantity production methods and largely by the use of automatic machinery so that by employing relatively inexpensive materials it is feasible to produce a lamp at minimum expense and which, aside from the foregoing advantages, will function over long periods of time with freedom from all difficulties.

With these and other objects in mind, reference is had to the attached sheet of drawing, illustrating one practical embodiment of the invention, and in which:

Fig. 1 is a fragmentary side elevation of a vehicle such as a bicycle and showing the lamp or signalling device mounted thereon;

Fig. 2 is an enlarged sectional side view taken along the lines 2—2 and in the direction of the arrows as indicated in Fig. 4;

Fig. 3 is a top plan view of the unit;

Fig. 4 is an end view thereof with the front casing removed;

Fig. 5 is an end view of the complete unit with certain portions broken away to show underlying constructions, and

Fig. 6 is a rear elevation of the front or cover portion of the unit.

In these views the numeral 10 indicates the surface upon which the unit is to be mounted, for example, a fender or other shield or support commonly having a curved configuration. The unit itself may be streamlined, as has been generally shown in Figs. 1, 2 and 3, and to this end may include a hollow body portion 11 having a forward extension 12 which is integral therewith and both of these parts being preferably (although not necessarily) formed of die-cast metal. The lower face of the body 11 may be curved so as to conform to the surface of the member upon which the unit is mounted and the interior of this body should present a space such that there may readily be accommodated therein a flashlight cell 13 or other light energizing element.

As illustrated especially in Fig. 4, the portion 11 at the time of its manufacture is preferably formed with inwardly extending projections or ribs 14 which may be three in number and which define between their inner edges a space adequate to accommodate the element 13. Moreover, a contact clip or spring 15 may have one of its ends secured to or grounded against portion 11, its opposite end being curved or extended upwardly to engage the base of element 13 and to yieldingly resist rearward movement thereof beyond a pre-determined point.

Mounted adjacent the open end of portion 11 is a lens supporting bezel or ring 16. The lens, as illustrated at 17, may be formed of transparent sheet material and may be notched so that inwardly extending portions 18 forming a part of the ring may lie within these notches to normally prevent a turning of the lens with respect to the mounting ring. A disc 19 of di-electric material is also notched at points corresponding to the projecting portions 18 and receives these portions so that a turning of the disc with respect to the mounting ring or bezel is normally precluded. It will also be noted that the edge of the lens extends between the inturned edge of ring 16 and the outer face of disk 19 so that if the latter is pressed outwardly, a displacement of the lens is prevented.

Now, with a view to properly supporting a lamp bulb with respect to disc 19, it will be observed that the latter is formed with an opening of an area adequate to permit of the passage of the stem 22 of such a bulb. Secured to the disc, as for example by rivets 21, and extending across the opening thereof, is a sheet of metal 20 which is also formed with an opening of a size just adequate to accommodate the stem 22 of the bulb. Moreover, the edges of this latter opening may be shaped so as properly to cooperate with the convolutions of the thread formed on stem 22.

Body portion 11 may also be provided with a rib 23 presenting a channel portion which receives the inner end of a strip 24. Thereafter the edges of the channel may be upset to clamp the strip in position, as shown in Fig. 4, and with the outer end of the strip extending into the space normally enclosed by ring 16. Sheet or plate 20 has an extension 25 also preferably formed of resilient metal. This extension projects into a plane—which, when the parts are in properly assembled relationship—is beyond the outer end of strip 24. The latter may incidentally have its outer end extending at a tangent. Accordingly, if strip 25 is swung so as to engage the outer end of strip 24, it will bear in firm contact with the edge of the latter. Portion 11 may moreover be formed with a slot 26 within which an inwardly extending part 27 of ring 16 may extend. The length of slot or groove 26 should be greater than that of the extension 27 so that the ring may be axially turned with respect to portion 11. Preferably located at a point diametrically opposite extension 27 the ring 16 is formed with a slot 28 and a spring pressed pin 29 is mounted by portion 11 and extends through an opening in the same to ride within this slot.

It accordingly follows that a person desiring to install the unit will simply drill the mounting surface 10 and extend the bolt 30 imbedded therein through such opening, thereafter securing the unit as, for example, by means of a nut 31. Pin 29 may be depressed whereupon ring or bezel 16 may be swung around the slot 26 until the upper edge of the ring clears portion 11. Thereafter projection 27 may be withdrawn from slot 26. A cell 13 or its equivalent may now be inserted in portion 11 and this cell will be properly centered and supported by means of the ribs or projections 14. Disc 19 may be withdrawn from the support of the inwardly extending portions or lugs 18 and a bulb screwed into position within the opening of plate 20.

Ring 16 may now have its inwardly struck portion 27 inserted into slot 26 and its upper end swung to the position shown in Figs. 2 and 3. At this time it is to be noted that the inwardly struck portions or lugs are preferably so spaced or have such characteristics that the operator will be unable to apply disc 19 to the ring except in a predetermined position, and one in which extension 25 lies adjacent extension 24. Obviously as ring 16 assumes its fully seated position, spring pressed pin 29 will snap upwardly through slot 28. In the position illustrated in Figs. 2 and 3, projections 24 and 25 will not engage. Accordingly the bulb will not be energized. However, by simply rotating ring 16 with respect to portion 11 extension 25 may be caused to ride into firm electrical contact with the end edge of extension 24, thereby completing the circuit through the bulb and energizing the latter. To disconnect or de-energize the bulb it is obvious that merely a reverse rotation of the ring with respect to the body portion will have to be resorted to.

It is apparent that while in many respects the housing 11—12 should have a streamline configuration, any desired contour will be satisfactory. Moreover, the base of the housing need not necessarily conform to the contour of the mounting surface, although it is extremely desirable that this should be the case. It is additionally obvious that if, for example, a bulb of the "bayonet-slot" type be employed, the mounting might be suitably and obviously modified to accommodate a unit of this character instead of one having a screw threaded stem.

It is moreover obvious that numerous changes in construction and rearrangement of the parts might be resorted to without departing from the spirit of the invention as defined by the claims.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. An apparatus of the character described including in combination a hollow body portion to receive an electric current supplying cell, a ring rotatably mounted adjacent one edge of said body, an inwardly extending portion forming a part of said ring, said body being formed with a slot having a length greater than the width of said portion and adapted to receive the same, said ring being also formed with a slot, a spring-pressed pin carried by said body and projectible through said latter slot, and the diameter of said pin being less than the length of such latter slot whereby said ring may be rotated throughout a limited arcuate path and with respect to said body, and upon inward projection of said pin, said ring may be rocked with respect to said body and incident to the hinged connection provided between the inwardly extending portion of the ring and the first named slot formed in said body, an electric energy consuming element supported by said ring, a contact portion also mounted by said ring and a contact portion mounted by said body, said contact portions being engageable with each other as said ring is rotated with respect to said body.

2. An apparatus of the character described including in combination a hollow body portion to receive an electric current supplying cell, a ring rotatably mounted adjacent one edge of said body, an inwardly extending portion forming a part of said ring, said body being formed with a slot having a length greater than the width of said portion and adapted to receive the same, said ring being also formed with a slot, a spring-pressed pin carried by said body and projectible through said latter slot, and the diameter of said pin being less than the length of such latter slot whereby said ring may be rotated throughout a limited arcuate path and with respect to said body, and upon inward projection of said pin, said ring may be rocked with respect to said body and incident to the hinged connection provided between the inwardly extending portion of the ring and the first named slot formed in said body, an inwardly extending portion adjacent the outer edge of said ring, a lens member carried by said ring and extending from the outer end of the same, the edge of said lens member lying in contact with the inner face of the ring edge portion, a disk, means extending from said ring and cooperable with said disk to position the same with reference to said ring, said disk being adapted to receive and mount an electric bulb, and said bulb being engageable with the terminal of the cell mounted by said member.

3. An apparatus of the character described including in combination a hollow body portion to receive an electric current supplying cell, a ring rotatably mounted adjacent one edge of said body, an inwardly extending portion forming a part of said ring, said body being formed with a slot having a length greater than the width of said portion and adapted to receive the same, said ring being also formed with a slot, a spring-pressed pin carried by said body and projectible through said latter slot, and the diameter of said pin being less than the length of such latter slot

whereby said ring may be rotated throughout a limited arcuate path and with respect to said body, and upon inward projection of said pin, said ring may be rocked with respect to said body and incident to the hinged connection provided between the inwardly extending portion of the ring and the first named slot formed in said body, an inwardly extending portion adjacent the outer edge of said ring, a lens member carried by said ring and extending from the outer end of the same, the edge of said lens member lying in contact with the inner face of the ring edge portion, a disk, means extending from said ring and cooperable with said disk to position the same with reference to said ring, said disk being adapted to receive and mount an electric bulb, said bulb being engageable with the terminal of the cell mounted by said member, a contact member carried by said disk, and a contact member carried by said body portion and cooperable with said first named member upon said ring being rotated with respect to said body.

CARL E. MEYERHOEFER.