Nov. 29, 1938. A. N. TAYLOR ET AL 2,138,078

LIGHTING UNIT MOUNTING

Filed Feb. 15, 1937

FIG.2.

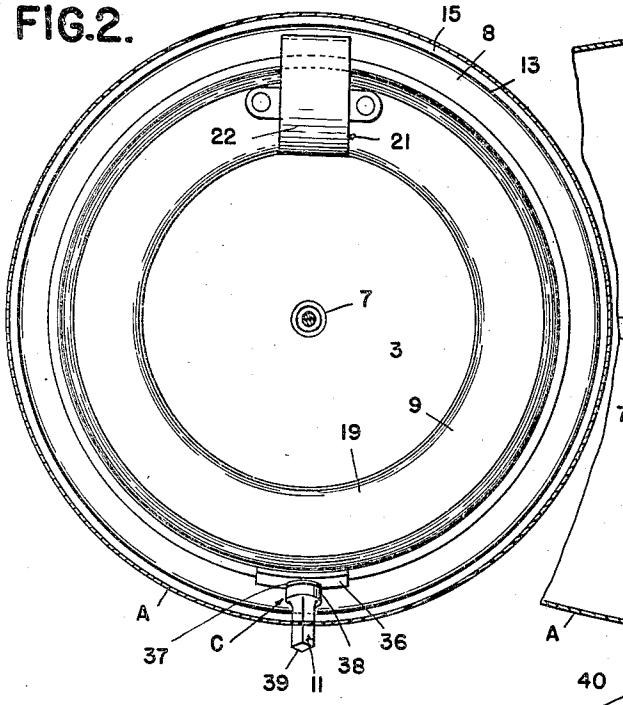


FIG.1.

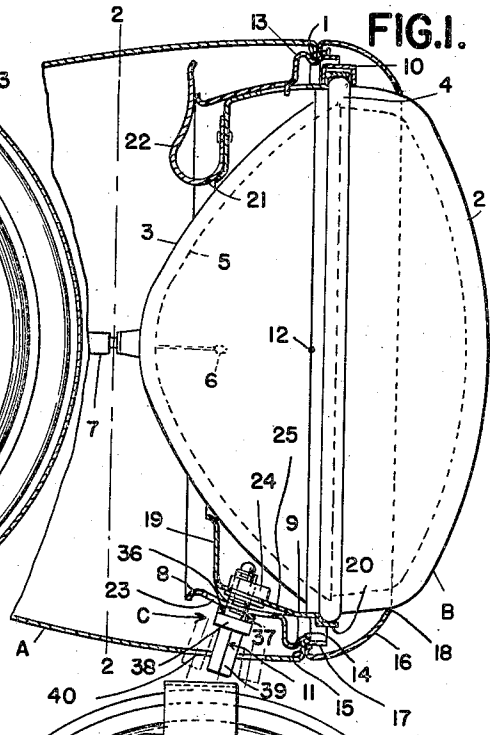
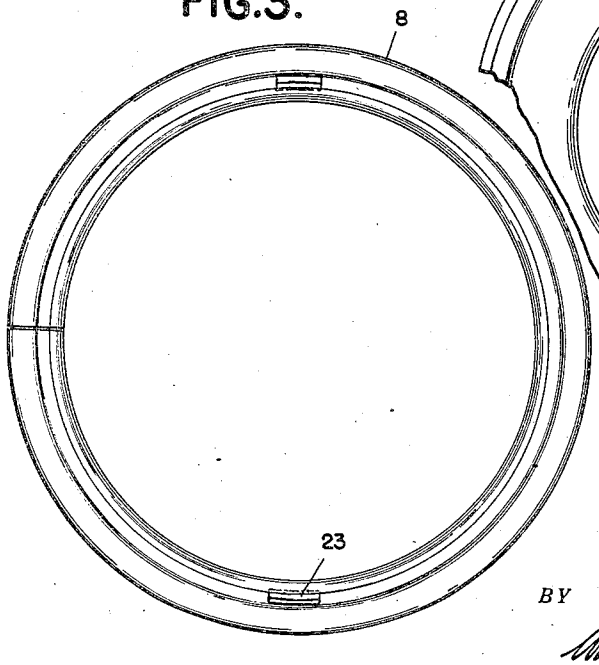


FIG.3.



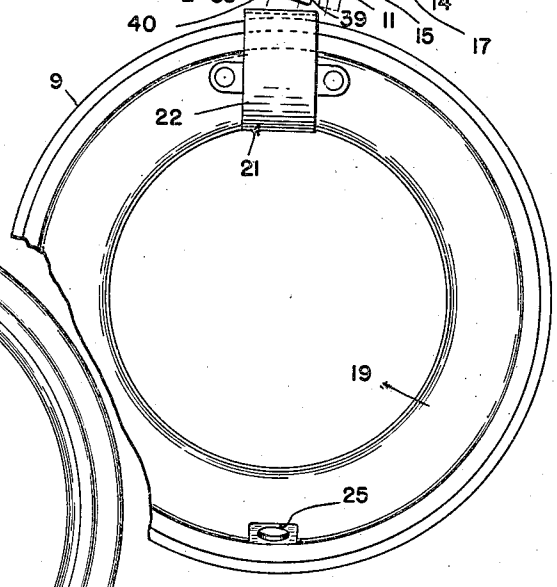


FIG.4.

INVENTORS

ARNOLD N. TAYLOR

NORBERT P. WORDEN

BY

ATTORNEYS

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LIGHTING UNIT MOUNTING

Arnold N. Taylor and Norbert P. Worden, Detroit, Mich., assignors to C. M. Hall Lamp Company, Detroit, Mich., a corporation of Michigan

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4 Claims. (Cl. 240—41.5)

This invention relates generally to lamps for motor vehicles and refers more particularly to that type designed for use as headlights.

In the past it has been customary to form such lamps with an outer casing of the desired configuration and to mount within this casing as a subassembly the essential elements of the lamp such as the reflector, bulb socket and the electrical terminals or connections. However, the development of lamps has progressed to such a point that it is now desirable to use a filament instead of a bulb as the lighting element and to mount within the lamp casing as a hermetically-sealed lighting unit a reflector, filament, lens and electrical terminals or connections. Thus, it has been necessary to redesign the mountings for such elements.

In view of the foregoing, it is an object of the present invention to provide the hermetically-sealed units with mountings that permit the units to be readily adjusted so that the beams of light projected therefrom may be properly directed.

Other objects, advantages and novel details of construction of this invention will be made more apparent as this description proceeds, especially when considered in connection with the accompanying drawing, wherein:

Figure 1 is a longitudinal vertical sectional view through a lamp structure embodying our invention;

Figure 2 is a vertical sectional view taken substantially on the line 2—2 of Figure 1;

Figure 3 is a detail view of the outer ring;

Figure 4 is a detail view of the inner ring.

Referring now to the drawing, A is the lamp casing, B is the hermetically-sealed unit, and C is the mounting embodying our invention for said unit.

In the present instance, the casing A may be any desired configuration and may be mounted in any suitable manner upon a motor vehicle. Preferably the casing A is elongated in form and is provided at its forward end with an opening 1 in which the unit B is mounted.

The hermetically-sealed lighting unit B may be made in any suitable manner and preferably has a shell of heat insulating glass, known in the trade as Pyrex, provided with meeting front and rear walls 2 and 3 and an annular bead 4 at the juncture of said walls. The front wall 2 of this shell comprises the lens, while the front face of the rear wall 3 has a coating of suitable material such as aluminum forming a reflector 5. A suitable filament 6 is carried by the rear wall 3 at the center thereof and is provided with suitable electrical terminals 7 for connection with electric conductors (not shown).

The mounting for the unit B preferably comprises a pair of cooperating rings 8 and 9, respectively, spring clips 10, and an adjusting screw 11. As shown, the rings 8 and 9 are arranged one inside the other in substantially concentric relation, the point 12 being the common center. Preferably the outer ring 8 has an outwardly offset annular flange 13 and is split to permit its insertion in contracted form into the opening 1. Intermediate its front and rear edges, this flange 13 has an outwardly opening circumferentially extending channel 14 that receives the edges of an inturned annular flange 15 of the casing. Any suitable tool (not shown) may be used to expand the flange 13 of the ring into firm engagement with the flange 15 of the casing. A bezel 16 is sleeved on an annular portion 17 of the flange and is provided with an opening 18 for the lighting unit B. The inner ring 9 is provided at its rear edge with an inturned flange 19 and is provided at its forward edge with an offset annular flange 20 substantially L-shape in cross section forming a seat for the bead 4 of the lighting unit. The spring clips 10 are U-shaped in configuration and straddle this flange 20 and bead 4 at spaced points circumferentially thereof to retain the parts in assembled relation. Any suitable means such as the spring 21 riveted to the inturned flange 19 of the inner ring and having an open, return-bent portion 22 engaging the rear edge of the outer ring 8 may be employed for preventing the inner ring and lighting unit carried thereby from falling out after they have been inserted in the casing. The adjusting screw 11 extends freely through an enlarged elongated opening 23 in the outer ring 8 and threadedly engages a nut 24 swedged or otherwise suitably secured to a flattened portion 25 of the inner ring. An elongated strip 36 carried by the screw 11 bridges the opening 23 and slidably engages the outer side of the outer ring 8. If desired, a washer 37 may be sleeved upon the screw 11 between an enlargement 38 thereof and said strip 36. The free end 39 of the screw is polygonal and extends through an elongated opening 40 in the casing A so that it may be engaged outside the casing by a suitable tool (not shown) when it is desired to make an adjustment. Thus, with this construction the lighting unit B may be adjusted relative to the casing A to vary the direction of the beam of light projected from the unit by first loosening the screw 11 in the nut 24 and

then shifting the screw, as indicated by dotted lines in Figure 1, to cause the inner ring 9 and unit B to be moved in unison as desired. The screw 11 may then be tightened in the nut 24 to hold the parts in adjusted position.

What we claim as our invention is:

1. A lamp having a casing provided with an opening, a light unit within said casing for projecting light rays through said opening, and a mounting for said unit including a pair of substantially concentric rings within said casing, one of said rings being connected to the casing and having an elongated opening therein, the second of said rings forming a seat for and being connected to said unit, a nut fixed to the second ring, and an adjusting screw movable freely in the elongated opening and threadedly engaging said nut, said screw extending freely through another opening in said casing and being accessible and operable from the outside of said casing.

2. A lamp having a casing provided with an opening, a light unit within said casing for projecting light rays through said opening, and a mounting for said unit including a pair of substantially concentric rings within and formed separately from said casing, one of said rings forming a seat for the second ring and having an annular flange extending outwardly through said opening, the first mentioned ring being connected to said casing, the second mentioned ring forming a seat for and being connected to said unit, means accessible outside the casing for adjusting the second ring and unit relative to the first mentioned ring, and a bezel sleeved upon the outwardly projecting annular flange of the first mentioned ring and having an opening receiving and forming a frame for said light unit.

3. A lamp having a casing provided with an opening, a light unit within said casing for projecting light rays through said opening, and a mounting for said unit including a pair of substantially concentric rings within and formed separate from said casing, one of said rings forming a seat for the second ring and having an annular flange extending outwardly through said opening, the first mentioned ring being connected to said casing, the second mentioned ring forming a seat for and being connected to said unit, means accessible outside the casing for adjusting the second mentioned ring and unit relative to the first mentioned ring, the second mentioned ring having an inturned flange, and means for holding the second mentioned ring and unit against outward displacement relative to said casing including a leaf spring fixed to said inturned flange and having an open return-bent portion engaging the rear edge of the first mentioned ring.

4. A lamp having a casing provided with an opening, a light unit within the casing for projecting light rays through said opening, and a mounting for said unit including a pair of substantially concentric rings within said casing, one of said rings forming a seat for the second mentioned ring and being connected to the casing, the second of said rings forming a seat for and being connected to said unit, the first mentioned ring and said casing having substantially aligned openings therein, a nut fixed to the second mentioned ring, and an adjusting screw movable freely in said aligned openings and threadedly engaging said nut, said screw being accessible and operable from the outside of said casing.

ARNOLD N. TAYLOR.
NORBERT P. WORDEN.