

May 24, 1932.

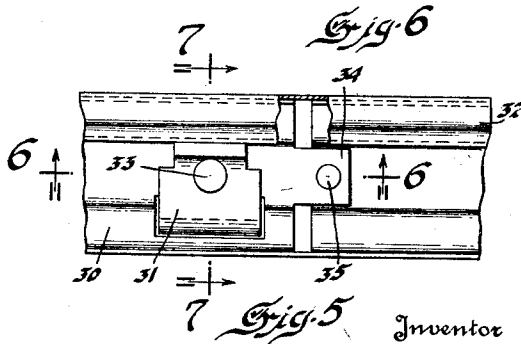
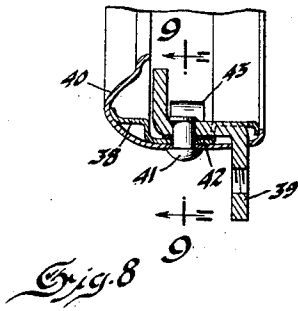
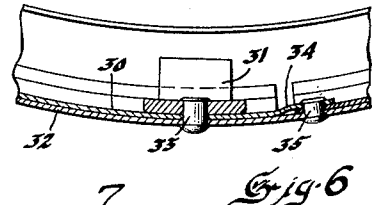
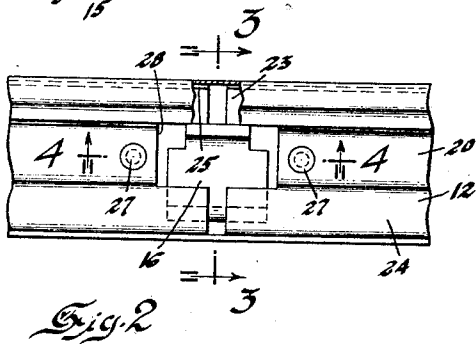
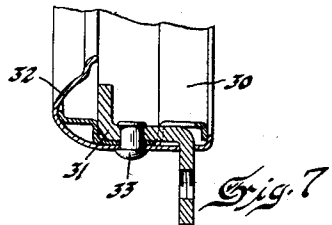
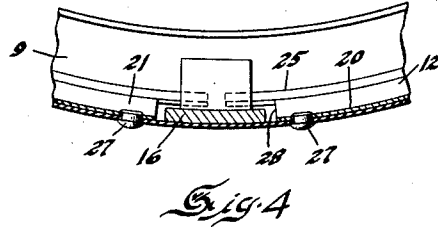
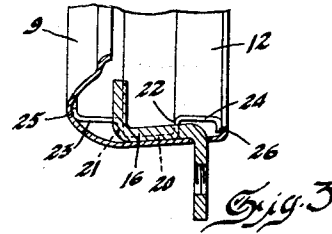
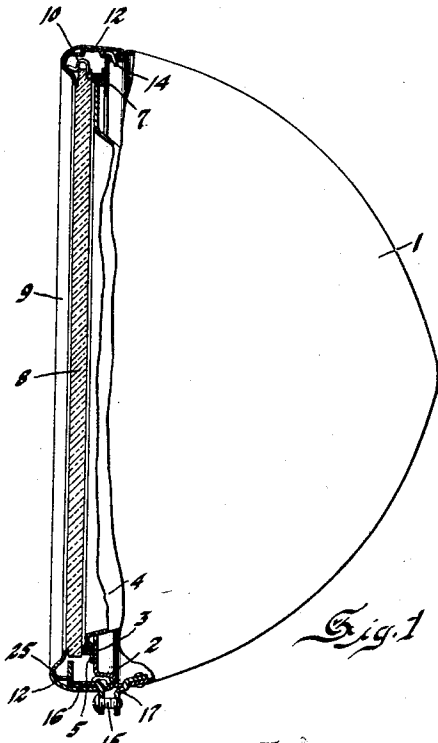
C. A. MICHEL

1,859,673

HEADLAMP CONSTRUCTION

Filed Dec. 21, 1929

2 Sheets-Sheet 1



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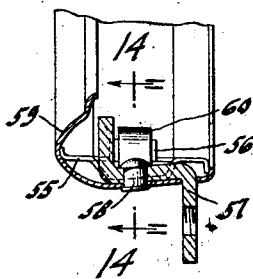
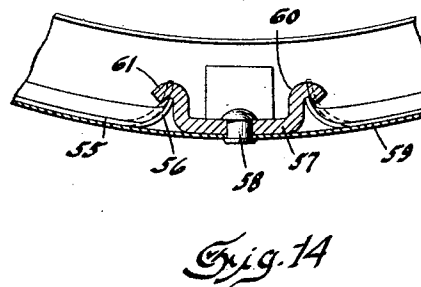
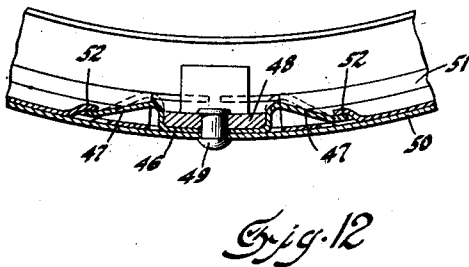
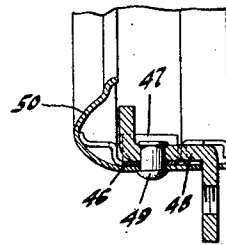
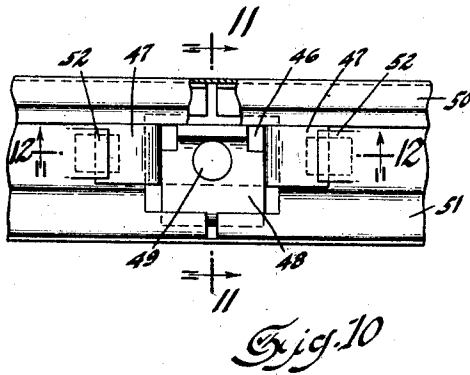
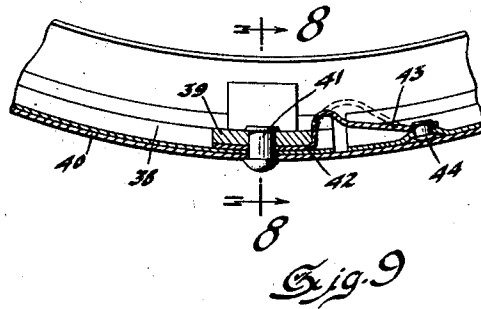
C. A. MICHEL

1,859,673

HEADLAMP CONSTRUCTION

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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HEADLAMP CONSTRUCTION

Application filed December 21, 1929. Serial No. 415,729.

This invention relates to headlamps of the general type commonly employed on motor vehicles and the like and more particularly to an improvement in headlamp door construction.

Headlamp housings ordinarily are painted to match or harmonize with the remainder of the car while the bezels or lens carrying rims of the doors are brightly plated for the purpose of ornamentation and contrast. There is somewhat of a tendency at the present time to cut down on the size of the bezel, which is usually formed from thin gauge sheet metal, to afford a slender and narrow appearance, supposedly in the interest of advanced and artistic design in balance or harmony with the general outline of the car as a whole and also to reduce the surface area to be plated thereby saving in manufacturing costs.

Due to the reduction in size certain difficulties are presented particularly in that type of headlamp embodying a hook-on door wherein the door is hooked on a tang at the top and fastened as by means of a screw at the bottom. Since the door is secured to the lamp casing only at the top and bottom there is a tendency, because of its narrow and weak cross section, for the ring to warp away from the body shoulder at the sides resulting in an unsightly appearance. To overcome troubles of this sort by the provision of an improved and sturdy door construction is one of the primary objects of the present invention.

To this end there is contemplated the employment of a reinforcing liner, which may take the form of a split ring, preferably rolled from strip stock with angularly related portions for increasing its inherent strength, and which may be assembled or nested within the conventional bezel and forcibly expanded into tight frictional contact with the inner surface of the bezel subsequent to the plating operation to thereby lend an increased degree of rigidity and stiffness to the door to preclude distortion and warping.

The invention will be better understood upon reference to the accompanying drawings wherein:

Figure 1 is a side elevation of a lamp with the door shown in vertical cross section.

Figure 2 is a fragmentary plan view of the inside of the bezel at its lower or bottom portion where the ends of the split ring are fixedly anchored in place.

Figures 3 and 4 are sectional views taken on line 3—3 and line 4—4 respectively of Figure 2.

Figure 5 is a plan view corresponding to Figure 2 but showing a modified form of the invention.

Figures 6 and 7 are sectional views taken respectively on lines 6—6 and 7—7 of Figure 5.

Figure 8 is a transverse section through a portion of the door illustrating a further modification and taken on line 8—8 of Figure 9.

Figure 9 is a section taken on line 9—9 of Figure 8.

Figure 10 is another plan view of an alternative form of the invention.

Figures 11 and 12 are sections taken respectively on lines 11—11 and 12—12 of Figure 10.

Figure 13 is a transverse section of a bezel and illustrates a still further modification.

Figure 14 is a section taken on line 14—14 of Figure 13.

Referring to the drawings the reference character 1 indicates a lamp housing having at its forward end a depressed portion 2 and an inturned annular flange 3. Within the housing is inclosed the lamp reflector 4 having an outturned annular flange 5 held in contact with the housing flange 3 by means of the door and an interposed gasket 7. The door may comprise a circular lens 8 and an inwardly open channelled bezel or rim 9 holding the lens as by means of a series of spring clips 10. Within the channel of the bezel it is proposed to locate the reinforcing ring 12.

The door may be secured in place as by means of a tongue 14 carried at the upper portion of the bezel for insertion within an opening in the adjacent portion of the casing 1 and by a screw 15 projecting through an attachment lug 16 at the bottom of the rim and

having screw-threaded engagement with a lug 17 carried by the lamp casing.

The reinforcing liner 12 is shown as comprising a central outwardly depressed portion 20 having parts 21 and 22 connected with inwardly depressed portions 23 and 24 respectively, with an intumed marginal flange 25 on the portion 23 and an outturned marginal flange 26 at the opposite side of the ring. The angularly related portions 20—26 of the ring give it an irregular shape in transverse section and serve to materially increase its inherent strength. For convenience and economy of manufacture the reinforcing ring is preferably rolled from strip stock cut to proper length and bent to circular form to afford a split ring.

In the assembly of the door, after the narrow section bezel, which may be stamped from thin gauge sheet metal, has been properly plated, the attachment lug 16 is first secured in place, and then the liner 12 is nested within the channel of the rim and forcibly expanded into tight engagement with the inside of the bezel. With the liner held in expanded condition rivet holes are punched through its opposite ends and adjacent parts of the bezel and rivets 27 inserted through the openings and peened over. Obviously, other fastening means may be made use of, as for example, bolts and nuts, welds, or the like. As shown in Figure 2 the split ends of the liner are anchored adjacent the attachment lug 16 with parts of the depressed central portion 20 cut away at 28 to clear the lug.

If desired the arrangement shown in Figures 5, 6 and 7 may be used, wherein one end of the stiffener or liner 30 is interposed between the attachment lug 31 and bezel 32 and secured by the same rivet 33 which secures the attachment lug in place. From this fixed end an extension or tongue 34 may be projected to overlap the free end of the ring. In this case the attachment rivet 35 is extended through holes punched in the overlapping portions of the ring and the rim subsequent to expansion of the ring.

In Figures 8 and 9 one end of the split liner 38 is secured between the attachment lug 39 and bezel 40 by the attachment rivet 41. A plate 42 is shown interposed between the lug and fixed end of the liner and secured by the same rivet 41. From the plate 42 extends a lateral leg or finger 43 which as preformed contains a bend or curve as indicated by the dotted lines in Figure 9, with its end attached to the free end of the liner as by means of the rivet 44. In the assembly of these parts the outwardly bowed finger 43 is flexed or deformed to substantially the full line position shown in Figure 9 to thereby expand the liner and/or hold it in expanded condition.

According to the disclosure of Figures 10, 11 and 12 there may be employed a spreader device consisting of a channelled sheet metal plate 46 having oppositely disposed legs or arms 47, within the channel of which is located the attachment lug 48 secured by rivet 49 to the bezel 50. The ends of the arms 47 engage with the ends of the split ring 51, there being shown for this purpose a pair of inwardly depressed tongues 52 in the ring beneath which the arms extend. The dotted lines in Figure 12 indicate the position of the spreader prior to expansion of the ring. As the attachment lug 48 and spreader plate 46 are forced outwardly from the dotted line position and into contact with the wall of the bezel for attachment by the rivet, the engagement of the arms 47 with the opposite ends of the liner forcibly spreads the ends apart to expand the ring.

An optional arrangement of spreader and liner is shown in Figures 13 and 14 wherein the ends of the liner 55 are turned inwardly as at 56 and the attachment lug 57, which is to be secured by the rivet 58 to the bezel 59, is provided at the opposite sides with inwardly extending legs 60 that are reversely curved as at 61 to receive and abut the liner ends 56. When the liner is first positioned within the bezel its ends 56 extend upwardly in the dotted line position of Figure 14 but the engagement therewith by the abutment elements 61 of the lug, as the lug is moved toward the ring and riveted, causes the ring to be expanded into tight frictional contact with the bezel.

The structural form of the invention may vary widely, but in any event the use of the reinforcing liner held tightly against the bezel will serve to materially stiffen the door, increase its period of usefulness and insure a proper, tight and neat fit at all times.

While the description has been more or less specific, it will be understood that such modifications may be made as come within the scope of appended claims.

I claim:

1. In a lamp construction, a lamp casing, a separate sheet metal bezel having an inwardly opening channel, an attachment device for removably securing the bezel to the lamp casing, a reinforcing ring within the channel and means associated with the attachment device for forcibly expanding said ring into tight engagement with the bezel and for holding it in expanded condition.

2. In a lamp construction, a lamp casing, a detachable door for the casing including a sheet metal lens rim, a liner ring adapted to be expanded into snug engagement with the rim to strengthen the same, and means including an attachment element between the door and casing, for holding the ring in its expanded condition.

3. In a lamp construction, a casing, a door for the casing including a lens rim, means to removably secure the door to the casing, a split liner ring adapted to be expanded into snug engagement with the rim to strengthen the same, means associated with said securing means to fix one end of the ring to the rim and a device engageable with the free end of the ring to spread the ends apart and hold the ring expanded. 70
4. In a lamp construction, a casing, a removable door for the casing, including a lens rim, and attachment lug on the rim for securing the door to the casing, a split liner ring adapted to be expanded into snug engagement with the rim to strengthen the same, means to anchor said lug and one end of the ring to the rim, and a deformable element associated with said means and engaged with the free end of the ring, whereby its deformation spreads the ends apart and holds the ring expanded. 75
5. In a lamp construction, a casing, a removable door for the casing, including a lens rim, an attachment lug on the rim for securing the door to the casing, a split liner ring adapted to be expanded into snug engagement with the rim to strengthen the same, means to anchor said lug to the rim, and means associated with said lug for engagement with the ends of the ring to spread the same and expand the ring. 80
6. In a lamp construction, a casing, a removable door for the casing, including a lens rim, an attachment lug on the rim for securing the door to the casing, a split liner ring adapted to be expanded into snug engagement with the rim to strengthen the same, means to anchor said lug to the rim, and a deformable element associated with the lug for engagement with the ring to expand the same upon its deformation. 85
7. In a lamp construction, a casing, a removable door for the casing, including a lens rim, an attachment lug on the rim for securing the door to the casing, a split liner ring adapted to be expanded into snug engagement with the rim to strengthen the same, means to anchor said lug to the rim, and a spreader device secured by the lug anchoring means and provided with oppositely disposed feet for engagement with the ends of the ring to spread the same apart. 90
8. In a lamp construction, a casing, a removable door for the casing, including a lens rim, an attachment lug on the rim for securing the door to the casing, a split liner ring adapted to be expanded into snug engagement with the rim to strengthen the same, means to anchor said lug to the rim, and abutment portions on the lug for engagement with the ends of the ring to hold the ring expanded. 95
9. In a lamp construction, a door including a lens rim, a split liner ring adapted to be expanded into snug engagement with the rim to strengthen the same and provided with upturned end portions, a spreader device engageable with said end portions to expand the ring and means to anchor the spreader to the rim. 100
- In testimony whereof I affix my signature.
CLARENCE A. MICHEL. 105