

May 21, 1935.

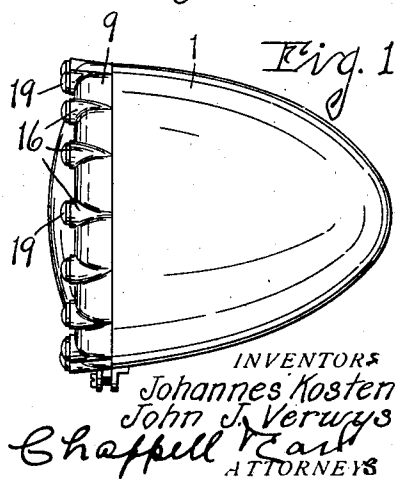
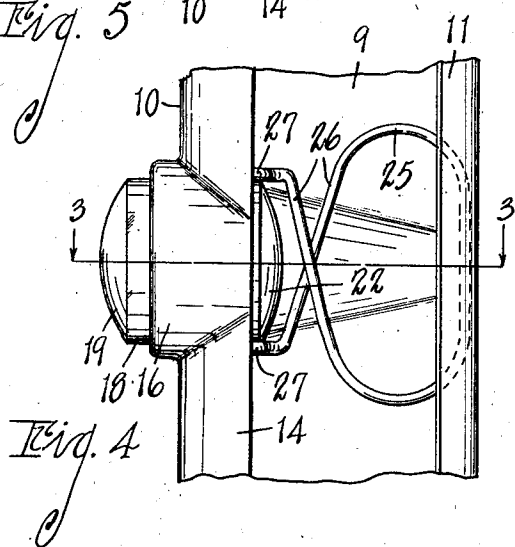
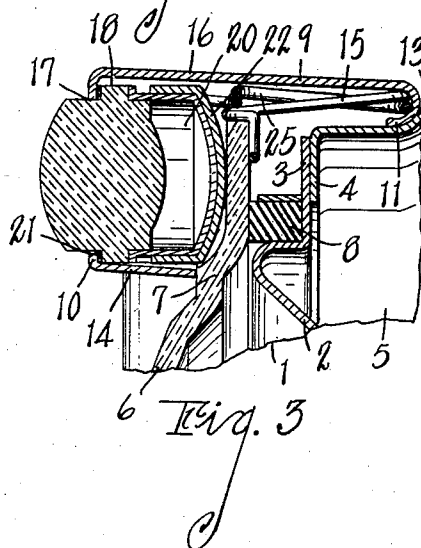
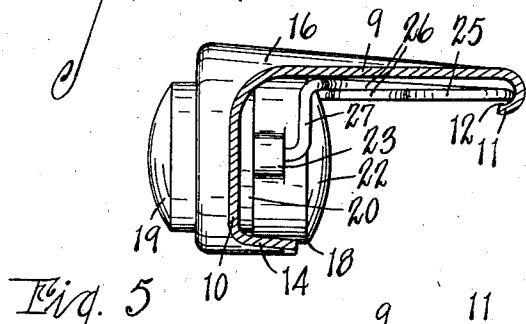
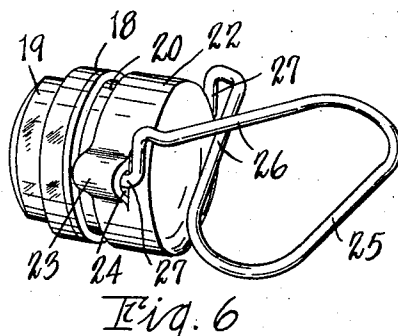
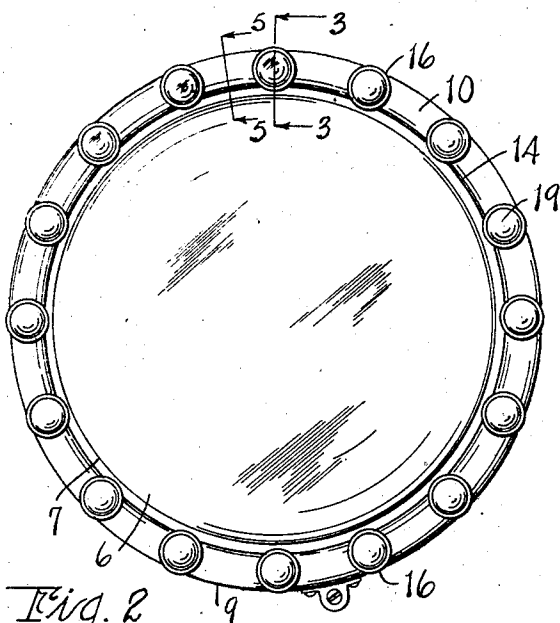
J. KOSTEN ET AL

2,002,015

REFLECTOR

Filed June 19, 1933

2 Sheets-Sheet 1



BY

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2 Sheets-Sheet 2

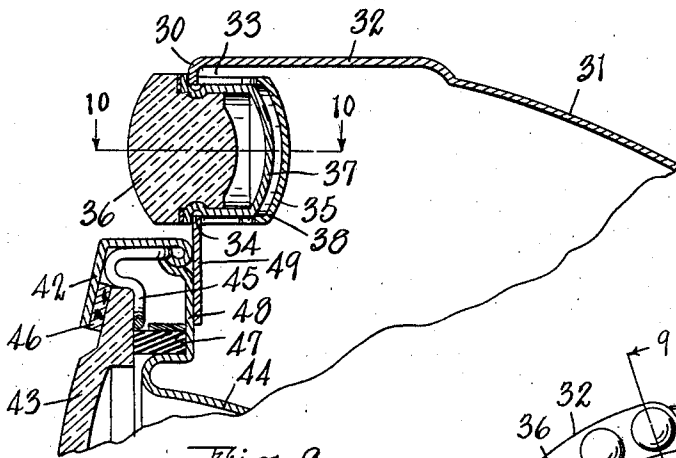


Fig. 9

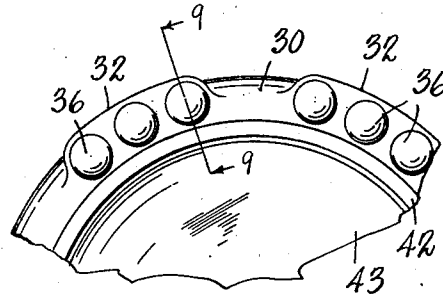


Fig. 8

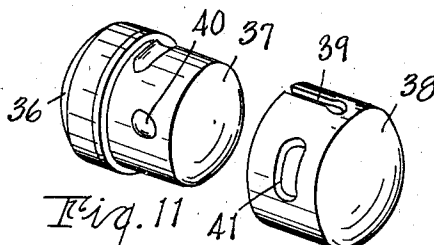


Fig. 11

Fig. 12

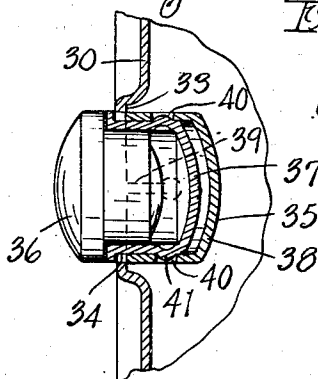


Fig. 10

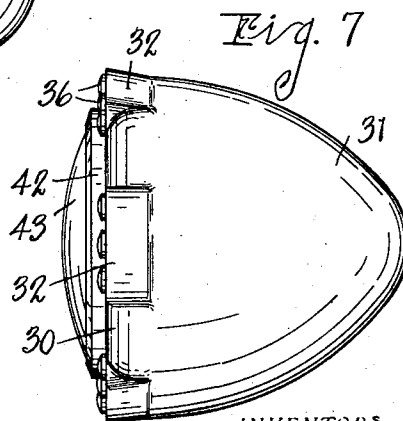


Fig. 7

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2,002,015

REFLECTOR

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Application June 19, 1933, Serial No. 676,444

21 Claims. (Cl. 88-81)

The main objects of this invention are:

First, to provide a motor vehicle headlamp with a plurality of reflecting units arranged around the rim thereof for promoting visibility especially when the headlamp is unlighted and at night.

Second, to provide a reflector of this character having improved means for securing the light reflecting units in assembled relation with the lamp housing without disturbing the standard construction of the headlamp except the annular rim member thereof which is embossed and made more pleasing in appearance.

Third, to provide a reflector of this character which is simple and economical in its parts and quite efficient and effective in operation.

Objects relating to details and economies of our invention will appear from the description to follow. The invention is defined and pointed out in the claims.

A structure which is a preferred embodiment of our invention is illustrated in the accompanying drawings, in which:

Fig. 1 is a view in side elevation of a headlamp embodying the features of our invention.

Fig. 2 is a front elevation.

Fig. 3 is an enlarged detail section on a line corresponding to line 3-3 of Figs. 2 and 4.

Fig. 4 is a fragmentary inside view of the rim member.

Fig. 5 is an enlarged detail section on a line corresponding to line 5-5 of Fig. 2.

Fig. 6 is a rear perspective view of a light reflecting unit assembly.

Fig. 7 is a view in side elevation of a headlamp embodying a modification of our invention.

Fig. 8 is a fragmentary view in front elevation of the embodiment of Fig. 7.

Fig. 9 is an enlarged detail section on a line corresponding to line 9-9 of Fig. 8.

Fig. 10 is a detail section on line 10-10 of Fig. 9.

Fig. 11 is a perspective view of a light reflecting unit of the modification.

Fig. 12 is a perspective view of the locking casing for the light reflecting unit of Fig. 11.

Referring to the embodiment of our invention illustrated by Figs. 1 to 6 of the drawings, the headlamp 1 of general bullet design or outline has a reflector 2 mounted therein with its annular flange 3 overlapping the inturned flange 4 of the shell or casing 5. The lamp is provided with a substantially circular lens 6 having an annular flange-like rim 7 which is held in spaced relation to the reflector 2 by means of the cork gasket 8. The shell or casing 5 has an annular closure or

rim member 9 having an inwardly facing channel 10 and an inturned annular flange 11 forming a forwardly facing annular channel 12. The flange 11 has telescoping engagement with the flared portion 13 of the shell. The flange 14 of the channel 10 engages the annular rim 7 of the lens 6. The lens 6 is resiliently held in assembled relation with the flange 14 by means of the wire spring 15 which is seated in the groove 12 and engages the rim 7 of the lens. The spring 15 holds the lens centered relative to the rim member 9 so as to provide an annular space between the periphery of the lens and the inside of the rim member.

The rim member has an annular series of embossed sockets 16, each of which is provided with a central opening 17. A light reflecting unit 18 is disposed in each socket with its lens 19 projecting through the opening 17.

The lens is provided with an annular rib or enlargement providing a forwardly facing shoulder-like seat for the gasket 21 disposed between the flanges on the socket and the shoulder or seat and a rearwardly facing shoulder-like gasket seat for the end of the cup-like reflector 20 which is preferably secured to the lens. The cup-like holder or casing 22 is arranged on the reflector and provided with oppositely disposed ears or lugs 23 having holes 24 therein receiving the ends of the spring wire loop 25. The arms 26 of this spring are preferably crossed as illustrated, their ends 27 engaging the holes 24. The springs are seated in the forwardly facing channel 12 of the rim 9.

The arms 26 extend through the space between the periphery of the lens 6 and the rim member 9. The spring wire loops act to resiliently urge the light reflecting units into assembled relation with their sockets. The light reflecting units are readily assembled with the rim member by merely inserting each light reflecting unit in its socket and then compressing the spring so as to snap it into the groove 12.

This arrangement permits very rapid assembling of the reflector lens units and they are held against rattling and urged by the springs against the gaskets 21 so that moisture is effectively excluded. Broken lens units may be quickly replaced without the aid of special tools.

Referring to the modification of our invention illustrated by Figs. 7 to 12 of the drawings, the rim member 30 of shell 31 of the headlamp is provided with an annular series of embossed sections 32, each of which is provided with a plurality of sockets 33 having openings 34. In each socket is disposed a light reflecting unit 35 con-

sisting of a lens 36 and a reflector 37. Each light reflecting unit is provided with a cup-like casing or holder 38, the wall of which is provided with opposed slots 39 to permit the wall to expand or yield when telescoped over the rounded lugs 40 formed on opposite sides of the wall of the reflector 37. The wall of the holder is provided with opposed openings 41 receiving the lugs 40 to hold the parts in assembled relation in the manner of a snap fastener.

In this case, the embossed sections 32 are arranged in the shell 31 on the outside of the closure or rim member 42 which holds the headlamp lens 43 in assembled relation with its reflector 44. A wire spring 45 urges the lens 43 into assembled relation with the rim member 42, a gasket 46 being disposed between these parts. A cork gasket 47 separates the inner surface of the lens 43 from the annular flange 48 of the reflector 44. The flange 48 overlaps the inturned flange 49 of the shell 31 in which the embossed sections are provided.

Our improved headlamp is highly ornamental and attractive in appearance, its efficiency as a headlight is not decreased, and the lamps are visible to an approaching vehicle, even when the lamps are not lighted, so headlights embodying my invention are a substantial safety factor to approaching vehicles. It is well known that many accidents occur because of the failure of one light on an automobile, which results in confusion to an approaching vehicle as to the exact position of the vehicle having the defective light.

We have illustrated and described our improvements in embodiments which we have found very practical. We have not attempted to illustrate or describe other embodiments or adaptations, as it is believed this disclosure will enable those skilled in the art to embody or adapt our improvements as may be desired.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:

1. A reflector comprising in combination a headlight lens, an annular headlamp rim member housing said lens, the periphery of the lens being spaced from the rim member, said rim member having a rearwardly facing front channel and a forwardly facing rear channel, the inner flange of the front channel engaging the lens, a spring seated in said forwardly facing channel and engaging said lens for urging it forwardly against said flange, said front channel having a plurality of embossed sockets provided with central openings, a light reflecting unit seated in each socket and comprising a lens projecting through said opening and having a forwardly facing gasket seat, a gasket arranged on said seat and engaging the front wall of the socket, a cupped holder for each unit having opposed perforated lugs, and a looped spring seated in said forwardly facing channel and having crossed arms disposed through the annular space between the lens and the rim member and terminating in offset portions engaging said lugs.

2. A reflector comprising in combination a headlight lens, an annular headlamp rim member housing said lens, having a rearwardly facing front channel, the inner flange of the front channel engaging the lens, a spring seated in said rim member and engaging said lens for urging it forwardly against said flange, said front channel having a plurality of embossed sockets provided with central openings, a light reflecting unit seated in each socket and com-

prising a lens projecting through said opening and having a forwardly facing gasket seat, a gasket arranged on said seat and engaging the front wall of the socket, a cupped holder for each unit having opposed perforated lugs, and a looped spring seated on said rim member and terminating in offset portions engaging said lugs.

3. A reflector comprising in combination a headlight lens, an annular headlamp rim member housing said lens, the periphery of the lens being spaced from the rim member, said rim member having a rearwardly facing front channel and a forwardly facing rear channel, the inner flange of the front channel engaging the lens, a spring seated in said forwardly facing channel and engaging said lens for urging it forwardly against said flange, said front channel having a plurality of embossed sockets provided with central openings, a light reflecting unit seated in each socket and comprising a lens projecting through said opening, a cupped holder for each unit having opposed perforated lugs, and a looped spring seated in said forwardly facing channel and having crossed arms disposed through the annular space between the lens and the rim member and terminating in offset portions engaging said lugs.

4. A reflector comprising in combination a headlight lens, an annular headlamp rim member housing said lens, having a rearwardly facing front channel, the inner flange of the front channel engaging the lens, a spring seated in said rim member and engaging said lens for urging it forwardly against said flange, said front channel having a plurality of embossed sockets provided with central openings, a light reflecting unit seated in each socket and comprising a lens projecting through said opening, a cupped holder for each unit having opposed perforated lugs, and a looped spring seated on said rim member and terminating in offset portions engaging said lugs.

5. A reflector comprising in combination an annular headlamp rim member having a rearwardly facing front channel and a forwardly facing rear channel, said front channel having a plurality of embossed sockets provided with central openings, a light reflecting unit seated in each socket and comprising a lens projecting through said opening and having a forwardly facing gasket seat, a gasket arranged on said seat and engaging the front wall of the socket, a cupped holder for each unit having opposed lugs, and a looped spring seated in said forwardly facing channel and having crossed arms engaging said lugs.

6. A reflector comprising in combination an annular headlamp rim member having a rearwardly facing front channel and a forwardly facing rear channel, said front channel having a plurality of embossed sockets provided with central openings, a light reflecting unit seated in each socket and comprising a lens projecting through said opening, a cupped holder for each unit having opposed lugs, and a looped spring seated in said forwardly facing channel and having crossed arms engaging said lugs.

7. A reflector comprising in combination an annular headlamp rim member having a rearwardly facing front channel and a forwardly facing rear channel, said front channel having an annular series of embossed sockets provided with openings, a light reflecting unit seated in each socket and comprising a lens projecting through the socket opening and having a for-

wardly facing shoulder and a rearwardly facing shoulder, the forwardly facing shoulder constituting a gasket seat, a gasket disposed on said seat, a cupped reflector arranged on said lens with its forward edge in engagement with the rearwardly facing shoulder of the lens, a cupped holder having oppositely disposed lugs, and a looped spring having its bight portion seated in said forwardly facing channel and having crossed arms engaging said lugs and urging the unit in place in its socket.

8. A reflector comprising in combination an annular headlamp rim member having a rearwardly facing front channel and a forwardly facing rear channel, said front channel having an annular series of embossed sockets provided with openings, a light reflecting unit seated in each socket and comprising a lens projecting through the socket opening and having a rearwardly facing shoulder, a cupped reflector arranged on said lens with its forward edge in engagement with the rearwardly facing shoulder of the lens, a cupped holder having oppositely disposed lugs, and a looped spring having its bight portion seated in said forwardly facing channel and having crossed arms engaging said lugs and urging the unit in place in its socket.

9. A reflector comprising in combination an annular headlamp rim member having a rearwardly facing front channel and a forwardly facing rear channel, said front channel having an annular series of embossed sockets provided with openings, a light reflecting unit seated in each socket and comprising a lens projecting through the socket opening and having a forwardly facing shoulder and a rearwardly facing shoulder, the forwardly facing shoulder constituting a gasket seat, a gasket disposed on said seat, a cupped reflector arranged on said lens with its forward edge in engagement with the rearwardly facing shoulder of the lens, a cupped holder, and a spring seated in the forwardly facing channel of said rim member and engaging said holder for holding the unit in place.

10. A reflector comprising in combination a headlamp casing having a rim member at the front and spaced embossed sockets provided with openings, light reflecting units disposed in said sockets and comprising shouldered lenses projecting through said openings, a gasket arranged between the shoulder of the lens and the rim member, a cupped reflector on the lens, a cupped holder telescoped with said reflector and having opposed lugs, and a resilient wire loop seated in said rim member and having crossed arms terminating in offset portions engaging said lugs and acting to yieldingly hold the unit in its socket, the lens openings and the seat for the loop being in oppositely disposed portions of the rim member.

11. A reflector comprising in combination a headlamp casing having a rim member at the front and spaced embossed sockets provided with openings, light reflecting units disposed in said sockets and comprising lenses projecting through said openings, a cupped holder having opposed lugs, and a resilient wire loop seated in said rim member and having crossed arms terminating in offset portions engaging said lugs and acting to yieldingly hold the unit in its socket, the lens openings and the seat for the loop being in oppositely disposed portions of the rim member.

12. A reflector comprising in combination a support having an inwardly facing front chan-

nel and a rear flange, said front channel having an embossed socket provided with an opening, a light reflecting unit disposed in said socket and provided with a lens disposed through said opening and a holder having opposed lugs, and a looped spring seated on said flange and having its arms engaging said lugs for detachably securing the unit in position.

13. A reflector comprising in combination a support having an inwardly facing front channel and a rear flange, said front channel having an opening, a light reflecting unit provided with a lens disposed through said opening and a holder having opposed lugs, and a looped spring seated on said flange and having its arms engaging said lugs for detachably securing the unit in position.

14. A reflector comprising in combination an annular head lamp rim member having an inturned flange with an annular series of openings therein, a light reflecting unit for each opening comprising a lens projecting through the opening and having a forwardly facing shoulder and a rearwardly facing shoulder, the forwardly facing shoulder constituting a gasket seat, a gasket disposed on said seat, a cupped reflector arranged on said lens with its forward edge in engagement with the rearwardly facing shoulder of the lens, a holder engaging said reflector, and a looped spring engaging said holder and seated on said rim member.

15. A reflector comprising in combination an annular head lamp rim member having an inturned flange with an annular series of openings therein, a light reflecting unit for each opening comprising a lens projecting through the opening, a holder engaging said unit and having radial lugs, and a looped spring engaging said lugs and seated on said rim member.

16. The combination in a headlight, of an annular casing member having a plurality of embossed sockets with openings therein, reflecting units disposed in said sockets and comprising lenses projecting through the openings, reflectors on said lenses, cupped holders engaging said reflectors and having lateral lugs, and looped springs seated on said casing member and engaging said lugs, whereby the lens units are retained in position.

17. The combination in a headlight, of an annular casing member having a plurality of openings therein, reflecting units disposed in said openings and comprising lenses projecting through the openings, reflectors on said lenses, cupped holders engaging said reflectors and having opposed lugs, and looped springs seated on said casing member and engaging said lugs whereby the lens units are retained in position.

18. A reflector comprising a support having a series of openings and a groove facing said openings in the back of said support, a light reflecting unit associated with each of said openings and comprising a lens projecting through the opening and having an abutment engaging the same to limit the forward movement of the lens, a holder for each unit having opposed perforated lugs, and a looped spring seated in said groove and having crossed arms terminating in offset portions engaging said lugs.

19. A reflector comprising a support having an opening and a groove facing said opening, the groove being laterally offset with respect to the center of the opening, a lens seated in said opening, a holder for said lens having radial lugs, and

a looped spring seated in said groove and having the arms of the loop engaging said lugs for securing said lens in place.

20. The combination with an annular support
5 having a rearwardly opening front channel and a forwardly opening rear channel, the latter being relatively narrow compared to the former and being disposed in outwardly offset relation
10 relative thereto, the web of said front channel having a series of spaced openings therein, of reflector units seated in said front channel to project forwardly through the web openings thereof, and loop-like spring means seated in said rear

channel and engaging said reflector units to hold the same in place.

21. The combination with a support having a rearwardly opening front channel and a forwardly opening rear channel, the latter being relatively narrow compared to the former, the web of
5 said front channel having a series of spaced openings therein, of reflector units seated in said front channel to project forwardly through the web openings thereof, and loop-like spring means
10 seated in said rear channel and engaging said reflector units to hold the same in place.

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