Jan. 20, 1942. W. S. C. GLOVER 2,270,680

BEAM CONTROLLING DEVICE FOR LAMPS

Filed Jan. 25, 1941

FIG. 1.

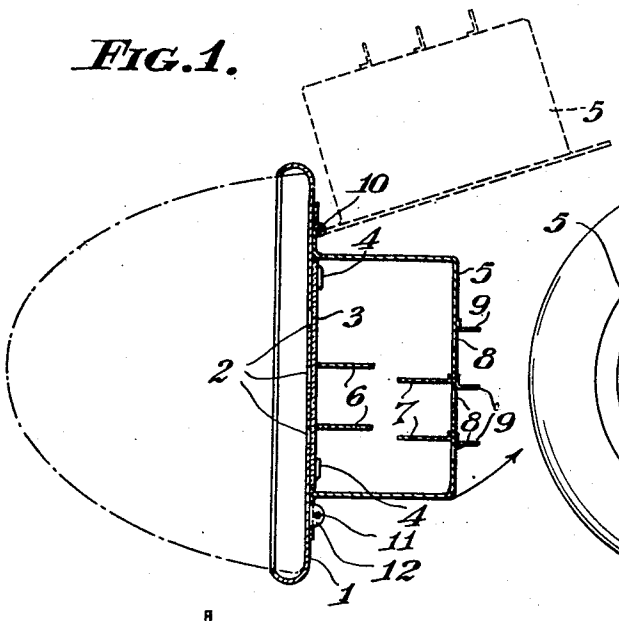


FIG. 2.

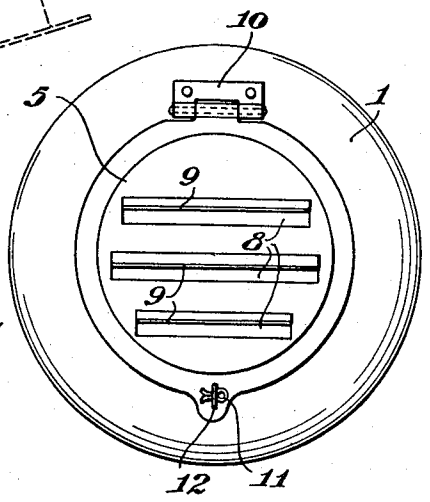


FIG. 4.

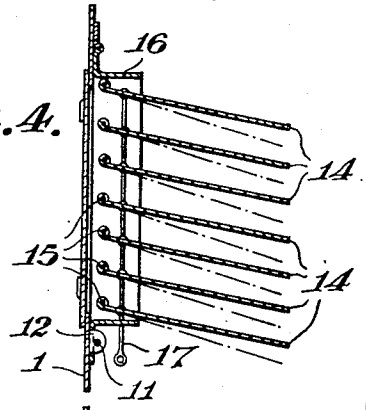


FIG. 3.

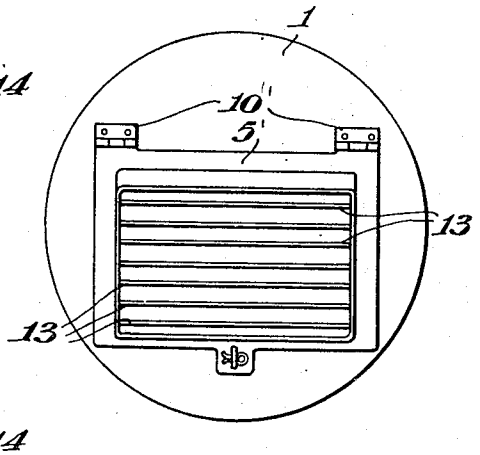
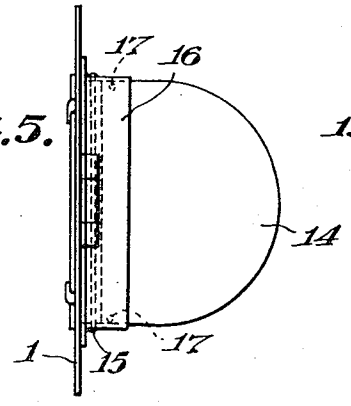


FIG. 5.



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BEAM CONTROLLING DEVICE FOR LAMPS

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In Great Britain December 22, 1939

4 Claims. (Cl. 240—48.4)

This invention relates to a beam controlling device for lamps of the type wherein an apertured cover plate or the like is fitted over the front of the lamp casing, the said aperture being covered with a glass or window usually of diffusive material such as frosted glass. On the front of the aperture the beam controlling device is fitted, which device may comprise a plurality of plates in the form of rings, or they may be horizontally disposed and inclined or otherwise arranged to prevent rays from issuing at an angle above the normal horizontal line.

With such devices, dimming of the light due to dirt on the aforesaid glass necessitates frequent cleaning thereof and it is the primary object of this invention to provide a means whereby the cleaning of the said glass can be effected expeditiously.

This and other objects will be apparent from the following description of the accompanying drawing which is illustrative of preferred examples of the invention wherein:

Figure 1 is a sectional elevation of one form of the device with the lamp casing shown diagrammatically and in broken lines,

Figure 2 is a front view of the form shown in Figure 1,

Figure 3 is a front view of an alternative form, and

Figures 4 and 5 are a sectional elevation and plan view respectively of another form of the invention.

Referring firstly to Figures 1 and 2, the device comprises a circular cover plate 1 which is provided with three horizontal and spaced apart apertures 2 therein. Mounted on the front of the plate 1 is a glass 3, the said glass being of a diffusive nature and held in position by means of clips or lugs 4.

A box-like housing 5 is mounted on the front plate, the said housing carrying two rear horizontal plates 6 and two front horizontal plates 7, while the front of the housing is provided with three horizontal and spaced apart apertures therein. For the type of beam required the apertures 8 are set slightly below the apertures 2, and the plates 6 and 7 are arranged to prevent light from an aperture 2 from passing through a higher aperture 8. As shown, control plates 6 are positioned just above slit apertures 2 in cover plate 1, and control plates 7 are positioned just above slit apertures 8 in the front face of housing 5. Since slits 8 are below slits 2, plates 7 are lower than plates 6. Front plates 9 are provided on the casing which front plates further prevent any upward direction of light rays.

The mounting of the front housing is by means of a butt hinge 10, the said housing normally being retained in position by means of a split pin 11 which passes through an aperture in the plate 12 on the cover, said plate passing through an aperture in the housing. It will be understood however that any suitable form of hinging and locking may be resorted to.

In the form shown in Figure 3 the housing 5' is of general rectangular form, but in its general construction is similar to the form illustrated in Figures 1 and 2. The front of the housing however is open and within said housing a plurality of vanes 13 extend from front to rear thereof. The housing is hinged to the plate 1 by means of a pair of butt hinges 10'.

It will be appreciated that the internal construction and arrangement of vanes may be varied and that the arrangement shown in the cylindrical housings Figures 1 and 2 may be applied to the rectangular housing in Figure 3 and vice versa.

Means may be provided whereby the angular disposition of the plates or vanes or their distance apart may be altered and one such arrangement is illustrated in Figures 4 and 5. The vanes 14 in this embodiment are of D-shape and their straight edges are bent over so as to provide cylinders for the mounting of the vanes by means of pivot pins 15 in a frame member 16. All of the vanes are coupled together by a rod 17 the lower end of which is connected to a means which will allow the angular disposition of the vanes to be altered either in a preset manner or from the driver's seat. This will serve as a means for "dipping" the beam, and the vanes are shown in broken lines in Figure 4, in the dipped position.

In all the examples illustrated the front plate is fitted onto the head lamp casing as shown in Figure 1 diagrammatically. In practice the front plate may be fitted into the usual ring which holds the normal headlamp glass.

It is to be understood that the embodiments above described are preferred examples of the invention and are not to be construed as limiting the scope of the invention which is set forth in the accompanying claims.

I claim:

1. In a beam controlling device for a headlight, a cover plate adapted to be attached to the front of the casing of said headlight, said cover plate being provided with a plurality of parallel slits, a housing carried on said cover plate and

having a front wall substantially parallel to said cover plate and provided with a plurality of slits which are parallel to the slits of said cover plate, a plurality of rear control plates mounted on said housing and extending substantially parallel to each other and to the slits in said cover plate and being respectively mounted immediately above said slits in said cover plate, and a plurality of front control plates mounted on said housing inside of the front wall thereof and extending substantially parallel to each other and to said slits in said front wall of said housing and further extending toward said rear control plates, and being respectively mounted immediately above said slits in the front wall of said housing.

2. In a beam controlling device for a headlight, a cover plate adapted to be attached to the front of the casing of said headlight, said cover plate being provided with a plurality of parallel slits, a housing carried on said cover plate and having a front wall substantially parallel to said cover plate and provided with a plurality of slits which are parallel to the slits of said cover plate, said slits in the front wall of said housing being displaced from registry with the slits of said cover plate in a direction perpendicular to said slits, a plurality of rear control plates mounted on said housing and extending substantially parallel to each other and to the slits in said cover plate and being respectively mounted immediately above said slits in said cover plate, and a plurality of front control plates mounted on said housing inside of the front wall thereof and extending substantially parallel to each other and to said slits in said front wall of said housing and further extending toward said rear control plates, and being respectively mounted immediately above said slits in the front wall of said housing, and said front control plates being displaced with reference to said rear control plates in a direction perpendicular to said control plates.

3. A beam controlling device according to claim 1, and a plurality of projecting control plates mounted on the outside of the front wall of said housing and extending outwardly therefrom substantially parallel to each other and parallel to and immediately above said slits in the front wall of said housing.

4. In a beam controlling device for a headlight, a cover plate adapted to be attached to the front of the casing of said headlight, said cover plate being provided with a plurality of parallel horizontal slits, a housing carried on said cover plate and having a front wall substantially parallel to said cover plate and provided with a plurality of slits which are parallel to the slits of said cover plate, said slits in the front wall of said housing being displaced from registry with the slits of said cover plate vertically downwardly in a direction perpendicular to said slits, a plurality of rear control plates mounted on said housing and extending substantially parallel to each other and to the slits in said cover plate and being respectively mounted immediately above said slits in said cover plate, and a plurality of front control plates mounted on said housing inside of the front wall thereof and extending substantially parallel to each other and to said slits in said front wall of said housing and further extending toward said rear control plates, and being respectively mounted immediately above said slits in the front wall of said housing, and said front control plates being displaced with reference to said rear control plates vertically downwardly in a direction perpendicular to said control plates.

WILLIAM STEPHEN COX GLOVER.