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W. HUELLER

IMAGE REFLECTOR FOR VEHICLES

Filed Sept. 10, 1926

Fig:1.

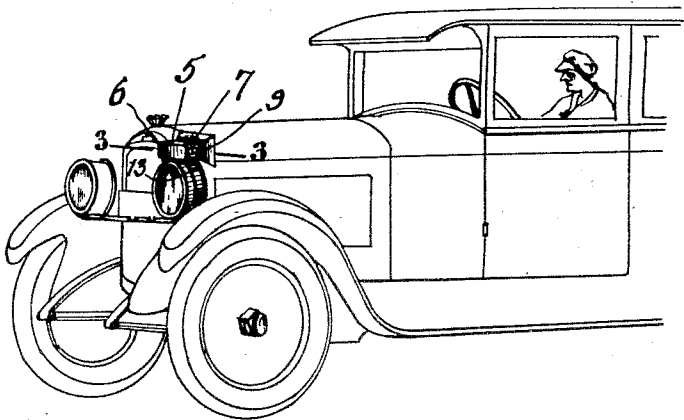


Fig:2.

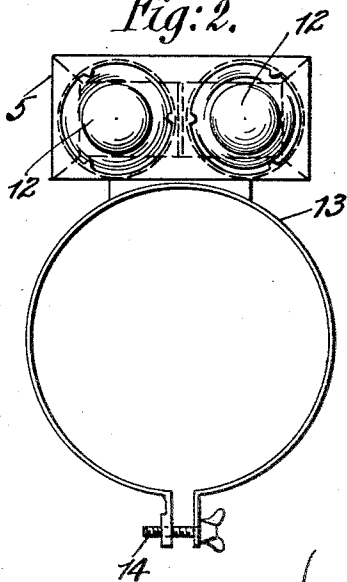


Fig:3.

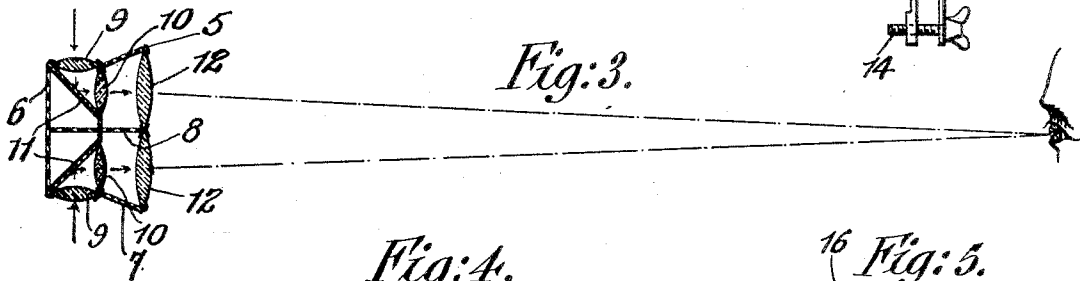


Fig:4.

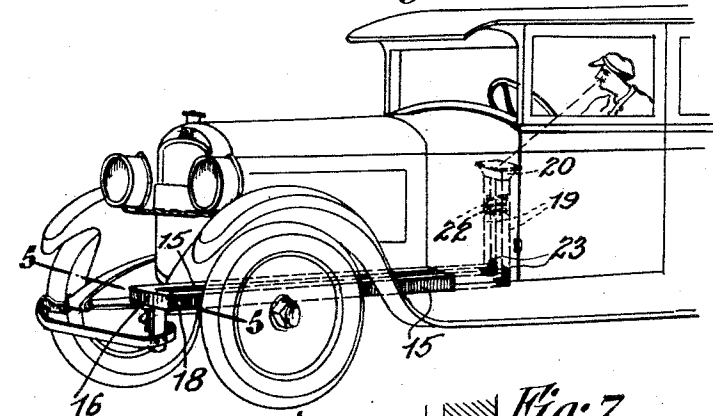


Fig:5.

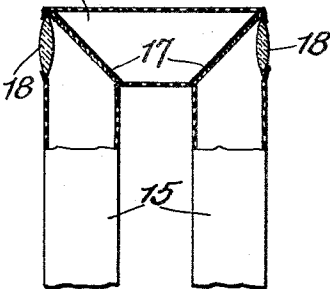


Fig:6.

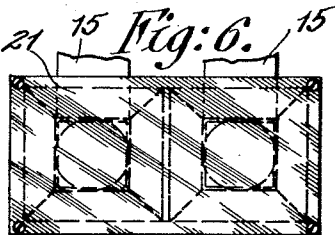
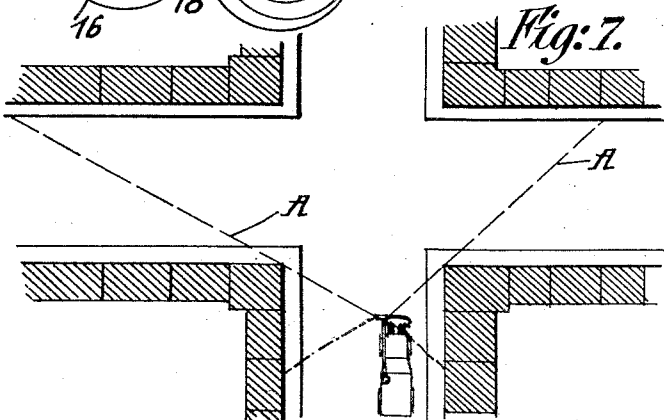


Fig:7.



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## UNITED STATES PATENT OFFICE.

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## IMAGE REFLECTOR FOR VEHICLES.

Application filed September 10, 1926. Serial No. 134,603.

This invention relates to image reflectors for vehicles, and has for its primary object to provide a simply constructed means whereby as the operator approaches the intersection of two streets or roads, he will be apprised of vehicles approaching the intersection from a direction at right angles to his line of travel, notwithstanding the fact that a direct view of such approaching vehicles from the driver's position is obstructed by buildings at the corners of the intersecting streets or roads. Thus, the driver will have ample time to apply his brakes and stop the vehicle, thereby avoiding a collision which might possibly result in serious damage to the vehicles and injury to the occupants thereof.

More particularly, it is an important object of my invention to provide such an image reflecting device which may be readily constructed in the nature of an attachment for application to existing motor vehicles, or which may be readily incorporated in the structure of the vehicle itself during manufacture thereof. In the first instance, the image receiving plate or lens is positioned exteriorly of the vehicle body, while in the second instance, this plate or lens may be conveniently mounted or arranged within the body of the vehicle upon or below the cowl or above the windshield.

With the above and other objects in view, the invention consists in the improved image reflector for vehicles, and in the form, proportion and relative arrangement of the several parts thereof as will be hereinafter more fully described, illustrated in the accompanying drawings, and subsequently incorporated in the subjoined claims.

In the drawings, wherein I have disclosed several simple and practical embodiments of the device, and in which similar reference characters designate corresponding parts throughout the several views,—

Figure 1 is a perspective view of the front portion of a motor vehicle showing one embodiment of my invention in the form of an attachment applied in its operative position;

Fig. 2 is an enlarged elevation of the device;

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 1;

Fig. 4 is a view similar to Fig. 1 showing

another embodiment of my invention which is incorporated in the vehicle structure in the manufacture thereof;

Fig. 5 is an enlarged horizontal section taken on the line 5—5 of Fig. 4;

Fig. 6 is a detail plan view of the image receiving plate or lens, and

Fig. 7 is a diagrammatic plan view showing the approach of a vehicle to a street intersection, more clearly illustrating the manner of operation of the device.

Referring in detail to the drawings, and more particularly to Figs. 1, 2 and 3 thereof, in the form of the invention therein illustrated, I provide a substantially rectangular casing 5 closed at its front side as at 6 and having its top, bottom and end walls obliquely inclined or flaring to the rear side thereof as shown at 7. The central wall 8 divides the interior of this casing into two sections. In the opposite ends of said casing between the wall 6 thereof and the flaring walls 7 the convex lenses 9 are mounted. Similar lenses 10 arranged in a plane at right angles to the lenses 9 extend between the end walls of said casing and the central dividing wall 8 and obliquely inclined deflecting mirrors 11 are mounted within the two chambers of the casing and extend between the lenses 9 and 11. In the rear open side of the flaring portions 7 of the casing between the end walls thereof and the central dividing wall 8 the larger magnifying lenses 12 are mounted in parallel concentric relation to the lenses 10.

A clamping band 13 has its central portion suitably secured to the under side of the casing 5. This band is adapted to be engaged around the casing of one of the headlights of the vehicle as clearly shown in Fig. 1 of the drawings and the ends of said band tightly drawn together to clamp the band on said lens casing by a suitable clamping bolt indicated at 14 so as to firmly secure the casing 5 upon the upper side of the lamp. The device is thus supported with the lenses 12 at a sufficient elevation so that they are clearly visible from the operator's position in the vehicle.

With the device applied in operative position as above stated, from reference to Fig. 7, it will be observed that as the vehicle approaches the intersection of two streets, in the event that there are corner buildings at

the street intersections which would obstruct a clear view by the driver, of the intersecting street as he approaches the same, the lenses 9 will reflect an image of any vehicle approaching through the intersecting street while the vehicle having the attachment thereon is from five to ten yards from the point of intersection, upon the deflecting mirrors 11 by which the image is directed through lenses 10 and upon the lenses 12 where it is magnified to sufficient proportions in order to be clearly visible to the driver of the vehicle. Thus, as indicated by the dotted lines A in Fig. 7, the operator will have ample time within which to apply his brakes and stop the vehicle before reaching the intersection, thus avoiding a possible collision with a vehicle approaching said intersection from either side. It will be apparent that such a device will be particularly advantageous upon motor vehicles of the larger sizes where the driver's seat is located a considerable distance from the front end of the machine.

The form of the invention above referred to is particularly designed for application and use upon existing vehicles of various types without necessitating any structural alterations therein. However, in Figs. 4 to 6 of the drawings, I have shown a form of the invention which may be built into the structure of the vehicle as it is manufactured. In this construction, I may provide two parallel rectangular tubes 15 extending above the front vehicle axle forwardly of the wheel and suitably secured to the chassis or frame of the vehicle. These tubes at their forward ends are connected by a transverse tube section 16 and at the diagonals between the tubes 15 and 16 the deflecting mirrors 17 are mounted. In the outer side wall of each tube 15 at the end thereof opposite the respective mirrors 17, the image receiving lenses 18 are suitably secured.

Vertical tubes 19 are connected with the rear ends of the respective tubes 15 and extend upwardly therefrom where they are suitably joined to a hollow head or casing 20, the upper side of which is closed by a lens or plate 21. Below this plate within the tubes 19 suitable magnifying lenses 22 may be arranged. At the juncture of the vertical tubes 19 with the rear ends of the tubes 15 image deflecting mirrors or prisms 23 are mounted. Thus, it will be apparent that the images received by the lenses 18 are deflected by the mirrors 19 through tubes 15 and upon mirrors or prisms 23 which in turn deflect the images upwardly through the lenses 22 upon the plate or lens 21. This lens or plate may be suitably mounted and arranged either beneath the cowl of the vehicle or upon the instrument board so that the images will be clearly visible to the driver. In such construction, it will be ob-

served that since the lenses 18 are located practically at the extreme forward end of the vehicle, the driver would receive more timely warning of the approach of a vehicle through an intersecting street than in the construction first described. However, with either arrangement, it will be apparent that notwithstanding the fact that the streets may be closely built up, the operator would have ample time to stop the vehicle and avoid a collision.

From the foregoing description considered in connection with the accompanying drawings, the several embodiments of my invention as herein disclosed will be clearly understood. Of course, the arrangements illustrated are more or less suggestive, and in the practical development of the invention, it may be found desirable to make various changes in the mounting or arrangement of the device upon the vehicle. Also the several structural parts of the invention itself may be susceptible of embodiment in various other alternative forms, and I accordingly reserve the privilege of resorting to all such changes in the form, construction and arrangement of the detail parts thereof as may be fairly embodied within the spirit and scope of the invention as claimed.

I claim:

1. A device for a road vehicle to indicate the approach of another vehicle from either side, said device comprising a pair of lenses with their axes extending transversely of the road vehicle; a mirror associated with each of said lenses and mounted to reflect images received by said lenses toward the driver of said vehicle; means for transmitting said images and means for magnifying said images, cooperating with said transmitting means for the benefit of the driver of said vehicle.

2. A device for a road vehicle to indicate the approach of a vehicle from either side, said device comprising a pair of lenses with their axes extending transversely of said road vehicle; a mirror for each lens to reflect images received by the lenses towards the driver of the vehicle, and lenses for magnifying said images.

3. A device for a road vehicle to indicate the approach of a vehicle from either side, said device comprising a casing; lenses attached to said casing with their axes extending transversely of the road vehicle, mirrors in said casing to reflect images received by the lenses towards the driver of the road vehicle, and lenses for magnifying said images for the benefit of the driver of the road vehicle.

4. A device for a road vehicle to indicate the approach of a vehicle from either side, comprising a casing, lenses carried by the casing with their axes extending transversely of the road vehicle, mirrors in the casing

to reflect images received by said lenses towards the driver of the road vehicle; means in the casing for transmitting said images, and lenses for magnifying said images for the benefit of the driver of said road vehicle.

5. A device, according to claim 3, wherein the casing is provided with means for se-

curing it upon one of the head lamps of the vehicle.

In testimony that I claim the foregoing as my invention, I have signed my name hereto. 10

WALTER HUELLER.