Jan. 19, 1926. 1,569,973

F. K. GOETTERT

LENS

Filed July 30, 1923

Fig. 1.

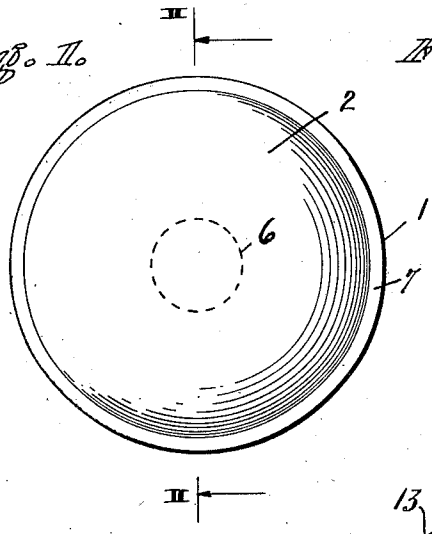


Fig. 2.

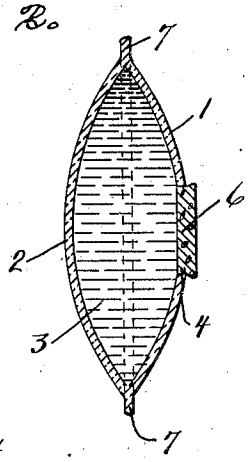


Fig. 3.

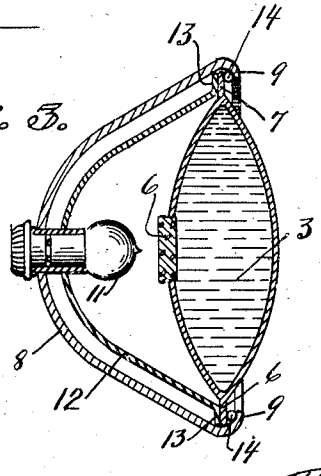


Fig. 4.

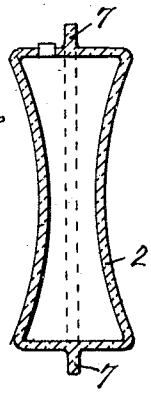
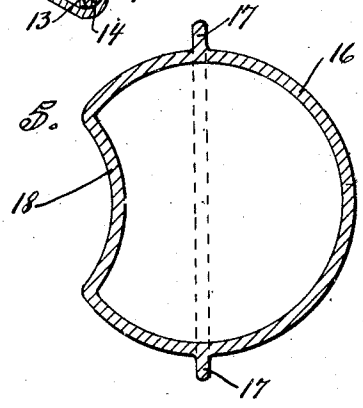


Fig. 5.



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UNITED STATES PATENT OFFICE.

FRIEDRICH K. GOETTERT, OF SAN FRANCISCO, CALIFORNIA.

LENS.

Application filed July 30, 1923. Serial No. 654,750.

To all whom it may concern:

Be it known that I, FRIEDRICH K. GOETTERT, a citizen of Germany, and a resident of San Francisco, county of San Francisco, State of California, have invented a new and useful Lens, of which the following is a specification.

The present invention relates to improvements in lenses and has particular reference to a lens adapted to be used in connection with the headlights of motor vehicles for diffusing the light so as to eliminate the glare while at the same time increasing the range of the light. My lens may also be used for a magnifying glass for search lights and in other connections. It is particularly proposed to provide a lens that instead of being made of solid glass or similar material is made hollow and filled with a suitable liquid allowing the rays to pass therethrough.

The preferred form of my invention is illustrated in the accompanying drawing in which Figure 1 shows a front view of my lens, Figure 2 a vertical section through the same taken along line II—II of Figure 1, Figure 3 a vertical section through the headlight of a motor vehicle employing my lens; Figure 4 a vertical section through a lens of a different form; and Figure 5 a similar section through a further modified form. While I have shown only the preferred forms of my invention, it should be understood that various changes or modifications may be made within the scope of the claims hereto attached without departing from the spirit of the invention.

My lens (1) comprises a receptacle (2) made of lens shape, either biconvex as shown in Figure 2, or biconcave as shown in Figure 4, or of any other suitable form, filled with a liquid (3). The latter liquid is preferably a mixture of pure water with salt and glycerine. Three pints of water are mixed with one pint of salt and allowed to boil so as to dissolve the salt, whereupon the mixture is cooled off gradually. Glycerine in the proportion of one part of glycerine to eight parts of the salt water is added to keep the salt from crystallizing. It will be understood that the salt is added to the water for the purpose of preventing the same from freezing. In countries where there is little or no frost ordinary distilled water may be used.

The receptacle is provided with a central aperture (4) through which the liquid is introduced and which is adapted to be closed by means of a stopper (6). The receptacle is further provided with a circumferential flange (7) which allows the same to be held between two clamping members.

In Figure 3 my lens is shown in connection with a headlight comprising the housing (8) having an internal flange (9) at its front end, a light (11) mounted therein in the customary manner and a reflector (12) having an external flange (13) against which the flange (7) of the lens may be placed, which latter is securely held by means of a link (14) introduced between the same and the flange (9) of the housing. The stopper (6) previously mentioned is disposed immediately in front of the light (11) and absorbs the rays emanating directly from the light (11) whereby the glare of the headlight is reduced considerably.

If desired the liquid in the receptacle may be made colored to appear, red, blue or green.

A modified form of lens is shown in Figure 5 in which a spherical receptacle (16) for the liquid is provided with a flange (17) surrounding the same. The sphere may be made complete or with an indenture as shown at (18).

I claim:

A lens comprising a lens-shaped receptacle of transparent material filled with a transparent liquid having means thereon allowing the same to be secured in front of a vehicle headlight and having a central aperture allowing the lens to be filled therethrough and a stopper for closing the aperture, the aperture and the stopper being disposed to absorb light rays emanating from the headlight.

FRIEDRICH K. GOETTERT.