A. E. JACOBS.

GOGGLES.

APPLICATION FILED AUG. 31, 1917.

Patented Dec. 3, 1918.

1,286,645.

Fig. 1.

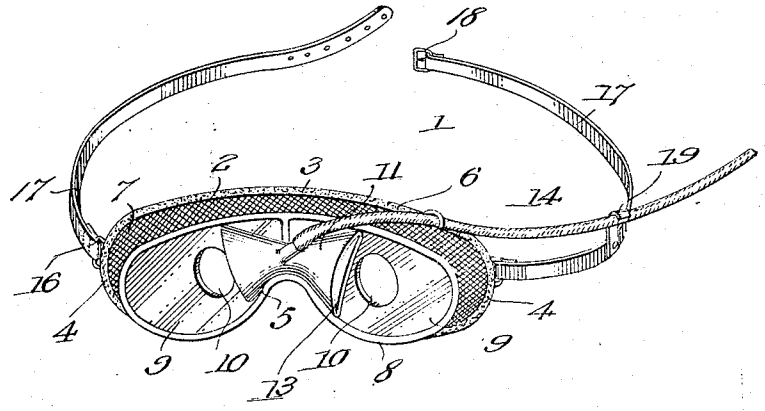


Fig. 3.

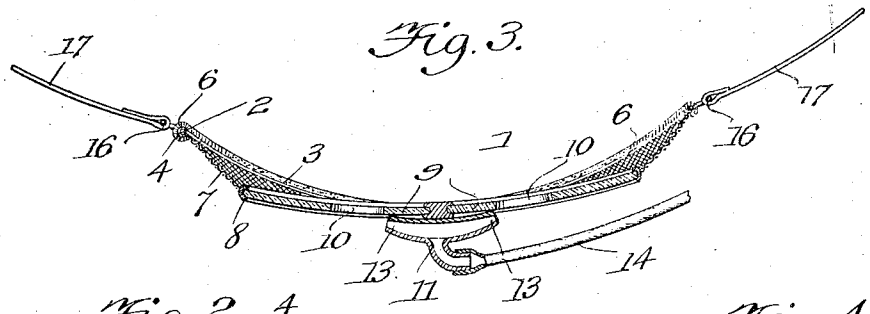


Fig. 2.

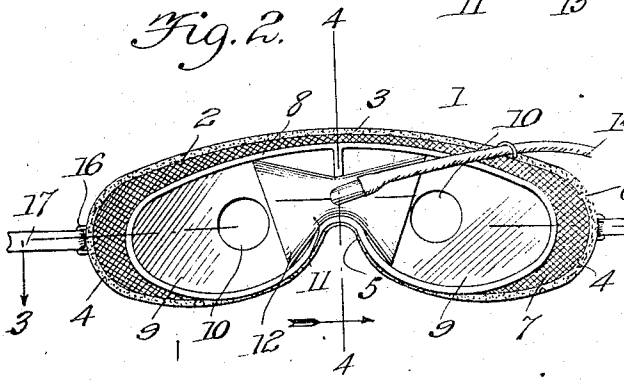
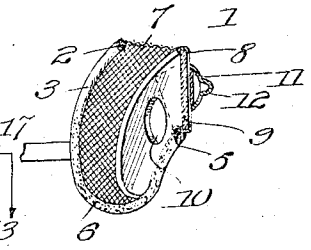


Fig. 4.



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GOGGLES.

1,286,645. Specification of Letters Patent. Patented Dec. 3, 1918.

Application filed August 31, 1917. Serial No. 189,198.

To all whom it may concern:

Be it known that I, ALBERT E. JACOBS, a citizen of United States, residing at 133 W. Susquehanna Ave., Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in Goggles, of which the following is a specification.

This invention relates to goggles, and has for a primary object to provide an efficient and clearly practicable device for projecting the eyes of vehicle drivers or occupants, from the obnoxious effects of volatile foreign matter.

Another object of the invention is to provide an eye protector for locomotive engineers, and like operators of high-speed vehicles, having improved features of construction for excluding dust, sand, and like particles from the eyes, yet permitting of a free and unobstructed vision, through the vision lens of the goggles, irrespective of weather conditions.

A further object resides in an eye protector or guard wherein is provided a frame-supported curvilineal lens, the lens being provided with apertures to aline with the eyes of wearer, and pneumatic means being carried by the protector to discharge currents of air across the apertures so as to provide a curtain of air in front of the same, whereby dust particles will be effectively prevented from lodging in the eyes of the wearer.

Other objects reside in a protector which can be quickly and firmly attached to the head of a wearer in a comfortable, yet securely-held manner, and one which will be light in weight, of few parts and relatively inexpensive to manufacture.

A still further object is to improve and simplify the construction of my Patent No. 897290, granted September 1, 1908.

For a further disclosure of the present invention, reference is to be had to the following description and to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a perspective view of the goggles comprising the preferred form of the present invention.

Fig. 2 is a rear elevation of the same.

Fig. 3 is a horizontal sectional view, taken along the line 3—3 of Fig. 2, and

Fig. 4 is a transverse sectional view taken along the line 4—4 of Fig. 2.

Similar characters of reference denote corresponding parts throughout the several views of the drawing.

In the drawings the numeral 1 designates the preferred form of the goggles comprising the present invention, the same consisting of a bent-metal inner frame 2, which is shaped to conform to the face of a wearer. The frame 2 includes a forehead-engaging portion 3, curved extremities 4, and a nose recess 5. Thus it will be seen that when the frame is in an operative position, the same will completely encircle the eyes of one wearing the goggles. The said frame may be covered with a felt-like material 6, so that the metal parts of the frame will not engage with the face, and to otherwise enhance the comfort of the wearer.

Connected in any suitable manner with the frame 2 and extending forwardly, is a section of reticulated material 7, the same having its outer marginal edge secured in any preferable manner to an outer frame 8. The latter is also constructed of bent metal, and is of the same general contour as the frame 2. Secured to the outer frame 8, in any preferable manner, is a vision lens 9, which is adapted to be located immediately in front of the eyes of one wearing the protector.

Numerous objections can be laid to the ordinary goggle glass, chief of which resides in the fact that moisture or the like will accumulate upon its exterior surface, so that a clear vision through the same is very difficult. To overcome this primary disadvantage, and others, the lens 9 employed by the present invention is provided with a plurality of spaced apertures 10, the latter being in the nature of openings extending entirely through the lens. Now in order to prevent foreign matter from entering the openings

10, the present invention contemplates ejecting a current of air across each of said openings in a direction transverse to their longitudinal axes, whereby dust particles will be effectively prevented from entering the goggles. To this end the invention provides an air ejector 11, consisting of two plates 12, which are interposed between the openings 10, and are secured in any preferable manner to the outer frame 8. The plates 12 are slightly spaced apart so as to provide at their outer ends flared nozzles 13, the latter being positioned immediately adjacent to the openings 10.

Connected with the member 11 is a flexible hose 14, which leads to a suitable source of air supply (not shown) whereby air under pressure will be conducted from said supply to the ejector 11. Due to the flared construction of the nozzles 13, the air will be forced in curtain formation across the openings 10, under sufficient pressure to effectively prevent dust particles from passing through said openings. It will be manifest that through the provision of the openings 10, and means for forcing the air across the same, a clear vision may be obtained at all times through the lens 9, and also the eyes will be protected from the effects of the elements.

In order to clearly retain the goggles in adjusted position upon the head of the wearer, the inner frame 2 is provided with eyes 16, to which are secured the extremities of straps 17. One of the straps 17 is provided with a buckle 18, for the reception of the free extremity of the other strap 17, whereby the straps may be adjusted and tightened about the head. It will be of course understood that the straps 17 may be eliminated if desired, and an elastic band or its equivalent substituted in place thereof. A metallic clip 19 is connected with one of the straps, and is employed to guide the tube 14 with relation to the goggles, so that the tube will be held in a supported position, and prevented from dropping in the line of vision of the goggles.

From the foregoing it will be seen that there is provided mechanism whereby the objects of the invention have been achieved, and all of the advantageous features above mentioned, among others, present. The goggles may be cheaply manufactured; are reliable and efficient in service, and will not interfere with the movements of the vehicle operator in any manner. It will be seen that by providing the spaced openings 10, that the wearer of the goggles will not be hampered in any manner by the accumulation of moisture or dust upon the outer surface of the lens 9; also, foreign matter will be prevented from entering the openings by the forcing of sheets of air transversely across the same, thus permitting of a clear vision through the lens 9.

Having described by invention, I claim:

1. An eye protector of the class described, comprising frames shaped to conform to the head of the wearer, lenses mounted within said frames and having spaced vision apertures formed therein, a nozzle element connected with said frames and located between said apertures, and means for supplying air under pressure to said nozzle to direct an air current across said apertures.

2. An eye protector of the class described, including curved frames, panels carried by said frames, and having spaced visional apertures formed therein, and pneumatic means connected with said frames for ejecting air currents across said apertures.

3. An eye protector of the class described, including inner face-fitting frames and outer panel-carrying frames, panels mounted within said outer frames, and having spaced visual openings provided therein, and pneumatic means carried by said frames for discharging forced air currents transversely across said openings.

4. An eye protector of the class described, including inner face-fitting frames and outer lens-carrying frames, lenses carried by said outer frames, said lenses having spaced visual apertures formed therein, of an air nozzle carried by said outer frames and situated between said apertures, and means for supplying air to the nozzle so as to eject air currents across the said apertures.

5. An eye protector comprising frames, an air ejecting element connected with said frames, means for supplying air under pressure to said air ejecting element to direct an air current across said frames, and means for supporting the latter mentioned means in non-obstructing position with respect to the line of vision.

6. An eye protector comprising frames having sight openings, an air ejecting element independent of the frames and located between the sight openings, and means for supplying air under pressure to said air ejecting element to direct an air current across said sight openings.

7. An eye protector comprising frames formed with a nose recess, an air ejecting element carried by the frames and located directly above said recess and exteriorly of the frames, and means for supplying air under pressure to said ejecting element to direct an air current across said frames.

8. An eye protector comprising frames having sight openings, an air ejecting element for directing an air current across said sight openings, said ejecting element comprising a plurality of plates.

9. An eye protector comprising frames having sight openings, an air ejecting ele-

ment for directing an air current across said sight openings, said ejecting element comprising a plurality of plates, said plates being spaced from one another and positioned between the sight openings of the frame.

10. An eye protector comprising frames having sight openings, an air ejecting element for directing an air current across said sight openings, said ejecting element comprising a plurality of plates, said plates being spaced from one another and positioned between the sight openings of the frame, the spacing of said plates providing at the ends thereof flared nozzles.

In testimony whereof I affix my signature.

ALBERT E. JACOBS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."