Sept. 19, 1961 W. F. STERNE ET AL 3,000,011

SAFETY GOGGLE

Filed July 26, 1957

Fig. 1.

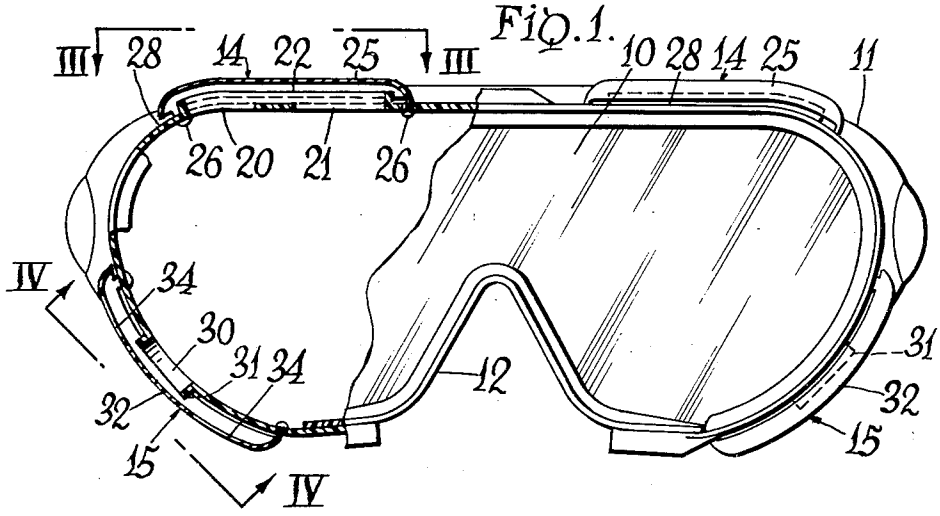



Fig. 2.

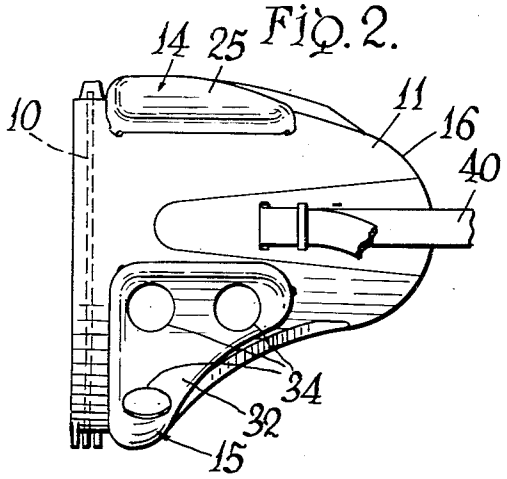



Fig. 3.

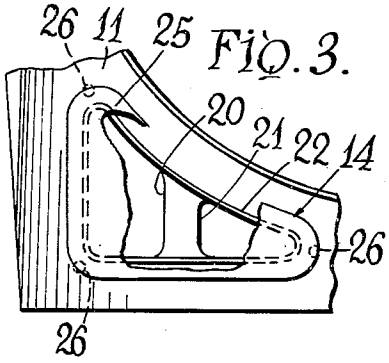



Fig. 4.

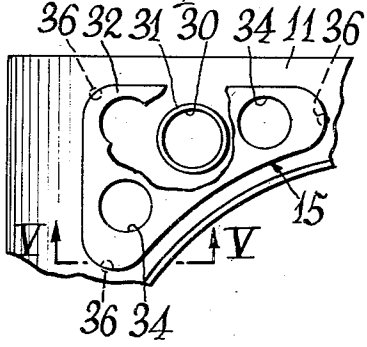
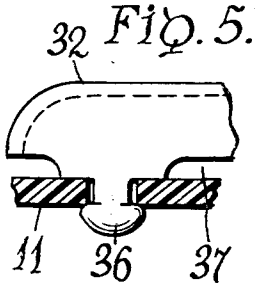



Fig. 5.




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# 3,000,011
# SAFETY GOGGLE

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Filed July 26, 1957, Ser. No. 674,386
2 Claims. (Cl. 2—14)

This invention relates to goggles of the type designed to protect the eyes of the wearer against dust, dirt and other foreign matter, such goggles being used particularly by industrial workers of various kinds such as in welding, grinding and similar occupations where flying particles present an eye-safety hazard.

A fairly common type of safety goggle of this general class comprises a continuous generally oblong lens member and a frame or support member which fits about the periphery of the lens member and is secured thereto or interlocked therewith. The frame or support member extends rearwardly from the lens member, and its rear edge is contoured to fit against the face of the wearer, particularly against the forehead, the cheekbone and the nose portions of the face. Thus the lens member is supported in a position substantially forwardly of the eyes of the wearer and the frame is generally of sufficient extent to be worn over ordinary eye glasses without interference.

It is common practice in goggles of this general type to provide multiple perforations in the frame portion of the goggles for ventilation of the interior thereof. In prior art goggles a great number of very small perforations are generally employed for such ventilation, their arrangement being virtually screen-like, in order to retard, to some extent, the admission of particles therethrough. This arrangement provides only a limited passage of ventilating air and only partially retards entry of foreign matter. Also since the frame members of these goggles are usually of molded plastic material, the numerous fine perforations greatly complicate the manufacture of the molds and the molding operation.

The present invention provides a goggle frame ventilating arrangement whereby the ventilation may be accomplished with relatively few openings, the individual openings being of considerable area. This is accomplished, according to the present invention and speaking generally, by providing readily attachable shield members over the ventilating openings in such manner as to bar the passage of solid or liquid matter without substantially interfering with the free passage of ventilating air. In prior art ventilating perforating arrangements there has been substantially no impedance to the admission of harmful or noxious liquids such as acid solutions and the like. In the arrangement of the present invention special means are provided to prevent entry of liquids to the interior of the goggles while permitting ample and adequate ventilating air flow.

Various modifications and mechanical advantages may be made in the goggles illustrated and described herein without departing from the principles of the present invention. It is to be understood that the embodiment thus illustrated and described in detail is set forth by way of example and that the principles of the invention are not limited thereto or otherwise than as defined in the appended claims.

In the drawings:

FIG. 1 is a general front elevational view of an assembled goggle constructed according to one form of the present invention, with portions thereof broken away for added illustration;

FIG. 2 is a side elevational view of the goggle of FIG. 1;



FIG. 3 is a fragmentary top plan view of the portion of the goggle indicated by the line III—III of FIG. 1, a portion thereof being broken away for further illustration;

FIG. 4 is a fragmentary view taken as indicated by the line IV—IV of FIG. 1, likewise with a portion thereof broken away for further illustration; and

FIG. 5 is a fragmentary cross-sectional view on the line V—V of FIG. 4.

The ventilating construction and principles of the present invention are applicable to various forms of goggles of the general type contemplated herein. By way of example, the form of goggle shown in the drawing is that which is illustrated and described in greater detail in our copending patent application, Serial No. 674,456 filed July 26, 1957, now Patent No. 2,914,770, granted December 1, 1959, wherein a front lens member is provided with a two-piece frame assembly which includes a separate framing member for the nose portion of the goggles. The principles are, however, equally applicable to known types of goggles wherein the frame member comprises a continuous endless loop engaged about a lens member and are also equally applicable to goggles of the type shown in Patent No. 2,422,534 wherein the frame member extends about the lens member from one side of the nose space to the other, without bridging such nose space.

Like characters of reference denote like parts in the several figures of the drawing and, referring more particularly to FIG. 1, a lens member **10** of transparent, relatively stiff, plastic or other material is horizontally oblong to cover both of the eyes of the wearer and is notched at its lower central portion to accommodate the wearer's nose, all as shown in FIG. 1 and as is generally known in the art. A main frame member **11** extends across the top and sides of the lens member **10** and terminates generally at the lower part of the lens member at opposite sides of the nose notch thereof.

In the goggles illustrated herein by way of example the main frame member **11** is supplemented by a nose portion frame member **12**. The manner in which these frame members are assembled with lens member **10** and with each other is set forth in detail in the aforesaid contemporaneous patent application and need not be further elaborated herein. For present purposes the frame members may be regarded as one.

In the form of the invention set forth herein by way of example two upper ventilating portions are provided, these being designated generally by the numeral **14**, and two lower ventilating portions are designated generally by the numeral **15**. As appears from FIG. 2, and as is well known in the art the rear edge of frame member **11** is contoured as at **16** to fit against the face of the wearer and the general depth of the frame member **11** from the lens member **10** rearwardly is such as to accommodate the ventilating portions **14** and **15**, although the irregular depth of the frame member **11** dictates the generally triangular shape of the ventilating portions, as illustrated in the drawings and as will appear from the ensuing description.

Reference will first be had to the upper ventilating portions **14**, the left-hand one of which, as viewed in FIG. 1, is illustrated in further detail in FIG. 3. A pair of openings **20** and **21** are formed in the wall of main frame member **11** and jointly form approximately a triangle. An outwardly directed flange **22** surrounds the openings **20** and **21** to provide a dam or barrier against flow of moisture into the openings **20** and **21**.

A cover or shield member **25** overlies the openings **20** and **21** and is generally of dished or inverted cup shape. The depending flanges of shield **25** are provided with several headed pintles **26**, in the present instance three in

number, which are resiliently pressed through openings formed in frame member **11**. The major marginal portions of the shield member **25** are cut back from the pintle forming portions to form slots **28** through which ventilating air may pass, such air being further free to pass over the flange **22** and through the openings **20** and **21** to the interior of the goggles. The readily attachable and separable nature of the shields **22** facilitates manufacture and renders the same readily applicable to or removable from the frame member **11** so that they may be employed only when and as desired.

One of the lower ventilating portions **15** is shown in detail in FIG. 4. An opening **30** in the frame member **11** is surrounded by a flange **31** and a dished or shallow cup-shaped shield member **32** overlies the opening **30**. In this instance the face portion of shield member **32** is provided with a plurality of openings **34** which provide air ingress and which also permit ready draining from the shield member of any moisture which may enter the same from the exterior, so that such moisture will not pass through the opening **30** into the interior of the goggles.

The flange portions of each shield **32** are provided with pintle formations **36** and one such pintle formation **36** is shown passing through a registering opening in the frame member **11** in FIG. 5. FIG. 5 also illustrates the recessed edges of the shield member which provide access of air to the interior of the shield member as at **37**, although these recessed edges, which are essential in the upper shield members **25**, may actually be dispensed with in the case of the lower shield members **32**, in which case air may enter only through the openings **34** in the shield member.

A conventional adjustable head band for the goggles is indicated at **40** in FIG. 2.



We claim:

1. In a safety goggle, a lens member, frame means about the marginal portion of the lens member and extending rearwardly substantially to the wearer's face, said frame member forming an enclosing wall between the lens member and the wearer's face, and ventilating means comprising an opening in such enclosing wall and a convex shield disposed over said opening but spaced outwardly therefrom, an outward flange on said enclosing wall surrounding said opening and projecting into the space within said convex shield, said shield having an opening therein out of registry with the enclosing wall opening and its surounding flange to provide an indirect ventilating air passage from the surrounding atmosphere to the space enclosed within the goggle.

2. In a safety goggle, a lens member, frame means about the marginal portion of the lens member and extending rearwardly to form an enclosing wall between the lens member and the wearer's face, and ventilating means comprising an opening in such enclosing wall and a convex shield disposed over said opening but spaced outwardly therefrom, an outward flange on said enclosing wall surrounding said opening and projecting into the space within said convex shield, said shield being detachably secured to the enclosing wall at its margin and a portion of said margin being spaced from said enclosing wall to provide an indirect air ventilating passage from the surrounding atmosphere to the space within the goggle.

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