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VENTED FACE SHIELD FOR WELDERS

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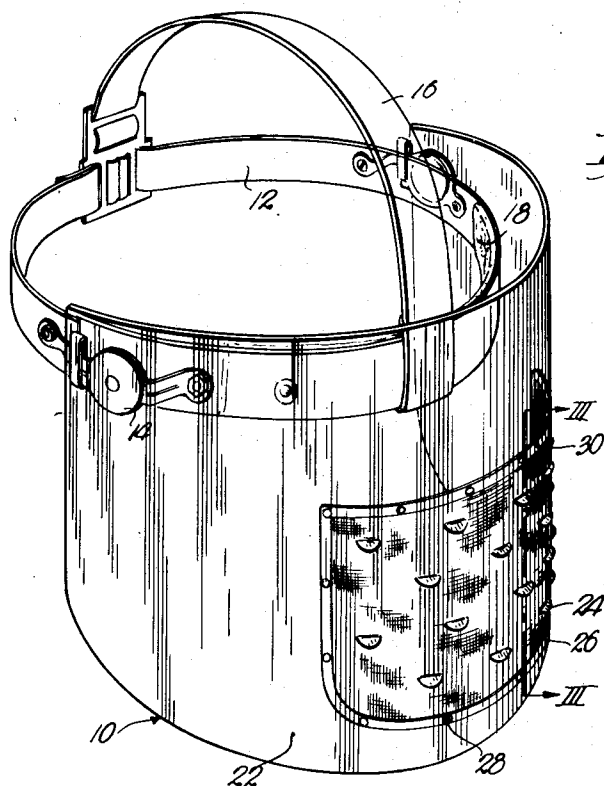


Fig. 1.

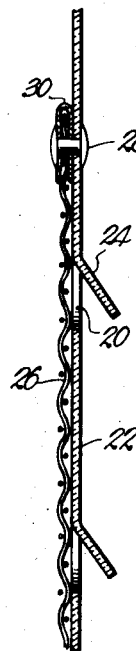


Fig. 3.

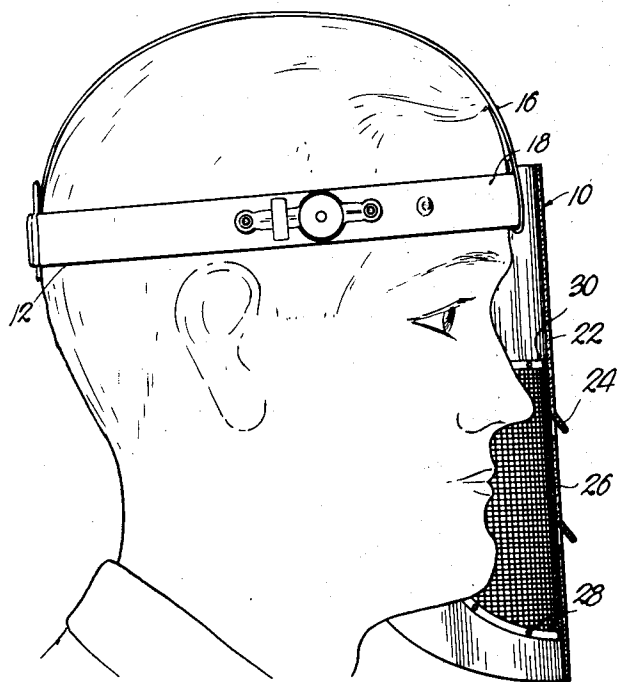


Fig. 2.

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VENTED FACE SHIELD FOR WELDERS

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5 Claims. (Cl. 2—8)

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This invention relates to face protectors, particularly those commonly employed by welders, and has for its primary object the provision of structure in the nature of a transparent shield, together with means for ventilating the shield thereby preventing steaming and obstruction of view.

Another important object hereof is to provide a ventilated shield for welders and the like capable of protecting the face and including means in the nature of a foraminous panel secured directly to the shield to prevent flying objects from striking the face of the wearer by virtue of the means employed herein for ventilating the shield.

A still further object hereof is to provide a ventilated shield having the aforesaid screen or screen-like protecting means, together with a plurality of louvers in overlying relationship to openings in the shield for rendering the entire device steamproof, and at the same time avoid direct entrance of dust and other material to the nose and mouth of the wearer, as well as flying objects that might otherwise strike and injure the face of the wearer by gaining entrance through the vent openings.

A further object of this invention relates to the way in which the entire assembly above mentioned for ventilating the shield and protecting the face of the wearer is so disposed as to maintain full view and clear vision for the user.

This is a continuation-in-part of my co-pending application, Serial No. 701,637, filed October 7, 1946, now Patent Serial No. 2,594,335 and entitled "Hinged Structure."

In the drawing:

Figure 1 is a perspective view of a vented face shield for welders made pursuant to my present invention.

Fig. 2 is a side elevational view thereof showing the same as worn by a welder, the shield being in section; and

Fig. 3 is an enlarged, fragmentary, cross-sectional view taken on line III—III of Fig. 1.

As shown and described in my aforementioned copending application, the protector hereof, commonly employed by welders, includes an elongated, longitudinally arcuate, substantially semi-cylindrical, transparent shield broadly designated by the numeral 10. Shield 10 is adjustably secured to an adjustable headband 12 through means of hinge structure 14 as fully described and covered by allowed claims in my co-pending application and the same need not be further described herein.

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An adjustable headstrap 16, together with a forehead band 18, are also included as a means for mounting the protector in the manner illustrated in Fig. 2 and to assure comfort on the part of the wearer. As might be expected when shields 10 of the character illustrated in Figs. 1 and 2 of the drawing, are placed in use in covering relationship to the face of the wearer, the same oftentimes become steamed as the user breathes upon the innermost face thereof, obstructing view and thereby creating a possible dangerous situation. It is necessary therefore, to provide a plurality of vent openings 20 in a portion 22 of the shield 10.

Portion 22 constitutes only that part of the shield 10 aligned with the nose and mouth of the wearer, but does not include that part of the shield 10 below the uppermost longitudinal edge thereof in alignment with the eyes of the wearer. Likewise, a substantial portion of the shield 10 extending rearwardly into covering relationship to the cheeks, ears and neck of the wearer, is devoid of openings 20. The openings 20 are preferably created by stamping a plurality of louvers 24 therefrom and bending the louvers 24 outwardly so that the same incline downwardly and outwardly from the outermost face of the shield 10 as is shown most clearly in Fig. 3 of the drawing. Accordingly, the louvers 24 and the openings 20 have the same semi-circular configuration and are of substantially the same size. The louvers 24 integral with the shield 10, overlie each corresponding opening 20 and are preferably staggered as shown in Figs. 1 and 2.

This construction provides adequate ventilation to avoid the steaming of the innermost face of shield 10, and the louvers 24 tend to deflect dust and dirt and many flying objects, keeping the same from contact with the face of the user through openings 20. It has been found however, that notwithstanding the louvers 24, many flying objects still enter the vent openings 20, irritating the face of the welder and oftentimes causing substantial and painful injury. There is therefore, provided means to cooperate with the louvers 24 in avoiding such hazard, taking the form of a foraminous panel 26 having substantially the same size and shape as the portion 22 of the shield 10 and disposed on the innermost face of the shield 10 in covering relationship to all of the openings 20.

The foraminous panel 26 may be made from any suitable material such as wire screen and should be affixed directly and rigidly to the innermost face of the shield 10 as by use of a plu-

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ality of marginal rivets 28 or other fastening instrumentalities.

The face of the welder should be further protected against the frayed, sharp edges of the foraminous panel 26 by a facing 30 so that is rebent upon itself in embracing relationship to the marginal edges of panel 26 as shown in Fig. 3, and held in place together with the panel 26 by the rivets or other fastening elements 28. In this connection, it is of extreme advantage to make the facing 30 from a transparent material, to the end that the wearer is confronted with little obstruction to full view of his work. The foraminous panel 26 has no adverse effect upon the free ventilation of the shield 10 and adequately deflects flying particles that might otherwise pass through the openings 20 and cause great injury to the welder.

A further advantage of utilizing a panel such as at 26 to accomplish the desired results hereof lies in the fact that the same is sufficiently flexible to conform to the contour of the shield 10 and will in no other way detract from the normal functions of such protecting shield.

Having thus described the invention what is claimed as new and desired to be secured by Letters Patent is:

1. In a face protector, the combination of an elongated, longitudinally arcuate shield of transparent material having a plurality of vent openings therein; a foraminous panel mounted on the normally innermost face of the shield covering said openings; and an outwardly and downwardly extending deflecting louver for each opening respectively on the normally outermost face of the shield.

2. In a face protector, the combination of an elongated, longitudinally arcuate shield of transparent material having a plurality of vent openings therein; an outwardly and downwardly ex-

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tending deflecting louver for each opening respectively of the normally outermost face of the shield; and a foraminous panel mounted on the normally innermost face of the shield covering said openings, said shield having a normally uppermost, longitudinal edge, said panel being spaced from said edge, presenting an unobstructed shield portion in alignment with the eyes of a user when the protector is worn on the head of said user.

3. In a face protector, the combination of a substantially semi-cylindrical, transparent shield having a portion normally aligned with the nose and mouth of a wearer; a plurality of outwardly and downwardly extending louvers on the normally outermost face of said shield, integral with the shield and disposed solely within said portion thereof, presenting a vent opening in said portion of the shield beneath each louver respectively, corresponding in shape and size therewith; and a screen secured to said portion only of the shield on the normally innermost face thereof in covering relationship to said openings.

4. In a face protector as set forth in claim 3, wherein said louvers are semi-circular and have their curved edges extending outwardly and downwardly from the shield.

5. In a face protector as set forth in claim 3, wherein there is provided a smooth, transparent facing covering the peripheral and marginal edges of the screen.

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References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
860,322	Paroubek	July 16, 1907
1,184,785	Stern	May 30, 1916
2,067,026	Schwartz	Jan. 5, 1937