Dec. 13, 1932. E. SCHERZ 1,890,865

EYESHIELD

Filed June 30, 1931

Fig. 1.



Fig. 3.

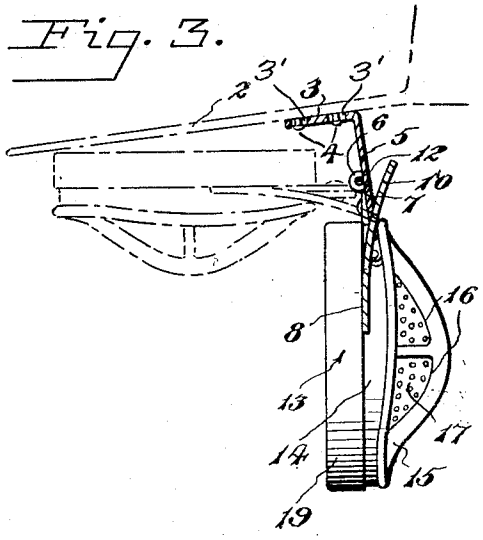


Fig. 2.

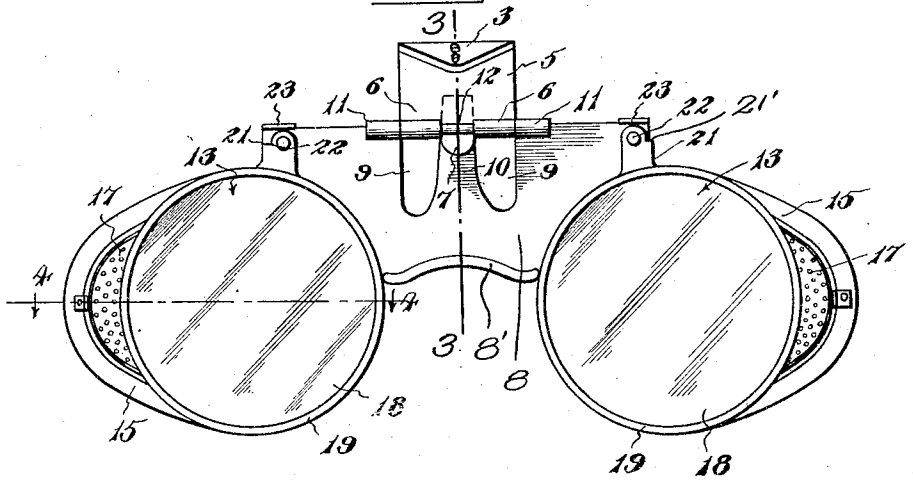
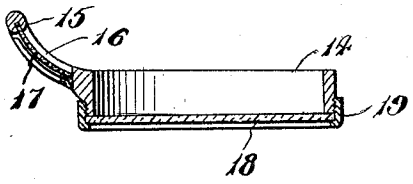


Fig. 4.



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UNITED STATES PATENT OFFICE

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EYESHIELD

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This invention relates to apparel and more particularly to an eye shield intended to be worn by miners and others who are liable to have their eyes injured when working.

One object of the invention is to provide an eye shield which may be attached to the visor of a cap or brim of a hat and may be very easily moved from a depending operative position in front of a person's eyes to an elevated or inoperative position in which the shield will extend in substantially a horizontal position beneath the visor of a hat.

Another object of the invention is to so construct the shield that while it may be very easily moved from a depending position for use to a raised position or from a raised position to a depending position, movement in either direction will be yieldably resisted and therefore the shield prevented from accidentally moving out of an adjusted position and particularly prevented from swinging downwardly in front of a person's face after being swung upwardly to an inoperative position.

Another object of the invention is to provide the shield with guards or eye protecting elements which resemble portions of a pair of goggles such as used by aviators, automobile drivers and others who travel upon fast moving vehicles, and to so mount the guards that after the shield has been swung upwardly to an inoperative position, the guards may be moved away from each other where they will be out of the way and not interfere with a person's sight.

Another object of the invention is to so mount the guards that when the shield is swung downwardly to a position for use, the guards may move easily towards each other into proper position in front of a person's eyes.

Another object of the invention is to so construct the shield that it may be easily applied to a hat or cap of a conventional construction and easily removed from a hat for transfer to another.

The invention is illustrated in the accompanying drawing wherein:

Figure 1 is a perspective view showing the improved shield applied to a person's hat, the shield being shown in a raised or inoperative position in full lines and its operative position being indicated by dotted lines.

Figure 2 is a view showing the improved shield in front elevation.

Figure 3 is a vertical sectional view taken on the line 3—3 of Figure 2.

Figure 4 is a sectional view through one of the eye guards of the shield taken along the line 4—4 of Figure 2.

The hat indicated in general by the numeral 1 is of the type worn by miners and is provided with the usual visor 2 which projects forwardly from the crown of the hat. The improved shield is disposed beneath the visor and is so constructed that it may be swung from an operative position in front of a person's eyes to a raised or inoperative position in which latter position it extends in substantially a horizontal plane beneath the visor.

A bracket 3 forming part of the shield is slidably secured against the underface of the visor by bolts or equivalent fasteners 4 passed through the visor and through slots 3′ formed longitudinally in the bracket. The bracket is bent intermediate its ends to form a depending portion 5 which extends downwardly from the visor as clearly shown in Figure 3 and at its lower end is formed with hinge ears 6 between which is located a tongue 7 extending downwardly below the hinge ears. This bracket is formed of stiff metal and therefore the depending tongue 7 cannot be bent out of its proper shape. Since the bolts 4 engage through slots in the bracket, the shield may be adjusted towards and away from a person's face and assume a comfortable position when in use.

A mounting or plate 8 preferably formed of resilient sheet metal and having its lower edge curved and padded as shown at 8′ extends transversely of the attaching bracket and has its intermediate portion slotted from its upper edge as shown at 9 thereby forming a tongue 10 which has its upper end projecting upwardly a sufficient distance to extend back of the attaching bracket in overlapping relation to the tongue 7. Hinge ears 11 are formed at the upper edge of the mount-

ing plate at opposite sides of the slots 9 and a pin 12 is passed through the ears 6 and 11 in order to pivotally connect the mounting plate with the attaching bracket. Since the tongue 7 extends in overlapping relation to the tongue 10, the resilient tongue serves as means to yieldably resist swinging movement of the mounting plate from a depending vertical position to a raised substantially horizontal position or from the raised position to a depending position. Therefore movement of the plate from one position to the other will be yieldably resisted and the shield prevented from accidentally moving out of an adjusted position.

At opposite sides or ends of the mounting plate are disposed guards 13 which are somewhat similar in construction to portions of a pair of goggles such as worn by aviators. Each of the guards has a frame 14 which is open at its front and rear and is circular in shape for the greater portion of its depth, but has its outer side portion extended outwardly as shown at 15 to form an extended side portion. Since the outer side portion is extended as shown in Figures 2, 3 and 4, the frame may fit closely against a person's eyes in front thereof, and also extended rearwardly to protect the eyes from the sides as shown in Figure 1.

The outer side portions of the frames are cut out as shown at 16 and carry perforated plates 17 thereby forming openings through which air may pass and ventilate the shield so that vapor will not condense upon the inner faces of lenses 18 and coal dust or other fine material prevented from entering a person's eyes. The lenses are preferably formed of transparent non-shatterable material and each is secured against the outer end of its frame by a rim 19 which is threaded into place so that it may be easily removed. It will be understood that if so desired the lenses may be removed and wire screen used in place of them. By this arrangement air will be permitted to circulate freely through the guards but particles of coal and other fine material will be prevented from striking a person's eyes.

Against the upper portion of each frame 14 extends an ear 21 and these ears are pivotally connected with the mounting plate 8 by fasteners 22 which may be rivets or bolts. Spring washers may be provided upon the fasteners to prevent the ears from working loose. By this arrangement the guards may be swung away from each other after the plate has been moved upwardly to the raised position thereby disposing the guards in such spaced relation to each other that they will be out of a person's line of sight when the shield is not in use and prevented from interfering with a person's view. Tongues 23 which project forwardly from the upper edge of the mounting plate above the fasteners 22 serve as abutments adapted to be engaged by shoulders 21′ on the ears 21 when the guards are moved away from each other and limit their movement in this direction. It should be noted that the lower edge of the mounting plate is curved longitudinally as shown in Figure 1, thereby causing the plate to taper in both directions from its center towards its ends or sides and permitting the guards to be moved towards each other and disposed in proper relation to a person's eyes as shown in Figure 2 and indicated by dotted lines in Figure 1.

When this device is in use it is applied to the visor of a cap or brim of a hat with the bracket 3 releasably secured by bolts so that it can be detached and transferred to another hat or cap. The mounting plate extends downwardly from the attaching bracket and the guards are disposed in front of a person's eyes with the extended portions 15 of their frames projecting rearwardly at the sides of the eyes in order to prevent particles of material from passing inwardly back of the guards at their sides and lodging in a person's eyes. When the shield is not needed, it is merely necessary to press the guards forwardly and this will cause the mounting plate to swing upwardly to a horizontal position beneath the visor of the hat where it will be held by engagement of the resilient tongue 10 with the rigid tongue 7. The guards may then be swung away from each other and disposed in such spaced relation to each other that they will be out of the line of a person's eyes and they will not interfere with his vision. When the shield is needed it is merely necessary to press downwardly upon the guards and the mounting plate will be swung downwardly to the position shown in Figure 2 and by full lines in Figure 3. The weight of the guards and the fact that their rear portions will engage the underface of the visor as the plate is swung downwardly will cause these guards to swing downwardly towards each other as the plate moves towards a depending position. Therefore the guards will move into their proper positions in front of a person's eyes when the plate is swung downwardly towards an operative position. It will thus be seen that the shield may be easily and quickly moved from a raised or inoperative position to a depending position in front of a person's eyes.

What is claimed is:

1. In combination with a hat having a visor at its front, a bracket carried by the visor, a mounting pivoted to said bracket for swinging movement from a depending vertical position to a raised horizontal position, means being provided to yieldably resist movement of said mounting from one position to the other, and shields pivoted to said mounting and movable in the plane of the mounting to adjusted positions.

2. In combination with a hat having a visor at its front, a pair of eye shields beneath the visor movable vertically from a depending position for use to a raised position beneath the visor and movable with respect to the visor towards and away from each other.

3. An eye shield comprising a bracket adapted to be secured to a hat visor with a portion extending downwardly therefrom, a mounting pivoted to the depending portion of said bracket for swinging movement from a depending position to a raised position, and eye guards carried by said mounting at opposite sides thereof and movable in the plane of the mounting to adjusted positions.

4. An eye shield comprising a bracket adapted to be secured to a hat visor with a portion extending downwardly therefrom, a mounting pivoted to the depending portion of said bracket for swinging movement from a depending position to a raised position, and eye guards pivotally connected with the mounting at opposite sides thereof and movable in the plane of the mounting towards and away from each other.

5. An eye shield comprising a bracket adapted to be secured to a hat visor with a portion extending downwardly therefrom, a mounting pivoted to the depending portion of said bracket for swinging movement from a depending position to a raised position, the mounting and bracket being provided with tongues extending in overlapping relation to each other and being resilient and yieldably resisting movement of the mounting out of an adjusted position, and eye guards carried by said mounting and movable in a plane parallel to the mounting.

In testimony whereof I affix my signature.

EMIL SCHERZ. [L. S.]