Sept. 6, 1932. G. R. HANNAN ET AL 1,876,225

GLARE SHIELD

Filed May 22, 1931

Fig. 1.

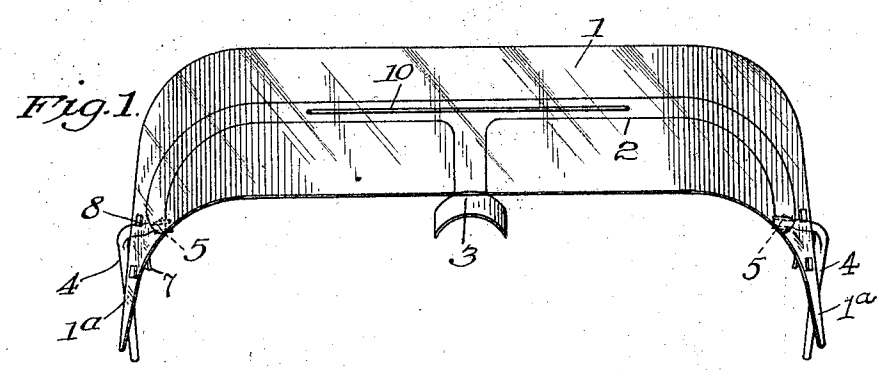


Fig. 2.

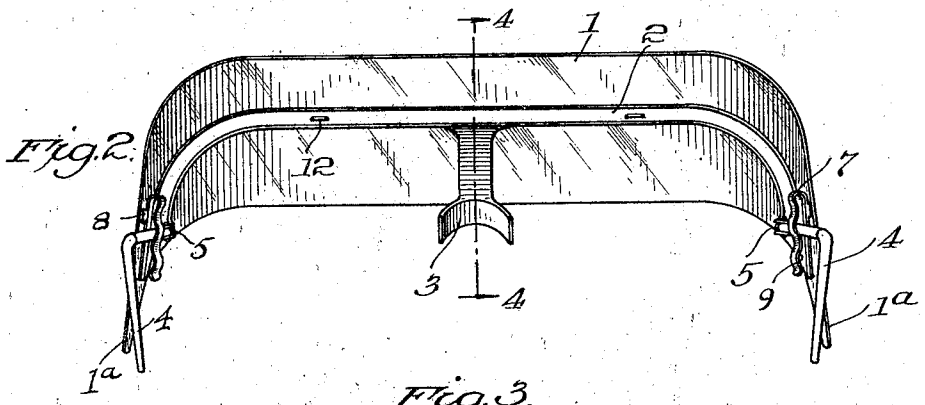


Fig. 3.

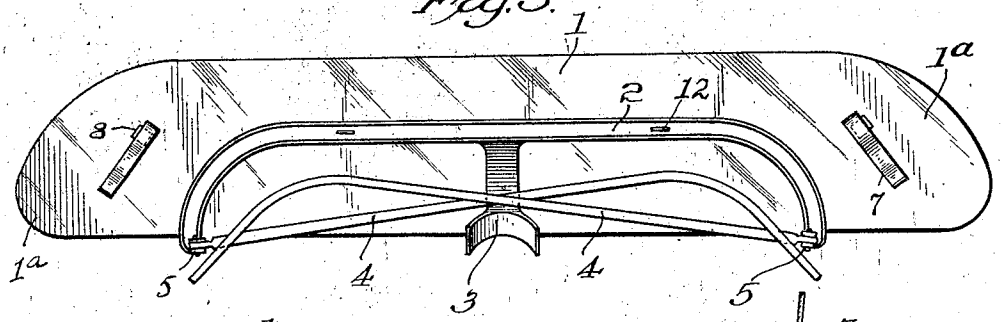


Fig. 4.

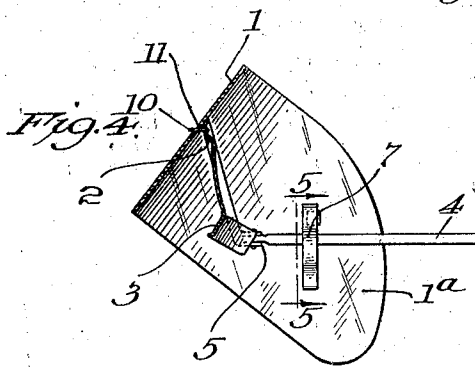
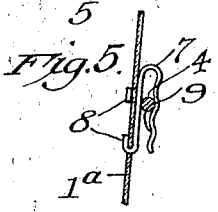


Fig. 5.



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UNITED STATES PATENT OFFICE

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GLARE SHIELD

Application filed May 22, 1931. Serial No. 539,250.

This invention is a glare shield, and has for its object to adapt a shield element for flat positioning against a folded supporting frame when not in use, or operative projection forwardly and downwardly in front of the unfolded frame so as to provide a glare shield for the eyes of the wearer, with the shield element preferably held against complete disengagement from the supporting frame when in either operative or inoperative position so as to provide a device which may be readily operatively positioned or as conveniently folded into a compact unitary structure which may be carried in the pocket.

It is a further object of the invention to provide a construction adapted for ready adjustment of the operatively positioned shield element so as to cut-off more or less glare, with the ends of the shield element projecting rearwardly alongside its supporting frame so as cut-off glare from the sides.

Further objects of the invention will be readily understood from the following description of the accompanying drawing, in which:

Fig. 1 is a front elevation of the glare shield in its operative position.

Fig. 2 is a similar rear elevation.

Fig. 3 is a rear elevation of the glare shield in its inoperative position.

Fig. 4 is a vertical section on the line 4—4 of Fig. 2.

Fig. 5 is a vertical section on the line 5—5 of Fig. 4.

As shown in the drawing a shield element 1 is mounted on a bowed supporting frame 2 which is adapted to extend across the face of the wearer so as to form a transverse support above the eyes, with the supporting frame preferably having a medially depending nose-piece 3 and end ear-pieces 4 hinged to the bowed frame as shown at 5, so that the supporting frame may be unfolded for use as shown in Figs. 1 and 2, with the nose piece adapted to rest upon the nose of the wearer and the ear-pieces extending rearwardly and adapted to hook over the ears, or the supporting frame may be folded as shown in Fig. 3, with the ear-pieces in crossed relation and lying flat against frame 2.

The shield element 1 is an elongated resiliently flexible strip of material adapted to intercept glare, suitably tinted celluloid for example, and is so positioned as to extend across the front of frame 2 with its medial portion supported on the frame and its ends 1^a adapted to lie in the plane of the medial portion of the strip when the shield is not in use as shown in Fig. 3, and adapted to be curved rearwardly and tilted downwardly beyond the ends of frame 2 and alongside ear-pieces 4 when the shield is in operative position as shown in Figs. 1 and 2. The rearwardly curved and downwardly tilted ends 1^a are adapted to releasably engage ear-pieces 4 so as to tilt the medial portion of the shield with relation to frame 2 as shown in Fig. 4, thereby projecting the medial portion of the shield downwardly and outwardly from the supporting frame and thus providing a glare shield in front of the eyes and at the same time protecting the eyes against glare from the sides by means of the rearwardly curved ends of the shield; and when the ends 1^a are disengaged from the ear-pieces 4, the inherent resiliency of the flexible shield returns its ends to the plane of its medial portion so that the entire shield lies in one flat plane, and the shield may then be tilted with relation to frame 2 so that it lies flat against the front of the frame as shown in Fig. 3.

For this purpose spring clips may be mounted on the ends of the shield and are adapted to releasably engage the ear-pieces 4; and the medial portion of the shield is preferably hinged to frame 2 so that the shield may be readily tilted to either its operative or inoperative position while held against complete disengagement from the supporting frame. The spring clips preferably provide for vertical adjustment of shield ends 1^a with relation to ear-pieces 4 so as to adjust the angular position of the shield, and the pivotal connection between the shield and frame preferably provides for such play as will prevent binding when the shield is tilted to either operative or inoperative position.

As an instance of this arrangement the spring clips may comprise inverted U-clips

7 mounted upon the inner surfaces of shield ends 1ª and held in place by tongues 8 reversely bent from the clips and extending through the shield ends and clamped thereagainst as shown in Fig. 5, with the U-clips each forming a plurality of vertically spaced engaging notches 9, any one of which is adapted to frictionally releasably engage the cooperating ear-piece 4. The pivotal connection between the shield and its supporting frame preferably comprises a wire 10 overlying the outer surface of the medial portion of the shield in alinement with frame 2, but spaced outwardly from the frame by rearwardly bending the ends of the wire as shown at 11, with said wire ends projecting through the shield and its supporting frame and fixed to the latter as shown at 12. The openings in the shield through which the wire ends project are of a size adapting the shield for tilting movement without binding, and by spacing the wire 10 outwardly from frame 2, the shield is free for such play at its pivotal mounting as will prevent it binding against the supporting frame.

It will thus be seen that when the glare shield is not in use, it may be readily folded and carried as a compact unitary structure by simply disengaging clips 7 from ear-pieces 4 so that the ends 1ª of the shield are free to return to the plane of its medial portion, and the ear-pieces 4 may be folded across the inner surface of the supporting frame. The flat shield element is then readily tilted downwardly so as to lie flat against the outer surface of the folded supporting frame, but is held by wire 10 against complete disengagement from the frame.

When the glare shield is to be used, ear-pieces 4 are swung rearwardly to operative position and the shield ends 1ª are curved rearwardly around the ends of frame 2 and are then tilted downwardly so as to hook the clips 7 over the ear-pieces, thereby tilting the medial portion of the shield outwardly and downwardly in front of its supporting frame; and by vertically adjusting the engagement between the clips and ear-pieces the angular position of the medial portion of the shield may be readily adjusted, with the wire 10 holding the shield snugly against the frame along the line of supporting contact and thereby preventing outward bulging of the medial portion of the shield. It will thus be seen that when the shield element is in operative position it is adapted to intercept all glare from above and from the sides, but without obstructing the line of direct vision below the lower edge of the shield.

In order that the shield ends 1ª may be readily rearwardly curved to operative position, the ends of frame 2 which form the hinge connections 5 are preferably twisted inwardly slightly as shown in Figs. 2 and 3 so that the hinge connections do not project laterally outwardly beyond the bowed ends of the frame, and the shield ends are thus adapted to fit snugly against the bowed frame ends without striking the hinge connections; and in order to provide an extremely compact structure when the glare shield is folded, the hinge connections 5 are preferably twisted so that when ear-pieces 4 are folded they do not lie parallel but slant upwardly so as to cross one another at an appreciable angle as shown in Fig. 3, thereby positioning substantially the entire length of the folded ear-pieces within the area defined by the flat shield element 1, instead of projecting the rear ends of the folded ear-pieces appreciably beyond the area of the flat shield.

We have thus provided a glare shield which may be readily folded or unfolded, and which when in operative position provides an adequate and adjustable shield for the eyes, and which when folded lies substantially flat and forms a compact and unitary structure which may be conveniently carried in the pocket.

We claim:

1. In combination, a supporting frame adapted to extend across the face adjacent the eyes, a shield having its medial portion extending across the front of the frame, a wire extending along the outer surface of the medial portion of the shield with the ends of said wire bent rearwardly and of some appreciable length and projecting through the shield and frame and secured to the frame whereby the medial portion of the shield is held against disengagement from the frame with the wire ends forming a pivotal mounting for the medial portion of the shield and permitting play at the pivotal mounting whereby the shield may be tilted to operative or inoperative position without binding on the frame, the ends of the shield being adapted to lie in the plane of said medial portion of the shield so that the shield may lie flat against the front of the frame when in inoperative position, and said shield ends being adapted to be curved rearwardly around the ends of the frame and tilted downwardly whereby the medial portion of the shield is tilted downwardly and outwardly in front of the frame for operatively positioning the shield, and means for securing the rearwardly curved shield ends to the frame.

2. In combination, a supporting frame adapted to extend across the face adjacent the eyes and having ear-pieces at its ends adapted to engage the ears, hinge connections between the frame and ear-pieces, a shield having its medial portion extending across the front of the frame and supported thereon with the ends of the shield curved rearwardly around the ends of the frame outside the ear-pieces and tilted downwardly

whereby the medial portion of the shield is tilted outwardly and downwardly in front of the frame, and inverted U-clips spaced from the margins of the shield ends and adapted to engage the ear-pieces for releasably securing the rearwardly curved shield ends to the ear-pieces with said shield ends projecting appreciably below the ear-pieces for shielding the eyes against glare from the sides.

3. In combination, a supporting frame adapted to extend across the face adjacent the eyes and having ear-pieces at its ends adapted to engage the ears, hinge connections between the frame and ear-pieces, a shield having its medial portion extending across the front of the frame and supported thereon with the ends of the shield curved rearwardly around the ends of the frame outside the ear-pieces and tilted downwardly whereby the medial portion of the shield is tilted downwardly and outwardly in front of the frame, and inverted U-clips having reversely bent tongues adapted for projection through the shield ends for clamping the U-clips against the surfaces of the shield ends with said U-clips spaced from the margins of the shield ends and adapted to be slipped downwardly over the ear-pieces for releasably securing the rearwardly curved shield ends to the ear-pieces with said shield ends projecting appreciably below the ear-pieces for shielding the eyes against glare from the sides.

4. In combination, a supporting frame adapted to extend across the face adjacent the eyes and having ear-pieces at its ends adapted to engage the ears, hinge connections between the frame and ear-pieces, a shield having its medial portion extending across the front of the frame and supported thereon with the ends of the shield curved rearwardly around the ends of the frame outside the ear-pieces and tilted downwardly whereby the medial portion of the shield is tilted downwardly and outwardly in front of the frame, and clips on the shield ends adapted to engage the ear-pieces for releasably securing the rearwardly curved shield ends to the ear-pieces, the clips having spaced engaging means whereby the releasable engagement between the shield ends and ear-pieces may be adjusted for varying the outward and downward tilt of the medial portion of the shield.

In testimony whereof we have affixed our signatures.

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RUTHERFORD G. GOLDMAN.