E. ALTMAN.

PROTECTOR FOR THE EYES.

APPLICATION FILED MAY 9, 1917.

1,298,636.

Patented Apr. 1, 1919.

2 SHEETS—SHEET 1.

Fig. 1.

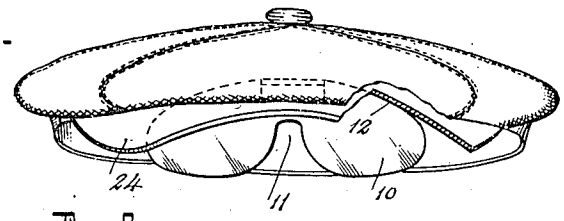


Fig. 2.

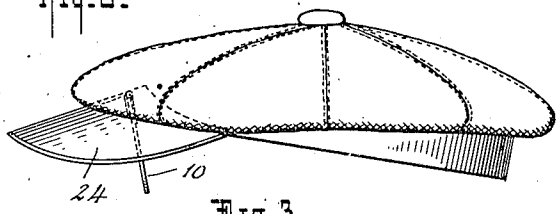


Fig. 3.

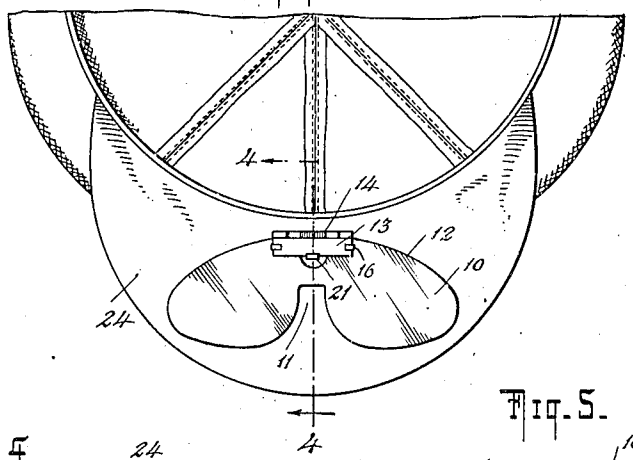


Fig. 4.

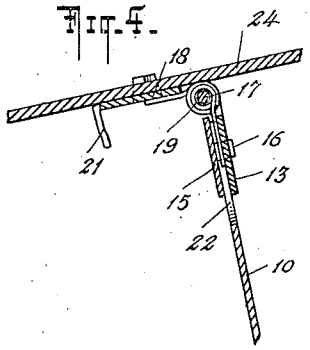


Fig. 5.

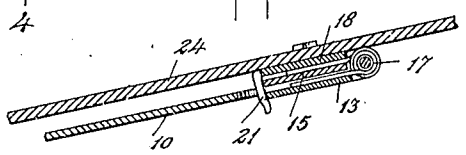
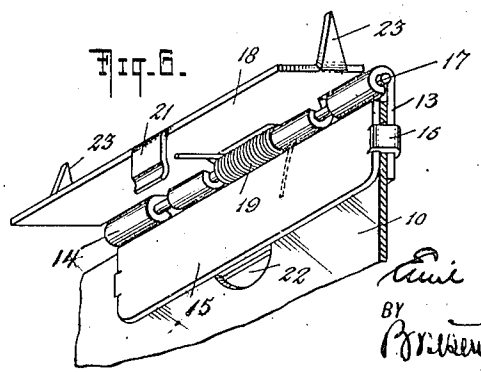


Fig. 6.



WITNESSES

George DuBois

Thos. A. Hellenthal

INVENTOR

Emil Altman

BY

Briesen & Schurck

ATTORNEYS

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2 SHEETS—SHEET 2.

Fig. 7.

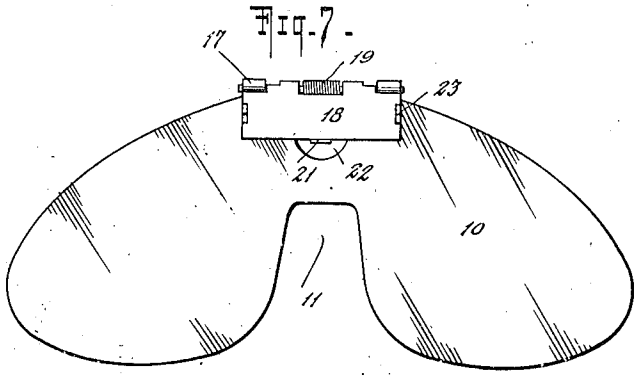


Fig. 8.

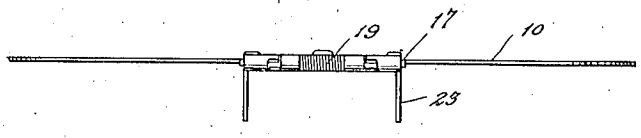


Fig. 9.

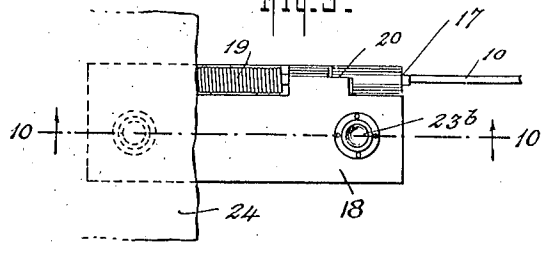


Fig. 10.

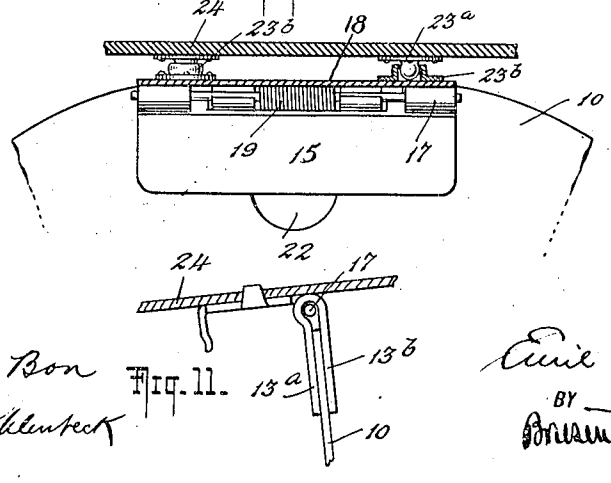


Fig. 11.

WITNESSES

George DuBois

John Ackenbeck

INVENTOR

Emil Altman

BY

Brisen & Perkins

ATTORNEYS

UNITED STATES PATENT OFFICE.

EMIL ALTMAN, OF BROOKLYN, NEW YORK.

PROTECTOR FOR THE EYES.

1,298,636. Specification of Letters Patent. Patented Apr. 1, 1919.

Application filed May 9, 1917. Serial No. 167,436.

To all whom it may concern:

Be it known that I, EMIL ALTMAN, a citizen of the United States, and a resident of the borough of Brooklyn, county of Kings, city and State of New York, have invented certain new and useful Improvements in Protectors for the Eyes, of which the following is a specification.

My invention relates to protectors for the eyes and more particularly to that type thereof commonly known as goggles and has for its object to provide a protector of the kind indicated which may be readily attached to any cap, hat or other head covering. My improvement further contemplates constructing the device in such a manner that the protector, after being attached to the head covering, may be readily folded to an inoperative position when not in use and quickly moved to an operative position when desired. My invention has for a further object to construct a protector in such a manner that it will coöperate with the vizor of a cap to exclude dust and the like from the eyes when said cap is in position on the head. Other objects of my improvement will appear from the description hereinafter and the features of novelty will be pointed out in the appended claims.

In the accompanying drawings I have shown several examples of my invention combined with a cap it being understood that this is only an example for the purposes of illustration and description and that my improved protector may be combined with substantially equal efficiency with other types of head coverings or hats. In said drawings Figure 1 is a front view of a cap, partly broken away, with my protector combined therewith; Fig. 2 is a side elevation of Fig. 1; Fig. 3 is an inverted plan view of the front portion of a cap with my protector attached thereto and occupying an inoperative or folded position; Fig. 4 is an enlarged detail section taken on the line 4—4 of Fig. 3 but showing the protector in its operative position; Fig. 5 is a similar view showing the protector in a folded or inoperative position; Fig. 6 is a perspective view of the hinge; Fig. 7 is a front elevation of the protector itself; Fig. 8 is a plan view thereof; Fig. 9 is a detail view showing another method of attaching my protector to the head covering; Fig. 10 is a detail section on the line 10—10 of Fig. 9; and Fig. 11 is an end view of another form of my improvement.

As shown in the drawings my improvement comprises an eye protector 10 which may be made of celluloid, glass or any other transparent material or constructed in any other desired manner to enable the wearer to see through it. The eye protector 10 is preferably cut out at 11 to fit over the nose of the wearer and is further formed with curved edges 12 for the purpose to be more fully described farther on in the description. The protector 10 is fastened to one member 13 of a hinge 14 in any suitable manner as for instance by means of a plate 15 having prongs 16 which pass through the protector 10 and are bent back upon the member 13; or as shown in Fig. 11 the hinge member 13 may comprise two sections 13^a and 13^b between which the protector 10 is secured. In this latter case friction alone may be relied upon to hold the protector 10 in place between the sections 13^a and 13^b so that said protector is readily detachable thereupon; with this arrangement it is possible to easily and quickly substitute protectors of different colors. In any case the hinge member above referred to whether it comprises a single section 13 or two sections 13^a and 13^b is pivotally connected at 17 with a second hinge member 18; in the preferred construction, a coil spring 19 surrounds the pivot pin 17 and has its opposite ends in engagement with said members 13 and 18. The spring 19 at all times exerts a tension tending to swing the hinge members 13 and 18 to an open position. The hinge members 13 and 18 are preferably each formed with cooperating shoulders 20 which by engagement with each other limit the opening movement of the hinge members, the shoulders 20 in the illustrated example being arranged to arrest said opening movement when the members 13 and 18 are at substantially right angles to each other. Any suitable means may be provided for maintaining the hinge members 13 and 18 in their closed or folded position against the tension of the spring 19; for instance the member 18 may be provided at its front edge with a resilient catch 21 adapted to engage the member 13 and hold it. With this construction the protector 10 is provided with an opening 22 for the accommodation of said catch.

The hinge member 18 is further provided

with means whereby the device may be readily and quickly attached to the cap or other head covering by anyone, without the necessity for any particular skill on the part of the person performing the attaching operation. The character of such fastening means may vary and as shown in Fig. 7 may simply comprise prongs 23 having pointed ends and located at opposite ends or at other suitable points of the hinge member 18. When it is desired to attach the protector to a cap these prongs 23 are simply forced through the vizor 24 at the proper points and then turned over. With this simple operation the combining of the device with the cap is complete it being understood that the device is always attached to the head covering so that in its operative position it will depend in front of the eyes and over the nose of the wearer.

As shown in Figs. 9 and 10 instead of using the prongs 23 the vizor 24 of the cap or the corresponding part of another head covering and the hinge member 18 may be provided with coöperating fastening devices 23^a and 23^b for instance of the glove fastener type. In order to prevent rotation or other displacement of the protection it is preferable to provide two sets of such devices 23^a and 23^b located at a distance from each other and so as to also position the protector in front of the eyes and over the nose of the wearer. To attach the protector to the cap or other head covering the devices 23^b on the hinge member 18 are simply brought into coöperative engagement with the devices 23^a on the vizor 24 of the cap or the corresponding part of another head covering.

In either case the protector may be readily and quickly attached to and completely removed from the cap or other head covering. It is thus possible to sell the head covering and protector together or to sell the protector separately for attachment to any head covering desired.

When in an inoperative position the two hinge members 13 and 18 or their equivalents occupy a folded position with the protector 10 lying in close proximity to the lower surface of the vizor or its equivalent and projecting toward the front as shown in Fig. 5. In this condition of the parts the resilient catch 21 engages the member 13 and thus securely maintains the protector in its inoperative position in which it does not interfere with the vision of the wearer or the manipulation of the cap or other head covering.

To bring the protector to its operative position it is simply necessary to exert a downward pull sufficient to overcome the tension of the catch 21. As soon as the member 13 is free from the catch 21 the spring 19 will swing the member 13 downwardly and with it the protector 10 to the position shown in Fig. 4 in which said protector covers the eyes of the wearer as is clearly shown in Fig. 1. To return the protector to its inoperative position it is simply necessary to swing it and the member 13 upwardly against the tension of the spring 19 until the catch 21 again engages and holds said member 13. Both operations may be easily performed with one hand, while the cap or other head covering is on the head; this is an important advantage for instance in automobile driving as it permits the protector to be adjusted according to the wearer's desires without necessitating the removal of both hands from the steering wheel. The protector may thus be quickly brought to an operative position for instance to neutralize the glare of the headlights on an approaching machine and as quickly returned to an inoperative position when use of the protector is no longer desired. The protector may also be worn continuously in an operative position without discomfort to the wearer. When the protector is in its operative position, the spring 19 maintains it against displacement away from the eyes of the wearer from any cause such as wind pressure and the like; said spring 19 also permits the protector to yield and automatically adjust itself to faces of varying contour.

In practice, when a cap is placed firmly upon the head of a wearer the tension exerted on the vizor tends to curve it transversely; this fact is taken advantage of in the present improvement and the curved edges 12 of the protector 10 are so shaped and proportioned that this transverse curving of the vizor brings it into engagement with said edges 12 when the protector is in its operative position, as shown in Fig. 1. All access to the eyes of the wearer from the front is thus substantially cut off, so that the eyes in addition to being protected from the glare of sunlight or artificial light are also protected against wind, dust and other foreign matter.

My improvement is extremely simple in construction and efficient in operation and may be sold as a separate article adapted for attachment by the purchaser to any type of head covering, or it may be sold in combination with a cap or other form of head covering. In the latter case, the protector may be readily removed at the will of the owner of the cap, hat, or the like. When the device is constructed as shown in Fig. 11 or in any other equivalent manner, it is further possible to readily substitute protectors 10 of different colors, as may be desired.

Various changes in the specific forms shown and described may be made within the scope of the claims without departing from the spirit of my invention.

I claim:

1. A device of the character described comprising a carrier hinge, a transparent eye protector carried by one member of said carrier hinge, prongs on the other member of said carrier hinge whereby said device is attached to a head covering, a spring exerting a tension tending to swing said hinge members to an open position, means for arresting the opening movement of said hinge members at a predetermined point and a resilient catch whereby said carrier hinge is maintained in its folded condition against the tension of said spring.

2. The combination of a cap having a vizor arranged to be transversely flexed under the tension produced by the cap when worn, and an eye protector depending from said vizor and having curved edges out of contact with said vizor in its normal condition and arranged to be engaged by said vizor as it is transversely flexed.

3. A device of the character described comprising a first plate, a second plate pivotally connected therewith, a third plate spaced from and substantially parallel to said second plate, an eye protector extending between said second and third plates so as to be carried thereby, means whereby said second and third plates are positively fixed against separation, and prongs on said first plate adapted to pass through a portion of a head covering, whereby said device is detachably connected with said head covering.

4. A device of the character described comprising a fastener member arranged to be connected with a head covering, a pair of spaced members pivotally connected with said fastening member, an eye protector inserted between said pair of members so as to be carried thereby and devices carried by one member and extending transversely therefrom into engagement with the other member whereby said members and eye protector are operatively combined.

In testimony whereof I have hereunto set my hand.

EMIL ALTMAN.