Aug. 14, 1956 C. A. BARATELLI 2,758,309

EYE PROTECTION DEVICES

Filed March 4, 1953 2 Sheets-Sheet 1

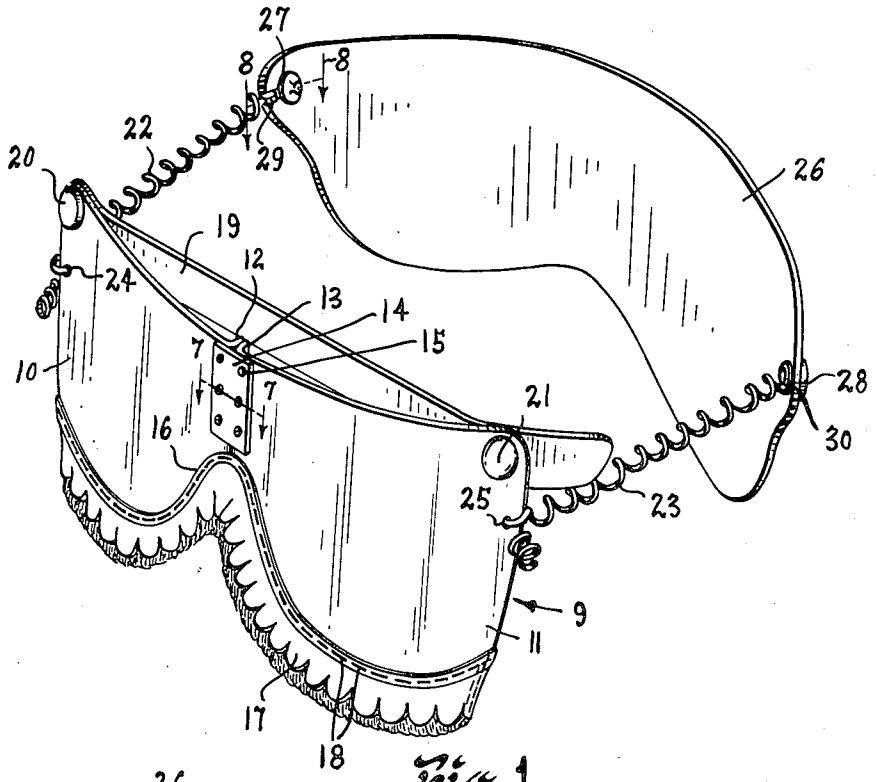


Fig. 1

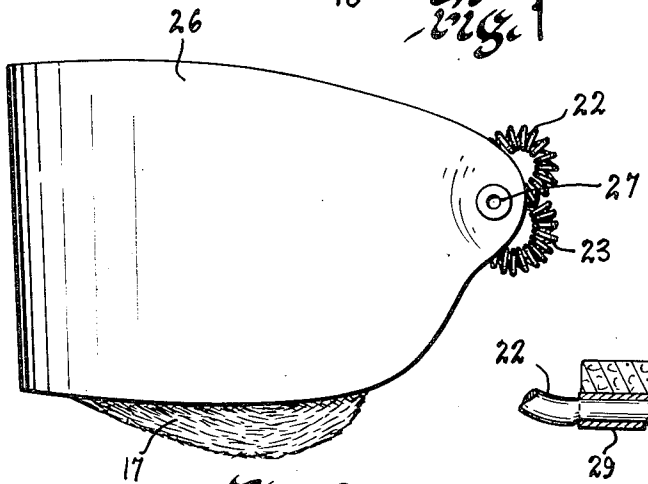


Fig. 2

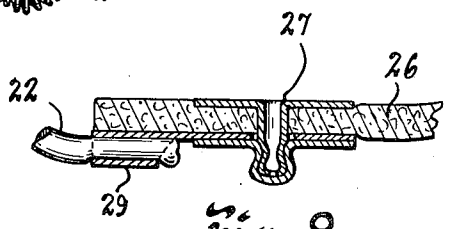


Fig. 8

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EYE PROTECTION DEVICES

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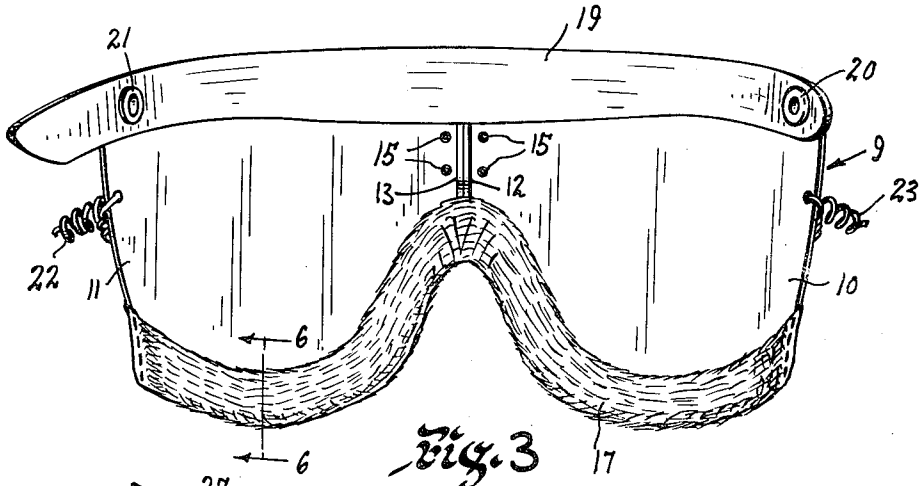


Fig. 3

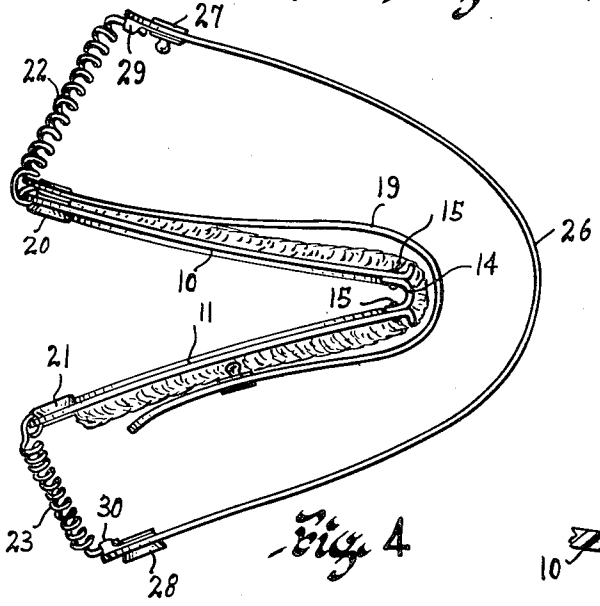


Fig. 4

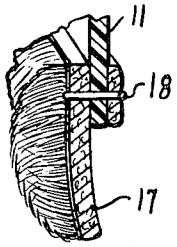


Fig. 6

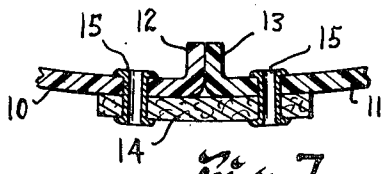


Fig. 7

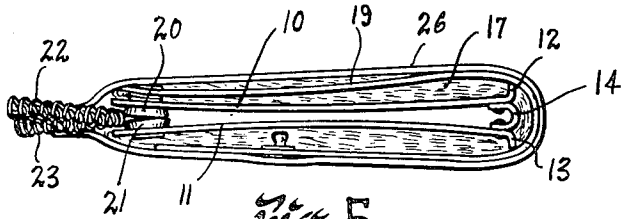


Fig. 5

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EYE PROTECTION DEVICES

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3 Claims. (Cl. 2—14)

This invention relates to improvements in eye protection devices and relates particularly to the provision of a light-weight eye protection device which may be readily folded into a compact, easily conveyable unit when not in use and extended to afford full field vision with maximum protection when in use.

One of the principal objects of the invention is to provide a shield-type eye protection device held in position of use before the eyes by a headband shaped to encircle the head and being so constructed that the parts thereof may be folded into compact relation with each other with a portion of the headband overlying said parts to provide a protective covering therefor when not in use and which, when in use, will be extremely light in weight and comfortable and will afford a relatively wide field of vision with maximum protection whereby the said device is adaptable to many different uses.

Another object is to provide a device of the above character having its parts so shaped and correlated with each other as to comfortably fit the general facial characteristics of most individuals with the main protective shield portion retained in proper spaced relation with the eyes and with the parts so arranged as to afford efficient ventilation.

Other objects and advantages of the invention will become apparent from the following description taken in connection with the accompanying drawings, and it will be apparent that many changes in the details of construction and arrangement of parts may be made without departing from the spirit of the invention as expressed in the accompanying claims. I, therefore, do not wish to be limited to the exact details of construction and arrangement of parts shown and described as the preferred form only has been given by way of illustration.

The device embodying the invention is intended as general utility lightweight and comfortable means for protecting the eyes from dust, sand, grit, etc., and is so constructed that the parts thereof, when the device is not in use, may be folded into compact relation with each other and a portion of the headband normally used in retaining the device in position of use on the face may be positioned in overlying relation with the folded parts to form a protective covering for said parts and to produce a unit which is readily conveyable when not in use.

Referring to the drawings;

Fig. 1 is a front perspective view of the device embodying the invention and showing the parts in extended relation with each other;

Fig. 2 is a side elevational view of the said device showing the parts in folded position;

Fig. 3 is a rear elevational view of the device;

Fig. 4 is a top plan view of the device illustrating how the parts thereof are correlated when the parts of the device are being folded into compact relation with each other;

Fig. 5 is a top plan view of the device showing the parts in compact relation;

Fig. 6 is an enlarged fragmentary sectional view taken as on line 6—6 of Fig. 3 and looking in the direction indicated by the arrows;

Fig. 7 is an enlarged fragmentary sectional view taken as on line 7—7 of Fig. 1 and looking in the direction indicated by the arrows; and

Fig. 8 is an enlarged fragmentary sectional view taken as on line 8—8 of Fig. 1 and looking in the direction indicated by the arrows.

Referring to the drawings wherein like characters of reference designate like parts throughout the several views, the device embodying the invention as shown throughout the various views comprises a main transparent shieldlike member 9 embodying two portions 10 and 11 of relatively thin artificial resinous or other similar material. Each portion is provided with integrally related rearwardly extending lips 12 and 13 on the nasal side thereof folded rearwardly along a substantially straight vertical line so as to permit said lips to relatively intimately engage in side surface relation with each other throughout their length. The said intimately related nasal edges are hingedly connected with each other by a strip of flexible material 14 such as leather or other suitable material which is secured to said sections by spaced rivets, stitchings, or other suitable means 15. The hingedly connected portions 10 and 11 are provided immediately below the hinge strip 14 with a nasal recess 16 to afford clearance for the nose when the shieldlike member 9 is positioned before the eyes. The lower contour edge of the member 9 throughout the lower edges of the portions 10 and 11 and the nasal recess is provided with a cushionlike edging 17 formed of leather, plush-like material or other suitable cushioning means which is secured to the portions by stitchings or other suitable means 18.

Secured to the upper temporal edges of the portions 10 and 11 is a headband 19 of resilient material. The headband is attached adjacent one end thereof to one of said portions by a rivet or the like 20 and adjacent its opposed end to the other of said portions by a snap fastener 21. The length of the headband 19, intermediate its attached ends, is of a length shorter than the normal distance between said rivet and snap fastener means carried by the main shieldlike member 9 so that when attached, as shown in Fig. 1, the said portions 10 and 11 will bow outwardly to assume a curvature to fit the curvature of the face in the vicinity of the eyes. This outward bowing of the portions 10 and 11 is brought about by the engagement of the rearwardly extending lips 12 and 13 which limit the rearward movement of said portions with respect to each other about the hinge strip 14.

Attached to the opposed sides of the portions 10 and 11 is a pair of expandable bandlike members 22 and 23. In this instance the bandlike members are in the form of extendable coil springlike portions of resilient material which are attached adjacent the forward ends thereof by extending said ends through suitable connection openings 24 and 25 formed in said portions 10 and 11. The rear ends of the said members 22 and 23 are secured to a flexible section 26 by clips or other suitable retaining means 29 and 30. The said section 26 is formed of leather, plastic or other suitable means which is self-conforming to fit the rear of the head and functions cooperatively with the bandlike members 22 and 23 to complete the means for retaining the main shieldlike member 9 in position of use before the eyes. The contour of the section 26 is controlled in shape so that when the headband 19 is disconnected from the portion 11 by disengaging the snap fastener means 21 and the portions 10 and 11 are folded in compact superimposed relation with each other, as shown in Fig. 2, 4, and 5, the said section 26 will overlie the outer surfaces of the folded portions. The section 26 is held in said relation by engaging the male and female portions of snap fastener means 27 and 28

carried by said section. This forms a compact unit which is readily conveyable and the section **26** provides protective covering means for the portions of the main transparent shieldlike member **9**, as shown best in Figs. 2 and 5.

Although the bandlike members have been described as coil spring like portions **22** and **23**, it is to be understood that the said portions may be formed of resilient ribbonlike material or other suitable extendable or contractable means. In instances when the resilient portions of the headband is formed of elastic ribbonlike material, it may be made to completely encircle the head with its opposed ends secured to the opposed sides of the main transparent shield **9**. The flexible portion **26** in this instance is secured to that portion of the headband which would normally engage the rear of the head.

It is further to be understood that the transparent shield **9** may be formed clear and colorless or may be formed to have differently controlled color, light filtering and absorptive characteristics. The said main shield member **9** may also be formed to different thicknesses dependent upon the protective characteristics desired.

The device, when in position of use, is extremely light in weight and comfortable. The wide angle of the main shieldlike member **9** provides a wide field of vision and maximum protection to the eye.

By reason of the fact that the headband **11** retains the portions **10** and **11** in a forwardly curved relation and the shield is spaced relatively to the face by the headband, ample ventilation is afforded.

The characteristics of the device are such that it is readily adaptable to different uses while affording maximum comfort and protection to the eyes of the wearer.

Due to the fact that the correlated parts of the device are readily foldable into compact relation with each other, the said device affords greater ease of conveyance and the flexible portion **26**, which, in addition to functioning as a portion of the headband, further provides outer covering means for the compactly related parts to protect said parts against scratching or other injury during conveyance.

From the foregoing description, it will be seen that simple, efficient and economical means have been provided for accomplishing all of the objects and advantages of the invention.

Having described my invention I claim:

1. A device of the character described comprising a main eyeshield member embodying two lens portions of flexible transparent material, hinge means connecting said lens portions together on their nasal sides whereby the lens portions may be closed into relatively flat superimposed relation, said nasal sides of the lens portions having rearwardly extending lips adapted to be disposed in abutting relation when the device is in position of use, a band having one end connected to the outer end of one of the respective lens portions and adapted to be extended across the rear side of the eyeshield member, said band being of a length shorter than the length of said eyeshield whereby when the detached end thereof is attached to the outer end of the other of said lens portions a rearward cupping of the lens portions is accomplished, with said lips on the nasal sides of the lens portions acting to restrain the lens portions from rearward hinging movements and effecting a forward bowing of the eyeshield, and means for securing the device in position of use upon the head of the wearer.

2. A device of the character described comprising a main eyeshield member embodying two lens portions of flexible transparent material hingedly connected together on their nasal sides whereby the lens portions may be closed into relatively flat superimposed relation, abutments provided on the nasal sides of the lens portions which are arranged to be disposed in abutting relation when the device is in position of use, a band having one end connected to the outer end of one of the respective lens portions and adapted to be extended across the rear side of the eyeshield member, said band being of a length shorter than the length of said eyeshield whereby when the detached end thereof is attached to the outer end of the other of said lens portions a rearward cupping of the lens portions is accomplished, with said abutments acting to restrain the lens portions from rearward hinging movement and so effecting a forward bowing of the eyeshield, and means for securing the device in position of use upon the head of the wearer.

3. A device of the character described comprising a main eyeshield member embodying two lens portions of flexible transparent material, hinge means connecting said lens portions together on their nasal sides whereby the lens portions may be closed into relatively flat superimposed relation, said nasal sides of the lens portions having rearwardly extending lips adapted to be disposed in abutting relation when the device is in position of use, and means for supporting the device on a wearer's head including a relatively wide portion to fit about the back of the wearer's head and being joined to the temporal sides of said two lens portions by narrower members of resilient nature, and said lips on the nasal sides of the lens portions acting to restrain the lens portions from rearward hinging movement when the device is in position of use and permit a flexing of the lens portions to effect a forward bowing of the eyeshield member, said relatively wide portion being positionable over the lens portions when in folded relation to serve as a protective covering therefor.

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