Aug. 21, 1962 R. F. E. STEGEMAN 3,049,716

EYESHIELDS

Filed Nov. 10, 1960

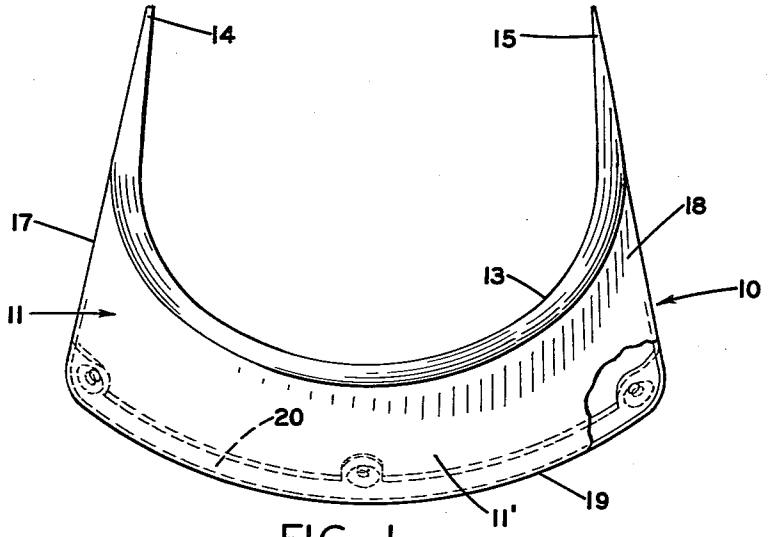


FIG. 1

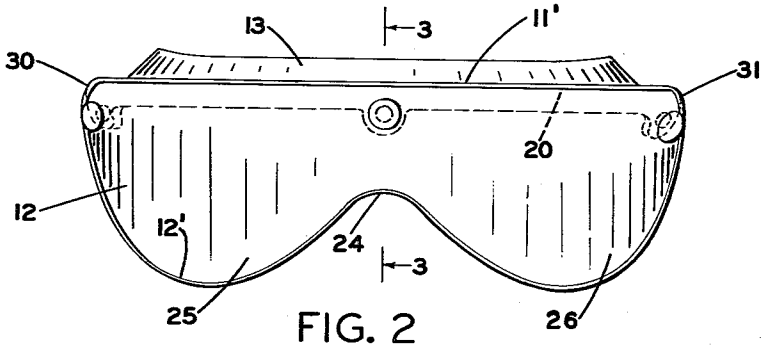


FIG. 2

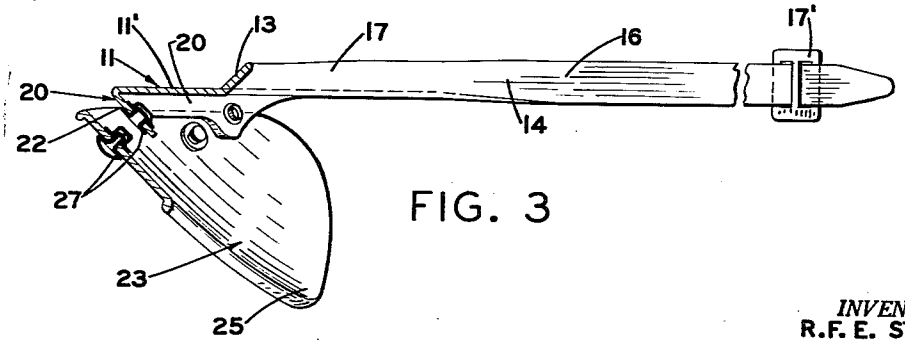


FIG. 3

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EYESHIELDS

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4 Claims. (Cl. 2—14)

This invention relates to improvements in eyeshields such as the kind which are used for outdoor athletic activities.

It is an object of this invention to provide an improved eyeshield of the integrally molded type having an easily interchangeable lens panel, said eyeshield being simple and strong in structure, comfortable and safe to wear, and having a low manufacturing cost while being of good appearance.

Further objects and advantages will be apparent in the details of construction and arrangement and combination of parts by reference to the specification herebelow taken in conjunction with the accompanying drawing, wherein:

FIG. 1 is a plan view partly broken away of a preferred form of the present invention;

FIG. 2 is a frontal view of the invention; and

FIG. 3 is a sectional view taken on the line 3—3 of FIG. 2 showing a part of the eyeshield as manufactured and having a part thereof disassembled.

With reference to the drawing, a preferred form of an eyeshield **10** is shown comprising a visor member **11** and a lens panel member **12**, the lens panel being demountably held or secured by separable attachment means on the visor member. The visor member **11** is a self-supporting structure preferably molded from resinous plastic or rubber-like material which is preferably opaque, flexible and deformable so that the visor is comfortable to wear and conforms to the head of the wearer. For the purpose of excluding the sun's rays, the visor member **11** is constructed with a broad normally flat top surface **11'** extending forwardly from the wearer and is closely fitted about the forehead and temples of the wearer by means of a flexible and conformable headband **13** which is formed integrally with said member. For purposes of improving flexibility, said headband **13** is inclined rearwardly at a considerable angle to the surface **11'** of the visor so that it is easily deflected in adjusting to the shape of the wearer's forehead and temples. Rearwardly of the temporal portions of the visor member **11**, the headband **13** is tapered and reduced in transverse dimensions where the visor member is extended over the ears of the wearer.

At the rear portions **14**, **15** of the visor member **11**, means are provided for holding the eyeshield on the face of the wearer and these means may take any preferred form, such as the integrally molded straps **16** which extend around and encircle the head and are adjustably held together by a buckle **17'**. The visor member **11** is provided with side faces **17** and **18** which are flared outwardly from their junction with the rear portions **14** and **15**, and accordingly, the span between the side faces increases to a maximum at the front where the sides blend into the forward edge **19** of the visor member **11**, the maximum span being considerably greater than the distance between portions **14** and **15**.

According to this invention, as best shown in FIG. 1, a depending flange **20** is formed along the front edge **19** of the visor member **11**. The primary function of the flange **20** is to support a detachable lens panel thereon and the flange also functions to somewhat reinforce and stiffen the front edge **19** of the visor member. This flange **20** extends along the curved front edge **19** between the extreme outer parts of the front of the visor member and the flange is furthermore rearwardly or obliquely

inclined toward the face of the wearer for purposes of positioning the lens panel properly.

As above mentioned, a lens panel **23** is detachably or interchangeably secured on the flange **20**, the lens panel being a sheet of transparent plastic material which is curved from side to side to fit the curved shape of the flange **20**. When the eyeshield **10** is attached on the wearer's face, the normally flat top surface **11'** and the top edge of the lens panel **12** which is parallel thereto may actually become arched somewhat in accommodating to the shape of the face of the wearer. A seating surface **22** is provided on the front face of the flange **20** against which the panel is secured and said surface is inclined backwardly like the flange so as to hold the panel in an oblique position whereby wind deflection and rigidity of the eyeshield is improved. Since the seating surface **22** for the lens panel **23** is not only inclined toward the rear but is also formed as a curved shape conforming to the front edge **19** of the visor member **11**, the rigidity of the panel is greatly augmented when the eyeshield is assembled and secured in operative position on the forehead.

It will be noted that the outermost parts **30**, **31** of the lens panel extend at least as far outwardly as the greatest span of the side parts **17** and **18** of the visor member and, accordingly, the lens panel covers the wearer's face effectively to deflect the wind stream even though the user turns his head to a considerable degree.

At the center of lens panel **12** a deep notch **24** is formed to accommodate the wearer's nose and at either side of the notch the lens panel extends downwardly and backwardly at portions **25**, **26** into proximity with the cheeks of the wearer. At least along the lower and side edges of the portions **25**, **26** of the lens panel **12**, a rolled edge or bead **12'** is formed to protect the wearer's face in case of contact with said edges. As already mentioned, the lens panel **12** is demountably attached to the visor member **11** by separable fastening means of any preferred form, such as a plurality of two-part separable fasteners **27**, one part of which is fixed to the flange **20** and the companion part is fixed to the contiguous portion of the lens panel **12**. When the parts are so assembled, the above mentioned rigidity of the lens panel is assured. Describing this feature in another way, when the lens panel **12** is firmly held against the curved seating surface **22**, the visor member and the lens panel mutually support and shape each other.

It should be emphasized that a further advantage of the aforementioned inclination of the lens panel **12** with respect to the visor member **11** is that said inclination provides a very ample space underneath the visor member for the accommodation of spectacles while allowing very little clearance space where the panel nears the wearer's cheeks so as to prevent annoying eddy gusts from reaching the eyes.

One of the further advantages of this eyeshield lies in the fact that the ventilation from side to side of the visor is free and open which minimizes the accumulation of fog on the eye panel **12**.

The above-described construction of an eyeshield is particularly advantageous with regard to the cost of manufacture by reason of the fact that only two separate parts principally enter into its construction. The replacement of the lens panels **12** by various selected gradations and colorations of lens panels to suit the fancy of the wearer is very desirable and is necessary in many circumstances of use. Furthermore, the construction is sufficiently secure and strong to resist accidental blows and hard usage and will act as a sturdy guard for those who are skiing through wooded lots, or like circumstances, and it will be apparent to those skilled in this art that

although only a preferred embodiment of the invention has been shown and described in detail, various modifications and changes may be made in the arrangement and construction of the parts of this invention without departing from the spirit of the invention as described in the claims here appended.

What is claimed is:

1. An eyeshield for wind protection and the like comprising an integral visor member formed from flexible material so as to extend from temple to temple across and in contact with the forehead of the wearer, said member having a substantially flat visor element adapted to extend straightforwardly and terminating at the front in a depending stiffening flange which is formed at an acute angle to said element integrally thereon, a curved seating surface formed on the front side of said flange, an interchangeable lens panel curved to fit said seating surface and covering the eyes of the wearer and formed of transparent flexible material, said lens panel extending obliquely downwardly and rearwardly so that the lower edge thereof is in close proximity to the checks of the wearer, separable fastener means cooperatively formed on the contiguous parts of said flange and panel to secure the panel in curved shape against said seating surface, and strap means for holding the eyeshield in operative position on the wearer's face, the straightforward arrangement of the visor element serving to provide a maximum of protection and ventilation in the immediate vicinity of the eyes of the wearer.

2. An eyeshield constructed according to claim 1 wherein the side faces of the visor flare progressively outwardly from the temporal parts to their junctures with the frontal parts thereof, the extreme spanwise ends of said lens panel being adjacent to said junctures which are spaced farther from each other than said temporal parts so as to deflect the wind away from the eyes of the wearer when the eyeshield is turned somewhat to one side.

3. An eyeshield for wind protection and the like comprising an integral visor member formed from flexible and deformable material, said member extending straightforwardly from and across the forehead of the wearer from temple to temple, the profile shape of the forward edge of said visor member being backwardly curved and the forwardly extending portion of said member being substantially flat, a stiffening flange formed integral with and underlying said forward edge, said flange having an obliquely inclined seating surface formed on the curved front side thereof adjacent to said edge, an interchangeable lens panel formed of transparent and resilient sheet material, said panel extending across the face of the wearer and having an arcuate upper edge which is shaped to match the curved shape of the forward edge of said visor member when assembled thereon, the angle of backward inclination of said panel being an acute angle with respect to said member and being such as to bring the lower edge of said lens panel into close proximity with the cheeks of the wearer while providing a wide clearance from the eyes at the top thereof, separable fastening means cooperatively formed on said stiffening flange and said lens panel to demountably secure the panel in contact with said seating surface, and a pair of strap-like extensions formed integrally on the rearmost parts of said visor member in substantial alignment with said forwardly extending portion thereof so as to facilitate integral molding, the free ends of the strap-like extensions being held together to retain the eyeshield on the forehead.

4. An eyeshield constructed according to claim 3 and being further characterized by a headband flange formed integrally at a rearwardly inclined angle to and on said forwardly extending portion so that an edge thereof bears yieldably against the wearer's forehead around the front and temporal sides thereof.

References Cited in the file of this patent

UNITED STATES PATENTS

2,233,600	Glasberg	Mar. 4, 1941
2,406,598	Flood	Aug. 27, 1946
2,598,265	Jones	May 27, 1952

FOREIGN PATENTS

649,245	Great Britain	Jan. 24, 1951

UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

August 21, 1962

Patent No. 3,049,716

Raymond F. E. Stegeman

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 3, line 21, for "checks" read -- cheeks --.

Signed and sealed this 26th day of February 1963.

(SEAL)
Attest:

ESTON G. JOHNSON
Attesting Officer

DAVID L. LADD
Commissioner of Patents