Sept. 3, 1946. J. E. DU BOIS 2,406,998

EYESHIELD

Filed Jan. 22, 1943

Fig 1

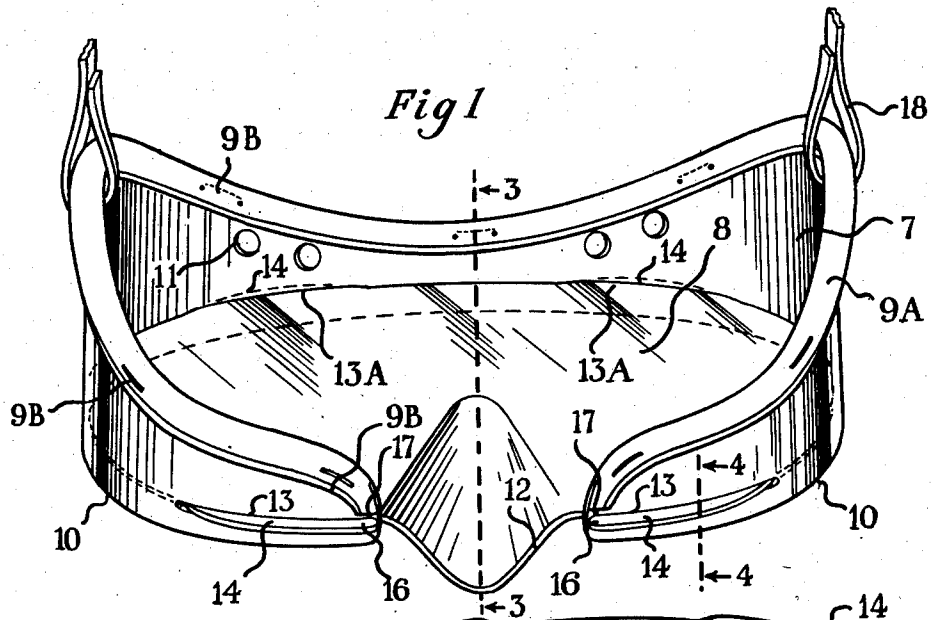
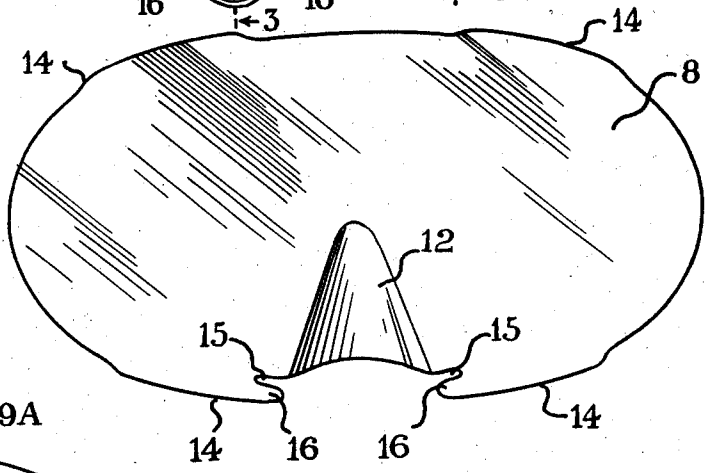


Fig 2



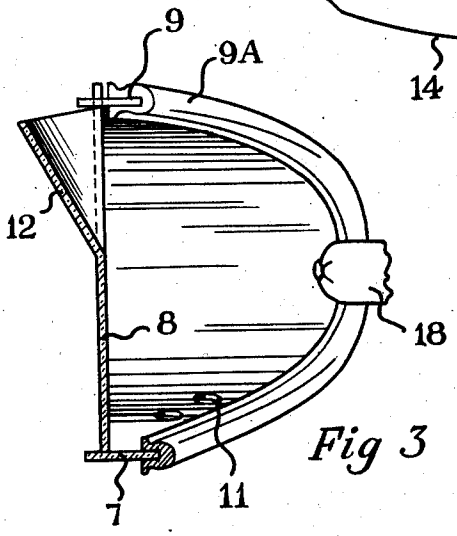


Fig 3

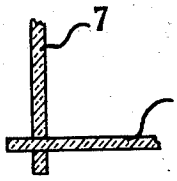


Fig 4

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Patented Sept. 3, 1946

2,406,998

UNITED STATES PATENT OFFICE

2,406,998

EYESHIELD

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Application January 22, 1943, Serial No. 473,167

10 Claims. (Cl. 2—14)

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This invention relates to eye shields and particularly to that type of shield which is used by mechanics and the like to protect the eyes from flying particles, abrasives, dust, metal, or other deleterious substances.

Another object of the invention is the provision of an eye shield, which is light in weight, sturdy in construction, and one which may be worn over the glasses of the user to provide unrestricted vision, and provide complete protection to the eyes, nose, and glasses.

Another object of the invention is the provision of a device in which the lens or face plate may be readily removed where it is desired to use another type of face plate.

Another object of the invention is the provision of improved means for securing the face plate and rim member together.

Another object of the invention is the provision of a device in which the face plate not only protects the eyes of the wearer, but also the nose.

The foregoing and other objects of the invention will become more apparent as the description proceeds, reference being made from time to time to the accompanying drawing in which:

Fig. 1 is a perspective view of a device embodying my invention.

Fig. 2 is a plan view of the lens or face plate comprising part of the device shown in Fig. 1.

Fig. 3 is a section taken substantially on the line 3—3 of Fig. 1, and turned 180 degrees from the position shown in Fig. 1.

Fig. 4 is a section taken substantially on the line 4—4 of Fig. 1.

Referring now more particularly to the drawing it will be understood that in the embodiment herein disclosed, my improved eye shield consists generally of a rim member 7, and a lens or face plate 8, which are preferably made of a suitable plastic material, such as "vinylite" or "plastacele" or the like.

It will be understood that the rim 7, and face plate 8, may be colored or tinted to keep out certain objectionable rays of light.

The rim member 7, is preferably blanked out of a sheet of plastic material, and is formed with the edge 9, shaped to fit the contour of the face of the wearer. The edge 9, is finished with a piping member 9A, which may also be made of plastic, rubber or any other suitable material. In the embodiment herein disclosed the member 9A is secured to the rim 9 of the member 7, and is secured in position by wire staples 9B. The edge 10 of the rim member 7, is formed straight so that when the parts are assembled, it serves

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as a means upon which the device may be rested on a table, bench, or the like, as illustrated in Fig. 1. The rim member 7 is provided with a plurality of apertures 11, which serve to ventilate the interior of the device when it is in use. The face plate 8 is formed with an outwardly bowed conical portion 12, which serves as a nose guard. It is obvious, therefore, that this device when in use will provide protection to the eye, as well as the nose of the wearer.

In order to facilitate the assembling of the parts and to strengthen the general assembly, I have provided an improved means for locking the rim 7, and face plate 8, together. The improved means consist of a plurality of longitudinal slots 13 and 13A formed in the rim 7, which are adapted to engage the bosses 14 formed on the periphery of the face plate 8. In addition thereto, I provide angular slots 15 in the face plate 8, at either side of the nose guard 12. The slots 15 are formed and positioned in such manner that they form projections or hooks 16, which extend through the slots 13 and engage the outer surface of the rim 7, as at 17, and prevent the outward displacement or lateral movement in one direction of the ends of the rim 7. The inward displacement of the rim 7 is prevented by its engagement with the periphery of the face plate 8. When the ends of the rim 7 are hooked over the projections 16, and the face plate 8 is pressed into position shown in Fig. 1, the trim 7 is placed under considerable tension so that it is impossible to unintentionally dislodge the face plate 8 from the rim 7, yet the parts may be readily disassembled by their proper manipulation indicated hereinafter. In assembling the device the ends of the rim 7 are always secured in position before the bosses 14, at the rear of the face plate 8, are forced into the slots 13A of the rim 7. In disassembling the parts, the reverse of that procedure is always followed. With the close fit provided between the parts it is difficult, if not impossible, to assemble or disassemble the parts in any other maner. This is one of the features of the invention, and this locking method is only made possible because of the resiliency and flexibility of the material with which the device is constructed.

The reference character 18, indicates a flexible head strap with which the device is secured to the head.

Having described my invention what I claim and desire to secure by Letters Patent is:

1. In a device of the character described the combination of an open-ended flexible rim mem-

ber formed of transparent, shatter proof material, and formed with one edge adapted to fit the contour of the human face, longitudinal slots in said rim member, and a lens member of flexible transparent material having bosses thereon adapted to engage the slots of said rim member, certain of said bosses engaging slots formed adjacent the open end of the rim member and being hook-shaped in the plane of the lens member to resist distention of the rim member relative to the lens member.

2. In a device of the character described the combination of a rim member of flexible, transparent material, formed with one edge adapted to fit the contour of the human face, longitudinal slots in said rim, a lens member of flexible, transparent, shatter proof material, and bosses on said lens member adapted to engage the slots of said rim member, certain of said bosses terminating in hooks adapted to prevent the outward movement of the edges of said rim member.

3. In a device of the character described the combination of a lens member of flexible, transparent, shatter proof material, a portion of said lens member being outwardly extended to form a nose guard, peripheral bosses on said lens member, a rim member of similar material, bent and rebent about the periphery of said lens member, and secured in position thereon by the engagement of the peripheral bosses with a plurality of longitudinal slots formed in said rim member, at least two of said bosses terminating in projections which are adapted to prevent the outward displacement of the ends of said rim member.

4. In a device of the character described, an open-ended rim member having the inner edge thereof shaped to fit the contour of the wearer's face in the vicinity of the eyes, said member being open at that portion thereof adjacent the wearer's nose, a lens member of shatterproof, transparent material fitted in the outer portion of said rim member, and complementary interlocking means formed integrally in the interfitting edge portions of said rim and lens members for detachably retaining the lens member in place and preventing its transverse displacement relative to the rim member, certain of said interlocking means being hook-like in shape to prevent outward distention of the open portion of the rim member relative to the lens member.

5. In a device of the character described, the combination of a rim member and a lens member of shatterproof, flexible, transparent material, removably secured to one another by integral interlocking means, the interlocking means comprising slots formed in the rim member, and bosses formed on the periphery of the lens member, certain of said bosses terminating in hooks, which are adapted to prevent the outer displacement of said rim member.

6. In a device of the character described, a lens member of transparent shatterproof material and

of a shape to span both eyes of a wearer, the lower intermediate portion of said lens member having an outwardly-bowed conical portion adapted to rest upon the nose of the wearer and form a guard therefor and hook-like projections depending from such member adjacent its conical portion.

7. In a device of the character described, the combination of a rim member having the inner edge thereof shaped to fit the contour of the wearer's face in the vicinity of the eyes and open at its lower edge in the vicinity of the wearer's nose, a lens member of shatterproof, transparent material fitted in the outer portion of said rim member, and complementary interlocking boss and slot means formed in the interfitting edge portions of the rim and lens members for detachably retaining the latter in place and against displacement laterally of the former, certain of said interlocking means preventing outward displacement of the open lower edge of the rim member relative to the lens member.

8. In a device of the character described, the combination of a lens member of flexible transparent material shaped at its lower portion to fit and rest upon the nose of the wearer, a plurality of peripheral bosses on said lens member, an open-ended rim member of flexible material bent and rebent about said lens member with its open portion registering with the nose-fitting portion of the lens member, and longitudinal slots formed in said rim member for engagement with the peripheral bosses of the lens member to detachably secure said lens and rim members together.

9. In an eye shield of the character described, the combination of a rim member shaped to extend part way about the vicinity of the eyes of the wearer and open at its bottom across the wearer's nose, a one piece lens member of shatterproof transparent material detachably fitted in said rim member with the lower portion thereof bridging the open bottom of the rim member and shaped to fit the contour of the wearer's nose, and means formed in the contiguous portions of the rim and lens members for detachably interlocking said members to each other.

10. In an eye shield of the character described, the combination of an open ended rim member, a one-piece lens member of shatterproof, flexible, transparent material detachably mounted in the rim member and spanning both eyes of the wearer, the lower portion of the lens member bridging the corresponding open portion of the rim member and having an outwardly-bowed, cone-shaped portion formed integrally therewith for resting upon the lower portion of the wearer's nose, means formed in the contiguous portions of the rim and lens members for detachably interlocking said members to each other, in snap-like fashion and means applied to the rim member for retaining the eye shield on the head of the wearer.

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