

April 14, 1959

L. P. BARKER, JR
FACE SHIELD DEVICE

2,881,443

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2 Sheets-Sheet 1

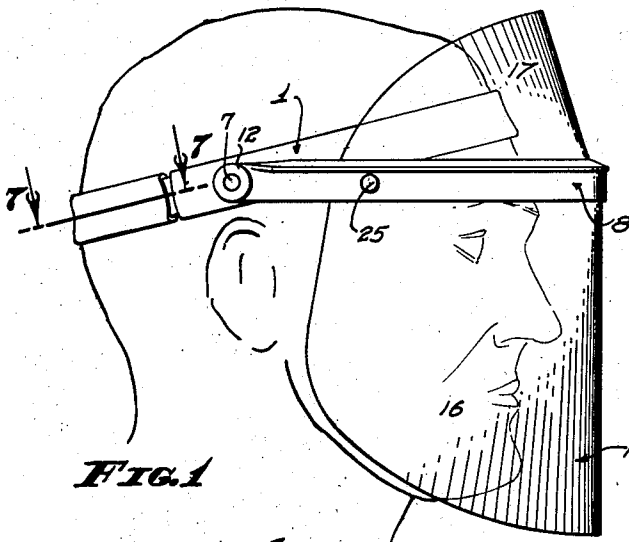


FIG. 1

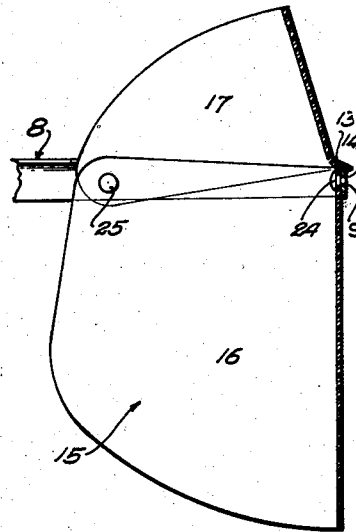


FIG. 3

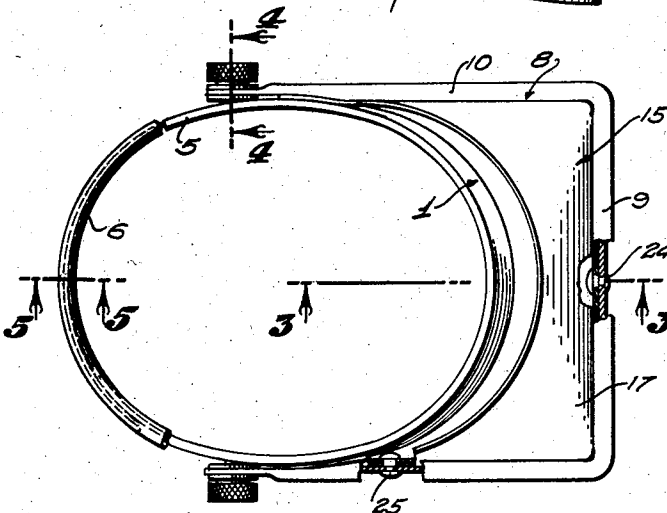


FIG. 2

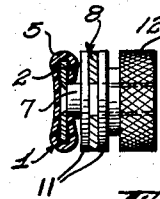


FIG. 4

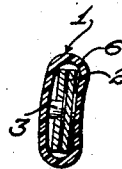


FIG. 5

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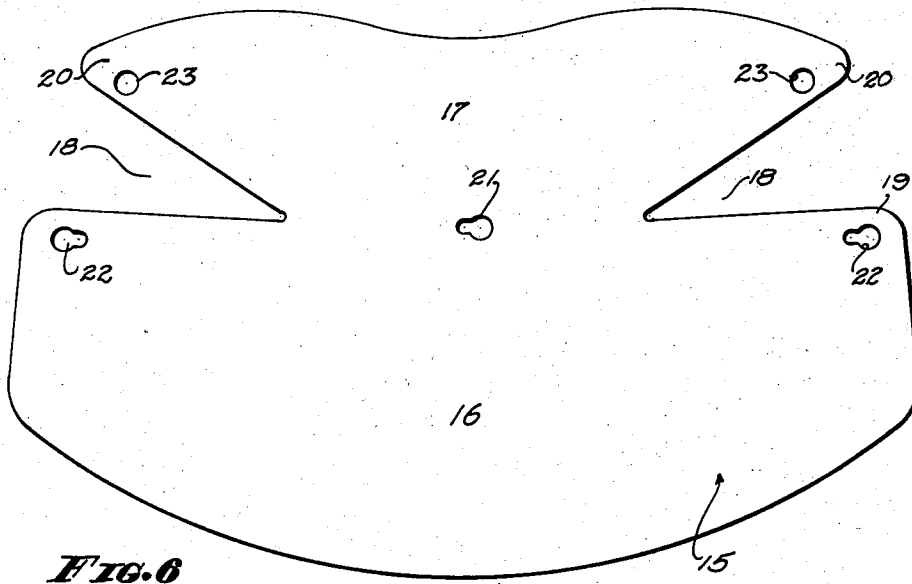
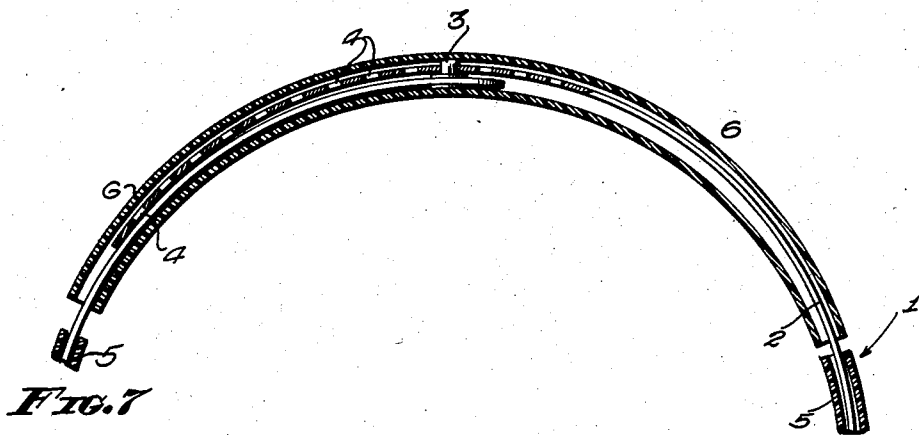
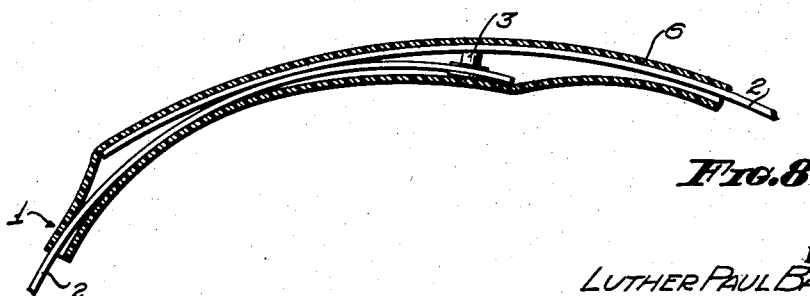
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FACE SHIELD DEVICE

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4 Claims. (Cl. 2—9)

This invention relates to face shield devices, and included in the objects of this invention are:

First, to provide an inexpensive but sturdy face shield device which affords ample protection for the fore part of the wearer's head.

Second, to provide a face shield device wherein the face shield member may be formed from a flat sheet of flexible transparent plastic material which may be easily installed and removed for replacement.

Third, to provide a face shield device wherein the face shield member is retained in a rigid frame which coincides with and covers notched portions of the face shield member, so as to protect the face shield member in the regions of the notched portions.

Fourth, to provide a face shield device having a yieldable face shield member and supporting frame wherein the supporting frame, when the face shield device is in use, is located just above the eye level of the user, and wherein the supporting frame comprises a flat cross portion and substantially right angularly disposed legs whereby the portion of the face shield in the line of vision of the wearer is maintained substantially flat, thereby minimizing distortion of the view due to curvature of the face shield member.

Fifth, to provide a face shield device which incorporates a novel headband formed of metal covered with a pliable sleeve, and wherein the headband employs a novel adjustment means utilizing the pliable sleeve to retain the headband in any of its adjusted positions.

With the above and other objects in view, as may appear hereinafter, reference is directed to the accompanying drawings in which:

Figure 1 is a side view of the face shield device as it appears in position on the wearer;

Fig. 2 is a top or plan view thereof;

Fig. 3 is a sectional view thereof through 3—3 of Fig. 2;

Fig. 4 is an enlarged sectional view through 4—4 of Fig. 2;

Fig. 5 is an enlarged sectional view through 5—5 of Fig. 2;

Fig. 6 is a developed view of the shield member;

Fig. 7 is an enlarged fragmentary sectional view through 7—7 of Fig. 1, showing the rear portion of the headband as it appears when fastened; and

Fig. 8 is a sectional view similar to Fig. 7, showing the rear portion of the headband distorted for the purpose of changing its adjustment.

The face shield device includes a headband 1 having a strap member 2 formed of metal or of strong plastic material. One end of the strap member is provided with an outwardly projecting pin 3 whereas the other end is provided with a series of perforations 4. The pin 3 is adapted to fit into any selected perforation for determining the head size of the headband.

The strap member 2 is covered with a sleeve 5 of pliable plastic material. The plastic sleeve is preferably divided into two sections, one section designated 6 covering the

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ends of the strap member, as shown best in Figs. 7 and 8. The strap member 2 is so preformed that the overlapping end portions tend to assume a concentric contiguous relation so that the pin 3 tends to remain in any of the selected perforations 4, thus aided by the surrounding sleeve 6.

The sleeve 6 is, however, sufficiently yieldable that by pressing the overlapping ends of the headband in a manner to flatten the perforated end, the pin 3 is withdrawn from its perforation so that it may be moved in a direction to increase or decrease the circumference of the headband 2. Upon release, the headband tends to resume its round or oval shape with the pin in place in the newly selected perforation and held there by the encompassing sleeve 6.

The opposite sides of the strap member 2, preferably rearwardly of a center line, are equipped with outwardly directed journal screws 7.

A U-shaped reinforcing and supporting frame 8 is adapted to be supported by the headband 2. The frame comprises a transversely extending portion 9 which is preferably flat. From the extremities of the front portion 9 extend leg portions 10 which are apertured at their extremities to fit on the journal screws 7. Also fitted on the journal screws are friction washers 11 and nuts 12 so that the frame 8 may be held in any desired angular position relative to the headband 2 and may be shifted from one position to another as desired.

The frame 8 is preferably formed of extruded metal having a substantially T-shaped cross-section with the cross portion 13 of the T disposed in angular relation with the stem 14 of the T.

The frame 8 receives a shield member 15 formed of flexible transparent plastic material. The shield member 15 includes a face-covering section 16 and a forehead-covering section 17 separated at their opposite lateral margins by V-shaped notches 18. The margins of the notches 18 form lobes 19 and 20 which are adapted to be folded into overlapping relation.

At the juncture between the face-covering section 16 and forehead-covering section 17, between the notches 18, there is provided a key slot 21. The lobes 19 forming the upper margins of the face-covering section 16 are provided with key slots 22. The lobes 20 of the lower margins of the forehead-covering section 17 are provided with apertures 23.

The distance between the notches 18 is equal to the length of the transverse portion 9 of the frame 8. Centered in the inner side of this transverse portion 9 is a headed rivet 24 adapted to interlock with the key slot 21.

The leg portions 10 are provided on the inner surfaces with headed rivets 25 which first receive the apertures 23 of the lobes 20 and then receive the key slots 22 of the lobes 19 so that the lobes 20 overlap the lobes 19. The shield member 15 is therefore secured within the frame 8, and the overlapping portions of the face and forehead-covering sections are covered by the leg portions 10 and protected thereby.

In the region of the frame 8 the shield member 15 is held so as to define three sides of a rectangle, and in particular the front portion of the shield in the line of vision of the user is held in substantially flat condition. However, the face-covering section 16 and the forehead-covering section 17 tend, as they approach their lower and upper margins respectively, to assume a semicircular shape in substantial conformity with the chin and forehead of the wearer. The lower and upper margins of the sections 16 and 17 are trimmed or rounded so as to give a pleasing contour to the shield.

It will be observed that by reason of the notches 18 and the manner in which the two sections of the shield member 15 are joined, the front side of the forehead-

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covering section 17 is disposed in angular relation to the face-covering section 16.

While a particular embodiment of this invention has been shown and described, it is not intended to limit the same to the exact details of the construction set forth, and it embraces such changes, modifications, and equivalents of the parts and their formation and arrangement as come within the purview of the appended claims.

I claim:

1. A face shield device, comprising: a headband including a bendable strap having perforations in one end, a pin at the other end for entering said perforations to adjust the circumference of said headband, and a pliable sleeve covering said headband including the ends thereof, thereby to retain said pin in a selected perforation, said sleeve being yieldable to permit forcing of said pin out of a perforation for insertion in another perforation; a reinforcing and supporting frame including a transversely directed front portion and substantially parallel legs joined to the extremities thereof and pivotally connected to the sides of said headband; and a face shield member attachable within the front and leg portions of said frame and extending above and below said frame to protect the forehead and face of the wearer when said frame is disposed substantially horizontally above the eye level of the wearer.

2. A face shield device, comprising: a headband including a bendable strap having perforations in one end, a pin at the other end for entering said perforations to adjust the circumference of said headband, and a pliable sleeve covering said headband including the ends thereof, thereby to retain said pin in a selected perforation, said sleeve being yieldable to permit forcing of said pin out of a perforation for insertion in another perforation; a U-shaped reinforcing and supporting frame having a flat cross portion and substantially parallel legs; friction pivot means joining the extremities of said legs to said headband; and a face shield member removably mounted within and conforming to said frame and projecting above and below said frame.

3. A face shield device, comprising: a headband including a bendable strap having perforations in one end,

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a pin at the other end for entering said perforations to adjust the circumference of said headband, and a pliable sleeve covering said headband including the ends thereof, thereby to retain said pin in a selected perforation, said sleeve being yieldable to permit forcing of said pin out of a perforation for insertion in another perforation; a U-shaped reinforcing and supporting frame having a flat cross portion and substantially parallel legs; friction pivot means joining the extremities of said legs to said headband; and a face shield member formed from an initially flat sheet of yieldable transparent material, opposite sides of said shield member being notched and the margins of said notched sides being disposed within, conforming to, and covered by the legs of said frame, the portion between said notches being disposed within and held in flat conformity with the cross portion of said frame, said shield member extending upwardly and downwardly from said frame.

4. A headband for supporting devices on the head of a wearer, comprising: a bendable strap having perforations in one end, a pin at the other end for entering said perforations to adjust the circumference of said headband, and a pliable sleeve covering said headband including the ends thereof, thereby to retain said pin in a selected perforation, said sleeve being yieldable to permit forcing of said pin out of a perforation for insertion in another perforation.

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