March 16, 1954 K. L. WADE 2,671,898

LIGHT SHIELD

Filed Oct. 3, 1951 2 Sheets-Sheet 2

FIG. 6

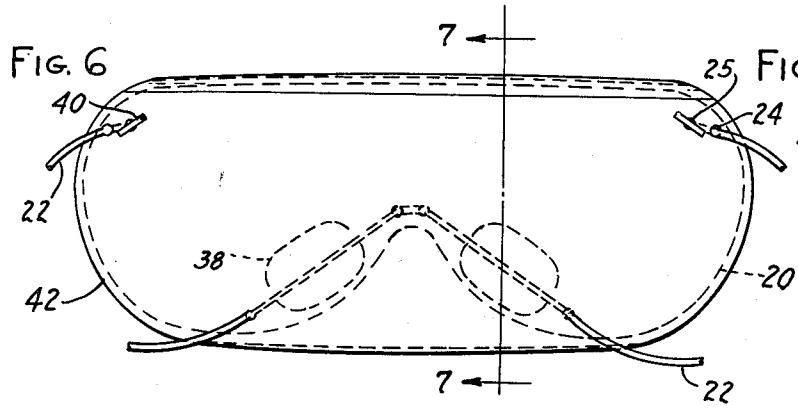


FIG. 7

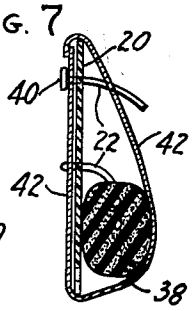


FIG. 8

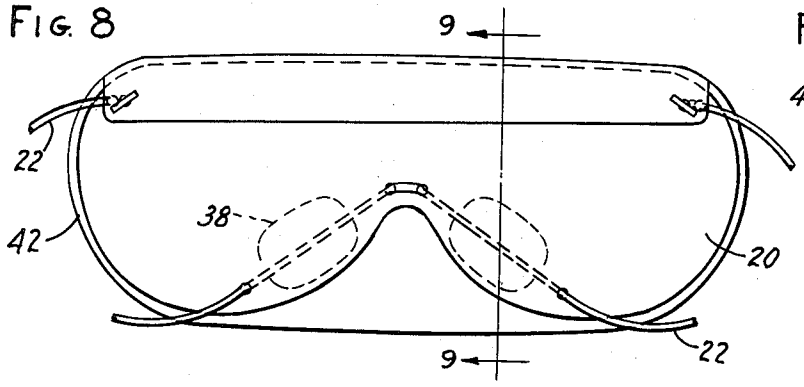


FIG. 9

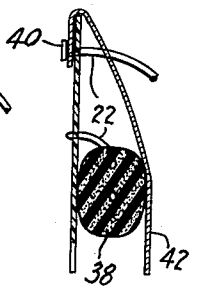


FIG. 10

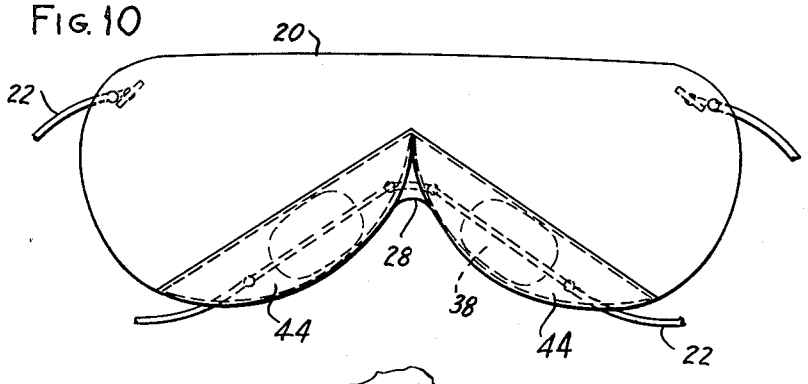
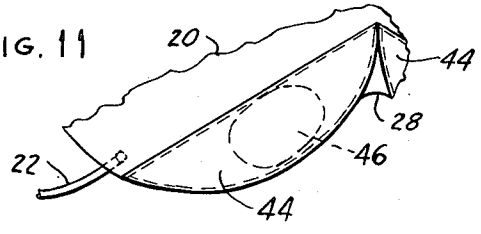


FIG. 11



INVENTOR
KENNETH L. WADE
BY
Stephen J. Rudy
AGENT

March 16, 1954 K. L. WADE 2,671,898

LIGHT SHIELD

Filed Oct. 3, 1951 2 Sheets-Sheet 1

FIG. 1

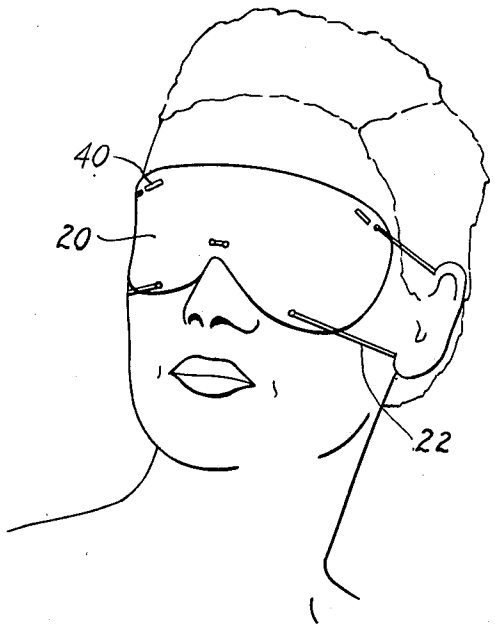


FIG. 2

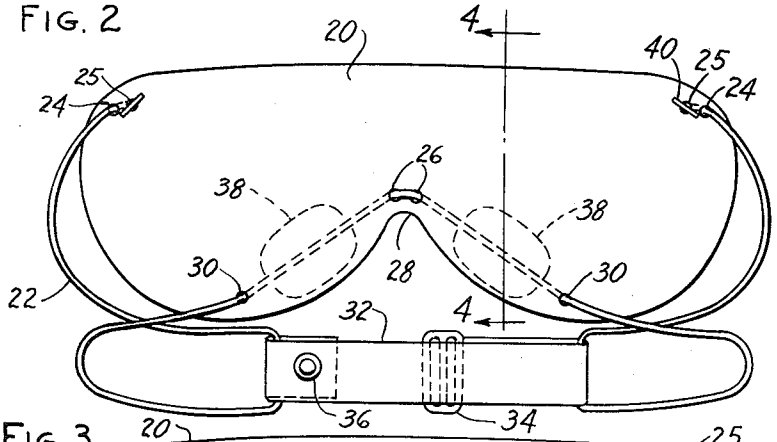


FIG. 4

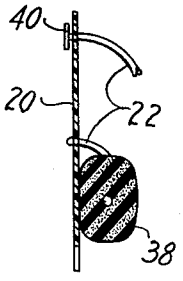


FIG. 3

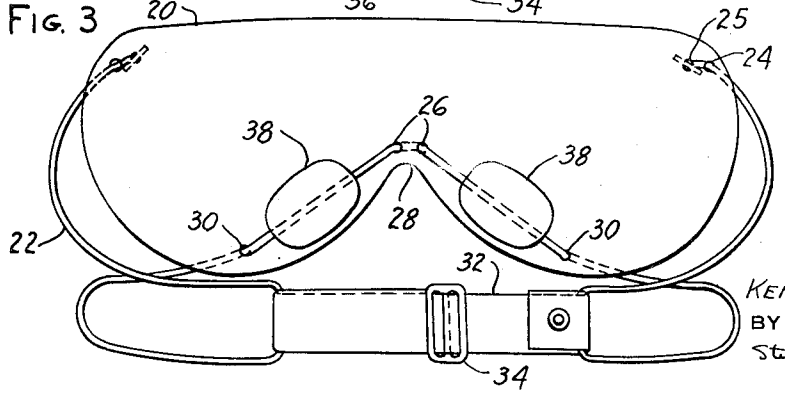
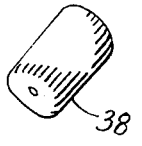


FIG. 5



INVENTOR
KENNETH L. WADE
BY
Stephen J. Rudy
AGENT

Patented Mar. 16, 1954

2,671,898

UNITED STATES PATENT OFFICE

2,671,898

LIGHT SHIELD

Kenneth L. Wade, New York, N. Y.

Application October 3, 1951, Serial No. 249,531

9 Claims. (Cl. 2—15)

1

This invention relates to light shields, more particularly to light shields used for excluding light rays from the eyes of the wearer.

In the designing of light shields it is not a simple task to provide a shield which will be effective in keeping all of the light rays from the eyes of the wearer. The chief reason for this is the difficulty of attaining a perfect fit between the shield and that portion of the wearer's face which the shield is to cover, particularly the area at the intersection of the nose and cheeks. A generally satisfactory design may include an integral pad arrangement which serves to fill in such areas, however, due to the fact that some people differ greatly in head size and shape, it is not easy to make a standard size shield which will be satisfactory in every case. In such cases, the tight adjustment which may be necessary to hold the shield snugly against the face to provide maximum light restriction, can result in discomfort to the wearer after a prolonged period of use.

It is desirable that a light shield be easily maintainable in clean or sanitary condition. As a result of frequent use a light shield may become soiled with body perspiration and odor, and may serve as a carrier of germs from an afflicted wearer.

In the light shield of my invention I have provided a shield of simple design which overcomes the problems discussed above. Basically, my shield comprises a combination including a body element and a pair of adjustable pad elements which can be positioned to eliminate passage of all light rays under the shield in the area of the wearer's nose and cheeks, as will be readily apparent later. Furthermore, the shield of my invention can be easily maintained in sanitary condition, since it features attachable cover means which can be quickly affixed to the body of the shield, and removed for cleaning purposes.

The main object of my invention is to provide a light shield which will effectively restrict passage of light rays from the eyes of the wearer.

A further object is to provide a light shield which can be readily adjusted to give satisfactory service to any person regardless of head size and shape.

Another object is to provide a light shield which can be easily maintained in clean or sanitary condition.

Other objects are to provide a light shield which is comfortable in use, simple in design, of low cost, and which will give long and satisfactory service.

2

These and further objects and features of the invention will become more apparent from a study of the following description and the illustrative drawings, in which:

Fig. 1 is a pictorial representation of the light shield of the invention in position on a wearer;

Fig. 2 is an elevation view of the basic shield of the invention as seen from the front or outside;

Fig. 3 is the same only as seen from the rear or face contact side;

Fig. 4 is a section as seen from line 4—4 in Fig. 2;

Fig. 5 is a perspective view of one of the adjustable pad elements used in the shield;

Fig. 6 is an elevation view of the shield with a removable cover in position and as seen from the front or outside;

Fig. 7 is a section view as seen from line 7—7 in Fig. 6;

Fig. 8 is an elevation view of the shield with another type of removable cover in position and as seen from the front or outside;

Fig. 9 is a section view as seen from line 9—9 in Fig. 8;

Fig. 10 is an elevation view of the shield with still another type of cover and as seen from the rear or face contact side; and

Fig. 11 is a fragmentary portion of a shield showing an alternate pad element arrangement.

Referring now to the drawings wherein like numerals have been used to indicate like elements in the several drawings, numeral 20 indicates a body or mask element formed in the shape illustrated and of such proportions as to cover the area of an average size face as shown in Fig. 1. The body element is preferably made from an opaque, stiff but flexible, sheet material such as the type known under the trade name "Bakelite." A plurality of holes is formed in the body element to receive a holding cord 22, which is preferable of the covered elastic type used on light shields, and which is continuous in length as shown. Two pairs of holes 24, 25 are symmetrically arranged in the upper and outer extremity of the body element, the hole 24 being farthest from the vertical centerline of the shield. Another pair of holes 26 is located in the region of a nose cut-out region 28 of the body element. A final pair of holes 30 is symmetrically arranged one on each side of the vertical centerline of the shield and at the lower edge of the body element, each of said holes 30 being located approximately midway between the pairs of holes 24, 25 and 26, as shown. The cord 22 passes through the looped ends of a ribbon-like band 32, which has

a buckle 34 for adjusting the length thereof. A snap fastener 36 can be arranged on one loop of the band 32 if desired, to facilitate assembly of the shield.

In a preferred form of my invention, the cord 22 passes through a pair of pad elements 38 to maintain the latter on the backside of the mask 20, and in the area of the nose cutout 28, as shown. While the pad elements may be made from any pliable and soft material, I have found that very satisfactory pad elements can be formed from a sponge rubber, such as the air foam rubber of the Goodyear Company. The pads 38 are adjustable in either direction along the cord so that when the shield is being worn, these pads may be suitably positioned to restrict passage of light rays underneath the shield for the particular wearer. At each end of the cord is attached a small metal bar 40 which fixes the cord to the shield.

The manner in which the cord 22 is arranged is to be observed. Notice that the cord passes from the bar 40, through the hole 25, enters adjacent hole 24 to exit on the front side of the shield, and enters the hole 30 from the front side of the shield. With this arrangement, the cord tends to press the mask in close contact with the area of the wearer's face to be covered. If desired, the cord can be knotted just before entry from the front side of the shield into each hole 30, to regulate the tension of that portion of the cord upon which the pads 38 are maintained. In addition, small metal eyelets, (not shown) may be secured in each hole of the shield for reinforcement against wear and tear of the shield. While I have shown but one manner of affixing the cord to the shield, it will readily occur to those skilled in the art that other ways may be as satisfactory, for example, the ends of the cord may be permanently attached to the body portion 22 by any of the usual means.

While the description of the invention so far discloses a basic shield which may be satisfactory as such, the arrangements as illustrated in Figs. 6 to 11 are more nearly in accord with all of the objects of the invention.

In Figs. 6 and 7 the shield of the invention is shown with a covering 42 which extends completely about the shield, i. e., both front and rear, and which is open at both ends. The covering 42 is preferrably made from an opaque material, and may have a plastic insert or covering (not shown) on the inner side thereof. Suitable holes for the cord 22 may be made in the covering, which holes coincide with the holes in the shield. The number of holes to be made in the covering can easily be determined from the illustrations of Figs. 6 and 7. It is to be noted that the covering 42 does not follow the contour of the mask at the nose cut-out portion 28, but rather encloses or extends over said portion. This arrangement is of further help in the restriction of light rays from passage underneath the light shield. While the covering 42 is shown to be joined to itself along the top edge of the shield, other means, such as zipper attachments or snap fasteners, may be employed for such purpose with equal effect. The cord 22 as applied to this embodiment of the invention, is affixed to the shield in the same manner as described in connection with the shield as illustrated in Figs. 2 to 4.

Figs. 8 and 9 illustrate another arrangement of the shield with a covering. In this embodiment the covering 42 extends only over the rear of the shield, so that it is positioned between the body member 20 and surface of the wearer's face. In all other respects it is similar to the covering of the Figs. 6 and 7 illustration. While a simple method of attaching this covering to the shield, has been illustrated, it will readily occur that means such as snap fasteners may be used with equal effect.

Fig. 10 illustrates another arrangement wherein the covering is greatly reduced in extent and comprises a pair of bag-like covers 44 which enclose the pad elements 38 in the region of action of the pad elements, as shown. The covers 44 can be either affixed to the body element 20 by stitching as illustrated, or removably affixed by snap fastening means, or equivalent.

In Fig. 11 is illustrated an arrangement wherein the bag-like covers 44 of Fig. 10, contain pad elements 46 which are like the pad elements 38, except they are not apertured to receive a holding cord. In this arrangement the pad elements 46 are maintained in adjusted position by virtue of snug contact with the inside of the covers 44, and the pressure of the shield against the face of the wearer.

It will now be apparent that the light shield of my invention is of simple design, will effectively restrict passage of light rays from the eyes of the wearer, is readily adjustable to give satisfactory service to any person so that a standard size is possible, and can be easily maintained in sanitary condition.

While I have shown and described the preferred manner of utilizing the principles of my invention, it may occur to others that certain variations may be possible, thus I do not wish to be limited to the disclosure per se, but rather to the appended claims which clearly define the scope of the invention.

What is claimed is:

1. A light shield comprising in combination an opaque flexible body element, cord means for positionally maintaining the body element in position on a wearer's head, and adjustable pad elements which are maintained in position by said cord means on the underside of the body element in the region of the wearer's nose and cheek intersection, said pad elements being rubber-like and cylindrical in form and apertured along the major axis to receive said cord means.

2. A light shield adapted to be worn to restrict passage of light rays to the eyes of the wearer comprising an opaque flexible body element, cord means for snugly maintaining the body element against the wearer's face so that a major portion of the light rays are cut-off from the wearer's eyes, adjustable pad means carried by said cord means which are positionable to cut-off the remainder of the light rays from the wearer's eyes, and a removable opaque cover means which encloses the body element including said pad means.

3. A light shield according to claim 2 wherein said cord means is adapted to position the cover means on the shield.

4. A light shield according to claim 3 wherein said cover means and said body element are apertured to receive said cord means.

5. A light shield adapted to be worn to restrict passage of light rays to the eyes of the wearer comprising an opaque flexible body element, cord means for snugly maintaining the body element against the wearer's face so that a major portion of the light rays are cut-off from the wearer's eyes, a pair of adjustable rubber-like pad means carried by said cord means on the

underside of the body element in the region of the wearer's nose, said pad elements being movable along the cord means for adjusting to cut-off the remainder of the light rays from the wearer's eyes, a removable cover means which encases the body element including the pad means, and adjustable band means which is looped to receive the cord means whereby the effective length of the cord means can be regulated.

6. A light shield according to claim 5 wherein the body portion and the cover means are both apertured to receive the cord means, the apertures being located along the top edge of the shield and the lower portion of the shield, those along the top edge of the shield being furthest removed from the vertical centerline of the shield.

7. A light shield comprising in combination an opaque flexible body element being provided with a recess adapted to conform to the nose contour of the person wearing the shield, an adjustable pad element adjacent each edge of said recess adapted to space the body element from the eyes of said person, holding means for maintaining the body element over the eyes of said person, and pad retaining means on the body element to positionally maintain said pad elements in adjusted position in the area adjacent each edge of said recess, said pad elements being further adapted when in position in the areas of intersection of the person's nose and cheeks to restrict passage of light to the person's eyes.

8. A light shield according to claim 7, including a removable means which covers the flexible body element.

9. A light shield comprising in combination an opaque flexible body element being provided with a recess adapted to conform to the nose contour of the person wearing the shield, an adjustable pad element adjacent each edge of said recess adapted to space the body element from the eyes of said person, holding means for maintaining the body element over the eyes of said person, pad retaining means on the body element to positionally maintain said pad elements in adjusted position in the area adjacent each edge of said recess, said pad elements being further adapted when in position in the areas of intersection of the person's nose and cheeks to restrict passage of light to the person's eyes, and a removable means which covers the flexible body element, said shield being further arranged so that said pad retaining means may form a part of said holding means.

KENNETH L. WADE.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,917,117	Hines	July 4, 1933
1,924,315	Hemphill et al.	Aug. 29, 1933