

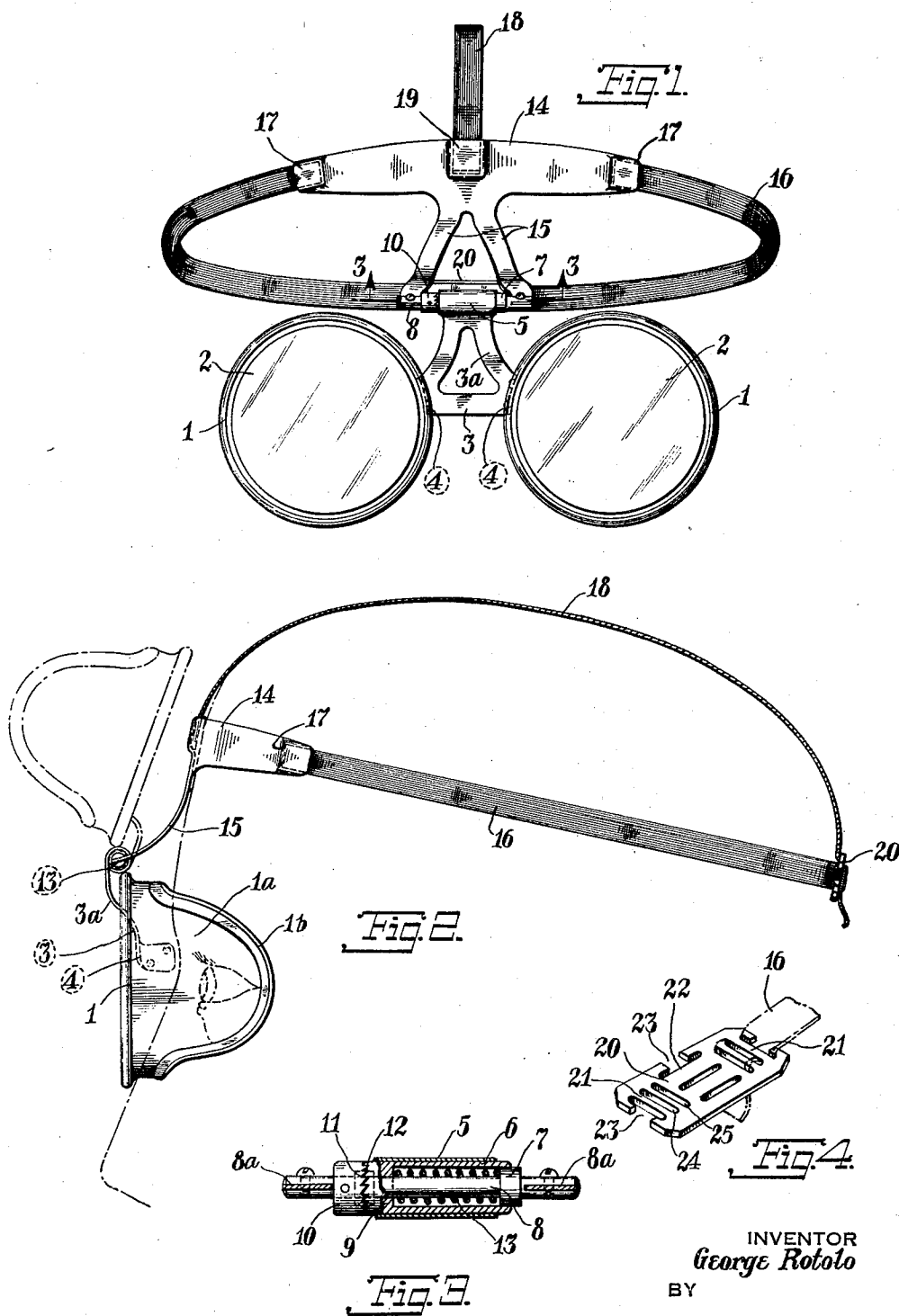
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ADJUSTABLE GOGGLES

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ADJUSTABLE GOGGLES

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This invention relates to eyeshields or goggles of the type which protect the eyes of the wearer from flying particles, heat, harmful light rays and other harmful effects.

5 In my copending application Serial No. 393,360, filed September 18, 1929, I have disclosed an adjustable eyeshield or goggles and this present invention is an improvement thereof.

10 In the present type of goggles there are many disadvantages, one of which is that the goggles fit so close against the face of the wearer that as a result they become very warm and inconvenient to wear after being retained in position for only a short period of time. Also the known forms of goggles tend to collect perspiration which will soon clog the eyeshield portion rendering clear vision impossible and making it necessary to remove the goggles in order to clean them. It is often necessary, especially in welding work, to remove the goggles from the eyes at frequent intervals, the goggles being retained in protective position when actually welding. In such a case with the known forms of goggles, it is necessary to slide them up on the forehead to get them out of position. This, of course, is a tiresome and inconvenient operation.

30 Another type of goggles in use at the present time makes use of a rigid head frame for retaining the goggles before the eyes. This type, of course, is expensive to manufacture and has the further disadvantage of having a heavy headgear which in close or cramped work is inconvenient to wear. This type in particular is found to be exceedingly uncomfortable to wear in warm temperature conditions and also tends to collect perspiration which makes the goggles unusable and even dangerous to wear.

45 One of the primary objects of my invention is to overcome the disadvantages stated above.

Another object of my invention is to obtain a light and rugged eyeshield which is fixedly adjustable to an operative or inoperative position.

50 Another object of my invention is to ob-

tain an eyeshield which is simple to manufacture.

Further objects of my invention will become apparent from the following description and drawings in which

Figure 1 is a front view.

Figure 2 is a side view.

Figure 3 is a detailed sectional view taken at 3-3 of Figure 1; and

Figure 4 is a perspective view of a detail of Figure 2.

Referring more particularly to the drawings in which like reference characters denote like parts, the rims 1 hold the transparent eyeshields 2. These rims may be made of any material either metal or composition, but a non-corroding, durable metal such as chromium plated rim is preferred. These rims may be extended as shown at 1a in such a manner that the extended edge follows the curvature of the face thus effectively protecting the eye on all sides. This extended portion may, of course, be made of fibrous mesh or other material. It is preferable that the extended edge be covered as shown at 1b with rubber, leather or similar material so that a pleasing contact may be made with the face of the wearer. The transparent shields 2 may be colored if desired in order to protect the eye from certain dangerous light rays. They may also be made of any of the non-shatterable, transparent materials now on the market.

The two eyeshields 2 are maintained in spaced relation by the element 3 which is attached to the rims at any convenient point as is shown in the drawings at 4. The element 3 may be curved so as to fit over the bridge of the nose or in certain cases may be fastened in such a position to the rims that it will have no contact with the face of the wearer. The element 3 has the extended portions 3a which connect with an outer housing 5 which covers a sleeve 6. One end of this sleeve is adapted to slide on the abutment 7 of the shaft 8, Figure 3. The opposite end of the sleeve 6 is guided on the shaft 8 by means of the internal ridge 9. Another abutment 10 is fastened to the shaft 8. This abutment has on its inner edge the serrated

or ridged surface 11 which is adapted to co-act with the serrated or ridged surface 12 at the end of the sleeve 6. Inside the sleeve and surrounding the shaft 8 there is a spring 13 which bears at one end against the collar or abutment 7 and at its opposite end against the internal ridge or abutment 9 of the sleeve 6. Inasmuch as the sleeve 6 is longitudinally movable and also adapted to rotate about the shaft 8, the spring tends to force the serrated or ridged end 12 against the serrated edge 11 of the fixed abutment 10. The action takes place irrespective of the position to which the sleeve 6 and housing 5 may be rotated.

The shaft 8 is connected at each end shown at 8a to the rigid frame 14 by means of the curved arms 15. This frame may be made of fibre or metal and may be covered with leather or other material. It is preferably of rigid construction and is curved to fit the forehead of the wearer. Its purpose is to furnish a rigid supporting element for the goggles and yet it is of such a light weight and size as to not impede the wearer or become irksome after continuous use. A strap 16 adapted to pass around the head of the wearer is fastened to the rigid element 14 at each end as shown at 17. Another strap 18 may be fastened at 19 which is adapted to pass over the head of the wearer and connected to the side strap at the back of the head. These straps may be adjusted to the head of the wearer by means of element 20 which has been shown in detail in Figure 4. The side straps pass around either side of the wearer and are fastened at the ends 21 of the element 20. The strap passing over the top of the head is fastened at 22. The straps are slipped through the opening 23 and then through the openings 24 and 25. The opening 23 acts to retain the strap in position and yet facilitates its adjustment and also increases the holding power of the slots 24 and 25. The points 17 and 19 at which the straps are fastened to the rigid element 14 may be indented so that the face of the strap will lie flush with the inside edge of the rigid element 14.

In operation the headbands 15 and 18 may be properly adjusted by means of the fastener element 20 so as to hold the rigid frame 14 in position without discomfort to the wearer. The rigid frame 14 is placed at such a position on the forehead that the goggles when turned down rest comfortably before the eyes in such a position that the eyes are protected from all glare, heat or flying particles. When it is no longer necessary or desirable to have the goggles before the eyes they are merely swung out away from the face to any desirable position such as is shown in dotted lines in Figure 2. This is most easily done by putting a slight pressure on the goggles to compress the spring 13 so that the housing

5 and sleeve 6 move along the rod 8 away from the fixed abutment 10. The serrated ends 11 and 12 will then no longer coact and the goggles may be easily lifted to a desired position. Then by merely releasing the goggles the spring 13, by bearing against the intumed edge 9 of the sleeve 6, forces the sleeve housing and goggles by a slight horizontal movement toward the abutment 10 so that the serrated face 12 is made to coact again with the serrated face 11 of the fixed abutment 10. As soon as these two ridged faces coact again the goggles are held in position. This spring action may be nicely adjusted so that only a slight pressure is necessary to move the goggles and yet the spring has enough pressure so that the goggles will always be maintained in the position to which they are moved.

The construction of the goggles is such that the only parts which touch the face of the wearer are the rigid frame 14 and a portion of the side shields 15. This is due to the fact that the arms 15 are curved away from the forehead and the goggles suspended from a point away from the face. If desired the goggles may be pivoted to a position slightly forward and away from the face and thus remove even the side shields 15 from contact with the face. There is no flopping movement of the goggles when maintained in this position away from the face.

It can be seen that my goggles are very easily adjusted. This adjustability is of great importance in certain types of work which require constant removal and replacement of the goggles before the eyes. With my goggles no movement of the headgear is necessary, the goggles being easily removable away from the face by pivoting about the fixed point which is situated also away from the forehead. Furthermore, my goggles have special advantages in working in the summer or in an atmosphere which causes perspiring, inasmuch as there is no possibility for the goggles to become clouded and thus unusable. There is no need for constant removal and cleaning and at all times a clear vision may be had. These goggles are also extremely light in construction. This is of a special advantage when goggles must be worn for a long period of time.

It will be apparent to those skilled in the art that many modifications may be made without departing from the spirit of my invention. For example, the external housing 5 and the sleeve 6 may be made as one piece, as may the shaft and the abutments. The goggles may be connected at any convenient point. I therefore do not wish to be limited by the specification and drawings but only by the appended claims.

I claim:

1. An eye protector comprising a substantially rigid frame member adapted to lie against the forehead and having integral

substantially rigid extended arms, a rod connecting the extremities of said arms and positioned between said arms, a sleeve fixedly adjustable on said rod, transparent eye protectors connected to said sleeve and flexible means for retaining said frame member in position.

2. An adjustable eye protector comprising a substantially rigid frame member adapted to lie against the forehead and having substantially rigid forked arms extending forwardly therefrom, a rod connected to the ends of said arms, a sleeve on said rod, a spring bearing against said sleeve whereby the sleeve is retained in adjusted position, transparent eye shields connected to said sleeve and means for retaining said frame member in position.

3. An improved goggle comprising a single piece substantially rigid frame member adapted to fit against the forehead and having two extending arms forming a fork, a rod connecting and positioned between the ends of said arms, a sleeve fixedly adjustable on said rod, transparent eye shields connected to said sleeve and flexible means for retaining said frame member in position.

In testimony whereof, I have signed my name to this specification this 6th day of November, 1929.

GEORGE ROTOLO.