May 30, 1939. E. RENNEBERG 2,160,675

CONNECTING OR SECURING MEANS

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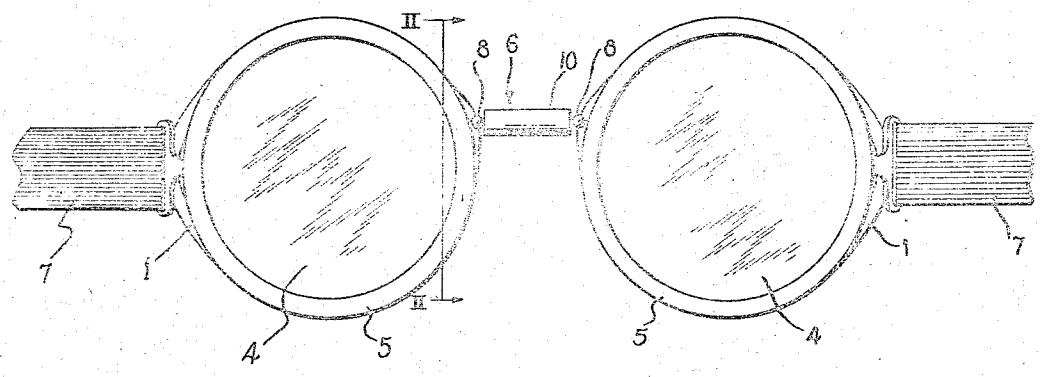


Fig. I

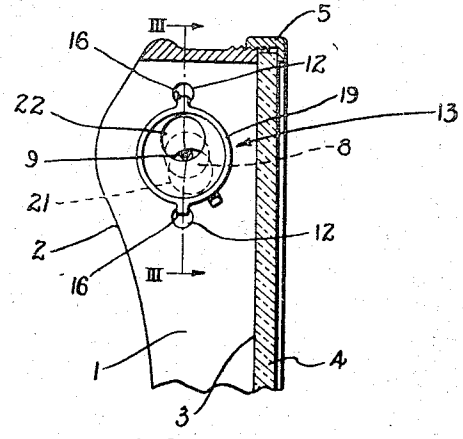


Fig. II

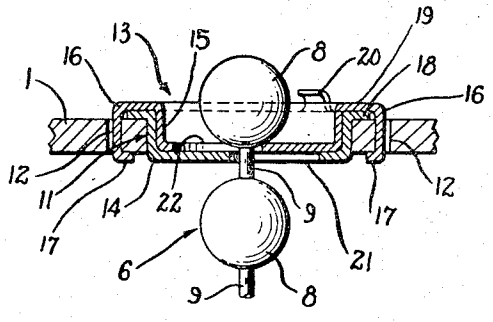


Fig. III

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CONNECTING OR SECURING MEANS

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2 Claims. (Cl. 24—211)

This invention relates to improvements in connecting or securing means and has particular reference to improved means and method of uniting the parts of an ophthalmic mounting.

One of the principal objects of the invention is to provide an improved connection or securing device for attaching and at the same time permitting the removal or adjustment of the bridge used in connecting the lens holding means or eyecups of a goggle or eye protector.

Another object of the invention is to provide improved bridge means for an ophthalmic mounting which may be automatically adjusted without bending to obtain the required distance between the lenses.

Another object is to provide means for locking the removable bridge in place so that there will be no opportunity for it to slip or loosen while the mounting is in use.

Another object is to provide simple means of adjusting the distance between the lens holding members which may be operated without disturbing other parts of the mounting.

Another object is to make possible the ready removal of soiled and worn bridge coverings or replacement of new parts as well as adjustments of said parts without the use of special tools.

Another object is to provide simple and durable means of adjusting the distance between the lens holding members and which will be relatively inexpensive to manufacture.

Other objects and advantages of the invention will become apparent from the following description taken in connection with the accompanying drawing, and it will be apparent that many changes may be made in the details of construction, arrangement of parts and steps of the process without departing from the spirit of the invention as expressed in the accompanying claims. I, therefore, do not wish to be limited to the exact details shown and described as the preferred form has only been shown by way of illustration.

In the drawing:

Fig. I is a front view of an ophthalmic mounting embodying the invention;

Fig. II is an enlarged fragmentary view of the portion of the goggle on line II—II of Fig. I and looking in the direction indicated by the arrows; and

Fig. III is an enlarged sectional view taken on line III—III of Fig. II.

With certain types of ophthalmic mountings particularly eye protectors and goggles it is necessary that the mounting be so formed that the distance between the lens holding members may be adjusted to fit the facial requirements of different individuals and to also enable the ready removal of soiled and worn parts such as bridge coverings, etc. In prior art mountings where attempts have been made to accomplish this result it has been found difficult to produce a connection that will hold the bridge member securely in position and yet be so constructed that the distance between the lens holding members may be quickly and easily adjusted, that is, to provide a device which is durable and inexpensive and which may be quickly operated without the use of special tools and without disturbing other parts of the mounting such as the means for supporting the lenses, etc.

It is therefore the prime object of this invention to provide a simple and efficient connection of the bridge means to the lens holding members of an ophthalmic mounting whereby the said bridging means may be easily and quickly adjusted to the requirements of the wearer and be held securely in the adjusted position during the use of the mounting.

Referring more particularly to the drawing in which similar characters of reference designate corresponding parts throughout the several views the device embodying the invention comprises a pair of eyecup members 1 of the usual conventional type which are formed with a face contacting edge 2 shaped to the contour of the face and a lens supporting edge 3 on which a protection lens 4 is held by suitable means such as a retaining ring 5. The retaining ring is preferably provided with a threaded portion which is threadedly connected to a similar threaded portion formed adjacent the lens supporting edge of the eyecup. It, however, may be attached to the eyecup by any suitable means known in the art.

The eyecup members 1 are connected centrally by a bridge member 6 and are provided with a suitable head band 7 to hold the mounting on the face of the wearer.

The bridge member 6 is flexible and is formed of a plurality of ball members 8 connected in spaced relation by a series of link members 9. The bridge member is covered by a tubular member 10 which may be formed of a non inflammable substance, rubber or other soft protective material.

The connection of the bridge member 6 to the eyecup 1 is formed by piercing the side walls of the eyecups to form a relatively large opening 11 therethrough and spaced diametrically opposed relatively small openings 12.

The connecting means, which as shown in Fig. III, comprises two small metallic cups 14 and 15 shaped to fit one within the other and to fit in the opening 11, is secured in said opening by means of small prongs or protuberances 16 formed on the cup member 15 and which extend through the openings 12 and are turned over as indicated at 17 to act as clips retaining the said cups 14 and 15 in superimposed relation with each other in the opening 11. The cup member 14 is provided with a flange 18 which assumes a position between the wall of the eyecup 1 and a similar flange 19 formed on the cup member 15. The cup member 14 is also provided with a prong or protuberance 20 which extends outwardly of the peripheral edge of the flange 19 towards the inside of the eyecup to provide means by which the cup member 14 may be revolved to the left or right within the opening 11.

Each of the cups 14 and 15 are provided with eccentric openings 21 and 22 respectively which during the rotation of the cup member 14 may be moved into alignment with each other to permit the insertion of one end of the ball chain member or bridge 6. After the end of the ball chain member has been adjusted to the length desired by the insertion of one or more of the ball members 8 inwardly of the aligned openings 21 and 22 the disk 14 is rotated by means of the prong 20 to cause the openings to move out of aligned relation with each other as indicated in Fig. II until the side walls of the portions having the openings therein close in about the adjacent link 9 to lock the bridge member to the eyecup.

When it is desired to change the length of bridge or remove the tubular member 10 when the said member becomes soiled or worn it is only necessary to rotate the cup member 14 until the openings 21 and 22 move into aligned relation with each other so that the ball members 8 may be moved inwardly or outwardly of said openings. This permits the bridge member to be detached from the connecting means 13 or permits the adjustment thereof as described above.

It is to be understood that one or both of the eyecups may be provided with the connecting means 13 as desired.

It is also to be understood that the flexible bridge member 6 may be formed of means other than the ball and link members 8 and 9 as it is only necessary that the said bridge member be provided with means which may be anchored in the connecting means 13 to secure the parts together.

From the foregoing it will be seen that I have provided simple, efficient and economical means of carrying out all of the objects and advantages of the invention, particularly that of providing durable means for allowing the bridge member to be easily and quickly adjusted and locked to the length desired without disturbing other parts of the mounting.

Having described my invention, I claim:

1. In a device of the character described for connecting separable parts, one of said parts having a wall with an opening therein and the other a portion shaped to extend in said opening, connecting means for securing said portion in said opening comprising a pair of concentrically arranged interfitted cup shaped members, each having an eccentrically disposed opening therein and an angularly disposed lip, the body portion of one of said cup shaped members fitting within the opening in said wall with its lip engaging a side surface of the wall adjacent said opening, the body portion of the other of said cup shaped members fitting in said first cup shaped member with its lip overlying the lip of said first cup shaped member and having attaching means extending therefrom and attached to the wall to hold the said cup shaped members in said opening, the lip of the first cup shaped member lying between the lip of said second member and the wall to which said second member is attached, said first member having a tongue extending outwardly of one side thereof between the contour of the lip of the second cup shaped member whereby the first cup shaped member may be rotated relative to the second to move the eccentric openings into and out of aligned relation with each other.

2. In a device of the character described for connecting separable parts, one of said parts having a wall with an opening therein and the other a portion shaped to extend in said opening, connecting means for securing said portion in said opening comprising a pair of concentrically arranged interfitted cup shaped members each having an eccentrically disposed opening therein and an angularly disposed lip, the body portion of one of said cup shaped members fitting in the opening in said wall with its lip engaging the side surface of the wall adjacent said opening, the body portion of the other of said cup shaped members fitting in said first cup shaped member with its lip overlying the lip of said first cup shaped member and having attaching fingers extending therefrom and attached to the wall adjacent the opening therein to hold the said cup shaped members in said opening, the lip of the first cup shaped member lying between the lip of said second member and the wall of the adjacent separable part with the attaching fingers overlying the edge of the lip of said first member, the said lip of said first member having a tongue extending outwardly to one side thereof beyond the contour of the lip of the second cup shaped member whereby the first cup shaped member may be rotated relative to the second to move the eccentric openings into and out of aligned relation with each other.

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