Feb. 23, 1943. G. E. NERNEY 2,311,991

EYEGLASS CONSTRUCTION

Filed July 27, 1940

Fig. 1.

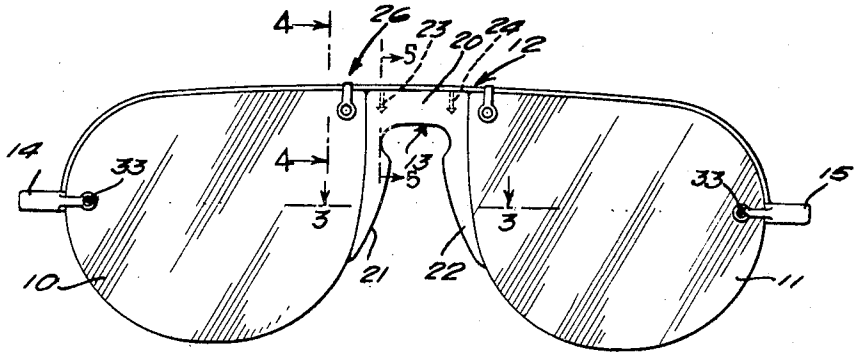


Fig. 2.

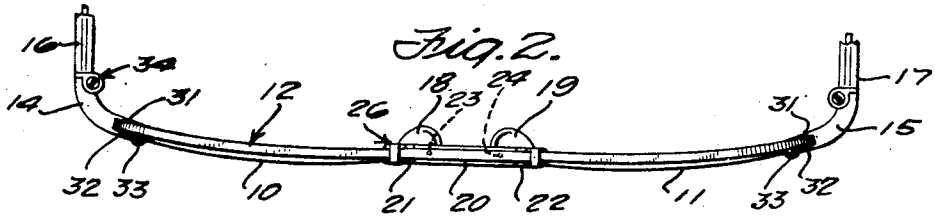


Fig. 3.

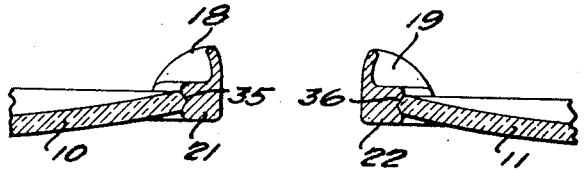


Fig. 4.

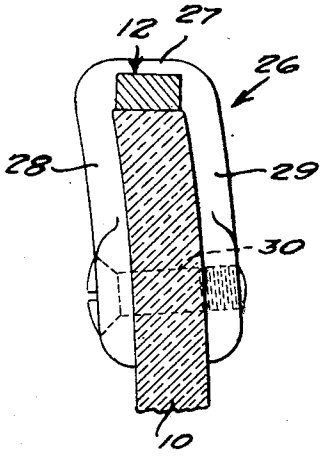
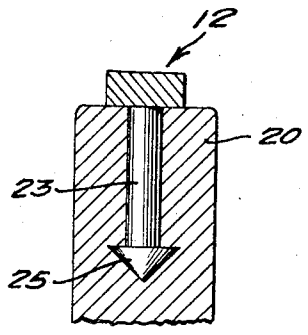


Fig. 5.



INVENTOR
GEORGE E. NERNEY
BY
Blair, Curtis & Hayward
ATTORNEYS

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EYEGLASS CONSTRUCTION

George E. Nerney, Attleboro, Mass., assignor to Bay State Optical Company, Attleboro, Mass., a corporation of Maine

Application July 27, 1940, Serial No. 347,887

5 Claims. (Cl. 88—41)

This invention relates to eyeglass construction and more particularly to that type of construction known as a pair of goggles.

One of the objects of this invention is to provide an eyeglass construction which will be strong, durable, and thoroughly practical. Another object is to provide a construction of the above character which may be economically manufactured with a minimum amount of labor. Another object is to provide a construction of the above character which may be conveniently applied to lenses of different shapes. Another object is to provide a construction of the above character which is well adapted to withstand the wear and tear of hard use and at the same time enhance the whole construction. Another object is to provide a construction of the above character in which the lenses thereof are reliably supported in their proper position. Another object is to provide a construction of the above character which may be made of light and inexpensive materials. Another object is to provide a construction of the above character whose assembly may be easily and quickly accomplished. Another object is to provide a construction of the above character having the appearance of a rimless pair of spectacles, while preserving to a marked degree the more durable characteristics found in the rim construction. Other objects will be in part obvious and in part pointed out hereinafter.

The invention, accordingly, consists in the features of construction, combinations of elements and arrangements of parts as will be exemplified in the structure to be hereinafter described, and the scope of the application of which will be indicated in the following claims.

In the accompanying drawing in which is shown one of the various possible embodiments of this invention,

Figure 1 is a front elevation of the eyeglass construction;

Figure 2 is a top plan view of the construction shown in Figure 1;

Figure 3 is a horizontal view on an enlarged scale on the line 3—3 of Figure 1;

Figure 4 is a vertical section on an enlarged scale on the line 4—4 of Figure 1; and

Figure 5 is a vertical section on an enlarged scale on the line 5—5 of Figure 1.

Similar reference characters refer to similar parts throughout the several views of the drawing.

As conducive to a clearer understanding of certain features of this invention, it might here be pointed out that there are three important things to be considered in goggle construction. These are that the goggles be of pleasing appearance, durable construction, and inexpensive to manufacture. That the goggles be of pleasing appearance is important, because goggles are worn by many people who do not wear glasses, and these people are not guided by the retailer in their selection but mainly by the appearance of the goggles. Accordingly, a goggle with a simple pleasing construction enjoys larger sales. Strength is necessary because goggles are handled less carefully than eyeglasses. For example, goggles are very often carried in ladies' handbags, and when therein are subjected to strains resulting both from shocks from the other articles in the handbag and from external pressures exerted thereon. Thus, it is preferable that a goggle be of durable construction, so that it can withstand the strains to which it is subjected. That a goggle be of economical manufacture is important because there are a large number of cheap goggles now on the market. Because of this, there must not be too large a price differential between a goggle which is to enjoy a large sale and these cheap goggles. Accordingly, a goggle which is of pleasing appearance, durable construction, and economical manufacture is a goggle which would enjoy a maximum of sales. It is another object of this invention to make a goggle construction of this type.

It might here be noted that reference hereinafter to an "outward" direction signifies a direction to the right or the left of the center of the bridge of an eyeglass frame in the direction of the temple, while the term "inward" denotes a direction toward the center of the bridge from one of the temples. A "rearward" direction refers to a direction toward the face of a wearer, whereas the term "forward" denotes the opposite direction thereto. An "upward" direction refers to a direction upwardly from the face of a wearer, while a "downward" direction is opposite thereto.

Referring now to Figures 1 and 2, there is shown a goggle construction having lenses 10 and 11, and extending across the top edges of these lenses to connect the lenses is a ribbon-like lens supporting member, generally indicated at 12. Between lenses 10 and 11 and secured to lens supporting member 12 is a non-metallic bridge, generally indicated at 13, which carries a pair of nose pads 18 and 19 (Figure 2). Secured to the ends of lens supporting member

12 are end pieces 14 and 15 connected to temples 16 and 17, respectively. As best shown in Figure 1, non-metallic bridge 13 includes a center portion 20 having a pair of integral depending arms 21 and 22 formed thereon. The nose pads 18 and 19 (Figure 2) are formed on and extend rearwardly from depending arms 21 and 22. These nose pads flange outwardly and rearwardly, as is best shown in Figures 2 and 3, to provide surfaces for comfortably transmitting the weight of the goggles to the nose of the wearer.

Lens supporting member 12 is preferably made from a metal ribbon of a rectangular cross section. The center section of this member is secured to the non-metallic bridge 13 by a pair of metal pins, generally indicated at 23 and 24 (Figure 1). These pins have enlarged wedge-shaped heads, such as the head 25 on pin 23 (Figure 5) and are secured to the lens supporting member 12 by soldering or welding. To fasten the lens supporting member to the non-metallic bridge, the plastic material from which the bridge is made is softened by the application of heat. Then pins 23 and 24 are driven into the center portion of the top of the bridge (Figure 2). When the plastic material hardens again, it secures a firm grip on the pins 23 and 24 and their enlarged wedge-shaped heads. Thus, lens supporting member 12 is securely fastened to the non-metallic bridge 13 by pins 23 and 24.

Referring now to Figure 3, the outer edges of depending arms 21 and 22, which abut against lenses 10 and 11, have grooves 35 and 36 formed therein. The inner edges of lenses 10 and 11 are beveled to fit in these grooves and thus, a connection is formed between the bridge and the lenses which interlocks them to form a single unit.

The lens supporting member 12 extends outwardly from bridge 13 following the peripheries of lenses 10 and 11 to their outside edges where they connect to end pieces 14 and 15. As the connection of the lens supporting member 12 to each of the lenses and to each of the temples through their respective end pieces is substantially the same, the description will be limited to the connection of this member to lens 10 and to temple 16.

The upper inner portion of lens 10 is secured to lens supporting member 12 by means of a strap, generally indicated at 26 (Figure 1). This strap is of a U shape (Figure 4), comprising a center portion 27 having two integral strap arms 28 and 29 formed thereon, and is secured at its center portion 27 to lens supporting member 12 by soldering or welding with its strap arms 28 and 29 extending over opposite faces of lens 10. Strap arms 28 and 29 have holes formed therein in alignment with a lens hole in lens 10. A screw 30 extends through one of these strap holes, through the lens hole, and threads into the other strap hole. This screw securely clamps the strap to the lens, and thus, the upper inner portion of the lens is firmly connected to the lens supporting member 12 (Figure 1).

The outer end of lens supporting member 12 (Figure 2) is secured by welding or soldering to end piece 14 between a pair of strap members 31 and 32. These strap members extend inwardly over opposite faces of lens 10 and have holes formed therein in alignment with a lens hole. A screw 33 extends through one of these strap holes, through the lens hole, and threads into the other strap hole. Thus, the outer end of lens supporting member 12 is firmly secured to lens 10. Accordingly, lens 10 is securely mounted upon lens supporting member 12, being connected thereto at two spaced points which are interconnected by a metal frame member.

End piece 14 is connected by a hinge 34 to temple 16, which is preferably non-metallic, but may be of any desired shape. This type of mounting for the temples is particularly durable, as the temples are interconnected by a continuous integral member. This eliminates connection points in the center of the frame which are vulnerable to twisting strains transmitted thereto from the temples. Furthermore, both lenses are firmly mounted upon one member and are separated by a non-metallic bridge, the resilient arms of which act as a cushion to absorb shocks upon the outside ends of the frame. A further advantage lies in the fact that all of the parts contacting the skin of the wearer are non-metallic, while the frame is basically a metallic one. Thus, the frame has the strength of a metallic construction coupled with the advantages of a non-metallic construction. Also, it should be noted that this goggle includes a minimum of parts, all of which are of simple construction. These parts may also be assembled in a minimum number of steps and thus, this goggle is economical to manufacture. Furthermore, because of the small number of parts, there is a minimum of joints and thus, the construction is of a durable and lasting character. From Figure 1 the pleasing appearance of the goggle is immediately apparent, the smooth curving lines of the parts blending to make an extremely attractive structure.

Thus, a goggle construction is disclosed which has simple pleasing lines, which is of strong durable construction, and which may be manufactured economically.

It will thus be seen that I have provided a thoroughly practical and efficient construction in which the several objects mentioned above, as well as many others, have been successfully and efficiently accomplished.

As many possible embodiments may be made of the above invention and as many changes might be made in the embodiment above set forth, it is to be understood that all matter hereinbefore set forth or shown in the accompanying drawing is to be interpreted as illustrative and not in a limiting sense.

I claim:

1. In eyeglass construction, in combination, a pair of lenses having their upper and inner edges extending at substantially right angles to each other, a single bar lens supporting member having a substantially straight center section extending across the upper edges of said lenses, a pair of straps securing said lenses to said bar at the juncture points of the upper and inner edges of said lenses, a pair of straps securing the outer ends of said bar to the outer edges of said lenses, a pair of temples hingedly connected to the outer ends of said bar, and a bridge member made of a resilient plastic positioned between said lenses and connected to the center portion of said bar, said bridge member including a center portion and a pair of depending arms, said depending arms being of substantial length and having their outer edges contacting substantially more than half of the inner edges of said lenses.

2. In eyeglass construction, in combination, a

pair of lenses, a single metallic lens supporting member extending across and engaging the upper edges of said lenses, a pair of lens straps secured to said lens supporting member and to the upper inner portions of said lenses, a second pair of lens straps secured to the ends of said lens supporting member and to the outer edge portions of said lenses, a bridge member made of a resilient plastic connected to said lens supporting member and positioned between said lenses, said bridge member having outer edges of substantial length which contact substantial portions of the inner edges of said lenses, said bridge member being adapted to resiliently resist movement of said lenses toward each other, and a pair of temples hingedly connected to the outer ends of said lens supporting member.

3. A pair of goggles comprising, in combination, a pair of non-circular lenses, a substantial portion of the upper edges of which are straighter than the outer edges thereof, a resilient plastic bridge disposed between said lenses and including a pair of spaced arms depending downwardly at least as far as the centers of said lenses and adapted to engage and support the inner edges of said lenses, an elongated metallic supporting member having a flat bottom surface adapted to engage the upper edges of said lenses and a portion of the outer edges of said lenses and the upper edge of said bridge, means for securing said member to each of said lenses at points adjacent the outer and upper edges thereof, and means for securing said member to said bridge, the inner edges of said lenses being separably related to the depending arms of said bridge whereby said arms support said lenses against their normal tendency to sag and also resiliently resist and absorb forces exerted on said lenses tending to force them together.

4. A pair of goggles comprising, in combination, a pair of lenses, the upper inner portions of each of said lenses having a definite line of demarcation between the upper and inner edges thereof, the upper edge of each lens being substantially horizontal and the inner edge thereof being substantially vertical, an elongated flattened metallic lens and bridge supporting member, means for securing the opposite ends of said member respectively to the outer edges of said lenses, a plastic bridge having a flat crosspiece and spaced depending arms, and means for securing said bridge to said member midway between the ends thereof and between said lenses, the distance between the point of connection of each lens and said member by said first-mentioned means and said line of demarcation being greater than the horizontal distance between said point and the nearer of said arms, the outer edges of said arms forming with said member angles equal to the angles formed by the upper and inner edges of said lenses whereby the upper inner portions of said lenses are supported by said member and said arms, the outer surfaces of said arms respectively engaging and supporting the inner edges of said lenses against downward movement thereof relative to said member.

5. A pair of goggles comprising, in combination, a pair of non-circular lenses, the upper and inner edges of each of which are flatter than the outer and lower edges, an elongated flattened metallic lens and bridge supporting member, means for securing said lenses to said member, said means including a resilient plastic bridge adapted to be secured to said supporting member midway between the ends thereof for engaging portions of the inner edges of said lenses to hold said lenses in position with their upper edges against the bottom surface of said supporting member, said bridge including a pair of spaced arms depending downwardly at least as far as the centers of said lenses, each of said arms having a groove formed therein into which portions of the inner edges of said lenses are respectively disposed, and means for securing the opposite end portions of said member respectively to each of said lenses at points adjacent the outer edges thereof whereby said first-mentioned means supports said lenses against their tendency to pivot downwardly about their points of attachment to said supporting member and also supports said lenses against their tendency to sag inwardly toward one another.

GEORGE E. NERNEY.