May 27, 1941. G. E. NERNEY 2,243,770

EYEGLASS CONSTRUCTION

Filed Feb. 24, 1940

Fig. 1.

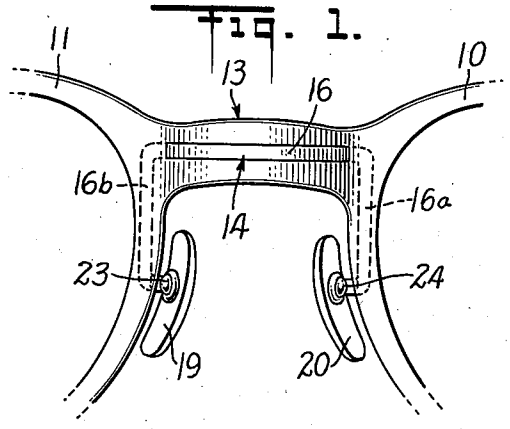


Fig. 2.

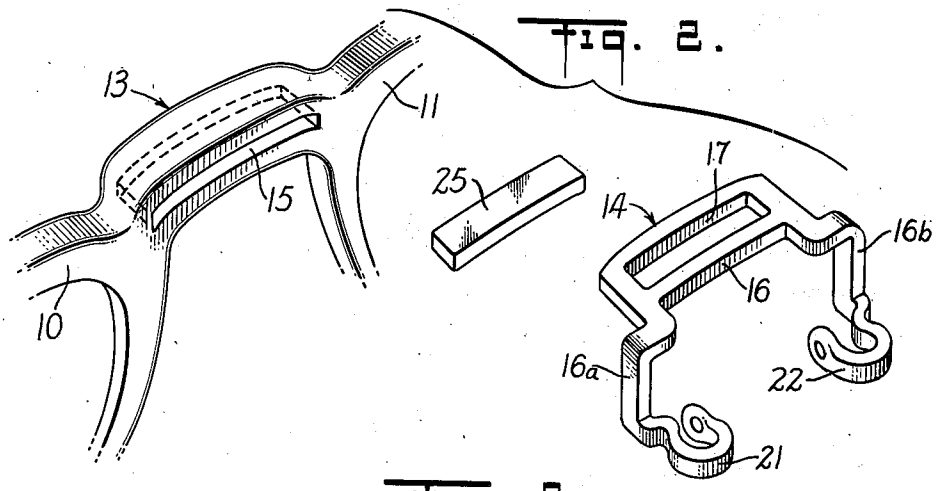


Fig. 3.

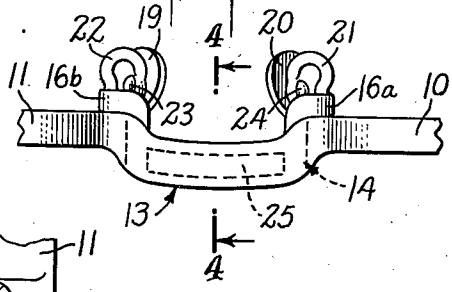
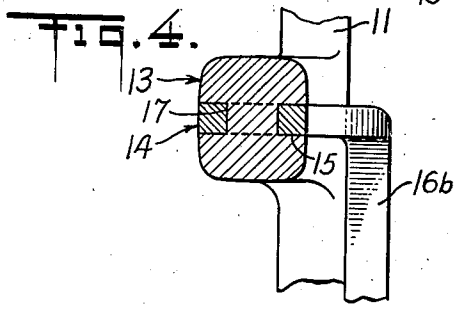


Fig. 4.



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

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6 Claims. (Cl. 88—43)

This invention relates to eyeglass construction and more particularly to an eyeglass frame formed from a plastic material.

One of the objects of this invention is to provide a simple and thoroughly practical eyeglass construction. Another object is to provide a construction of the above character which will be neat and attractive in appearance. Another object is to provide a construction of the above character having a minimum of parts and being capable of easy assembly. Another object is to provide a construction of the above character which may be readily and inexpensively manufactured in large quantities. Another object is to provide a construction of the above character which is sturdy and durable under the strain of extended use. Another object is to provide a construction of the above character wherein the metallic parts are concealed to a great extent to give a pleasing effect. Another object is to provide a construction of the above character wherein the metallic parts are reliably secured to the plastic material. 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 my invention,

Figure 1 is a front elevation of an eyeglass frame, certain of the parts thereof being broken away;

Figure 2 is an exploded perspective view of the frame shown in Figure 1;

Figure 3 is a top plan view of the frame shown in Figure 1; and

Figure 4 is a vertical sectional view taken along line 4—4 of Figure 3.

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 in eyeglass frames or the like, and more particularly in non-metallic frames in which metallic fittings are used, considerable difficulty has been experienced in providing a connection between the fittings and the non-metallic frame. For example, in making connections of this type, due to the character of the materials, it is difficult to obtain a joinder between the fittings and the frame which will not loosen after continued usage, such loosening being difficult and sometimes impossible to correct. A further difficulty has been experienced in that when a metal fitting has been made of sufficient size to make a strong connection with the non-metallic frame, it detracted from the frame's appearance. This was caused by the fact that plastic materials are usually partially or completely transparent, and thus the parts comprising a fitting are visible. One of the objects of this invention is to provide a construction wherein the above difficulties, as well as many others, are effectively overcome.

Referring now to the drawing, in Figure 1 there is shown the center portion of a non-metallic frame comprising rims 10 and 11 connected by a bridge generally indicated at 13. The frame is preferably made from zylonite or the like and has a nose guard fitting generally indicated at 14 connected to bridge 13 in a manner to be disclosed more fully hereinafter.

As may be best seen in Figure 2, bridge 13 has a slot 15 cut therein, preferably in a plane substantially horizontal with respect to the normal position of the frame when worn. This slot preferably extends substantially throughout the length of the bridge and passes from the front to the back thereof, as may be seen in Figure 4.

Nose guard fitting 14 (Figure 2) comprises a metal part 16 having a pair of depending portions, generally indicated at 16a and 16b formed thereon. Metal part 16 preferably is of the same width as bridge 13, and its length and thickness are substantially the same as the length and thickness of slot 15. Extending through and along substantially the entire length of part 16 is an opening 17 which is adapted to receive snugly and be filled by an insert 25 of a plastic material such as zylonite.

To secure nose guard fitting 14 to bridge 13, insert 25 is placed in opening 17 in part 16, and the part and the insert are first coated with lacquer and then dipped in ethyl acetate, which softens the outer surface of insert 25. While the plastic insert is in this softened state, part 16 and insert 25 are inserted in slot 15 in bridge 13, and the upper and lower portions of the bridge are pressed together. This pressure causes the ethyl acetate on insert 25 and on the surfaces of part 16 to contact and soften the abutting surfaces of slot 15. As the ethyl acetate evaporates, insert 25 fuses to the upper

and lower surfaces of slot 15, and the bridge becomes an integral member having a section extending through the center of part 16. Furthermore, the lacquer and ethyl acetate on the surfaces of part 16, contacting the sides of slot 15, form a bond which securely connects the metal part to the non-metallic frame.

Depending portions 16a and 16b are preferably connected to the inner corners of part 16 and extend downwardly therefrom, following the rear surfaces of rims 10 and 11, respectively, and terminating in the form of brackets 21 and 22. These brackets 21 and 22 extend rearwardly away from rims 10 and 11 (Figure 3) and toward each other (Figure 1) and provide mountings for a pair of nose guards 19 and 20. Nose guards 19 and 20 are loosely mounted upon suitable rivets 23 and 24, which permit the nose guards to assume the proper position to fit the nose of the wearer.

Thus I have provided a nose guard fitting for a non-metallic frame which has a minimum of parts and thus may be easily and quickly assembled. At the same time, a nose guard fitting has been devised which is well adapted to withstand any strains which may be placed thereupon by hard usage. Furthermore, a fitting has been provided for a non-metallic frame in which a minimum of the metal part connecting the fitting to the frame is visible, thus enhancing the appearance of the frame.

It will thus be seen that I have provided a thoroughly practical, efficient, and durable construction in which the several objects disclosed hereinabove, as well as many others, have been successfully achieved.

As many possible embodiments may be made of the above invention, and as many changes might be made in the embodiments above set forth, it is to be understood that all matters hereinabove 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 bridge formed from a plastic material, and a flat metal part embedded in said bridge in substantially a horizontal plane with respect to the normal position of the frame when worn and extending substantially across said bridge, said part having a vertical opening of substantial size formed therein, said opening extending substantially throughout the length of said metal part, said plastic material extending through said opening, and a pair of nose guards secured to said part.

2. In eyeglass construction, in combination, a bridge formed from a plastic material and having a slot therein, a flat metal part mounted in said slot having a substantially vertical opening of substantial size formed therein and being positioned in substantially a horizontal plane with respect to the normal position of the frame when worn, said opening extending substantially throughout the length of said metal part, a piece of plastic material substantially filling said opening, means securing said piece of plastic material to the sides of said slot, and a pair of nose guards connected to said metal part.

3. In eyeglass construction, in combination, a bridge formed from a plastic material and having a slot therein, an elongated flat metal part positioned in said slot and having a vertical opening of substantial size formed therein, said flat metal part being positioned in substantially a horizontal plane with respect to the normal position of the frame when worn, said plastic material extending through said opening in said part and thus securing said part to said bridge, a pair of nose guard arms extending downwardly from the rear edge of said metal part, a pair of nose guards, and means securing said nose guards to said downwardly extending nose guard arms.

4. In eyeglass construction, in combination, an eyeglass frame formed from a material plastic in character and including a non-metallic bridge having an elongated slot extending therethrough, an elongated flat metal part mounted in said slot and having an elongated opening of substantial size extending therethrough, a separate piece of plastic material in the opening in said part substantially completely filling said opening and being fused to the sides of said slot, and a pair of nose guards connected to said part.

5. In eyeglass construction, in combination, an eyeglass frame formed from a material plastic in character and including a non-metallic bridge having a slot formed therein, an elongated metal part mounted in said slot and having an opening of substantial size formed therein, a separate piece of plastic material filling the opening in said part and being fused to the side walls of said slot, and a pair of nose guards connected to said part.

6. In eyeglass construction, in combination, a bridge formed from a plastic material and having a slot therein in substantially a horizontal plane with respect to the normal position of the frame when worn, a flat metal part positioned in said slot and having a vertical opening of substantial size formed therein, a flat plastic material insert positioned in said opening and having its exposed sides flat and flush with the flat sides of said metal part, said piece of plastic material being fused to the side walls of said slot, and a pair of nose guards connected to said part.

GEORGE E. NERNEY.