March 28, 1944. G. E. NERNEY 2,345,065

EYEGLASS CONSTRUCTION

Filed Aug. 12, 1941

Fig. 1.

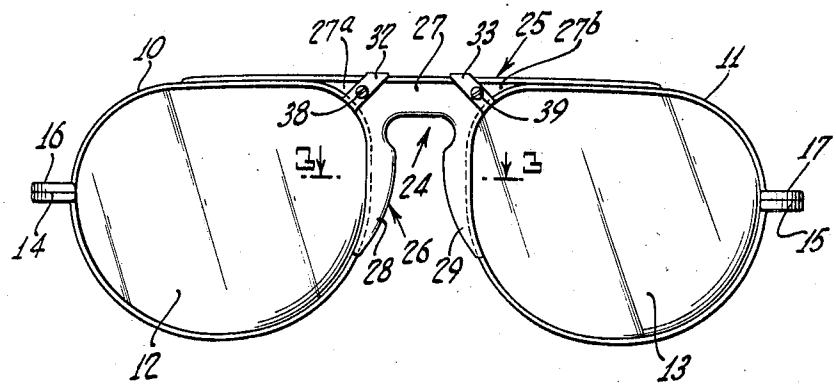


Fig. 2.

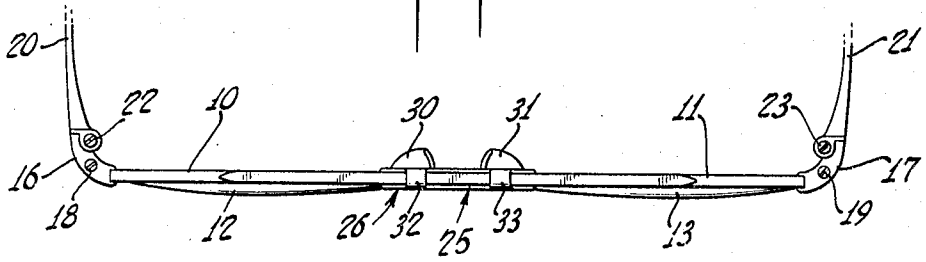


Fig. 3.

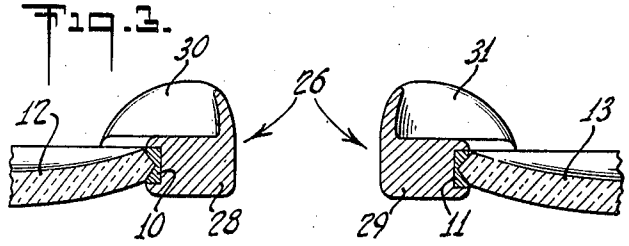
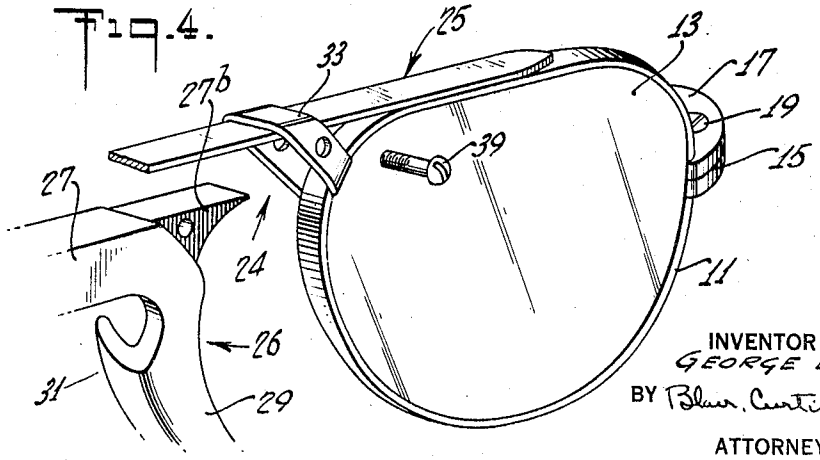


Fig. 4.



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EYEGLASS CONSTRUCTION

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7 Claims. (Cl. 88—41)

This invention relates to eyeglass frame construction.

One of the objects of this invention is to provide an eyeglass frame which is simple, thoroughly practical, and durable in use. Another object of the above invention is to provide a construction of the above character, the manufacture of which will be economical both from the standpoint of labor and materials used. 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 the strength of which is greatly increased due to the durability and lasting quality of the more vulnerable portions thereof. A further object is to provide a construction of the above character which is particularly adapted to absorb the shocks and strains resulting from extended use. 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 frame;

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

Figure 3 is a horizontal section, on an enlarged scale, taken on the line 3—3 of Figure 1; and,

Figure 4 is an exploded perspective view, on an enlarged scale, of portions of the frame shown in Figures 1 and 2.

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 the construction of a metal rim frame the bridge and its points of connection to the rims are known to be one of the weakest portions of this type of frame. This is caused by the fact that it is very difficult to produce a bridge which will be sturdy and securely attached to the rims and yet be light in weight. Also, when a frame is in use, and the lenses are twisted or are forced out of the positions in which they normally lie, the strains must be absorbed by the bridge. To withstand these strains, bridges are very often made of heavy construction. This type of bridge is liable to cause increased lens breakage, however, as it lacks resiliency and thus does not absorb shocks resulting from striking the ends of a frame. The force of these shocks, if they are not absorbed by the bridge and evenly distributed throughout the frame, very often results in lens breakage.

It is another object of this invention to provide a construction in which the above-mentioned difficulties, as well as many others, are overcome.

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 Figure 1, there is shown a frame having a pair of metal rims 10 and 11 completely encircling and holding in position a pair of lenses 12 and 13. Rims 10 and 11 may be made of any suitable construction and are split at points 14 and 15 (Figure 1) through endpieces 16 and 17 in order that the lenses may be disposed therein. Screws 18 and 19 (Figure 2) hold the split rims in assembled relationship, and a pair of temples 20 and 21 are pivotally connected to endpieces 16 and 17 in any suitable manner, such as by screws 22 and 23.

The bridge, generally indicated at 24, includes a metallic bridge member, generally indicated at 25, and a non-metallic bridge member, generally indicated at 26. The metallic member 25 is preferably made of a resilient metal and is of flat ribbon-like construction (Figures 1 and 4). Substantial portions of the outer ends of this member are connected to the upper edges of rims 10 and 11 in any suitable manner, such as by solder. As is best shown in Figure 1, rims 10 and 11 extend downwardly and inwardly from the innermost points of connection of the metallic bridge member to the rims, and thus a pair of angularly shaped pockets are formed between the upper inner edges of the rims and the metallic bridge member.

The non-metallic bridge member 26, which is positioned immediately below metallic bridge

member 25, includes a center portion 27 and a pair of depending portions 28 and 29. The center portion 27 extends between the rims and has sections 27a and 27b (Figure 1) which extend outwardly into the pockets between the metallic bridge member and the rims described hereinabove. Depending portions 28 and 29, which are integrally formed with portion 27, taper downwardly and outwardly to meet rims 10 and 11 (Figure 1). Extending rearwardly from depending portions 28 and 29 is a pair of nose pads 30 and 31 (Figures 2, 3, and 4) which preferably have their inner surfaces in curved planes which extend through the inner edges of depending portions 28 and 29. The outer edges of the non-metallic bridge member are preferably grooved (Figures 1 and 3) to receive the portions of rims 10 and 11 they contact.

To connect non-metallic bridge member 26 to the frame, a pair of U-shaped straps 32 and 33 is provided. These straps extend over the metallic bridge member, bridging the sides of the pockets formed between the member and the rims, and have their free ends secured to the front and rear edges of rims 10 and 11 in any suitable manner, such as by soldering. To mount the non-metallic bridge member the rims are spread, and the outwardly extending sections 27a and 27b are introduced into the pockets between the rims and the metallic bridge member. When the rims return to their normal position, the pockets, straps, grooves on the outer edges of the non-metallic bridge member, and shape of the non-metallic bridge member all coact to retain the non-metallic bridge member in assembled relationship with the frame. To more securely connect the non-metallic bridge member to the frame, screws 38 and 39 (Figures 1 and 4) may be used. These screws extend through holes in one of the legs of each strap through the outwardly extending sections 27a and 27b of the non-metallic bridge member, and then are threaded into the other leg of each strap. Thus, it may be seen that the straps both serve to reenforce the connection of the rims to the metallic bridge member and also are of material importance in mounting the non-metallic bridge member on the frame.

Thus, a frame has been disclosed in which the resilient metallic bridge member permits a maximum of movement of the various parts of the frame with respect to each other. Furthermore, the non-metallic bridge member forms an efficient buffer between the rims and thus is particularly well adapted to absorb the shocks which result when an end of the frame is struck against an object. It will thus be seen that I have provided a thoroughly efficient and practical construction in which the several objects hereinabove referred to, as well as many others, are successfully 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 frame construction, in combination, a pair of metallic rims, a flat metallic bridge member connected to the top portions of said rims, said rims curving downwardly and inwardly from the innermost points of connection of said metallic bridge member to said rims forming a pair of pockets with said metallic bridge member, and a non-metallic bridge member positioned below said metallic bridge member, said non-metallic bridge member having a pair of grooves formed in the outer edges thereof adapted to receive the inner edges of said rims and having sections extending outwardly from the upper portion thereof into the pockets between said rims and said metallic bridge member.

2. In eyeglass frame construction, in combination, a pair of metallic rims, a flate metallic bridge member connected to the top portions of said rims, said rims curving downwardly and inwardly from the innermost points of connection of said metallic bridge member to said rims forming a pair of pockets with said metallic bridge member, a non-metallic bridge member positioned below said metallic bridge member, said non-metallic bridge member having a pair of grooves formed in the outer edges thereof adapted to receive the inner edges of said rims and having sections extending outwardly from the upper portion thereof into the pockets between said rims and said metallic bridge member, and means connected to said rims to close portions of the front and rear sides of said pockets.

3. In eyeglass frame construction, in combination, a pair of metallic rims, a flat metallic bridge member connected to the top portions of said rims, said rims curving downwardly and inwardly from the innermost points of connection of said metallic bridge member to said rims forming a pair of pockets with said metallic bridge member, a non-metallic bridge member positioned below said metallic bridge member, said non-metallic bridge member having a pair of grooves formed in the outer edges thereof adapted to receive the inner edges of said rims and having sections extending outwardly from the upper portion thereof into the pockets between said rims and said metallic bridge member, and a pair of U-shaped straps having their free ends connected to said rims and having their closed ends extending over the center portion of said metallic bridge member, the legs of said U-shaped straps bridging the sides of said pockets.

4. In eyeglass frame construction, in combination, a pair of metallic rims, a flat metallic bridge member connected to the top portion of said rims, said rims curving downwardly and inwardly from the innermost points of connection of said metallic bridge member to said rims forming a pair of pockets with said metallic bridge member, a non-metallic bridge member positioned below said metallic bridge member, said non-metallic bridge member having a pair of grooves formed in the outer edges thereof adapted to receive the inner edges of said rims and having sections extending outwardly from the upper portion thereof into the pockets between said rims and said metallic bridge member, a pair of U-shaped straps connected to said rims and locking the outwardly extending sections of said non-metallic bridge member within said pockets, and pin means extending through said straps and said non-metallic bridge member to connect said bridge member to said frame.

5. In eyeglass frame construction, in combination, a pair of metallic rims, a flat metallic bridge member mounted on the top portions of said rims, a U-shaped non-metallic bridge member positioned below said metallic bridge mem-

ber and extending between the inner edges of said rims, the legs of said U-shaped non-metallic bridge member being grooved to receive substantial portions of the inner edges of said rims, a pair of U-shaped straps having their free ends connected to said rims and having their closed ends extending over said metallic bridge member, the legs of said straps extending across portions of said non-metallic bridge member, and means for connecting said non-metallic bridge member to the legs of said straps.

6. In eyeglass frame construction, in combination, a pair of metallic rims, a substantially straight resilient bridge member extending between the top portions of said rims, a U-shaped non-metallic bridge member positioned below said metallic bridge member, said non-metallic bridge member including a center portion and a pair of depending portions, the center portion of said non-metallic bridge member being positioned beneath and contacting said metallic bridge member, the depending portions of said non-metallic bridge member extending along and contacting substantial portions of the inner edges of said rims, and means connecting the center portion of said non-metallic bridge member to said metallic bridge member, said connection between the center portion of said non-metallic bridge member and said metallic bridge member being the sole connection between said non-metallic bridge member and said frame, whereby the depending portions of said non-metallic bridge member are free to move with respect to said rims.

7. In eyeglass frame construction, in combination, a pair of metallic rims, a substantially straight resilient bridge member extending between and being secured to substantial portions of the top portions of said rims, a U-shaped non-metallic bridge member positioned below said metallic bridge member, said non-metallic bridge member including a center portion and a pair of depending portions, the center portion of said non-metallic bridge member being positioned beneath and contacting said metallic bridge member, the depending portions of said non-metallic bridge having a pair of grooves formed in the outer edges thereof adapted to receive the inner edges of said rims, and means connecting the center portion of said non-metallic bridge member to said metallic bridge member, said connection between the center portion of said non-metallic bridge member and said metallic bridge member being the sole connection between said non-metallic bridge member and said frame, whereby the depending portions of said non-metallic bridge member are free to move with respect to said rims.

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