L. W. BUGBEE.

FRAME.

APPLICATION FILED NOV. 30, 1917.

1,278,431. Patented Sept. 10, 1918.

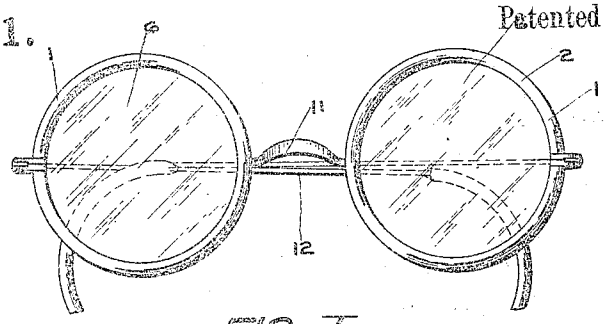


FIG. I

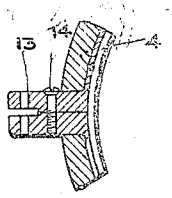


FIG. II

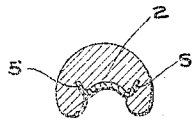


FIG. III

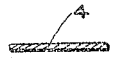


FIG. IV



FIG. V



FIG. VI

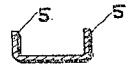


FIG. VII

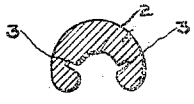


FIG. VIII

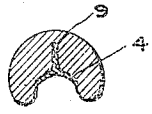


FIG. IX

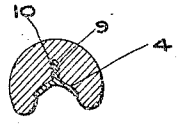


FIG. X

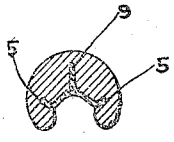


FIG. XI

INVENTOR
LUCIAN W. BUGBEE

BY
H. H. Styll & K. Parsons
ATTORNEYS

UNITED STATES PATENT OFFICE.

LUCIAN W. BUGBEE, OF SOUTHBRIDGE, MASSACHUSETTS, ASSIGNOR TO AMERICAN OPTICAL COMPANY, OF SOUTHBRIDGE, MASSACHUSETTS, A VOLUNTARY ASSOCIATION OF MASSACHUSETTS.

FRAME.

1,278,431. Specification of Letters Patent. Patented Sept. 10, 1918.

Application filed November 30, 1917. Serial No. 204,644.

To all whom it may concern:

Be it known that I, LUCIAN W. BUGBEE, a citizen of the United States, residing at Southbridge, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Frames, of which the following is a specification.

This invention relates to new and useful improvements in ophthalmic mountings and has particular reference to that type of mounting formed by the combination of two different materials such as shell or zylonite and a metal whereby the strength of the metal is combined with the attractive appearance and comfortable qualities of the non-metallic member.

One of the leading objects of the present invention is the provision of an improved frame for an ophthalmic mounting which shall embody the strength and durability of an ordinary metallic construction together with the ornamental appearance and the cushion or lens protecting features of a non-metallic frame.

Another object of the present invention is the provision of an improved construction of frame wherein improved means is used for uniting the metallic and non-metallic parts.

With the above and other objects in view the invention consists in the novel features of construction and the combination and arrangement of parts herein more fully set forth, pointed out in the claims and shown in the accompanying drawings, in which

Figure I is a front elevation of a pair of spectacles constructed in accordance with my invention.

Fig. II is a longitudinal sectional view at the meeting ends of each frame.

Fig. III is a transverse sectional view taken through the frame.

Fig. IV is a transverse section of the blank from which the metallic frame is formed.

Fig. V is a transverse sectional view illustrating another form of the invention.

Fig. VI is a similar view illustrating still another form of the invention.

Fig. VII is a transverse sectional view of the metallic part before being pressed into the non-metallic part.

Fig. VIII is a transverse sectional view of the non-metallic part of the frame.

Fig. IX is a transverse sectional view taken through the frame, illustrating another form of the invention.

Fig. X is a similar view illustrating still another form of the invention.

Fig. XI is a transverse section of the frame illustrating another modified form of the invention.

Referring now more particularly to the drawings in which the several parts are designated by the various reference characters the numeral 1 indicates the non-metallic rim of my improved mounting the inner face of which is provided with the substantially arcuate recess as indicated at 2 and extending at an angle from each side wall of the recess are the annular grooves 3. The metallic frame which is indicated by the numeral 4 is disposed within the recess 2 and provided with the angularly extended annular flanges 5 adapted to be disposed within the grooves 3 in order to retain the metallic frame within the recess 2. It will be noted that the central portion of the metallic frame is of arcuate formation to receive the edges of the lenses 6 whereby when the frames are fastened together at their ends the lenses will be securely held in place.

In the construction of the metallic part of my improved frame a blank of material is used such as that illustrated in Fig. IV and bent into U shape form as illustrated in Fig. VII. In placing the metallic part in the recess 2 within the non-metallic part the annular flanges 5 of the U shape member are inserted in the grooves 3 and the intermediate portion of the member bent to conform to the shape of the recess as illustrated in Fig. III. On the other hand the intermediate portion of the U shape member may be bent into U shape form as illustrated in Fig. V before the same is engaged with the non-metallic member.

In Fig. VI I have illustrated another form of the invention wherein the annular flanges of the U shape member are corrugated as shown at 8 so that when the same is pressed into the non-metallic material it will securely hold the metallic part within the arcuate recess 2 and thus retain the two parts against detachment. It will be understood that this form of the invention is to be applied to the non-metallic part in the same manner as the form heretofore illustrated and described.

In Fig. IX I have illustrated still another form of the invention wherein the intermediate portion of the metallic member is provided with a centrally disposed annular rib 9, which is normally disposed within a centrally arranged recess formed within the central portion of the recess 2 and is adapted to retain the metallic rim within the non-metallic portion. It will be readily understood that this annular rib 9 can be corrugated in the same manner as the flanges 5 as is clearly illustrated in Fig. X and disposed within a similar recess or groove 10 whereby when the non-metallic material is put under pressure it will be pressed into the grooves of the corrugations and securely retain the metallic member within the recess 2.

In Fig. XI I have illustrated the annular rib 9 in connection with the side flanges 5 whereby the metallic part of the frame will be securely retained within the non-metallic part. In this form of the invention the rib may be used in either a smooth or in corrugated form. From the above description taken in connection with the accompanying drawings it will be readily apparent that I have provided a novel spectacle frame formed by the combination of two different materials such as shell or zylonite and a metal whereby the strength of the metal is combined with the attractive appearance and comfortable qualities of the non-metallic member.

In the drawings in which my improved mounting is illustrated it will be noted that suitable temples 12 are provided and the frames are centrally connected by the nose bridge 11 as illustrated in Fig. I. Extending out from the metallic part of the frame are the lugs 13 detachably connected by means of the screw 14 whereby the lenses in the frames can be readily exchanged when desired.

I claim:

1. A lens frame including an outer non-metallic member, having an annular recess, and further provided with grooves communicating with said recess, a metallic member disposed within the recess, flanges projecting outwardly from the metallic member and engaging within the grooves and means for securing the two members together.

2. A lens frame including an outer non-metallic member, having an annular recess, and further provided with grooves communicating with said recess, a metallic member disposed within the recess, flanges projecting outwardly from the metallic member and engaging within the grooves, said flanges being provided with corrugations and means for securing the two members together.

3. A lens frame including an outer non-metallic member having grooves therein, a metallic member arranged within the outer member and having means disposed within said grooves to prevent movement of either of said members with respect to each other.

In testimony whereof I have affixed my signature in presence of two witnesses.

LUCIAN W. BUGBEE.

Witnesses:

ARTHUR S. CANN,

H. E. COLEMAN.