C. W. BARNABY.

EYEGLASSES.

APPLICATION FILED OCT. 19, 1912.

1,200,072. Patented Oct. 3, 1916.

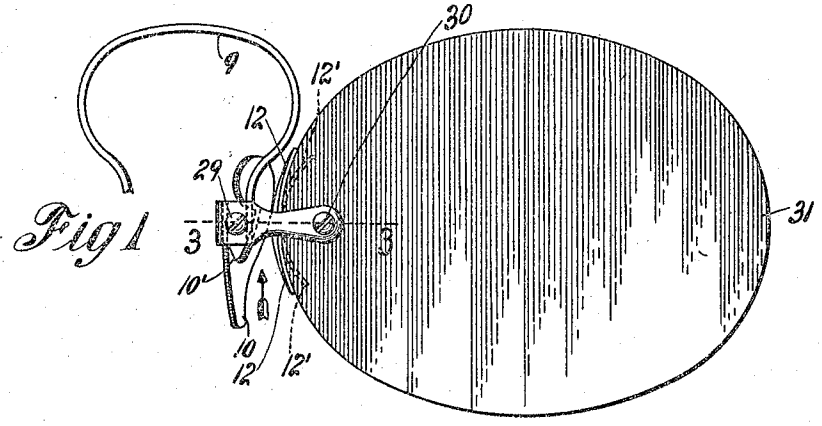


Fig 1

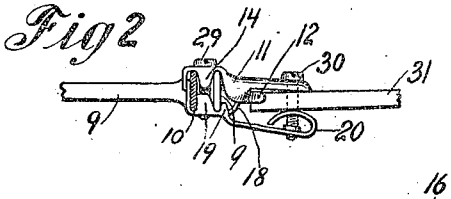


Fig 2

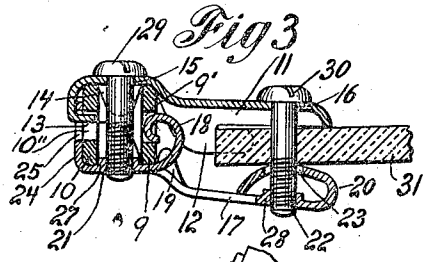


Fig 3

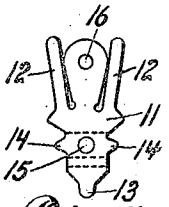


Fig 5

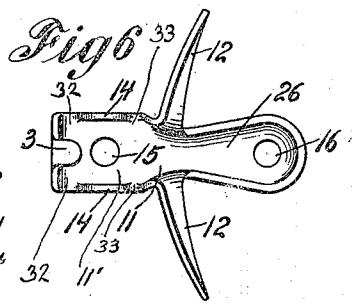


Fig 6

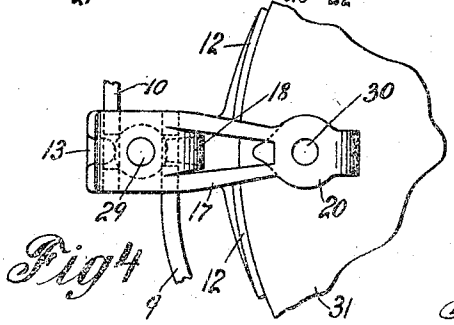


Fig 4

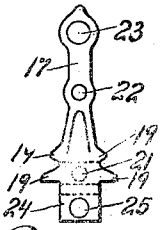


Fig 7

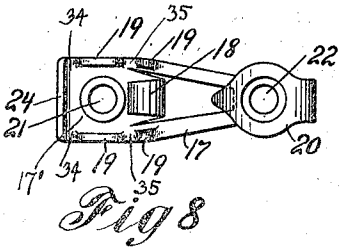


Fig 8

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UNITED STATES PATENT OFFICE.

CHARLES W. BARNABY, OF NEW BRIGHTON, NEW YORK, ASSIGNOR OF ONE-HALF TO SIMON COOPER, OF NEW YORK, N. Y.

EYEGLASSES.

1,200,072. Specification of Letters Patent. Patented Oct. 3, 1916.

Application filed October 19, 1912. Serial No. 726,692.

To all whom it may concern:

Be it known that I, CHARLES W. BARNABY, a citizen of the United States, residing at New Brighton, in the county of Richmond and State of New York, have invented certain new and useful Improvements in Eyeglasses, of which the following is a specification.

My invention relates broadly to eyeglasses, spectacles or the like, and more particularly to the manner of and means for mounting therein the lens.

One of the objects of my invention is to provide such a mounting which will prevent to a greater degree than was possible heretofore the loosening of fastening screws or other connective elements.

Another object is to provide a mounting wherein the instrumentality connecting the bridge and nose-piece may rigidly and resiliently clamp the latter parts against relative displacement.

Another object is to provide a mounting of such a nature that certain elements thereof may preferably be pressed or stamped out of any desired sheet metal of the proper thickness.

Another object is to provide in this connection a mounting for the lens which may be readily adapted to differences in dimensions and other characteristics of the lens.

Another object is to provide a steady, accurate and rigid mounting, and yet one which will preferably have a certain degree of resiliency.

Other objects will be in part obvious and in part pointed out hereinafter.

To these ends, my invention, whereof I disclose herein one of the various possible embodiments, generally consists in the novel arrangement, construction, and combination of parts as hereinafter more specifically set forth and described and particularly pointed out in the claims.

Referring now to the accompanying drawing, wherein is shown the embodiment of my invention just referred to: Figure 1 is a front elevation of a portion of an eye-glass including a form of mounting of the above type; Fig. 2 is a bottom plan view, partly broken away, of the parts shown in Fig. 1; Fig. 3 is a sectional view, on an enlarged scale, taken on the line 3—3 of Fig. 1, and looking in the direction of the arrow; Fig. 4 is a rear elevation, on an enlarged scale, and partly broken away, showing the said parts illustrated in Fig. 1; Fig. 5 is a view illustrating a preferable form of blank which may be stamped from sheet metal, to be formed into one of the members constituting the mounting, which member, carrying offset arms adapted to bear against a portion of the periphery of the adjacent lens, I hereinafter refer to as the "arm-bearing member"; Fig. 6 is a rear elevation of said arm-bearing member as finally conformed; Fig. 7 is a view illustrating a preferable form of blank which may likewise be stamped from sheet metal, to be formed into another of the members constituting the mounting, which member, carrying a leaf-spring or cushion portion 20, I hereinafter refer to as the "cushion-carrying member"; Fig. 8 is a front elevation of said cushion-carrying member as finally conformed.

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

Referring now particularly to the embodiment of my invention disclosed in the drawing, 9 represents the bridge, and 10 the nose-piece. Bridge 9 is preferably provided adjacent each terminus with a transverse hole, 9′, most clearly shown in Fig. 3; and nose-piece 10 is preferably provided upon its extension 10′ (Fig. 1), with a transverse hole 10″, most clearly shown also in said Fig. 3. Numeral 11 represents the arm-bearing member, provided with a plurality of arms 12 as shown, a lug 13, a plurality of spacer-extensions 14, a hole 15 and a hole 16. With reference to the arms 12, which pillow an adjacent portion of the lens periphery, these are preferably so resiliently conformed that they will normally assume the approximate positions illustrated in Fig. 1 in dotted lines as at 12′; whereby upon properly assembling the mounting their expansion around the lens periphery will tend to secure a more positive, rigid, permanent and accurate fastening. Numeral 17 represents a cushion-carrying member, provided as shown with a lug 18, a plurality of spacer-extensions 19, a bent, preferably resilient cushion portion 20, a hole 21, a hole 22, a hole 23 and a wall 24, wall 24 being provided with a hole 25. The holes 15, 16, 23 and 25, in this embodiment, are not shown as being tapped, while the holes 21 and 22 are disclosed as being so constructed. The

post or screw 29 is provided in this embodiment (Figs. 1, 2, 3 and 4), for free entry through hole 15 and threaded reciprocation within tapped hole 21 (*vide* particularly Fig. 3), and post or screw 30 is likewise provided (Figs. 1, 2, 3, and 4), for free entry through holes 16 and 23 and threaded reciprocation within tapped hole 22 (*vide* particularly Fig. 3).

Screw 29 is adapted to be applied in the relation shown in Figs. 2 and 3 after preliminarily assembling the bridge 9, the appropriate nose-piece 10, the arm-bearing member 11 and the cushion-carrying member 17. As thus assembled, it will be noted that the inter-engagement of the parts in this embodiment is as follows: The face of the arm-bearing member 11 illustrated in Fig. 6 overlies the face of cushion-carrying member 17 illustrated in Fig. 8, as shown most clearly in Figs. 2 and 3. The lug 18 of cushion-carrying member 17 enters the hole 9′ in bridge 9, and interlocks said member with bridge 9, and the former's wall 24 lies against nose-piece 10 as shown, the hole 25 (formed in said wall) registering with the hole 10″ in said nose-piece. The lug 13 of arm-bearing member 11 enters said registered holes 10″ and 25 and interlocks the nose-piece 10 and the wall 24. Spacer-extensions 14 co-act with the opposed spacer-extensions 19 (see particularly Fig. 2), thereby to maintain spaced apart as shown the included portions of nose-piece 10 and bridge 9. Upon the aforesaid insertion of screw 29 the various elements will thus be positively, permanently and mutually engaged, and absolutely maintained against relative displacement or looseness. It will be noted also that there is here present a resilient quality with reference to the entire combination which keeps the screw 29 under tension during a considerable portion of the final turn upon its threads; thereby insuring the subjection of the said screw to such a continuous stress that the possibility of its working loose is exceedingly remote. Also, the interlocked characteristic of the inter-engagement of the parts, as pointed out, renders impossible the twisting action, which usually arises and which would have a tendency to loosen the screw.

An important feature of my invention, which should in an equivalent manner preferably distinguish every embodiment thereof aimed to provide a connection between the bridge and the nose-piece of an eyeglass, resides in the fact, to be particularly noted at this point, that the substantially alined spacer-extensions 14 define in the arm bearing member 11 ways or grooves 32 and 33 (Fig. 6); that the substantially alined spacer-extensions 19 define in the cushion-carrying member 17 ways or grooves 34 and 35 (Fig. 8); of which grooves, with the parts in assembled relation, grooves 32 and 34 substantially overlie each other to accommodate a shank of the bridge 9, and grooves 33 and 35 substantially overlie each other to accommodate the shank of the nose-piece 10; and that the portion 11′ of the arm-bearing member 11 and the overlying portion 17′ of the cushion-carrying member 17 are naturally resilient with reference to the application thereto of the screw 29, whereby the threading home of said screw will cause portions 11′ and 17′ to spring-press against the edges of, and transversely through, the spaced portions of bridge 9 and nose-piece 10 therebetween. In this connection it should be noted that while this construction positively maintains the parts against relative displacement and looseness, it is obvious that the very action of screw 29 in drawing together portions 11′ and 17′ sets up a spring-pressed frictional drag upon any accidental or other subsequent rotation of the screw, positively preventing it working loose or weakening its grip.

Upon the insertion of a lens 31 (Fig. 1), the arms 12 are forced to the position illustrated in full lines, and the screw 30 (Figs. 2 and 3) is inserted, passing freely through holes 16 and 23, and being screwed home into tapped hole 22. It will thus be seen that the lens is held against displacement or looseness within its general plane, and also laterally of said plane. It will also be apparent that by thus mounting the lens between the elements described, which I may call spring-cushioning elements, any likelihood of the lens being broken when subjected to sudden shock or strain, as when the eye-glasses are accidentally dropped, is avoided. An advantageous adaptability of this embodiment to variations in nose-guard, bridge and lens dimensions, and to variations in locations of the drillings therein, should also be apparent.

I desire to call attention to the fact that I preferably give to the arm-bearing member a cupped portion 26, adjacent the hole 16, best illustrated, with reference to its clamping function, in assembled relation in Figs. 1, 2 and 3. This cupped portion is an important feature of this embodiment of my invention, because it adds extra gripping efficiency to the lens-holding parts. It should be noted also that in the present embodiment I preferably stamp out the cushion-carrying member, whose holes 21 and 22 are tapped for the purposes mentioned above, so that these holes will be respectively located transversely of bosses 27 and 28 as shown most clearly in Fig. 3, whereby an additional number of threads may be utilized. It should also be noted that the cushion-carrying member is provided in the formation and denominated in the manner disclosed herein merely for illustrative pur-

poses, since it is obvious that any element in a particular embodiment of my invention may be provided with a cushioning or resiliently operating gripping means for the lens, or an auxiliary and spring-acting member, such as an interposed leaf-spring or the like, may be utilized in such a manner that the lens will be so gripped.

It should be obvious that my invention may be advantageously utilized in connection with eye-glasses of the kind generally known as spectacles.

Various other modifications and changes in the design and construction of my improved mounting could be resorted to, also, without departing from the spirit of the invention or sacrificing any of its advantages.

Inasmuch as many changes could be made in the above construction, and many apparently widely different embodiments of my invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be taken as illustrative and not in a limiting sense. It is also to be understood that the language used in the following claims is intended to cover all the generic and specific features of the invention herein described, and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. In a device of the kind described, a member having spring portions for engaging the opposite edges of a bridge and nose-piece respectively, and a fastening means engaging said spring portions between the bridge and the nose-piece.

2. In a device of the kind described, a member made in two pieces and having spring portions for engaging the opposite edges of a bridge and nose-piece respectively, and a fastening means engaging said spring portions between the bridge and the nose-piece respectively.

3. In a device of the kind described, a member having portions engaging opposite faces of a lens, one of said portions having an extension bent over upon the portion last-mentioned and a plurality of apertures arranged in a line extending substantially transversely of the lens.

4. In a device of the kind described, a member having diverging spring arms for engaging the edge of a lens, and having portions engaging opposite faces of the lens, one of said portions having an extension bent over upon the portion last-mentioned and a plurality of apertures arranged in a line extending substantially transversely of the lens.

5. In a device of the class described, in combination, a member having diverging spring arms for engaging the edge of a lens, means for engaging one face of said lens, means for engaging an opposite face of said lens, the means last mentioned consisting of spring cushion having a normal resilient bias, and an adjustable instrumentality, adapted for manipulation to abnormally dispose said means last mentioned whereby the latter and the means first mentioned are drawn together to cushion the mounting of said lens therebetween.

6. In a device of the class described, in combination, a member having diverging spring arms for engaging the edge of a lens, means for engaging one face of said lens, means for engaging an opposite face of said lens, the means last mentioned consisting of spring cushion having a normal resilient bias, and an adjustable instrumentality, adapted for manipulation to abnormally dispose said means last mentioned whereby the latter and the means first mentioned are drawn together to cushion the mounting of said lens therebetween, said diverging spring arms also having a normal resilient bias whereby upon the aforesaid manipulation of said instrumentality said arms will also cushion the mounting of said lens therebetween.

7. In a device of the class described, in combination, a member having diverging spring arms for engaging the edge of a lens, means for engaging one face of said lens, means for engaging an opposite face of said lens, the means last mentioned consisting of spring cushion having a normal resilient bias, and an adjustable instrumentality, adapted for manipulation to abnormally dispose said means last mentioned whereby the latter and the means first mentioned are drawn together to cushion the mounting of said lens therebetween, the second mentioned means including a member adapted to overlie one of the faces of said lens and said member having an extension bent over upon itself.

8. In a device of the class described, in combination, a member having diverging spring arms for engaging the edge of a lens, means for engaging one face of said lens, means for engaging an opposite face of said lens, the means last mentioned consisting of spring cushion having a normal resilient bias, and an adjustable instrumentality, adapted for manipulation to abnormally dispose said means last mentioned whereby the latter and the means first mentioned are drawn together to cushion the mounting of said lens therebetween, said diverging spring arms also having a normal resilient bias whereby upon the aforesaid manipulation of said instrumentality said arms will also cushion the mounting of said lens therebetween, the second mentioned means in-

cluding a member adapted to overlie one of the faces of said lens and said member having an extension bent over upon itself.

9. In a device of the class described, in combination, a member having diverging spring arms for engaging the edge of a lens, means for engaging one face of said lens, means for engaging an opposite face of said lens, the means last mentioned consisting of spring cushion having a normal resilient bias, and an adjustable instrumentality, adapted for manipulation to abnormally dispose said means last mentioned whereby the latter and the means first mentioned are drawn together to cushion the mounting of said lens therebetween, the second mentioned means including a member adapted to overlie one of the faces of said lens and said member having an extension bent over upon itself, a portion of said extension lying between the said two means.

10. In a device of the class described, in combination, a member having diverging spring arms for engaging the edge of a lens, means for engaging one face of said lens, means for engaging an opposite face of said lens, the means last mentioned consisting of spring cushion having a normal resilient bias, and an adjustable instrumentality, adapted for manipulation to abnormally dispose said means last mentioned whereby the latter and the means first mentioned are drawn together to cushion the mounting of said lens therebetween, said diverging spring arms also having a normal resilient bias whereby upon the aforesaid manipulation of said instrumentality said arms will also cushion the mounting of said lens therebetween, the second mentioned means including a member adapted to overlie one of the faces of said lens and said member having an extension bent over upon itself, a portion of said extension lying between the said two means.

11. In a device of the kind described, a member having spring portions for engaging the opposite edges of a bridge and nose-piece respectively, and a fastening means engaging said spring portions between the bridge and nose-piece; said member being further provided with portions engaging opposite faces of a lens, one of said portions being provided with a cushion; and said member being also provided with diverging spring arms for engaging the edge of the lens.

12. In a device of the kind described, a member having portions engaging opposite faces of a lens, one of said portions having a resilient extension bent over upon it whereby the engagement of one of the last-mentioned portions will be spring-cushioned due to a re-action of said extension to becoming further bent over upon said last-mentioned portion.

13. A member 11, provided with arms 12, and having a lug 13, spacer-extensions 14, a hole 15, and a hole 16.

14. A member 17, having a lug 18, spacer-extensions 19, a cushion portion 20, a hole 21, a hole 22, a hole 23, and a wall 24 provided with a hole 25.

15. A member 17, having a lug 18, spacer-extensions 19, a hole 21, a hole 22, and a wall 24 provided with a hole 25.

16. In a device of the class described, in combination, a first member including a plurality of off-set extensions and a plurality of apertures, a second member including a plurality of similar extensions and a plurality of apertures, a third member including an aperture, and a locking instrumentality; said members being so formed that said first and second members may be assembled to establish a compartment between them within which may be inserted said third member.

17. In a device of the class described, in combination, a first-member including a plurality of off-set extensions and a plurality of apertures, a second member including a plurality of similar extensions and a plurality of apertures, a third member including an aperture, and a locking instrumentality; said members being so formed that said first and second members may be assembled whereby a projecting portion of each will overlie the opposite faces of the lens and also whereby said first and second members will establish a compartment between them within which may be inserted said third member.

18. In a device of the class described, in combination, a first-member including a plurality of off-set extensions and a plurality of apertures, a second member including a plurality of similar extensions and a plurality of apertures, a third member including an aperture, and a locking instrumentality; said members being so formed that said first and second members may be assembled to establish a compartment between them within which may be inserted said third member, said third member having its opposite edges gripped between said first and second members.

19. In a device of the class described, in combination, a first-member including a plurality of off-set extensions and a plurality of apertures, a second member including a plurality of similar extensions and a plurality of apertures, a third member including an aperture, and a locking instrumentality; said members being so formed that said first and and second members may be assembled to establish a compartment between them within which may be inserted said third member, said third member having its opposite edges gripped between said first and second members, an extension car-

ried by one of the other members engaging with the aperture of said third member to prevent a longitudinal displacement of said third member from between said first and second members.

20. In a device of the class described, in combination, a first-member including a plurality of off-set extensions and a plurality of apertures, a second member including a plurality of similar extensions and a plurality of apertures, a third member including an aperture, and a locking instrumentality; said members being so formed that said first and second members may be assembled to establish a compartment between them within which may be inserted said third member, said third member having its opposite edges gripped between said first and second members, said members being so arranged that said locking instrumentality may be manipulated to grip said third member between said first and second members.

21. In a device of the class described, in combination, a first member including a plurality of off-set extensions and a plurality of apertures, a second member including a plurality of similar extensions and a plurality of apertures, a third member including an aperture, and a locking instrumentality; said members being so formed that said first and second members may be assembled to establish a compartment between them within which may be inserted said third member, said third member having its opposite edges gripped between said first and second members, said members being so arranged that said locking instrumentality may be manipulated to grip said third member between said first and second members, said first and second members including resilient portions.

22. In a device of the class described, in combination, a first member including a plurality of off-set extensions and a plurality of apertures, a second member including a plurality of similar extensions and a plurality of apertures, a third member including an aperture, and a locking instrumentality; said members being so formed that said first and second members may be assembled to establish a compartment between them within which may be inserted said third member, said third member having its opposite edges gripped between said first and second members, said members being so arranged that said locking instrumentality may be manipulated to grip said third member between said first and second members, said first and second members including resilient portions which by the aforesaid manipulation of said locking instrumentality may be brought to bear against said opposite edges of said third member.

23. In a device of the class described, in combination, a first-member including a plurality of off-set extensions and a plurality of apertures, a second member including a plurality of similar extensions and a plurality of apertures, a third member including an aperture, and a locking instrumentality; said members being so formed that said first and second members may be assembled to establish a compartment between them within which may be inserted said third member, said third member having its opposite edges gripped between said first and second members, certain of said apertures being engageable by certain of said extensions to maintain said members as so associated against a certain displacement and said locking instrumentality being manipulable to maintain said members as so associated against another displacement to the end that said members as so associated are thus maintained against any displacement whatsoever.

24. In a device of the class described, in combination, a first member including a plurality of off-set extensions and a plurality of apertures, a second member including a plurality of similar extensions and a plurality of apertures, a third member including an aperture, and a locking instrumentality; said members being so formed that said first and second members may be assembled to establish a compartment between them within which may be inserted said third member, said third member having its opposite edges gripped between said first and second members, certain of said apertures being engageable by certain of said extensions to maintain said members as so associated against a certain displacement and said locking instrumentality being manipulable to maintain said members as so associated against another displacement to the end that said members as so associated are thus maintained against any displacement whatsoever; and a conformation carried by one of said members adapted to establish a way for the insertion into said compartment of said third member.

25. In a device of the class described, in combination, a first member including a plurality of off-set extensions and a plurality of apertures, a second member including a plurality of similar extensions and a plurality of apertures, a third member including an aperture, a fourth member including an aperture, and a locking instrumentality; said members being so formed that said first and second members may be arranged to establish a compartment between them within which may be inserted said third and fourth members; certain of said apertures being engageable by certain of said extensions to maintain said members as so associated against a certain displacement and said

locking instrumentality being manipulable to maintain said members as so associated against another displacement to the end that said members as so associated are thus maintained against any displacement whatsoever.

26. In a device of the class described, in combination, a first member including a plurality of off-set extensions and a plurality of apertures, a second member including a plurality of similar extensions and a plurality of apertures, a third member including an aperture, a fourth member including an aperture, and a locking instrumentality; said members being so formed that said first and second members may be arranged to establish a compartment between them within which may be inserted said third and fourth members; certain of said apertures being engageable by certain of said extensions to maintain said members as so associated against a certain displacement and said locking instrumentality being manipulable to maintain said members as so associated against another displacement to the end that said members as so associated are thus maintained against any displacement whatsoever; and conformations carried by said first and second members adapted to establish ways for the insertion into said compartment of said third and fourth members.

27. In a device of the class described, in combination, a first member including a plurality of off-set extensions and a plurality of apertures, a second member including a plurality of similar extensions and a plurality of apertures, a third member including an aperture, a fourth member including an aperture, and a locking instrumentality; said members being so formed that said first and second members may be arranged to establish a compartment between them within which may be inserted said third and fourth members; certain of said apertures being engageable by certain of said extensions to maintain said members as so associated against a certain displacement and said locking instrumentality being manipulable to maintain said members as so associated against another displacement to the end that said members as so associated are thus maintained against any displacement whatsoever; and conformations carried by said first and second members adapted to establish ways for the insertion into said compartment of said third and fourth members; said third and fourth members being arranged in said compartment so that the opposite edges of each are gripped between the opposite walls of said compartment and so that said third and fourth members are spaced whereby the locking instrumentality may be accommodated therebetween and transversely of said compartment.

28. In a device of the class described, a member having a wall, an extension off-set from said wall and a second extension offset from the first-mentioned extension; in combination with a member having a wall, an extension off-set from said wall, and an aperture in said extension; whereby said members may be assembled to establish a compartment and so said second extension of said first member may engage the said aperture.

29. In a device of the kind described, a two-part structure for engaging the opposite edges of a bridge and nose-piece and maintaining them in spaced relation, one part for one edge and the other part for the opposite edge, of the bridge and nose-piece respectively, and means extending between the bridge and nose-piece for drawing the two parts of said structure toward each other and into engagement with the opposite edges of the bridge and nose-piece.

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

CHARLES W. BARNABY.

Witnesses:

FRANK J. KENT,

A. C. MCDONNELL.