No. 842,762. PATENTED JAN. 29, 1907.

S. W. BURCH.

EYEGLASSES.

APPLICATION FILED MAY 23, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

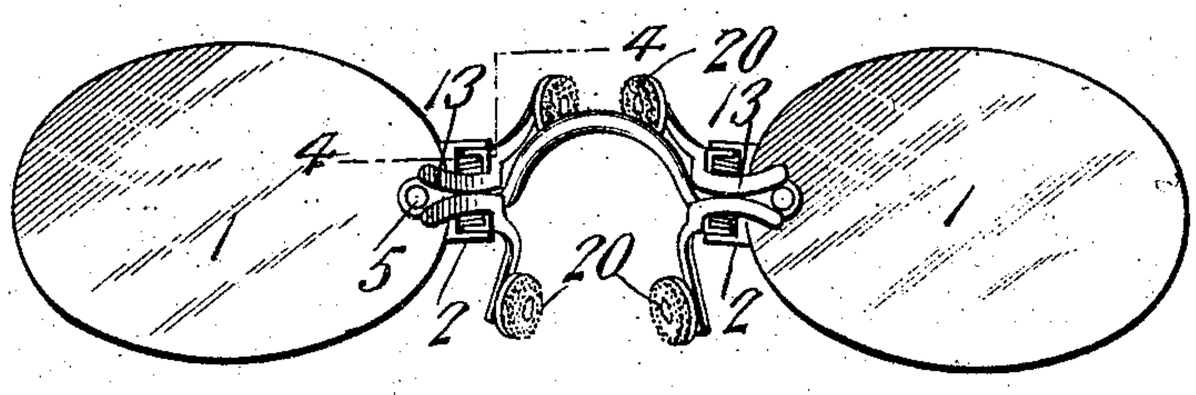


Fig. 7.

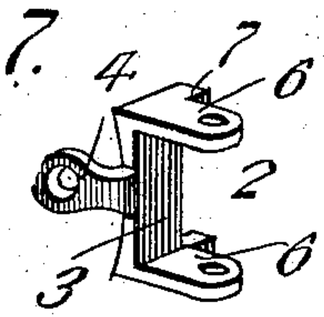


Fig. 8.

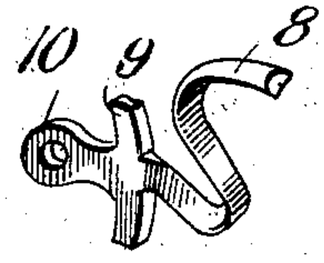


Fig. 2.

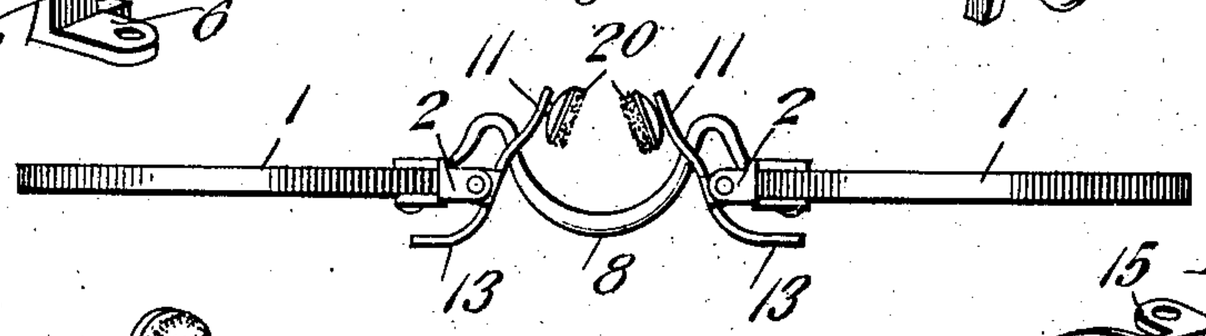


Fig. 5.

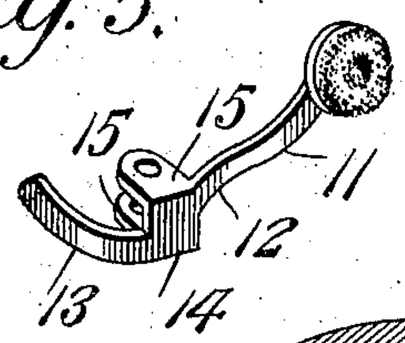


Fig. 6.

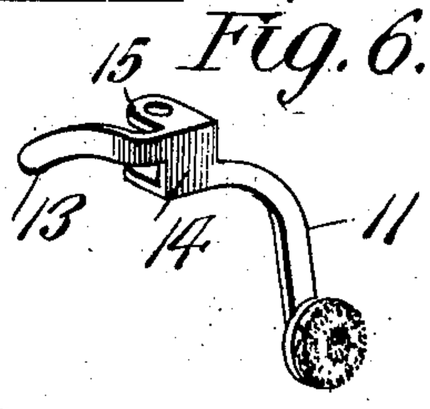


Fig. 3.

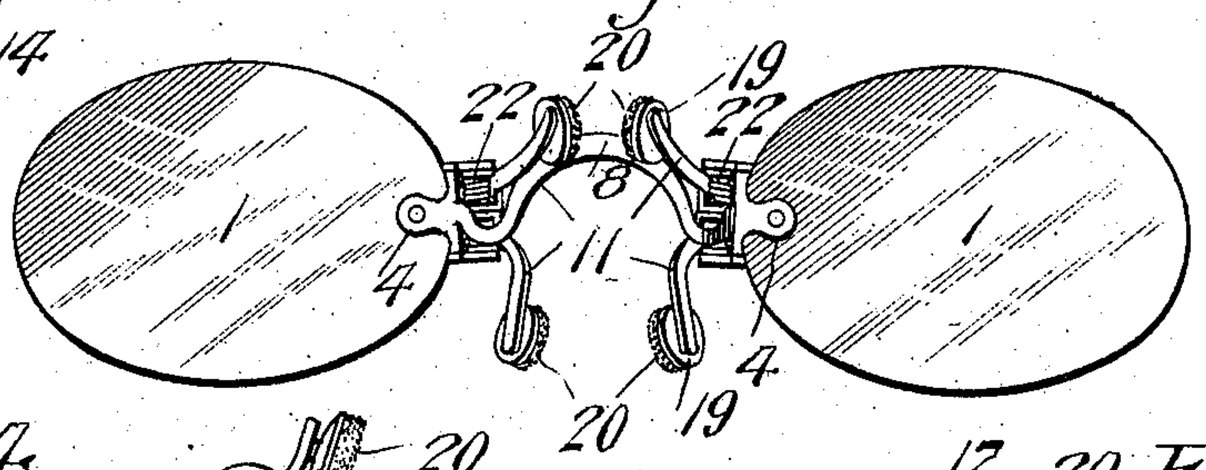


Fig. 4.

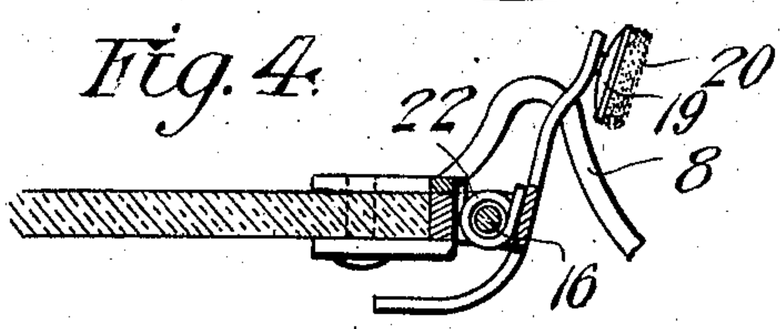
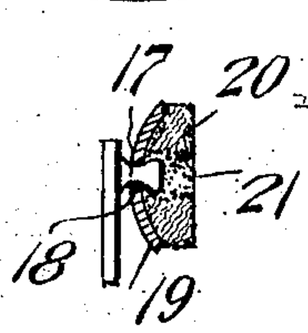


Fig. 9.



WITNESSES.

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No. 842,762. PATENTED JAN. 29, 1907.

S. W. BURCH.

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2 SHEETS—SHEET 2.

Fig. 10.

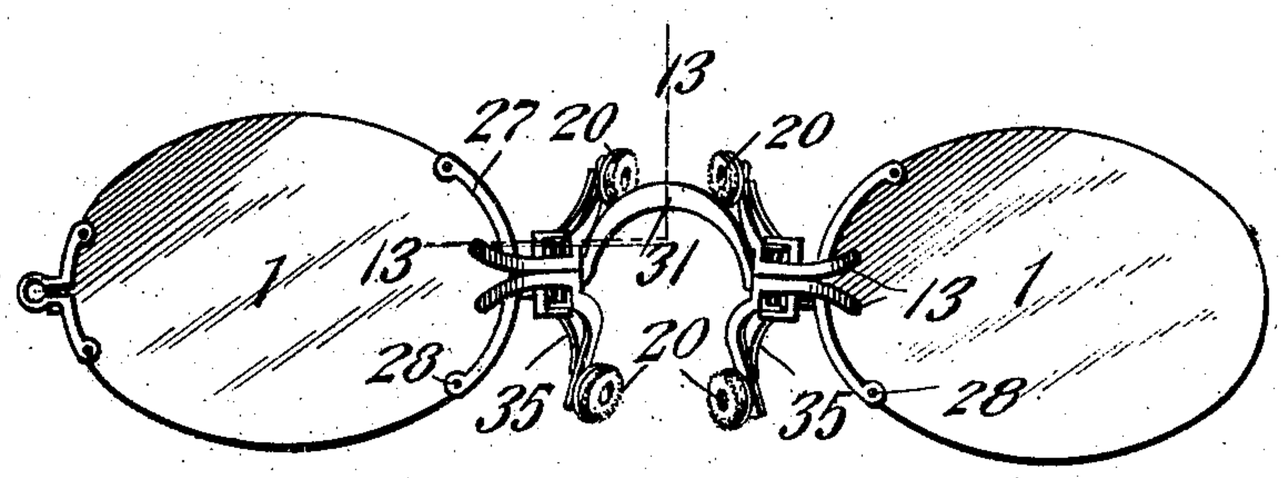


Fig. 11.

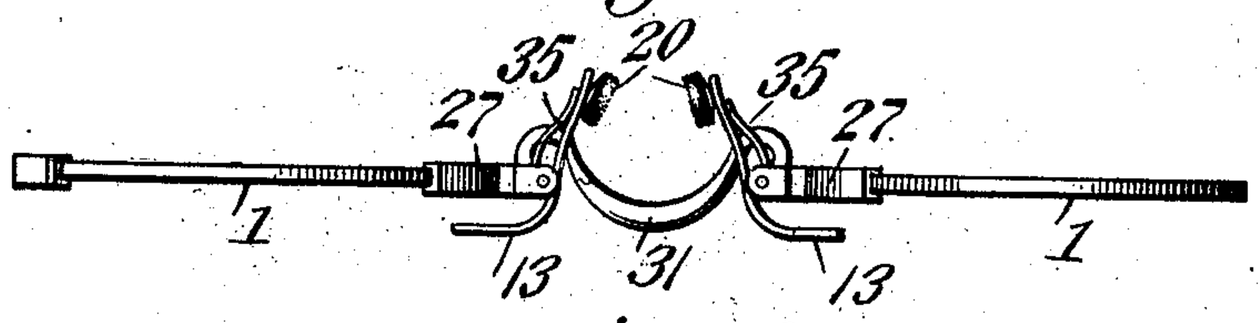


Fig. 12.

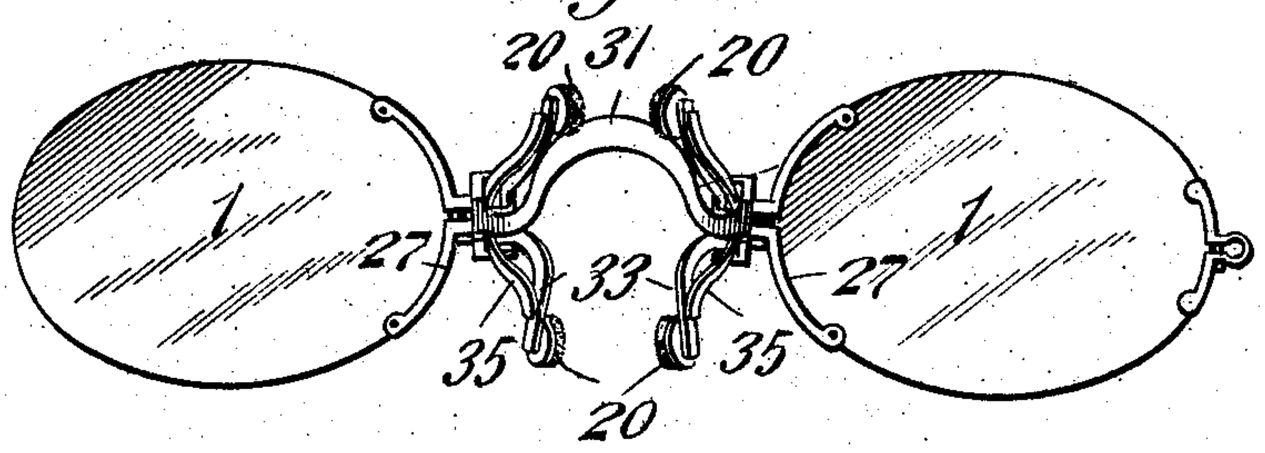


Fig. 13.

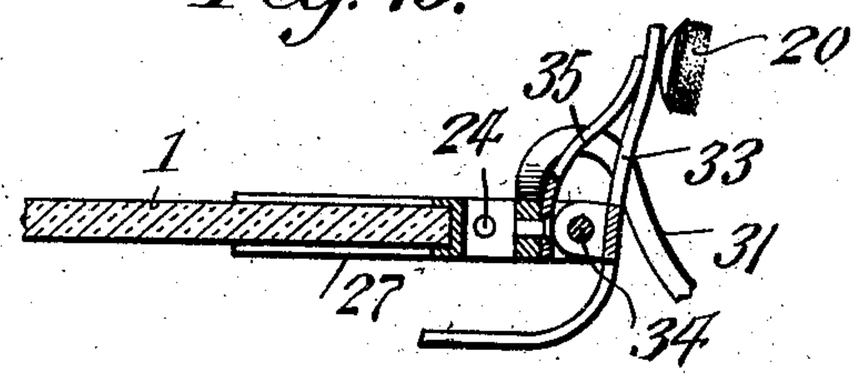
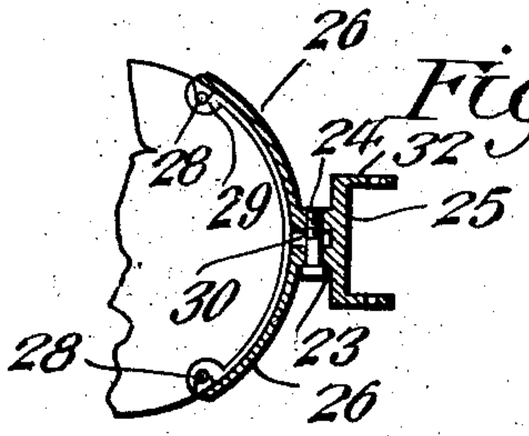


Fig. 14.



Witnesses

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UNITED STATES PATENT OFFICE.

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EYEGLASSES.

No. 842,762. Specification of Letters Patent. Patented Jan. 29, 1907.

Application filed May 23, 1906. Serial No. 318,384.

To all whom it may concern:

Be it known that I, SMITH W. BURCH, a citizen of the United States, residing at Voluntown, in the county of New London and State of Connecticut, have invented new and useful Improvements in Eyeglasses, of which the following is a specification.

The invention relates to an improvement in eyeglasses, and particularly to a nose-clamp for use therewith.

The main object of the present invention is the provision of a nose-clamp arranged for ready coöperation with the usual glasses and comprises a plurality of bearing-arms carrying at their ends the usual pads for contact with the skin and each independently mounted and arranged for independent movement, whereby each pad will individually accommodate itself to any irregularities in the nose of the wearer and provide a secure clamping action.

The invention will be described in the following specification, reference being had particularly to the accompanying drawings, in which—

Figure 1 is a front view of a pair of eyeglasses provided with my invention. Fig. 2 is a top edge view of the same; Fig. 3, a rear view of the same; Fig. 4, a section on line 4 4 of Fig. 1; Fig. 5, a perspective of one of the clamping-arms. Fig. 6 is a perspective of another of the clamping-arms. Fig. 7 is a perspective detail showing the lens-post. Fig. 8 is a broken perspective illustrating the means for connecting the bridge-piece in place. Fig. 9 is an enlarged sectional view, partly in elevation, showing the construction and connection of the pad proper with the lever. Fig. 10 is a front view of an eyeglass illustrating the modification; Fig. 11, a top edge view of the same; Fig. 12, a rear view of the same; Fig. 13, a section on line 13 13 of Fig. 10; Fig. 14, an enlarged section showing the lens-post construction and the connection thereof to the lens.

Referring particularly to the drawings, it will be noted that my invention is shown for use in connection with the ordinary rimless eyeglasses, including lenses 1, though it is to be understood that I contemplate the use of the invention in connection with any form of lens.

In the form of the invention shown in Figs. 1 to 9, inclusive, the lens-post 2 comprises an approximately rectangular plate 3, shaped on its inner side to conform to the curvature of the lens and formed with an outwardly-extending centrally-disposed lip 4, projecting from the relatively outer edge of the plate 3 and designed to overlie and bear upon the lens, said lip being perforated for the reception of the usual pin 5, designed to pass through the lens and secure the post thereto.

The respective ends of the plate 3 are formed with relatively inwardly-projecting ears 6, extending in parallel spaced relation for a purpose which will later appear. In alinement with the respective ends of the plate the relatively inner edge thereof is provided with lugs 7, extending at right angles to the plane of the lens, as clearly shown in Fig. 2. The bridge-piece 8 of the structure is provided at one end with a cross-strip 9, designed to seat between the lugs 7 of the respective lens-posts and bear against the proximate side edge of the plate 3. The cross-piece 9 is centrally provided with an outwardly-projecting lip 10, corresponding in size and shape to the lip 4 of the lens-post and being designed to engage the lens on the side opposite to the lip 4, said lip 10 being formed with an opening to receive the securing-pin 5. By this construction the lens-post and bridge-piece are secured in place in a manner to provide a secure connection with the lens, it being understood that the lugs 7 engage the ends of the cross-piece 9, and thereby limit independent movement of the bridge-piece.

The nose-clamp, which forms the material part of the present invention, is provided with four practically duplicate parts, two being arranged for coöperation with each lens-post, as will appear in the drawings. Each part of the nose-clamp comprises a clamping-arm 11, formed with a pad-section 12 and with a screwed or handle portion 13. At the juncture of the handle portion with the pad portion the arm is enlarged laterally to provide a plate 14, from the ends of which project spaced parallel ears 15. The plates 14 of each respective pair of clamping-arms are designed for coöperation with one lens-post aggregating in width the distance between the ears 6 of the lens-post, so that in applied position said arms are arranged side by side between the ears 6 and are pivotally connected thereto by a pin 16, passing

through openings in the ears 6, and through appropriately-formed openings in the ears 15.

The pad portions 12 of the arms of the respective pairs are curved relative to their plates 14 in approximately opposite directions, so that when assembled on the lens-post, as above described, said pad portions 12 will project in relatively opposite directions from the lens-post—that is, above and below the bridge 8. The pad portions 12 of the respective pairs of arms are also projected, so as to terminate in alinement in rear of the bridge, whereby to embrace the nose above and below and in rear of the engaging point of the bridge. The handle portions 13 of the respective pairs of clamping-arms are also curved in such manner that when assembled they will be slightly divergent relative to the respective plates 14, their projection from the plates in a direction opposite to that of the pad portions disposing the handles beyond and forward of the lens-posts in a position to be conveniently and simultaneously operated in applying the eyeglasses.

The free end of each of the pad portions 12 of the clamping-arms is provided with a laterally-projecting pin 17, formed with a centrally-reduced portion 18 to loosely receive a concavo-convex disk 19, on the concave or outer side of which disk is secured the pad proper, as 20. By preference, the pad proper is made of chamois or other material and formed of the desired thickness, being preferably provided with a centrally-disposed opening 21, whereby to produce a desired degree of suction in use. The opening in the disk 19 is preferably slightly greater than the reduced portion 18 of the pin 17, with which said opening coöperates, whereby to permit an independent movement of the pad to provide for the accommodation of said pad through irregularities of the nose-surface.

It is to be noted that the clamping-arm of each pair connected to the lens-posts is arranged for independent movement, if desired, and to provide for a suitable clamping action of each of said arms I secure a coil-spring 22 beneath the plate 14 of each arm, said spring being coiled about the pivot-pin 16 and with its terminals connected, respectively, to the plate 3 of the lens-post and to the plate 14 of the respective clamping-arms. Each arm is thus spring-pressed into clamping position, and the independent action thus provided for each arm enables the particular arm to perform a clamping action on the nose of the wearer wholly independent of any other arm, as will be obvious.

In the form shown in Figs. 10 to 14, inclusive, the lens-post 23 comprises spaced plates 24, connected at their inner ends by a face-plate 25 and at their outer ends by lens-plates 26, projecting in opposite directions and bent to conform to the curvature of the lens. Each of the plates 26 have edge plates 27 to embrace the respective surfaces of the lens, said plates 27 being connected at their free ends by transversely-arranged pins 28 to engage notches 29, appropriately formed in the edges of the lens. A screw 30 is designed for threaded engagement with one of the plates 24, being passed loosely through and headed beyond the other of said plates. By this construction the screw 30 may be operated to draw the plates 24 toward each other, and thereby effectively bind the pins 28 in the lens, securing the parts against accidental displacement. The bridge 31 of the modified form is preferably constructed integral with the lens-post, projecting therefrom in such a way as to leave the relatively inner surface of the face-plates 25 unobstructed. The face-plate 25 is provided at the respective upper and lower ends with inwardly-projecting ears 32, between which are disposed the clamping-arms 33 in pairs, pivotally secured through the medium of a pin 34. The clamping-arms of the modified form are identical in construction with those of the preferred form, and therefore a detailed description thereof in this connection is unnecessary.

As a means for controlling the movement of the respective clamping-arms of the modified form I provide a spring 35 for each clamping-arm, said spring being preferably in leaf form with one end secured to the face-plate 25 of the lens-post immediately beyond the pivotal connection of the coöperating clamping-arm, as clearly shown in Fig. 13. The spring 35 extends in alinement with the clamping-arm and bears at its free end upon the relatively outer surface of said arm, preferably at the point overlying the connection of the pad to said arm.

The operation and use of the structure is readily apparent from the above description, taken in connection with the drawings, it being obvious that by my invention four independent clamping members are provided in connection with the eyeglass, two bearing above and two below the contacting-point of the bridge. The glasses are thus secured on the nose of the wearer against possibility of accidental displacement.

In connection with the above-described construction it is to be particularly noted that each clamping-arm is supported on the lens-post wholly independent of the other clamping-arms and that its relative position is determined solely by the spring carried by said arm, so that each pad will readily accommodate itself to the particular irregularities of the surface on which it bears, thereby insuring a firm even grip upon the nose and avoiding the irregularities of grip ordinarily incident to those nose-clamps in which the bearing-pads are independent. Furthermore, the construction provides for the ready renewal of either of the bearing-arms without interfering in the slightest degree with any of

the others, rendering the repair of this portion of my improvement a matter of comparatively small expense and labor.

Having thus described the invention, what is claimed as new is—

1. The combination with an eyeglass, of a nose-clamp therefor comprising independently-movable clamping-arms, to engage each side of the nose and means permitting the independent manual manipulation of said arms.

2. The combination with an eyeglass, of a nose-clamp therefor comprising independently-movable clamping-arms to engage each side of the nose and carrying nose-pads at their outer ends, a spring secured to each arm and to the lens-post of the eyeglass structure, and means projecting beyond said post to permit manual movement of the arm.

3. The combination with an eyeglass, of a nose-clamp therefor comprising independently-movable clamping-arms to engage each side of the nose, a spring secured to each arm, and means connecting said spring to the lens-post of the eyeglass structure, said arm being extended beyond the connection of said spring and post to provide an operating-handle.

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

SMITH W. BURCH.

Witnesses:

HOWARD A. HUBBARD,

JOHN EDWARDS.