No. 764,212. PATENTED JULY 5, 1904.

J. H. STARBUCK.

OPTICIAN'S PLIERS.

APPLICATION FILED AUG. 8, 1903.

NO MODEL.

Fig. 1.

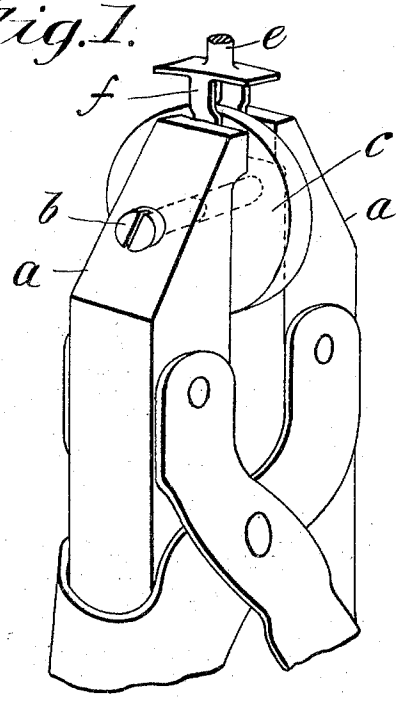


Fig. 2.

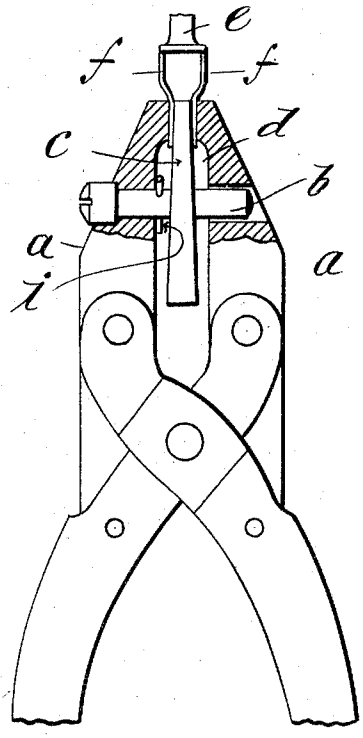
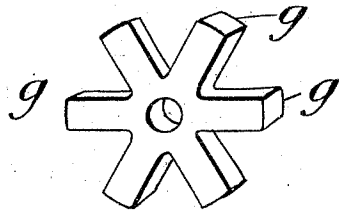


Fig. 3.



Witnesses:
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No. 764,212. Patented July 5, 1904.

UNITED STATES PATENT OFFICE.

JOHN H. STARBUCK, OF PITTSFIELD, MASSACHUSETTS.

OPTICIAN'S PLIERS.

SPECIFICATION forming part of Letters Patent No. 764,212, dated July 5, 1904.

Application filed August 8, 1903. Serial No. 168,750. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. STARBUCK, a citizen of the United States of America, residing at Pittsfield, in the county of Berkshire and State of Massachusetts, have invented new and useful Improvements in Opticians' Pliers, of which the following is a specification.

This invention relates to tools for the use of opticians, and has special reference to an improved construction of pliers used for applying the fittings to the lenses of eyeglasses, the object of the invention being to provide improved pliers for bending together the two arms of the clips used on eyeglasses, to which the spring which unites the glasses is secured or to which when applied to the outer end of the glass the cord may be attached.

The invention consists in mounting a gage-plate between the jaws of the pliers, the thickness of which plate at its periphery varies, whereby when a clip is fitted over this plate and squeezed between the jaws of the pliers the arms of the clip may be adjusted to fit a lens of any thickness.

In the drawings forming part of this application, Figure 1 is a perspective view of the jaws of a pair of pliers constructed according to my invention. Fig. 2 is a side elevation of the same, partly in section. Fig. 3 is a perspective view of a modified form of the gage-plate.

Referring to the drawings, *a a* indicate the two jaws of the pliers, between which on an axis *b* there is mounted a rotatable gage-plate *c*, preferably circular and whose two sides are located in converging planes. At some distance below the ends of the jaws the latter are cut away, as at *d*, to provide space for the free rotation of the gage-plate. The clip which is to be fitted to the lens is indicated as a whole by *e* and the two arms thereof which embrace the lens by *f f*.

Heretofore it has been customary to bend these arms inwardly toward each other separately by means of small pliers, and it is difficult to bend them with sufficient accuracy to locate their adjoining sides in parallel planes, and therefore when the screw is put in to bind them to the glass the latter is not clamped with sufficient firmness to prevent it from turning.

By means of the improved construction described herein the arms *f* of the clip may be quickly bent together in parallelism and at such distance one from the other as to cause them to fit snugly over the edge of the lens.

By applying the edge of the lens to the edge of the plate *c* it can readily be ascertained what portion of the periphery of the latter must be located between the jaws *a* to make the arms *f* fit the lens properly after said arms have been pressed together against opposite sides of the plate.

In Fig. 3 is shown a gage-plate having radially-disposed arms *g*, which are of varying thickness and which may be used in place of the circular plate *c*, shown in the other figures. The axis on which the plate *c* is mounted is shown in the drawings to consist of a bolt passing transversely through both of the jaws *a*, and it may be held in position either by a pin *i*, passed through it, as shown in Fig. 2, or said bolt, if desired, may be threaded and be screwed into that jaw next the head of the of the bolt. The method, however, of mounting the gage-plate between the jaws is immaterial, and other than those means described herein may be resorted to, if desired.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination with the jaws of a pair of pliers or like implement, of a gage-plate supported between said jaws on a suitable axis and being freely slidable on the latter toward either jaw of the pliers.

2. In combination with the jaws of a pair of pliers, a circular gage-plate located between the jaws, a pin secured in one jaw and extending toward the other, on which pin said plate is rotatably supported, the opposite sides of said plate being located in converging planes.

3. The combination with the jaws of a pair of pliers or like implement, of a plate revolubly mounted between said jaws on a suitable axis, said plate having sides located in converging planes, the plate being movable toward either jaw.

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Witnesses:
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