Dec. 19, 1922. 1,439,664.

F. T. FOEHL.

PLIERS.

FILED DEC. 16, 1921.

Fig. 1,

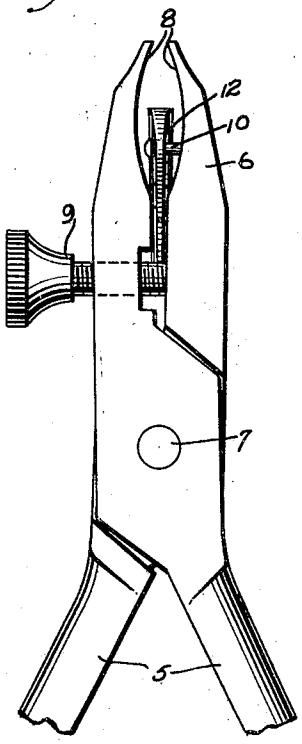


Fig. 2,

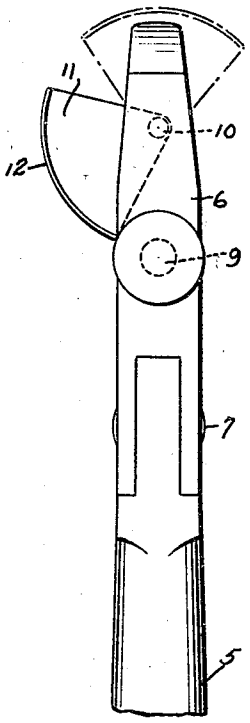


Fig. 3,

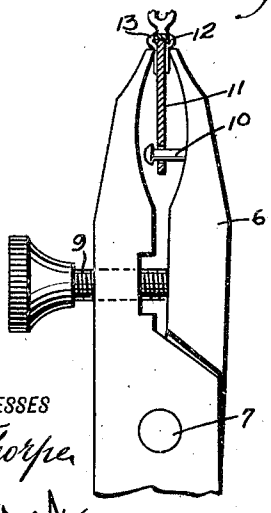


Fig. 4.



WITNESSES

Edw. Thorpe.

O. H. Marshall

INVENTOR

Frederick T. Foehl

BY

Munn & Co

ATTORNEYS

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UNITED STATES PATENT OFFICE.

FREDERICK T. FOEHL, OF BROOKLYN, NEW YORK.

PLIERS.

Application filed December 16, 1921. Serial No. 522,840.

To all whom it may concern:

Be it known that I, FREDERICK T. FOEHL, a citizen of the United States, and resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Pliers, of which the following is a full, clear, and exact description.

My invention relates to pliers, and aims to provide a device of this nature particularly adaptable for use in connection with optical work.

It is a well appreciated fact, in connection with spectacles, eye-glasses, etc., that considerable difficulty has been experienced in properly applying the clamping pieces to the lens in such a manner that no play might exist between these elements.

With this in mind, my present invention aims to provide pliers, and primarily pliers which shall be extremely simple in construction, and by means of which an optician will be capable of accurately fitting the clamping arms of the nose piece, and other parts of the spectacle to the lens, in such a manner that no play will come into being between these parts.

A further object of this invention is the construction of a device of the character specified, which shall be adaptable for use in connection with the application of the arms of the frame to virtually any thickness of lens.

Still further objects of this invention will appear in the annexed specification, taken in connection with the drawings, which latter illustrate one practical embodiment thereof, and in which;

Figure 1 is a side elevation of the forward end of a pliers embodying my improved construction.

Figure 2 is an edge view thereof.

Figure 3 is a view similar to Figure 1 and showing the pliers in use, and

Figure 4 is an edge view of one of the details of construction.

In these views it will be seen that the reference numeral 5 indicates the handles of the pliers, which may be of any desirable construction, and terminate in jaws 6, the latter being pivotally secured together, as at 7, in the usual construction.

Contrary to the conventional construction however, it will be noted that the inner faces of the jaws 6 are recessed as at 8, so that only the outer ends of these members will co-operate with each other, the bodies of the same providing a space for a purpose hereinafter specified.

A set screw 9 extends through a screw threaded opening in one of the jaws 6, and co-operates with the second of these jaws, and it will be noted that a pin 10 is also associated with one of the jaws, which pin serves to movably mount an arcuate wedge-shaped element 11, preferably formed with a flanged outer edge 12.

In use this element is swung to the position shown in Figure 1, and in full lines in Figure 2. The lens to be worked upon is then inserted between the outer ends of the jaws 6, and these latter members are actuated by means of the handles 5 to engage opposite faces of the lenses.

The set screw 9 is now actuated until the outer end of the same engages the inner face of the jaw with which it co-operates, thus preventing the working parts of the jaws moving closer together than the thickness of the lens which has just been gaged.

As has been indicated in Figure 3, the element 11 now has applied to it the member 13 which is to be affixed to the lens, and this element carrying the member is now swung to a position at which the outer ends of the jaw may co-operate with the same. A pressure applied to the handles 5 will now result in the legs of the member 13 being bent inwardly to a distance corresponding exactly to the distance of the lens. However, incident to the flange 12 which extends beyond the outer edges of the jaws 6, the base portions of the legs of the member 13 will be bowed adjacent this point, thus strengthening the entire construction. Further, it will be found that upon applying the member 13 to the lens with which it is to be associated, that the same will fit accurately and snugly against the opposite faces of the lens in such a manner as to be virtually immovable with respect to the same. Upon applying a conventional screw provided for this purpose it will be found that no fear may be felt for any play between these parts coming into being.

Thus I have constructed pliers by means of which all of the objects set forth in the preamble of this specification have been accomplished, and it will further be understood that numerous modifications of struc-

ture might readily be resorted to without in the least departing from the spirit of my invention, which I claim as:

1. A plier including a pair of jaws movable with respect to each other, a member swingingly disposed between said jaws, and having the edge of its body extending beyond the same, said edge portion being of increasing thickness.

2. A plier including a pair of jaws movable with respect to each other, a member presenting a body having a wedge shaped edge portion, means for swingingly mounting said body between said jaws, the edge portion of said body being adapted to extend adjacent the ends of the jaws.

3. A pliers, including a pair of jaws formed with a recessed inner face, and an arcuate wedge shaped element of increasing thickness adapted to be movably supported between said jaws, and within the space thus provided.

4. A pliers including a pair of jaws formed with a recessed inner face, a pin attached to one of said jaws and extending within the space thus provided, and an arcuate wedge-shaped element movably attached to said pin.

5. A pliers, including a pair of jaws formed with a recessed inner face, a set screw associated with one of said jaws, and co-operating with the second of the same, and means adapted to be extended within the opening thus provided for supporting an object being worked upon by said jaws.

FREDERICK T. FOEHL.