

March 29, 1938.

S. E. BOUCHARD

2,112,647

ADJUSTING DEVICE FOR OPHTHALMIC MOUNTINGS

Filed Feb. 1, 1937

FIG. 2

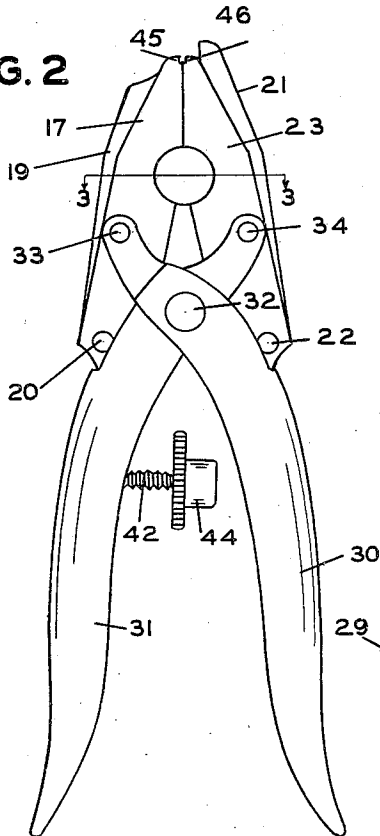


FIG. 4

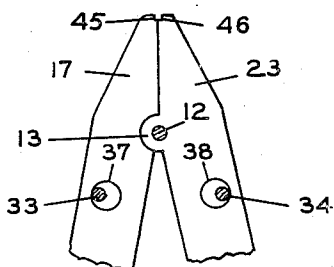
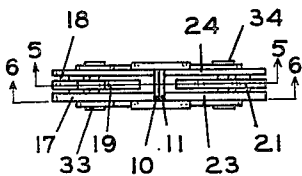


FIG. 6

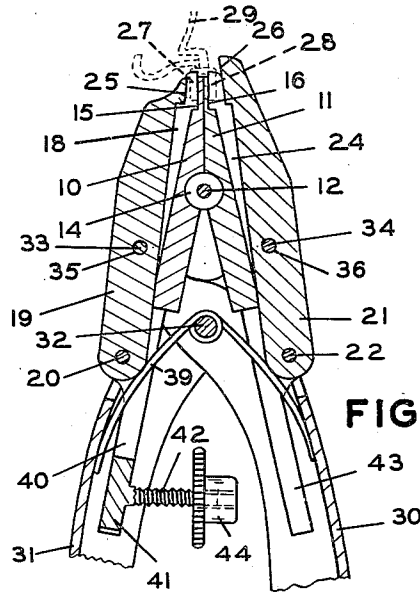


FIG. 5

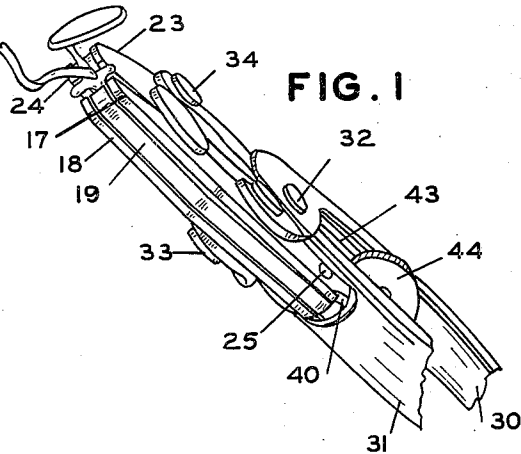


FIG. 1

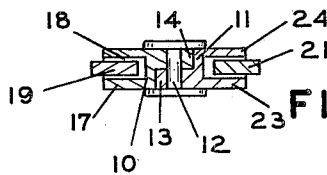


FIG. 3

SAMUEL E. BOUCHARD
INVENTOR.

BY

G. A. Ellestad
B. D. Higgins
ATTORNEYS

UNITED STATES PATENT OFFICE

2,112,647

ADJUSTING DEVICE FOR OPHTHALMIC MOUNTINGS

Samuel E. Bouchard, Rochester, N. Y., assignor
to Bausch & Lomb Optical Company, Rochester,
N. Y., a corporation of New York

Application February 1, 1937, Serial No. 123,505

5 Claims. (Cl. 81—3.6)

The present invention relates to devices for spreading the straps of an ophthalmic mounting.

Ophthalmic lenses vary widely in edge thickness and, in assembling ophthalmic mountings of the rimless type, it is frequently necessary to change the separation between the straps to accommodate a particular lens. Heretofore this operation has usually been performed by straightening the straps and rebending them with a different separation. Such a procedure is at best a cut and try operation and frequently results in broken straps and mountings.

One of the objects of the present invention is to provide an improved device for spreading the straps of an ophthalmic mounting which device is simple in construction yet efficient in operation. Another object is to provide a device which will spread the straps of an ophthalmic mounting in a single operation. Another object is to provide a device which will spread the straps of an ophthalmic mounting to the proper width for a particular lens. These and other objects and advantages reside in certain novel features of construction, arrangement and combination of parts as will hereinafter be more fully set forth and pointed out in the appended claims.

Referring to the drawing:

Fig. 1 is a perspective view of a device embodying this invention showing a mounting in position to be adjusted.

Fig. 2 is a side elevation thereof.

Fig. 3 is a section taken on line 3—3 of Fig. 2.

Fig. 4 is an end view thereof.

Fig. 5 is a section taken on line 5—5 of Fig. 4.

Fig. 6 is a section taken on line 6—6 of Fig. 4.

In the embodiment illustrated in the drawing, two U-shaped arms are provided with flat portions 10 and 11 pivotally secured together by a pin 12 which passes through lugs 13 and 14 on the portions 11 and 10, respectively. At their outer ends, the portions 10 and 11 are provided with recesses 15 and 16 in their respective rear surfaces for a purpose to be hereinafter described. Two walls 17 and 18 extend rearwardly from each side of the portion 10 and a clamping jaw 19 is pivotally secured between these walls 17 and 18 by means of a pin 20. Another clamping jaw 21 is pivotally secured by a pin 22 between two walls 23 and 24 extending rearwardly from the portion 11. The jaws 19 and 21 have projecting faces 25 and 26, respectively, opposite the recesses 15 and 16 to grip the straps 27 and 28 of an ophthalmic mounting 29 as indicated in Figs. 1 and 5.

The mechanism is actuated by means of two

handles 30 and 31 pivotally connected together by a pin 32. Pins 33 and 34 are secured at the outer ends of the handles 30 and 31, respectively, and pass through the side walls 17 and 18 and jaw 19 and side walls 23 and 24 and jaw 21, respectively. The points where the pins 33 and 34 pass through the arms and jaws are between the pivot pin 12 and the pivot pins 20 and 22 so that the handles 30 and 31 move the jaws 19 and 21 toward each other and the flat portions 10 and 11 away from each other. As best shown in Figs. 5 and 6, the pins 33 and 34 are snugly received in holes 35 and 36 in the jaws 19 and 21, respectively, while the holes 37 and 38 in the walls 17 and 23 and the identical holes, not shown, in walls 18 and 24, are much larger than the pins 33 and 34. The jaws 19 and 21 work directly with the handles 30 and 31 while the oversize holes 37 and 38 provide a lost motion connection between the handles 30 and 31 and the U-shaped arms so that the handles 30 and 31 first close the jaws against the arms and then open the arms. A spring 39 is wrapped around the pivot pin 32 and urges the handles 30 and 31 away from each other.

In order to limit the extent of opening of the arms, the side walls 17 and 18 are provided with shanks 40 which extend into the handle 31 and carry a lug 41 with a projecting screw 42. The side walls 23 and 24 have shanks 43 extending into the handle 30 and a nut 44 on the screw 42 engages the shanks 43 to stop them in predetermined position. This position determines the extent of opening of the arms.

When using the present device in the adjustment of an ophthalmic mounting, the edge of the necessary lens is placed in a groove determined by two notches 45 and 46 formed in the adjacent free ends of the side walls 17 and 23 and by identical notches, not shown, in the side walls 18 and 24. The groove formed by these notches has a width equal to the thickness of the two flat portions 10 and 11 at the recesses 15 and 16. The nut 44 is then screwed into contact with the shanks 43. The lens is then removed from the groove, the handles 30 and 31 are released and a mounting 29 is located on the device with strap 27 on one side of the flat portions 10 and 11 and with strap 28 on the other side thereof as indicated in dotted lines in Fig. 5. All that is necessary now is to squeeze the handles 30 and 31 together as far as they will go and the straps 27 and 28 are spread to the exact width required for the particular lens.

From the foregoing it will be apparent that I am

able to attain the objects of my invention and provide a new and improved device for adjusting ophthalmic mountings which is simple in construction yet efficient in operation. While I have referred only to the spreading of the straps of such mountings, it is obvious that the present device can be as well used to reduce the separation between the straps. Various modifications can, of course, be made without departing from the spirit of my invention or the scope of the appended claims.

I claim:

1. In a device of the character described, a pair of arms each having one flat face, means for pivotally connecting said arms so that the flat faces are in opposed relation, two jaws pivotally connected one to each arm on the side away from the flat face, actuating handles, means interconnecting said actuating handles and said jaws, whereby said jaws are moved into contact with said arms and means interconnecting said handles and said arms after said jaws are closed whereby said arms are moved out of contact with each other.

2. In a device of the character described, a pair of arms each having one flat face, means for pivotally connecting said arms so that the flat faces are in opposed relation, two jaws pivotally connected one to each arm on the side away from the flat face, actuating handles, and means interconnecting said actuating handles, said jaws and said arms, whereby said jaws are moved into contact with said arms and said arms are moved out of contact with each other, said last-named means including a lost motion connection whereby said jaws close against said arms before said arms open.

3. In a device of the character described, a pair of arms, each having one flat face, means for

pivotally connecting said arms so that the flat faces are in opposed relation, two jaws pivotally connected one to each arm on the side away from said flat face, the pivots of said jaws being spaced from the pivot of said arms, two handles pivotally connected together, two pins, one on each handle, said pins being rotatably journaled one in each jaw between the pivot of said arms and the pivot between the jaw and the arm, and lost motion connections between said pins and said arms.

4. In a device of the character described, a pair of arms, each having one flat face, means for pivotally connecting said arms so that the flat faces are in opposed relation, two jaws pivotally connected one to each arm on the side away from said flat face, the pivots of said jaws being spaced from the pivot of said arms, two handles pivotally connected together, two pins, one on each handle, said pins being rotatably journaled one in each jaw between the pivot of said arms and the pivot between the jaw and the arm, lost motion connections between said pins and said arms, and means for limiting the pivotal movement of said arms.

5. In a device of the character described, a pair of arms, each having a flat front face, means for pivotally connecting said arms so that the flat faces are in opposed relation, a pair of rearwardly extending walls on each arm, two jaws pivotally connected one between each pair of walls, the pivots for said jaws being spaced from the pivot for said arms, two handles pivotally connected together, two pins one on each handle, said pins being rotatably journaled one in each jaw between the pivot of said arms and the pivot between the jaw and the arm, and oversized holes in said walls through which said pins pass.

SAMUEL E. BOUCHARD.