No. 656,394. Patented Aug. 21, 1900.

H. A. DEITERS & E. L. BILL.

PLIERS.

(Application filed Feb. 20, 1900.)

(No Model.)

Fig. 1.

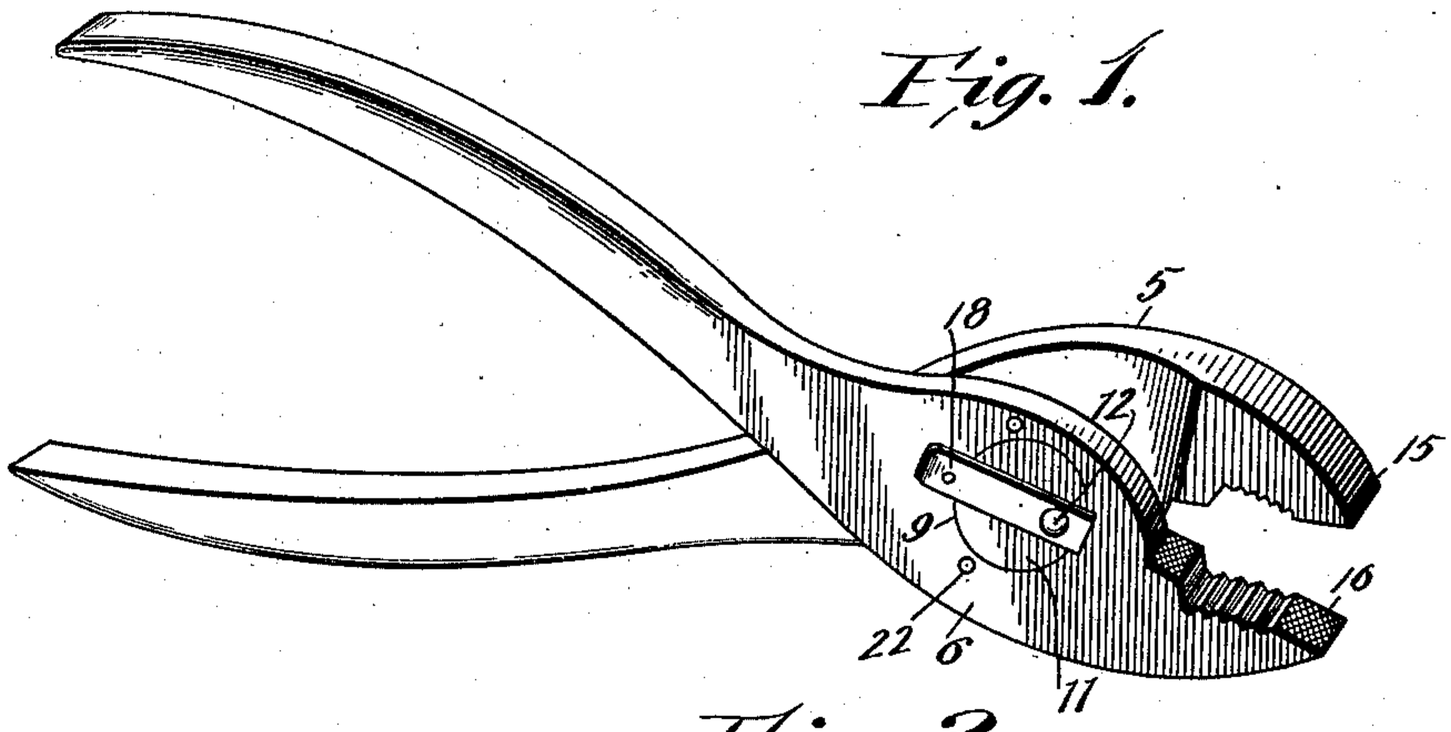


Fig. 2.

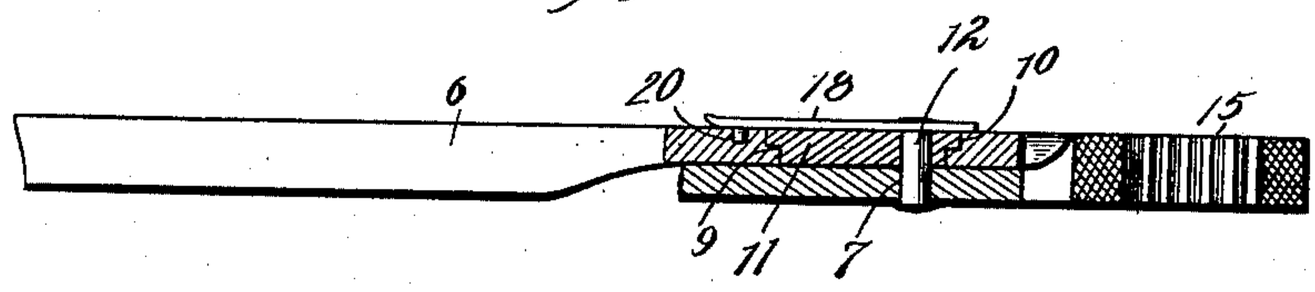


Fig. 3.

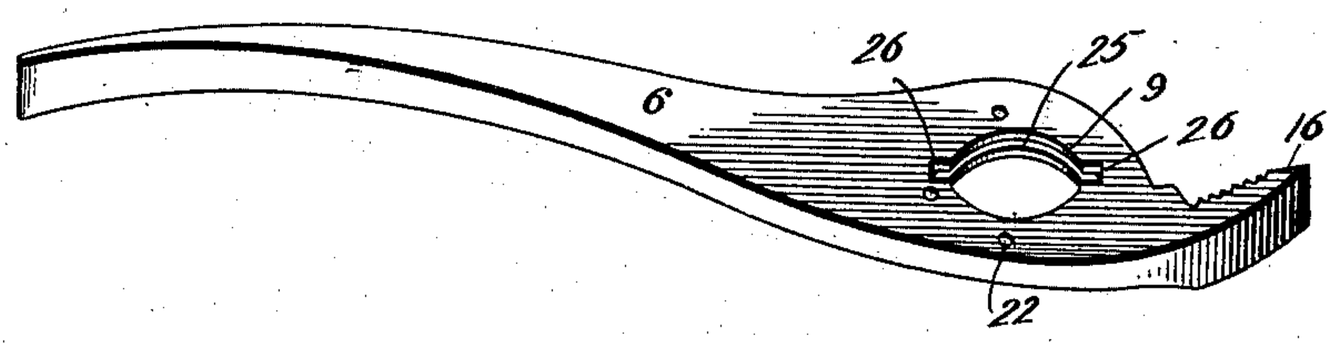
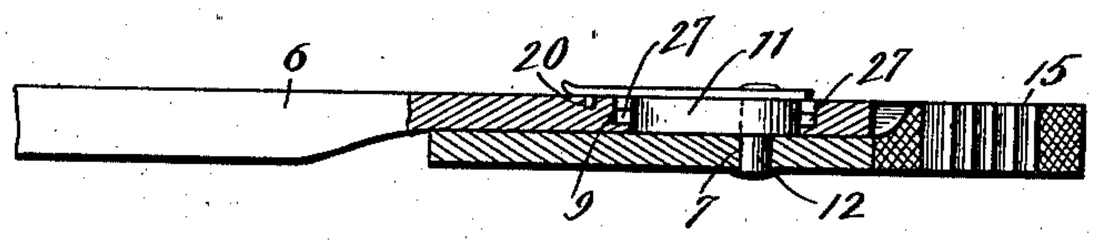


Fig. 4.



Witnesses
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Geo. H. Chandlee.

H. A. Deiters,
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Inventors

By their Attorneys,
C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

HARRY A. DEITERS AND EDWARD L. BILL, OF SPENCER, WEST VIRGINIA.

PLIERS.

SPECIFICATION forming part of Letters Patent No. 656,394, dated August 21, 1900.

Application filed February 20, 1900. Serial No. 5,939. (No model.)

To all whom it may concern:

Be it known that we, HARRY A. DEITERS and EDWARD L. BILL, citizens of the United States, residing at Spencer, in the county of Roane and State of West Virginia, have invented new and useful Pliers, of which the following is a specification.

This invention relates to pliers in general, and more particularly to adjustable pliers, one object of the invention being to provide a device of this nature in which the members of the pliers may be adjusted with respect to each other to normally lie with their jaws at different distances apart.

A further object of the invention is to provide a construction in which the members may be quickly adjusted with respect to each other and in which they will be held securely in their adjusted positions.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a perspective view showing a pair of pliers having their pivotal connection adjusted to a given position. Fig. 2 is a sectional view taken through the adjusting-eccentric of the pliers. Fig. 3 is a perspective view of one of the members of a pair of pliers constructed in accordance with a modification. Fig. 4 is a view partly in section and partly in elevation, the section being similar to that shown in Fig. 2 and illustrating the modification.

Referring now to the drawings, and more particularly to Figs. 1 and 2 of the drawings, the pliers of the present invention comprises two members 5 and 6, having their ends constructed to form handles. The member 5 has the usual perforation 7 for the reception of the pivot of the pliers. The member 7 has an enlarged and circular perforation 9 therethrough and including the pivotal point of that member, this perforation 9 having its outer end countersunk, as shown at 10. In the perforation 9 and countersink 10 is disposed rotatably a disk 11, having a peripheral flange which directly engages the countersink, as shown, and this disk carries the pivot-pin 12 of the pliers, as illustrated. In practice the disk is put into place in the perforation 9 and countersink 10, with the pivot-pin extending beyond that end of the perforation opposite to the countersink. The member 5 is then adjusted to receive the pivot-pin in its perforation, and the pivot-pin is then upset to prevent its withdrawal. If the pivot-pin is in the form of a bolt, its nut is screwed into place. With the parts in this position it will be seen that if the disk 11 is turned it will alternately throw the members 5 and 6 in one direction and then the other with respect to each other. The result is that the jaws 15 and 16 of the pliers may be caused to normally lie a greater or lesser distance apart to give the best results under different conditions. In order to hold the disk 11 at different points of its adjustment to correspondingly maintain the position of the pivot-pin with respect to the member 6, a spring-finger 18 is fastened to the outer end of the disk 11 and preferably through the medium of the pivot-pin. This finger extends beyond the periphery of the disk, and at one end and from its under side there extends a pin 20, which is adapted to snap into any one of a number of perforations 22 in the outer face of the member 6. It will thus be seen that by raising the finger 18 to move the pin 20 from the perforation with which it is engaged the disk may be swung to right or left to move the jaws toward or away from each other and that when the proper adjustment is secured within the scope of the structure the pin may be engaged with another perforation to hold the pivot-pin in the adjusted position. It will of course be understood that any number of perforations 22 may be made in the member 6.

In Figs. 3 and 4 of the drawings there is shown a similar construction, the only difference being that the perforation 9 instead of having a countersink to receive a flange upon the disk has a groove 25 in its periphery, with which communicate two slots 26, forming a "keyhole-lock" for the engagement of lugs 27 upon the periphery of the disk 11, the object of the construction being to prevent the disk from being drawn through the perforation.

In practice various modifications of the structure shown may be made and any suitable materials and proportions may be used without departing from the spirit of the invention.

What is claimed is—

1. A device of the class described comprising a jaw member having a perforation, a disk rotatably mounted in the perforation, a pivot-pin mounted in the disk and eccentric thereto, a second jaw member mounted upon the pivot-pin, a spring-finger carried by the disk, and a pin upon the finger adapted to engage the first member and hold the disk at different points of its rotatable movement.

2. A device of the class described comprising a jaw member having a perforation therein, a rotatable disk mounted in the perforation, a spring-finger mounted upon the disk and adapted for engagement with the member to hold the disk at different points of its rotation, a pivot-pin carried by the disk, eccentric thereto, and a second jaw member mounted upon the pivot-pin.

3. A device of the class described comprising a jaw member having a perforation therein, a rotatable disk mounted in the perforation, said perforation having a peripheral groove and passages leading thereto, lugs upon the disk adapted to enter the passages and engage the groove, a pivot-pin carried by the disk eccentric thereto, a spring-finger mounted upon the disk and having a pin for engagement with perforations in the member to hold the disk at different points of its rotation, and a second jaw member mounted upon the pivot-pin.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

HARRY A. DEITERS.
EDWARD L. BILL.

Witnesses:
W. HUDDLESTON,
AMOS E. KENNEY.