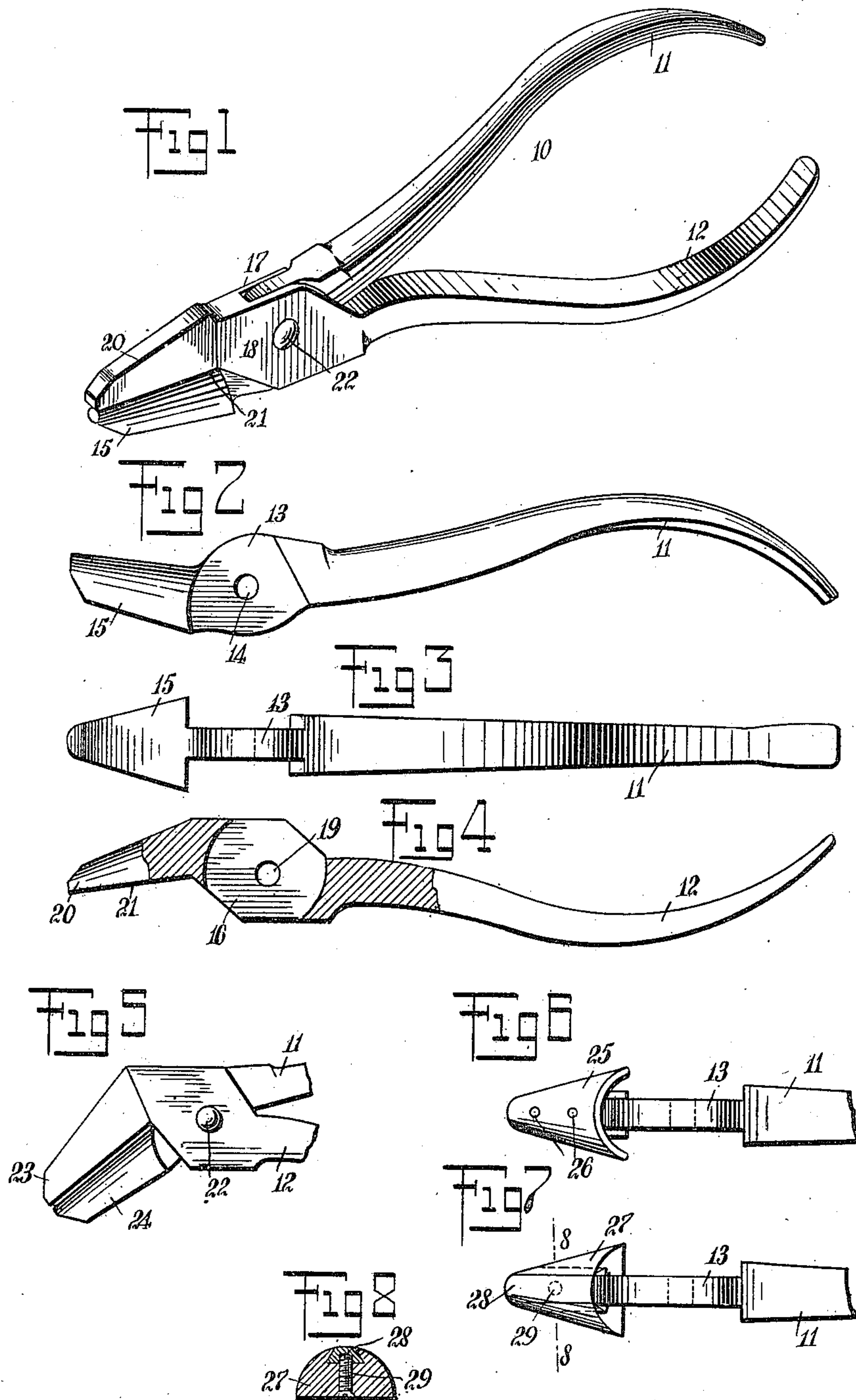


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PLIERS.

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993,902.

Patented May 30, 1911.



WITNESSES:

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PETER GEORGE STORMER, OF JOHNSTOWN, PENNSYLVANIA.

PLIERS.

993,902.

Specification of Letters Patent.

Patented May 30, 1911.

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To all whom it may concern:

Be it known that I, PETER G. STORMER, a citizen of the United States, and a resident of Johnstown, in the county of Cambria and State of Pennsylvania, have invented new and Improved Pliers, of which the following is a full, clear, and exact description.

My invention relates to pliers, more particularly to pliers used by opticians and the like, and has for an object to provide a pair of pliers adapted to be used for adjusting and handling delicate articles, such as eyeglasses, parts of watches, spectacles, and the like.

A further object of my invention is to provide a pair of pliers which will enable the operator to bend wire or like members into either a curved or straight form, and further permit of the operator securing a firm but quickly releasable hold on fragile, delicate or diminutive articles.

My invention comprehends among other things a pair of coacting jaws provided with extended handles pivotally fulcrumed at one end adjacent to the jaws, one of the jaws having a flat face and the other jaw having a curved face, the said faces of the jaws being adapted to removably coact when the handles are pressed together, and one of the said jaws being removably secured to one of the handles.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a perspective view of my pliers, showing the same in closed position; Fig. 2 is a side elevation of one of the handle members forming a part of my pliers and showing the curved jaw in side elevation; Fig. 3 is a view looking at the handle member shown in Fig. 2, from the underside; Fig. 4 is a partial sectional side view of the other handle member forming a part of my pliers; Fig. 5 is a fragmentary view of a modification of the jaws forming a part of my pliers; Fig. 6 is another modification showing a curved jaw constructed in a semi-circular form; Fig. 7 is still another modification of one of the jaws of my pliers, showing a semi-circular hollow jaw removably secured to a handle; and Fig. 8 is a sectional view taken on the line 8—8 in Fig. 7, and

showing the means whereby the curved hollow jaw is secured to the handle.

Referring more particularly to the various figures, I provide a pair of pliers 10, having handle members 11 and 12, pivotally fulcrumed to move relatively to one another. At one end of the handle member 11 is formed a bearing 13, having therein a transverse opening 14. Adjacent to the bearing 13 is a curved jaw 15, tapering slightly and extending outwardly from the bearing 13 of the handle 11. At one end of the handle member 12 is disposed a bearing 16, formed of divided portions 17 and 18, and having therein a transverse opening 19. Adjacent to the bearing 16 is a tapered jaw 20, extending outwardly from the bearing 16 and provided with a flat face 21. In order to conveniently fulcrum the members 11 and 12, a pin 22 is passed through the openings 14 and 19 in the members 11 and 12, thereby pivotally fulcruming the said members, so that when the handles of the same are pressed together, the jaws 15 and 20 will coact so that the curved face of the jaw 15 will contact with the flat face 21 of the jaw 20, as will be easily seen by referring to Fig. 1.

Referring to Fig. 5, modified forms of jaws are shown in which the flat faced jaw 23, and the curved jaw 24, are bent downwardly at an angle. By means of this construction greater convenience is secured when gripping certain delicate articles.

In Fig. 6 the convex jaw 25, is removably secured to the handle member 11 by the holding members 26, removably passed through the jaw 25 and the handle member 13.

Fig. 7 discloses another modified form of circular jaw. Here the convex jaw 27, is preferably hollow and the handle member 11 together with the jaw 27 form a dove-tailed joint 28, inside the jaw 27 and removably secured by the screw 29.

Although I have shown my preferred form of pliers in Fig. 1, it will be readily seen that with the various modified forms shown and described a convenient, strong and easily manipulated tool is presented.

It will be understood that although I have shown and described several important forms of my device, I do not limit myself to the precise construction as shown, the scope

of my invention being fully defined in the appended claim.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

10 In a pair of pliers the combination of a flat jaw and a curved jaw, handles extending rearwardly therefrom and pivotally fulcrumed at one end adjacent to the said jaws, the said flat jaw being integrally formed on one of the said handles and the said curved jaw consisting of a shell open at one end and provided therein with a dove-tailed slot

extending longitudinally of the shell and adapted to receive a dove-tailed end of the other handle, and means for removably holding the said dove-tailed end in the said dove-tailed slot. 15

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses. 20

PETER GEORGE STORMER.

Witnesses:

EMANUEL COVER,
LOIS KRISE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
