

(No Model.)

E. B. CROCKER.

CUTTING PLIERS.

No. 345,215.

Patented July 6, 1886.

Fig. 1.

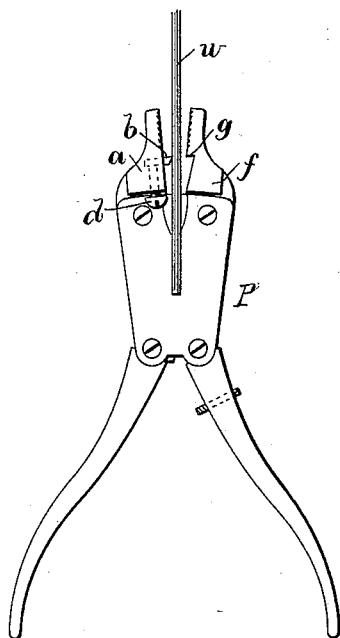


Fig. 2.

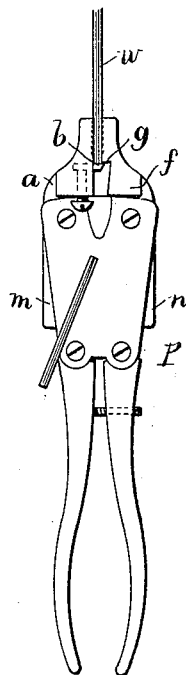


Fig. 3.

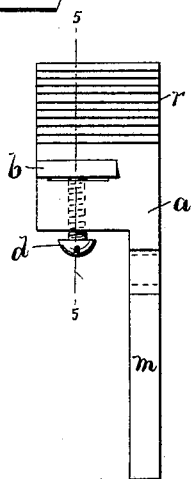
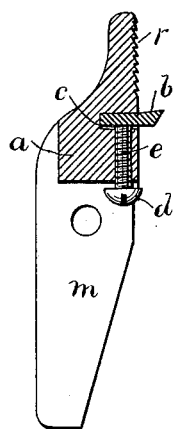


Fig. 4.



Fig. 5.



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CUTTING-PLIERS.

SPECIFICATION forming part of Letters Patent No. 345,215, dated July 6, 1886.

Application filed February 16, 1886. Serial No. 192,080. (No model.)

To all whom it may concern:

Be it known that I, EUGENE B. CROCKER, of Pawtucket, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Pliers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to the class of pliers which have their jaws provided with co-operating cutting parts, whereby combined cutting and holding pliers are secured, or cutting-pliers alone are produced.

The object of my invention is to provide the inner faces of the jaws of ordinary holding-pliers with cutting parts, whereby the worked material is first grasped, then cut clean and held firmly gripped by one and the same action of said pliers.

My invention consists, essentially, in the peculiar arrangement and construction of the cutting parts, and of the combinations, all as hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 represents a front view of an ordinary pair of holding-pliers with my invention attached to the jaws, which are opened to receive a wire, *w*. Fig. 2 represents the same as Fig. 1 after the jaws have closed upon the wire *w*, then cut and gripped the same. Fig. 3 represents an enlarged detached view of the inner face of a jaw and its lever-arm with my cutting-blade attached. Fig. 4 represents an enlarged detached view of my removable cutting-blade. Fig. 5 represents a sectional view on line 5 5 of Fig. 3.

In the said drawings like letters designate like parts throughout.

P designates an ordinary pair of holding-pliers, which have the jaws *a* and *f* borne upon the lever-arms *m* and *n*, respectively. The jaw *a* is provided with my cutting-blade *b*, which is removably set in a transverse slot, *c*, and held therein by the clamp-screw *d*, which works in the screw-threaded channel *e*. The jaw *f* is constructed with a cutting-edge, *g*, which coacts with the cutting-blade *b* in shearing materials. The inner faces of both jaws have similar roughened holding-surfaces, *r*, near their outer ends or lips. The cutting-edge

g is slightly undercut—that is, its flat or shearing face is slightly inclined inwardly relatively to the holding-surface *r*, and the flat or shearing face of the blade *b* is slightly inclined outwardly, both as shown in Figs. 1 and 2. These inclinations may be varied in order to accomplish a cleaner cut, or these shearing-faces may be constructed perpendicularly to the holding-surfaces. As I have shown them, the co-operating cutting parts *b* and *g* make a cut at right angles to the axis of wire *w*, thereby allowing no waste of material by a tapering or ragged cut. The cutting-blade *b* is adjustable relatively to the cutting-edge *g*, and it is readily removable for repairs or replacement.

By the use of my device in drawing wire and then cutting it into required lengths, these two operations of drawing and subsequently cutting are combined into one by the single operation of my pliers in grasping the wire at the desired point, cutting it clean, then gripping it for drawing, as described above.

The form of my combined pliers may be varied and modified without departing from the essence of my invention, as herein specified.

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

1. In pliers, the shearing or cutting parts, consisting of a fixed cutting-edge and a removable cutting-blade opposite, both of said parts correspondingly disposed upon the inner faces of the respective jaws of said pliers and across the line of length of said jaws, and both of said parts co-operating, for the purpose described.

2. In combination, a pair of plier-jaws provided with holding-surfaces on the inner and opposite faces and adjacent to the lips or outer edges thereof, a fixed cutting edge or part on the inner face of one of said jaws, and a removable cutting-blade on the inner face of the other said jaw, both of said cutting parts correspondingly disposed to the rear of said holding-surfaces and across the line of length of said jaws.

3. In combination, a plier-jaw provided with a roughened holding-surface on the inner face and near the outer end thereof, and a fixed cutting-blade disposed to the rear of the holding-surface transversely to the jaw, a fellow plier-jaw provided with a like holding-surface similarly located, and a transverse slot formed on the inner face of said jaw to the rear of the

holding-surface, a screw-threaded channel communicating with said slot, a clamp-screw working in said channel, and a removable cutting-blade set in said slot and clamped by said screw, said cutting blade and edge arranged oppositely and coacting, substantially as described.

4. The combination, with the jaw *a*, provided with the transverse slot *c*, the blade *b*, the channel *e*, and the clamp-screw *d*, of the jaw *f*, provided with the cutting-edge *g*, both said jaws having the holding-surface *r*, substantially as and for the purpose described.

5. In combination, a plier-jaw provided with the transverse slot *c*, having the communicating screw-threaded channel *e*, the removable cutting-blade *b*, set in said slot, the clamp-screw *d*, working in said channel and binding said blade, and a coacting plier-jaw provided with the fixed cutting edge or part *g*, substantially as described.

EUGENE B. CROCKER.

Witnesses:

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