

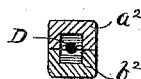
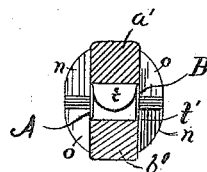
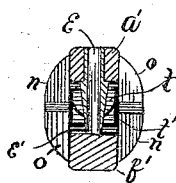
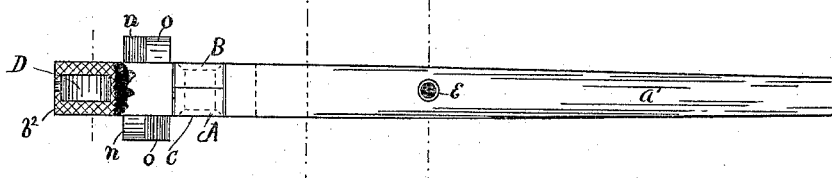
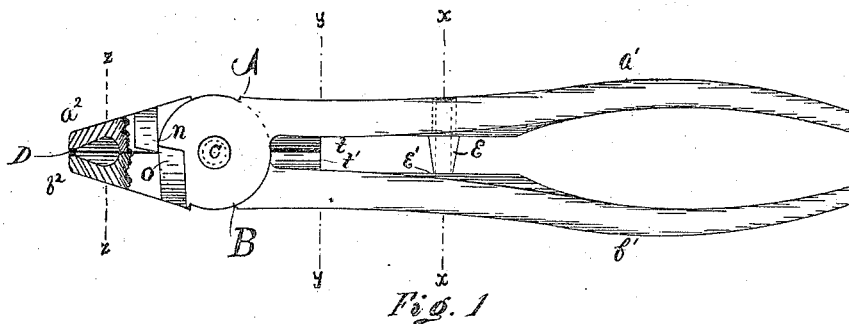
(No Model.)

W. CRONK.

PLIERS.

No. 344,769.

Patented June 29, 1886.



Witnesses.

E. Horton

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UNITED STATES PATENT OFFICE.

WILLIAM CRONK, OF HAVANA, NEW YORK.

PLIERS.

SPECIFICATION forming part of Letters Patent No. 344,769, dated June 29, 1886.

Application filed November 18, 1885. Serial No. 183,229. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM CRONK, a citizen of the United States, residing at Havana, in the county of Schuyler and State of New York, have invented useful Improvements in Pliers, of which, with reference to the drawings, the following is a full, clear, and exact description.

My invention relates to improvements in pliers; and the objects of my improvements lie in its general construction, combining elements most wanted by farmers for general purposes, such as building wire fence, mending harness, ringing hogs, cutting off wire, forming or bending wire hooks and staples, drawing nails, &c. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side view of the pliers, partly in section, the jaws being broken away to show the cupping or recess in them. Fig. 2 is an edge view of the pliers with the upper jaw broken away to show a plan view of said cupping. Fig. 3 is a cross-section on the line $x\ x$, Fig. 1, showing the construction of the hollow punch. Fig. 4 is a cross-section on the line $y\ y$, Fig. 1, showing the relation of the convex and concave dies for wire-bending. Fig. 5 is a cross-section of jaws on the line $z\ z$, Fig. 1, to show the cupping and the opening in the point of the jaws.

Similar letters refer to similar parts throughout the several views.

A and B represent two similar stock parts, halved together about a fulcrum-pin, C, which passes through them in the center of a circle, an arc of which is formed in each part. The length of the arc regulates the amount each jaw turns upon the rivet or joint-pin C. Running out from each circle of the stock parts are the curved handles $a\ b'$, and at less leverage from the fulcrum-pin C the flat-faced jaws $a^2\ b^2$. These jaws are so shaped that when closed they will meet squarely together. The like cuppings, D, centrally cut in the face of each jaw, form an improvement for the general usages for which pliers of this kind have heretofore been made, as even with the jaws so cupped the advantage of their meeting squarely together is preserved. A nail can be caught and withdrawn, hog-rings can be closed readily, pieces of wire can be held firmly, and the pliers can almost always be placed to work without slipping.

Midway in the handle a' is inserted a hollow punch, e , the lower and sharpened end of which comes in contact with a leveled surface, e' , on the inside of the handle b' when the pliers are closed, and by this punch rivet-holes may be made for the insertion of rivets in mending harness, &c. Next, in close relation to the joint portions of the stock parts A and B, and between and toward the handles, I have added the convex die f and the corresponding concave die, f' , fitting into each other when closed, and by placing wire between them it may be formed into rings, hooks, staples, and many other desired shapes.

From each side of each stock part A and B projects a cutting shoulder or knife, $n\ o$, the one with its cutting-edge seated within the joint-circle and tangent to it, the other with its cutting-edge seated without said circle, and also tangent to it, their relative positions being such that they pass by each other when the pliers are closed far enough to admit of being sharpened, and to cut off wire placed between them in line with handles $a'\ b'$.

I am aware that pliers have been made with devices for cutting wire, also belt-punches having a hollow punch. Such I do not claim, broadly; but

I claim and wish to secure by Letters Patent the following combinations:

1. In a pair of pliers, the stock parts A B, united by pin C, and having handles $a'\ b'$ and jaws $a^2\ b^2$, each with a flat-surfaced face and a cupping or recess, D, in its face, substantially as shown and described.

2. In a pair of pliers, the stock parts A B, united by pin C, and having jaws $a^2\ b^2$, each with a flat-surfaced face and a cupping or recess, D, in its face, and convex and concave dies $f\ f'$, closing within each other, substantially as described.

3. A pair of pliers having jaws $a^2\ b^2$, each with a flat-surfaced face and a cupping or recess, D, in its face, and handles $a'\ b'$, having hollow punch E, substantially as described.

4. In a pair of pliers, the stock parts A B, united by pin C, and having projecting knives $n\ o$ and jaws $a^2\ b^2$, each with a flat-surfaced face, and a cupping or recess, D, in its face, substantially as shown and described.

WILLIAM CRONK.

Witnesses:

E. HORTON,
G. S. SHATTUCK.