No. 649,039. Patented May 8, 1900.

W. A. BERNARD.

PLIERS.

(Application filed Aug. 4, 1899.)

(No Model.)

Fig. 1.

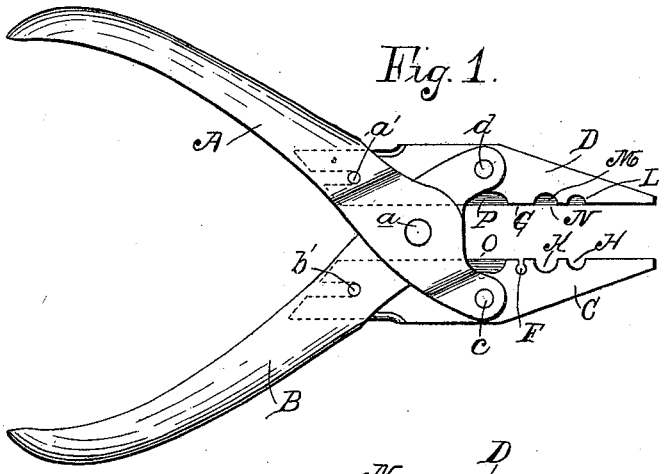


Fig. 2.

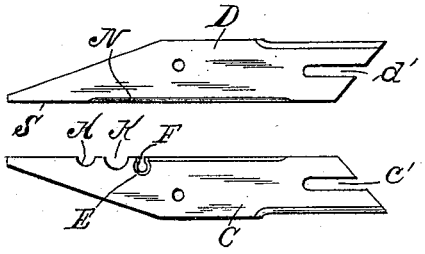


Fig. 3.

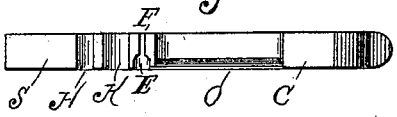
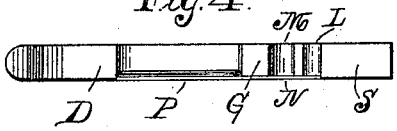


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM A. BERNARD, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE WILLIAM SCHOLLHORN COMPANY, OF SAME PLACE.

PLIERS.

SPECIFICATION forming part of Letters Patent No. 649,039, dated May 8, 1900.

Application filed August 4, 1899. Serial No. 726,170. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. BERNARD, of the city and county of New Haven, in the State of Connecticut, have invented a new and useful Improvement in Pliers, of which the following is a full, clear, and exact description when taken in connection with the accompanying drawings, in which—

Figure 1 represents a side elevation of pliers embodying my invention; Fig. 2, a reverse elevation of the jaws of the pliers, and Figs. 3 and 4 bottom views in detail of the jaws.

In all figures similar letters of reference represent like parts.

This invention relates to pliers, and more particularly to pliers used in work on electrical wiring, &c.; and it consists in the improvements and novel combinations of parts set forth hereinafter.

Referring to the drawings, the parts designated by the letters A and B are hollow handle-levers fulcrumed at *a*, and to the forward ends of which are pivoted jaws C and D by screws or pins *c* and *d*. The jaws C and D are shown slotted at *c'* and *d'* at their rear ends for a sliding connection on pins *a'* and *b'*, secured to the handles, so that the jaws are shown as parallel-moving jaws; but the invention is not limited thereto.

In the gripping-face of the jaw C is a transverse slot of two widths E and F, the part E being wide enough to receive an electric conductor or wire with its non-conductive coating or insulation, while the part F is of width sufficient merely to receive the wire stripped of its insulation. The jaw D is provided with a flat bearing-surface G on that part of the face of the jaw which in closing meets the part of the jaw C with the slots E and F, so that when a wire, with its insulation, is placed over the slots E and F and the jaws are closed the wire is forced by the surface G into the slot F and the insulation cut by the edges of the slot F and stripped from the portion of the wire forced therein, the insulation being thus cut longitudinally with the wire. In the case of light insulation the portion so stripped from the wire may be severed from the portion still surrounding the wire by merely retaining the jaws closed and withdrawing the wire.

Two transverse semicylindrical slots H and K, of different widths, are also formed in the jaw C and corresponding slots L and M in the jaw D. The slots H and K extend entirely across the gripping-surface of the jaw C, while the slots L and M terminate at one side in a cutting edge N. When a wire with heavy insulation is placed in either of the slots H or K and the jaws closed, the cutting edge N will substantially sever the insulation on one side of the wire. By rotating the wire and opening and closing the jaws the insulation is cut on an annular line about the wire, and upon withdrawing the wire while the jaws are closed the wire is stripped of the insulation.

A further feature of the jaws, as shown, is a cutting edge O on the jaw C and corresponding edge P on the jaw D, so that the wire itself may be severed by the same tool, if desired. Flat gripping-surfaces are shown at the outer ends of the jaws, so that the tool may be employed as simple pliers, if desired.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In pliers, the device for stripping the insulation from wire, consisting of two jaws, one having a transverse slot of the exact width of the wire, and the other having a flat bearing-surface adapted to fit over the slot and upon the closing of the jaws to force the entire portion of the wire between the jaws into the slot, whereby upon the longitudinal withdrawal of the wire an indefinite length thereof may be stripped of its insulation, substantially as described.

2. In pliers, the device for stripping the insulation from wire, consisting of a slot of two widths in one jaw, one width of slot being sufficient to receive the wire without the insulation; and a flat bearing-surface on the other jaw adapted to fit over the slot, substantially as described.

3. In pliers, the device for stripping the insulation from wire, consisting of a semicylin-

drical slot extending across the gripping-surface of one jaw and a corresponding slot in the other jaw, terminating in a cutting edge on a line with the inner face of the jaws, so that when the jaws are closed the slot in one jaw remains open from end to end, substantially as described.

In witness whereof I have hereunto set my hand this 3d day of August, 1899.

WILLIAM A. BERNARD.

Witnesses:
SAMUEL H. FISHER,
ELIZABETH K. PENDLETON.