No. 635,417. Patented Oct. 24, 1899.

W. A. BERNARD.

NIPPERS.

(Application filed Aug. 4, 1899.)

(No Model.)

Fig. 1.

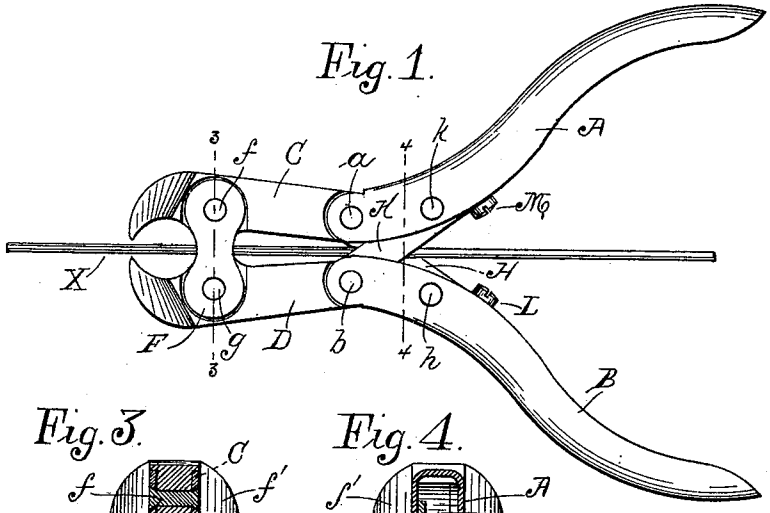


Fig. 3.

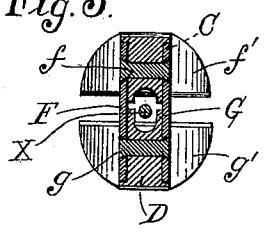
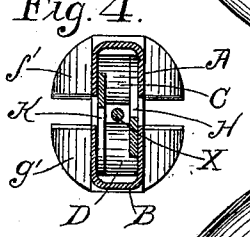


Fig. 4.



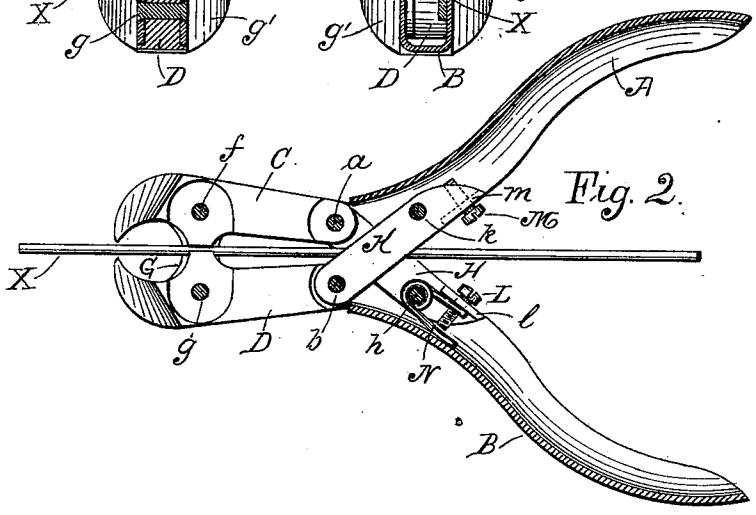


Fig. 2.

Witnesses.
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

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

NIPPERS.

SPECIFICATION forming part of Letters Patent No. 635,417, dated October 24, 1899.

Application filed August 4, 1899. Serial No. 726,171. (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 Nippers, of which the following is a full, clear, and exact description, when taken in connection with the accompanying drawings, which form a part thereof, and in which—

Figure 1 represents a side elevation of a pair of nippers embodying my invention; Fig. 2, a longitudinal vertical section of the same; Figs. 3 and 4, transverse vertical sections on lines 3 3 and 4 4, respectively, of Fig. 1.

In all figures similar letters of reference represent like parts.

The invention relates to nippers; and it consists in the various improvements and combinations of parts set forth and claimed hereinafter.

Referring to the drawings, the parts designated by the letters A and B represent hollow sheet-metal handle-levers, within the forward ends of which are pivoted, by pins or screws *a* and *b*, the heels of the jaws C and D, which do not cross, but are connected together by means of plates F and G, pivoted on the two sides thereof at *f* and *g*. These plates being pivoted on the outside of the two jaws, a space or opening is formed between them for the passage of any rod or wire, as shown in Figs. 2 and 3. The forward ends of the jaws are shown flared, as at *f'* and *g'*, Figs. 3 and 4, so that the meeting edge of the cutting-surface is on a line at right angles to the length of the jaws and is of greater width than the jaws; but the invention is not limited to this particular form of cutters, nor to cutters, as any form of gripping-surfaces may be used.

Pivoted by the pivots or pins *a* and *b* to the heel of each of the jaws is an independent link H or K, which is also pivoted to and within the oppositely-disposed handle (or handle connected to the opposite jaw) by pins or screws *h* or *k*. Each of the links H or K is pivoted to the opposite outer side of its respective jaw, so that substantially the width of the heel of the jaws is between the links, as shown in Fig. 4. The link H or K is prolonged beyond the pivot *h* or *k*, Fig. 2, and through this extension or prolongation *l* or *m* projects a screw L or M, which may be adjusted to come in contact with the under side of the handle upon the closing of the nippers, so as to form a stop for limiting the movement of the nippers and relieve the cutting edges. A spring N (shown coiled around one of the pivots *h*) bears against the prolongation *l* of one of the links H and the under side of one of the handles and tends to force the prolongation *l* away from the handle, which movement opens the nippers.

As the plates F and G have a space or opening between them and the links H or K also an opening, and as the stop and spring are situated only at one side of the center of the tool, Figs. 1 and 2, a rod or wire X may be passed between the cutttng edges or gripping-surfaces of the jaws and pass unobstructed out between the handles.

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

1. Nippers or pliers consisting of a pair of hollow handles; jaws pivoted at the rear ends within the forward ends of the handles, and connected together at or near their forward ends; links connected each to the rear end of one of the jaws and to and within the oppositely-disposed handle; said jaws having an opening through their connection with each other and said links having a space between them, for the passage of a rod or wire through the tool, substantially as described.

2. Nippers or pliers consisting of a pair of hollow handles; jaws pivoted at the rear ends within the forward ends of the handles; plates pivoted to the outside of the forward ends of the jaws connecting the same; and independent links each pivoted to the outside of the rear end of one of the jaws, and also pivoted within the oppositely-disposed handle, substantially as described.

3. In nippers or pliers, the combination with a pair of handles; of jaws pivoted to the forward ends of said handles, and connected together at or near their forward ends; links pivoted each to the rear end of one of said jaws, and to the oppositely-disposed handle, one or both of said links being prolonged be-

yond the pivot with said handle; and a stop limiting the movement of said prolongation by said handle, substantially as described.

4. In nippers or pliers, the combination with a pair of handles; of jaws pivoted to the forward ends of said handles, and connected together at or near their forward ends; links connected each to the rear end of one of said jaws, and to the oppositely-disposed handle, and a spring bearing on one of said handles and link connected thereto, constantly tending to open the tool, 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.