

No. 851,794.

PATENTED APR. 30, 1907.

W. A. BERNARD.
PUNCH, PLIERS, &c.
APPLICATION FILED FEB. 10, 1906.

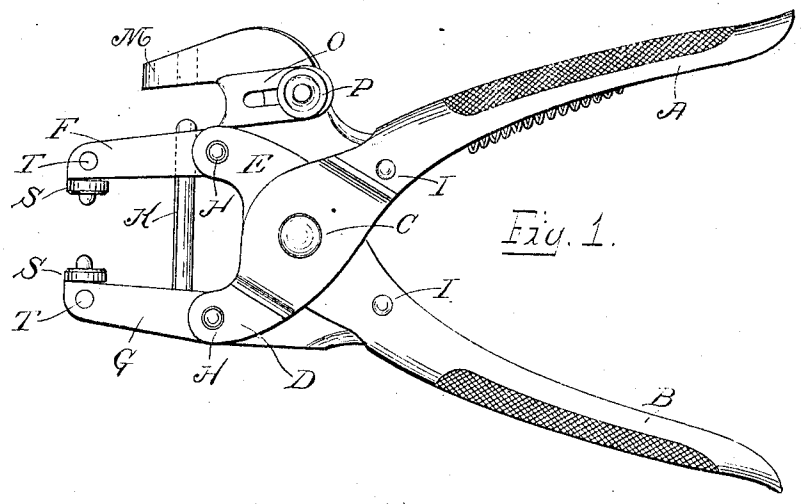


Fig. 1.

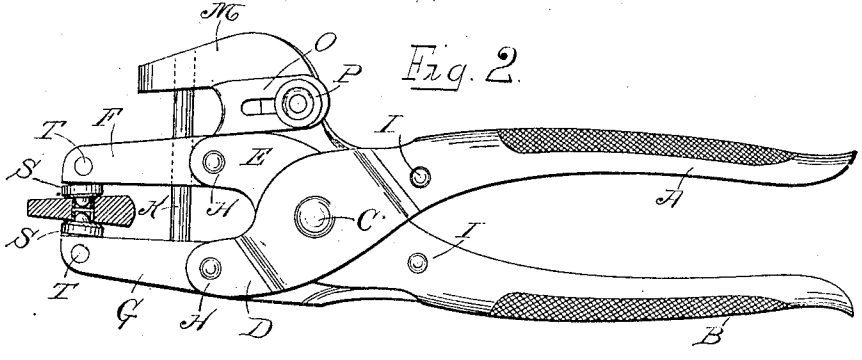


Fig. 2.

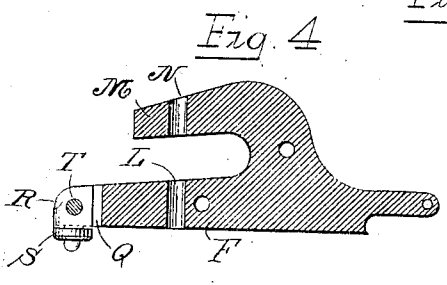


Fig. 4.

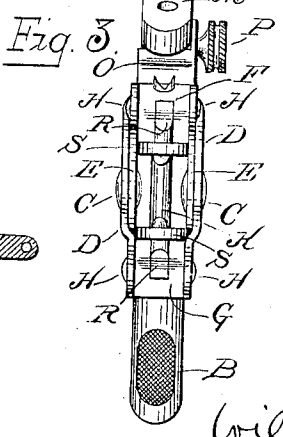


Fig. 3.

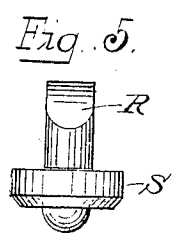


Fig. 5.

Witness
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UNITED STATES PATENT OFFICE.

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PUNCH, PLIERS, &c.

No. 851,794.

Specification of Letters Patent.

Patented April 30, 1907.

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To all whom it may concern:

Be it known that I, WILLIAM A. BERNARD, of the city and county of New Haven and State of Connecticut, have invented new and useful Improvements in Punches, Pliers, and Similar Tools, 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 punch embodying the invention, Fig. 2, a similar view, with the jaws of the punch shown closed upon an article. Fig. 3, an end view of the punch, as shown in Fig. 1, Fig. 4, a longitudinal vertical section through one of the jaws, and Fig. 5, a detailed end elevation of one of the riveting dies.

In all figures, similar letters of reference represent like parts.

This invention relates to punches, pliers and similar tools, and has for its object the production of tools of this class, with parallel moving jaws, having riveting dies so connected with said jaws as to grip objects, the sides of which are not parallel, as, for example, the wooden strip at the end of a window shade. By having the jaws parallel with each other continuously during their movement a punch may be located on one jaw, which will project into or through the other jaw in which the article to be punched is held. But with jaws of this character an objection has existed in that the riveting dies were incapable of conforming to an article placed between them which did not have parallel sides. As in the present invention, the riveting dies are swivel mounted on the jaws, they are free to turn on their pivots to grip articles of different form, as more particularly shown in Fig. 2, while the jaws of the punch moves, as hitherto, parallel to each other.

The invention consists, therefore, in the improvements and combinations of parts hereinafter described.

Referring to the drawings for a more particular description, the parts designated by the letters A and B are lever handles, which

at their forward ends are forked, and are provided with parallel plates or tines D and E which are fulcrumed together by the pin or rivets C.

The jaws F and G are pivoted at H between the forwardly extending plates D and E, and their rear ends extend into the hollow portions of the lever handles, with which they have a sliding connection, by means of pins I, in well known manner.

The jaw G is provided with a punch K, projecting from the inner face thereof, through a perforation L, in the main portion of the jaw F. The jaw F is provided with an arm M, projecting laterally from its upper side and extending forwardly and substantially parallel with the main portion of the jaw. This arm M is provided with a perforation N in alinement with the perforation L for the reception of the end of the punch K, when the jaws are closed (Fig. 2). A gage O is mounted on the jaw F, and provided with a thumb screw P adapted to clamp it in its adjusted position.

The forward ends of the jaws F and G are slotted longitudinally, at Q, as shown more particularly in Fig. 4. The riveting dies S are provided with extensions R, which project into the slots Q, and are pivoted therein by pins T. The dies S are adapted thereby to rotate on a longitudinal plane so that they may project directly toward each other, as shown in Fig. 1, or at an angle to each other, as shown in Fig. 2.

By this construction, an article, such as the stick in the end of a window shade, the sides of which are not parallel, may be perforated by the punch K and eyelets may be inserted and their flanged ends turned down flush or made to conform to the sides of the article, whether the sides be parallel or at an angle with each other.

As illustrated in Fig. 2, eyelets may be nicely inserted in and their flanges made flush with the sides of the lower strip of a window shade which is thicker at one edge than at the other.

Having now described my invention, what

I claim and desire to secure by Letters Patent, is:—

In punches, pliers and similar tools, the combination with lever handles fulcrumed
5 together; of jaws operated thereby to move parallel with each other, having longitudinal slots in their forward ends and one of said
jaws having an arm; a punch carried by one
10 of said jaws and projecting through the other to cooperate with said arm; and dies having

extensions projecting into said slots and pivoted therein to rotate in the plane of the tool, substantially as described.

In witness whereof I have hereunto set my hand on the 12th day of January, 1906.

WILLIAM A. BERNARD.

Witnesses:

JOHN W. BRISTOL,
SAMUEL H. FISHER.