

J. L. Devoe,

Saw Set.

No. 91,097.

Patented June 8, 1869.

Fig. 1.



Fig. 2.

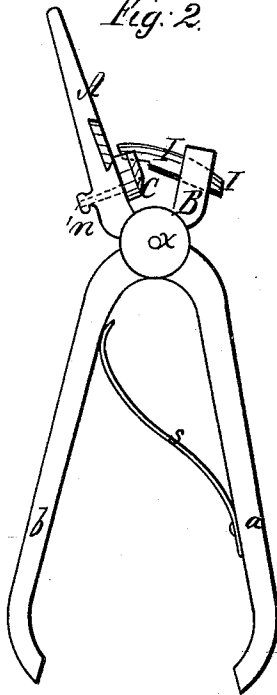


Fig. 3.

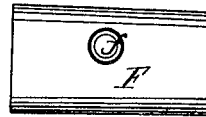


Fig. 4.

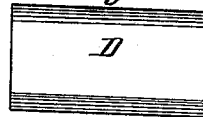


Fig. 5.

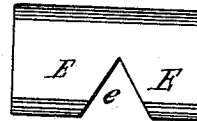


Fig. 10.



Fig. 3a



Fig. 4a



Fig. 5a



Fig. 6.



Fig. 6a



Fig. 7.



Fig. 8.



Fig. 8a



Fig. 9.



Fig. 9a



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JONATHAN L. DEVOL, OF PARKERSBURG, WEST VIRGINIA.

Letters Patent No. 91,097, dated June 8, 1869.

IMPROVEMENT IN COMBINED SAW-SET, GUMMER, PUNCH, AND WIRE-CUTTER.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JONATHAN L. DEVOL, of Parkersburg, in the county of Wood, in the State of West Virginia, have invented a combined Saw-Set, Gummer, Punch, and Wire-Cutter; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, and to the letters of reference marked thereon.

The nature of my invention consists in providing the jaws of a pair of pincers with removable dies or plates, and punches, and with a sliding guide for the purposes hereinafter set forth.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

Figure 1 represents an elevation, showing the under side of the lower jaw.

Figure 2 is a side view of the tool, arranged for punching.

Figures 3 to 9 represent views and sections of the different plates and punches.

Figure 10 is a plan of the sliding guide.

A represents the long lower jaw, which has a wide, dovetailed, and slightly tapering groove cut across its upper side. The depth of this groove is equal to the thickness of the plates to be inserted into it, so that the upper side of the jaw is in one plane with the upper side of the plate when inserted. The triangular-shaped hole in this jaw is directly under the notch in the gumming-plate, and the eye of the punch-plate, when inserted, and allows the wads to fall through.

B is the short upper jaw, which has a conical eye widening toward the under side, in which the punches are inserted.

C represents the sliding guide, secured to the upper side of the lower jaw by a screw, *n*, which moves loosely in a slot of the jaw. It has a semicircular shape, as shown in fig. 10 of the drawings, with its ends pointing to the open ends of the jaws.

By means of the screw and slot in the jaw, it can be adjusted to give the desired set to the teeth of a saw, and in gumming, to determine the size and shape of the teeth.

a is the upper handle, and forms one piece with the lower jaw A.

b is the lower handle, forming one piece with the upper jaw B, and is hinged at *x* to the upper handle *a*.

s is a spring between the handles, throwing them apart, and holding the jaws open. It is fastened to the upper handle *a*.

D is the set-plate, with the bevel *d*.

E is the gumming-plate with the Λ -shaped notch *e*.

F is the punch-plate, with eye *f*.

The plates are all dovetailed, and slightly tapering, to fit in the groove of the lower jaw.

G represents the set-punch.

H represents the gumming-punch.

I represents the round punch.

K represents the cutting-punch.

The operation is as follows:

When it is desired to use the tool as a saw-set, the set-plate is inserted in the groove of the lower jaw of the pincers, in such a manner that its bevel is up, and nearest the sliding guide.

To give to the teeth of a saw more or less set, the sliding guide is pushed over or from the bevel of the set-plate.

The set-punch is inserted in the upper jaw, in such a manner, that when brought down on the set-plate, the part *g*, of its ends, will lie flat against the upper side, and the part *g'*, against the bevel of the set-plate. The upper handle is now taken in the palm of the hand, and the long lower jaw slipped under the saw, lying flat on it, and the toothed edge of the saw butting against the sliding guide. The lower handle is then drawn up by the fingers; this brings the punch down on the saw, holding it firmly, flat to the jaw, and, at the same time, bending a tooth down. The pressure on the lower handle is then released, when the action of the spring will throw the upper jaw with the punch up. The tool is then slid along to the next tooth but one, the operation repeated, and so on, until every alternate tooth is bent down, when the saw is turned upside down, and the teeth not yet bent operated upon in the same manner.

The double action of the set-punch pressing the saw flat against the set-plate, and at the same time bending a tooth over the bevel of the plate, makes a set-screw unnecessary, and gives a uniform set to the saw.

For cutting wire the same plate may be used, but the set-punch is taken out of, and the cutting-punch put in the upper jaw.

For gumming, the plate E and punch H are used, the plate being inserted in the lower jaw in such a manner that its notch is nearest the sliding guide and the punch in the upper jaw, so that when brought down it will enter the notch in the plate. The size of the teeth and their shape, are determined by the adjustable sliding guide, which allows more or less of the saw to be subjected to the action of the punch, and at different angles.

For punching, the plate F and the round punch are used, the latter, when borne down, entering the eye of the former.

In gumming and punching, the operation is arrested by the curved ends of the handles coming together at the point when the whole surface of the end of a punch is just below the plane of the upper side of the plate.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The jaw A, constructed as shown and arranged, to receive the dies or plates D E F, and guide C, in combination with the jaw B, substantially as and for the purpose specified.

2. The combination and arrangement of the jaws A and B, set-punch G, gumming-plate H, round punch I, cutting-punch K, guide C, and plates or dies D, E, and F, substantially as shown, and for the purposes specified.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

J. L. DEVOL.

Witnesses:

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