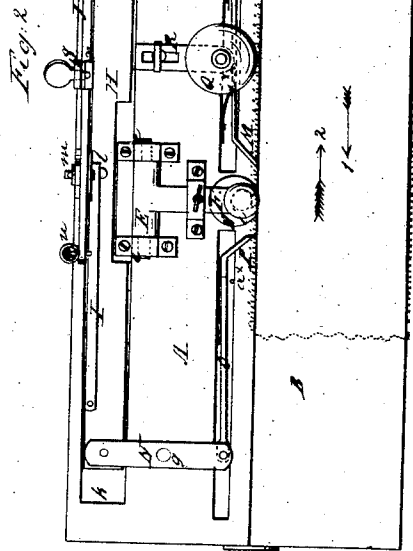
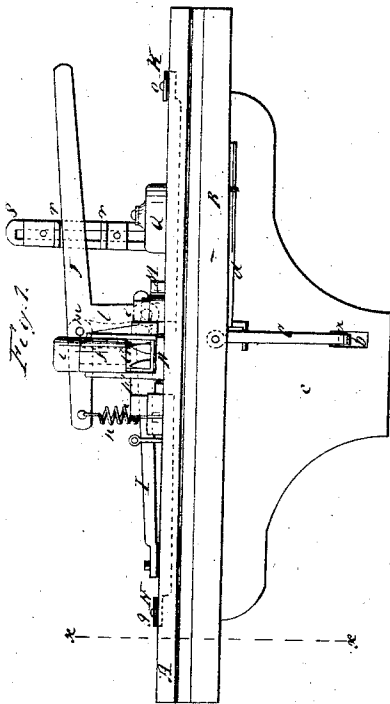
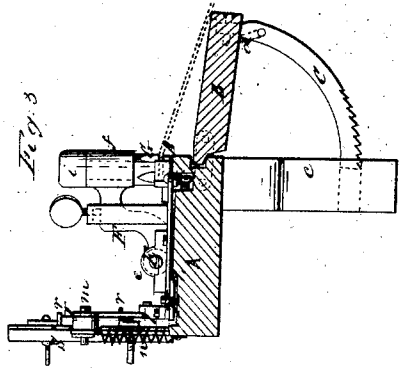


J. Erdle.

Saw-Set.

N^o 17,620.

Patented Jun. 23, 1857.



UNITED STATES PATENT OFFICE.

JACOB ERDLE, OF WEST BLOOMFIELD, NEW YORK.

SAW-SET.

Specification of Letters Patent No. 17,620, dated June 23, 1857.

To all whom it may concern:

Be it known that I, JACOB ERDLE, of West Bloomfield, in the county of Ontario and State of New York, have invented a new and Improved Saw-Set; 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, forming part of this specification, in which—

Figure 1 is a front view of my improvement. Fig. 2 is a plan or top view of the same. Fig. 3 is a transverse vertical section of the same; (x) (x) in Fig. 1, indicating the plane of section. Fig. 4 is a face view of the punch.

Similar letters of reference denote the same parts in all the figures.

My invention consists in the peculiar means employed for feeding the teeth of the saw to the punch, as will be hereinafter fully shown and described, whereby the teeth may be fed to the punch in either direction, and in a very simple and efficient manners

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

A represents a horizontal bedplate of rectangular form, having a flap or plate B hinged or jointed to one side of it. To the under side of the flap or plate B a segment rack C is attached. This rack passes or works through a slot or opening (a) in a bracket or plate (c) attached at right angles to the under side of the bedplate A; and the rack is retained at any desired point by a plate (b) which projects upward a short distance above the lower and front edge of the opening (a). A spring (d), connected with the upper end of the rack, has a tendency to keep said rack pressed down upon the plate (b). By adjusting the rack C, the flap or plate B may be placed more or less obliquely with the bedplate A. This will be understood clearly by referring to Fig. 3.

The bedplate A and the flap B may be constructed of wood; but I do not confine myself to that material.

In the bedplate A a circular block of metal D is secured. Steel would probably be the most preferable material of which to construct this block. This block projects a short distance above the surface of the bedplate A, and the upper surface of the block is perfectly level or horizontal. The block D is secured in the bedplate A at one

side, so that one point of its periphery is flush with the front side of the bedplate A.

On the bedplate A, a shaft E is secured. The journals of this shaft are fitted and work in proper bearings (e) (e) and a curved arm F is attached to this shaft; said arm having a collar (f) formed at its outer end. Within the collar (f) a punch G is placed. This punch is formed of a cylindrical piece of steel, so filed or cut that the face (g), as shown in Fig. 4, is composed of four triangular surfaces (h); said surfaces being of different dimensions. The upper part of the punch is of smaller diameter than the lower part and is fitted within the collar (f), said upper part having a screw-thread formed on it, on which a nut (i) is placed; this nut, by being screwed down firmly upon the upper end of the collar, causes the shoulder produced by the increased diameter of the lower part of the punch to bear snugly up against the lower surface of the collar. The punch G is placed over the block D, near its outer edge, so that the outer edge of either of the surfaces (h), when the punch is adjusted, will be flush with the outer edge of the block or anvil D. A spring bears against the under side of the arm F, and keeps the punch G up from the surface of the block or anvil D. The arm F and the shaft E should be constructed of metal.

In the bedplate A, a metal bar H is fitted; the said bar being fitted in a groove (k) therein, which groove is longer than the bar, so that the bar may have a certain degree of play longitudinally. A rod or bar I is pivoted or attached at one end to the bar H, and the opposite end is pivoted or attached to the lower end of a bar or plate (l), the upper end of which is attached to a lever J, whose fulcrum is at (m). To one end of the lever J a spiral spring (n) is attached; said spring being also attached to the bedplate A. To one end of the bar H, a bar K is attached at right angles; and a bar L is attached by a pivot (o) to the end of the bar K; the bar L being fitted in a slot (p) in the bedplate A. The inner end of the bar L has a curved plate or hand M attached; the form of which is shown clearly in Fig. 2. To the end of the bar H, opposite to the end where the bar I is pivoted, one end of a lever N is pivoted. This lever N works on a fulcrum pin (q) and its opposite end has a bar O pivoted to it. The bar O is precisely

similar to the bar L, and has a similar plate or hand P formed at its inner end; see Fig. 2.

Q, represents a guide roller, which is attached to a sliding or adjustable plate R.

- 5 The lever J is fitted or works between two adjustable lips (*r*) (*r*) which are fitted to an upright S, attached to the bedplate A. These lips control or regulate the length of the vibration of the lever J.
- 10 The operation is as follows: The saw to be set (shown in red), is placed on the flap B; the edge of the teeth being against the roller Q; and if the saw is to be moved in the direction indicated by arrow 1, the plate or hand
- 15 P is moved back free from the saw teeth and retained in that position by a pin (*a*^x). The plate or hand M is kept into or between the teeth of the saw by a spring (*b*^x); and by operating the lever J, the plate or hand M is
- 20 actuated so as to feed the teeth of the saw to the punch.

- The vibration of the lever J is regulated by setting the lips (*r*) (*r*) the proper distance apart so that the hand or plate M will move
- 25 the saw the distance of two teeth at each vibration. The teeth of the saw pass over the anvil or block D, at a greater or less inclination, according to the set required to be given the teeth; and the teeth are set by
- 30 tapping the punch with a hammer. The lever J may be actuated by the wrist or arm of the operator and the hammer held in the hand of the said arm. Every alternate tooth is set while the saw is moved in the direction
- 35 indicated by the arrow 1; and when the whole number of said teeth are set, the saw is reversed upon the flap B, the plate or hand M thrown back from the saw teeth, and the plate or hand P allowed to catch therein;

consequently a reverse movement is given 40 the saw, as indicated by the arrow 2, and the intervening teeth are set.

The punch G is so adjusted that the proper surface (*h*),—that is, the one corresponding in size to the teeth of the saw being 45 set,—shall act upon said teeth; and it will be seen that the broad portions of the faces (*h*) will always be at the base of the saw teeth, because the points of the several surfaces (*h*) meet at the center of the face (*g*) of the 50 punch. This is an important feature in the invention, and differs from other punches or dies hitherto used; as the latter are in reverse position; their points being at the bases of the saw teeth. By my improve- 55 ment, the teeth of the saw will be bent or set in a perfect manner; because a perfect bearing or action of the punch at the base of the teeth is obtained.

I do not claim feeding the saw teeth to the 60 punch by means of a pawl or hand, irrespective of the arrangement of the same; for that is a well-known mechanical device, and has been previously used for such or analogous 65 purposes. But

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

The two plates or hands P, M, when connected to the bar H, as shown; the bar H 70 being actuated by the lever J, and the whole arranged substantially as described, for the purpose of feeding the saw teeth to the punch in either direction as described.

JACOB ERDLE.

Witnesses:

GARDNER P. NILES,
JAS. H. HALL.