C. HEINEN.

SAW-SET.

No. 186,250. Patented Jan. 16, 1877.

Fig. 1

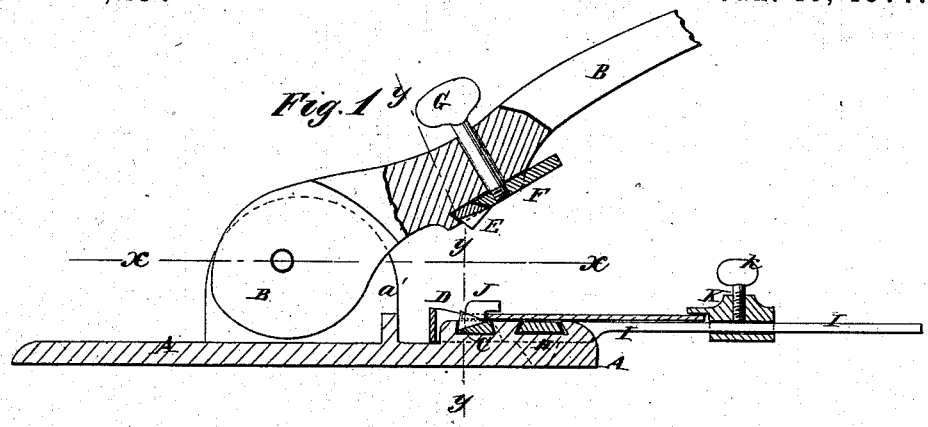


Fig. 2

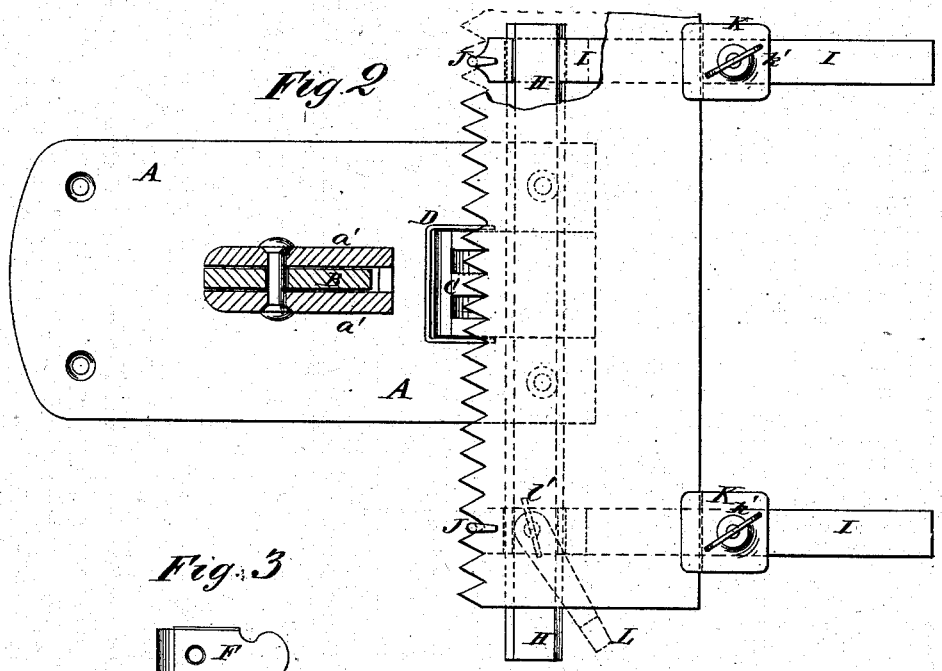


Fig. 3

Fig. 4

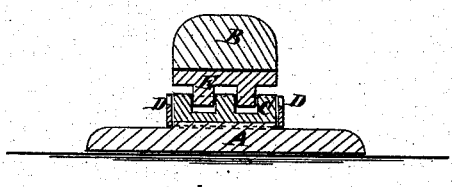
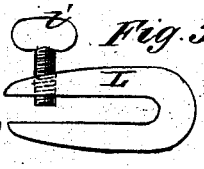


Fig. 5



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHRISTOPHER HEINEN, OF LEAVENWORTH, KANSAS.

IMPROVEMENT IN SAW-SETS.

Specification forming part of Letters Patent No. **186,250**, dated January 16, 1877; application filed December 18, 1876.

To all whom it may concern:

Be it known that I, CHRISTOPHER HEINEN, of Leavenworth, in the county of Leavenworth and State of Kansas, have invented a new and useful Improvement in Saw Set and Guide, of which the following is a specification.

Figure 1 is a side view of my improved machine, partly in section, through the bed-plate and lever. Fig. 2 is a top view of the same, partly in section, through the line *x x*, Fig. 1. Fig. 3 is a detail view of the key for securing the upper die in place. Fig. 4 is a detail section taken through the line *y y y*, Fig. 1. Fig. 5 is a detail view of one of the detached clamps.

Similar letters of reference indicate corresponding parts.

The object of this invention is to improve the construction of the saw-set for which Letters Patent, No. 180,878, were granted to me August 8, 1876, to enable the upper die to be more firmly held in place, and the saw-plate to be more easily and accurately guided to the dies, and which shall be simple in construction and convenient in use.

The invention consists in the combination of the key with the upper die, the lever, and the screw; in the combination of the sliding bar, the two bars having hooks formed upon their forward ends, and the adjustable clamps, with the grooved forward end of the bed-plate of the machine, as hereinafter fully described.

A is the base-plate of the machine, upon which are formed two lugs, *a'*, to and between which is pivoted the end of the lever B. C is the lower die, which is inserted in a dovetailed groove in the bed-plate A, and which is kept in place by a gage, D. E is the upper die, which is inserted in a dovetailed groove in the lever B, where it is secured in place by a key, F, and screw G. The forward end of the key F is beveled, and is inserted beneath the die E, and the screw G passes through the lever B and screws into the key F.

In a dovetail groove in the forward part of the bed-plate A is placed a sliding bar, H, the end parts of which are inserted in dovetail cross-grooves in the forward parts of the bars I. Upon the forward ends of the bars I are formed hooks J, to hook between the teeth of the saw-plate, and against which the said saw-plate is held by clamps K. The clamps K are formed with a flange to overlap the rear edge of the saw-plate, and are secured in place by set-screws *k'*. When the saw-plate is so narrow that the clamps K cannot reach and clamp it the detached clamps L are used. The clamps L are made U-shaped, with the opening between the arms wide enough to receive the bars H I and the saw-plate, and are secured in place by set-screws *l'*. With this construction the saw-plates will be securely and firmly held, and will be moved squarely across the dies, so that the teeth will be accurately and evenly set.

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

1. The combination of the key F with the upper die E, the lever B, and the screw G, substantially as herein shown and described.

2. The combination of the sliding bar H, the two bars I, having hooks J formed upon their forward ends, and the adjustable clamps K *k'*, with the grooved forward end of the bed-plate A of the machine, substantially as herein shown and described.

CHRISTOPHER HEINEN.

Witnesses:
JOHN BIRINGER,
F. FELIX.