

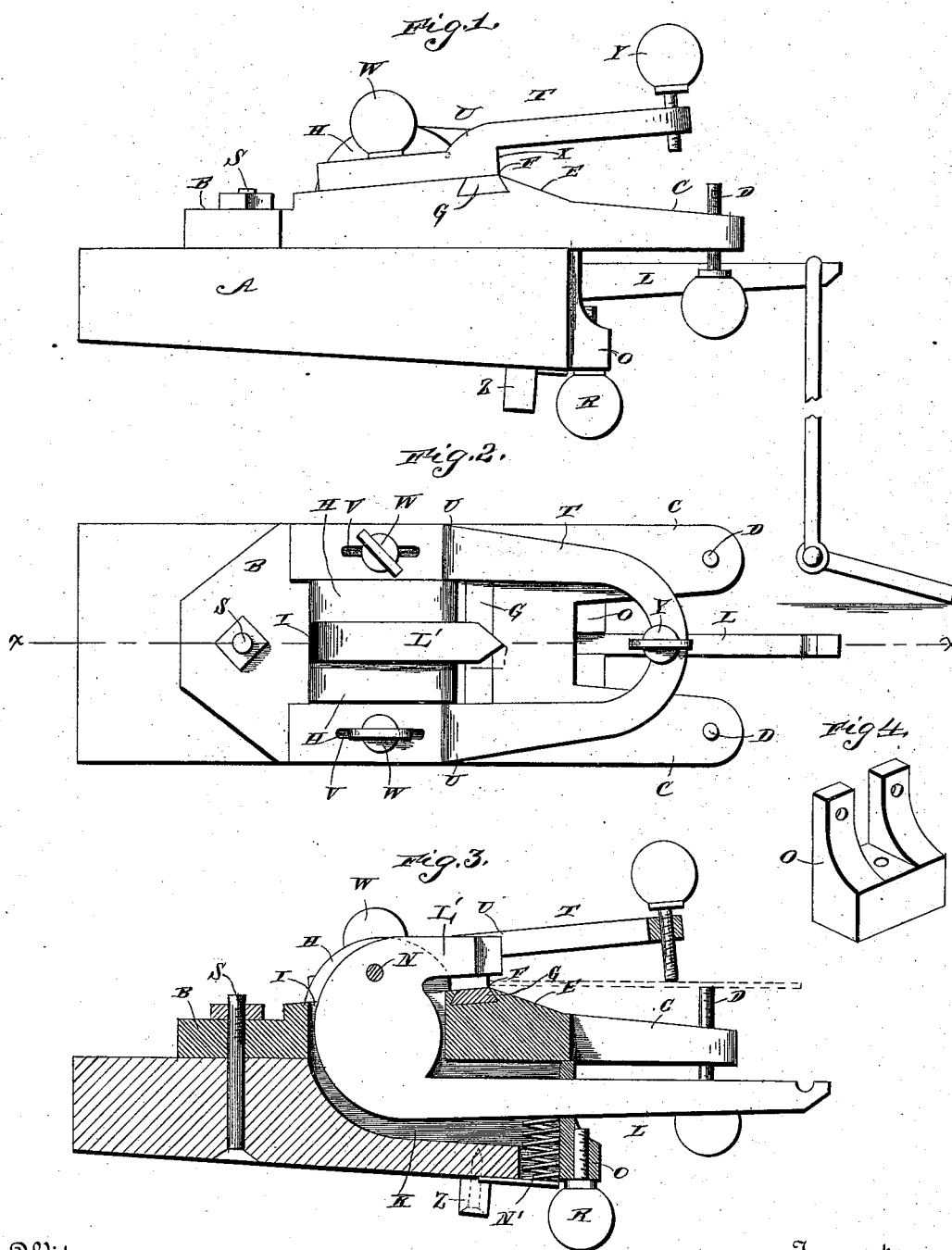
(No Model.)

S. HARGRAVE, Sr.

SAW SET.

No. 377,853.

Patented Feb. 14, 1888.



Witnesses
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UNITED STATES PATENT OFFICE.

SAMUEL HARGRAVE, SR., OF POMONA, ILLINOIS.

SAW-SET.

SPECIFICATION forming part of Letters Patent No. 377,853, dated February 14, 1888.

Application filed March 30, 1887. Serial No. 232,992. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL HARGRAVE, Sr., a citizen of the United States, residing at Pomona, in the county of Jackson and State of Illinois, have invented a new and useful Improvement in Saw-Sets, of which the following is a specification.

My invention relates to an improvement in saw-sets; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a saw-set embodying my improvements. Fig. 2 is a top plan view of the same. Fig. 3 is a vertical longitudinal sectional view taken on the line *xx* of Fig. 2. Fig. 4 is a detailed perspective view of the bracket O.

A represents a base-block which is wedge-shaped longitudinally, the front end of the said base-block being thicker than the rear end thereof. On the upper side of the base-block is a similarly shaped plate, B, which is provided at its front end with forwardly-projecting arms C. Vertical threaded openings are made in the outer ends of the said arms, and vertical set-screws D extend upward through the said openings. An inclined offset or shoulder, E, is formed on the upper side of the plate slightly in rear of the inner ends of the arms C, the said inclined offset or shoulder extending transversely across the plate. At a slight distance from the offset or shoulder and arranged parallel therewith is a transverse dovetailed groove, F, in which is fitted a similarly-shaped bar, G, made of hardened steel, the said bar forming the anvil. On the upper side of the plate B, near the center thereof, are formed a pair of ears, H. Between the said ears is a vertical opening, I, which extends through the plate and communicates with the vertical longitudinal opening K made in the base-block.

L represents a lever made in the form shown in Fig. 3. The said lever extends through the slot K and has its inner end curved upward and forward to form an arm, L', that is pivoted on a transverse bolt, N, extending through aligned openings made in the ears H. The front end of this arm is beveled on opposite sides to a point, and the said arm is made of hardened steel and constitutes the punch.

N' represents a coiled extensile spring which bears against the lower side of the opening K and against the lower side of the lever L, the function of said spring being to normally raise the said lever, and thereby raise the punch from the upper side of the anvil.

O represents a bracket which is secured to the front end of the block A by means of bolts or screws P, and the said bracket is provided with a vertical opening through which the lever L extends. In the lower side of the said bracket is a vertical opening through which extends a set-screw, R. The upper end of the said screw is arranged under the lever L, and the function of the said screw is to limit the downward movement of the said lever.

The plate B is secured to the upper side of the block A by means of bolts or screws S.

T represents a gage which is bent substantially in the form of the letter U, and is provided thereby with parallel arms U, which bear on the upper side of the plate B and against the outer sides of the ears H. These arms U have slots V, and set-screws W extend downward through the said slots and enter threaded openings in the plate B. By means of these set-screws the gage may be moved backward and forward and secured at any desired longitudinal adjustment, as will be very readily understood. The arms U of the gage are provided on their under sides, at a suitable distance in advance of the slots V, with vertical offsets or shoulders X, against which the serrated edge of the saw rests when the device is in operation.

Y represents a vertical set-screw which extends downwardly through a threaded opening made in the outer end of the gage.

The operation of my invention is as follows: The saw to be set is supported in position, as indicated in dotted lines in Fig. 3, by having its serrated edge bearing upon the upper side of the offset or shoulder E and its lower side bearing against the points of the set-screws D. The set-screw Y is turned so as to bear upon the upper side of the saw, and thus retain the latter at the correct inclination, and the gage U is adjusted longitudinally a suitable distance from the offset or shoulder E, according to the depth of the saw-teeth. The points of the said teeth bear against the offsets or shoulders X of the gage, and thereby one of the teeth of

the saw is caused to rest under the punch and over the anvil. When the free end of the lever L is lowered, the free end of the punch is caused to descend, and thereby bend the saw-tooth downward, so as to set the same at the correct inclination.

In order to facilitate the operation of the device, I prefer to employ the pedal—such as shown in Fig. 1—connected to the free end of the lever K by means of a rod, and thereby adapt the punch to be operated by one foot of the operator, so as to leave his hands free to manipulate the saw and the saw-set.

From the under side of the block A, near the front end thereof, depends a vertical lug, Z. The function of this lug is to enable the saw-set to be clamped in an ordinary bench-vise to steady and hold the saw-set when in use. The lug is secured to the block by means of screws, so that the lug may be detached from the block when not required.

Having thus described my invention, I claim—

1. In a saw-set, the combination of the plate B, the anvil attached to the plate, and the pivoted lever L, having the arm L', forming the punch, the free end of the said arm being arranged above the anvil, for the purpose set forth, substantially as described.

2. The combination, in a saw-set, of the plate B, having the transverse dovetailed groove F, and the metallic bar G, forming the anvil and secured in the said groove, and the lever L, pivoted to the plate B and having the curved arm L', forming the punch, the free end of the said arm being arranged above the center of the anvil, substantially as described.

3. The combination of the plate B, having the front arms, C, provided with the vertical set-screws D, the said plate having the transverse inclined offset or shoulder E and provided with the anvil, the gage secured to the plate and movable longitudinally thereon, the said gage having the offsets or shoulders X and forward-projecting portion extending over the arms C and provided with the adjusting-screw

Y, and the lever L, pivoted in and extending through an opening in the plate B, the said lever having the arm L', forming the punch, substantially as described.

4. The combination of the block A, the plate B, secured on the upper side of the block and having the forward-projecting arms C, the anvil on the said plate, the adjusting-screws D, extending through the said arms C to support the outer edge of the saw and adjust the same to any desired inclination with reference to the anvil, the pivoted lever L, having the arm L', forming the punch, and the spring to normally raise the lever, and thereby raise the punch, and the adjusting-screw R, extending upward and bearing under the lever to regulate the descent thereof, substantially as described.

5. In a saw-set, the combination of the block A, having the slot K, the plate B, secured on the upper side of the block and having the forward-projecting arms C, the transverse offset or shoulder E, and ears H, the anvil secured to the plate, the adjusting-screws D, extending upward in the outer ends of the arms C, the lever L, extending through the slot K and having its inner end curved upward and forward to form the arm or punch L', the said arm or punch being pivoted between the ears H, the spring bearing under the lever to raise the same, the adjusting-screw R, to limit the downward movement of the lever, and thereby regulate the stroke of the punch, and the longitudinally-movable gage T, secured on the upper side of the plate, provided with the shoulders or offsets X, for the purpose set forth, and extending forward over the arm C and provided with the adjusting-screw Y, all combined and arranged to operate substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

SAMUEL HARGRAVE, SR.

Witnesses:

WILLIAM R. LEE,
I. F. KOENIG.