(No Model.)

C. F. LEOPOLD.

SAW SET.

No. 451,494. Patented May 5, 1891.

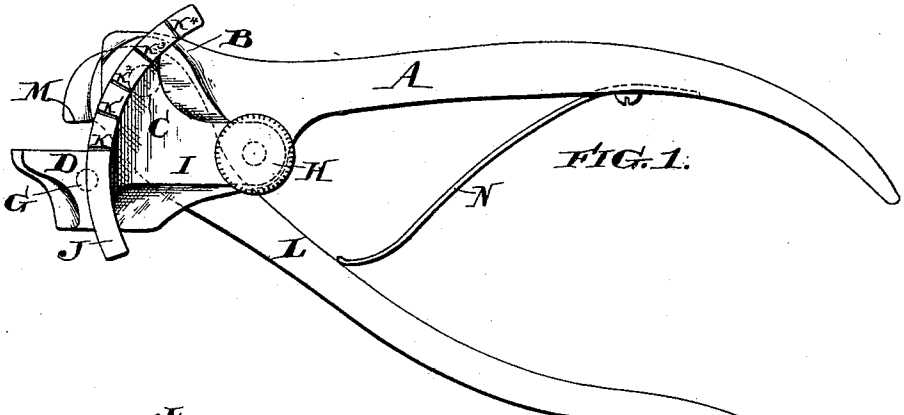


FIG. 1.

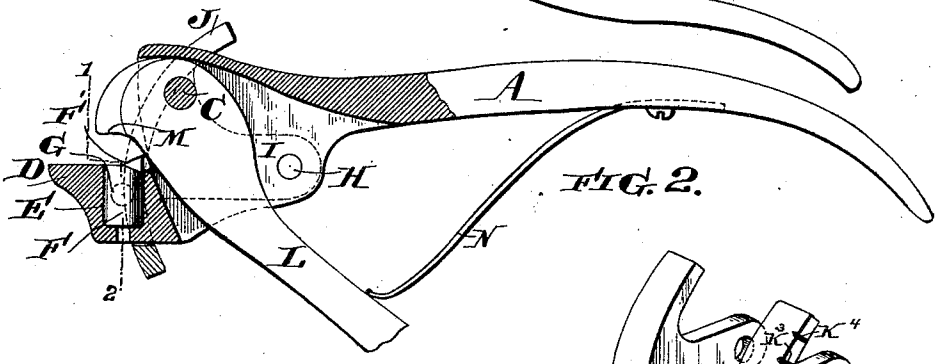


FIG. 2.

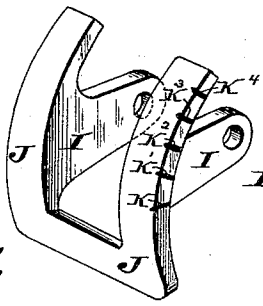


FIG. 4.

FIG. 3.

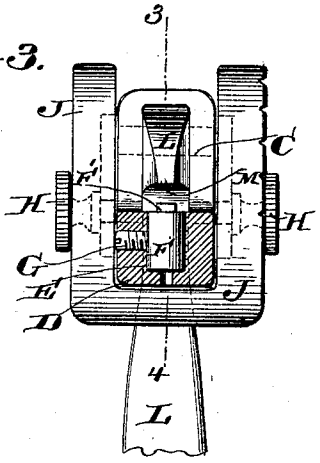
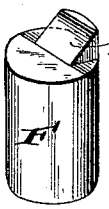


FIG. 5.



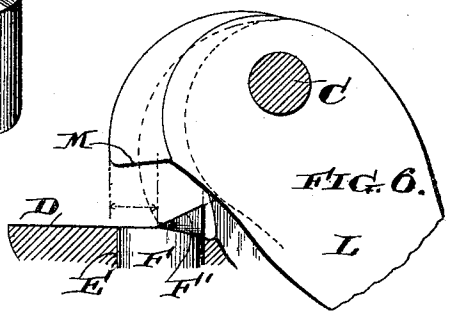


FIG. 6.

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UNITED STATES PATENT OFFICE.

CHARLES F. LEOPOLD, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO WILLIAM J. LLOYD, OF SAME PLACE.

SAW-SET.

SPECIFICATION forming part of Letters Patent No. 451,494, dated May 5, 1891.

Application filed January 28, 1891. Serial No. 379,357. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. LEOPOLD, of the city and county of Philadelphia, State of Pennsylvania, have invented a certain new and useful Improved Saw-Set, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to the devices known as "saw-sets," and has for its object to provide an improved tool of this kind simple in construction and efficient in its operation.

The invention will be best understood as described in connection with the drawings, in which I have illustrated it as embraced in a hand-tool, and in which—

Figure 1 is a side elevation of the tool; Fig. 2, a side elevation, partly taken in section, on the line 3 4 of Fig. 3; Fig. 3, a front elevation, partly in section, on the line 1 2 of Fig. 2; Fig. 4, a perspective view of the adjustable gage-stop; Fig. 5, a perspective view of the anvil; and Fig. 6 an enlarged elevation, partly in section, showing the mode of operation of the jaw.

A is a lever, on the short arm of which is a pivot-carrying extension B and an anvil-carrying extension B′.

C is a pivot to which the jaw of the tool is secured.

E is an opening or socket in the jaw D, in which is secured the anvil-block F, F′ being the active surface of the anvil.

G is a clamping-screw to hold the anvil-block in place.

H H are pivot and clamping screws screwing into the lever A and upon which are pivoted the arms I, which support at their other extremities an eccentrically-curved gage-stop J.

The marks K K′ K², &c., on the edge of the eccentric gage-stop indicate adjustments of sundry standard sizes of saw-teeth.

L is a lever, which is pivoted to the lever A by the pin C, and on the shorter arm of which is formed the bending-jaw M.

N is a spring acting to hold the two lever-arms A and L apart, as shown in the drawings.

It will be seen that when a saw-blade is inserted between the bending-jaw M and the anvil-face F′ it will rest against the eccentric gage-stop J, and that by bringing the two long arms of the levers together the jaw M is brought down, clamping and bending the saw-teeth against which it strikes. The adjustment for different sizes of saw-teeth is made simply by swinging the eccentric gage-stop J on the pivots H.

In its general features the combination of the two levers A and L, one carrying an anvil and the other a bending-jaw, is old and in common use; but in devices of this kind with which I am familiar the clamping-jaw and anvil bear such a relationship to each other that when they are acting to bend the tool to the saw they have a tendency to thrust the saw-blade out away from the gage, so that unless considerable force and care are exercised the teeth will not be bent upon the proper line. In my construction I have overcome this difficulty by so pivoting the clamping-jaw M with respect to the anvil that at the time it engages the saw-tooth resting upon the anvil it shall be moving in a direction toward the gage-stop, so that its action will be rather to pull the saw-blade in than to push it out. This action is best illustrated in Fig. 6, where the full lines indicate the normal position of the clamping-jaw and the dotted lines the position of the clamping of the jaw when it rests against the anvil-face, the motion of the jaw from its normal position toward the anvil being such as to draw the saw inward.

I prefer, in connection with a clamping-jaw pivoted in the way above described, to construct the active anvil-face F′ with an inclination upward and inward, as shown, giving the clamping-jaw of course a corresponding shape, so that its face will rest against the anvil-face when brought down upon it. The combination of the anvil-face and jaw-face thus formed and pivoted, as above described, I have found to be the best for drawing in the saw-blade during the operation of bending its teeth.

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

1. In a saw-set, the combination, with a lever

A, supporting an anvil and a stop, of a lever L, pivoted to lever A and having a binding-jaw M at its end placed with respect to the pivot so as to move inward toward the anvil in bending a saw-tooth.

2. In a hand saw-set, the combination, with an upwardly and inwardly inclined anvil-face and a stop, of a bending-jaw having its face formed to incline downward and outward when resting against the anvil, said jaw being pivoted, as described, to move in toward the stop while clamping and bending the saw-tooth against the anvil.

3. In a saw-set having an anvil and pivoted bending-jaw, the combination, with the anvil-supporting lever, of the pivoted eccentric gage-stop J, having gage-marks on its edge, substantially as and for the purpose specified.

4. In a saw-set, the combination, with the lever A, having an upwardly-inclined anvil F′ on its shorter arm, of the lever L, having a bending-jaw M on its shorter arm, said lever being pivoted to lever A, so that the jaw will move inwardly in clamping and bending the saw-tooth, and an eccentric gage-stop J, pivoted to lever A, all substantially as and for the purpose specified.

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Witnesses:
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