

(No Model.)

J. LAYBOLT.

SAW SET.

No. 330,031.

Patented Nov. 10, 1885.

Fig.1.

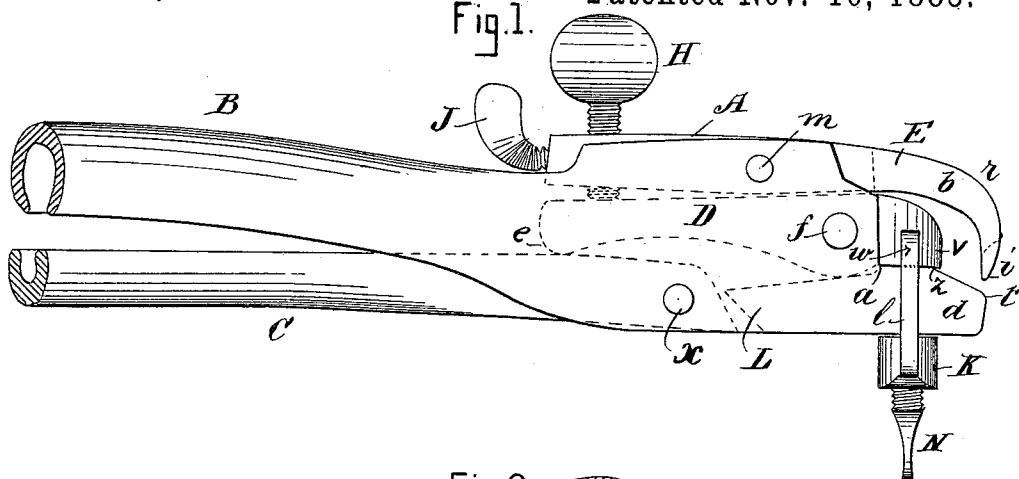


Fig.2.

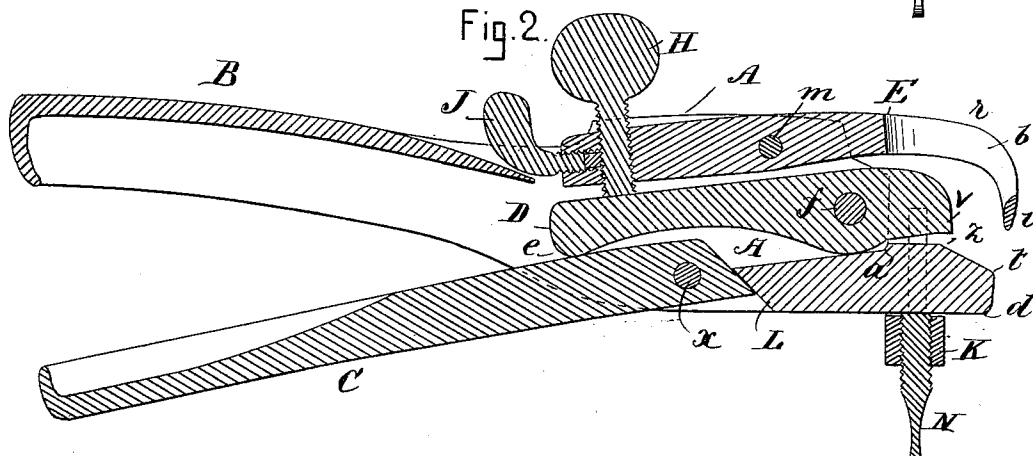


Fig.3.

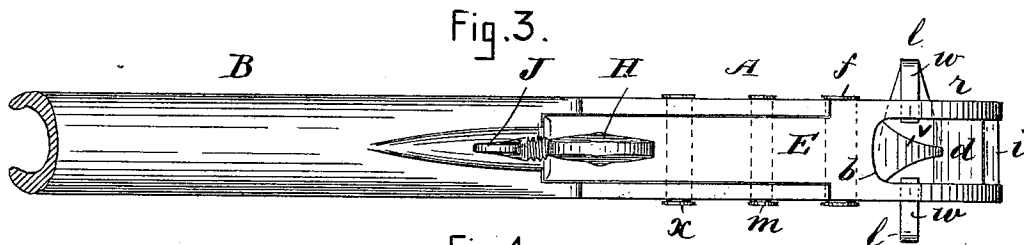
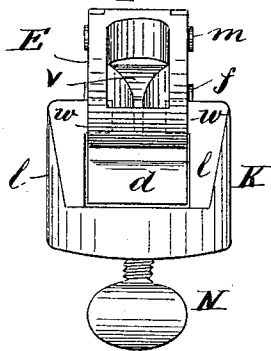


Fig.4.



Witnesses.

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# UNITED STATES PATENT OFFICE.

JOSIAH LAYBOLT, OF WAKEFIELD, MASSACHUSETTS.

## SAW-SET.

SPECIFICATION forming part of Letters Patent No. 330,031, dated November 10, 1885.

Application filed August 13, 1885. Serial No. 174,258. (No model.)

*To all whom it may concern:*

Be it known that I, JOSIAH LAYBOLT, a subject of the Queen of Great Britain, residing at Wakefield, in the county of Middlesex, State of Massachusetts, have invented a certain new and useful Improvement in Saw-Sets, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of my improved saw-set, a portion of the handles being represented as broken away; Fig. 2, a vertical longitudinal section of the same; Fig. 3, a top plan view, and Fig. 4 an end view.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to that class of saw-sets which are adjustable; and it consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a more desirable and effective device of this character is produced than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the head of the set, which is hollow and elongated to form the rigid upper handle, B, a lower handle, C, being pivoted in the head A at *x* directly beneath the handle B. A horizontally-arranged clamp-lever, D, is pivoted at *f* in the head A, said lever being projected forward of its pivot to form the movable upper jaw, *v*, of the set, the lower jaw, *d*, being rigid and formed integral with the head A. A set-lever, E, is also pivoted at *m* in the head A, and provided near its rear end with an adjusting-screw, H, and set-screw J, for fastening the adjusting-screw; but the latter may be omitted, if desired. The lever E projects forward of the jaw *v*, as shown at *r*, and is curved downwardly to such an extent that its point *i* comes below the jaw *v* when the set is closed. The lower jaw, *d*, is level at a point immediately under the jaw *v*, or is in parallelism therewith from *a* to *z*, but

from *z* to *t* it is inclined downwardly. A gage, K, is attached to the lower jaw by means of the screw N, by which it is also rendered adjustable on said jaw longitudinally of the head A, to determine the distance the teeth of the saw are to be inserted in the jaws of the set. An opening or elongated slot, *b*, is formed in the curved end of the lever E, through which the jaw *v* may be seen when using the set, thereby enabling the upper jaw to be properly adjusted on the tooth of the saw.

In the use of my improvement the saw is placed on its side on any convenient bench, with its teeth projecting slightly over the edge of the same. The set is then taken in the hand and the tooth to be operated on inserted between the jaws *v d* until the adjoining teeth of the saw strike the side pieces, *l*, of the gage K, these side pieces being turned inwardly at their upper ends to form hooks *w*, which rest upon or engage the lower jaw, *d*. When the tooth is in position between the jaws, the handles are closed, thereby pressing the handle C against the under side of the rear end of the lever D at *e*, raising said lever and causing the jaws to close onto or grasp the tooth. At the same time, the screw H resting on the rear end of the lever D, the rear end of the lever E will be raised and its point *i* depressed, said point being brought into contact with the body of the saw and bending or setting the tooth in a manner which will be readily obvious without a more explicit description.

By turning the screw H in or out a greater or less "set" or angle may be given to the tooth, as required.

It will be obvious that when the jaws *v d* have fully closed onto the tooth the rear ends of the levers D E will cease their upward movements, and the point *i* of the setting-lever will cease to descend, and hence when the tooth is very thick or nearly fills the space between the jaws the rear end of the lever E will be raised but slightly and its forward end or point, *i*, descend a corresponding distance, thus automatically governing the set of the tooth in accordance with its thickness. This feature of my invention is a very important one, as it is essential that all of the teeth should "range" perfectly when the saw is set, or that their outer edges should be in line; but when

the saw becomes worn, or when it is thinner in some places than at others, it is difficult to set it properly by means of the ordinary saw-set. This difficulty is fully overcome by my invention, as the less the thickness or diameter of the tooth the more set it will receive, and vice versa, the point descending a greater distance when the tooth is thin than when it is thick, for the reasons stated.

- 10 A shoulder, L, is provided to prevent the handle C from dropping too low as the set is used.

Having thus explained my invention, what I claim is—

- 15 1. In a saw-set, the head A, having a fixed lower jaw and provided with a fixed handle, B, in combination with a clamp-lever pivoted in said head and forming a movable upper jaw, a set-lever also pivoted in said head and adapted to engage the body of the saw automatically when the clamping-jaws are closed, the outer end of said set-lever being provided with a slot, a screw for adjusting said set-lever, a pivoted handle for operating said levers simultaneously, and an adjustable gage for determining the distance the tooth may enter the jaws, substantially as described.

- 25 2. In a saw-set, the head A, having a fixed lower jaw and provided with a fixed handle, 30 B, in combination with a clamp-lever pivoted in said head and forming a movable upper jaw, a set-lever also pivoted in said head and adapted to engage the body of the saw automatically when the clamping-jaws are closed, 35 the outer end of said set-lever being provided

with a slot, a screw for adjusting the inner end of said set-lever upon the inner end of said clamping-lever, a pivoted handle for operating said levers simultaneously, and an adjustable gage for determining the distance the tooth may enter the jaws, substantially as described. 40

3. In a saw-set, the head A, having a fixed lower jaw and provided with a fixed handle, B, in combination with a clamp-lever pivoted 45 in said head and forming a movable upper jaw, a set-lever also pivoted in said head and adapted to engage the body of the saw automatically when the clamping-jaws are closed, the outer end of said set-lever being provided 50 with a slot, a screw for adjusting the inner end of said set-lever upon the inner end of said clamping-lever, a set-screw for fastening said adjusting-screw, a pivoted handle for operating said levers simultaneously, and an adjustable gage for determining the distance the tooth may enter the jaws, substantially as described. 55

4. In a saw-set, the head A, having shoulder L, and provided with fixed handle B, in combination with levers having jaws for clamping and setting the saw-teeth, and the pivoted handle C, for operating said levers, the inner end of said handle abutting against said shoulder, whereby it is limited in its outward movement, substantially as described. 60 65

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Witnesses:

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