(No Model.)

J. P. BECK.

SAW SET.

No. 507,523. Patented Oct. 31, 1893.

Fig. 1.

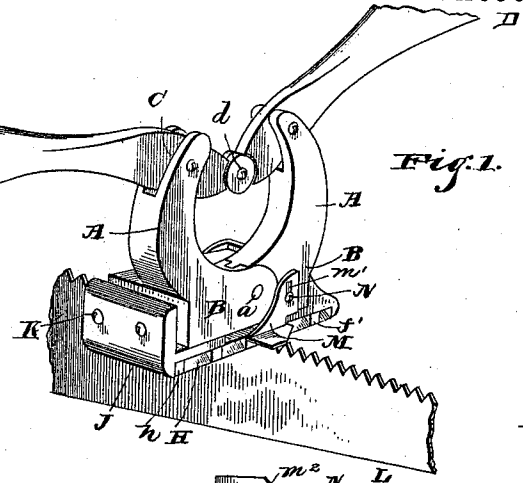


Fig. 2.

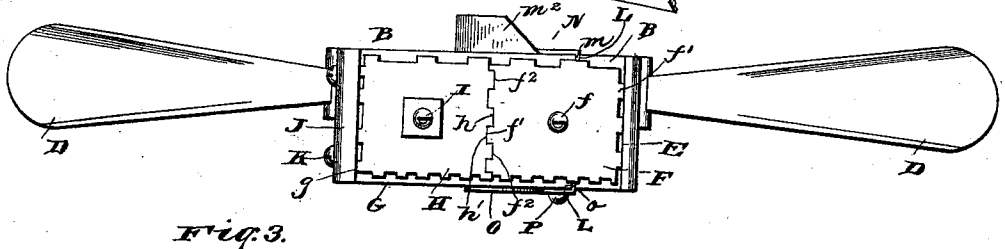


Fig. 3.

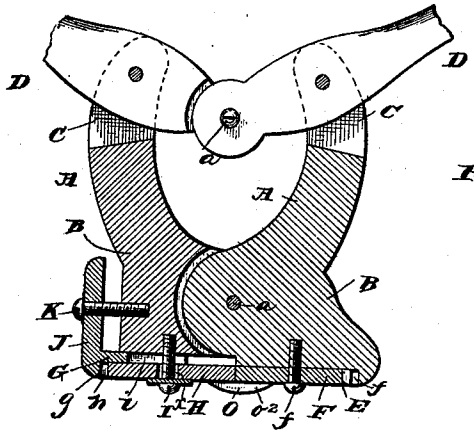


Fig. 4.

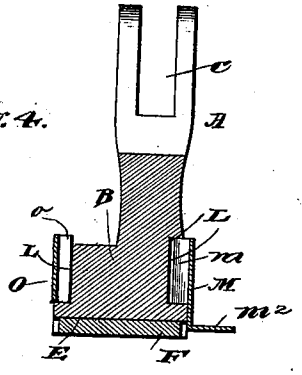


Fig. 5.

Fig. 7.

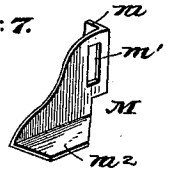
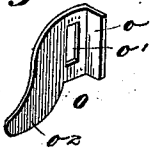


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

JACOB P. BECK, OF LOCK HAVEN, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO ALBION WHITE, OF SAME PLACE.

SAW-SET.

SPECIFICATION forming part of Letters Patent No. 507,523, dated October 31, 1893.

Application filed April 15, 1892. Renewed June 19, 1893. Serial No. 478,198. (No model.)

To all whom it may concern:

Be it known that I, JACOB P. BECK, a citizen of the United States, residing at Lock Haven, in the county of Clinton and State of Pennsylvania, have invented a new and useful Saw-Set, of which the following is a specification.

This invention relates to saw sets; and it has for its object to provide an improved saw set which shall be simple, durable, and easy of manipulation, so as to be easily adapted for setting any variety of saws whatever and also to give the same any desired set.

To this end it is the main object of this invention to improve upon saw sets of this character, and particularly to provide certain improvements over my former Patent No. 461,305.

With these and many other objects in view which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

In the accompanying drawings:—Figure 1 is a perspective view of a saw set constructed in accordance with this invention, and in position upon a saw. Fig. 2 is a bottom plan view of my improved set. Fig. 3 is a vertical longitudinal sectional view. Fig. 4 is a vertical transverse sectional view through one of the heads of the lever arms. Figs. 5, 6, and 7 are detail views of one of the set dies, the gage pawl or plate and the adjusting plate respectively.

Referring to the accompanying drawings,—A, A represent opposite lever arms pivoted at their lower ends centrally as at *a*, and terminating at said lower ends in the opposite jaws or heads B. The upper end of said lever arms are bifurcated as at C, to receive the lever handles D, pivotally mounted in said bifurcated upper ends of the lever arms and pivotally connected at their inner ends at *d* to each other, between said arms, so that by raising and lowering the opposite lever handles, the said lever arms may be contracted or spread at their upper ends to spread or close the lower heads or jaws B, thus providing a toggle lever connection by means of which the device can be readily manipulated. One of the heads or jaws B is provided upon the under side thereof with the flanged seat E, which receives the fixed rectangular set die F, which is held in position within its seat by means of the set screw *f*, passing therethrough and into the head to which the same is secured. The said die F is provided upon each of the four edges thereof with an alternate series of tongues *f'*, and intermediate notches f^2, between said tongues, and the spaces or notches and the tongues differ in width upon each edge of the die to provide for different sizes of saws. By means of the set screw *f* the said die may be adjusted within its seat, so as to present any one of the setting edges thereof to the corresponding adjustable die carried by the opposite head or jaw and to be presently described.

Sliding upon the under side of the opposite head or jaw B is the sliding die adjusting plate G. The said die adjusting plate G is provided with a flanged die seat *g* which accommodates the companion set die H, corresponding in shape and construction to the opposing die F, and provided with the alternating series of tongues *h* and the intermediate notches *h'* between said tongues, which correspond with those upon the four edges of the opposing die plate, said tongues and notches or the edges of the opposing dies being designed to interlock with each other, so that when the saw teeth are placed between the dies, the said teeth are readily and rapidly set when the interlocking dies are brought together. The die H is held to its seat *g*, by means of the set screw I, passing through the slotted openings, *x*, therein and through the slot *i* in the sliding plate G. The said set screw allows the die H to be adjusted circularly or axially within its seat so as to present any one of the setting edges thereof to the corresponding opposite die upon the opposite head or jaw, which is similarly adjustable. The sliding die plate G works over the set screw I and is adjustable to and away from the opposing die, together with the die H, so that by adjusting said plate and the die thereon the latter can be set in such a position with respect to the opposite die member as to give

the saw any pitch of set desired. The said sliding plate G terminates at one end in an adjusting head J through which pass the adjusting screws K which engage the side of the head or jaw upon which the said plate is mounted, and it can be readily seen that by adjusting said screws the said plate may be slid to and away from the opposite die member to adjust the die H carried thereby for the purposes already noted.

The head or jaw B carrying the fixed die member F is provided upon opposite faces thereof with the grooves L. The groove upon one face of the jaw is engaged by the adjustable adjusting and regulating plate M. The said plate M is provided with a tongue *m* engaging said groove, an adjustment slot *m'*, and a flat resting end or flange m^2, which when the set is in position over the saw teeth will rest on the teeth and cause all the same to be evenly and regularly set. An adjusting screw N passes through the slot in said plate and the head carrying the same, and provides means for adjusting said plate, so that the same can be adjusted according to the size of the saw to be set and the set to be given.

Adjustably secured to the opposite side of the same head or jaw is the gage plate O, provided with a tongue *o* engaging the groove in the side of the head, an adjustment slot *o'*, and a projecting gage end o^2 which is designed to project below the dies of the set and rest between the teeth when the device is in use. A set screw P passes through the slot in said gage plate and serves to adjustably secure the same to the head or jaw so that it can be readily adjusted according to the size of saw teeth which are being set.

In order to set the saw, the same is fastened in the ordinary saw clamp to present the teeth to the operator. The set herein described is placed over the saw so that the gage plate O rests between the teeth and the opposite flat adjusting plate rests upon the teeth, so that when the opposite jaws or heads are pressed together by forcing the handles down, the tongues of one die will be pressed into the opposing notches of the opposite die on the opposite head or jaw, thereby evenly setting an equal number of teeth on each side, the said gage plate on one jaw and the adjusting and regulating plate on the opposite side of the same jaw causing every tooth to be perfectly set, as fast as the device can be moved.

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

1. In a saw set, the opposite movable jaws, and rectangular set-dies circularly or axially adjustable on said jaws and provided with varying toothed edges any one of which may be presented to the corresponding opposing edge of the other die, by reason of such adjustments, substantially as set forth.

2. In a saw set, the opposite movable jaws, and adjustable rectangular set dies adjustably secured to the under sides of said jaws or heads and provided upon each of the four edges thereof with an alternate series of interlocking tongues and notches any one of which edges is presented to corresponding opposing edge of the other die, substantially as set forth.

3. In a saw set, the opposite lever arms pivoted at their lower ends and terminating in opposite movable jaws or heads, a rectangular die having toothed edges and secured to one of said jaws or heads, and having a fixed circular or axial adjustment thereon, and a similar opposing interlocking die mounted to slide in lateral adjustment upon the opposite head, and also having a corresponding circular or axial adjustment, substantially as set forth.

4. In a saw set, the opposite lever arms pivoted at their lower ends and terminating in lower jaws, one of which is provided with a flanged seat, a fixed rectangular set die, provided with varying toothed edges, adapted to be circularly adjusted in said seat, an adjusting guide plate mounted to slide upon the opposing jaw, and an opposing interlocking rectangular die carried by said sliding plate, substantially as set forth.

5. In a saw set, the opposite movable jaws, a fixed rectangular set die provided with varying toothed edges and adjustably secured to one of said movable jaws, an opposite die plate provided with a longitudinally disposed slot and having a head at one end, adjusting screws passing through said head and engaging the jaw, an opposing interlocking die mounted on and carried by said plate, and a set screw passing through said opposing die and the slot in said plate engaging said jaw or head, substantially as set forth.

6. In a saw set, the combination with the movable die carrying jaws, of a slotted adjustable set regulating plate adjustably secured to one side of one of said jaws and provided with a flat resting end or flange adapted to rest upon the top of the saw teeth, and an opposite gage plate adjustably secured to the opposite side of the same jaw and provided with a lower projecting gage and adapted to rest between the teeth, substantially as set forth.

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

JACOB P. BECK.

Witnesses:
ALBION WHITE,
JNO. C. CLARK.