

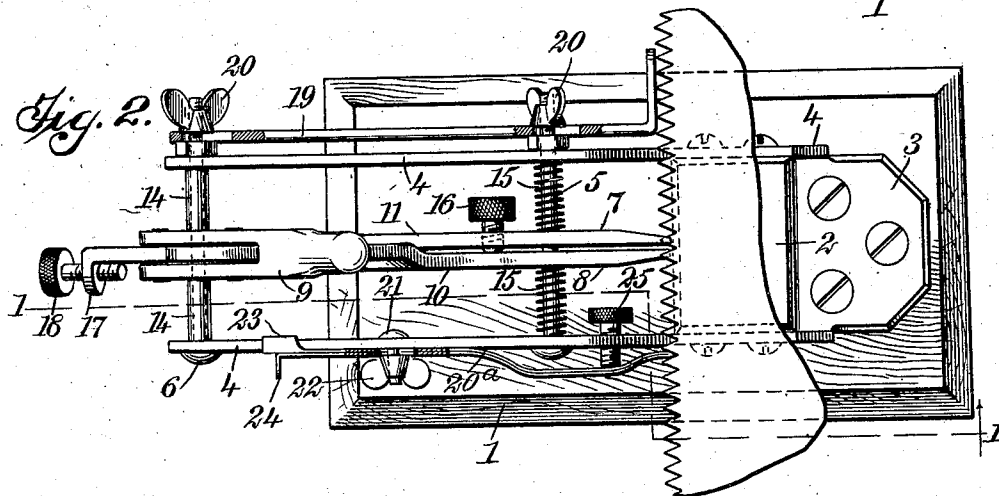
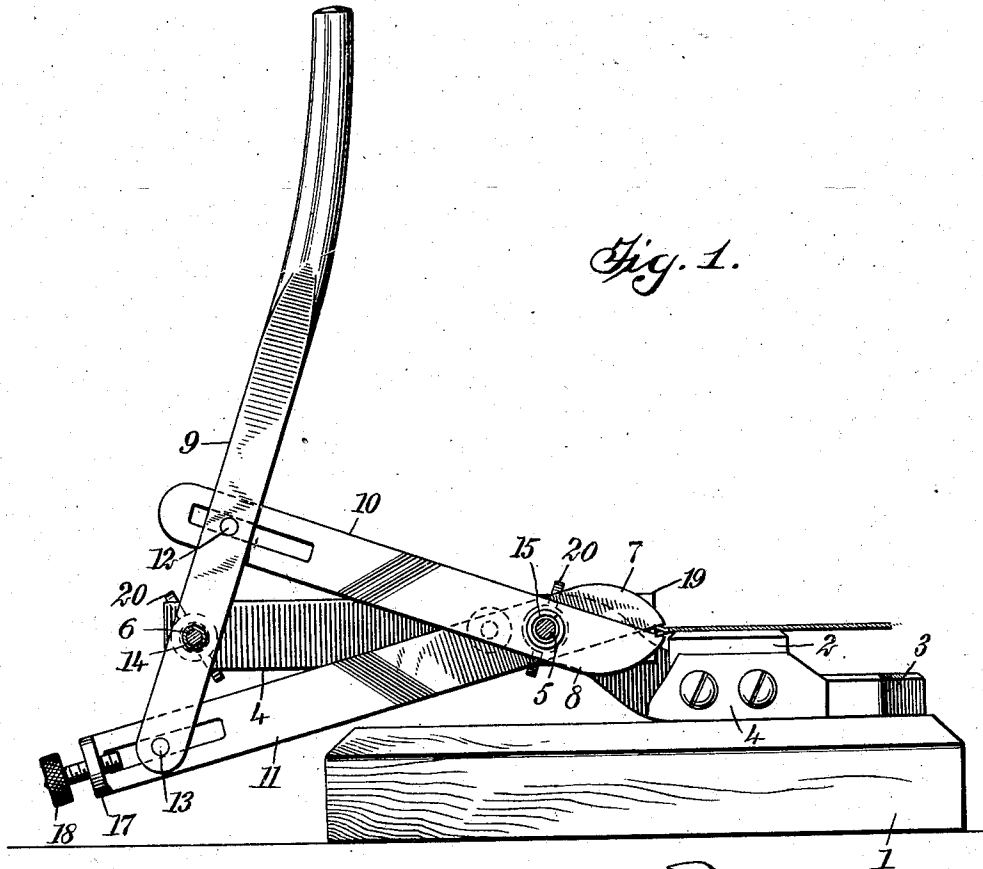
No. 853,747.

PATENTED MAY 14, 1907.

J. V. STROMBOM.

SAW SET.

APPLICATION FILED OCT. 5, 1906.



WITNESSES

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# UNITED STATES PATENT OFFICE.

JOHN VICTOR STROMBOM, OF NEW YORK, N. Y.

## SAW-SET.

No. 853,747.

Specification of Letters Patent.

Patented May 14, 1907.

Application filed October 5, 1906. Serial No. 337,639.

*To all whom it may concern:*

Be it known that I, JOHN VICTOR STROMBOM, a citizen of the United States, and a resident of the city of New York, (borough of Brooklyn,) in the county of Kings and State of New York, have invented a new and Improved Saw-Set, of which the following is a full, clear, and exact description.

This invention relates to certain improvements in machines for setting saws, and the object thereof is to provide a device in which a plurality of teeth may be set at each movement of the operating handle, and which may be so adjusted as to permit of its being used with saws of any sized teeth, and to permit of the teeth being set to any desired extent either by varying the amount of the tooth which is bent, or varying the extent to which it is bent.

A further object of the invention is to provide guides whereby as the saw is placed upon the support, the teeth are automatically brought to the proper position both as regards the lateral, as well as the longitudinal, position thereof.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in both figures, in which

Figure 1 is a side elevation of my improved saw-set, a portion thereof being broken away, approximately on the line 1—1 of Fig. 2; and Fig. 2 is a plan view of the complete device.

In the preferred embodiment of my invention, I provide a support 1, of any suitable character, to which the operating handle of my saw-set is secured, although it is evident that the operating parts may be secured to a work-bench or in any other desired position. The saw-set proper comprises a saw supporting plate 2, having a perfectly smooth polished surface upon which the saw rests, and having a bracket or flange 3, by which the said plate may be secured to the support. The sides of the plate 2 carry two arms 4, extending backward therefrom at a lower level than the surface of the plate, whereby they do not in any way interfere with the saw placed upon said plate. These two arms may extend upward at a short distance back of the rear edge of the plate, and are provided with two connecting-bolts 5 and 6 upon substantially the same level as the surface of the plate. One of these bolts 5 constitutes the pivot for the two saw-setting jaws 7 and 8, while the other connect-

ing-bolt 6 is located at the extreme end of the arms 4 and constitutes the pivot for the operating-lever 9. Each of the saw-setting jaws is provided with arms 10 and 11, which extend backward from the pivot-bolt 5, and each arm is provided with a longitudinal slot adjacent its rear end. The end of one of these arms lies above the connecting-bolt 6, while the rear end of the other arm lies below said connecting-bolt. The two arms are bent at a point back of their pivotal support, namely, the connecting-bolt 5, so as to bring the two arms into the same plane, and the operating-lever 9 is bifurcated at its lower end and incloses the two arms. The two prongs of the operating lever are connected by pivot pins 12 and 13, which extend through the slots in the arms 10 and 11, respectively, and as the connecting-bolt 6 passes through the two prongs at a point intermediate the two pivot pins 12 and 13, and as the pivot pins may move freely along the slots in the two arms, it will be noted that by moving the upper end of the handle 9 backward and forward, the pivot pins travel in the slots and bring the rear ends of the arms closer together or farther apart. As the arms are integral with the saw-setting jaws, it will be noted that a forward movement of the handle brings the jaws closer together.

The prongs of the operating handle are held in their proper position intermediate the ends of the bolt 6, by sleeves 14, and the two arms are held together on their pivot bolt 5 by means of coil springs 15 on said bolts and placed between said arms and the rearwardly-extending supporting arms 4. The tips of the saw-setting jaws are held the proper distance apart, so that when the saw is inserted, the edge 7 comes above one tooth of the saw, while the jaw 8 comes below the next adjacent tooth. As the handle 9 is brought forward, the two jaws engage with the two adjacent teeth and one is bent in one direction and the other in the opposite direction to exactly the same extent. In case the teeth are larger and the points thereof a greater distance apart, the jaws may be spread to the proper distance in opposition to the action of the spring 15, by means of a set screw 16 carried by one of the jaws, adjacent the pivot bolt and adapted to engage with the other jaw. By means of this set screw, the jaws may be spread so that they will exactly coincide with the points of the teeth on any saw which it is desired to set.

To insure the bending of all the teeth along the saw to exactly the same extent, and, at the same time, control that amount, I provide the outer or rear end of one of the arms, as for instance, the arm 11, with a flange 17, carrying a set screw 18, the inner end of which may engage with the prong of the operating lever at a point adjacent the pivot pin 13. As the extent to which the jaws are brought together is determined by the movement of the pivot pins 12 and 13 along the slots in the arms 10 and 11, it will be noted that by varying the position of the set screw 18, and thus virtually controlling the length of the slot in one of the arms, the jaws may be brought together to the same extent upon each and every stroke during the setting of any particular saw, and that this extent may be varied for different sizes.

In order to insure insertion of all of the teeth between the jaws to exactly the same extent, and to insure the bringing of the points of the saw teeth directly below the setting jaws, I provide two guides mounted upon the supporting arms 4 on each side of the setting jaws. One of these guides comprises a longitudinal member 19, provided with two slots through which passes the ends of the connecting-bolts 5 and 6. Each of the bolts is preferably provided with nuts engaging with the supporting arm 4, and preferably extends to a sufficient distance beyond said nut to act as a support for the guide 19. Thumb nuts 20 are provided on these bolts to hold the guides in place and permit of the easy adjustment thereof. The end of the guide 19 is bent at right angles to the body portion thereof and is adapted to extend in the same line as the points of the teeth and serve as an abutment, against which the points of the teeth project when the saw is being set. By moving the guide 19 forward or backward along on the bolts 5 and 6, the distance to which the points of the saw are inserted between the setting jaws may be controlled at will.

The opposite supporting arm 4 carries a guide 20<sup>a</sup>, which not only serves the same purpose as the guide 19, but also acts to bring the points of the saw teeth in perfect alinement with the setting jaws. This guide is made of spring metal and provided with a slot through which extends a short bolt 21, having a thumb nut 22, whereby it may be adjusted longitudinally of the supporting arm 4. The guide may, if desired, be made of double thickness and the rear end of one portion provided with flanges 23 to inclose the supporting arm 4 and keep the guide in alinement, and the rear end of the other portion provided with an outwardly-extending flange 24, serving as a handle for moving the guide longitudinally of the supporting arm. The supporting arm 4 is provided with a set screw 25, adapted to abut against the spring

metal guide 20<sup>a</sup> and press the latter away from the supporting arm.

The end of the guide 20<sup>a</sup> is thin and adapted to be inserted between two adjacent teeth of the saw, so that as the saw is pushed forward on the supporting plate 2, the engagement of the thin edge of the guide with the inclined edge of the tooth serves to move the saw longitudinally until the end of the guide reaches the base of the recess between the teeth, at which time the points of two other teeth should be in the proper position in respect to the setting jaws. By turning the set screw 25, the guide 20<sup>a</sup> may be moved away from or toward the jaws so as to perform its function irrespective of the size of the teeth. The guide 20<sup>a</sup> may be moved longitudinally of its supporting bar in a manner similar to the movement of the guide 19, so that it serves not only to determine the longitudinal position of the saw, but also controls the lateral insertion thereof. As the adjustment of this guide is entirely independent of the adjustment of the other guide, and independent of all the other adjusting features, it is evident that saws having teeth of any size, shape, or distance apart, may be set by bending any portion thereof any desired amount.

The specific device illustrated in the drawings, involves only a single embodiment of my invention, and it is evident that various modifications and changes may be made in the details thereof without departing from the spirit of my invention.

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

1. A machine for setting saws, comprising a suitable support, two arms pivoted adjacent thereto, each of said arms terminating in a jaw, said jaws adapted for engagement with opposite sides of successive teeth, each of said arms having a slot adjacent one end thereof, a pivoted lever having pins in engagement with said slots, whereby when said lever is moved the jaws are simultaneously moved toward or from each other, and means carried by one of said arms adjacent the slot therein for controlling the movement of the pin in said slot.

2. In combination, means for supporting a saw, a plurality of brackets mounted adjacent thereto, two pivot bolts carried by said brackets, two arms mounted upon one of said pivot bolts and having coacting jaws adjacent said saw-supporting means, an operating lever mounted upon the other pivot bolt, and means carried thereby and in sliding engagement with each of said arms, whereby the jaws may be operated by the movement of said lever.

3. In combination, means for supporting a saw, a pivot bolt mounted adjacent thereto, two arms mounted upon said pivot bolt and having coacting jaws adjacent said saw-sup-

porting means, a second pivot bolt mounted substantially parallel to said first mentioned pivot bolt, and an operating lever mounted upon the second pivot bolt and having sliding engagement with each of said arms, whereby the jaws may be operated by the movement of said lever.

4. In combination, means for supporting a saw, two parallel brackets mounted adjacent thereto, two arms pivotally mounted upon said brackets and having coacting jaws adjacent said saw-supporting means, and an op-

erating lever also pivotally mounted upon said brackets and having sliding engagement with each of said arms, whereby the jaws may be operated by the movement of said lever.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN VICTOR STROMBOM.

Witnesses:

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LOUIS W. SEVERY