L. H. BIGELOW.

DEVICE FOR SETTING, JOINTING AND GAGING THE TEETH OF SAWS.

No. 190,539. Patented May 8, 1877.

Fig. 1.

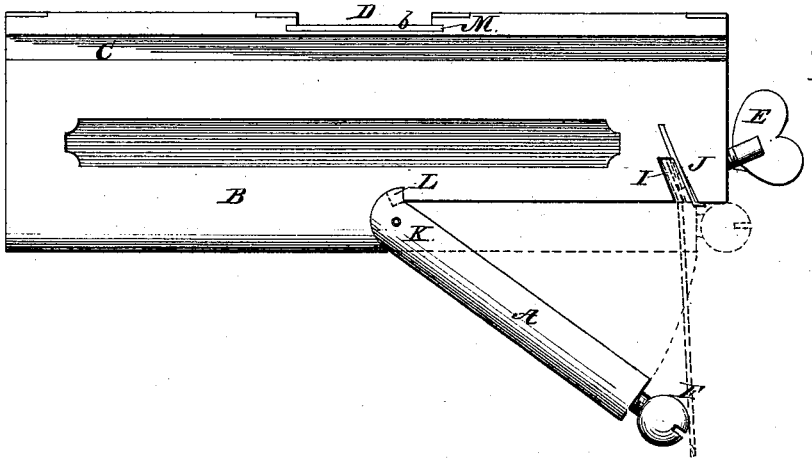


Fig. 4.

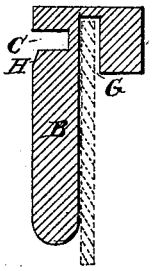


Fig. 2.

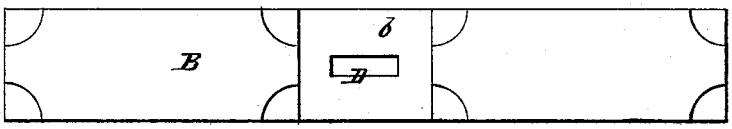


Fig. 5.

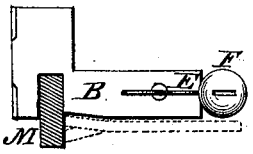


Fig. 3.

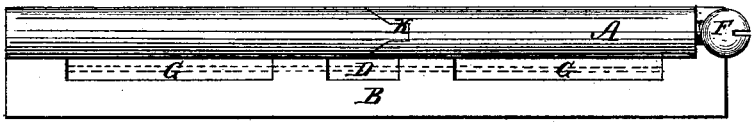
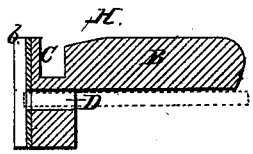


Fig. 6.



Witnesses.

Geo W McGill

Orlando H Hawley

Inventor.

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UNITED STATES PATENT OFFICE.

LEVI H. BIGELOW, OF FREMONT CENTRE, MICHIGAN.

IMPROVEMENT IN DEVICES FOR SETTING, JOINTING, AND GAGING THE TEETH OF SAWS.

Specification forming part of Letters Patent No. **190,539**, dated May 8, 1877; application filed January 10, 1876.

To all whom it may concern:

Be it known that I, LEVI H. BIGELOW, of Fremont Centre, in the county of Newaygo and State of Michigan, have invented a new and Improved Device for Setting, Jointing, and Gaging Saw-Teeth; and I do hereby declare that the following is a full, clear, and exact description of the same.

In order that saws may perform their function properly their teeth occasionally require to be "set," to give them a uniform inclination or angle, also to be "jointed," to make them uniform in length, and when "clearers" are used they require to be cut down or made shorter than the fleam or cutting-teeth, between which they are located. The object of my invention is to provide a cheap, simply-constructed, but efficient device, for use in performing these operations, to wit, setting, jointing, and gaging.

In the accompanying drawing the device is shown in side view in Figure 1, in edge view or plan in Figs. 2 and 3, in cross-section in Figs. 4 and 6, and in end view in Fig. 5.

The body of the device consists of a thin oblong rectangular plate, having a right-angular projection or rib at one edge, so that it is L-shaped in cross-section. The parts employed for setting the cutting-teeth of saws are, first, an arm, A, hinged at K to the body B of the device, and having a screw, F, in its free end; second, an inclined or diagonal slot, I, formed in the plate B, near the end thereof; and, third, a spring-plate, J, located in said slot I, and a set-screw, E, for adjusting the same, for the purpose of clamping the saw-teeth. In order to set the teeth the arm A is opened, as shown in Fig. 1, until the shoulder L on its fulcrum end meets a corresponding shoulder on the plate B. The instrument is then held in such position that one of the saw-teeth will enter slot I, in which it is clamped, by means of the spring-plate J and set-screw E. The outer end of the plate B is then depressed until the head of screw F strikes the saw-blade, as shown in Fig. 1, the arm A being rigidly supported by the leverage of its fulcrum and the shoulders L. The saw-tooth will thus be bent and set at the desired angle. The screw E is then adjusted to release the tooth, and the remaining teeth are successively set in the same manner.

It is obvious the adjustment of the screw F will practically increase or diminish the length of the arm A, and that the angle of the saw-teeth will be determined by such adjustment.

To joint the teeth, the arm A is closed, and a flat file, M, placed in the lengthwise groove C, Figs. 4, 5, 6, formed in the side of plate B near its broader edge. The instrument is then applied to a saw-blade, as shown in Fig. 5—that is to say, so that the body of plate B lies flat against the saw-blade, and the file M rests upon or against the edge of its teeth. The instrument is then reciprocated or moved from one end of the blade to the other, until all the teeth have been reduced to a uniform length.

The side of plate B is beveled at H, contiguous to the file-groove C, in order that the cutting-teeth of the same may not be dulled by contact with the plate in the operation of jointing.

To gage the clearers or clearing-teeth of a saw, the instrument is applied to the saw-blade substantially in the same manner as for jointing, except that the opposite side of plate B is in contact with the saw, as shown in dotted lines, Figs. 4 and 6.

The ledge or rib of plate B has a central slot, D, to receive a clearing-tooth, and a recess, G, on each side thereof, to receive the two cutting-teeth, between which the clearer is located.

The depth of the recesses G relative to the length of the open slot D is such that a clearing-tooth, of the same length as the adjacent cutting-teeth, will project through the slot D, and slightly above the plate *b*, Fig. 6, which is inserted in a depression of the base of the L-shaped plate.

By filing down the projecting points of the clearer until flush with plate *b*, the same will be made shorter than the cutting-teeth, and thereby gaged as required, to enable the saw to operate satisfactorily.

The plate D is made detachable, in order that others of different thickness may be sub-

stituted, according to the gage it is desired to give the clearers of different saws.

What I claim is—

The device for setting, jointing, and gaging saw-teeth, consisting of an L-shaped plate, B, having the hinged arm A, edge slot I, set-screw E, spring-plate J, a file-groove, C, the recesses G, and open slot D, as shown and described.

LEVI H. BIGELOW.

Signed in presence of—

JAMES W. DUNNING,
T. C. RANDOLPH,
HARMAN K. BUSH.