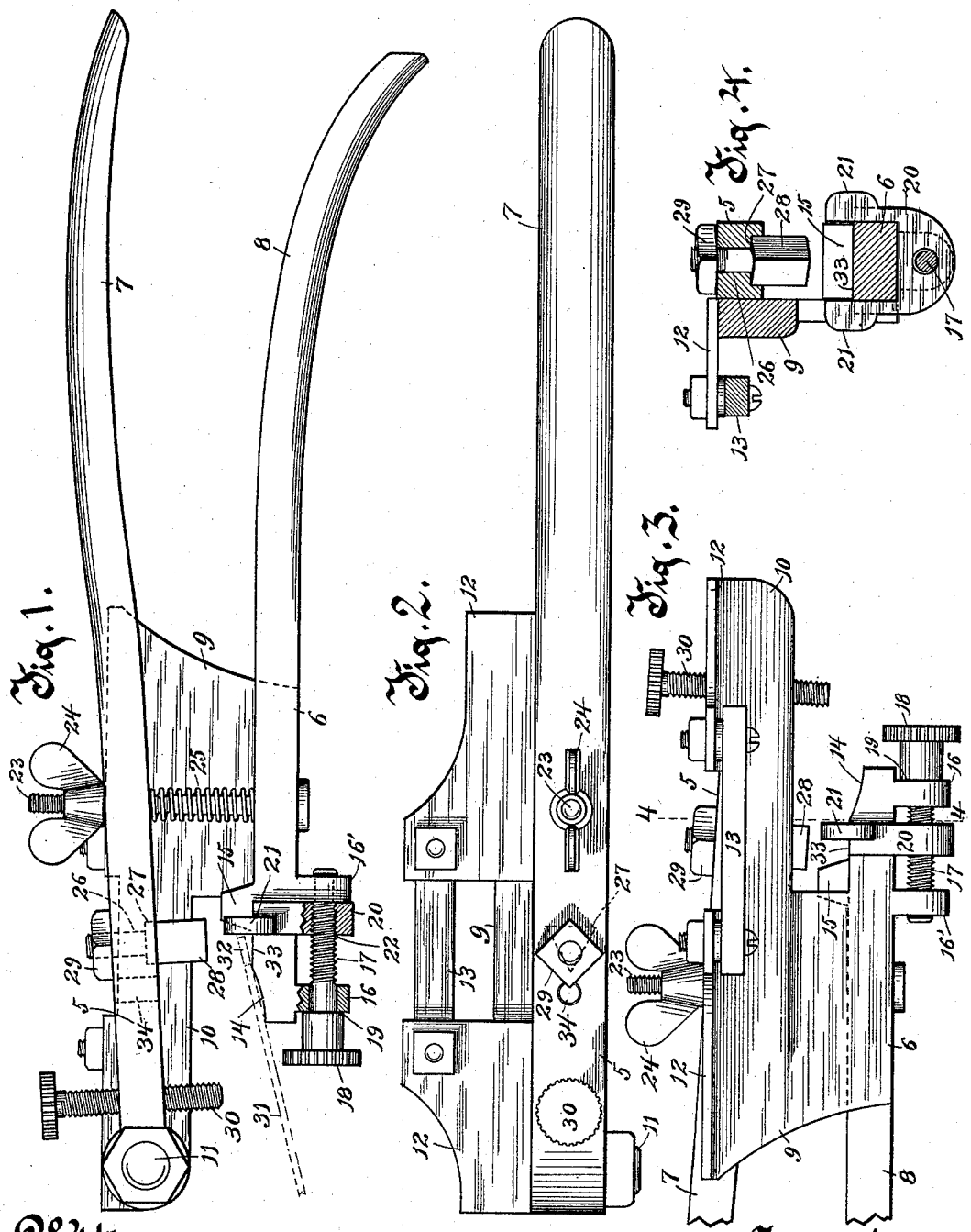
(No Model.)

A. HOLECEK.

DEVICE FOR SETTING SAW TEETH.

No. 590,985. Patented Oct. 5, 1897.



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UNITED STATES PATENT OFFICE.

ALBERT HOLECEK, OF REEDSVILLE, WISCONSIN.

DEVICE FOR SETTING SAW-TEETH.

SPECIFICATION forming part of Letters Patent No. 590,985, dated October 5, 1897.

Application filed February 23, 1897. Serial No. 624,559. (No model.)

To all whom it may concern:

Be it known that I, ALBERT HOLECEK, of Reedsville, in the county of Manitowoc and State of Wisconsin, have invented a new and useful Improvement in Devices for Setting Saw-Teeth, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention has relation to improvements in devices for setting saw-teeth and for holding a saw during the operation of filing the teeth.

The object of the device is to produce a most simple form of tool for the purpose designed, adapted for accomplishing effective work with the least possible labor and loss of time on the part of the operator.

With the above primary object in view the invention consists of the devices and parts or their equivalents, as hereinafter more fully set forth.

Referring to the drawings, Figure 1 is a side elevation of the complete device, showing the saw-blade in dotted lines as adjusted to the tool in position to have its teeth properly set. Fig. 2 is a plan view. Fig. 3 is a side elevation of the forward end of the tool, showing the side opposite to that illustrated in Fig. 1; and Fig. 4 is a cross-section on the line 4 4 of Fig. 3.

The two principal members of the tool consist of the upper and lower jaws 5 and 6, respectively, each provided with the rearwardly-extending portions 7 and 8, forming the operating-handles.

The lower jaw 6 is provided with a rigid upwardly-extending side piece 9, which is formed with a forwardly-extending portion 10 of less width than the main part of the side piece. The forward extremity of the inner side of this forward extension is provided with a laterally-extending trunnion 11, which passes through an eye in the forward extremity of the upper jaw 5, said trunnion thereby forming a pivot for the upper jaw. Formed upon or secured to the upper edge of the side piece of the lower jaw are laterally-extending flanges 12 12. The inner edges of these flanges are a desired distance apart, so as to form a space therebetween. To the under sides of the flanges at their outer edges is secured a longitudinal bar 13.

The upper surface of the forward extremity of the lower jaw 6 is beveled, as indicated at 14, and just back of this beveled extremity said jaw is provided with an upwardly-extending shoulder 15. The under side of the lower jaw near its forward extremity is provided with downwardly-extending apertured lugs 16 16'. Passing through these apertured lugs is an adjusting-screw 17. One end of the screw is provided with a milled head 18 for convenience in turning the same, and in advance of this head the screw is of greater diameter than that part thereof which is threaded, in order to form a shoulder 19, which shoulder bears against the lug 16. The opposite extremity of the screw is upset, said upset end, in conjunction with the shoulder 19, preventing longitudinal movement of the screw.

The numeral 20 indicates an adjustable gage. This gage is of a substantial yoke form and its two side members or arms embrace the side edges of the lower jaw. The upper edges of these arms or members, which edges are preferably substantially flush with the upper surface of the lower jaw, are provided with upwardly-extending lateral wings or flanges 21 21. The lower solid portion of this gage below the lower surface of the jaw 6 is provided with a screw-threaded aperture 22, through which the threaded portion of the adjusting-screw 17 passes.

The two jaws are connected medially by means of a bolt 23. The upper extremity of this bolt is threaded to receive a wing-nut 24. Encircling the bolt between the two jaws is a coiled spring 25. The upper jaw is provided with an opening 26, which at its lower end terminates in a triangular socket or recess 27. The numeral 28 indicates a tooth-setting finger, the lower portion of which being of triangular form, and the upper portion preferably round to fit the circular opening 26 therefor. The extreme upper end of the finger is threaded to receive thereon a nut 29, and the shoulder formed at the upper end of the triangular portion of the finger is adapted to fit into the triangular socket 27 in order to prevent the finger from turning

when the nut 29 is tightened. The opening 26 is so located that the depending triangular portion of the finger will just clear the beveled front face of the shoulder 15 when said finger is brought downwardly in order to bend a saw-tooth. The lower end of the finger may be advisably beveled slightly in order to better adapt it to act on the saw-teeth. Passing through a threaded opening near the forward extremity of the upper jaw 5 is a screw-bolt 30.

In the operation of my invention when it is desired to set the teeth of a crosscut-saw the adjusting-screw 17 is turned to the left. This will cause the gage 20 to move longitudinally along the screw, the movement preferably being caused to continue until the gage has reached the limit of its adjustment or until it contacts with the lug 16′, as shown in Fig. 1. The crosscut-saw (indicated by the numeral 31) is now adjusted to the position shown by dotted lines in Fig. 1, which illustrates the blade resting in an inclined position on the upper bevel 14, formed at the extremity of the jaw 6, while the teeth 32 of the saw extend from the angle formed at the junction of the beveled surface 14 with the plane surface 33 of the lower jaw. When in this position, the points of the teeth of the saw are in contact, or nearly so, with the wings 21 of the gage. In order to adjust the degree of the bending or setting of the teeth, the screw-bolt 30 is turned a desired distance to limit the upward swing of the saw-blade when the teeth thereof are struck by the saw-setting finger. Of course the more the screw 30 is screwed downwardly the more will the saw-teeth be bent. After the several adjustments referred to have been made the handles of the jaws are pressed together until the setting-finger contacts with a tooth of the saw and bends or sets the same. The saw-blade is then moved along until the next tooth of the series is brought into alinement, when that is bent in like manner, and so on. After the handles are brought together, as described, and pressure thereon (after the setting operation is completed) is removed the coiled spring 25 returns the handles to their normal position.

In the case of handsaws the adjusting-screw 17 is turned to the right, so as to adjust the gage toward the forward end of the lower jaw as far as deemed necessary.

Many saws are provided with very narrow blades. In order to provide for setting the teeth of such saws, I form an extra screw-threaded opening 34 in the upper jaw 5, to which the screw-bolt 30 may be transferred for securing the proper inclination of the teeth of such saws with narrow blades.

The space formed between the opposite edges of the flanges 12 and between the bar 13 and the side piece 9 is designed to accommodate the upper toothed edge of a saw, when it is desired to file the teeth of said saw. The file is simply reciprocated backward and forward over this space, so as to act on the teeth. In order to provide for this reciprocation of the file, it is necessary that the upper jaw be adjusted downwardly, so as to bring its top surface flush with the upper edges of the side piece 9 and the longitudinal bar 13.

The end or face of the saw set or finger 28 is practically of the same size as the teeth of large crosscut-saws, and when the teeth of such a saw are to be set the adjustable gage 21 is moved rearwardly to the limit of its travel, substantially to the position shown in Fig. 1, or may be removed entirely from the implement, and the shoulder 15 then serves as a satisfactory gage for applying the implement to the teeth of such saw.

What I claim as my invention is—

1. In a saw-set, the combination, of jaws formed with suitable handles, and one of said jaws having a surface against which the saw-teeth are adapted to be bent, and also provided with a side piece projecting therefrom, said side piece having a forwardly-projecting extension, and also at its top edge provided with outwardly-extending flanges having their inner edges a desired distance apart to form a longitudinal opening into which the saw-teeth may project for the purpose of filing them by the action of a file reciprocated transversely over the upper portion of the device, another jaw provided with a projecting setting-finger, and a bolt pivotally connecting the forward end of this jaw with the forwardly-projecting extension of the side piece of the other jaw.

2. In a saw-set, the combination, of jaws, formed with suitable handles, and one of said jaws having a surface against which the saw-teeth are adapted to be bent, and also provided with a side piece projecting therefrom, said side piece having a forwardly-projecting extension, and also at its top edge provided with outwardly-extending flanges having their inner edges a desired distance apart to form a longitudinal opening into which the saw-teeth may project for the purpose of filing them by the action of a file reciprocated transversely over the upper portion of the device, another jaw provided with a projecting setting-finger, a bolt pivotally connecting the forward end of this jaw with the forwardly-projecting extension of the side piece of the other jaw, a bolt passing freely through the jaws near the rear ends thereof, a spring encircling this bolt between the jaws, and a screw-bolt engaging a threaded opening in one of the jaws, the end of said bolt adapted to act as a stop to limit the swing of the saw-blade, when the teeth of the saw are bent.

In testimony whereof I affix my signature in presence of two witnesses.

ALBERT HOLECEK.

Witnesses:

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