No. 693,504. Patented Feb. 18, 1902.

A. B. EDMONDS.

COMBINED SAW SET, GAGE, SWAGE, AND JOINTER.

(Application filed Apr. 18, 1901.)

(No Model.)

Fig. 1.

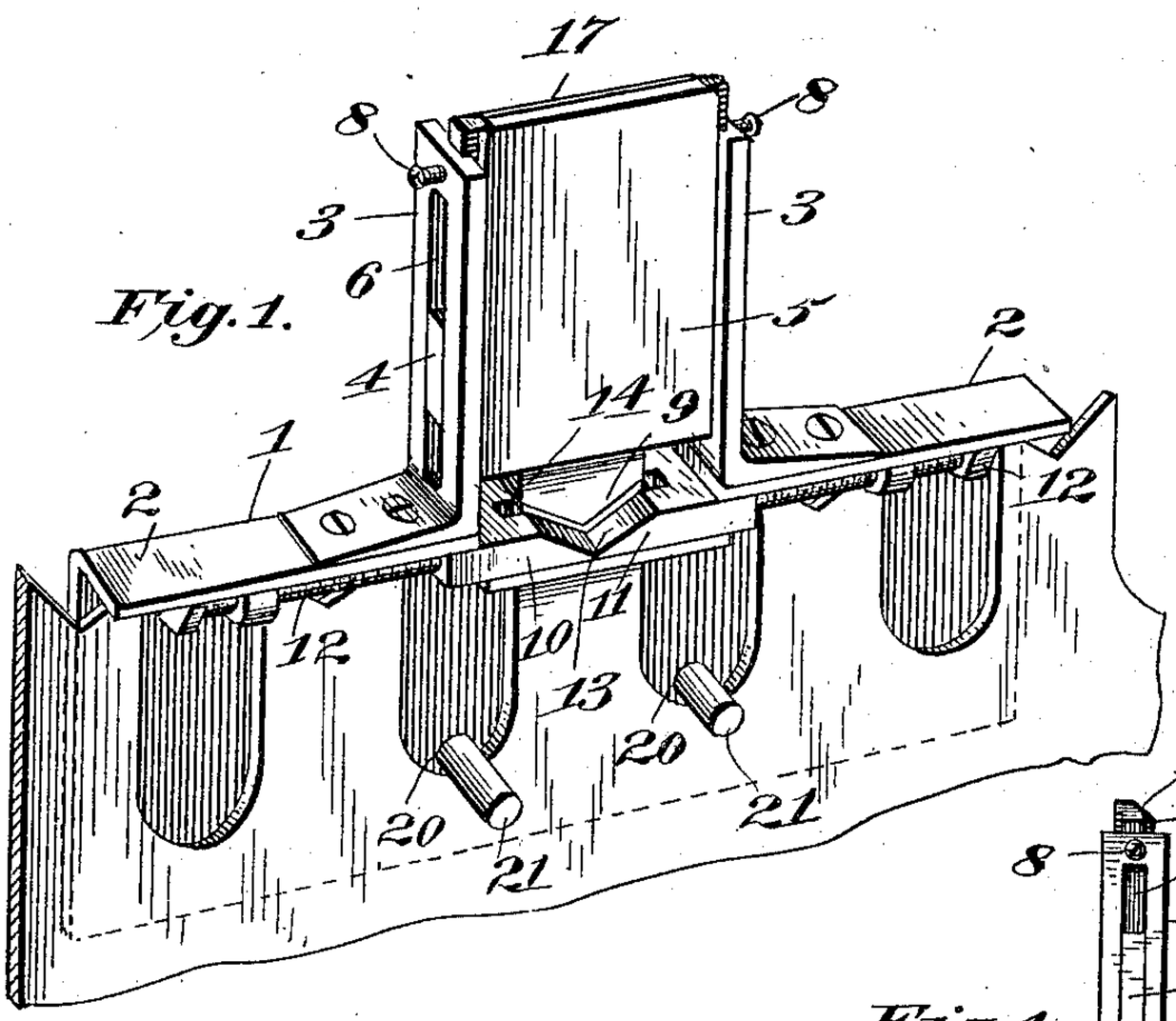


Fig. 2.

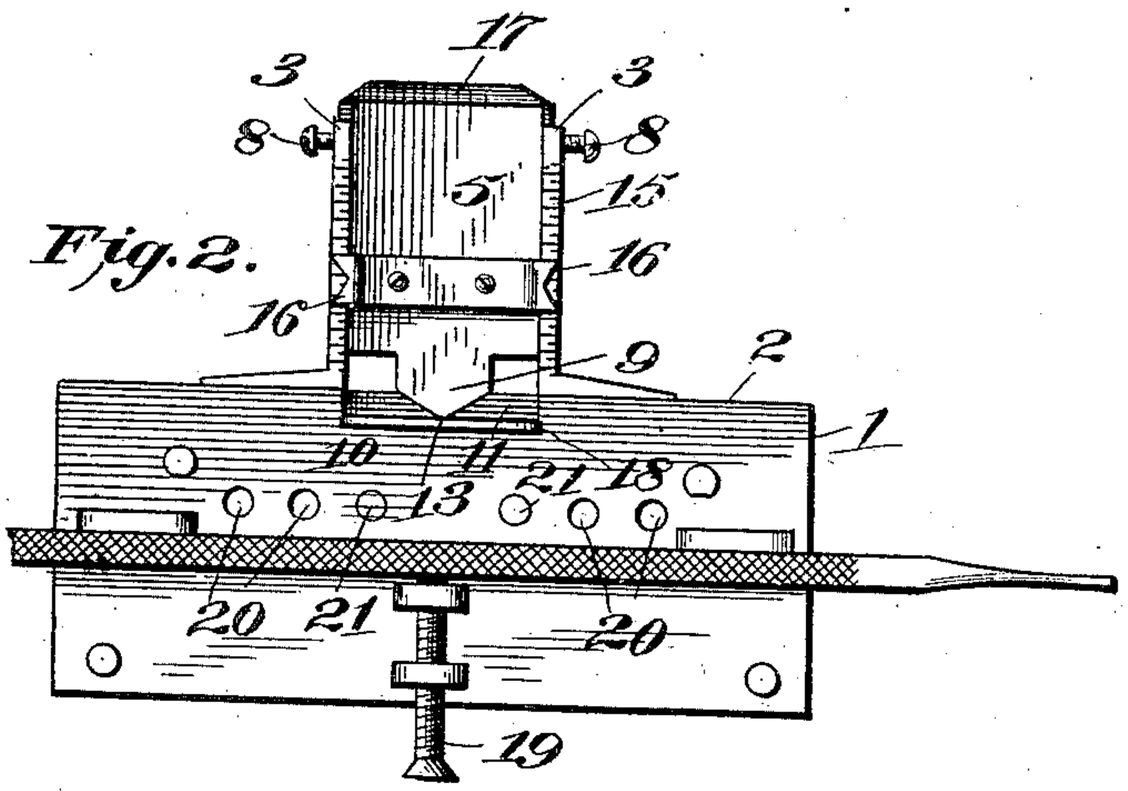


Fig. 3.

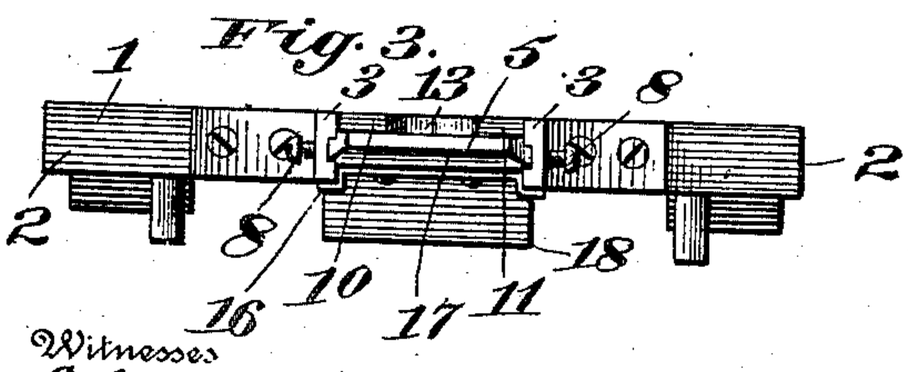


Fig. 4.

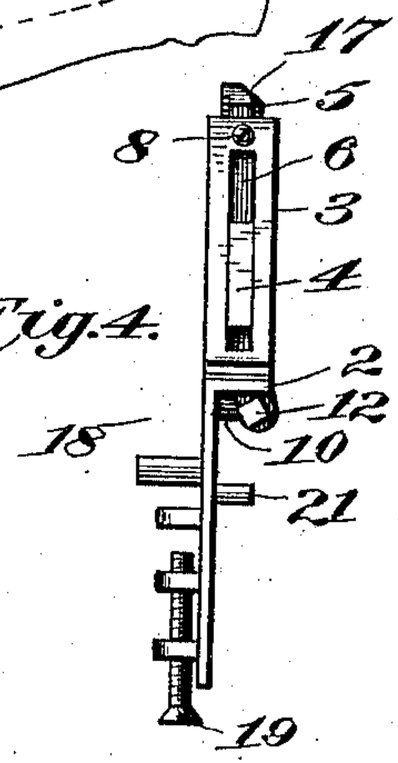
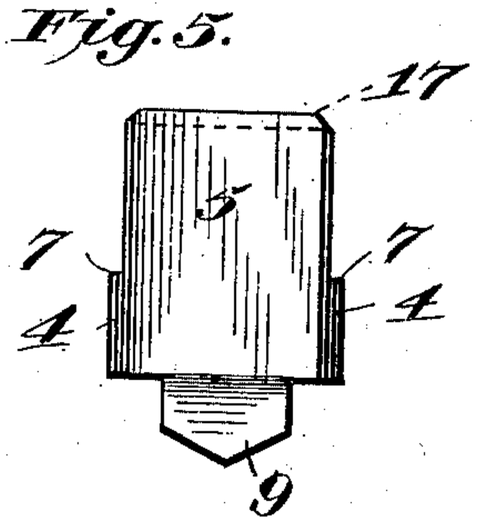


Fig. 5.



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UNITED STATES PATENT OFFICE.

AUSTIN B. EDMONDS, OF RIDGEFIELD, WASHINGTON.

COMBINED SAW SET, GAGE, SWAGE, AND JOINTER.

SPECIFICATION forming part of Letters Patent No. 693,504, dated February 18, 1902.

Application filed April 18, 1901. Serial No. 56,383. (No model)

To all whom it may concern:

Be it known that I, AUSTIN B. EDMONDS, a citizen of the United States, residing at Ridgefield, in the county of Clarke and State of Washington, have invented certain new and useful Improvements in a Combined Saw Set, Gage, Swage, and Jointer; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a combined saw set, gage, swage, and jointer; and its object is to provide a device of this character which is simple and effective in construction and whereby the operation of sharpening and setting the teeth of crosscut-saws may be conveniently, accurately, and expeditiously performed.

To this end the invention consists of a tool of this character embodying certain novel features of construction, combination, and arrangement of parts, as will be hereinafter more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view of a device constructed in accordance with my invention and showing the same arranged on a saw for swaging the drag-teeth thereof. Fig. 2 is a rear elevation of the device. Fig. 3 is a top plan view thereof. Fig. 4 is an end elevation, and Fig. 5 is a detail view of the swaging-anvil removed.

Referring now more particularly to the drawings, the numeral 1 represents a gage constructed of suitable material, and consisting in the present embodiment of the invention of an oblong plate provided at its upper edge on opposite sides of its center with flanges 2, from which rise a pair of vertical guides 3, which are grooved or slotted to receive longitudinal tongues or projections 4 on the side edges of a die-block 5, whereby said block is adapted to reciprocate vertically toward and from the upper edge of the gage. In the present instance slots 6, formed in said guides, form guideways for the die-block, and said block is provided with shoulders 7, which are adapted to abut against the guides, at the upper ends of the slots therein, to limit the upward movement of the anvil-block. To hold said block at the limit of its upward position, a set-screw 8 is mounted upon one of the guides and is adapted to engage the block to hold the same against downward movement. At its lower end the block is provided with a die 9, having a V-shaped lower edge for swaging the drag-teeth of crosscut-saws, as will be hereinafter described. Upon the upper edge of the gage 1, between said flanges 2, is arranged an anvil composed of a pair of sliding blocks or plates 10 and 11, which are adjustably mounted on the gage, so as to be moved toward and from each other by means of adjusting-screws 12. These blocks or plates 10 and 11 are beveled on their upper surfaces near their meeting ends to form a V-shaped recess 13, which communicates with a longitudinal slot 14, formed in the meeting edges of each of said blocks and which when the blocks are brought together form a closed slot, the parts of which are in longitudinal alinement. This construction provides an anvil having a longitudinal slot adapted when the gage is arranged on the saw, as illustrated in Fig. 1, to expose the drag-teeth of the saw to enable the same to be swaged and also to enable the operator to have clear access thereto to file off and sharpen the points of the drags. By means of the adjusting-screws 12 the anvil-blocks 10 and 11 may be adjusted toward and from each other to receive saw-teeth of different sizes, and in the operation of swaging the drag-teeth of a crosscut-saw the gage is arranged upon the saw, as shown in Fig. 1, to allow both of the points of a drag-tooth to project upwardly into the V-shaped recess 13, which corresponds to the form of the teeth. The die 9, secured by the set-screw 8, is then loosened and the upper end of the die-block 5 struck by means of a hammer or other suitable tool to cause the V-shaped die 9 to come down between and shape the points of the drag-teeth as desired. By this construction of the parts both of the points of a drag-tooth may be simultaneously swaged and accuracy secured.

An indicator 15, having points or projections 16, is secured to the die-block 5, and these points are bent, so as to ride over the rear faces of the guides 3 and coöperate with a gage thereon to indicate the proper downward movement of the die necessary to im-

part the proper amount of swage to the teeth. By this means the points of the drag-teeth may be swaged accurately and to the desired extent, so that both points will have the same set, whereby proper cutting of the saw is insured. When it is desired to file off and sharpen the points of the drag, the die-block 5 is elevated and the set-screw 8 tightened to secure the same, whereupon sufficient space will be left between the die and anvil to enable the operator to have free access to the drag-teeth to file off the points of the teeth to the required extent. One longitudinal side edge of the upper end of the die-block 5 is beveled, as shown at 17, whereby upon inverting the gage from the position shown in Fig. 1 and bringing said beveled surface into contact with the points of the cutting-teeth the latter may be readily and accurately set by a light blow from a hammer or mallet.

From the rear side of the gage 1 projects a flange 18, which serves as a support for the anvil and also as a fixed clamp to bear upon one side of a file, for use in sharpening the teeth of the saw. The file in practice is placed between said flange and the clamping-screw 19, mounted on the gage, which clamping-screw is then adjusted to clamp the file against said flange 18. By then bringing the flat under cutting-surface of the file to rest upon the points of the file-teeth and reciprocating the device thereon, the file may be accurately manipulated to sharpen the teeth after they have been made uniform without reducing their height. By this means the cutting-teeth may be jointed or evened up in a convenient and expeditious manner.

In the body of the gage 1 is formed a series of screw-threaded openings 20 to receive two or more screw-threaded holding-pins 21, which are adapted to be fitted between the teeth of the saw to hold the gage securely in place while in use. These openings are so arranged as to enable the pins to be adjusted to fit teeth of any saw.

From the foregoing description, taken in connection with the accompanying drawings, the construction, mode of operation, and advantages of my invention will be readily understood, and it will be seen that a simple and effective form of device for the purpose stated is provided.

While the preferred embodiment of the invention is as herein disclosed, changes in the form, proportion, and details of construction may be made within the scope of the invention without departing from the spirit or sacrificing any of the advantages thereof.

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

1. A swage for clearing teeth of crosscut-saws having its swaging-face formed at an obtuse angle, and adapted to fit between the two points of a clearing-tooth in operation and thus operate upon both of said points simultaneously, and equally.

2. A device of the character described, comprising a body having a slotted plate or anvil, a die coöperating with the anvil to swage the drag-teeth of a saw, guides in which the die is mounted to reciprocate, said guides being provided with a gage, and a pointer on the die coöperating with said gage to indicate the extent of movement of the die, substantially as set forth.

3. A device of the character described, comprising a body or gage provided with an anvil composed of relatively movable sections having correspondingly slotted and beveled meeting ends forming a longitudinal slot, and a V-shaped recess, means for adjusting the parts or sections of the anvil, and a die-block having a V-shaped die coöperating with said slot and recess, substantially as set forth.

4. A device of the character described, comprising a gage-plate provided with a bearing-flange, an adjusting-screw for clamping a file against said flange, a series of screw-threaded openings formed in said gage-plate, and pins adjustably mounted in said openings to engage the teeth of a saw and support the device thereon, substantially as set forth.

5. In a device of the character described, the combination of a gage-plate provided with guides, a two-part anvil adjustably mounted on the gage-plate at the base or below the guides and having a longitudinal slot and a V-shaped transverse recess, set-screws for adjusting the parts of the anvil, a die-block mounted to reciprocate in said guides and provided with a V-shaped die coöperating with said slot and recess in the anvil, an indicator on the die-block coöperating with the gage on the guides to indicate the extent of movement of the die, and means for holding the die-block away from the anvil, substantially as set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

AUSTIN B. EDMONDS.

Witnesses:
ALFRED C. ALLEN,
LUKE B. BLACKBURN.