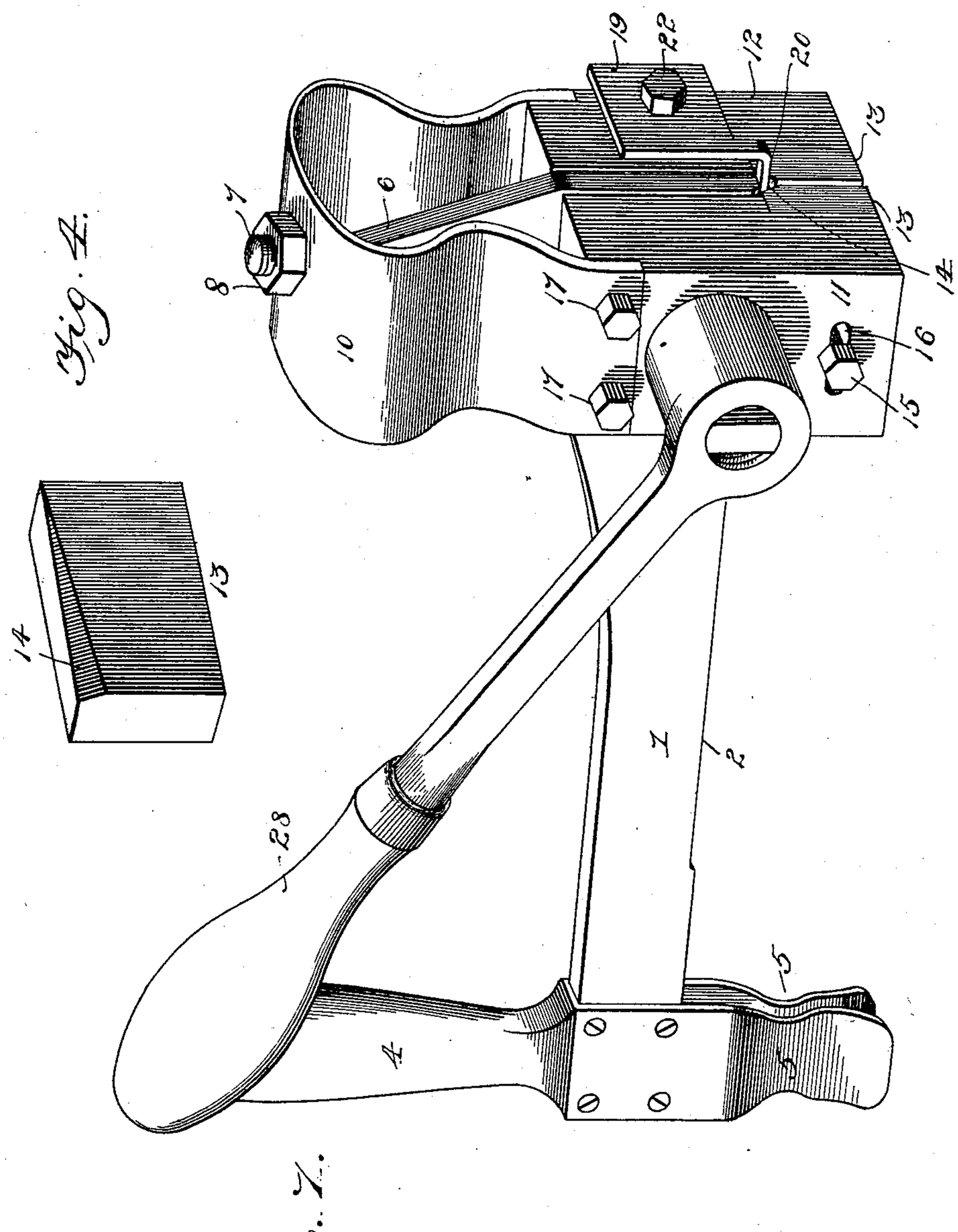
(No Model.) 2 Sheets—Sheet 1.

G. M. BROWN.

SIDE DRESSER FOR SAW TEETH.

No. 568,295. Patented Sept. 22, 1896.

Fig. 1.



Witnesses
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O. E. Hoyt

Inventor
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By his Attorneys,
C. A. Snow & Co.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

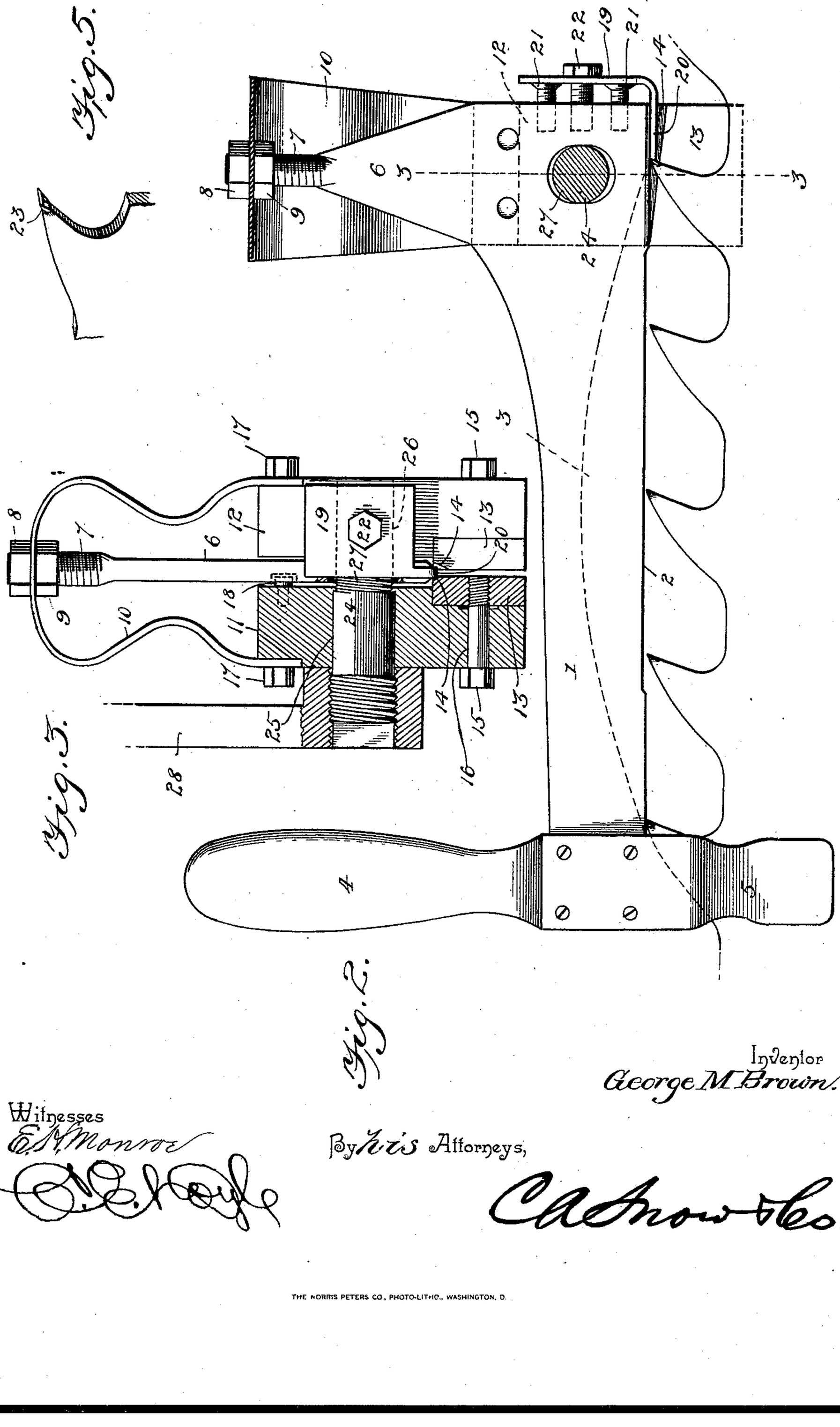

Fig. 2.

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UNITED STATES PATENT OFFICE.

GEORGE M. BROWN, OF FRANKLIN, LOUISIANA.

SIDE DRESSER FOR SAW-TEETH.

SPECIFICATION forming part of Letters Patent No. 568,295, dated September 22, 1896.

Application filed January 31, 1896. Serial No. 577,563. (No model.)

To all whom it may concern:

Be it known that I, GEORGE M. BROWN, a citizen of the United States, residing at Franklin, in the parish of St. Mary and State of Louisiana, have invented a new and useful Side Dresser for Saw-Teeth, of which the following is a specification.

My invention relates to saw-tooth-dressing machines, and has for its object to provide a device adapted for use in connection with band, gang, circular, and other saws which may be applied and operated with facility and rapidity, the same comprising the minimum number of parts whereby displacement in operation is avoided.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a side dresser constructed in accordance with my invention. Fig. 2 is a side view, partly in section, of the same, showing it applied to a portion of a band-saw. Fig. 3 is a front view, partly in section, on the line 3 3 of Fig. 2. Fig. 4 is a detail view in perspective of one of the dies. Fig. 5 is a detail view of a saw-tooth adapted to be dressed by a machine constructed in accordance with my invention.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a guide having a straight lower edge preferably cut away slightly throughout a portion of its length to form a slight offset, (shown at 2,) said guide being also channeled or recessed, as shown at 3, to receive and fit upon the teeth of a circular saw. The guide terminates at its rear end in an upstanding handle 4, adapted to be grasped by the left hand of the operator, and depending parallel guide-ears 5, adapted to bear against opposite side surfaces of the saw. The guide terminates at its front end in an upwardly-extending tapered head 6, having a threaded upper extremity 7, engaged by upper and lower nuts 8 and 9 upon opposite sides of the plane of a bowed or arched spring-plate 10, whereby the guide may be vertically adjusted with relation to said spring-plate.

The spring-plate 10 connects and carries the laterally-movable jaws 11 and 12, to the inner surfaces of which are secured the dies 13, said dies being of chilled steel or equivalent material, and having their upper inner angles beveled or cut away to form chamfers 14. These chamfered surfaces are reduced in width from the front or outer ends of the dies toward the rear ends thereof, where they terminate in points, as shown clearly in the detail view, Fig. 4, for a purpose hereinafter explained. The dies are secured in place by means of set-screws or bolts 15, which extend horizontally through longitudinal slots 16 in the jaws 11 and 12, and are threaded into suitable openings in the dies, and after loosening said set-screws or bolts either or both of the dies may be adjusted longitudinally of the jaws for a purpose hereinafter explained.

The arms of the bowed spring-plate 10 are secured to the upper portions of the jaws by means of screws or bolts 17, and arranged upon the inner or facing surface of one of the jaws is an adjustable jaw-stop 18, preferably consisting of a set-screw, as shown, and adapted to limit the inward movement, or the movement toward each other, of the jaws to suit the thickness of the saw-blade; also, mounted upon one of the jaws is a tooth-stop 19, having a horizontal tongue 20, which projects rearwardly between the jaws approximately in the plane of the upper sides of the dies to fix the position of the teeth of the saw as they are successively introduced between the dies. The adjustment of this tooth-stop longitudinally of the machine may be accomplished in various ways; but in the drawings I have shown set-screws 21 arranged upon opposite sides of a clamping-screw 22, the clamping-screw being arranged to pass through the vertical or body portion of the tooth-stop and screw into a suitable socket in the jaw, while the rear surface of said body portion of the stop bears against the heads of the set-screws 21. Thus the clamping-screw holds the body portion of the tooth-stop in contact with the heads or exposed ends of the set-screws, and by varying the adjustment of the set-screws the extremity of the tongue 20 may be arranged opposite any desired point of the chamfered faces of the die-blocks. Inasmuch as said chamfered faces are tapered rear-

wardly in width, the adjustment of the tooth-stop to arrange its extremity opposite any desired point of said faces provides for forming lateral or clearance ears or projections 23 of any desired width upon the saw-teeth, and hence adapts the device to be adjusted to suit the special construction of the saw to be dressed. By varying the vertical adjustment of the guide with relation to the jaws the machine is adapted to the particular gage of the saw, and inequalities or irregularities may be accommodated to cause the clearance ears or projections at the extremities of the saw-teeth to project equally by the adjustment, independently of each other, of the die-blocks.

In order to provide for actuating the jaws to compress the dies upon the saw-teeth, I employ a feed-screw 24, fitting in axially-alined openings 25 and 26, formed, respectively, in the jaws 11 and 12, said openings being of different sizes, and the feed-screw having a reduced threaded portion 27 to fit in the reduced opening 26 of the jaw 12. Thus the feed-screw is secured rigidly to the jaw 12 as its smooth-surfaced portion operates loosely in the opening in the jaw 11. The outer end of the feed-screw beyond the outer surface of the jaw 11 is threaded for engagement by the eye of an operating-lever 28, which, when turned, feeds toward or from the movable jaw 11 and actuates said part. The head of the feed-screw is preferably squared or made angular to form a wrench-seat to facilitate turning the reduced portion of the screw into the opening in the jaw 12.

In operation the guide is placed upon the teeth of the saw to be side-dressed, the handle 4 being grasped in the left hand of the operator and the lever 28 by the right hand. The guide is moved until the tooth-stop comes in contact with the tooth to be dressed, when the operating-lever 28 is depressed to feed the jaws toward each other and thus compress the extremity of the tooth. The operation is accomplished quickly, and the device may be moved rapidly from tooth to tooth, a simple downward movement of the operating-lever being necessary the moment the tooth-stop comes in contact with the tooth to be dressed.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

1. The combination of a guide adapted to be arranged in the plane of a saw to bear against the extremities of its teeth, laterally-movable die-carrying jaws arranged upon opposite sides of the plane of the guide, an arched spring-plate terminally connected to the jaws, operating devices for moving the jaws toward each other against the tension of the spring-plate, and adjustable connections between the guide and an intermediate part of the spring-plate to vary the relative positions of the guide and jaws, substantially as specified.

2. The combination of a guide terminating at one end in an upstanding handle and at the other end in a head, laterally-movable jaws arranged upon opposite sides of the plane of said head and carrying die-blocks, an arched or bowed plate connecting the jaws, means for adjustably securing the head of the guide to said plate, whereby the guide may be adjusted vertically with relation to the jaws, and means for feeding the jaws toward and from each other, substantially as specified.

3. The combination of a guide adapted to be arranged in the plane of a saw, laterally-movable die-carrying jaws arranged upon opposite sides of the plane of the guide and provided with transversely-registering openings, a feed-screw extending loosely through the opening in one jaw and secured in the alining opening of the other jaw, yielding means for normally holding the jaws spread, and an operating-lever threaded at one end upon a portion of the feed-screw which projects beyond the first-named jaw, and bearing against the outer face of said jaw, whereby lateral reciprocation of the coöperating jaws may be caused by the oscillation of said lever, substantially as specified.

4. The combination of laterally-movable jaws carrying die-blocks, a bowed or arched spring-plate connecting the jaws, a guide arranged at its front end between the planes of the jaws and having an upward-threaded extension fitting in an opening at the center of said spring-plate, nuts engaging said extension above and below the plane of the spring-plate, a feed-screw secured to one of the jaws, and an operating-lever threaded upon said screw and engaging the other jaw, substantially as specified.

5. The combination with laterally-movable jaws, a guide arranged between the planes of the jaws, and means for moving the jaws toward and from each other, of die-blocks carried by the jaws and provided with beveled or chamfered faces which are tapered in width continuously from one end to the other and adjustable means for controlling the position of a saw-tooth with relation to the die-blocks, substantially as specified.

6. The combination with laterally-movable jaws, a guide arranged between the planes of the jaws, and means for moving the jaws toward and from each other, of die-blocks carried by the jaws and provided with chamfered faces which are tapered in width continuously from one end to the other, a tooth-stop arranged in operative relation with said die-blocks, and means for adjusting the tooth-stop longitudinally of said chamfered faces, substantially as specified.

7. The combination with laterally-movable jaws, a guide arranged between the planes of the jaws, and means for moving the jaws

toward and from each other, of die-blocks carried by the jaws and having chamfered faces tapered in width, a tooth-stop mounted upon one of the jaws and having a tongue extending rearwardly between the jaws to determine the position of the saw-tooth between said chamfered faces of the die-blocks, and means for adjusting the tooth-stop longitudinally of the die-blocks, said means including set-screws against which the body portion of the tooth-stop is arranged, and a clamping-screw to hold the tooth-stop in contact with the heads of the screws, substantially as specified.

8. The combination with laterally-movable jaws, a guide arranged between the planes of the jaws, and means for moving the jaws toward and from each other, of die-blocks carried by the jaws and having chamfered surfaces which are tapered in width continuously from one end to the other, and means for adjusting the die-blocks independently of each other and longitudinally of the jaws, substantially as specified.

9. The combination with laterally-movable jaws, a guide arranged between the planes of the jaws, and means for moving the jaws toward and from each other, of die-blocks carried by the jaws and having chamfered faces tapered in width continuously from one end to the other, and set-screws engaging the die-blocks and extending through elongated openings or slots in the jaws, whereby said die-blocks may be independently adjusted longitudinally of the jaws, substantially as specified.

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

GEO. M. BROWN.

Witnesses:
PLUCILLE P. SIGUR,
A. G. FRÈRE.