

No. 679,249.

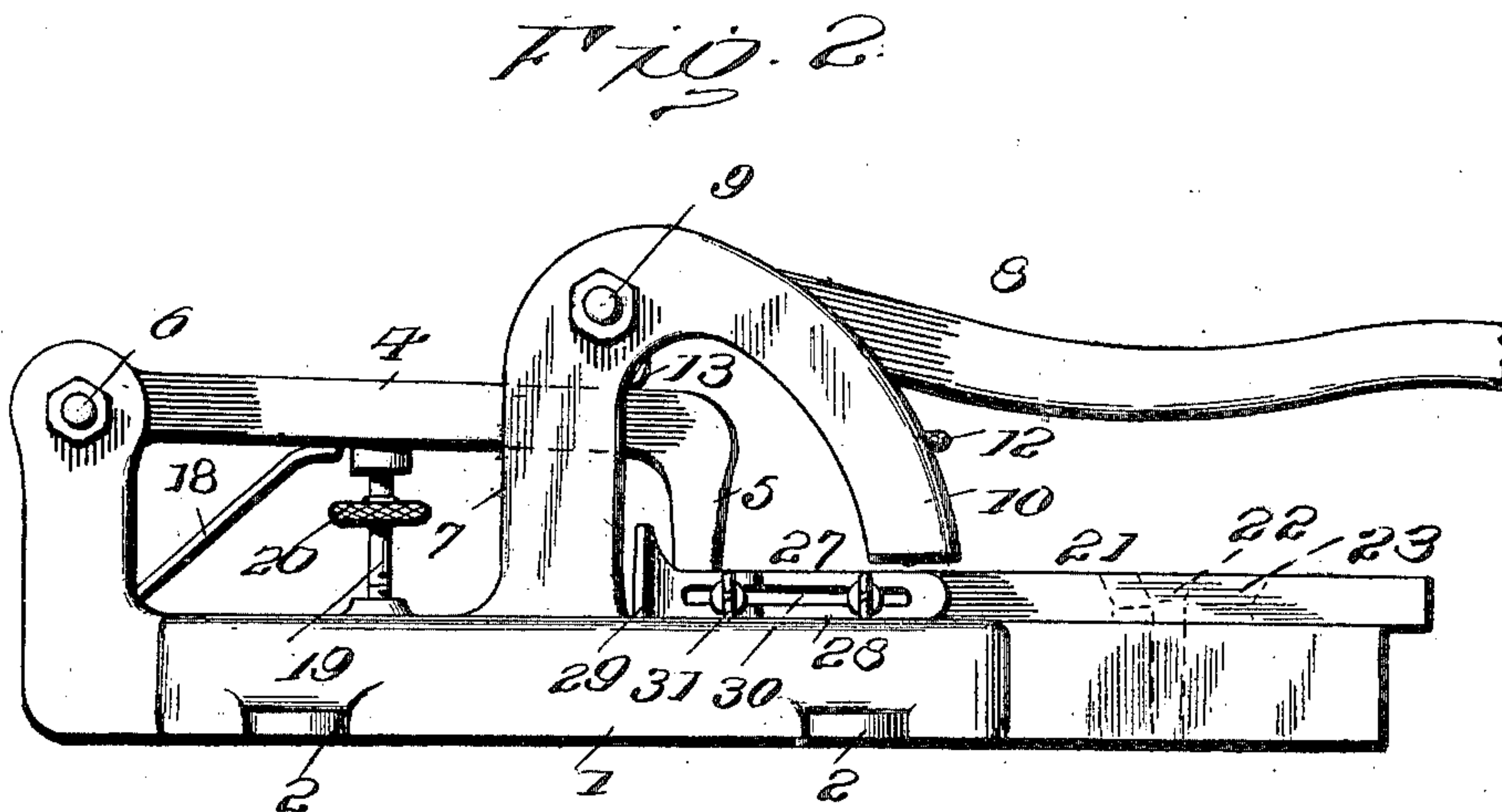
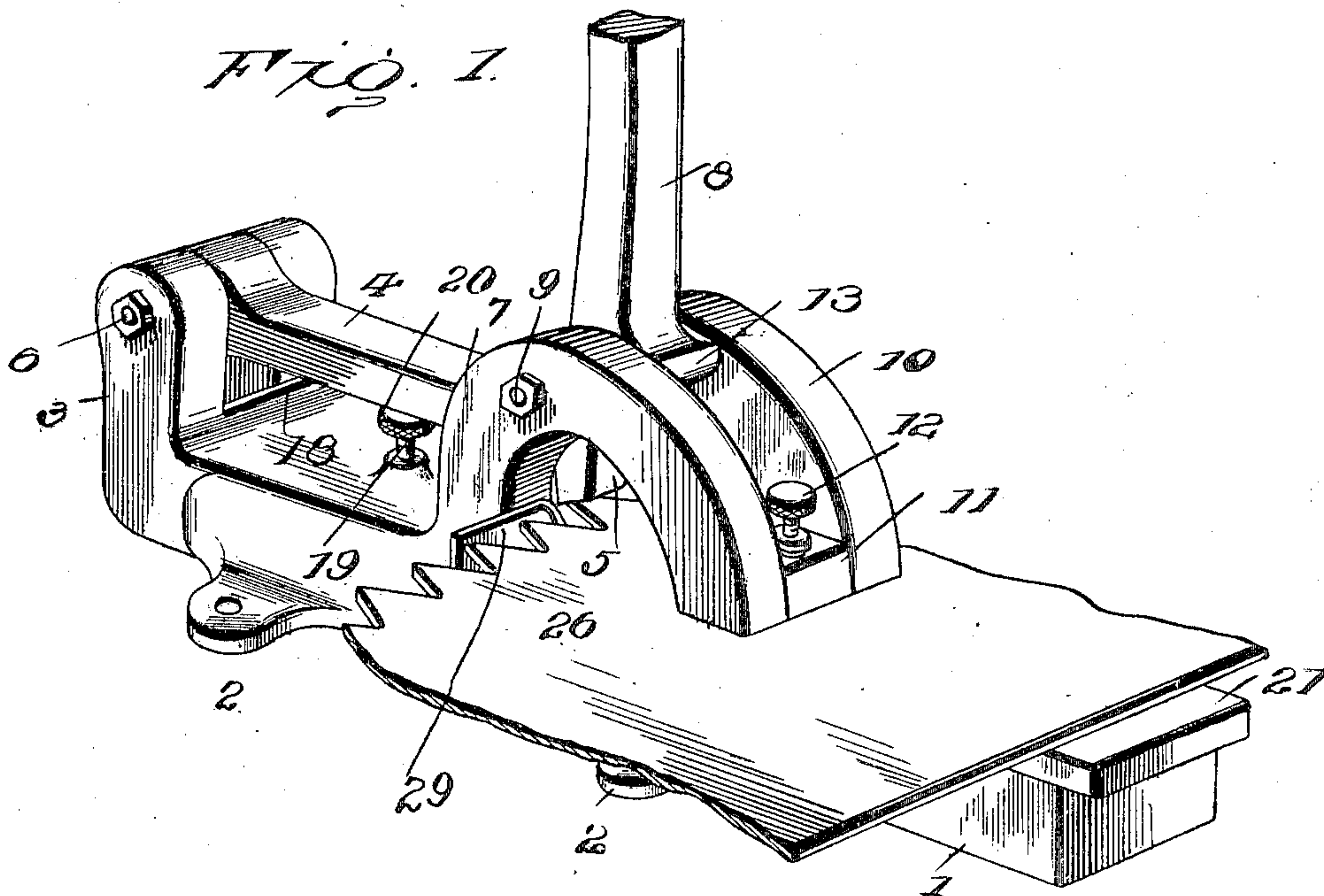
Patented July 23, 1901.

J. F. WOOD.
SAW SETTING MACHINE.

(No Model.)

(Application filed Feb. 20, 1901.)

2 Sheets—Sheet 1.



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UNITED STATES PATENT OFFICE.

JAMES F. WOOD, OF ZELDA, OHIO.

SAW-SETTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 679,249, dated July 23, 1901.

Application filed February 20, 1901. Serial No. 48,188. (No model.)

To all whom it may concern:

Be it known that I, JAMES F. WOOD, a citizen of the United States, residing at Zelda, in the county of Athens and State of Ohio, have
5 invented certain new and useful Improvements in Saw-Setting Machines; and I do hereby 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
10 it appertains to make and use the same.

The machine forming the basis of this application can be used for setting, gumming, and swaging saws, as may be required, by placing in position an anvil and punch best
15 adapted for the particular nature of work to be performed. The machine is designed for crosscut, circle, hand, or any form of saw requiring the teeth to be set, swaged, or gummed.

Among the many advantages may be mentioned uniformity of work, ease of operation, adjustability to teeth of different length and thickness, effectiveness and simplicity, and durability of construction.

For a full description of the invention and
25 the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

30 While the essential and characteristic features of the invention are necessarily susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

35 Figure 1 is a perspective view of a saw-setting machine constructed in accordance with and embodying the essential features of the invention. Fig. 2 is a side elevation with the operating-lever thrown down. Fig. 3 is a
40 longitudinal section with the free end of the operating-lever turned up. Fig. 4 is a plan view. Fig. 5 is a detail view of the anvil and attached guides. Fig. 6 is a detail view of the punch and anvil on a larger scale. Fig.
45 7 is a different form of operating-lever, used chiefly when the machine is adapted for gumming and swaging.

Corresponding and like parts are referred to in the following description and indicated

in all the views of the drawings by the same 50 reference characters.

The base 1 of the machine is of oblong formation and is provided at its edges with off-standing extensions 2, which are apertured to receive fastenings for securing the machine to a bench or other support to prevent
55 movement thereof when used for heavy work. A pair of standards 3 is provided at the rear of the base, and the shank 4 of the punch 5 is pivoted between their upper ends by being
60 mounted upon the pin or bolt 6, supported in transversely-alined openings formed in the upper portion of the said standards. A second pair of standards 7 rise from the base at a point intermediate of its ends, and the op-
65 erating-lever 8 is mounted upon a pin or bolt 9, supported at its ends in openings formed in the upper portion of the said standards. Arms 10 curve forwardly and downwardly from the upper ends of the standards 7 and
70 terminate a short distance from the base and are joined at their lower ends by a web 11, in which is mounted a set-screw 12, designed to engage with the saw resting upon the base, so as to prevent vertical movement thereof
75 when the teeth are acted upon by the punch either in the operation of setting, gumming, or swaging. These parts—the base, off-standing extensions 2, standards 3 and 7, and arms
80 10—are preferably integrally formed, although this is not essential within the spirit of the invention, as it is obvious that they may be separately constructed and united in any substantial manner.

The operating-lever 8 is provided with an
85 eccentric portion, which is adapted to engage with the head of the punch 5 and depress the latter, and this projecting part may be an integral extension, as shown at 13, or a roller 14, as indicated in Fig. 7. The roller 14 is
90 employed when great pressure is required, so as to reduce the frictional contact between the operating-lever and the punch to the smallest amount possible. This roller is preferably mounted between plates 15, applied to
95 opposite sides of the head or pivotal end of the operating-lever.

The punch 5 is vertically arranged with

reference to the horizontal base 1, and its shank 4 is about parallel with the base and is preferably an integral part of the punch. This construction is not essential, as the punch may be secured to its shank in any desired way. The lower end of the punch is inclined, as shown at 16, and is of wedge form, so as to insure engagement with the saw-teeth. An extension 17 is pendent from the inner or rear side of the punch, and its lower face is inclined in the same direction as the end 16 or at a greater angle. A shoulder is formed between the extension 17 and the rear portion of the inclined end 16 to constitute a stop to limit the forward movement of the saw-tooth being acted upon. This extension 17 is therefore of the nature of a stop. A spring 18 is interposed between the base 1 and the shank 4 and normally holds the punch elevated, so as to permit of the ready insertion of the saw-tooth between the punch and anvil. An adjustable stop 19 is interposed between the base and shank 4 of the punch to limit the downward movement of the latter and prevent injury or spreading of the point of the tooth should excessive pressure be applied to the operating-lever. This adjustable stop 19 is a threaded pin or screw-thread connection with the base 1 and is provided with a milled flange 20 for rotation thereof to change the elevation of the upper end of the stop, whereby the downward movement of the punch is limited.

The anvil consists of a plate 21, slidably mounted upon the outer end portion of the base 1 and connected thereto in an adjusted position by means of a clamp-screw 22, operating in a longitudinal slot 23 of the said plate. The inner end portion of the plate is reduced in width and thickness and is provided with a guide extension 24, which fits snugly between the standards 7, whereby lateral movement of the plate 21 is prevented. The anvil proper is formed intermediate of the guide extension 24 and the plate and consists of the inclined portion 25, a shoulder being formed between said anvil and the guide extension. The anvil, as well as the punch, is of hard steel, so as to resist wear and withstand the strain incident to the work to be performed. The set of the saw-teeth can be regulated by moving the anvil in or out as well as by adjusting the stop 19. The saw 26 to be acted upon rests upon the plate 21, and its forward movement is limited by guides 27, which are applied to opposite edges of the plate 21 and have adjustable connection therewith, so as to position the teeth with reference to the punch and anvil as may be desired. The guides 27 are of similar formation and consist of shanks 28 and plates 29, the latter standing at a right angle to the plate 21 and projecting above the latter a distance to insure engagement thereof with of the saw-teeth. The shanks 28 are

placed against opposite edges of the plate 21 and are slotted, as shown at 30, to receive clamp-screws 31, by means of which the guides are secured in an adjusted position. The plates 29 of the guides align transversely of the machine, and when the guides are adjusted with reference to the anvil the latter and guides move together as one part, thereby admitting of the required set being given to the teeth of a saw.

The roller 14 may be fitted to the operating-lever in any desired and practicable manner. For instance, the plates 15 may be replaced by extensions of the head of the lever and receive the roller between them.

Having thus described the invention, what is claimed as new is—

1. In a machine of the character described, a base having spaced vertical extensions, a punch, actuating means for the punch, and an anvil adjustable upon the base and having a guide extension adapted to operate between the said vertical extensions of the base, substantially as set forth.

2. In a machine of the character described, a base, standards rising from the base and transversely spaced, forwardly and downwardly extending arms forming a part of said standards and overhanging the base and serving to prevent vertical movement of the saw, a punch operating in the space formed between the said standards, and an operating-lever for the punch pivoted to the standards and adapted to operate in the space formed between the arm extensions thereof, substantially as set forth.

3. In a machine for setting saws, and in combination with a punch, an anvil adjustable with reference to the punch, and guides applied to and movable with the anvil, substantially as set forth.

4. In a machine for setting saws, and in combination with a punch, an anvil adjustable with reference to the punch, guides, and means for adjustably connecting the guides to the anvil, substantially as set forth.

5. In a machine for setting saws, and in combination with a punch, an anvil adjustable with reference to the punch, guides applied to opposite sides of the anvil and comprising oppositely-extending plates and shanks, and means for adjustably connecting the said guides with the anvil, substantially as specified.

6. The herein-described machine for setting saws and the like comprising a base provided with rear and intermediate standards, the latter having forwardly and downwardly extending arms connected at their lower ends, a set-screw supported in the web or connection at the lower ends of the said arms, a punch having a shank pivotally connected to the rear standards, a spring for normally elevating the punch, an adjustable stop applied to the base for limiting the downward move-

ment of the punch, an operating-lever pivoted to the upper ends of the intermediate standards and operating in the space formed therebetween, a plate having adjustable connection with the base and provided with an anvil and a guide extension, the latter operating in the space formed between the said intermediate standards, and guides having adjustable connection with opposite edge por-

tions of the said plate, substantially as set forth.

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

JAMES F. WOOD. [L. S.]

Witnesses:

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