No. 657,974. Patented Sept. 18, 1900.

D. C. WIEST.

SAW SET.

(Application filed Jan. 8, 1900.)

(No Model.)

Fig. 1.

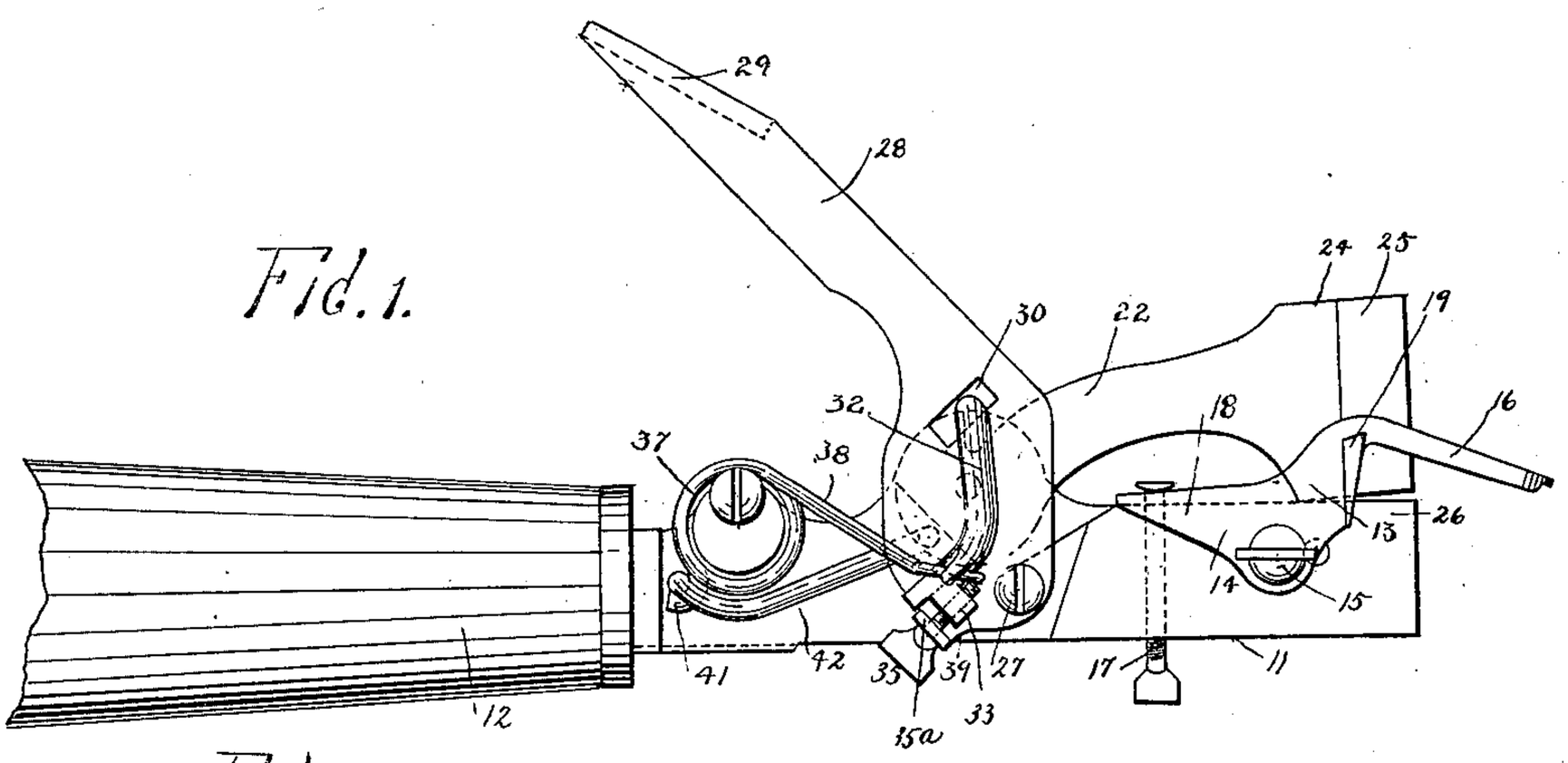

Fig. 2.

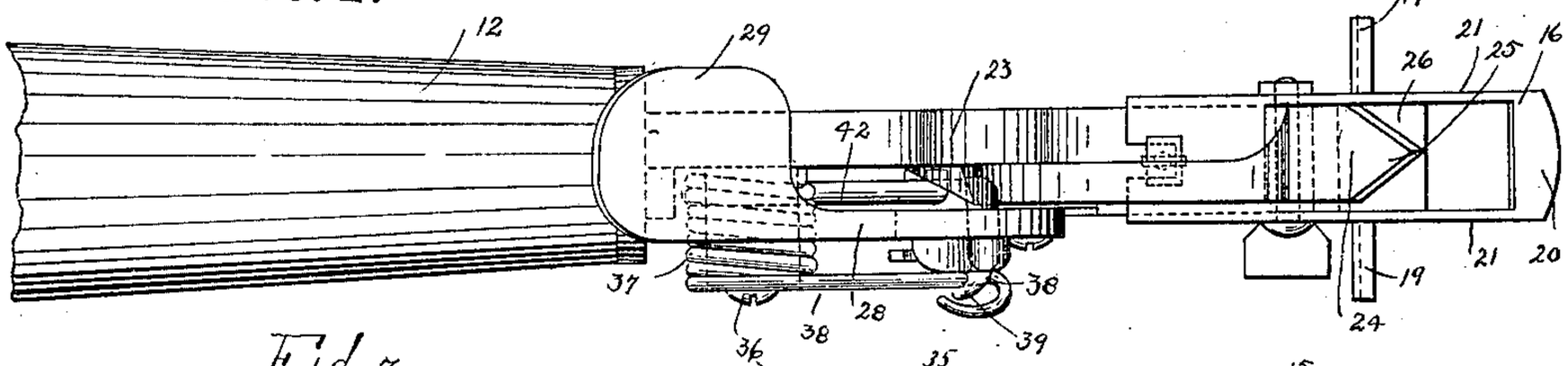

Fig. 3.

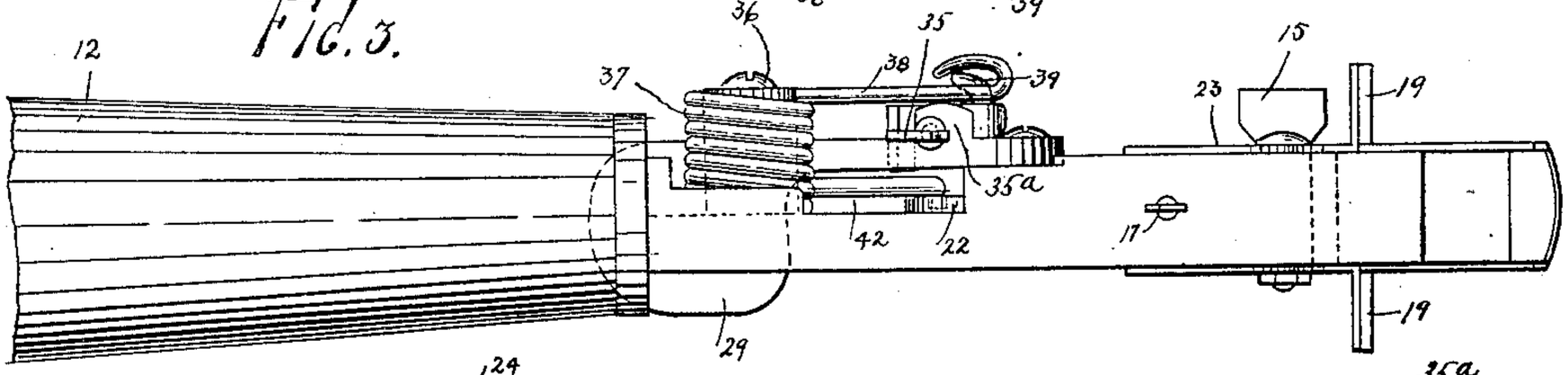

Fig. 4.

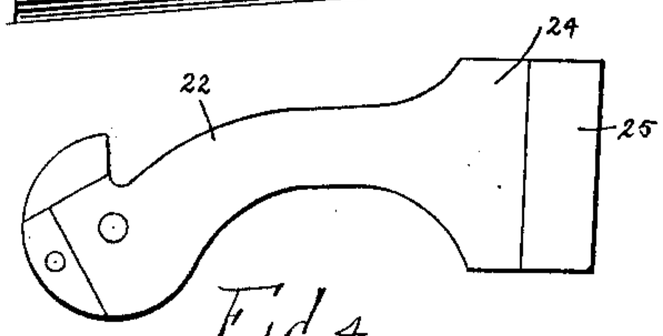

Fig. 5.

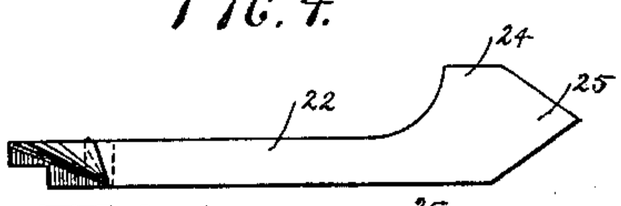

Fig. 6.

Fig. 7.

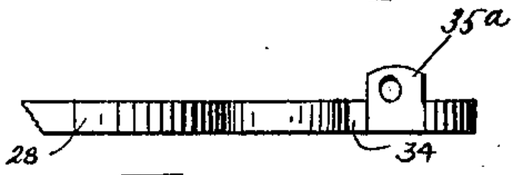

Fig. 8.

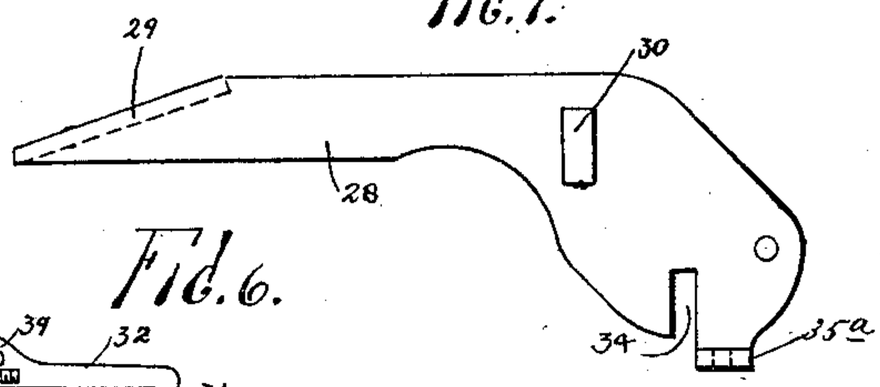

Fig. 9.

WITNESSES

Earl B. Larson

F. W. Stuart

INVENTOR

David C. Wiest,

BY

Edgar Tate & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

DANIEL C. WIEST, OF MOHRSVILLE, PENNSYLVANIA.

SAW-SET.

SPECIFICATION forming part of Letters Patent No. 657,974, dated September 18, 1900.

Application filed January 8, 1900. Serial No. 704. (No model.)

To all whom it may concern:

Be it known that I, DANIEL C. WIEST, a citizen of the United States, residing at Mohrsville, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Saw-Sets, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to saw-sets; and one object thereof is to provide a device of this class whereby the teeth of a saw may be rapidly and accurately set and whereby the set-arm may be tensionally operated and automatically released from a trigger-arm by which it is retracted.

A further object is to provide a trigger-arm with devices whereby the extent of throw of the set-arm may be varied.

With these and other objects in view my invention consists in the construction and arrangement of parts hereinafter set forth.

In the accompanying drawings, forming part of this specification, in which like reference characters denote like parts in the several views, Figure 1 is a side view of a saw-set constructed according to my invention; Fig. 2, a top plan view thereof; Fig. 3, a bottom plan view thereof; Fig. 4, a side view of the set-arm thereof detached; Fig. 5, a top plan view of the construction shown in Fig. 4; Fig. 6, a side view of the trigger-arm detached, and Figs. 7, 8, and 9 views of further details of construction.

In the practice of my invention I provide a body portion or shank 11 for the saw-set, with which the various other parts about to be described are connected, and which is provided with a handle 12, by which the whole may be supported.

The body portion 11 is provided at its forward end with a frame-shaped set-regulator 13, which is pivoted by side cheeks 14 to the sides of the body portion 11 by means of a screw-pin 15, by which the angle of the outer end portion 16 of said regulator with the body portion 11 may be determined, and an adjusting-screw 17 is passed upwardly through the body portion 11 and engages with the rear end portion 18 of the said regulator 13, further assisting in maintaining the latter in adjusted operative position. The part 13 is also provided with laterally-directed flanges or wings 19, and the front portion 16 consists of a forward lip 20 and spaced sides 21.

A set-arm (denoted by the general reference character 22) is pivoted at its inner end to the shank 11, and in connection with a shoulder 23, formed upon one side of the latter, and said set-arm is provided at its outer end with a head 24, the extreme end portion 25 of which is V-shaped in form, and said head 24 operates in connection with the extreme end portion 26 of the shank or body portion 11, which forms the anvil of the tool. The head 24 also operates between the spaced sides 21 of the forward end 16 of the set-regulator 13. Pivoted adjacent the pivotal point of the set-arm 22 by means of a pin 27 is a trigger-arm 28, provided at its outer end with a thumb-piece 29, and the trigger-arm 28 is provided with a transverse slot 30, through which operates the laterally-deflected end 31 of a catch-piece 32, which projects from a block 33, slidably mounted upon the trigger-arm 28 and provided with a flange 33^a, which operates in a chamber 34, formed adjacent the pivotal point 27 of the trigger-arm 28. The flange 33^a is adjustable within the chamber 34 by means of an adjusting-screw 35, which passes through the block 33, and a lip 35^a, formed upon the trigger-arm 28. The laterally-directed end 31 of the catch-piece 32 operates in connection with a recess formed in the set-arm 22, adjacent the pivotal point thereof, and when the trigger-arm 28 is depressed said laterally-directed end operates the said arm 22 to raise the same. A boss 36 is connected with the shank at one side thereof, and adjacent the handle 12 and mounted thereon is a coiled spring 37, one end 38 whereof engages a lip 39 upon the catch-piece 32, thus exercising a spring tension upon said catch-piece, and the block 33, with which it is connected, tending to force the former upwardly in the slot 30 and the flange 33^a upwardly in the chamber 34, as clearly shown in Fig. 1. The other end 41 of the spring 37 is connected with a link 42, which is also connected with the set-arm 22, adjacent the pivotal point thereof, and the tension of the spring 37 is exerted through said link to nor-

mally maintain the set-arm 22 in a depressed position and in engagement with the anvil 26, as shown in the drawings.

The toothed edge of the saw to be set is passed under the outer end portion 16 of the set-regulator 13, and by means of the adjusting-screw 17 and the pivoted pin 15, which is also screw-threaded, the said set-regulator may be adjusted to determine the "set" of the saw. One by one the teeth of the saw are brought into alinement with the anvil 16 and the head 24 of the set-arm 22, and the trigger-arm 28 is depressed, raising the said set-arm. The pivotal points of the set-arm and trigger-arm do not coincide, and, as shown in the drawings, the deflected end 31 of the catch-piece 32 occupies a position farther from the pivotal point 27 of the trigger-arm than does the recess 35 from the pivotal point of the set-arm 22. Hence as the trigger-arm is depressed rearwardly the said deflected end 31 gradually raises the set-arm until it reaches such phase in its movement that the deflected end 31 thereof is disengaged from the recess in the set-arm, allowing the set-arm to be suddenly depressed by the link 42 and spring 37, the end portion 25 thereof engaging the tooth to be set and forcing it downwardly upon the anvil 26. The end portion 38 of the spring 37 immediately returns the trigger-arm 28 to the elevated or normal position, operating in connection with the lip 39 upon the catch-piece 32, and the deflected end 31 of said catch-piece rides into the recess in the set-arm and is seated therein by the tension of the spring end 38. By means of the screw 35 the normal position of the flange 33^a in the chamber 34 may be regulated, and it is evident that the more advanced the position of said flange in said chamber the earlier will be the moment of the disengagement of the catch-piece with the above-mentioned recess of the set-arm 22 when the trigger-arm 28 is depressed. Thus by means of the screw 35 the block 33 may be adjusted to determine the length of the path of oscillation of the set-arm 22, and hence the strength of the blow of the head 24, thus accommodating the device to all classes of work. The set-regulator 13 may be adjusted and locked in adjusted position by means of the screw 17 and threaded pivot-pin 15, thus determining the amount of set of the teeth of the saw.

By means of my improved tool, as above described, the teeth of saws may be rapidly and efficiently set, and the device is operated by simply grasping the handle 12 in the hand and successively depressing the trigger-arm 28 by means of the thumb-piece 29, moving the tool or the saw laterally, so as to successively bring the teeth of the saw into alinement with the anvil 26.

I do not limit myself to the specific construction of parts herein set forth, but reserve the right to vary the same within the scope of my invention.

Having fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A set device of the class described, comprising a body portion, one end of which is provided with an anvil, a set-regulator pivotally mounted adjacent said anvil, means for adjusting the same, a set-arm pivotally mounted rearwardly of said anvil, a trigger-arm pivotally mounted adjacent said set-arm and provided with an adjustable device which operates in connection with said set-arm to elevate the same, and a coiled spring mounted adjacent said set-arm, and said trigger-arm, and the ends of which operate respectively in connection with said set-arm and said trigger-arm, substantially as shown and described.

2. In a device of the class described, a body portion provided at one end with an anvil, a set-arm pivotally connected therewith and provided with a head which operates in connection with said anvil, a trigger-arm pivotally connected with said body portion adjacent said set-arm, a catch-piece adjustably connected with said trigger-arm and provided with a laterally-deflected end, said trigger-arm being provided with a slot through which said deflected end operates, and said set-arm having a recess within which said deflected end operates, the deflected end of said catch-piece being radially farther distant from the pivotal point of said trigger-arm than said recess is radially distant from the pivotal point of said set-arm, and tensional devices which operate in connection with said set-arm to normally depress the same, substantially as shown and described.

3. In a device of the class described, a body portion provided at one end with an anvil, a set-arm pivotally connected with said body portion and provided at its outer end with a head which operates in connection with said anvil, a trigger-arm pivotally connected with said body portion adjacent the pivotal point of said set-arm, said trigger-arm being provided adjacent its pivotal point with a chamber, a block having a flange slidably and adjustably mounted in said chamber, and provided with a catch-piece, which latter is provided with a laterally-directed outer end which operates through a slot formed in said trigger-arm, and in connection with a recess formed in said set-arm, and a coiled spring connected with said body portion and one end of which is operatively connected with said adjustable block, the other end of said coiled spring being operatively connected with said set-arm to normally depress the same, substantially as shown and described.

4. A device of the class described, comprising a body portion provided at one end with an anvil, a set-arm pivotally connected with said body portion and provided at its outer end with a head which operates in connection with said anvil, a trigger-arm pivotally connected with said body portion adjacent the pivotal point of said set-arm, and provided

adjacent its pivotal point with a chamber, a block provided with a flange slidably mounted therein and provided with an adjusting-screw which operates in connection with said trigger-arm connected with said block and operating through a slot formed in said trigger-arm, and in connection with a recess formed in said set-arm, and a coiled spring imposed upon a stud connected with said body portion, and one end of which spring operates in connection with said block, the other end being connected with the inner end portion of said set-arm by means of a link, substantially as shown and described.

5. In a device of the class described, a body portion provided with an anvil, a set-arm pivotally connected with said body portion and provided at its outer end with a head which operates in connection with said anvil, a trigger-arm pivotally connected with said body portion adjacent the pivotal point of said set-arm and provided adjacent its pivotal point with a chamber, a block slidably mounted upon said set-arm and provided with a flange which operates within said chamber, said trigger-arm being provided with an adjusting-screw which operates in connection with said block, said block being provided with a catch-piece which operates through a slot formed in said trigger-arm and in connection with a recess formed in said set-arm, and tensional means which operate in connection with said set-arm whereby the same is normally held in a depressed position, substantially as shown and described.

6. In a set device of the class described, a pivotally-mounted set-arm, a trigger-arm pivotally mounted adjacent said set-arm and provided with an adjustable device which operates in connection with said set-arm to elevate the same, and a coiled spring mounted adjacent said set-arm and said trigger-arm, and the ends of which operate respectively in connection with said set-arm and said trigger-arm, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 9th day of December, 1899.

DANIEL C. WIEST.

Witnesses:

GEORGE A. RAHN,

ELIZABETH H. RULSON.