

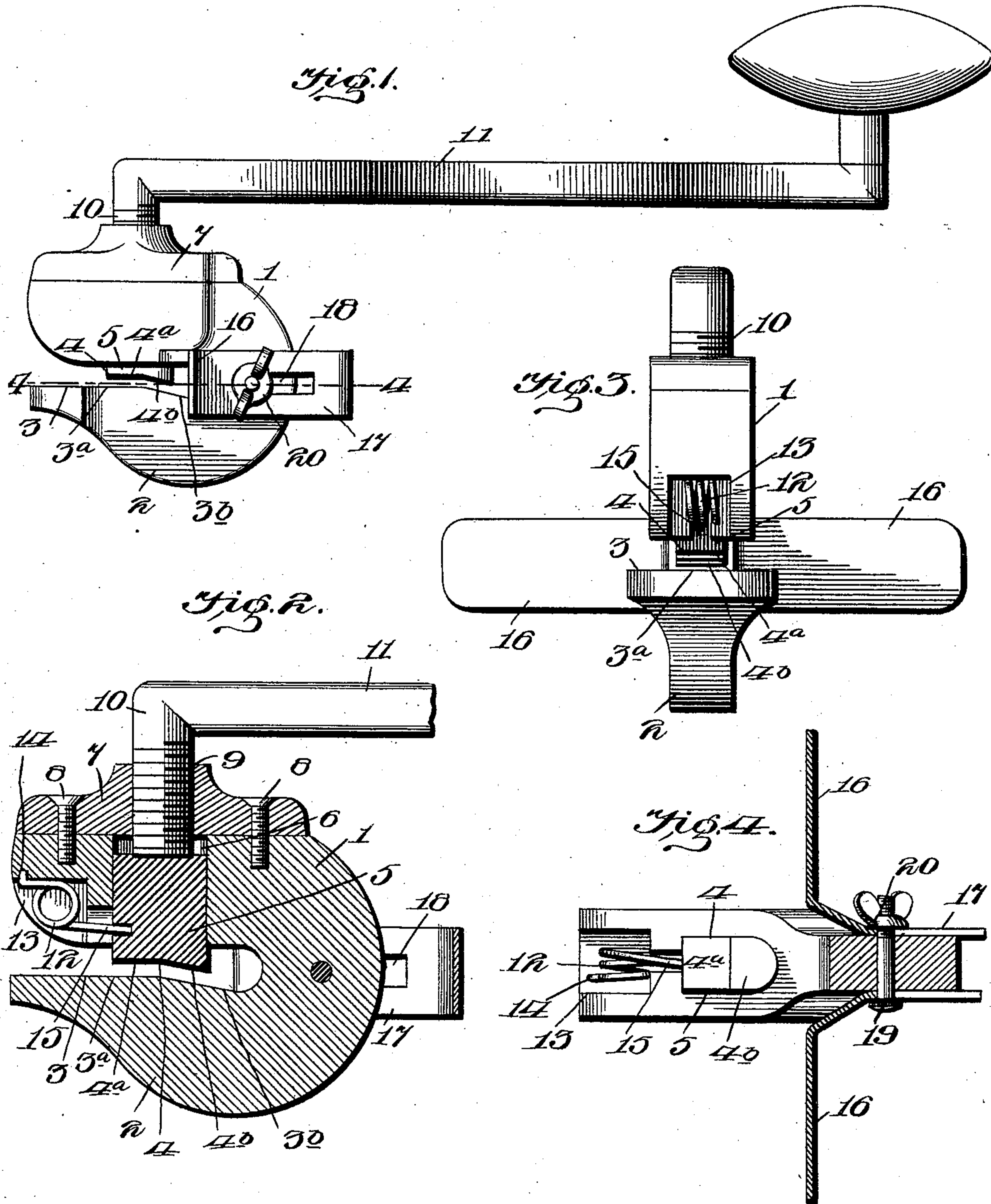
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Patented Feb. 26, 1901.

E. CHAINEY.  
SAW SET.

(Application filed Oct. 6, 1900.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

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## SAW-SET.

SPECIFICATION forming part of Letters Patent No. 668,677, dated February 26, 1901.

Application filed October 6, 1900. Serial No. 32,266. (No model.)

*To all whom it may concern:*

Be it known that I, EMANUEL CHAINEY, a citizen of the United States, residing at Florence, in the county of Florence and State of Wisconsin, have invented a new and useful Saw-Set, of which the following is a specification.

My present invention relates to a novel saw-set, one object of the invention being to produce a simple, inexpensive, and durable device of this character embodying a spring-retracted setting-die operated by unusually-powerful mechanism to the end that the device may be employed for the setting of exceedingly heavy saw-teeth.

A further object of the invention is to so form the gripping-faces of the die and anvil that the base of the tooth will in case of displacement thereof be bent back into the plane of the saw while the end of the tooth is being deflected or set, the extent of the set or deflection being capable of regulation by means of an adjustable gage.

To the accomplishment of these ends and others which will hereinafter more fully appear the invention consists in the details of construction and arrangement to be described, illustrated in the accompanying drawings, and defined in the appended claims.

In said drawings, Figure 1 is a side elevation of my device complete. Fig. 2 is an enlarged sectional view of the device, showing some of the parts in elevation and with the outer end of the handle broken away. Fig. 3 is a front view of the subject-matter of Fig. 2, and Fig. 4 is a sectional view on the line 4 4 of Fig. 1.

Referring to the numerals employed to designate corresponding parts throughout the views, 1 indicates the head of my device, which is a comparatively heavy casting formed with an anvil 2, having an integral connection at one end with the contiguous end of the head. The anvil is in substantially parallel relation with the head proper in order to present its gripping-face 3 opposite the gripping-face 4 of a reciprocatory die 5, mounted in the head. The die 5 is of generally angular contour in cross-section and is received within a correspondingly-shaped die-socket 6, piercing the head 1 and closed at its upper or outer end by a comparatively heavy cap 7.

This cap may be secured to the head in any suitable manner—as, for instance, by set-screws 8—and is provided with an internally-threaded opening or bore 9 in line with the socket 6 for the reception of a threaded spindle or actuator 10, bearing upon the outer end of the die 5 and actuated by a handle or crank 11 to force the die in the direction of the anvil as the rotating spindle is fed forward by reason of its screw connection with the cap.

Inasmuch as one of the primary objects of my invention is to provide a tool of exceedingly-simple construction and capable of being manufactured at slight cost and of having its parts assembled without the necessity for the employment of skilled labor, I do not make provision for the connection of the spindle and die, but provide for the retraction of the latter under the impulse of a retracting-spring 12, preferably of spiral form, as shown, and located within a recess 13, formed in the head, the opposite ends 14 and 15 of the spring being in engagement with the head and die, respectively. It is evident that by the employment of this construction the spring may be easily passed into the recess and its ends sprung into engagement with the head and die after the parts of the device have been otherwise assembled.

I have stated that a novel feature of the invention is the provision of means for pressing the base of the tooth into the plane of the saw during the setting of the tooth-point. This end I attain by forming the gripping-face 4 with two angularly-related portions 4<sup>a</sup> and 4<sup>b</sup>, opposed to similarly-related portions 3<sup>a</sup> and 3<sup>b</sup> of the gripping-face 3 of the anvil. It will now be seen that as the point of the tooth is clamped between and set by the portions 3<sup>b</sup> and 4<sup>b</sup> of the gripping-faces the base of the tooth will be clamped between the portions 3<sup>a</sup> and 4<sup>a</sup>, which are disposed parallel to the plane of the saw.

The extent of the set is regulated by a gage-plate 16, adjustably retained upon the head by a U-shaped shank 17, provided with slots 18 for the reception of a bolt 19, located in line with the space between the opposed faces of the head and anvil and provided with a thumb-nut 20, by means of which the shank may be clamped in its adjusted positions.

The method of manipulation of the tooth



will be evident, since it is simply necessary to insert the saw between the head and anvil, with the points of the teeth bearing against the gage-plate 16. The spindle is then rotated by the manipulation of the handle or crank 11, and the die is fed slowly, but under powerful pressure, for the purpose of clamping the saw-tooth against the anvil to effect the proper alinement of its base with the saw and to impart the desired set to the point of said tooth. The reversal of the spindle or feed-screw will permit the retraction of the die under the impulse of the spring 12, and the device may be withdrawn from the saw or passed to successive teeth. Whenever it is desired to disorganize the device for purposes of cleaning or repair, it is simply necessary to unscrew the spindle, remove the cap 7, and withdraw the spring and die in an obvious manner, the reorganization of the parts being effected by a reversal of this procedure.

From the foregoing it will be observed that I have produced a saw-set embodying a novel construction best calculated to effect the accomplishment of the several objects stated; but while the present embodiment of my invention appears at this time to be preferable I wish to reserve the right to effect such changes, modifications, and variations as may be embraced within the scope of the protection prayed.

What I claim is—

1. In a saw-set, the combination with a head provided with an anvil and a die-socket, of a cap screwed upon the head and having a threaded opening in line with, but of less diameter than, the die-socket, a feed-screw extended through the cap into engagement with the die, means for operating said screw, and means for retracting the die.

2. In a saw-set, the combination with a head provided with an integral anvil having an angular gripping-face and with a die-socket extending entirely through the head, of a cap removably secured upon the head and having a threaded bore in line with the die-socket, a die within said die-socket provided with an angular gripping-face opposed to the angular gripping-face of the anvil, a feed-screw passed through the head and engaging the die, means for operating said feed-screw, a spring located within the head and engaging the die to ef-

fect the retraction thereof, and an adjustable gage-plate carried by the head.

3. The combination with a head provided with an integral anvil in substantially parallel relation thereto, said anvil being provided with an angular gripping-face and said head being provided with a die-socket disposed substantially at right angles to the gripping-face of the anvil, of a die mounted for reciprocation within the die-socket, a feed-screw disposed to urge the die toward the anvil, and a die-retracting spring mounted within the head to one side of the die and operatively connected to the latter.

4. In a saw-set, the combination with a head and integral anvil in substantially parallel relation, said head being provided with a die-socket extending entirely therethrough transversely and with a spring-recess disposed at one side of the die-socket and opening through the end of the head, of a die mounted for reciprocation within the die-socket, a feed-screw disposed to urge the die toward the anvil, and a die-retracting spring mounted within the recess in the head and having its opposite extremities extended into the head and die, respectively.

5. In a saw-set, the combination with a head and an integral anvil in substantially parallel relation, said head being provided with a transversely-disposed die-socket extending entirely therethrough and with a recess extending laterally from the die-socket and opening through the end of the head, a die mounted for reciprocation within the die-socket, a coiled spring mounted within the recess and having its opposite ends engaged with the head and die, respectively, a cap secured upon the head and provided with a threaded opening of less diameter than the diameter of the die-socket, a feed-screw passed through the opening in the cap and bearing against the die, and a crank connected to the outer end of the feed-screw.

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

EMANUEL CHAINEY.

Witnesses:

FRANK WARING,  
C. S. HOPKINS.