(No Model.)

J. A. MORRELL.

SAW SET.

No. 564,634. Patented July 28, 1896.

Fig. 1.

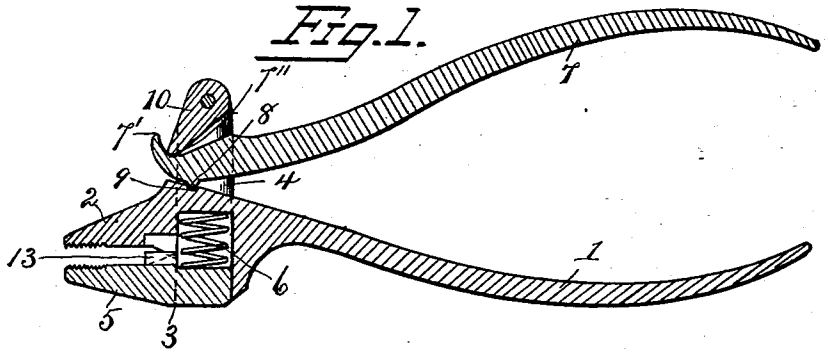


Fig. 2.

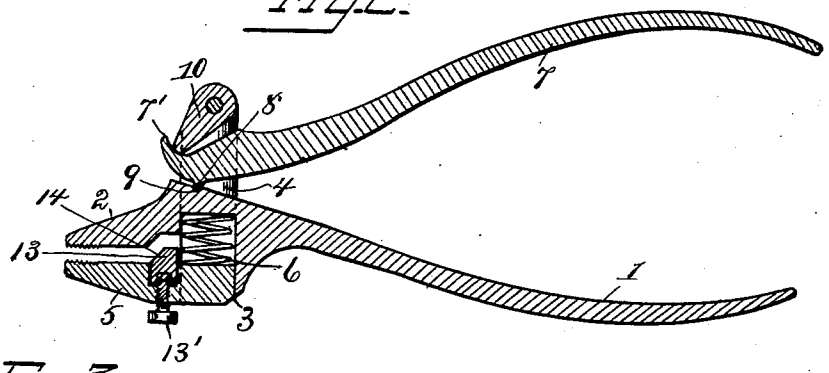


Fig. 3.

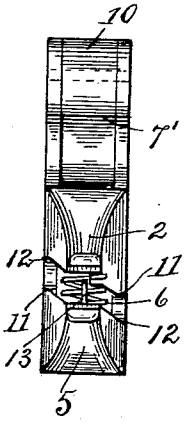


Fig. 5.

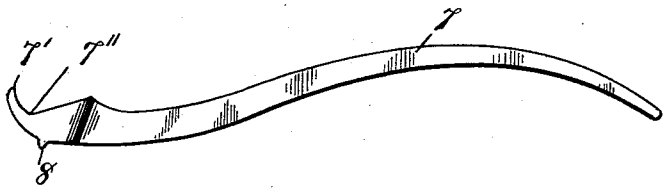


Fig. 4.

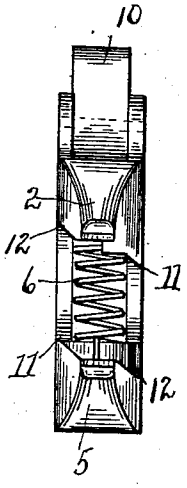


Fig. 6.

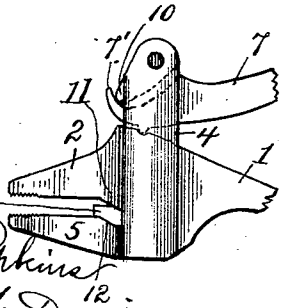
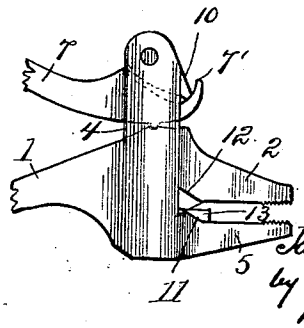


Fig. 7.



WITNESSES

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UNITED STATES PATENT OFFICE.

JAMES A. MORRELL, OF LANSDALE, PENNSYLVANIA.

SAW-SET.

SPECIFICATION forming part of Letters Patent No. 564,634, dated July 28, 1896.

Application filed January 29, 1896. Serial No. 577,293. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. MORRELL, a resident of Lansdale, in the county of Montgomery and State of Pennsylvania, have invented certain new and useful Improvements in Saw-Sets; 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 it pertains to make and use the same.

The invention relates to saw-sets, and has for its object to increase their efficiency and capacity; and the invention consists in the construction hereinafter described and particularly pointed out.

In the accompanying drawings, Figure 1 is a central longitudinal section. Fig. 2 is a similar view showing a modified detail. Fig. 3 is an enlarged front elevation showing the parts in position to receive the saw-teeth. Fig. 4 is a similar view, the separable handle being removed and a pivoted dog turned downwardly, the parts being inoperative. Fig. 5 is a side elevation of a handle. Fig. 6 is a partial side elevation, and Fig. 7 is a similar view of the opposite side.

Numeral 1 denotes a handle having fixed thereto a jaw 2, and provided with ways or slots 3 to receive the arms 4 of the opposite jaw 5. The proximate faces of the jaws are always held parallel by the devices to be described and their free ends are adapted to clamp the body of the saw in or at the close of the tooth-setting operation. The jaw 5 is made movable transversely of the handle 1 by the arms 4 sliding in said slots 3.

6 is a spring tending to hold the jaws apart.

7 is a separable handle having a bearing 8, adapted to be seated in a depressed fulcrum 9 in the handle 1, as indicated.

In the arms 4 is pivoted a swinging piece or dog 10, adapted to loosely engage the depression 7″ in the handle 7.

When the handles are closed, the handle 7 is moved about its fulcrum on handle 1. Said handle 7 by its overhanging end 7′ pulls inwardly the free end of dog 10, which turns on its pivot and between the arms 4. This operation has the effect to bodily move the handles and connected parts toward each other, the jaw-arms moving in slots 3 and the jaws closing. Said arms and slots guide the jaws in straight lines to and from each other. By this movement the spring 6 is compressed and thereby put in readiness to open the jaws by a reverse movement of the parts. Each jaw is provided in or adjacent the throat formed by the connection of the jaws with oppositely-inclined tooth-setting faces 11 and 12, the similarly-inclined faces of the two jaws being situated diagonally opposite each other.

13 denotes a projection or stud for guiding the tool to the proper lateral situation with respect to the saw-teeth. This projecting guide in operation comes in contact with two teeth, one on each side, and insures their proper lateral situation and also determines the depth or distance of the setting operation on each tooth. Its simplicity of construction and the above-named twofold functions are characteristic of the improvement.

The guide 13 may be permanently fixed to or integral with a jaw, or may be made adjustable by means of a screw 13′ or the like, as represented in Fig. 2. This tooth-guide has its forward free corner cut away or beveled, as indicated at 14, and by this feature of construction coöperating with the adjustability of the guide it is adapted to vary the width of the "set." Thus, for example, when fully advanced the widest part of the beveled guide will touch the base of the teeth and insure a narrow set, and when the guide is withdrawn to bring a narrower part in the plane of the saw the latter can be pushed farther into the throat of tool to insure a wider set.

The tool having been applied to the teeth of a saw so that the guide or centering device 13 enters between two of them, said teeth will be situated immediately between the similarly-inclined faces 11 and 12 of the opposite jaws, so that when said jaws are closed, as before described, the teeth will be oppositely bent and properly set, whereupon the spring is permitted to separate the jaws, and they are applicable to other teeth in like manner, thus enabling the setting of two teeth at every operation. The principle of the improvement is not, however, confined to the simultaneous setting of any particular number of teeth, though one of its main objects is to thus set several teeth at once, and all

the teeth of a saw could be set at once by adequate power and a suitable number of bearing-faces 11 and 12.

The detachable handle 7, when closed, pulls inwardly the point of the dog, as stated, and thereby increases the difference between the long and short arm of the handle 7, considered as a lever, and so increases the leverage just before and at the completion of the setting operation.

The shoulders at each side of the slots or ways 3 guide the jaws in a right line to and from each other.

Having thus described my invention, what I claim is—

1. In a saw-set the two jaws having free ends adapted to embrace the body of a saw-blade and connected to be moved to and from each other in a straight line each jaw having oppositely-inclined teeth-setting faces adjacent the throat formed by the connection of the jaws, one on each side adapted to bear on different teeth, the faces on the same side of the tool inclining similarly to each other and oppositely to those on the other side, substantially as described.

2. In a saw-set the two jaws having free ends adapted to embrace the body of a saw-blade and connected to be moved to and from each other in a straight line each jaw having oppositely-inclined teeth-setting faces adjacent the throat formed by the connection of the jaws, one on each side adapted to bear on different teeth, the faces on the same side of the tool inclining similarly to each other and oppositely to those on the other side, and a central tooth-guide or centering device between the laterally-adjacent faces, substantially as described.

3. In a saw-set the two jaws having free ends adapted to embrace the body of a saw-blade and connected to be moved to and from each other in a straight line each jaw having oppositely-inclined teeth-setting faces adjacent the throat formed by the connection of the jaws, one on each side adapted to bear on different teeth, the faces on the same side of the tool inclining similarly to each other and oppositely to those on the other side, and a central tooth-guide or centering device between the laterally-adjacent faces, said centering device being beveled and adjustable in the longitudinal plane of the tool, substantially as described.

4. In a saw-set the jaws fixed respectively to a handle and to arms transversely movable and provided with a lever-handle having a fulcrum on the fixed jaw-handle between the arms whereby the jaws may be closed, and a movable part or dog 10 adapted to swing toward the fulcrum to increase the leverage, substantially as described.

5. In a saw-set, the combination of jaws, devices for closing them, and a tooth-guide adapted to enter between the saw-teeth to be set, said jaws having tooth-setting faces on each side said guide, substantially as described.

6. In a saw-set, the combination of jaws, devices for closing them, and a tooth-guide adapted to enter between the saw-teeth to be set, said jaws having tooth-setting faces on each side the guide, the jaw opposite the guide being recessed to receive said guide, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAMES A. MORRELL.

Witnesses:
BENJ. R. CATLIN,
FRANK D. BLACKISTONE.