(No Model.)

A. J. LEWIS & F. A. SAUER.

SAW SET.

No. 396,406. Patented Jan. 22, 1889.

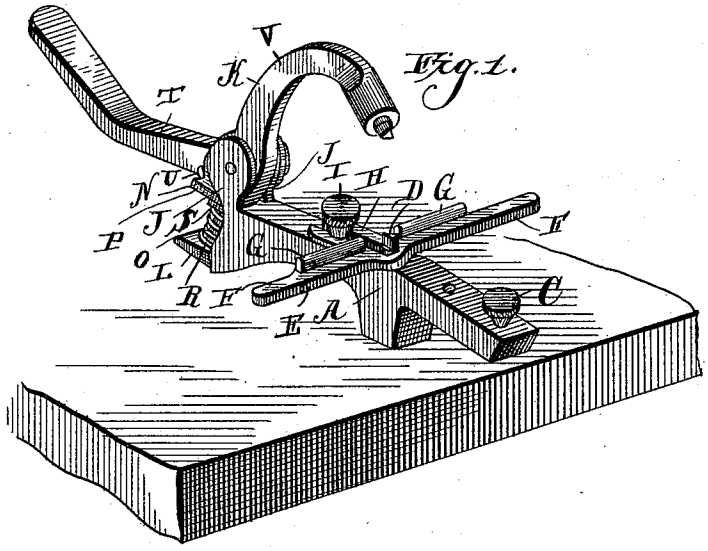


Fig. 1.

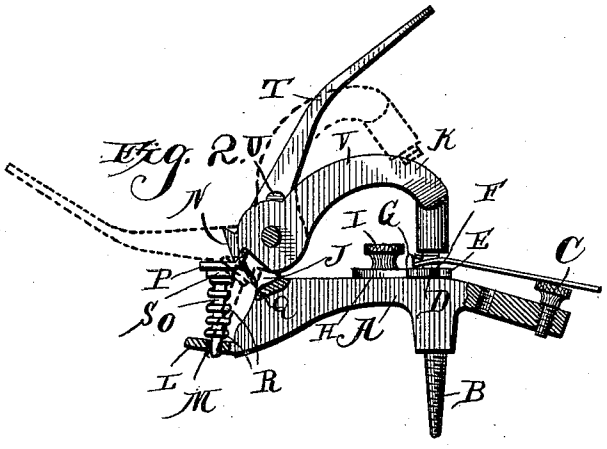


Fig. 2.

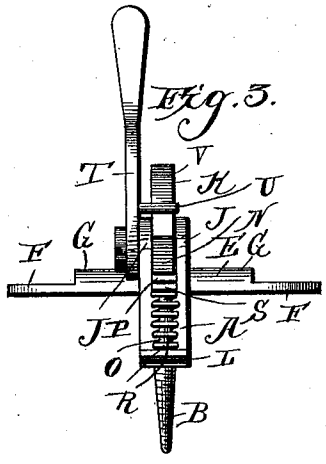


Fig. 3.

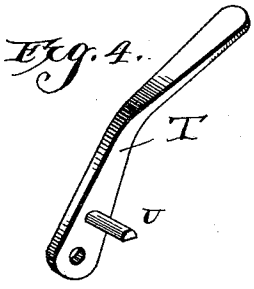


Fig. 4.

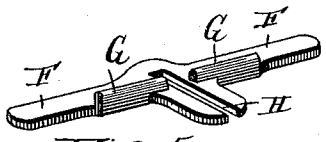


Fig. 5.

Witnesses.

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UNITED STATES PATENT OFFICE.

ANTHONY J. LEWIS AND FREDERICK A. SAUER, OF WILKES-BARRÉ, PENNSYLVANIA.

SAW-SET.

SPECIFICATION forming part of Letters Patent No. 396,406, dated January 22, 1889.

Application filed October 12, 1888. Serial No. 287,900. (No model.)

To all whom it may concern:

Be it known that we, ANTHONY J. LEWIS and FREDERICK A. SAUER, citizens of the United States, residing at Wilkes-Barré, in the county of Luzerne and State of Pennsylvania, have invented new and useful Improvements in Saw-Sets, of which the following is a specification.

Our invention relates to improvements in saw-sets; and it consists in certain novel features, hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a perspective view showing our improved device in its operative position. Fig. 2 is a side view with a part broken away and showing the hammer lowered in full lines and raised in dotted lines. Fig. 3 is an end view. Fig. 4 is a detail view of the operating-lever. Fig. 5 is a detailed view showing the gage.

Referring to the drawings by letter, A designates the stock or body of our improved device provided on its under side at about its center with the depending securing-screw B, by means of which it can be fastened to the work-bench. The front end of the stock or body is bent downward, as clearly shown, and in the extremity of said downwardly-bent portion we mount a thumb-screw, C. The saw in operation rests upon this thumb-screw, which can be raised or lowered to give the blade the proper inclination to secure the desired set.

The anvil D is mounted on the upper side of the stock or body, at the rear end of the downwardly-bent portion thereof, and the gage or guide E passes around the anvil, as shown. The gage or guide E consists of a plate, F, arranged transversely to the stock or body, and is provided at its rear edge with the vertical ribs or flanges G G, and having the prongs H projecting from said rear edge, a set-screw, I, being inserted between the said prongs into the body and adapted to be turned down, so as to clamp the said prongs to the body and thereby secure the guide or gage at the proper point. At its rear end, on its upper side, the stock or body is provided with the vertical parallel lugs or ears J J, between which the hammer K is pivoted. At the lower edge of its rear end the stock or body is provided with an upwardly and rearwardly projecting lip, L, having a vertical perforation, as shown. The hammer K has its front end extended over to a proper point to rest upon the anvil when the hammer is lowered, and its rear end is projected slightly in rear of the lugs J J, and is provided with the offset N, the ends or edges of said offset being beveled to form hooks or spurs, as shown.

O designates a small rod or pin arranged in rear of the stock or body, having its lower end inserted into the perforation M of the lip L, and having its upper end provided with a trip-plate, P, having its front edge turned up, forming a rib, Q, which is adapted to engage the lower edge of the offset N of the hammer. A spring, R, is coiled around the pin O, and has its lower end resting on the upper side of the lip L, the upper end of the same resting against a nut, S, mounted on the upper screw-threaded portion of the said pin O, so that by turning the said nut in the proper direction the tension of the spring can be increased or diminished.

The pivot of the hammer is projected beyond the side of one of the lugs J, and the operating-lever T is mounted on said projecting end. The said lever projects upward and forward, as shown, so as to be within easy reach of the operator, and is provided near its lower end with the laterally-projecting pin U, which acts upon the hammer to raise and lower the same. The said hammer, it will be observed, is provided with a curved edge above its pivotal point, which extends from the upper edge of the offset N to the main upwardly-projecting portion V of the hammer. The pin U rides over this curved edge and contacts with the rear side of the upwardly-projecting portion of the hammer and with the upper edge of the offset N in the operation of the device, as will be readily understood.

In practice the saw is placed in position with the blade resting upon the thumb-screw C and the teeth resting upon the guide or gage E and against the ribs G of the same, the said gage having been first adjusted to the proper position in relation to the length of the teeth to secure the desired set of the same. The operating-lever is then pushed backward, as shown in dotted lines in Fig. 2,

causing the pin U to engage the offset N, and thereby raise the hammer. This action carries the pin O, the trip-plate, and the spring into the position shown in dotted lines in Fig. 2, when the spring will be compressed, as will be readily understood. The tooth to be operated upon having been brought to bear on the anvil the operating-lever is drawn forward, causing the lateral pin of the same to contact with the rear edge of the hammer and carry the same slightly forward. As soon as the rib Q of the trip-plate is brought past the plane of the pivot of the hammer, the spring will rapidly expand and throw the hammer onto the saw-tooth with considerable force, thereby giving the same the desired set. The hammer is then raised and the saw moved forward and the above-described operation repeated until all the teeth of the saw have been operated upon.

It will be observed that our device is composed of few parts, and is very simple and compact in its arrangement. By its use uniformity in the set of the teeth is secured and the work of setting the saw-teeth can be easily and rapidly performed. The device can be applied to any work-bench, as it is provided with a securing-screw forming a part of its structure, so that it is not necessary to use other devices to secure the saw-set in position, as has been the case heretofore.

It will be noticed that the work to be done by the operator is practically reduced to a minimum, as the operating-lever is used only to raise the hammer and is not used to lower the same, except so far as is necessary to turn the same into the proper position for the spring to act thereon, so that the blow delivered by the hammer is always the same, being controlled by the spring, as will be readily understood.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a saw-set, the combination, with the stock or body having an anvil on its upper side, of the gage or guide consisting of a plate, F, arranged transversely to the stock or body and provided at its rear edge with the vertical ribs or flanges G G, and the prongs H, passing around the anvil and projecting in rear of the same, and the set-screw inserted between said prongs into the body and having its head bearing on the prongs to clamp them to the body, as set forth.

2. The combination of the body having a lip, L, at its rear end, the hammer mounted on the body, the lever fulcrumed thereon and engaging the hammer, the pin mounted in the lip L and having a trip-plate at its upper end engaging the hammer, and a spring coiled around said pin between the trip-plate and the lip L, as set forth.

3. The combination of the body provided at its rear end with a lip, L, having a perforation, M, the hammer mounted on the body and having its rear end provided with the offset N, the pin O, having its lower end inserted into the perforation M and its upper end provided with a trip-plate, P, having its front edge turned up, forming a rib engaging the offset N, the spring coiled around the pin O, between the trip-plate and the lip L, and the lever fulcrumed on the body and engaging the hammer, as set forth.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

ANTHONY J. LEWIS.
FREDERICK A. SAUER.

Witnesses:
M. ROSENBLUTH,
JAMES FOX.