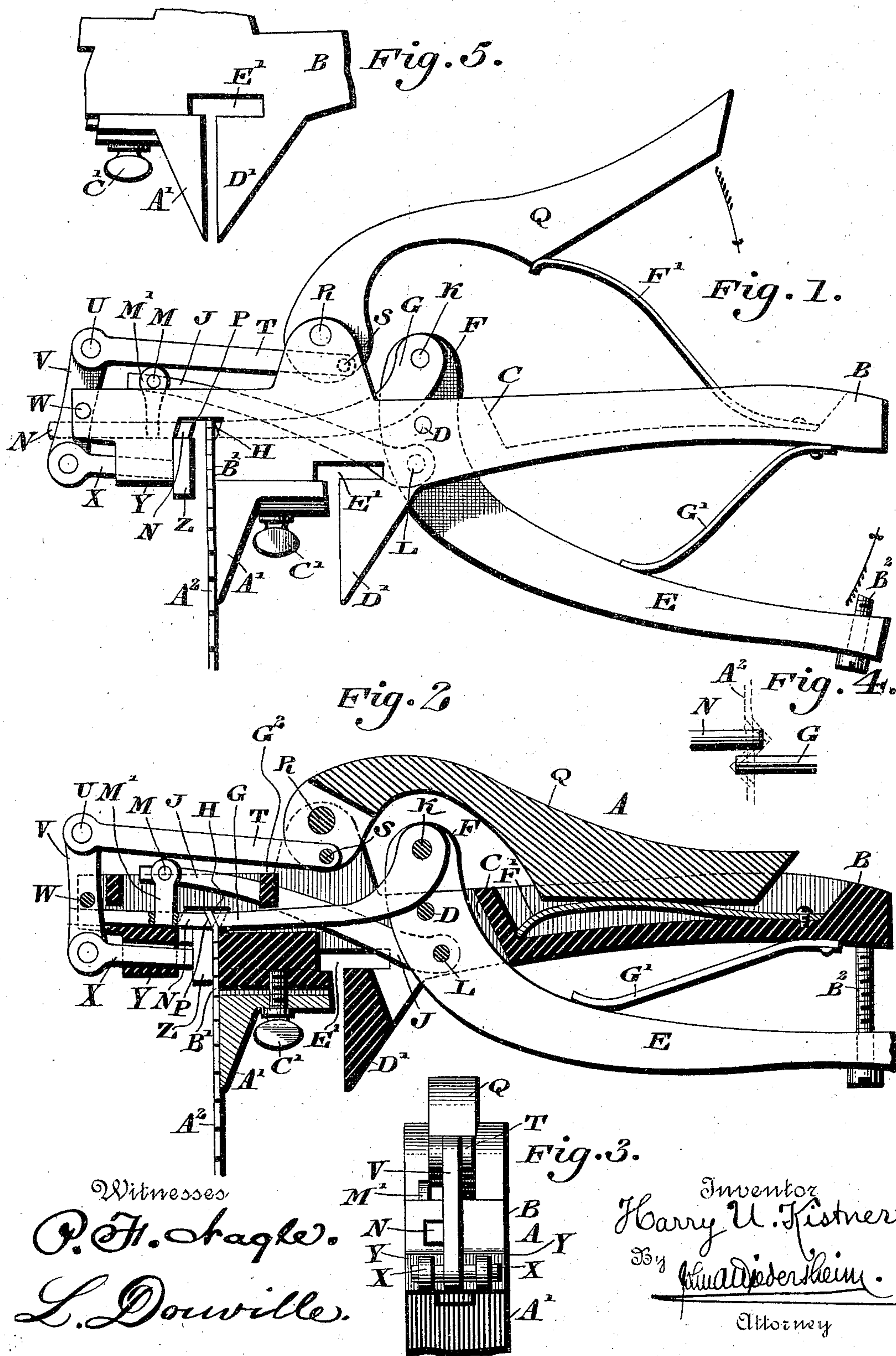


(No Model.)

H. U. KISTNER.  
SAW SET.

No. 555,957.

Patented Mar. 10, 1896.





# UNITED STATES PATENT OFFICE.

HARRY U. KISTNER, OF SELIN'S GROVE, PENNSYLVANIA.

## SAW-SET.

SPECIFICATION forming part of Letters Patent No. 555,957, dated March 10, 1896.

Application filed June 28, 1895. Serial No. 554,344. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY U. KISTNER, a citizen of the United States, residing at Selin's Grove, in the county of Snyder, State of Pennsylvania, have invented a new and useful Improvement in Saw-Sets, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a novel construction of saw-set, by means of which several teeth of a saw-blade can be mechanically and accurately set at one time, provision being made for gripping or holding the saw firmly during the act of setting, and for operating the setting and gripping device simultaneously.

It further consists in making certain portions of the device adjustable, whereby different-sized teeth can be readily set.

It further consists in providing means for readily converting the saw-set into a saw-jointer by reversing or adjusting certain parts of the device.

It further consists of novel details of construction, all as will be hereinafter set forth.

Figure 1 represents a side elevation of a saw-set embodying my invention, showing the parts in readiness to be applied to a saw. Fig. 2 represents a vertical longitudinal sectional view of the same, showing the position the parts assume in the act of setting the teeth. Fig. 3 represents an end view of Fig. 1. Fig. 4 represents a detached detail view showing the position the pins or studs assume in the act of setting the teeth of a saw. Fig. 5 represents a detached portion of the saw-set, showing the jaws reversed for the purpose of utilizing the set as a saw-jointer.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a saw-set, the same consisting of a body portion B, which is provided with a slotted portion C intermediate of its ends, within which is pivoted at the point D the lever or handle E, which has a portion F projecting up above the pivoted point.

G designates an arm which is pivoted at K to the portion F of said lever E, and which is provided with a beveled end or punch H, which is adapted to set a tooth of the saw, the said arm G being always caused to move

in substantially the same relative path by means of the guide G<sup>2</sup>.

J designates a second arm or lever, which is pivoted to the lever E below the pivot D at the point L, the other end of said lever J being attached at M to the upright stud M', which is itself secured to the pin or punch N, which has a beveled extremity P, which is adapted to set one tooth of the saw, the relative positions of said pins or punches N and H with respect to the blade A<sup>2</sup> being understood from Fig. 4.

Q designates a lever or handle which is pivoted at the point R to a suitable ear attached to the body B, said lever Q having pivoted thereto at the point S the end of a link T, the other end of which latter is pivoted at U to the lever V, which is fulcrumed at W to the body B, the other end of said lever being pivoted to the arms X, which slide in suitable ways or slots in the lug Y, the extremity of said arms X being attached to a plate or block Z, which is adapted to be moved into contact with the face B' of the body B, to a suitable portion of which is attached the movable jaw A', the same sliding in suitable ways upon said lug and being held in position by a thumb-screw C' or similar device, it being evident that if desired the jaw A' may be dispensed with and the face B' lengthened to take its place.

D' designates a stationary jaw which depends from said body portion B, the latter having a slot E' therein, in which a file is adapted to be reciprocated.

F' and G' designate springs which are attached to suitable portions of said body B in such a way that their normal tendency is to keep the levers or handles Q and E in the positions seen in Fig. 1.

The operation is as follows: When it is desired to set a saw the blade A<sup>2</sup> of the same is placed against the face B' and the movable jaw A', as indicated in Figs. 1 and 2. The downward movement of the handle Q into the position seen in Fig. 2 will, by reason of the intermediate connections, cause the plate Z to move into the position seen in Fig. 2, into contact with the blade A<sup>2</sup>, and simultaneously the movement of the lever or handle E toward the body B, into the position seen also in Fig. 2, will cause, by reason of the connections G



and J, the punches N and H to move simultaneously toward each other, each having the same extent of movement, since their movements are governed by the stroke of the same lever E, said punches N and H assuming the position seen in Fig. 4 with respect to each other and to the saw-teeth, it being therefore apparent that the teeth of the saw-blade will be simultaneously and accurately set to the required degree by a single movement of the lever E, the plate Z firmly gripping and holding the saw-blade during the operation of setting.

The device can be readily converted into a saw-jointer by changing the adjustable jaw A' from the position seen in Figs. 1 and 2 to the position seen in Fig. 5, the saw-blade A<sup>2</sup> being held between the jaws A' and D', while a suitable file can be readily manipulated in the slot E' adjacent said jaws, the device being thus capable of being readily employed as a saw set or jointer with equal readiness.

A thumb or set screw B<sup>2</sup> may be placed near the end of the lever E, and is adapted to abut against the lower side of the body portion B and limit the movement of said lever E, whereby the device can be adjusted to give the teeth the required level or set.

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

1. In a saw-set, a suitable body portion, levers pivotally mounted thereon, punches suitably guided, connections from above and below the fulcrum of one of said levers to said punches, a jaw against which a saw-blade is adapted to be placed, a plate for holding said blade in position and connections from said plate to the other of said levers, substantially as described.

2. In a saw-set, a body portion, having a face against which a saw-blade is adapted to be held, levers pivotally mounted thereon,

punches suitably guided and supported, connections from one of said levers to said punches, whereby the latter are caused to move in opposite directions, a plate for holding a saw-blade in position against said face of said body portion, and connections from said plate to the other of said levers, substantially as described.

3. In a saw-set, the body portion B, levers Q and E pivoted thereto, the arms G and J having the beveled ends P and H attached thereto, the plate Z, and means for moving the same toward or away from the body B, in combination with the jaw A', substantially as described.

4. In a saw-set, a body portion, having the slot E' therein, and a stationary jaw, adjacent thereto, in combination with a reversible jaw, and means for attaching the same to the body of said set, substantially as described.

5. In a saw-set, a body portion, having the slot E' therein, and a stationary jaw adjacent thereto, in combination with a reversible jaw, which latter is adapted to be set either in alignment with a face of said body portion or turned into juxtaposition with said stationary jaw, substantially as described.

6. In a saw-set, the body portion B, the levers Q and E mounted thereon, springs for holding said levers normally in position, punches suitably guided and supported, connections from one of said levers to said punches, whereby the latter are caused to move in opposite directions, a plate Z for holding a saw-blade in position, a lever V pivotally mounted, connections from said plate to said lever, and a link intermediate the latter and said lever Q, substantially as described.

HARRY U. KISTNER.

Witnesses:

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UTICA FISS.