E. Marshall.

Saw-Set.

No. 18,921. Patented Dec. 22, 1857.

Fig. 1.

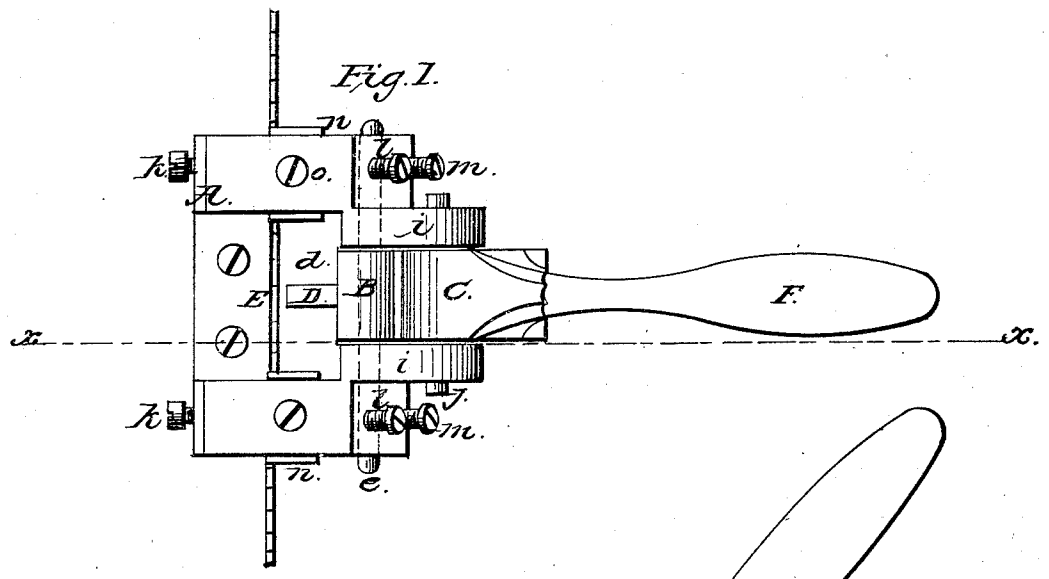
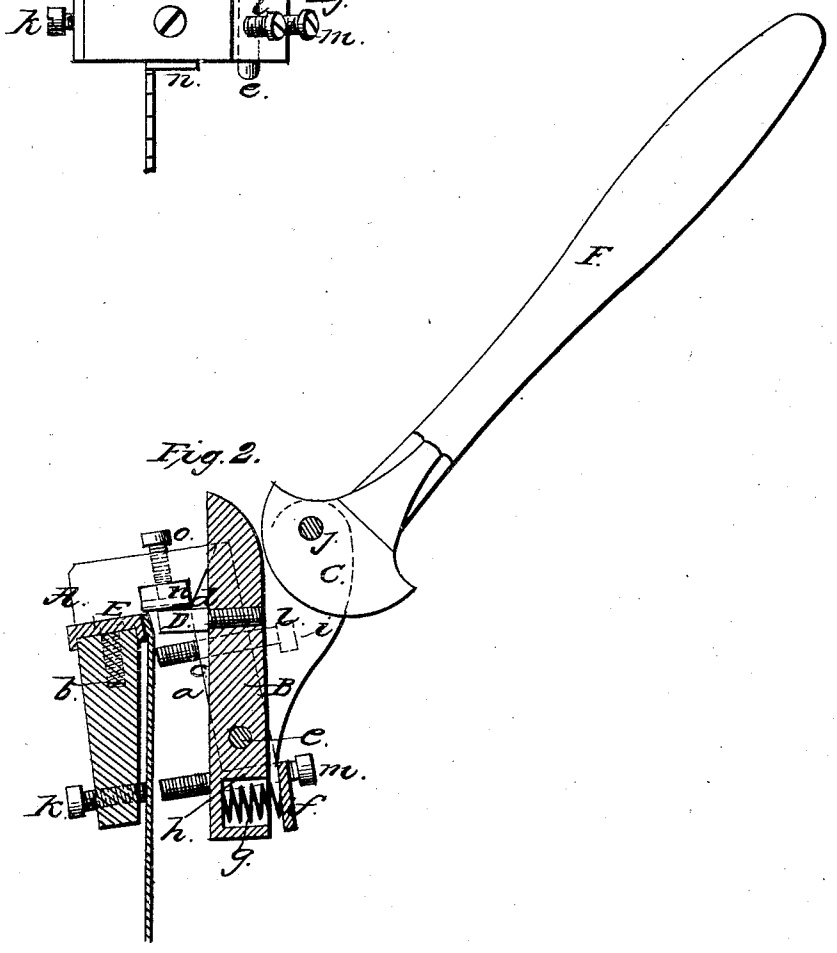


Fig. 2.



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UNITED STATES PATENT OFFICE.

EDWARD MARSHALL, OF BROOKLYN, NEW YORK.

SAW-SET.

Specification of Letters Patent No. 18,921, dated December 22, 1857.

To all whom it may concern:

Be it known that I, EDWARD MARSHALL, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Saw-Set; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a plan or top view of my improvement. Fig. 2, is a transverse section of ditto; *x*, *x*, Fig. 1, indicating the plane of section.

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

This invention relates to an improvement in that class of saw sets in which a punch is employed for bending or giving the set to the teeth.

This invention consists in a new article of manufacture, viz, a saw-set, made as hereinafter described.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and the manner in which it is used.

A, represents what may be termed a stock in one side of which a bar B, is placed. The stock A, is formed of metal and of one piece and may be described as being a rectangular block having a slot *a*, cut in its under side so as to form two pendent plates *b*, *c*, an opening *d*, being made through the upper end of the block. The bar B, is fitted in the plate or part *c*, of the head and works upon a rod *e*, which passes through the lower part of the plate or part *c*, and a plate *f*, is secured to the outer side of the plate *c*, against the inner side of which a spiral spring *g*, bears, said spring being fitted in a recess *h* in the lower part of the bar. The plate or part *c*, has two lugs or ears *i*, *i*, formed on it and a cam C, is fitted between these two lugs or ears, said cam being fitted and working on a rod *j*, which passes through the two lugs or ears. The form or shape of the cam C, is plainly shown in Fig. 2. It does not differ much from a semicircle, the rod *j*, passing through it eccentrically. The upper end of the bar B, is rounded as shown clearly in Fig. 2. To the inner side of the bar B, a punch D, is attached, said punch projecting at right angles or nearly at right angles from the bar B. This punch is of the form usually employed for such purposes, the face of the punch being of triangular form corresponding to the shape of the saw teeth. The inner surface of the plate or part *b*, is not parallel with the inner surface of the plate or part *c*, as shown clearly in Fig. 2, the lower part of the slot *a*, being wider than the upper part. Through the lower part of the plate or part *b*, two set screws *k*, *k*, pass and four set screws *l*, *l*, *m*, *m*, pass through the plate or part *c*, the two screws *l*, *l*, passing through the upper part of the plate and the other two *m*, *m*, passing through the lower part of the plate. To the upper part of the plate *b*, and directly opposite the punch D, a bed E, is secured. This bed may be constructed of steel and its inner surface is inclined or is not in the same plane as the inner surface of the plate or part *b*, see Fig. 2. In the upper part of the stock A, two stops *n*, *n*, are placed, one stop at each side of the stock. These stops may be adjusted or raised and lowered by set screws *o*, *o*. A handle F, is attached to the cam C.

The implement is used in the following manner. The saw to be set is secured in an ordinary saw-vise and the stock A, is placed on the saw, the stops *n*, *n*, resting on the saw teeth, the stops being so adjusted that the punch D, will act properly against the teeth. The stops, it will be understood, require to be adjusted according to the size of the teeth. The stock A is moved along on the saw, and the punch D is forced against the saw teeth by depressing the handle F, the punch bending the teeth against the bed E, and giving the set to the teeth. The degree of set may be varied by adjusting the set screws *k*, *l*, *m*, whereby the saw may have a position more or less out of line with the face of the bed F. This will be understood by referring to Fig. 2, the saw blade being shown in red.

I am aware that punches have been previously used for setting saws, and they have been operated in various ways, and inclined beds have also been used, but I am not aware that those parts have been arranged so as to operate conjointly as herein shown. The machines which have hitherto been constructed with punches have not been successful on account of the difficulty in giving various degrees of set to the saw teeth, and the modes hitherto employed for operating the punches have caused the work to be imperfectly done. In some machines the dies

are struck by hammers, the saw teeth being often broken thereby; in others they are actuated by levers; this movement is slow and does not set the teeth properly. No implement of this kind has hitherto been made perfect. My implement has been practically tested, operates well and obviates the objections above alluded to.

I do not claim any such arrangement as that shown in R. O. Gurley's rejected application for a patent on a gummer and set, July 30, 1850. The body or stock of Gurley's instrument is different in form and principle from mine. The end of the bar which carries the punch, receives a circular motion which gives the punch an inclination to draw off from the teeth of the saw and prevent a correct setting thereof. There is no such inclination or tendency in my improvement. In respect to the introducing of my set to the saw, it will be seen that the saw is first placed in a filing clamp; the machine is them placed or saddled on the saw; the cam is then made to operate upon the inner lever or bar, forcing the die inward and downward upon the teeth, and thus giving the teeth the set or curve desired. The tooth of the saw cannot be seen in Gurley's device, when operated upon. But in my machine, when the tooth comes under the punch, it can be seen distinctly when operated upon.

Having thus described my invention, I claim and desire to secure by Letters Patent, as a new article of manufacture:

A saw-set, made as herein described.

EDWARD MARSHALL.

Witnesses:
W. TUSCH,
J. W. COOMBS.