

No. 703,440.

Patented July 1, 1902.

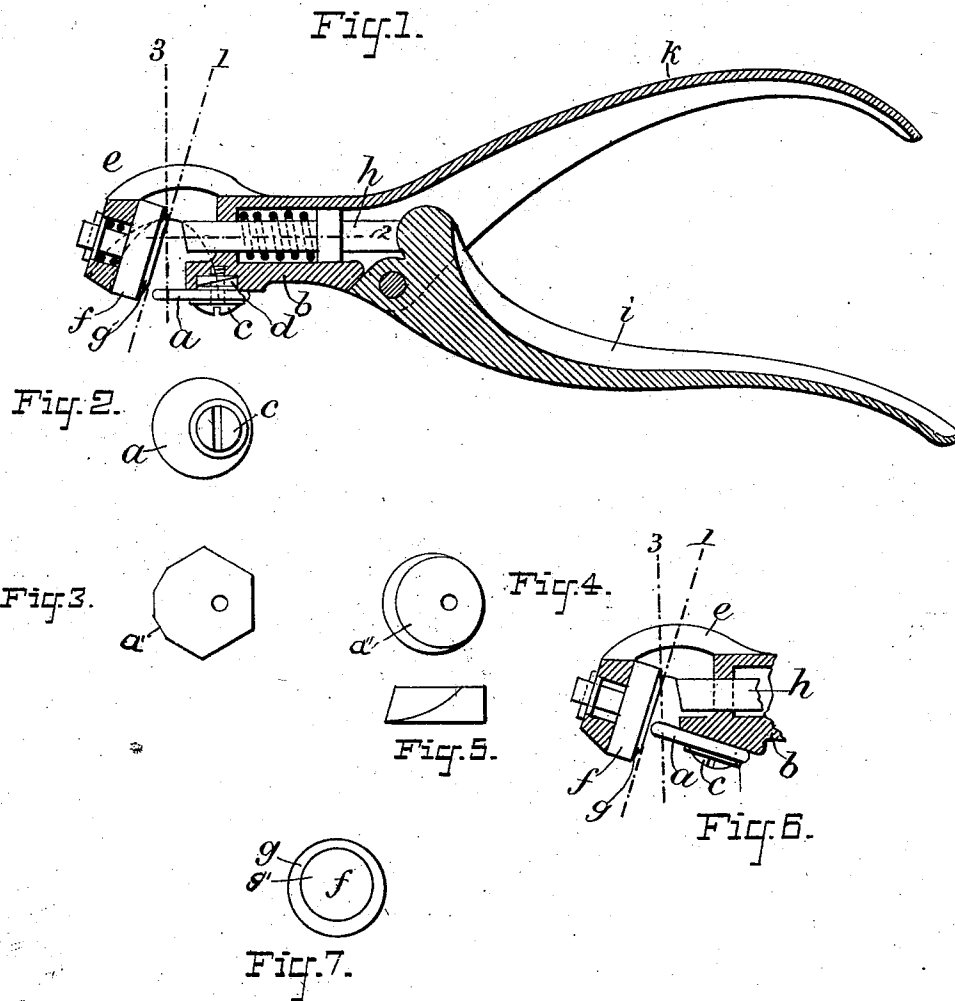
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SAW SET.

(Application filed Nov. 25, 1901.)

(No Model.)



WITNESSES:
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UNITED STATES PATENT OFFICE.

SARAH C. MORRILL, OF NEW YORK, N. Y., EXECUTRIX OF CHARLES MORRILL, DECEASED.

SAW-SET.

SPECIFICATION forming part of Letters Patent No. 703,440, dated July 1, 1902.

Application filed November 25, 1901. Serial No. 83,837. (No model.)

To all whom it may concern:

Be it known that CHARLES MORRILL, deceased, late of the city, county, and State of New York, (SARAH C. MORRILL executrix of said CHARLES MORRILL,) did invent certain new and useful Improvements in Saw-Sets, of which the following is a specification.

The invention relates to a rotative or otherwise adjustable eccentric gage applicable to saw-sets having an adjustable anvil (rotative slide or screw adjusting device.)

It also relates to the eccentric beveled plane of a rotative anvil arranged at right angles to the path of action of the horizontally-moving plunger.

The invention consists of the eccentric plane of the rotative anvil arranged so that the beveled face thereof will be at right angles to the axis of the horizontally-moving plunger.

In the drawings, Figure 1 represents a horizontal vertical section of a saw-set in which is shown the principal features of the invention. Fig. 2 is an inverted view of the plate forming, as it does, the rotative eccentric gage. Figs. 3, 4, and 5 are modifications of the eccentric plate forming the gage. Fig. 6 is also a modification showing another position in which the polygonal or circular shaped eccentric gage may be arranged so that it may meet the resistance of the saw-blade nearer the initial point of action of the plunger upon the tooth of the saw. Fig. 7 is a front elevation of the rotative anvil, in which is shown the eccentric plane and beveled face.

Similar letters refer to similar parts throughout the drawings, in which—

a represents the rotative eccentric gage secured to the stock *b* of the saw-set by means of the screw *c*, which is made fixed to the stock aforesaid in a manner that will admit of the rotative adjustment of the eccentric gage *a*, the latter of which is held in its adjusted position by means of the frictional spring *d*. The head *e* of the saw-set is mounted with the usual-shaped rotative anvil *f*, provided with the eccentric plane *g* and beveled face *g*. The axis of the said rotative anvil *f* is arranged oblique to the axis

of the plunger *h* in a manner that will bring the beveled face *g* at right angles to the axis of the plunger *h* aforesaid.

It will be observed that the inclination of the operative face of the plunger *h* is arranged at an angle to that of the beveled face *g* of the rotative anvil *f*. The object of arranging the plunger and rotative anvil in this manner is to enable the plunger to properly engage with the cross-angle extending to the apex of the tooth, and thereby setting the tooth perfect in every respect, a result never heretofore accomplished. It is a well-known fact that the manner by which saws are sharpened forms a fleaming on each edge of the tooth on the same side of the saw, beginning at the throat of the tooth and extending upward, where the intersection thereof forms the cross-angle extending to the apex of the tooth. It will also be obvious that saw-sets heretofore made could not operate upon the cross-angle near the apex of the tooth with that precision shown by the operation of this invention.

The plunger, with its retracting-spring, will be operated by the lever-handle *i* and the fixed handle *k* in the usual way. When a saw-blade is placed in position, as shown by dotted line 1, and the plunger is brought forward in the direction indicated by the axis shown by the dotted line 2, it will engage with the cross-section near the apex of the tooth and sit over the point of the tooth of the saw parallel with the vertical line, as indicated at 3. It will be obvious that by this arrangement a more perfect and positive result is produced at the initial point of action upon the tooth of the saw.

The important features of the polygonal or circular-shaped rotatively-mounted eccentric gage will be indispensable in a tool of this character, for it will be observed that in many cases the operator will be compelled to set the teeth of his saw in order that it may perform its function consistent with the character of the wood to be operated upon.

In order to set the teeth of the saw properly, it will be necessary to adjust the eccentric gage so as to regulate the back thrust of

the blade, and thereby giving the proper set to the teeth when the plunger shall have been brought forward.

The operator must not lose sight of the fact that when wet, green, or soft wood is to be operated upon the set of the teeth will of course be deeper than they would have to be if hard wood is to be operated upon, and in order that the operator should not err in judging the exact position of the eccentric gage each side of the polygon or portion of its circumference of the eccentric gages a , a' , and a'' will be indicated in any manner desirable. With a saw-set thus equipped any inexperienced mechanic could easily and properly adjust the gage without depending upon his judgment. It is a known fact that many mechanics err in their judgment when operating the ordinary screw-gage, the proper position of which depends upon proper judgment. It will therefore be observed that it will not require the hand of the skilled mechanic to operate this tool properly and scientifically, thus obviating the objectionable features of the saw-sets heretofore made. In the former application the axis of the rotative anvil was arranged oblique to the axis of the plunger; but in that case the beveled plane was arranged parallel with the inclined plane of the end of the plunger.

It is not desired to confine the invention to any particular-shaped eccentric gage, as many forms may be devised without departing from the spirit of the invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a saw-set a rotary concentric anvil having an eccentric bearing-surface and a beveled anvil-face, and a movable setting device having its operative face slightly inclined to the anvil-face, the inclination being toward the perimeter of the anvil as described.

2. In a saw-set a rotary concentrically-pivoted anvil having an eccentric bearing-surface and a beveled anvil-face, and a plunger having its axis of movement perpendicular to the opposed portions of the beveled anvil-face, and its operative face arranged at an angle therewith, the inclination being toward the perimeter of the anvil as described.

Signed at New York this 22d day of November, 1901.

SARAH C. MORRILL,
Executrix of the estate of Charles Morrill, deceased.

Witnesses:

JOSEPH MCARDLE,
WM. C. DUNCAN.