L. T. SMART.

Saw Set.

No. 82,759. Patented Oct. 6, 1868.

Fig. 1.

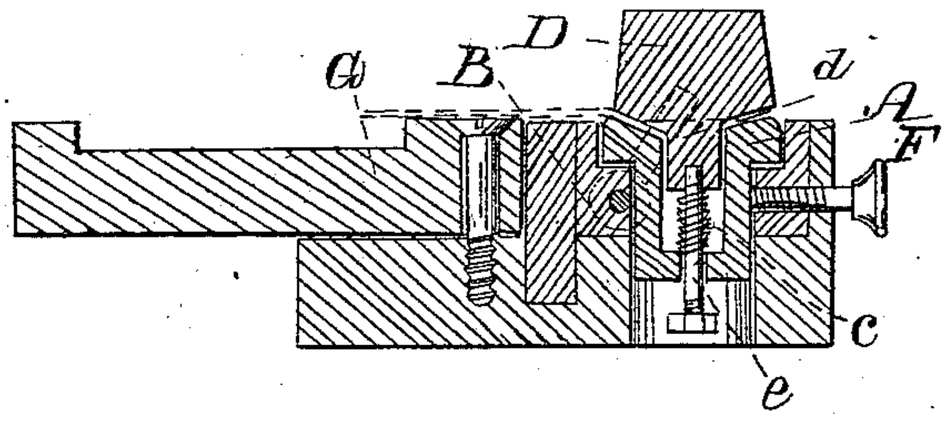
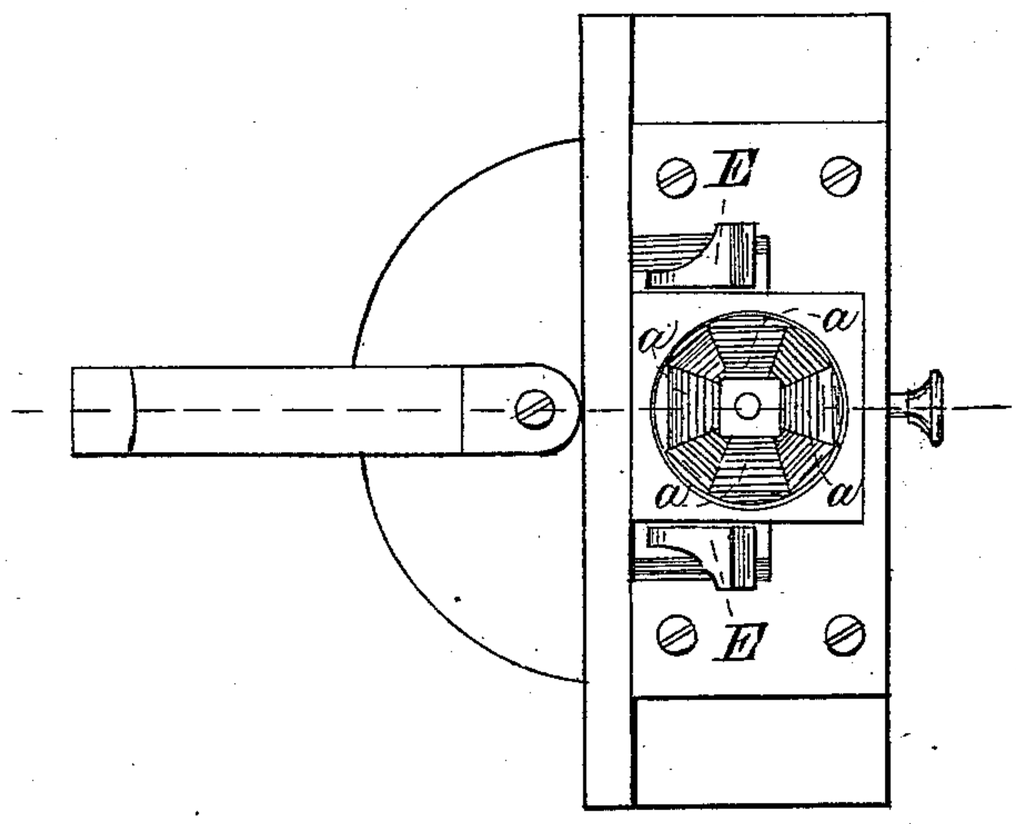


Fig. 2.



Witnesses.

Wm A Morgan
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L. T. SMART, OF OSSIPEE, NEW HAMPSHIRE.

Letters Patent No. 82,759, *dated October* 6, 1868.

IMPROVEMENT IN SAW-SET.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, L. T. SMART, of Ossipee, in the county of Carroll, and State of New Hampshire, have invented a new and useful Improvement in Saw-Sets; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to accompanying drawings, forming part of this specification, in which—

Figure 1 represents a sectional elevation of my improvement on the line *x x* of fig. 2.

Figure 2 is a plan view of the same.

Similar letters of reference indicate like parts.

The nature of this invention relates to improvements in saw-sets, the object of which is to provide an adjustable saw-set that can be more readily adjusted for setting teeth of different pitch or inclination than any now in use.

It consists of a circular bed-die, fitted into a suitable die-holder, so as to turn therein on a vertical axis, which is provided with a square socket in its central axis, and with four or any other suitable number of inclined facets on its upper end, varying in degree of angularity, which serve as the bed on which the teeth are to be hammered to produce the required set, and a movable die, provided with a central shank, which fits in the recess of the bed-die, arranged in combination therewith, having a corresponding number of facets, of various degrees of angularity, corresponding with those of the bed-die, which is supported in a vertical position therein, and the facets maintained a short distance above those of the bed-die by a suitable spring. The bed is provided with gauges, whereby the saw to be set may be presented so that the teeth may be suitably acted upon by the said dies when a blow is given to the head of the movable die.

In the drawings, A represents the bed-die, which rests in a circular recess of a die-holder, B, and is provided with a prolongation extending through the said die-holder. The latter may be made of any suitable metal, and secured to any suitable block or bench.

The die A is provided with a socket, C, through the bottom of which is a central hole.

The top of the die is provided with four or any other desired number of facets, *a*, inclined from the circumference downward towards the centre of the said die, each having a different inclination.

D represents a movable die, provided with a projection, *d*, from one end of which fits the socket C of the bed-die. The lower end of the die D is provided with an equal number of facets, having corresponding varying inclinations, and tapered from the centre outward.

The projection *d* has a stem fixed centrally thereto, which projects through a hole in the bottom of the recess C, and provided on its lower end with a nut, and in the said recess, between the end of the projection *d* and the bottom of the recess, with a spiral spring, whereby the die D is maintained a suitable distance above the bed-die, the nut preventing the spring from throwing it out of place.

E represents gauges, pivoted to the block or die-holder B, or otherwise adjustably fixed thereto.

F represents a set-screw, for securing the bed-die in position, and G represents a rest for the saw.

The saw to be operated on is laid on the rest G, as shown in red in fig. 1, with the teeth projecting over the face of the die A a suitable distance, which is gauged by the gauges E, and the upper end of the die D, struck with a blow from a hammer, which forces it down upon the tooth, and sets it against the bed-die.

The dies may be adjusted to produce any given set, which may be indicated, by numbers on the dies opposite the facets, by turning them around to the required position in the holder B, and securing them by the set-screws F.

They may be made of steel, case-hardened iron, or chilled iron, as preferred. I prefer to make them of chilled iron, as that is the cheapest, and, as far as my experience goes, is equally as durable as hardened steel.

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

The die A, adjusted in the holder B by the screw F, and provided upon its upper face with facets of varying inclinations, corresponding to the inclinations of the facets upon the under side of the movable die D, all constructed, arranged, and operating as herein described and shown, for the purpose specified.

L. T. SMART.

Witnesses:

LEVI SMITH,

DANIEL SMITH.