D. SATTLER.

Saw-Gummer.

No. 161,557. Patented March 30, 1875.

Fig. 1.

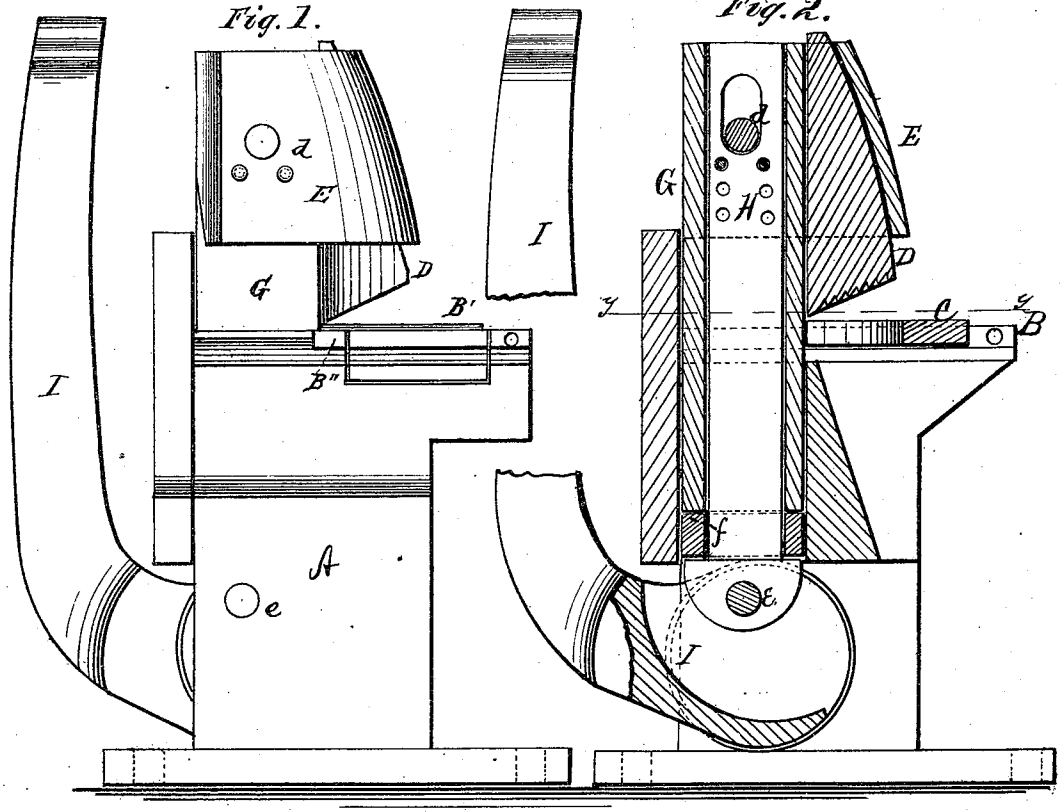
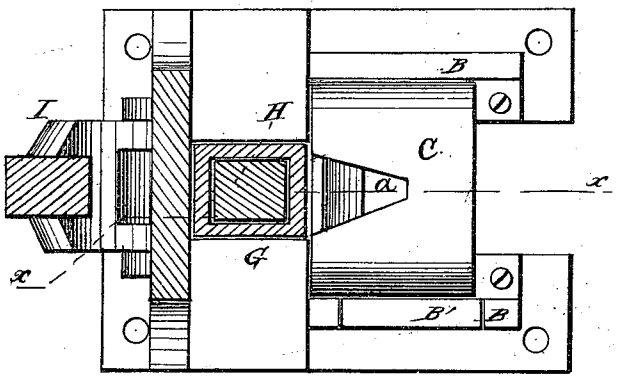
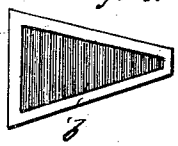


Fig. 2.

Fig. 3.



D Fig. 4.



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UNITED STATES PATENT OFFICE.

DAVID SATTLER, OF NAPOLEON, OHIO.

IMPROVEMENT IN SAW-GUMMERS.

Specification forming part of Letters Patent No. **161,557**, dated March 30, 1875; application filed January 27, 1875.

To all whom it may concern:

Be it known that I, DAVID SATTLER, of Napoleon, in the county of Henry and State of Ohio, have invented certain new and useful Improvements in Saw-Gummers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form part of this specification.

The nature of my invention consists in the peculiar construction of the die, and also in such other features of novelty, as will hereinafter be more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation of my machine. Fig. 2 is a longitudinal vertical section of the same through the line *x x* of Fig. 3. Fig. 3 is a horizontal section through the line *y y*, Fig. 2. Fig. 4 is a view of the under surface of the male die.

A represents the stand of my machine, cast in one piece, in substantially the form and construction as shown in the drawing. In this stand are suitable guides or ways B B, in which the female die C is placed, said die being formed with the aperture *a*, as shown in Fig. 3. D represents the male die, the under surface of which is made beveled or inclined, in such a manner that just at the time when its base or butt enters the female die its point will be at least one-half the length of the die, or more, from said female die.

By this inclination a perfect shear-cut is obtained, whereby injury to the saw-plate is, in a very great measure, obviated, as the cutting strain on the metal is gradual from the edge inward; and, furthermore, the usual hammering of the saw-teeth after being gummed is dispensed with; also, prevents breaking of point of male die.

The under surface of the male die D is formed with teeth or corrugations *b*, as shown in Fig. 4, which extend nearly from side to side; or such teeth may be formed on the female die, or on both. These teeth or corrugations hold the plate, while being cut, in its place, and prevent it from slipping.

In the ordinary saw-gummers now in use the shear is very small, and hence there is no slipping of the plate.

In my invention, in which I use a large shear, the plate would be apt to slip with a smooth die. This is entirely overcome by my invention of providing the surface of the male die with the teeth or corrugations, as described; or the same may be accomplished by roughening said surface in any suitable manner.

The male die is held in a socket, E, formed on the front at the upper end of the die-holder or die-holding bar G. This bar or holder is hollow, and moves vertically up and down in the stand. In the holder is inserted a bar, H, which is fastened near the upper end of the holder by means of a pin, *d*. The lower end of the bar H is, by a pin, *e*, connected with an eccentric lever, I, whereby the holder and male die are operated in the same manner as is usual in a certain kind of saw-gummers. The bar H has a head on its lower end, and between said head and the lower end of the holder is inserted a washer, *f*, or more than one, if desired. As the male die wears, this washer or washers are reduced in size or number, and at last entirely taken away, so as to bring the male die into the female die the same depth as when new and of its full size.

I have shown in Fig. 2 one mode of adjustment, but, of course, do not confine myself to any particular manner of accomplishing it.

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

1. In a saw-gummer, the die having its under surface inclined, and provided with teeth or corrugations *b*, or otherwise roughened, substantially for the purposes set forth.

2. The hollow die-holder G, with adjustable central bar H, connecting it with the operating eccentric lever I, substantially as and for the purposes herein set forth.

3. The combination of the hollow die-holder G, headed connecting-bar H, and one or more washers, *f*, for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

DAVID SATTLER.

Witnesses:

THOMAS C. CONNOLLY,

HENRY H. BARTON.