

H. C. STRONG.  
Saw-Gummer.

No. 207,456.

Patented Aug. 27, 1878.

Fig. 3.



Fig. 1.

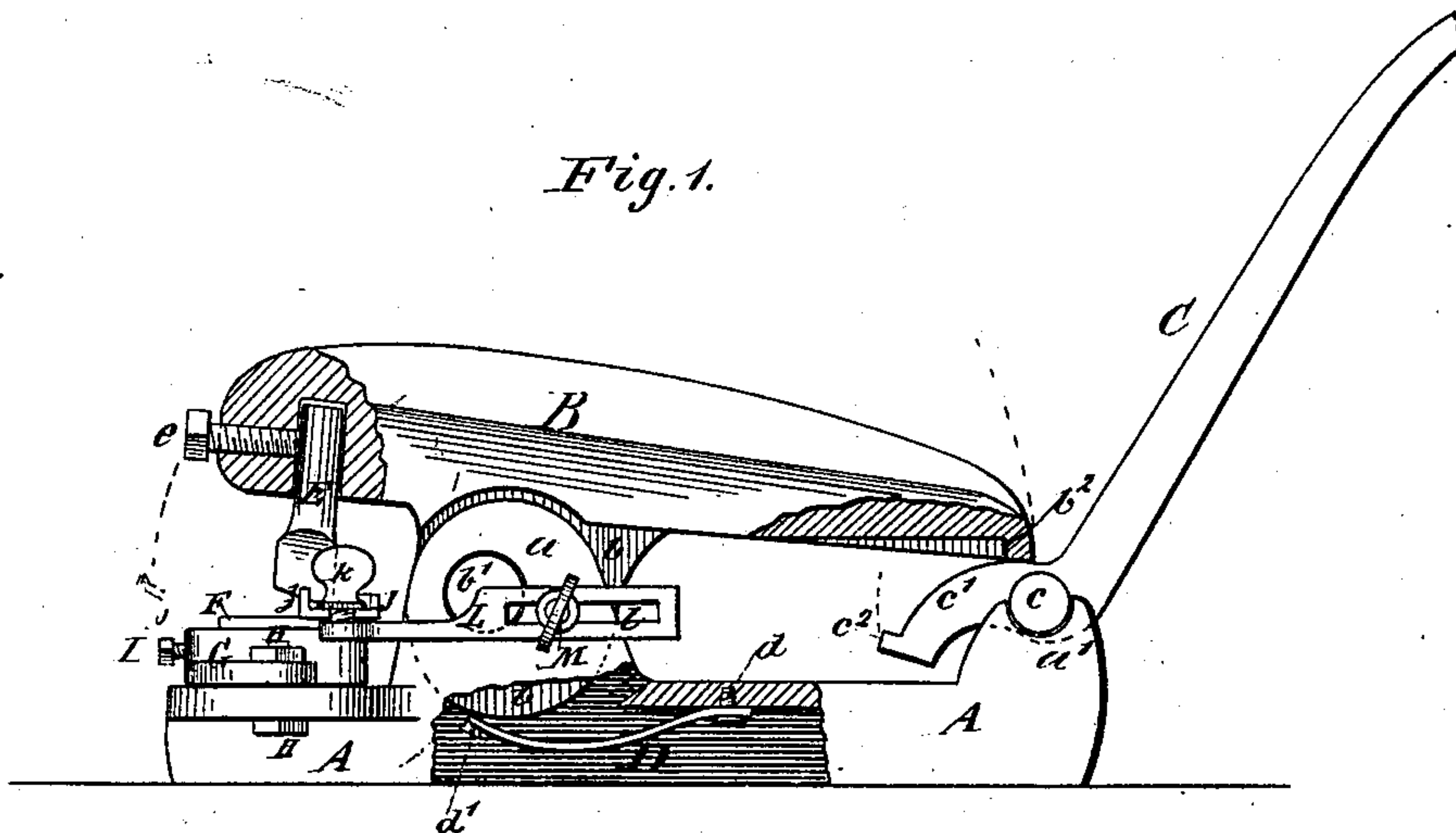


Fig. 2.

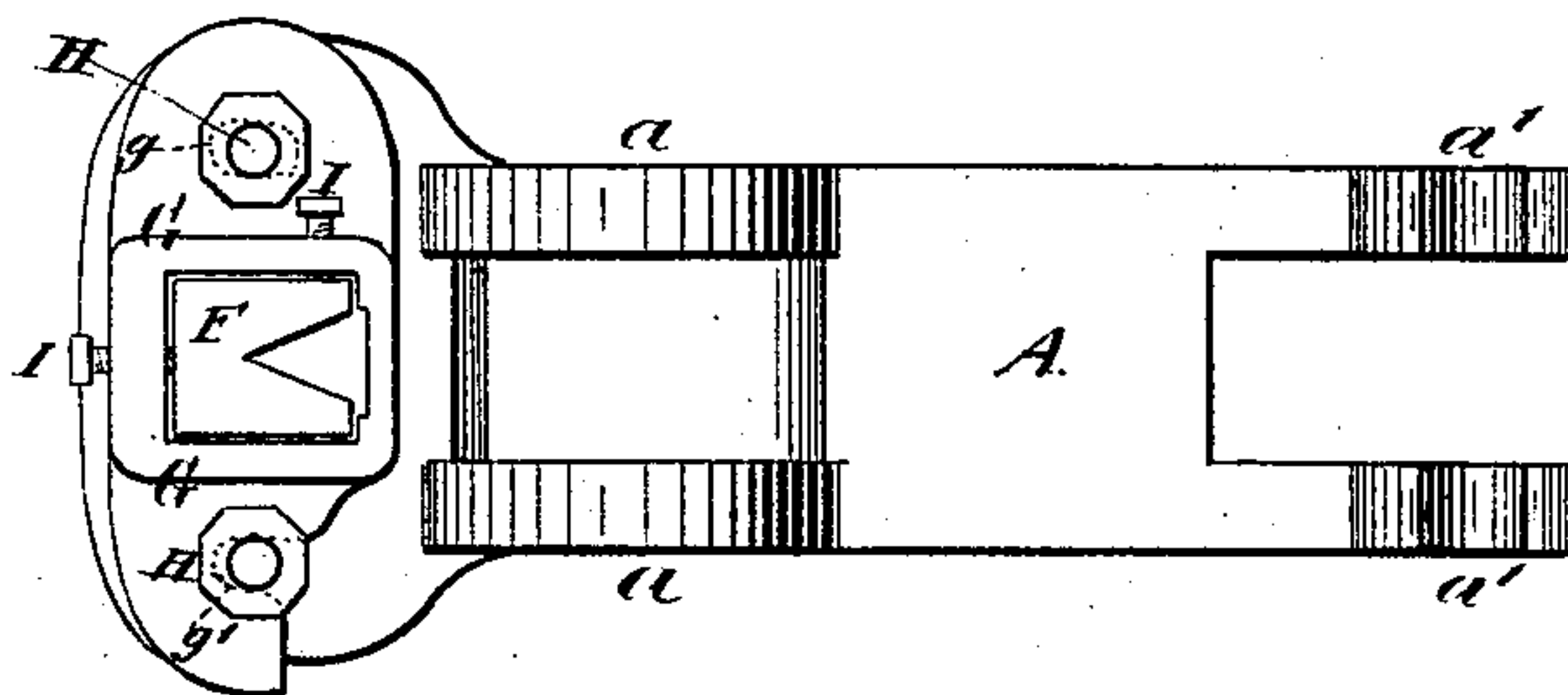


Fig. 5.

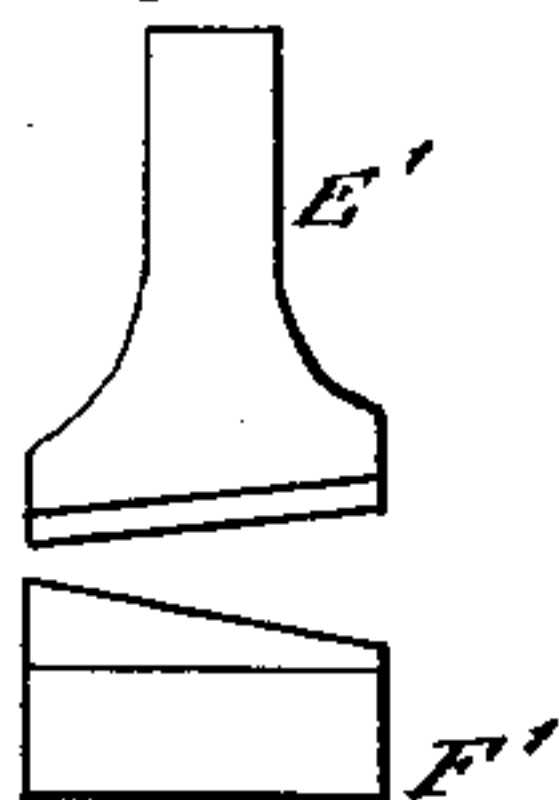


Fig. 4.

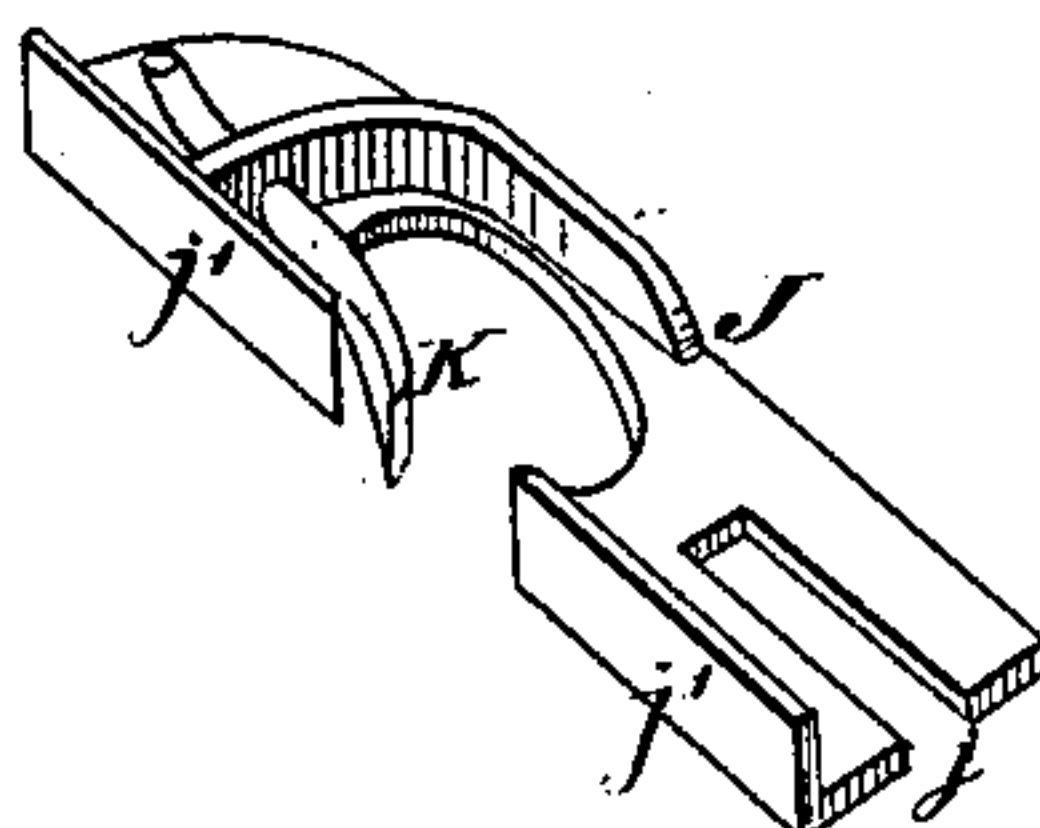
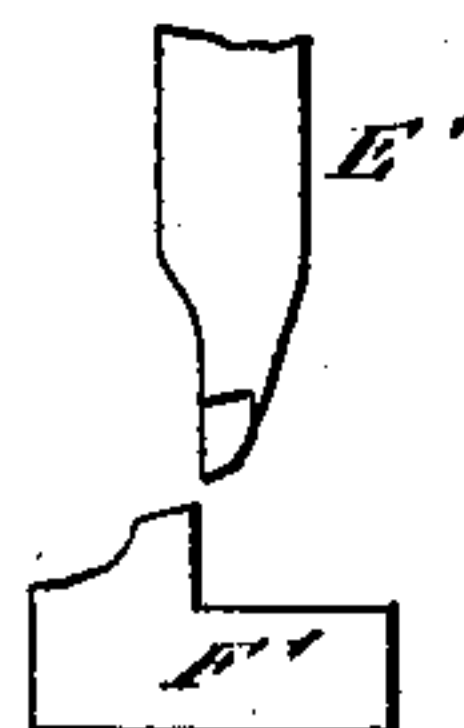


Fig. 6.



WITNESSES:

Henry N. Miller  
C. Sedgwick

INVENTOR:

H. C. Strong  
BY *[Signature]*

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

HENRY C. STRONG, OF MAUSTON, WISCONSIN, ASSIGNOR TO HIMSELF AND OSCAR F. TEMPLE, OF SAME PLACE.

## IMPROVEMENT IN SAW-GUMMERS.

Specification forming part of Letters Patent No. 207,456, dated August 27, 1878; application filed May 4, 1878.

*To all whom it may concern:*

Be it known that I, HENRY C. STRONG, of Mauston, in the county of Juneau and State of Wisconsin, have invented a new and Improved Saw-Gummer, Shears, &c., of which the following is a specification:

The object of my invention is to provide a time and labor saving machine for cutting, gumming, and shearing saw-teeth, and which may be used also as a punch.

The invention consists in the construction and combination of the various parts, as will be hereinafter described and claimed.

In the accompanying drawing, Figure 1 represents a side view of my improved saw-gummer, partly in section. Fig. 2 is a top view of the bed-plate and die-holder. Fig. 3 is a perspective view of the gumming-punch. Fig. 4 is a perspective view of the gage. Fig. 5 is a side view, and Fig. 6 an edge view, of the shearing-dies.

Similar letters of reference indicate corresponding parts.

A is the bed-plate of the machine. This is provided with two stout upright lugs, *a*, between which is pivoted the downward-projecting lug *b* of the punch-lever B by the strong pin *b*<sup>1</sup>, which latter serves as fulcrum for the lever B. On the rear end of the bed-plate A are two lugs, *a'*, grooved correspondingly on their upper surface, to receive and support the pivots or journals *c* of the operating or hand lever C, whose cam-shaped short end *c*<sup>1</sup> is arranged in contact with the under side of the rear end of the punch-lever B, so as to raise the latter and depress its forward end by depressing the handle of the lever C, the throw being limited by the projection *c*<sup>2</sup> on the cam *c*<sup>1</sup>, which strikes against the stop *b*<sup>2</sup> at the rear end of the lever B, and prevents the lever C from being thrown down so far as to bring the cam *c*<sup>1</sup> out of contact with the lever B.

The punch is raised, and the rear end of the lever B depressed upon the cam *c*<sup>1</sup>, by the spring D, attached at one end to the stationary pin or lug *d* in the bed-plate, and acting with the other end against the pin or projection *d'*, cast upon the under side of the lug *b* of the lever B.

E is the male die or gumming-punch, fast-

ened by a set-screw, *e*, in a vertical socket in the forward end of the punch-lever B, in position to enter the female die F, (and cut out a space at the bottom of the opening between two teeth of a saw-blade,) by depressing the hand-lever C, the cutting-line being level with the fulcrum of the lever B to avoid any drag of the dies. G is the die-holder, provided with a central socket for the reception of the die F, which is adjusted and held in position in the said socket by horizontal set-screws I, fitted through the vertical flange which surrounds the socket.

The die-holder G is secured to the bed-plate A by two bolts, H, through slots *g g'* in lugs on opposite sides of the die-socket, the lug at the slot *g'* being cut off at the end of the slot, so that the plate G may be swung out horizontally on the bolt in the slot *g* from the bolt in the slot *g'*, after loosening the nuts on the bolts H, for changing the die from a gummer to a shear, or otherwise, as required.

The depth, width, taper, and uniform shape of the teeth to be cut are regulated by the adjustable gage J against the vertical flange *j'*, by which the edge of the saw-blade is held and guided while operated upon by the dies. The gage J has an open slot, *j*, at one end, and is secured in any desired position by a thumb-screw, *k*, going through the slot *j*, and screwing into a threaded vertical hole in one end of the gage-holder L, which latter is fastened to the outside of one of the lugs *a* of the bed-plate A by a thumb-screw, M, going through a longitudinal slot, *l*, in the gage-holder L.

By the slot *l* and thumb-screw M the holder L can be set to adjust the gage J to the desired depth of the teeth of the saw, and by the slot *j* and the thumb-screw *k* the gage J can be swung horizontally, adjusted, and set to the desired width and inclination or taper of the tooth.

For gaging the distance between the teeth in cutting a new saw-blade, a little wire, K, is fastened in an upright flange or lug upon the plate J, inside the flange *j'*, and projecting with its bent point through the central opening in the flange *j'* (shown in Fig. 4) just far enough to enter a tooth just cut, and, by its adjusted



distance from the punch E, gage the space for the next cut, the depth of the teeth being gaged by the flange  $j'$ , as usual.

In gumming old saw-teeth, the wire K, as not needed, is removed.

When it is desired to cut away the whole or a portion of the tooth or teeth of an old saw, the shear-dies E' F', Figs. 5 and 6, are inserted in place of the gumming-dies E F, and secured by the set-screws  $e$  I in a position parallel with or at right angles to the length of the machine, according to whether a slit in or a cross-cut of the teeth may be required to be made.

This machine can be used to punch holes, and for other similar purposes, by changing the dies accordingly, and can be arranged to be worked by foot or by other power.

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

1. The cam-lever C  $c^1$ , fulcrumed upon the lugs  $a'$  on the bed-plate A of a saw-gumming machine, and provided with the projection  $c^2$ , in combination with the punch-lever B, having a stop,  $b^2$ , on the under side of the tail end, substantially as and for the purpose set forth.

2. The combination of the flanged gage J, bent wire K, and holder L, constructed and arranged as and for the purpose specified.

HENRY C. STRONG.

Witnesses:

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WILLIAM TOWERS.