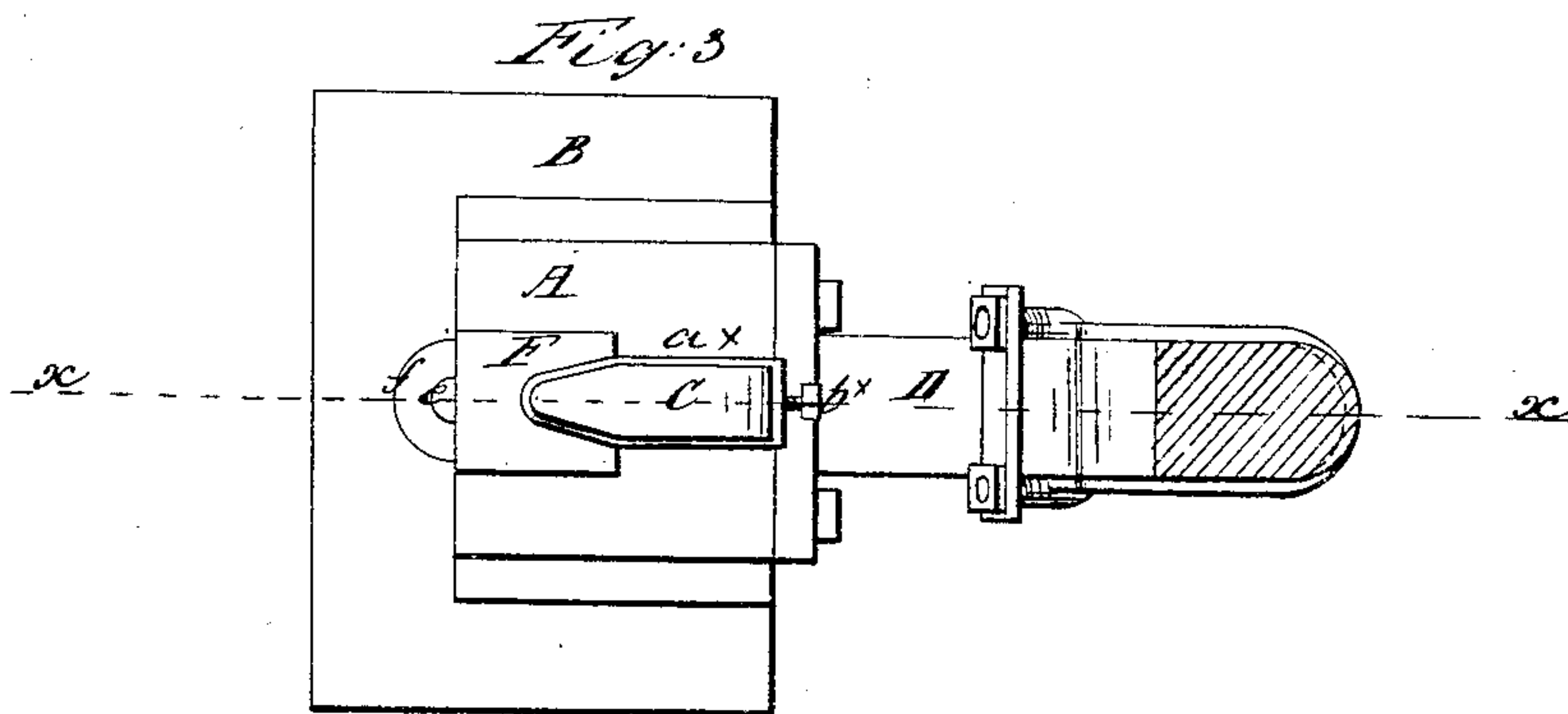
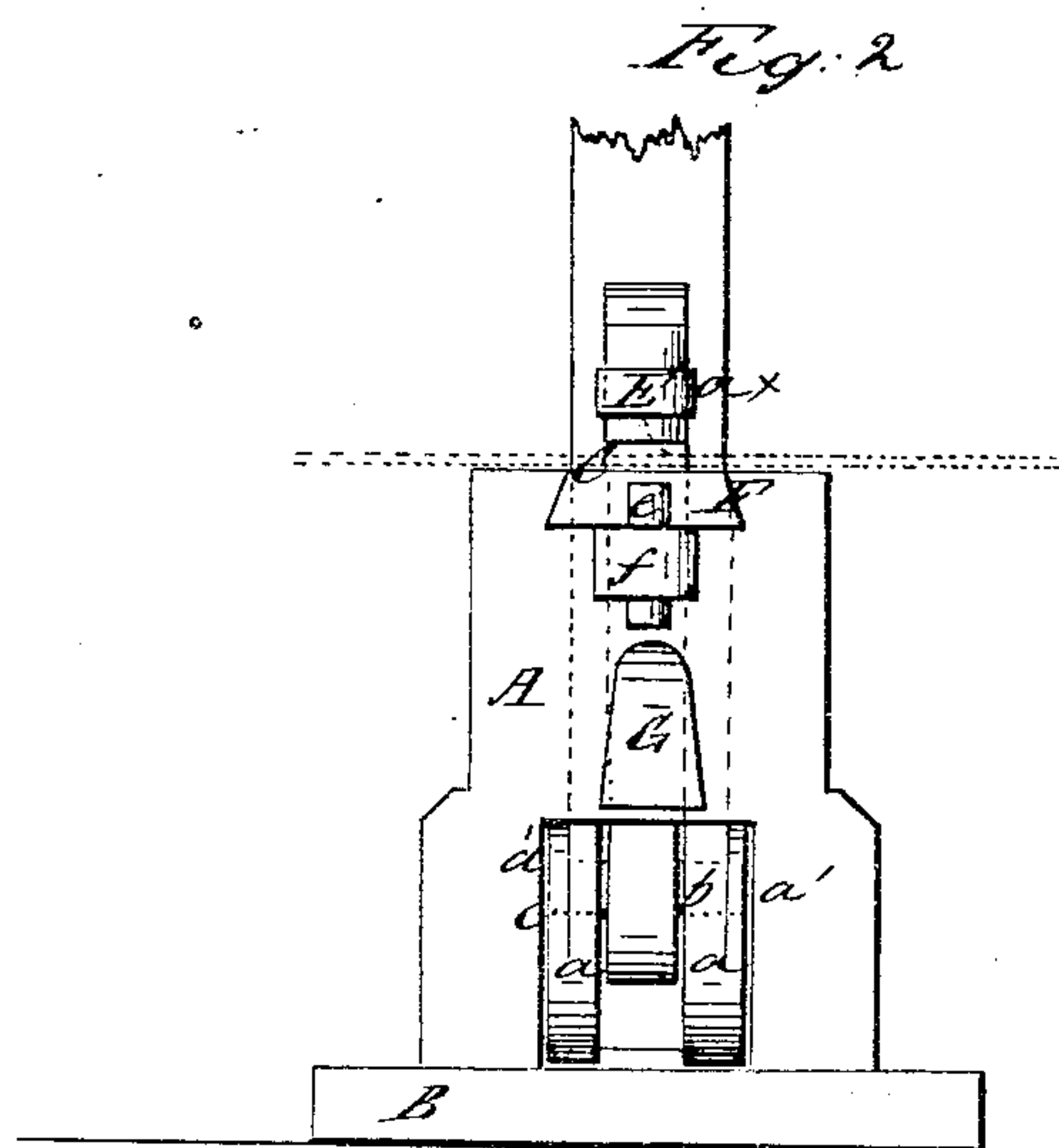
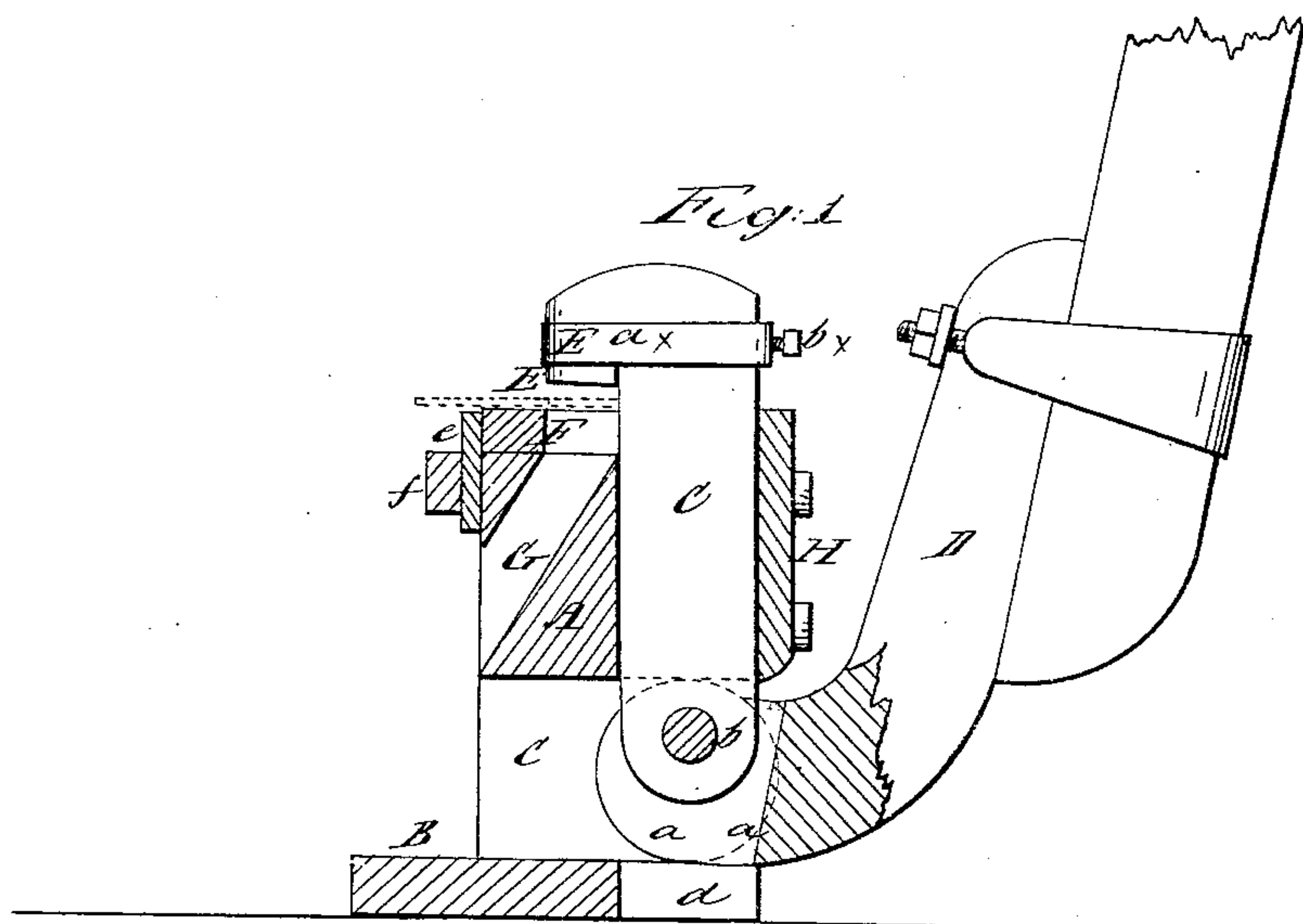


I. A. Dole.

Gumming Saws.

N^o 15,718.

Patented Sept. 9, 1856.



UNITED STATES PATENT OFFICE.

L. A. DOLE, OF SALEM, OHIO, ASSIGNOR TO DOLE, SILVER AND FELCH, OF SALEM, OHIO.

SAW-GUMMER.

Specification of Letters Patent No. 15,718, dated September 9, 1856.

To all whom it may concern:

Be it known that I, L. A. DOLE, of Salem, in the county of Columbiana and State of Ohio, have invented a new and Improved
5 Implement or Device for Gumming Saws; 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 specifi-
10 cation, in which—

Figure 1, is a vertical section of my improvement, (*a*), (*a'*), Fig. 3, showing the plane of section. Fig. 2, is a front view of ditto. Fig. 3, is a plan or top view of
15 ditto.

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

The nature of my invention consists in arranging the cam or moving crank which
20 operates the male die or punch below the stationary die, either in or below the die block, so as to draw down the male die or punch by means of a bar traversing in said die block. Also in arranging a cam lever
25 with a movable fulcrum in combination with an opening in the die block in which it is marked, so constructed and arranged as to traverse the bar with a positive motion in each direction which moves the male die or
30 punch as the lever is vibrated.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A, represents the stock or body of the
35 implement. This stock is formed of cast iron. It may be of rectangular form, and rest upon a base B, which may be cast with it so as to form the stock or die block and base in one piece.

40 C, represents a vertical bar, of rectangular form. This bar works in a recess made or formed in the stock or body A, and has its lower end fitted in a fork, at the lower end of a lever D, the lower end of said lever
45 having circular shoulders, (*a*), upon it, which form the fork, and between which, the lower end of the bar C, is secured by a pin (*b*), which passes eccentrically through the shoulders (*a*), as shown in Fig. 1, and by
50 dotted lines in Fig. 2. The shoulders (*a'*), (*a'*), of the lever D, rest upon the base B, an opening (*c*), being allowed in the lower part of the body or stock to receive the shoulders, as shown plainly in Figs. 1, and
55 2. A slot (*d*), is also made in the base B, to allow the lever D, to be depressed to raise

the bar C, and male die E, with a positive motion by the action of the shoulders (*a'*) (*a'*) on the base B, each side of the slot *d*.

The upper end of the bar C, is made to
60 project over the opening in the die F, and the punch or male die E, is fitted under this projection on the bar C, as shown in dotted lines in Fig. 1, and the die is fastened to the bar C, by the strap *a*, *x* provided with a set
65 screw *b*, *x*, so arranged as to draw the die E against the bar C, and hold it firmly. The bar C, is held in the recess in the stock A, by the plate H fastened to the stock A by four
70 screws.

In the upper end of the stock or body A, there is placed a stationary die F. This die is fitted in grooves in the stock, and is secured in proper position by a pin (*e*), which
75 passes vertically through a lip (*f*), on the stock or body A. The die E, which is the male die is of triangular form, corresponding to the form of the spaces between the teeth of the saw, and the die F, which is the female die, corresponds inversely in form
80 with the male die.

G, is a passage made in the stock A, and communicating with the lower end of the die F for the chips formed in punching or gum-
85 ming a saw to escape from the die and stock.

The saw to be gummed, shown in red, is laid flatwise upon the die F, and the saw is gummed, or the spaces between the teeth cut out, by depressing the outer end of the lever
90 D, the die E, being brought down, owing to the eccentric attachment of the bar C, to the lever D, which works against the underside of the stock A, in the opening (*c*), the shoulders (*a'*), bearing upon the base B, and
95 serving as a fulcrum for the lever D to raise the bar C, with a positive motion. The cut pieces from the saw pass down through the passage G.

By arranging the cam or moving crank below the die either in or below the die stock
100 so as to draw down the punch or male die by means of a bar traversing in said die stock substantially in the manner described, I am enabled to make a machine of a given power
105 with one half the weight of metal heretofore required for the same purpose, and with three fourths of the labor, so that one of my machines adapted to any particular kind of
work, only costs five eighths, or a little more
110 than half as much as those heretofore made. Besides my machines are far better, as well as cheaper and can be operated with far less

power than is usually employed for similar purposes; and further by fastening the male die to the edge of a bar that is so thin, that it will readily enter the scores between the
5 teeth of a common sawmill saw, and allow the saw to be vibrated as may be desirable in gumming it, is a great advantage which will readily be appreciated by those skilled in the process. Besides it brings the cutting die, or
10 punch so near the traversing bar that carries it, that the cam which traverses the bar acts almost directly under the dies, and with a very short lever, acting with great force in proportion to the power applied to it. I
15 contemplate that the cam or crank used to traverse the bar and punch, may be arranged either in, or below the die block as may be preferred.

I believe I have described the construction
20 and operation of my machine for gumming

saws, punching, &c., so as to enable any person skilled in the art, to make and use it.

I will now specify what I desire to secure by Letters Patent, (to wit).

1. I claim arranging the cam, or moving 25 crank below the die, either in or below the die block, so as to draw down the punch or male die, by means of a bar traversing in said die block, substantially as described.

2. I claim the cam lever, D, with a mov- 30 able fulcrum in combination with the opening *c*, so constructed and arranged as to traverse the bar, C, with a positive motion in each direction, as the lever is vibrated, substantially as described.

L. A. DOLE.

Witnesses:

A. H. BATTIN,
M. L. EDWARDS.