

L. W. Holmes,

Metal Punch,

N^o 82,317.

Patented Sep. 22, 1868.

Fig. 1.

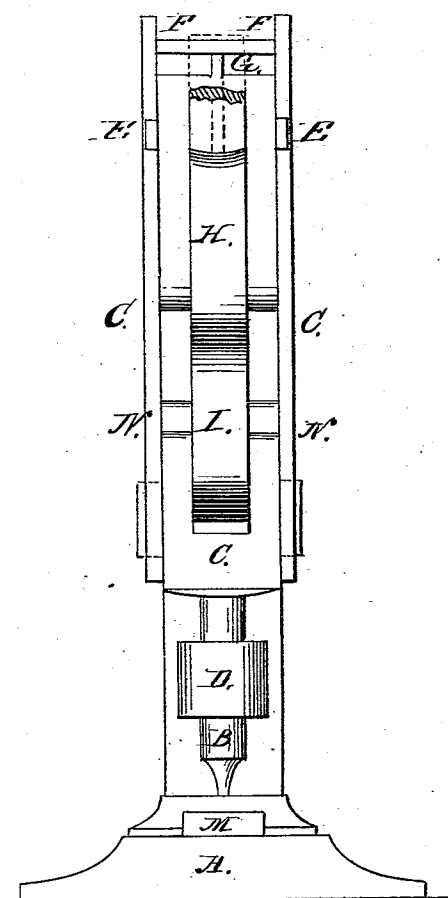
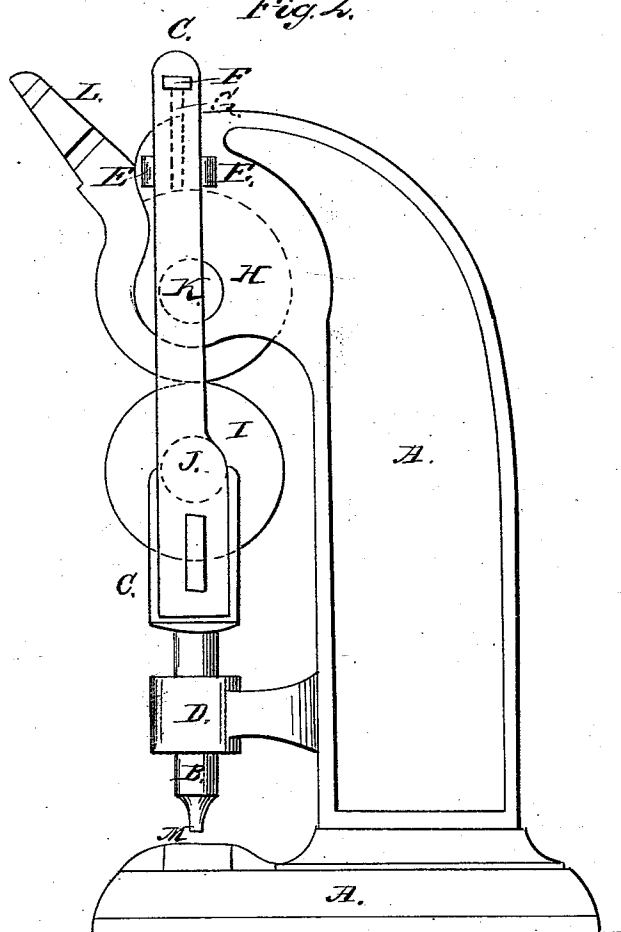


Fig. 2.



Witnesses,

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United States Patent Office.

LUTHER W. HOLMES, OF GRAND LEDGE, MICHIGAN.

Letters Patent No. 82,317, dated September 22, 1868.

IMPROVED ARRANGEMENT OF MECHANISM FOR OPERATING PUNCHES.

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, LUTHER W. HOLMES, of Grand Ledge, in the county of Eaton, and State of Michigan, have invented certain new and useful Improvements in Punches; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a front view, and

Figure 2 a side elevation of my improved machine.

The object of my invention is to construct a punching-machine in which the parts are simple and not liable to get out of order, and which, with a given motive-power, is capable of exerting greater pressure upon the punch proper than can be done by machines now in use.

To enable others to make and use my invention, I shall now proceed to describe its construction and operation.

A is the frame of the machine; B, the punch proper, which passes through the arm or guide D attached to the frame A, and is securely held in the stirrup C, which is capable of a sliding up-and-down motion. This stirrup C carries a pin, G, and a roller, I, the pin being securely fixed to the cross-piece F, and resting upon the eccentric H, while the roller revolves upon the axle J, having its bearings at N. The stirrup is guided in its up-and-down play by the guides E and the arm D. On the fixed fulcrum K in the frame A works the eccentric H, provided with a handle or prolongation, L. M is the bed-plate on which the article to be punched is placed.

The operation of the machine is as follows:

The punch being in the position shown in the drawings, the article to be punched is placed upon the bed-plate M. Then, by means of the handle or lever L, the eccentric is revolved upon its axis, and being tangential to the roller I, will, by its eccentricity, cause the stirrup and cam to be pressed down with considerable force, and the punch thus be made to penetrate the article on said bed-plate. The roller I revolves freely upon its axis, for the purpose of preventing excessive friction between it and the eccentric H.

When the operation of punching is completed, and is desired to be raised for the insertion of another article, the eccentric H is revolved in the opposite direction, pushing up the pin G on the cross-piece F, thus raising the stirrup C and the punch which is attached to it, as before set forth.

This machine may be operated by hand or otherwise, according to circumstances.

The advantages of my invention will be obvious from the foregoing description, and it is not deemed necessary to here enumerate them. It will suffice, therefore, that the parts are simple, and not liable to get out of order, and that the whole machine may be made at but little cost.

I am aware of the patent of Alfred Sower and Mark Payne, dated May 12, 1863. This I do not claim.

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

The construction and arrangement of frame or standard A, with its guide-pieces D and E, sliding stirrup C, with sliding pin G, cam-lever L H, roller I, and bed-plate, in the manner as shown and described and for the purpose set forth.

LUTHER W. HOLMES.

Witnesses:

ORANGE JOHNSON,
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