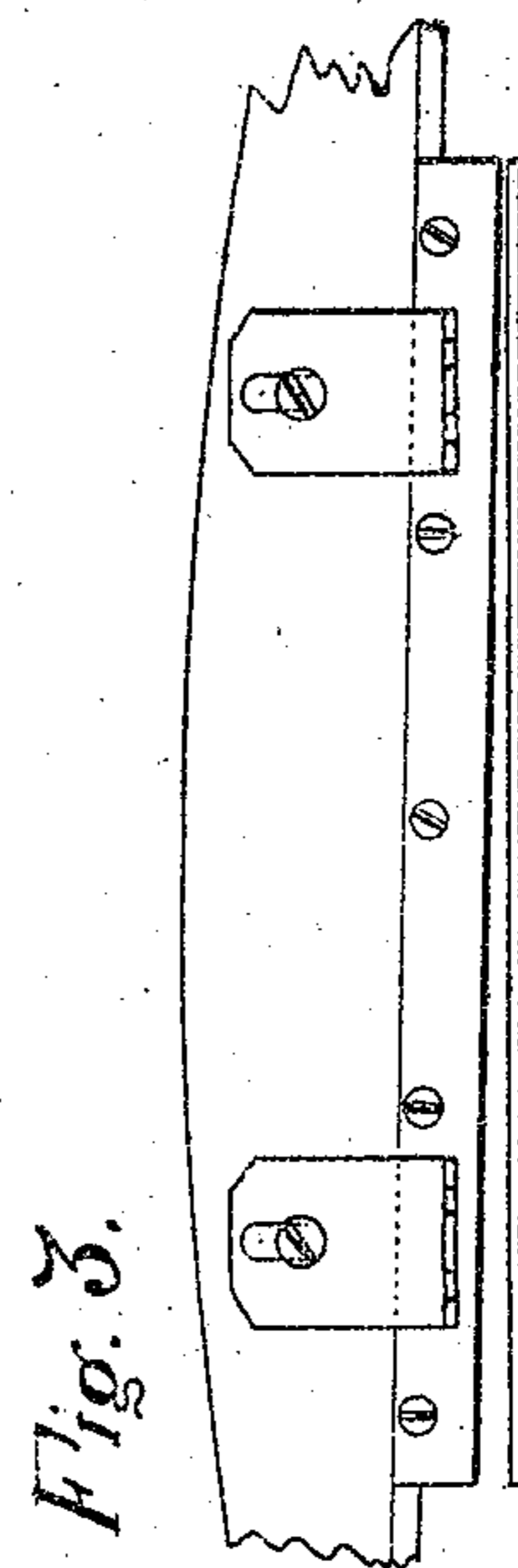
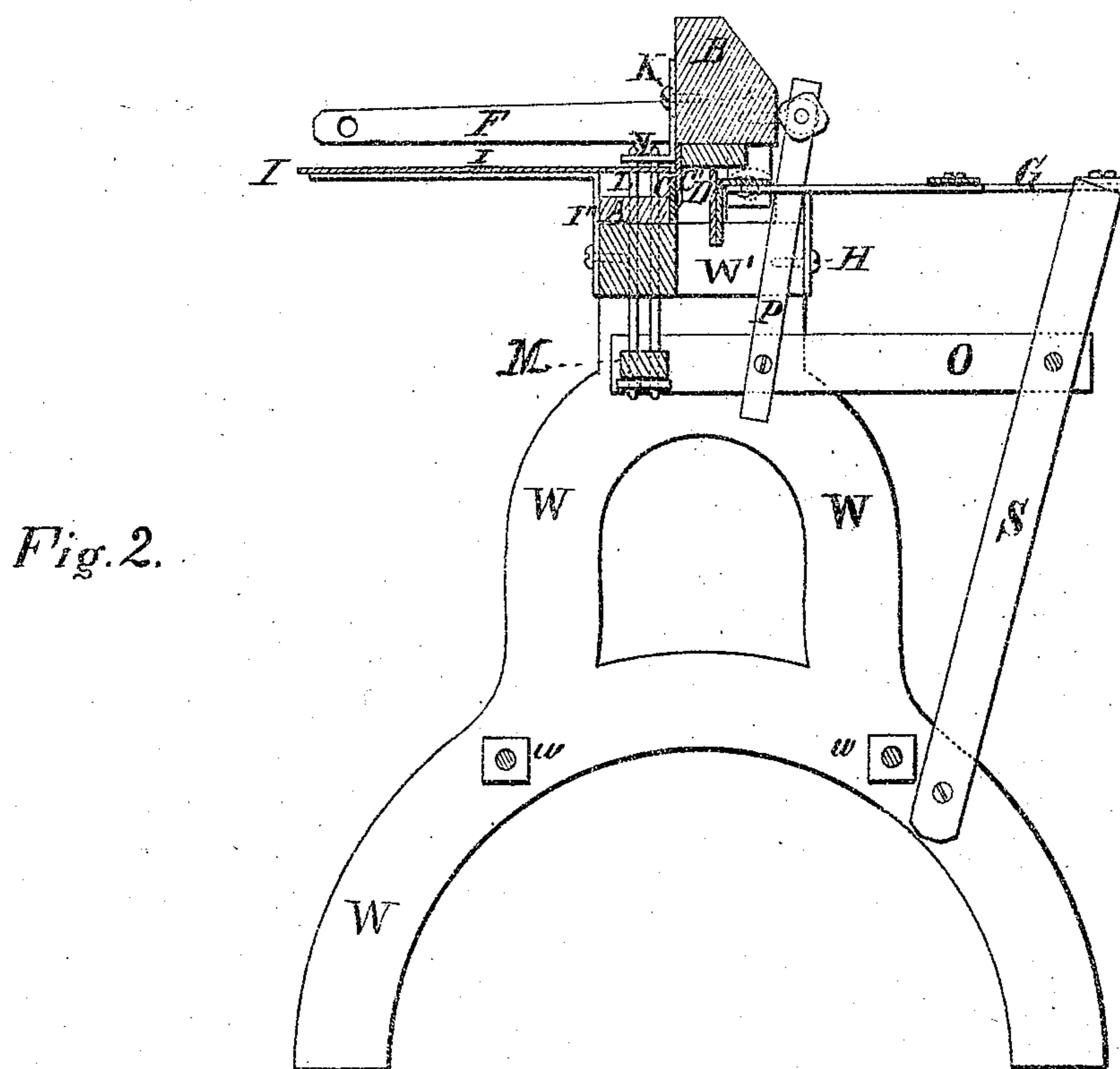
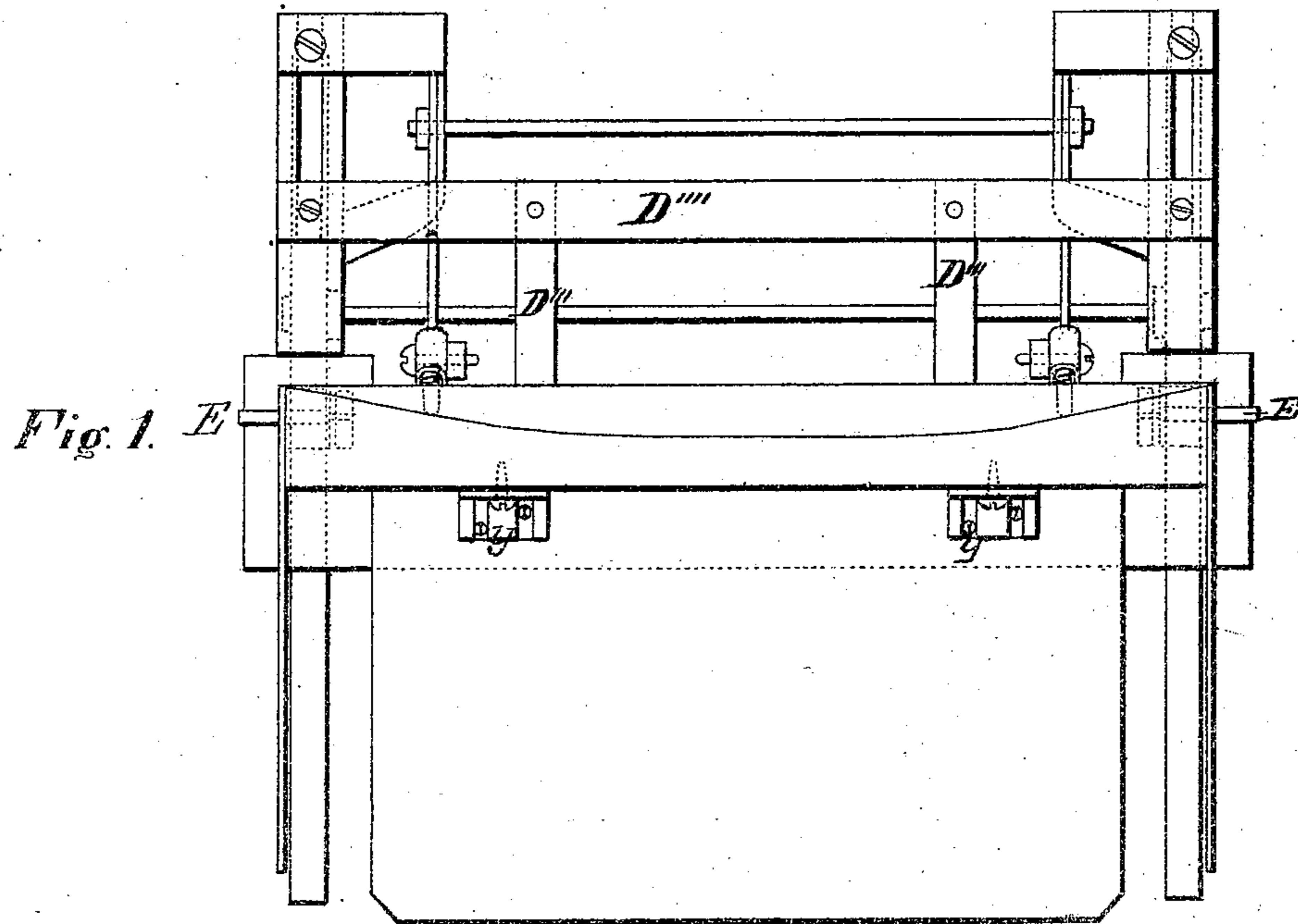


CHARLES B. CHOATE.

Improvement in Machines for Cutting and Punching Shingle Bands.

No. 119,820.

Patented Oct. 10, 1871.



Witnesses.

Villette Anderson.

E. H. Bates

Inventor.

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UNITED STATES PATENT OFFICE.

CHARLES B. CHOATE, OF EAST SAGINAW, MICHIGAN.

IMPROVEMENT IN MACHINES FOR CUTTING AND PUNCHING SHINGLE-BANDS.

Specification forming part of Letters Patent No. 119,820, dated October 10, 1871.

To all whom it may concern:

Be it known that I, CHARLES B. CHOATE, of East Saginaw, in the county of Saginaw and State of Michigan, have invented a new and valuable Improvement in Machine for Punching Sheet Metal; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a top view of my invention. Fig. 2 is a vertical transverse section of the same. Fig. 3 is a detached view.

This invention relates to machines for cutting and punching sheet-iron to form bands for bunches of shingles, hoops for vessels, and the like; and it consists in a combination of blades, punches, and dies so arranged, adjusted, and operated as to cut the sheet-iron into strips, and to punch rivet-holes in the end of the strips at the same time and with the same stroke of the machine, the holes being punched in the strips by punches passing upward through openings in the table that supports the sheet-iron into the dies, so that the burs formed on the iron are on the upper side of the sheet, and thus do not prevent it from sliding properly on the table to the shears.

The supporting-frame W W W is in the general form shown, consisting of end legs held together by braces *w* and *w* and a plate, W'. On the plate W' is a fixed cutter-blade, C, and a supporting-table, I, on which the sheet metal to be cut and punched is placed. The table is supported by braces I''. The movable cutter C' is connected to the front and under edge of the upper jaw B, which is so supported by bearings E as to bring the cutting-edges of the blades C and C' to the proper position for cutting as the jaw B is moved up and down on its spindles. To the front of the jaw B are connected the dies Y, so placed that when the jaw B is closed, as shown in the drawing, Fig. 2, the faces of the dies will rest upon the edge of the table, immediately over the punches L L. The jaw B is operated by levers F on each

end of it by suitable means. The width of the strip to be cut off the sheet of metal is regulated by an adjustable guard, D', supported by arms D'' and D''' and a cross-piece, D''', which is made adjustable by means of set-screws and slots, as shown, on the brace-arms G, which are held up by the supports S. To the back of the jaw B levers P are connected by pivots, and to the lower ends of these levers are pivoted the lever-arms O, which are also pivoted to the supports S, as shown. On the ends of the lever-arms O the shaft M has its bearings; and on the shaft M, in proper position to strike the dies Y, are fixed the steel-pointed punches L L, by means of nuts above and below the shaft, so that the punches may be adjusted. The punches and dies may be varied in structure to suit the necessities of the case.

As the jaw B is raised or lowered an opposite motion is communicated to the punches and the punches are thus brought up through the sheet into the dies as the upper blade comes down and clips off a strip of metal for a band or hoop; and thus the cutting of the sheet into strips and the punching of the nail or rivet-holes in the ends of the same are effectually accomplished at once, without interrupting the sliding of the sheet on the table in consequence of the burs formed on the ends of the strips, all as set forth.

I claim as my invention—

1. The combination, with the punches L, rising and falling vertically through the table I, of the fixed cutter C of the rock-shaft B, bearing the oblique cutter C' and the adjustable press-brackets *y*, substantially as specified.

2. The combination with the rock-shaft, bearing the oblique cutter C' and press-brackets *y*, of the fixed blade C, punches L, arms P O, and the sliding gauge D', substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

CHARLES B. CHOATE.

Witnesses:

WM. I. HOWARD,

WM. H. DE FOREST.

(119)