

I. L. Miles.

Printing on Glass.

Nº 61350.

Patented Jan 22. 1867.

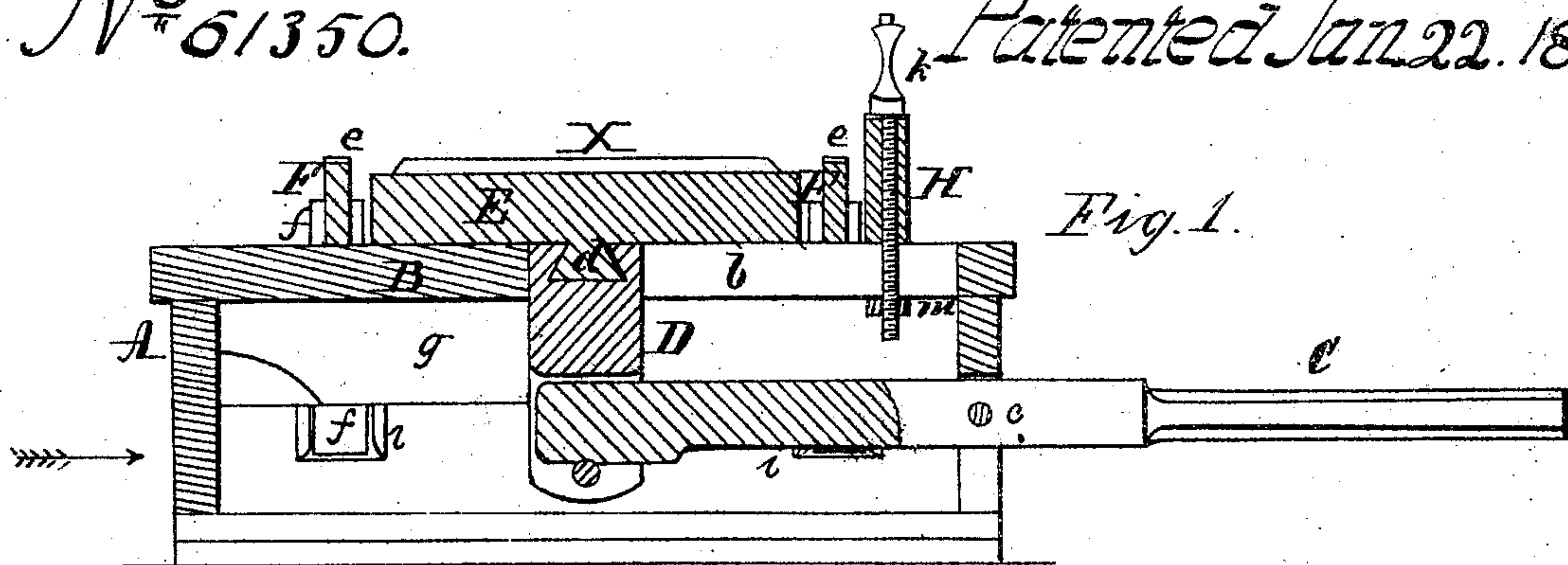


Fig. 1.

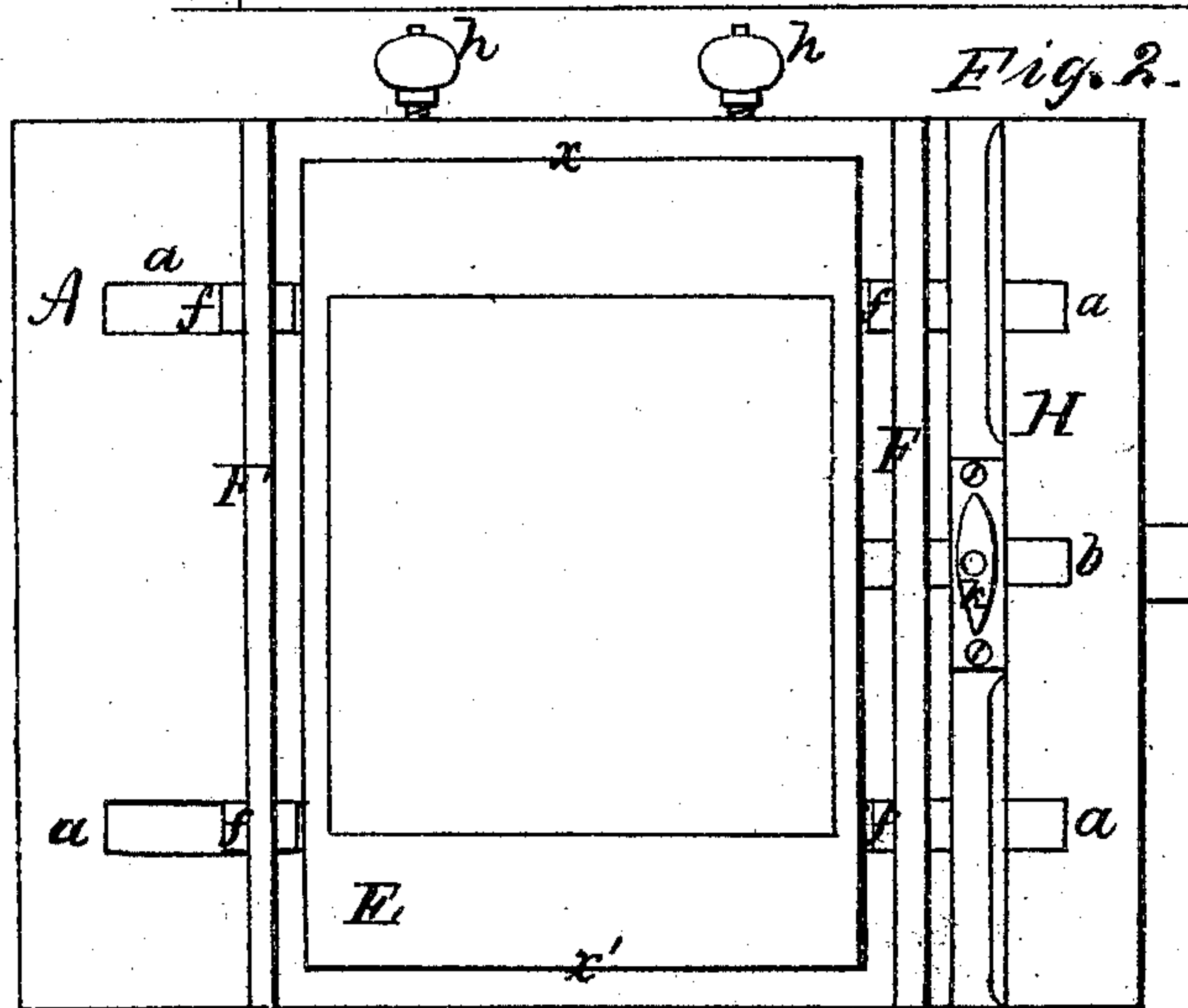


Fig. 2.

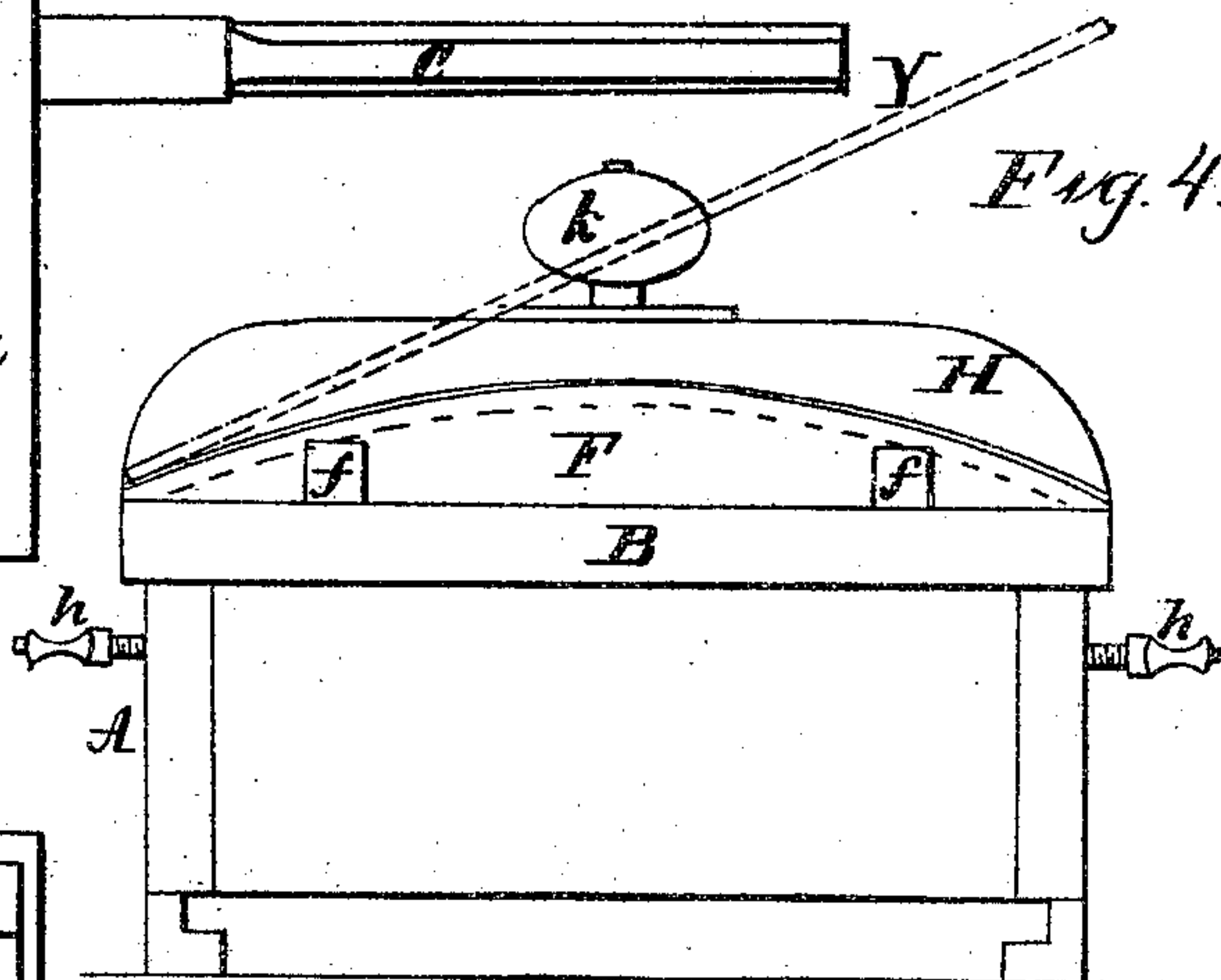


Fig. 4.

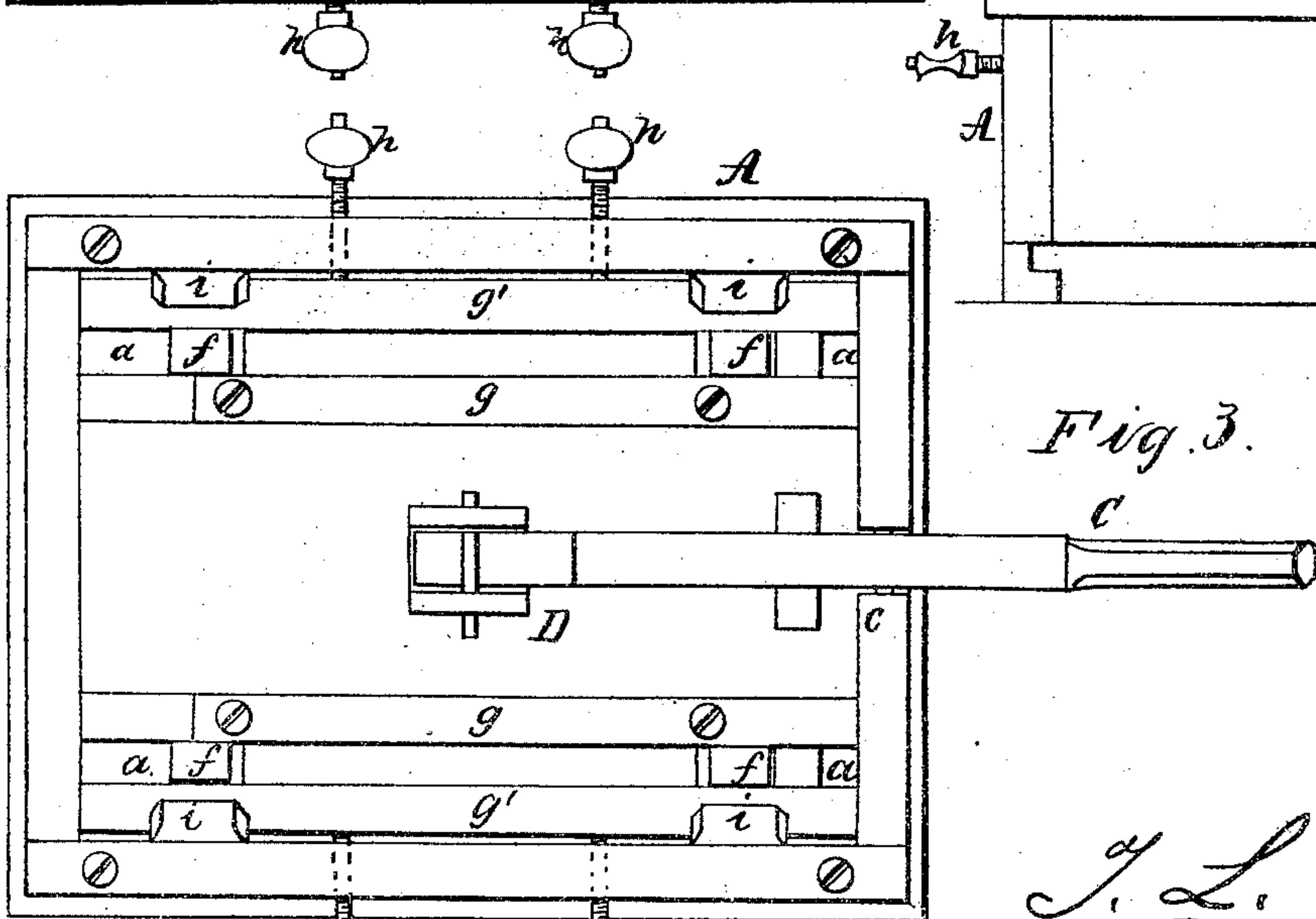


Fig. 3.

Witnesses
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Inventor.
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United States Patent Office.

ISAAC L. MILES, OF CHARLESTOWN, MASSACHUSETTS.

Letters Patent No. 61,350, dated January 22, 1867.

MODE OF PRINTING ON GLASS.

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, ISAAC L. MILES, of Charlestown, Massachusetts, have invented a Mode of Printing on Glass; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

My invention consists in transferring an impression from a form of elastic type having a rounded surface to a flat plate of glass, by rolling the latter over and in contact with ways arranged adjacent to and having a curvature corresponding with that of the form of type, as described hereafter.

In order to enable others to practise my invention, I will now proceed to describe the manner in which it may be carried into effect. On reference to the accompanying drawing, which forms a part of this specification—

Figure 1 is a sectional elevation of apparatus for carrying out my improved mode of printing on glass.

Figure 2, a plan view.

Figure 3, an inverted plan view; and

Figure 4, an end view, looking in the direction of the arrow, fig. 1.

A is a box or case, in the top B of which are three parallel slots, *a a b*, the middle slot *b* being the shortest. Across an opening in one side of the box extends a pin, *e*, to which is hung a lever, C, the inner end of which is confined vertically to the lower end of a block, D, the latter being arranged to slide up and down in an opening in the centre of the top B of the box. In the upper end of the block D is a dove-tailed recess or groove, in which fits a dove-tailed projection, *d*, at the under side of a plate, E, the latter resting on the plate B, and having a curved or rounded upper surface, to which is secured a curved form, X, of elastic type. At opposite sides of the plate E are adjustable strips or ways, F F', the upper edges of which are curved to correspond to the curvature of the face of the form X of types, and are level, or nearly level, with the surface of the latter. On the curved edge of each way, F F', is secured a strip, *e*, of gum-elastic, or other material which will serve the purpose described hereafter. Each of the ways F F' is provided with two projections, *f f*, which extend through and are guided by the slots *a*, and between two parallel strips or clamps, *g g* and *g' g'*, the former being secured to the under side of the plate B at right angles to the slots *a*, and the latter sliding on projections, *i i*, at the side of the box, and being maintained in contact with the projections *f f* by set-screws *h h*. On the plate B, at one side of and parallel to the way F', rests an adjustable strip or guide, H, the upper edge of which projects above that of the way, the said guide being secured in the position to which it may be adjusted by a thumb-screw, *k*, projecting through the slot *b*, and having on the lower end a nut, *m*, which bears against the under side of the plate B. The outer end of the lever C is depressed, and the plate E and its type are raised so that the surface of the latter may be coated with ink or other desired composition, after which the plate is depressed until it again rests on the top B of the box. The strip H is adjusted to such a position that it will serve as a guide against which one edge of the plate of glass is caused to bear, thereby determining the position of the printed matter on the said glass. The sheet Y of glass is held in the position shown in fig. 4, so that it may rest near one of its edges at the top and near the end of the ways F F'. The operator then gradually depresses the highest edge of the glass, so as to move or roll it over and in contact with the ways F F', without permitting it to slide over or to be elevated free from contact with the said ways; the glass, as it is thus moved, being brought in contact with the inked surface of the elastic type from which an impression is thus taken. If a plate of glass be pressed on to a flat bed of elastic type, so as to receive at once the entire impression, the latter is apt to be blurred and irregular, unless the glass be perfectly flat, which is rarely the case. When rolled over the curved surface of the type, however, in the manner described, a clear and otherwise perfect impression is obtained, as many practical tests have demonstrated. The importance of covering the ways F F' with gum-elastic or other material having a tendency to prevent the glass from sliding on the ways, will be understood without explanation. When necessary, the plate E may be readily detached from the block D by sliding it sideways, so as to withdraw the dove-tailed projection *d* from the recess in the block, to make way for another plate with a different form of type.

Although I have described minutely apparatus by means of which my invention may be carried into effect, and which I have used to advantage, I do not desire to confine myself to that apparatus; but I claim as my invention, and desire to secure by Letters Patent—

Transferring an impression from a form of elastic type, having a rounded or curved surface, to a flat plate or sheet of glass, by rolling the latter over and in contact with ways arranged adjacent to and having a curvature corresponding with that of the face of the form of type, as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ISAAC L. MILES.

Witnesses:

CHARLES E. FOSTER,

JOHN WHITE.