F. L. BAILEY & J. WATSON.

Printing-Presses.

No. 135,618. Patented Feb. 11, 1873.

Fig. 1.

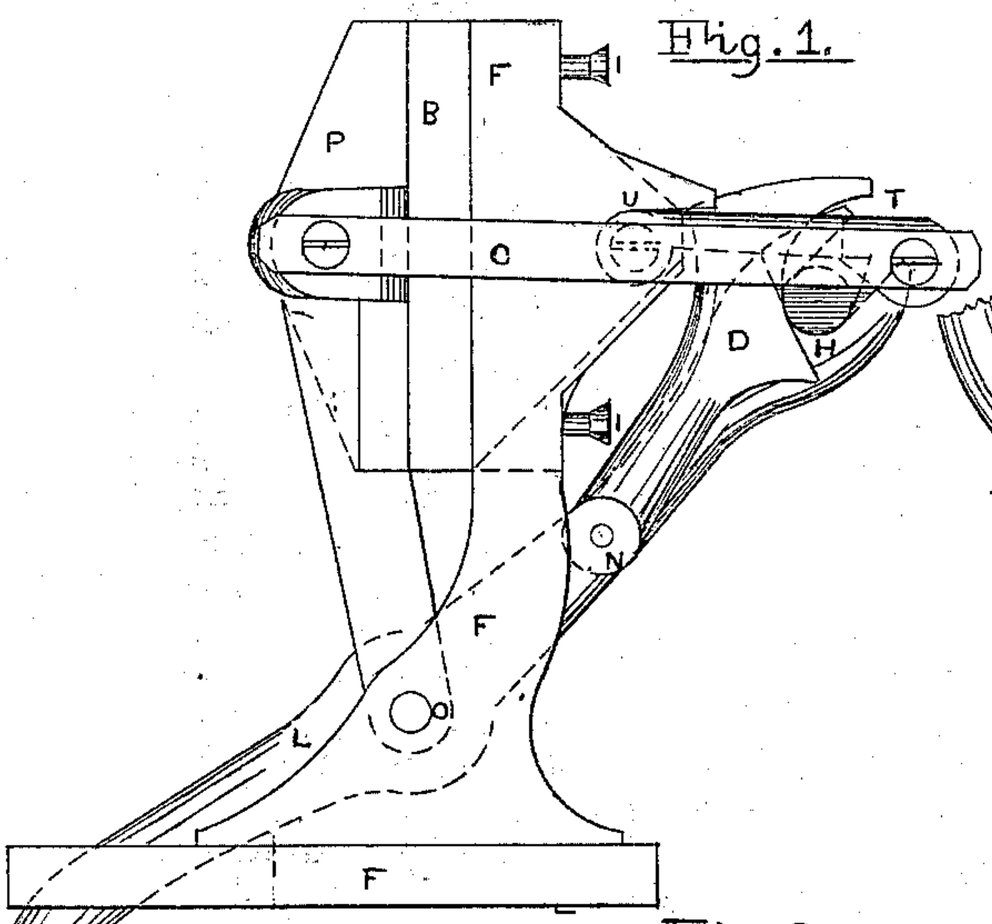


Fig. 2.

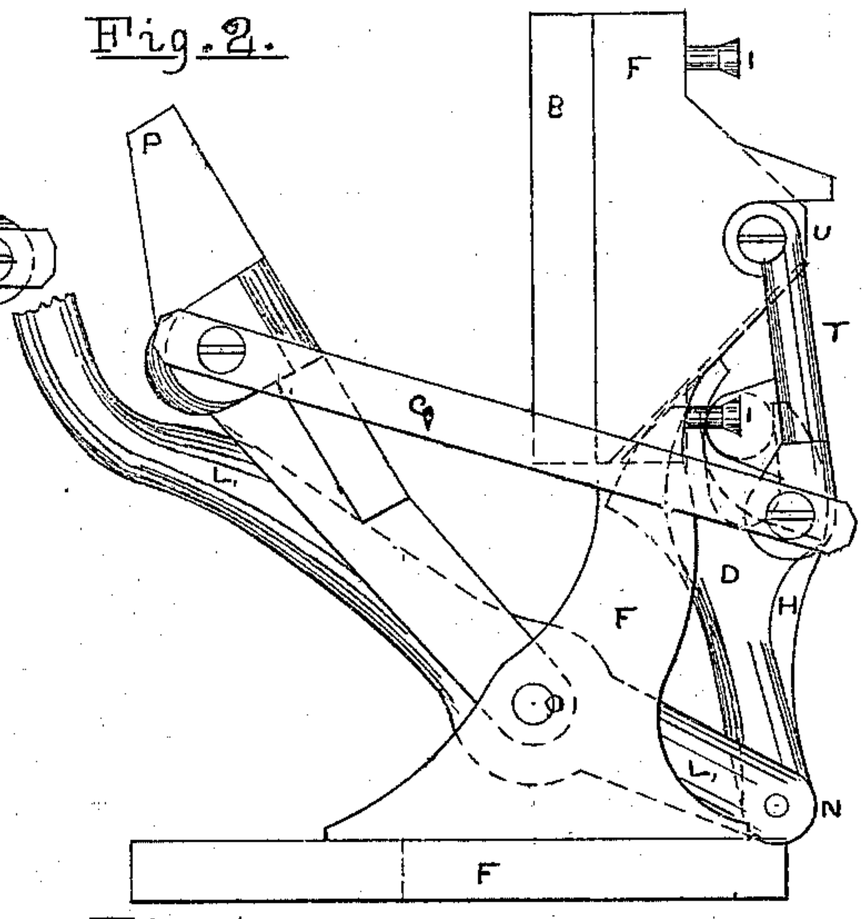


Fig. 3.

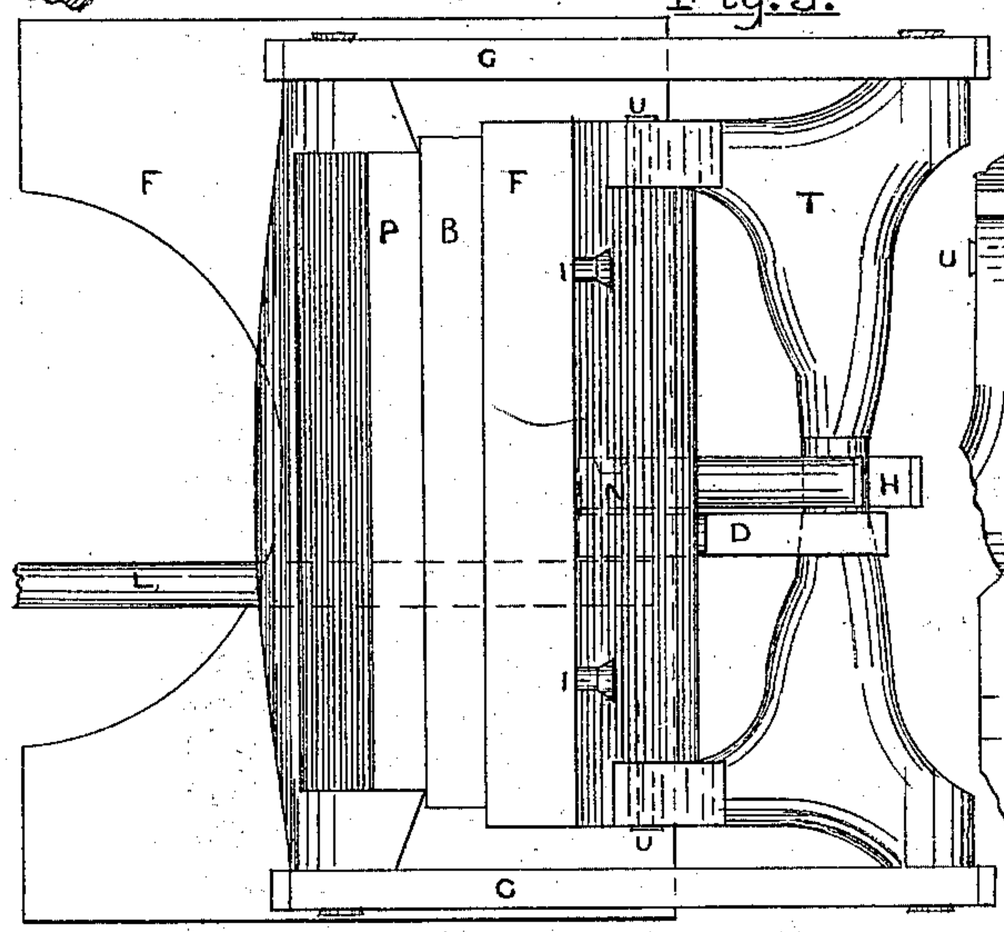
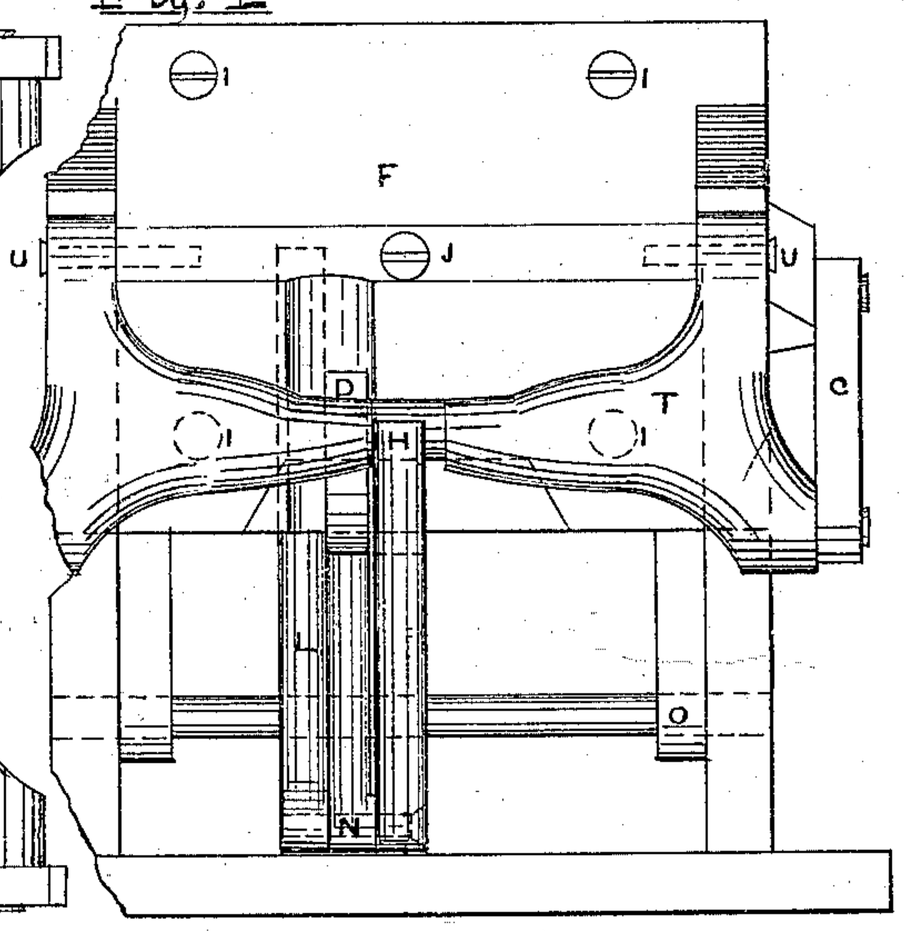


Fig. 4



Witnesses:

Sumner Albee

Horace Sargent

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Franklin L. Bailey.

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AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

FRANKLIN L. BAILEY, OF BOSTON, AND JOSEPH WATSON, OF EVERETT, MASSACHUSETTS.

IMPROVEMENT IN PRINTING-PRESSES.

Specification forming part of Letters Patent No. **135,618**, dated February 11, 1873.

To all whom it may concern:

Be it known that we, FRANKLIN L. BAILEY, of Boston, in the county of Suffolk and State of Massachusetts, and JOSEPH WATSON, of Everett, in the county of Middlesex and State aforesaid, have invented certain Improvements in Printing-Presses; and we do declare that the following, taken together with the drawing which accompanies and forms a part of this specification, is a description of our invention sufficient to enable those skilled in the art to practice it.

Our invention and improvement relate to the toggles and levers and parts concerned in giving the impression, more particularly in the employment of a cam-lever or lifter, in connection with the foot-lever, for the purpose of modifying the motion of the main toggle of the press, so that an additional lever or lifter (one member of a toggle of which the foot-lever constitutes the other part) may press to the best advantage against the said main toggle-bar, which moves the platen to and fro by means of connections connecting its ends with those of the platen, these connections with the toggle-bar forming at the impression a folding-toggle. By this arrangement very great power, without any sacrifice in the convenience in the working the press by foot or hand, is obtained.

Figure 1 is a side elevation of this press, showing the position of the parts while the impression is on and the toggles are exerting their utmost power. Fig. 2 is a side elevation, showing the position of the parts when the toggles are relaxed, impression completely off, and platen open. Fig. 3 is a plan corresponding with Fig. 1. Fig. 4 is a view of the back of the press, corresponding to the position of the parts in Fig. 2, showing the relative lateral positions of the toggles, levers, and lifters.

F F F F, Figs. 1, 2, &c., are the two sides, beam, and base of the press, which, being rigidly fastened together, hold and support the other and moving parts. B is a bed fastened to the beam of the frame by the screw J, Fig. 4, which is adjustable by the impression-screws I I I I. P is a platen hinged to the sides of the press at O O, and is made to vibrate toward the bed B, and away from it by two side arms or connections, C C, one end of each of the arms being pivoted to the toggle-bar T, and the opposite ends to the opposite ends ot the platen. The toggle-bar T, having its feet pivoted in sockets in the back of the beam of the frame, on opposite sides and back of the center of the bed and platen at U U, is swung upward, drawing the two connections and the platen P by means of the wedge-shaped lifter D and forked lifter H, both of which are pivoted at the same point N on the foot-lever L, which forces them upward as the opposite end of the lever is pressed downward by foot or hand; this lever being hinged on the same rod O, which supports the platen.

In order to make the press as simple as possible and at the same time effective, that the foot-lever may have the proper amount of movement, and be in the most convenient position for the feet to operate it, it is hinged at the said point O; so, also, for the purpose of getting sufficient power, the point of the toggle-bar, against which the forked lifter H bears at the moment of impression, is brought below the general level of the toggle; but, as will be seen in Fig. 2, when the impression is entirely off, the toggle-bar is in such a position that the upward pressure of the foot-lever and its forked lifter would press it against its pivots instead of causing it to swing around upon them. That this toggle may be moved into such a position as to be successfully operated by the forked lifter, the wedge-shaped lifter D is forced between the back of the beam of the frame and the said toggle-bar, in advance of the forked lifter, forcing the toggle outward and upward. The forked lifter following overtakes and comes to a bearing at a practical angle against the toggle-bar, and continues its motion upward to the point of impression.

The two lifters D and H are pivoted at the same point N on the short end of the foot-lever L, thereby adding to the simplicity of the press.

As the lifter D and the lifter H bear in succession on the same rounded surface of the toggle-bar, it will at once be seen that the two can be combined in one piece, that one side of

the forked lifter may have a wedge-shape corresponding to and have a bearing in the same manner against the beam and the toggle-bar, and perform the same functions that the other does. We think this would be the same in principle as the present plan.

We claim—

The combination of the lever L, lifter D, the frame E with its inclined plane, against which the lifter D slides, the toggle T, the connecting-rods C C, and the vibrating platen P, substantially as described.

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Witnesses:
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