S. W. SOULE.

Hand-Presses.

No. 146,786. Patented Jan. 27, 1874.

Fig. 1.

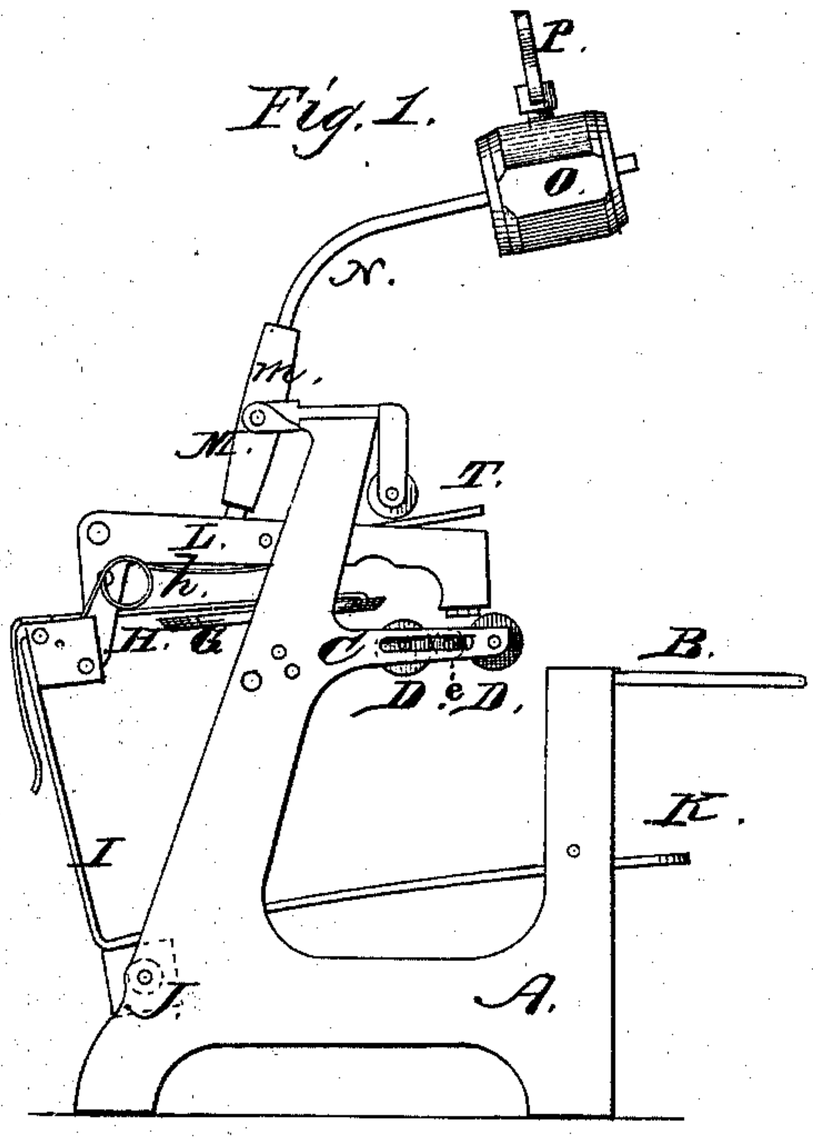


Fig. 2.

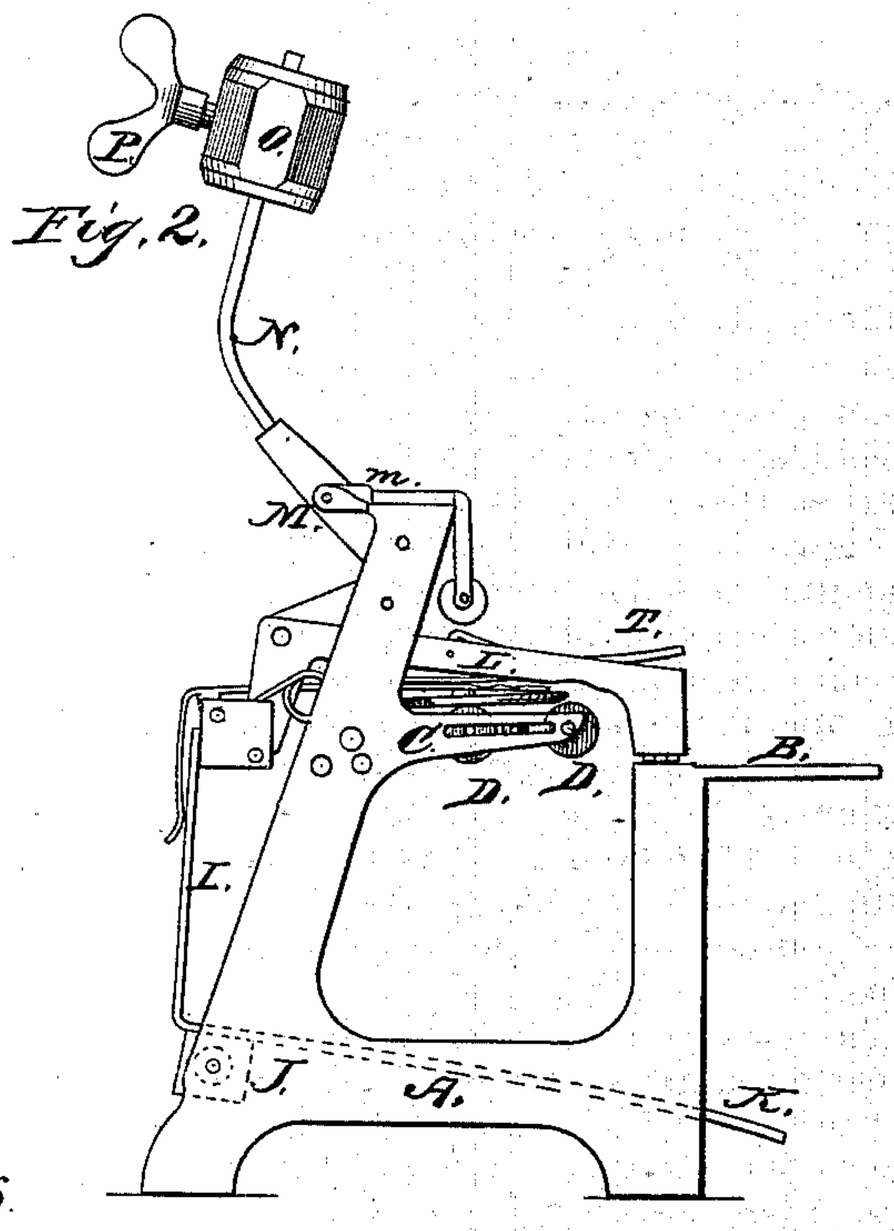


Fig. 6.

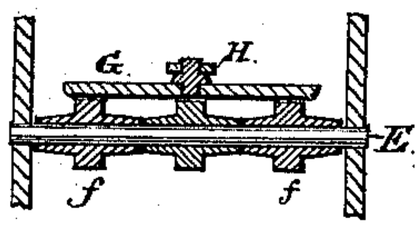


Fig. 4.

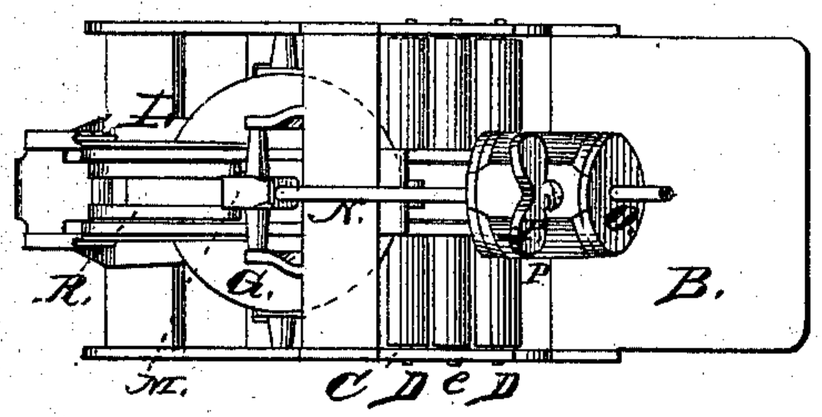


Fig. 3.

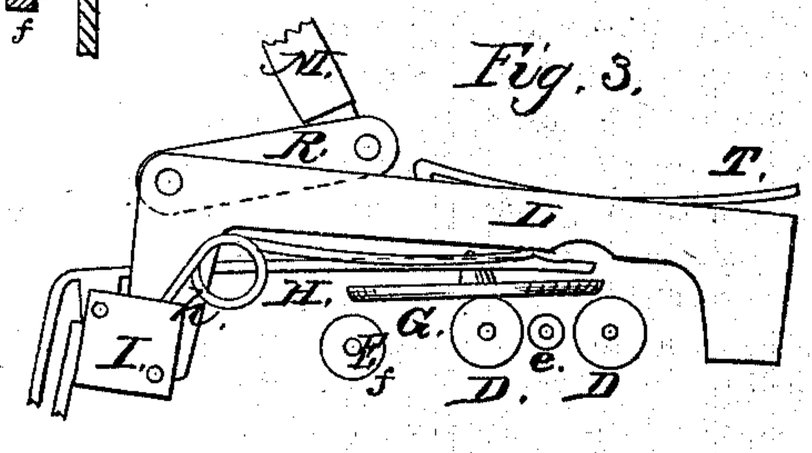
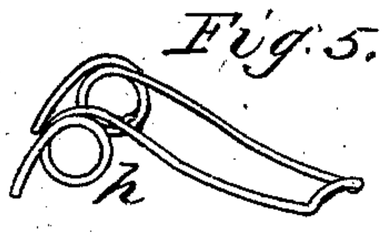


Fig. 5.



Witnesses.

Sterling Doane.

Michael Cook

Inventor.

Samuel W Soule.

UNITED STATES PATENT OFFICE.

SAMUEL W. SOULE, OF NEW YORK, N. Y.

IMPROVEMENT IN HAND-PRESSES.

Specification forming part of Letters Patent No. **146,786**, dated January 27, 1874; application filed July 29, 1872.

To all whom it may concern:

Be it known that I, SAMUEL W. SOULE, of the city, county, and State of New York, have invented, made, and applied to use certain Improvements in Hand-Presses; and that the following is a full, clear, and correct description of the same, reference being had to the accompanying drawing making part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a side elevation of my printing-machine, the type receiving its ink. Fig. 2 is a side elevation of the same, the type giving an impression. Fig. 3 is a detached view of the operative parts of my printing-machine. Fig. 4 is a top view of the machine. Fig. 5 is a view of the spring *h*. Fig. 6 is a transverse section of the spindle E, rollers *f*, and table G.

In the drawing, like parts of the invention are pointed out by the same letters of reference.

The nature of the present invention consists in certain improvements, as more fully set forth, in the construction of a printing-press, the object of the invention being the production of a printing-machine simple in operation and capable of executing its work rapidly, and at the same time producing a sharp, clear, and well-defined impression.

To enable those skilled in the arts to make and use my invention, I will describe the same.

A shows a frame for supporting the operative parts of the machine, composed of the side pieces united by the front and rear stretchers. B shows a table, secured to the frame A and projecting therefrom, upon which the sheet of paper or card to be printed is placed. C are slotted supports, in which are placed the inking-rollers D and an intermediate roller, *e*, much smaller in diameter than either of the rollers D, between which it is placed. Back of the supports C is placed a spindle, E, having upon it the rollers *f*. This spindle E is supported in the frame C, and the rollers *f* are passed over and are free to revolve upon it, with the exception of one of the two end rollers, which is stopped by a pin inserted in the frame C, and entering a slot in the roller. The central roller is made smaller in diameter than either of the other rollers, and serves to support the ink-table G until, as the plate G recedes, it rises upon the larger rollers, and, as one of these rollers is free to move upon its axis, the ink plate or table G is rotated a small distance at the extreme of its backward movement by the excess of friction that the roller stopped by the pin has over the roller free to move upon its axis. When the ink-table is carried forward, all the rollers turn in unison until one is arrested by the pin, at or about which time the table G rises upon one of the rollers D, and a counter revolution of the table is prevented. G shows an ink-table, employed to supply one of the ink-rollers D (the rear one) with ink. This table G is made circular, and is held and carried by a strip of metal, H, attached to the upper end of the bell-crank lever I. To this strip and to the lever I is attached a spring, *b*, for the purpose of giving additional pressure of the ink-table upon the ink-roller D. I shows a bell-crank lever, secured upon a rock-shaft, J, held in the frame A, and provided with a treadle, K. To the upper end of this lever I is attached the strip of metal H and the frame L, in the forward end of which is secured the type or form from which an impression is to be taken. M shows a lever, having its fulcrum at *m*, and N is a stiff spring, forming a continuation of said lever, upon which the weight O is held by means of a set-screw, P, the weight being adjusted upon said spring N, to govern the velocity with which the machine may be run. If the speed of the machine is to be increased, the weight O is placed nearer the fulcrum *m*, and vice versa. The opposite end of the lever M is pinned to the forward ends of the connecting-links R, the rear ends of said links being attached to the frame L, in which is secured the type to give the impression. Thus the frame L moves in an opposite direction with the weight O, and as the frame L advances or has a forward movement, the weight is thrown back.

The operation of the machine may be thus described: The ink, having been placed upon the ink-table G or rear ink-roller D, is distributed by operating the treadle K of the machine, by which a forward movement is given to the frame L and strip H, supporting the ink-table G. As the ink-table G has a forward movement given to it through the operation of the treadle K, it is brought into contact with the

rear ink-roller D, causing the same to partially revolve, and to be supplied with ink; or, if the ink has been placed upon this roller, the same is broken up by the table passing over and in contact with it. The rear roller imparts a supply of ink to the front roller D through the intermediate roller *e*, turned by contact with it, and this roller is free to turn by or through contact with the intermediate roller *e*. After the ink has been properly broken up, the type is secured in the forward end of the frame L, and the card or paper is placed upon the table B of the machine. Power is then applied to the treadle K of the machine, by which a forward movement is given to the frame L, in which is secured the type, and the type or form is carried from the ink-roller D, and at the moment the forward movement of the type is arrested by a stop, the momentum of the weight O acts on the type to give to the same an independent motion, by which an impression is produced. During this movement of the frame L the ink-table has been carried onto and partially over the roller D, causing the same to be brought into contact with the intermediate roller *e*, and the latter with the forward roller, and as the rollers revolve in unison the ink is broken up and ready to be supplied to the type on its return movement. The operation of the treadle continuing, the spring N and weight O are carried forward to their former position, the type moving back to the ink-roller D, being guided in its return movement by the piece T, and the ink-table moves on the rollers secured upon the spindle, and is partially revolved by one of them, which has a rotary movement imparted to it.

For purposes of rapid printing, or for canceling stamps placed upon letters, my machine will be found particularly applicable.

Having now described my invention, what I claim as new is—

1. The lever M, in combination with the weight O and type-carrier L, for the purposes set forth.

2. The combination of the ink-table G and rollers D and *e* with the spindle E and rollers *f*, as and for the purposes set forth.

SAMUEL W. SOULE.

In presence of—

A. SIDNEY DOANE,

WM. HASTINGS.