C. H. BACON.

Inking Apparatus for Printing-Machine.

No. 207,934. Patented Sept. 10, 1878.

Fig. 1.

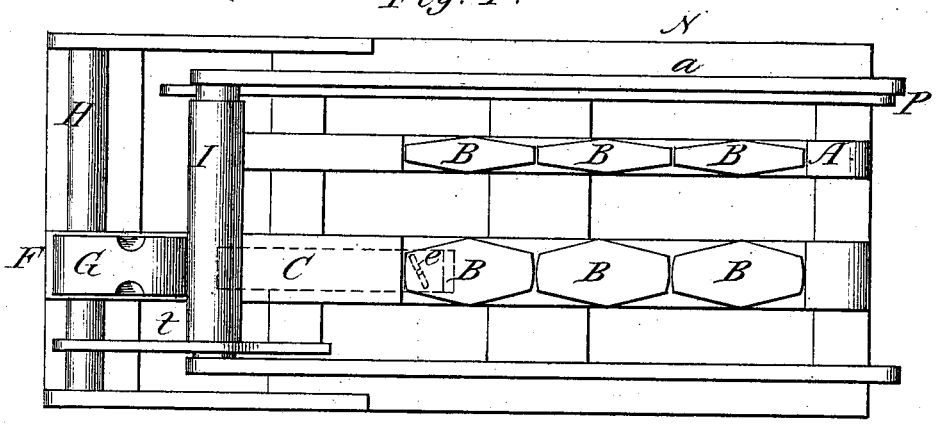


Fig. 2.

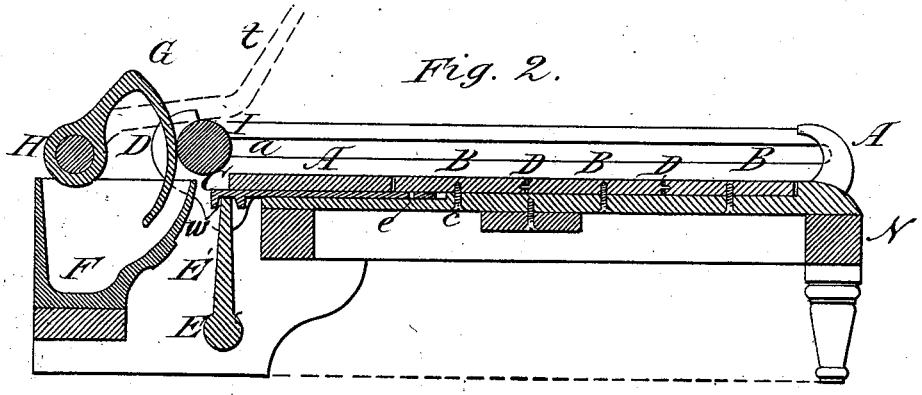


Fig. 3.

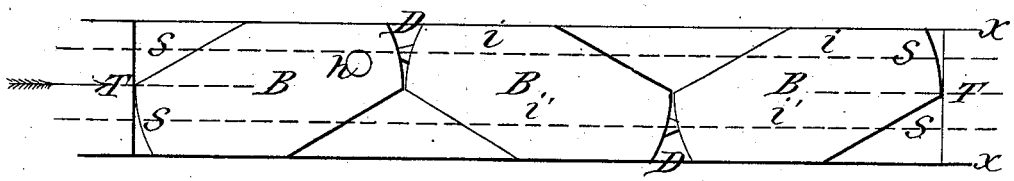
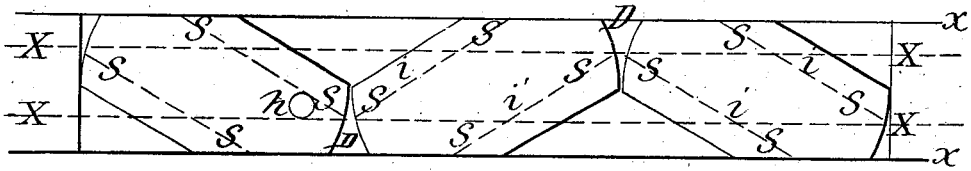


Fig. 4.



Attest:

Charles Brigham

Charles C. Sherwood

Inventor.

Charles H. Bacon

UNITED STATES PATENT OFFICE.

CHARLES H. BACON, OF BOSTON, ASSIGNOR TO CHARLES BRIGHAM, OF WATERTOWN, AND C. C. LIVERMORE, OF CAMBRIDGE, MASSACHUSETTS, THREE-EIGHTHS TO EACH.

IMPROVEMENT IN INKING APPARATUS FOR PRINTING-MACHINES.

Specification forming part of Letters Patent No. **207,934**, dated September 10, 1878; application filed January 14, 1878.

To all whom it may concern:

Be it known that I, CHARLES H. BACON, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Inking Apparatus for Printing-Machines, which improvement is fully set forth in the following specification and accompanying drawings.

My invention is a distributing-table consisting of one or more series of vibrating plates, arranged and operating, as fully described hereinafter, so that each plate shall change its position after each movement of the roller, while peculiar facilities are afforded for distributing different-colored inks simultaneously in parallel bands or lines.

A further improvement relates to the ink-carrier.

In the drawings, Figure 1 is a plan view illustrating my improved distributing-table and ink-carrier; Fig. 2, a sectional elevation, and Figs. 3 and 4 plan views drawn to an enlarged scale, showing the vibrating plates in different positions.

The table consists of one or more series of plates, B, each series arranged on a line at right angles to the axis of a distributing-roller, I, moving in guides *a*, supported by a frame, N.

In the present instance each plate B is movable about a central pivot or pin, *c*, and lugs D on one plate enter recesses in the others, so that all are geared together to secure simultaneous vibration, the adjacent plates moving in opposite directions.

The motion may be secured by different mechanical appliances, the device shown consisting of a plate, C, having an inclined slot to receive a pin, *c*, on one of the plates B, and reciprocated longitudinally by a rock-shaft, E, having an arm or blade, E′, connected to the plate. A pin, *w*, at the edge of the blade enters a slot in a slide, P, which is struck by the roller I as it approaches the limit of its movement in either direction, and moves with it, turning the rock-shaft E and changing the position of each plate B.

The plates B are so formed that when they are at the limit of their movements in either direction the extreme edges on that side shall all be on the same line *x x*.

As each plate changes its position after the passage of the roller the line of travel of the roller over each plate changes with each passage. Thus, in moving in the direction of the arrow, Fig. 3, the roller traverses each plate in the direction of the lines S S, but in returning, after the change in position of the plates, traverses the latter on the lines X X, crossing the former path, S S, on each plate at an angle, as shown in Fig. 4.

The change in position of each plate is absolutely necessary to secure a lateral distribution of the ink at each movement of the roller. If, for instance, but one of the plates B was movable, an accumulation of ink at a point, *h*, would be carried first along the line *i*, and then along the parallel line *i′*, but in streaks, and without being spread laterally to any considerable extent.

When, however, the position of both adjacent plates is changed, bringing them at different angles in respect to each other, the ink carried from *h* along the line *i*, when the parts are in the position shown in Fig. 3, will be spread across the face of the plate on the next movement of the roller after the change to the position shown in Fig. 4.

By the use of several series of movable plates having edges which are brought to coincide with the same lines *x* different colors may be distributed evenly in stripes or bands, to insure a close arrangement of parallel colors without blending in chromatic printing.

To facilitate the transfer of ink from the well F to the roller I, I employ a rock-shaft, H, carrying a curved arm or segment, G, which is dipped into the ink, and then raised into contact with the roller as it reaches the limit of its rearward movement.

A ready mode of imparting this movement is by means of a bent arm, *t*, struck and raised by the roller as it moves to the rear, and turning the shaft H, to which it is connected.

I am aware that a single vibrating plate and a stationary plate have been used together in a distributing-table, and do not claim, broadly, a table having a series of plates; but

I claim—

1. The combination, in a distributing-table, of a series of pivoted plates arranged on the

same line, and mechanism, substantially as described, for vibrating the adjacent plates in contrary directions, as specified.

2. The series of pivoted plates B, arranged and constructed, as described, with edges which, when the plates are at the limit of their movement, coincide with the same straight line, as set forth.

3. The combination of the rock-shaft H, curved ink-feeder G, and fountain F, arranged and operating in respect to the distributing-roller I as set forth.

CHARLES H. BACON.

Witnesses:
CHARLES BRIGHAM,
CHARLES C. LIVERMORE.