

(No Model.)

G. P. FENNER.
SHEET DELIVERY FOR PRINTING PRESSES.

No. 469,555.

Patented Feb. 23, 1892.

Fig. 1.

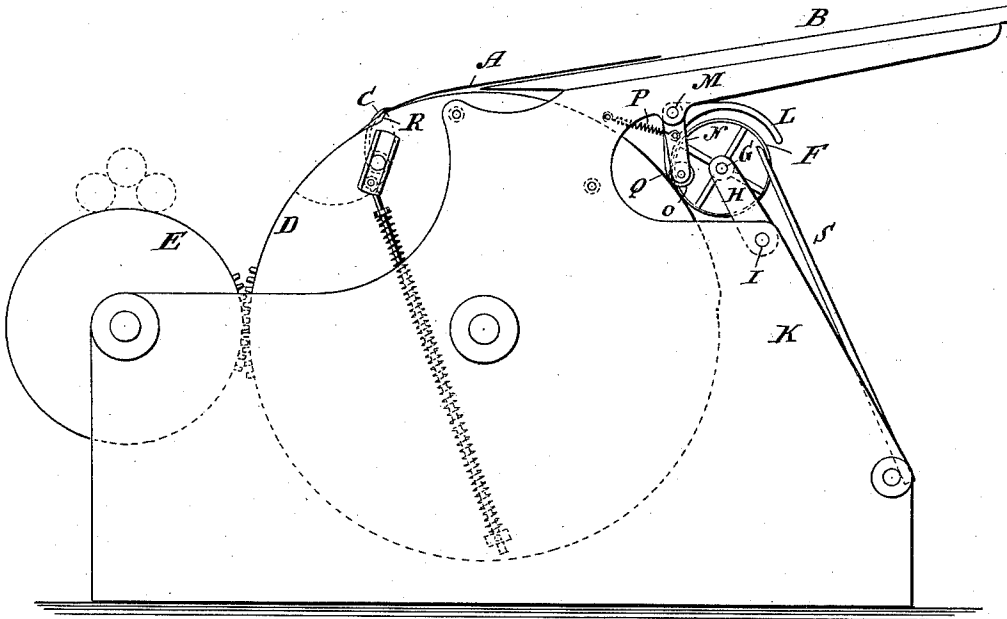


Fig. 2.

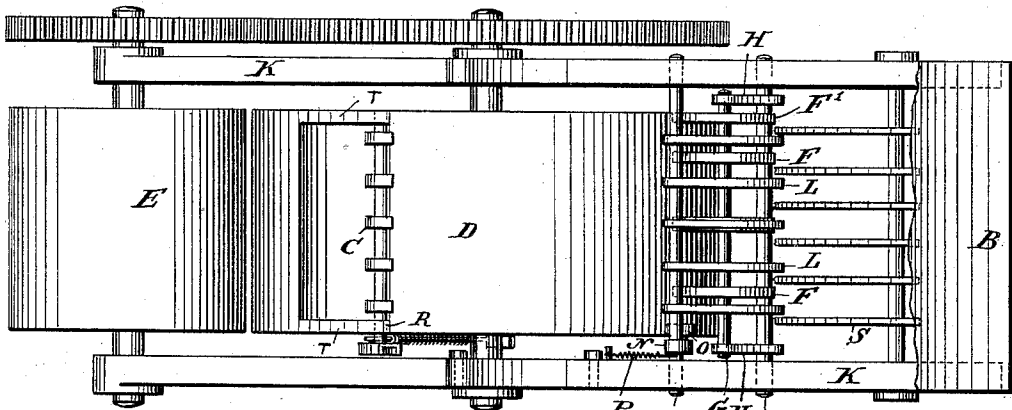
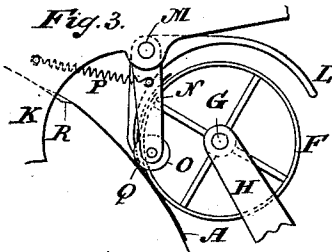


Fig. 3.



WITNESSES:

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INVENTOR:

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BY

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UNITED STATES PATENT OFFICE.

GEORGE P. FENNER, OF NEW LONDON, CONNECTICUT.

SHEET-DELIVERY FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 469,555, dated February 23, 1892.

Application filed September 17, 1891. Serial No. 405,986. (No model.)

To all whom it may concern:

Be it known that I, GEORGE P. FENNER, a citizen of the United States, residing at New London, in the county of New London and State of Connecticut, have invented new and useful Improvements in Sheet-Delivery for Printing-Presses, of which the following is a specification.

This invention relates to an improvement in sheet-delivery for printing-presses, and by means of this invention the use of tapes or grippers in the delivery mechanism is dispensed with, as set forth in the following specification and claims and illustrated in the annexed drawings, in which—

Figure 1 is a side elevation of a printing-press containing my invention. Fig. 2 is a plan view of Fig. 1. Fig. 3 is a detail view showing parts in a different position than in Fig. 1.

The sheet A, taken off the feed-board B by the grippers C on the impression-cylinder D, receives an impression on passing the type-bed E.

The delivery mechanism consists of a cylinder or series of disks or wheels F, having a shaft G. Said shaft turns loosely in a bearing at each end, said bearings being formed in or by the arms H. These arms H are carried by a shaft I, supported by the frame or base K of the machine. As the arms H swing freely and are placed at the proper angle or incline, as seen in Fig. 1, the delivery-cylinder F bears with considerable force or weight against the surface of the impression-cylinder, so as to conform to any irregularities of said cylinder, and at the same time the delivery-cylinder is turned by the frictional contact with the impression-cylinder. The fingers L are supported by the pivot or shaft M, so as to swing readily. To the shaft M is secured a lever or arm N, having a friction-roller O bearing on the surface of the impression-cylinder. A spring P holds the roller O in contact with the surface of the impression-cylinder.

After the sheet A has passed the type-bed E it is carried along until its leading end is caught between the delivery-cylinder F and the impression-cylinder D. The grippers C then move to their releasing position to release the sheet, and the latter is carried along

by the frictional contact between the impression and delivery cylinders. Upon the grippers releasing their hold the points Q of the fingers L catch under the leading edge of the sheet and the slight incline R then strikes the roller O, which roller just previous to this time had dropped in the depression of the cylinder D. Consequently the incline R pushes the roller O with the points Q outward or away from the cylinder D, so as to lift the edge of the sheet off said cylinder. The fingers L then strip the sheet off the impression-cylinder and guide it about the delivery-cylinder to the fly S.

To prevent the delivery-cylinder from falling into the gripper-opening in the impression-cylinder, one of the delivery-disks—as, for example, disk F'—is placed in such position that it always runs on one end or on a rim or flange T of the impression-cylinder, said rim or flange being so formed as to hold the delivery-cylinder from falling into the depression or gripper-opening.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with an impression-cylinder, of a delivery-cylinder mounted in swinging bearings and in frictional contact with the impression-cylinder, said impression-cylinder being provided with a rim or flange and said delivery-cylinder being made to run in part on said rim or flange, so that the delivery-cylinder is held out of the gripper-depression in the impression-cylinder, and means for stripping the leading edge of the sheet from the delivery-cylinder at the proper time, substantially as described.

2. The combination, with an impression-cylinder having a rim or flange, of a delivery-cylinder and swinging arms for supporting said delivery-cylinder, said arms being placed at an angle, so as to secure frictional contact between the impression and delivery cylinders, and means for stripping the leading edge of the sheet from the delivery-cylinder at the proper time, substantially as described.

3. The combination, with an impression-cylinder having a rim or flange, of a delivery-cylinder actuated by frictional contact with the impression-cylinder, swinging arms which carry the delivery-cylinder, and guide fingers or strippers for taking the sheet off the im-

pression-cylinder and guiding it about the delivery-cylinder, substantially as described.

4. The combination, with an impression-cylinder, of a delivery-cylinder actuated by
5 frictional contact with the impression-cylinder, swinging guide fingers or strippers for taking the sheet off the impression-cylinder, an actuating-arm for said fingers, said arm being extended into contact with the impression-cylinder, and means for operating said
10 actuating-arm, substantially as described.

5. The combination, with an impression-cylinder, of a delivery-cylinder actuated by
15 frictional contact with the impression-cylinder, swinging guide fingers or strippers for

taking the sheet off the impression-cylinder and guiding it about the delivery-cylinder, an actuating-arm for said fingers, said arm carrying a roller in contact with the impression-cylinder, a spring for holding the arm to
20 the impression-cylinder, and an incline on the impression-cylinder for acting on said roller, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing
25 witnesses.

GEORGE P. FENNER.

Witnesses:

NATHAN BABCOCK,

WILFRED D. WELLS.