(No Model.) 2 Sheets—Sheet 1.

G. P. FENNER.

PRINTING PRESS.

No. 455,664. Patented July 7, 1891.

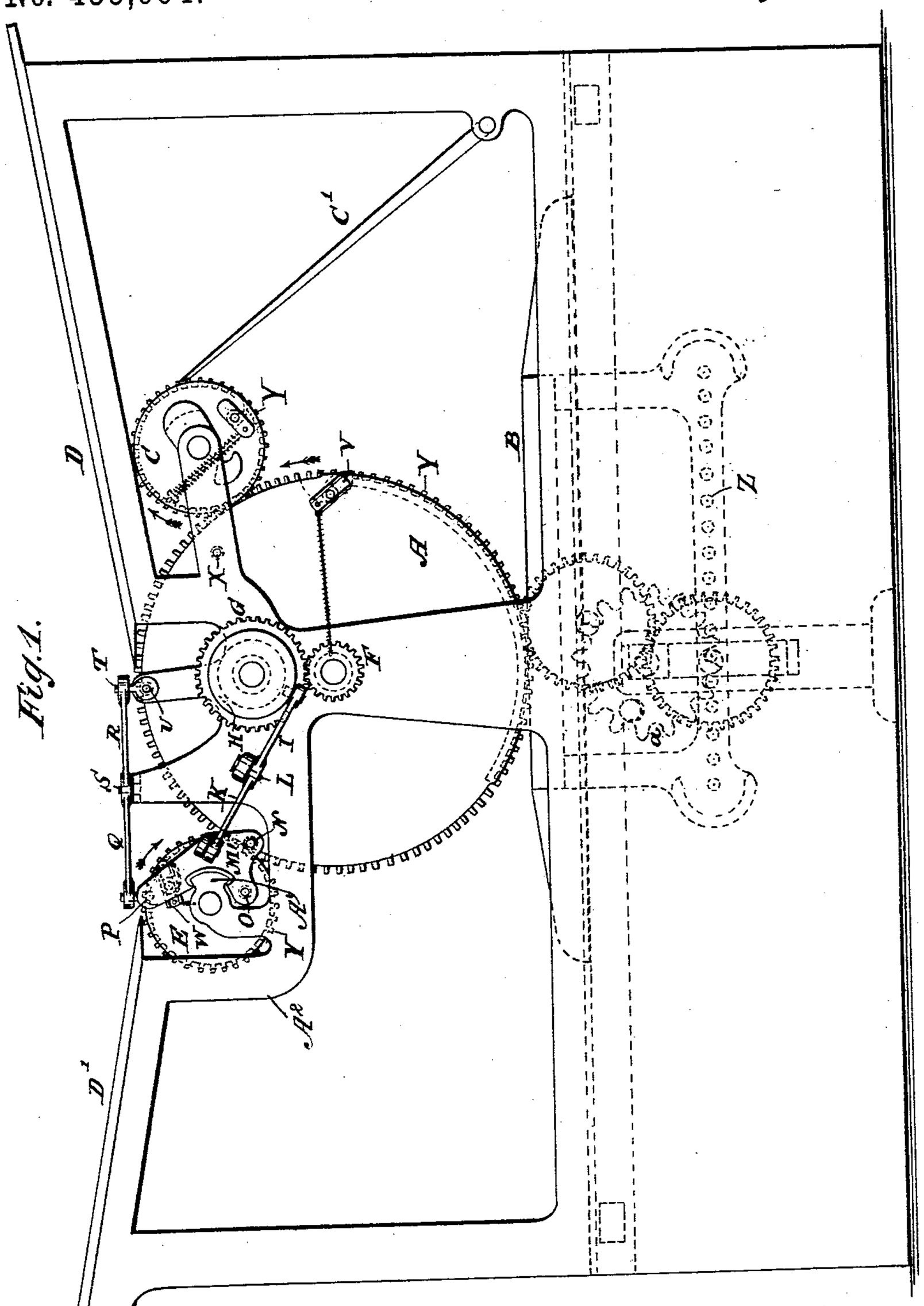

Fig. 1.

WITNESSES:

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

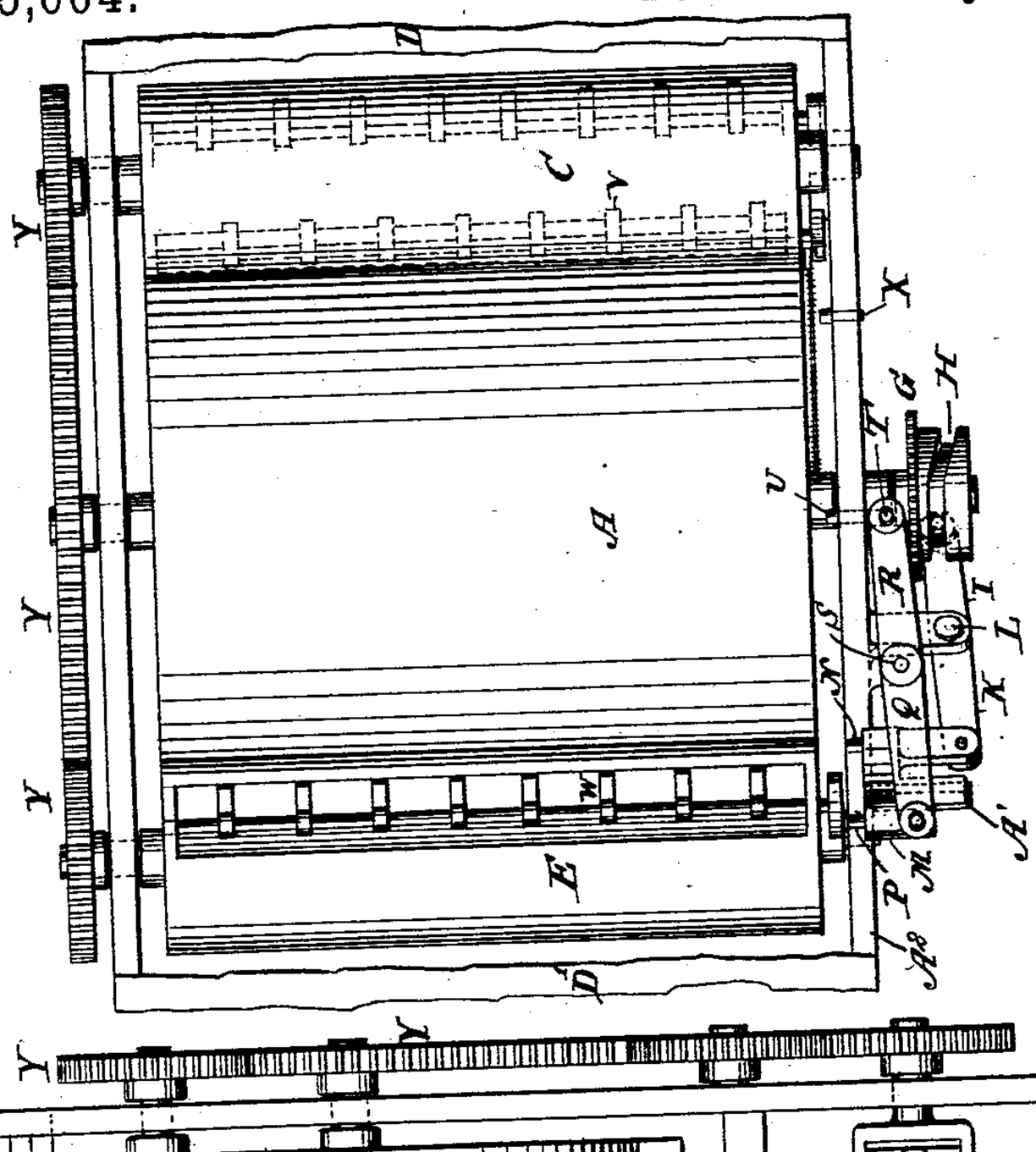
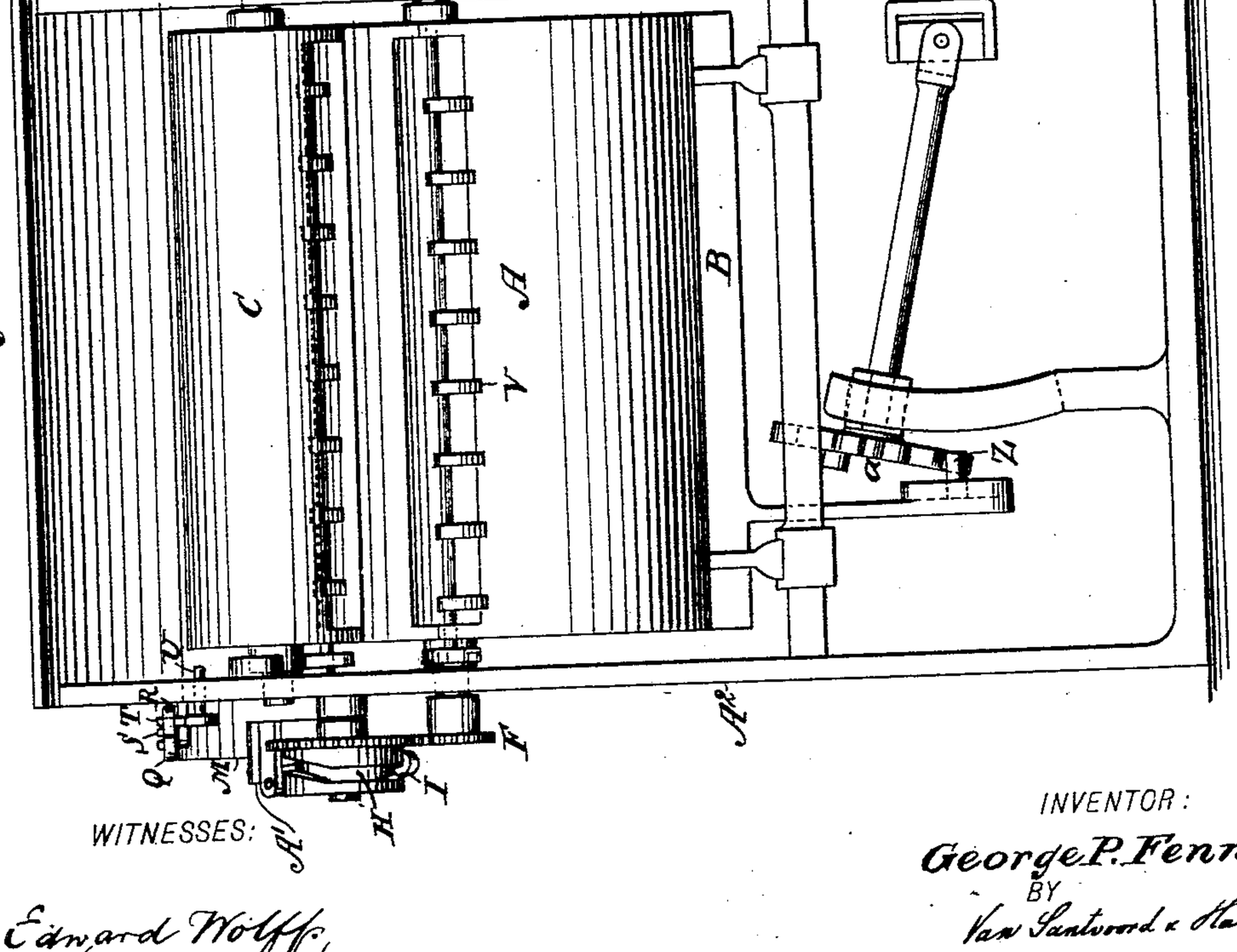


Fig. 2.



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UNITED STATES PATENT OFFICE.

GEORGE P. FENNER, OF NEW LONDON, CONNECTICUT.

PRINTING-PRESS.

SPECIFICATION forming part of Letters Patent No. 455,664, dated July 7, 1891.

Application filed March 19, 1891. Serial No. 385,646. (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 Printing-Presses, of which the following is a specification.

This invention relates to an improvement in printing-presses; and the invention consists in the details of construction 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 rear elevation of Fig. 1. Fig. 3 is a plan view of Fig. 1.

In the drawings, the letter A indicates an impression-cylinder, and B is a horizontally-reciprocating type-bed. The printed sheets are taken off the cylinder A by the delivery mechanism C, which may be either a delivery-cylinder or any other suitable form of delivery well known in the art. The delivery mechanism C delivers the sheets to the fly C′.

The press is shown as having two feeders or feed-boards D D′. By feeding sheets alternately from one feeder and then from the other to the cylinder A said cylinder can be kept supplied with sheets even when running at a high rate of speed. The sheets from feeder D are taken by the cylinder A, while the sheets from feeder D′ are taken by the auxiliary cylinder E and thence delivered to the impression-cylinder A. The cylinder A transmits motion through gear F to gear G, to which is connected a groove-cam H. The gear G and cam H make one revolution for every two revolutions of cylinder A. The cam H actuates a lever I K, fulcrumed at L. The lever-arm K is jointed to a movable or sliding frame M, having trippers or studs N O P. From the frame or support M extends a lever Q R, fulcrumed at S, and jointed at T to a tripper or stud U. The frame or support M is engaged with an arm A′, forming a part of the main supporting-frame A^2 in such manner that the frame or support M can be moved back and forth on the extremity of the arm A′. When the lever K L is oscillated so as to move the lever-arm K and frame or support M out, then the lever Q R is oscillated to move the lever-arm R and stud U inward, so that the stud or tripper U lies in the path of the grippers V, so as to cause them to grasp a sheet from the feeder D, which sheet after being printed is taken by the delivery C. On the next revolution of the cylinder A the frame M is moved inward by the lever I K, and the stud U is moved out by lever Q R, so that the grippers V clear the stud U. Said grippers are then tripped by the stud or tripper N, so as to take a sheet from the grippers W on the auxiliary cylinder E. The stud or tripper P, lying in the path of grippers W, trips said grippers, so as to cause them to grasp or close on a sheet coming from feeder D′, and the stud O opens the grippers W, so as to release the sheet, which is then grasped by the grippers V, tripped by stud N. At the next revolution of the cylinder the studs N O P and grippers W are out of action, and the stud U is again in action. The grippers V are opened by the stud X. Suitable gears Y transmit motion between the cylinders A C E and the horizontally-reciprocating type-bed B is shown actuated by the toothed wheel *a* and rack Z.

In case only one feeder is to be used the cylinder A is turned until the studs N O P are out, or in their inactive position, and the stud U is in, after which the fulcrum L is removed, so that the lever I K is inactive. The grippers V are then only tripped by the stud U and take sheets only from feeder D. The advantage of having two feeders when working rapidly is obvious.

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

1. The combination, with an impression-cylinder, a type-bed, and a feed device, of an auxiliary cylinder having gripper mechanism actuated from the impression-cylinder to take sheets alternately and deliver them to such impression-cylinder, substantially as described.

2. The combination, with an impression-cylinder having grippers, a type-bed, and a feed device, of an auxiliary gripper-cylinder for delivering sheets to the impression-cylinder, movable trippers for the grippers of the impression and auxiliary cylinders, and mech-

anism, substantially as described, for alternately moving said trippers into and out of action, substantially as described.

3. The combination, with an impression-cylinder having grippers, a type-bed, and a feed device, of an auxiliary gripper-cylinder, a tripper for the grippers of the auxiliary cylinder, a movable frame or support for said tripper, a cam for actuating said frame, and two trippers for the impression-cylinder grippers, one of said trippers being connected to the movable frame or support, and the other of said trippers being connected to a lever actuated by said movable frame, substantially as described.

4. The combination, with an impression-cylinder, a type-bed, and a feed device, of an auxiliary gripper-cylinder, a tripper for the grippers of the auxiliary cylinder, and a cam and lever for alternately throwing said tripper into and out of action, said lever having a removable fulcrum, so that on the removal of the fulcrum the lever is thrown out of action, substantially as described.

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

GEORGE P. FENNER.

Witnesses:
NATHAN BABCOCK,
WILFRED D. WELLS.