

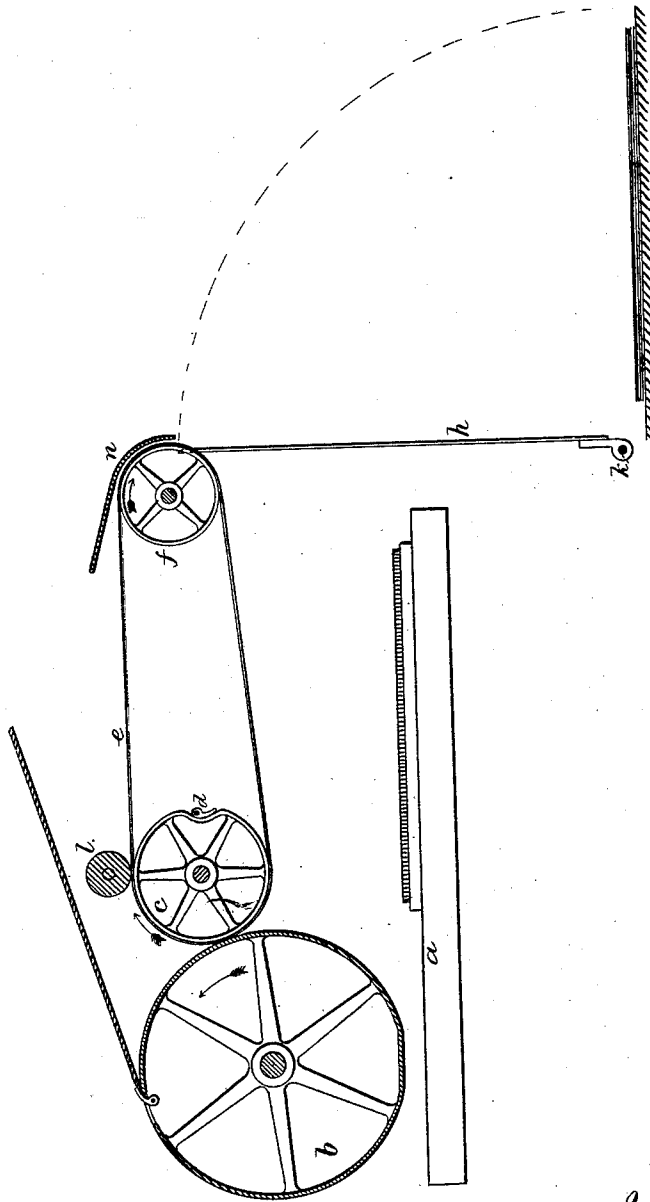
(No Model.)

C. POTTER, Jr.

Delivery Apparatus for Printing Machines.

No. 232,203.

Patented Sept. 14, 1880.



Witnesses,

Charles H. Smith
Harold Ferrell

Inventor

Charles Potter Jr.

per

Lemuel W. Ferrell
att'y

UNITED STATES PATENT OFFICE.

CHARLES POTTER, JR., OF PLAINFIELD, NEW JERSEY.

DELIVERY APPARATUS FOR PRINTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 232,203, dated September 14, 1880.

Application filed June 25, 1880. (No model.)

To all whom it may concern:

Be it known that I, CHARLES POTTER, JR., of Plainfield, in the county of Union and State of New Jersey, have invented an Improvement in Delivery Apparatus for Printing-Presses, of which the following is a specification.

Before my present invention an impression-cylinder had been employed with a flat reciprocating type-bed, and a delivery-cylinder having grippers to seize the advancing edge of the printed sheet had taken the sheet from the impression-cylinder and delivered it upon ranges of inclined belts, that conveyed the sheet along over the fly to near the base of said fly, in order that the fly might lift the sheet off the tapes and carry it over and lay the sheet on the pile of sheets. In this case the impression is liable to become blurred, because the fly acts to lift the sheet off the belts, and the two forces are acting positively on the sheet, and all parts thereof are not entirely clear of the tapes before the fly has stopped the endwise movement of the sheet, or else the sheet is still moved endwise by the tapes after it touches on portions of the fly-fingers.

In other instances the sheets have been delivered to a cylinder by belts, and from that they have passed vertically, or nearly so, to the fly. In these instances the printed sheet passed between belts and was liable to be blurred.

In my improvement I combine with the impression-cylinder, having grippers for the sheet, a second or delivery cylinder having grippers; and a range of belts and pulleys, to which the belts pass nearly horizontally, and a fly the upper ends of whose fingers pass in between the pulleys, and a stationary deflector, beneath which the sheet passes, and from which it receives a downward direction to cause it to pass in front of the fly. By this arrangement the printed sheet simply lies upon the belts while being conveyed along, and there is no risk of the impression being injured.

In the drawing I have represented my improvement by a vertical section.

The bed *a*, impression-cylinder *b*, delivery-cylinder *c*, grippers *d*, and range of endless belts *e* are the same as heretofore usually employed, except that the pulleys *f*, for the end-

less belts or tapes, are at about the same height as the delivery-cylinder; or they may be higher instead of being lower, as heretofore employed.

The fly *h* is upon the rock-shaft *k*, and is operated as usual, except that the fly-fingers, instead of remaining at an inclination beneath the delivery-belts, stand vertically, or nearly so, and a contact-roller at *l* insures the passage of the sheet upon the nearly horizontal tapes after the grippers *d* have let go of the advancing edge.

If the sheet were allowed to move by the action of the belts alone, the inertia and the atmosphere would tend to carry the sheet out nearly level from the pulley *f*, and the sheet would fall in a shapeless mass. To avoid this difficulty I make use of a segmental deflector, *n*, that is adjacent to the pulleys *f*, so that the sheet, as its advancing end passes beneath this deflector, is directed downwardly, and its course is changed from a horizontal to a perpendicular direction, and I find that the air intervening between the deflector and the printed sheet prevents the first impression being blurred, the last impression being next to the tapes.

It will now be evident that the printed sheet passes vertically down in front of the fly, and hence that it is entirely clear of the tapes at the time that the fly acts upon the same and arrests its downward movement, and carries it in the arc of a circle and deposits it upon the pile of printed sheets.

I claim as my invention—

In combination with the impression-cylinder and its grippers, a delivery-cylinder having grippers to take the sheet from the impression-cylinder, a range of belts around the delivery-cylinder, and the distant range of pulleys for such belts, whereby the sheet is conveyed horizontally, or nearly so, a fly the upper ends of whose fingers pass in between the pulleys, and a stationary deflector to give to the sheet a vertical direction in front of the fly, substantially as set forth.

Signed by me this 22d day of June, A. D. 1880.

CHARLES POTTER, JR.

Witnesses:

GEO. T. PINCKNEY,
CHAS. H. SMITH.