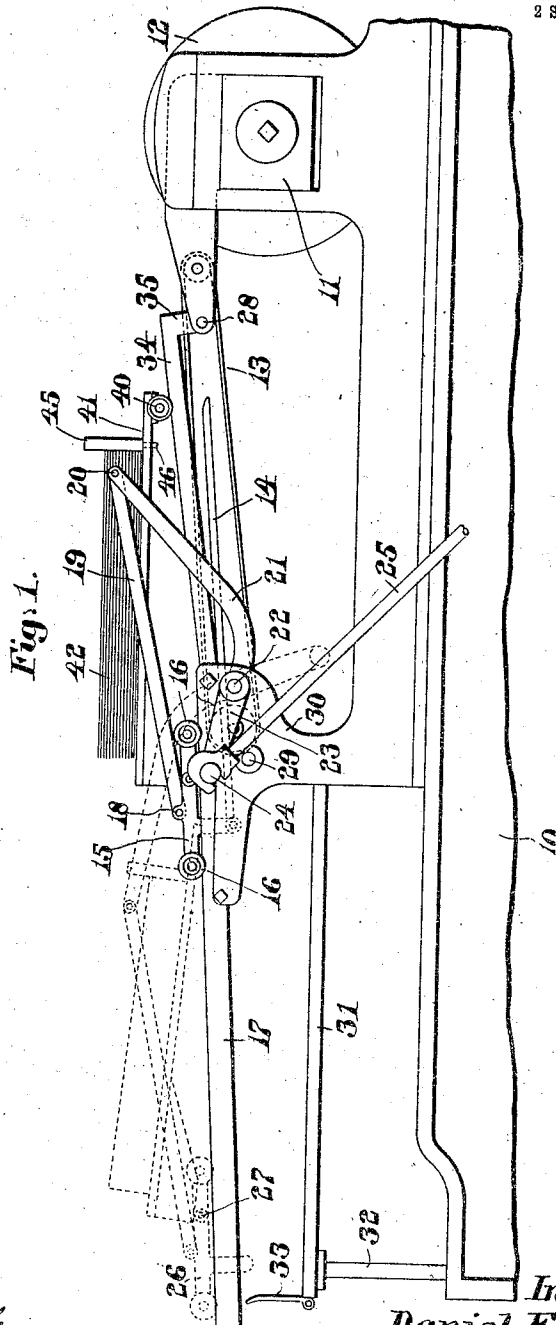


D. F. REID & H. C. JOHNSON.
SHEET FEEDING DEVICE FOR PRINTING PRESSES.
APPLICATION FILED FEB. 15, 1912.

1,054,987.

Patented Mar. 4, 1913.

2 SHEETS—SHEET 1.



Witnesses:
Edward F. Allen.
H. C. Lombard

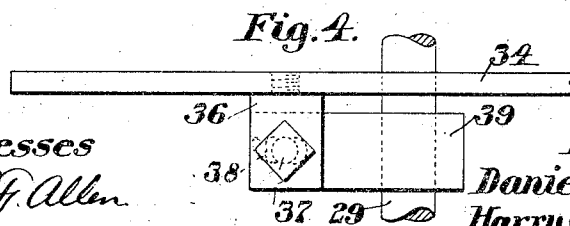
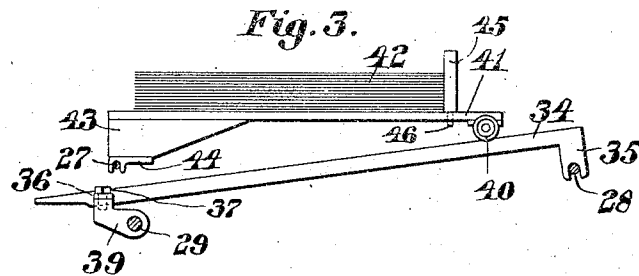
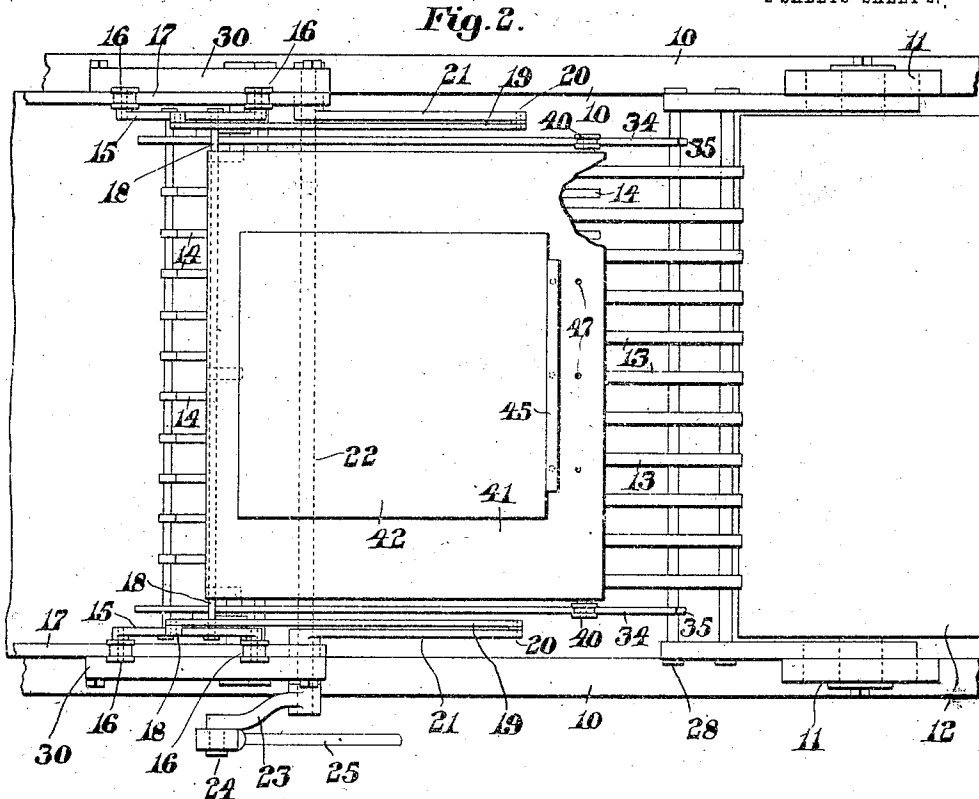
Inventors;
Daniel F. Reid,
Harry C. Johnson.
by Walter E. Lombard,
Atty.

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UNITED STATES PATENT OFFICE.

DANIEL F. REID, OF DORCHESTER, AND HARRY C. JOHNSON, OF CAMBRIDGE,
MASSACHUSETTS.

SHEET-FEEDING DEVICE FOR PRINTING-PRESSES.

1,054,987

Specification of Letters Patent.

Patented Mar. 4, 1913.

Application filed February 15, 1912. Serial No. 677,855.

To all whom it may concern:

Be it known that we, DANIEL F. REID and HARRY C. JOHNSON, citizens of the United States of America, and residents of Dorchester, in the county of Suffolk, and Cambridge, in the county of Middlesex, State of Massachusetts, respectively, have invented certain new and useful Improvements in Sheet-Feeding Devices for Printing-Presses, of which the following is a specification.

In the art of fine printing it is always customary to insert between the printed sheets other sheets known as slip sheets to prevent the ink being offset.

Heretofore, when these slip sheets are used, they are piled on a platform at one side of the press and it has been necessary for the feeder to stand at the end of the printing press and as the printed sheets are delivered from the platen upon the delivery rack a slip sheet is seized in one hand, transferred to the other, and placed upon the printed sheet before another printed sheet is delivered thereon. Owing to the position that the feeder has been obliged to take at the end of the machine while the sheets are at the side of the press, he has been obliged to reach over operating parts of the machine, which in their movement interfere materially with his operations, as he must continuously be on guard to prevent injury to himself and also injury to the operating parts of the delivery mechanism. Moreover, when the feeding of the slip sheets is done in this manner, the feeder is kept continuously at work and under considerable strain both arms being always in operation.

Obviously the feeding of the slip sheets from the side of the printing press is very objectionable for the above stated reasons, and to overcome these objections is the principal purpose of the present invention.

This invention provides for moving the platform adapted to support the slip sheets, which platform will move with the delivery mechanism into a position where an operator at the end of the printing press may seize the upper slip sheet and hold it while the movable rack supporting the slip sheets returns to its normal position, thus permitting the sheet seized by the operator to be dropped upon the upper face of the last printed sheet preparatory to the delivery thereon of another printed sheet. This greatly simplifies the work of inserting the

slip sheets between the printed sheets and may be quickly and accurately performed by even the cheapest labor, while, when the slip sheets are inserted by a feeder from the side of the press an experienced and thoroughly skilled helper is necessary.

The invention consists in certain novel features of construction and arrangement of parts which will be readily understood by reference to the drawings and to the claims hereinafter given.

Of the drawings: Figure 1 represents a side elevation of so much of a printing press as is necessary to show the connection of the present invention applied thereto. Fig. 2 represents a plan of a portion of the same. Fig. 3 represents an elevation of the movable rack supporting the slip sheets and the track supporting the same, and Fig. 4 represents an enlarged detail in plan of one of the supports for the movable rack supporting track.

Similar characters designate like parts throughout the several figures of the drawings.

In the drawings, 10 represents a portion of the side frame of a printing press provided with a bearing 11 for a cylindrical platen 12 from which printed sheets are delivered onto endless bands 13 in the usual manner, and are moved lengthwise thereon onto the fingers 14 supported by a traveling carriage 15 provided with trucks 16 movable lengthwise of the inclined rails 17. At 18 a coupler 19 is pivoted to the traveling carriage 15, the opposite end of said coupler being pivotally connected at 20 to an oscillating arm 21 secured to a shaft 22 which has also secured at one end thereof an arm 23 the outer end of which is provided with a stud 24 to which is pivotally connected a link 25 the opposite end of which is connected to some movable part of the printing press which will cause in its movement a continuous oscillation of the shaft 22, and thereby move the carriage 15 from its normal position as shown in full lines in Fig. 1 of the drawings, to a position shown in dotted lines in said figure at 26, and subsequently return the carriage to its normal position. The two side frames of the carriage 15 are connected together by means of a rod 27. In the ordinary construction of a printing press a shaft 28 extends transversely thereof, and a smaller shaft 29 extends

transversely of the press and is supported in bearings in the upwardly extending bracket 30 of the side frames 10. Between the side frames 10 of the printing press at the delivery end of the press is a rack 31 supported by members 32 and having an end stop 33. All of the parts heretofore described are common to most cylinder presses and particularly to the Miehle printing press, a portion of which is shown in the drawings as one type of printing press to which the present invention may be applied. An inclined rail 34 is provided with a downwardly extending forked arm 35 straddling the shaft 28 between its bearings, the opposite end of which is pivotally secured to a member 36 in turn adjustably secured by means of the bolt 37 extending through a slot 38 to an arm 39 mounted upon the shaft 29.

In the operation of printing the platen cylinder 12 is raised and lowered slightly, and during this movement the rail 34 is permitted to accommodate itself to this movement by turning about its pivotal connection with the member 36. Supported at one end by trucks 40 movable lengthwise of the rails 34 is a movable platform 41 adapted to support a pile of slip sheets 42, the opposite end of said platform being provided with a bracket 43 to the lower end of which is secured a forked member 44 straddling the rod 27 forming a part of the movable carriage 26. The slip sheet supporting rack 41 is provided with a registering member 45 having a plurality of pins adapted for insertion in the holes 47 in said rack 41. This provides a ready means for adjusting the registering member longitudinally of the rack 41, said registering device preventing the slip sheets from moving endwise at one end of the movement of said rack, while at the other end of said movement the sheets are prevented from becoming displaced by the inclination of the rack as indicated in dotted lines in Fig. 1 of the drawings. It is obvious that from this construction the sheet delivery mechanism which conveys the printed sheets from the platen to the delivery rack 31 operates in unison with the movable slip sheet supporting rack 41. While the printed sheet is being carried by the fingers 14 into position to be dropped upon the rack 31 a pile of slip sheets on the rack 41 is simultaneously being moved into the position shown in dotted lines in Fig. 1 of the drawings. This provides a means whereby a boy or other helper standing at the end of the printing press may simply place his fingers upon the upper slip sheet, and as the rack carrying the same makes a return movement toward the platen 12 the pile of slip sheets is removed from under the upper one, thereby permitting the helper to place it upon the last printed sheet delivered to the rack 31.

By the use of such a device as is herein described the press may be run at a greater speed inasmuch as by the old method of feeding the slip sheets the speed of the press is determined by the skill of the slip sheet feeder, and as the latter has many movements to make in order to place a slip sheet in position upon the printed sheet, the speed of the press is necessarily limited to the rapidity with which he can feed the sheets. The work of the helper with the present construction operating at the end of the press is so simple that the press may be speeded up to its limit and the slip sheets interposed between the printed sheets as fast as they can be delivered to the rack 31. Obviously this is a great advantage.

It is believed that the operation and many advantages of the invention will be thoroughly understood from the foregoing.

Having thus described our invention, we claim:

1. In a machine of the class described, the combination with a delivery rack to receive the printed sheets and mechanism for conveying said sheets thereto from the platen; supplemental rails provided with forked members straddling a transverse rod of the press and pivotally connected at the other end to another transverse rod; and a supplemental slip sheet supporting rack connected to said delivery mechanism and adapted to be reciprocated thereby over said rails into a position above the delivery rack.

2. In a machine of the class described, the combination with a delivery rack to receive the printed sheets and mechanism for conveying said sheets thereto from the platen; supplemental rails inclined downwardly toward the delivery end of the machine one end of each of which is pivotally connected to a transverse rod of the press while the other end is provided with a downward forked extension straddling another transverse rod; and a supplemental slip sheet supporting rack connected to said delivery mechanism and adapted to be reciprocated thereby over said rails into a position above the delivery rack.

3. In a machine of the class described, the combination with a delivery rack to receive the printed sheets and mechanism for conveying said sheets thereto from the platen consisting in part of a transverse rod; rails fixed from end movement; a supplemental slip sheet supporting rack provided at one end with trucks movable on said fixed rails and at the other with downward forked extensions straddling said rod and insuring a simultaneous movement of said conveying mechanism and said supplemental rack.

4. In a machine of the class described, the combination of mechanism for conveying the printed sheets to a delivery rack; separated rails supported by transverse rods on

the press; and a supplemental slip sheet supporting rack having grooved wheels at one end on said rails and arms straddling a transverse member forming a part of said conveying mechanism movable in unison with said sheet conveying mechanism and temporarily positioned above said delivery rack.

5. In a machine of the class described, the combination of mechanism for conveying the printed sheets to a delivery rack; separated rails supported by transverse rods on the press in inclined position; and a supplemental slip sheet supporting rack movable in unison with said sheet conveying

mechanism and temporarily positioned above said delivery rack in an inclined position, said rack being provided at one end with grooved wheels adapted to travel over said rails and at the other end with downward forked extensions straddling a rod forming a part of the printed sheet delivery mechanism.

Signed by us at 4 Post Office Sq., Boston, Mass., this 13th day of February, 1912.

DANIEL F. REID.

HARRY C. JOHNSON.

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