(No Model.)

J. FLANDERS.

MACHINERY FOR SLITTING PAPER.

No. 243,767. Patented July 5, 1881.

Fig. 1.

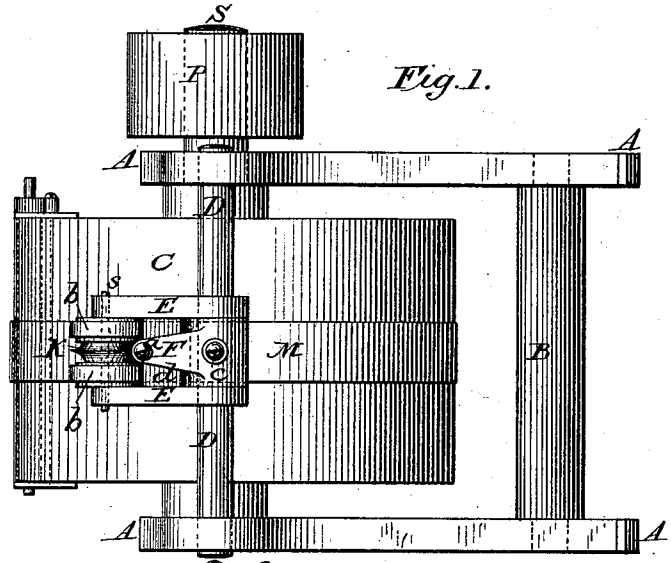


Fig. 2.

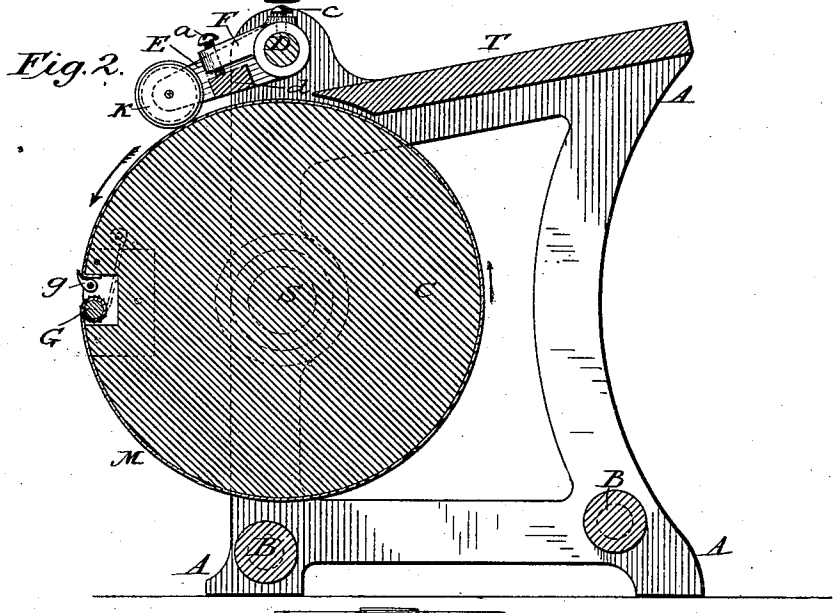
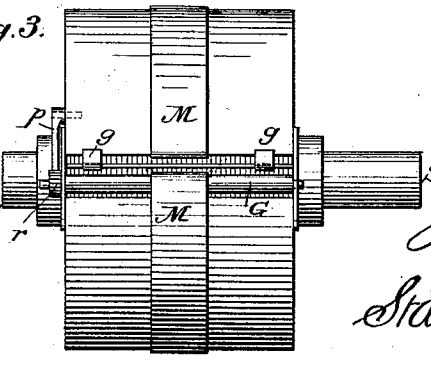


Fig. 3.



Attest.

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MACHINERY FOR SLITTING PAPER.

SPECIFICATION forming part of Letters Patent No. 243,767, dated July 5, 1881.

Application filed April 13, 1881. (No model.)

To all whom it may concern:

Be it known that I, JAMES FLANDERS, of the city of Augusta, in the county of Kennebec and State of Maine, have invented certain new and useful Improvements in Machinery for Slitting Paper as it Issues from Printing-Presses; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a top view of the machine. Fig. 2 is a longitudinal vertical section. Fig. 3 is a front view of the cylinder and gripers.

The same part is marked by the same letter of reference wherever it occurs in the drawings.

The object of my invention is to provide a convenient means by which paper can be slit while on the cylinder of the printing-press, at the time of printing, so as to cut the sheet in register with the printed matter upon it, and to save the rehandling of the paper, which would be necessary if it were cut after removal from the press. It is especially adapted and designed for that class of printing-machines in which there is no transfer of the paper to another cylinder from that on which it is carried during the operation of printing.

The nature of my invention consists in placing a metallic belt or strip around the drum, above the blanket and tympan-sheet, after the form is "made ready," and attaching above it a blunt rotary cutter, under which the paper passes and is severed by pressure upon the metallic belt, all as hereinafter more particularly set forth.

In the drawings, A marks the side frame of the press; B, the cross-framing; T, the feed-table; C, the carrying cylinder or drum, provided with the ordinary gripers, *g*, operating in the usual way. S is the cylinder-shaft, and P its driving-pulley.

M is the metallic belt, one end of which is fastened to the blanket-hook in the griper-recess, and the other end wound around the blanket-roller G, by means of which, with its ratchet *r* and pawl *p*, the belt is strained upon the drum and held tightly in place. The belt I prefer to make of hard sheet-brass.

K is the cutter, which has a smooth dull edge and a thick back. It is held on shaft *s* between disks, on whose edges are rubber bands *b b*, which run in contact with the belt M and turn the cutter by friction. The cutter-shaft turns in arms E E, attached round bar D, so as to be capable of turning on it. A stationary lug, F, is attached, between arms E E, to the same rod D, by adjusting-screw *c*, which, pressing upon the cross-bar *d*, between arms E E, forces the cutter K down upon the belt, so as to sever the paper by crushing apart its fibers as it passes between the cutter-wheel and the strip or belt M. The belt M is placed around the drum in the line of the marginal spaces on the form, so as not to injure the type or plates.

The operation is as follows: The sheet of paper is fed from the table T in the usual manner, is held by the gripers *g*, and carried around by the drum between the cutter-wheel and the belt M, where it is severed, as before described. As it is carried around it is printed and delivered in the ordinary way; or it may be carried up and over the cylinder again, thus passing the cutter a second time, and be delivered onto the fly above or in front of the cylinder, as now practiced in many presses.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with the drum of a printing-machine, of a metallic belt or strip and a cutter which acts against it to sever the paper during the process of printing, as described.

2. In combination with the drum of a printing-press covered with "packing," a metallic belt surrounding the packing, and a cutter, under which said belt passes, as described, for the purpose of protecting the blanket and tympan-sheet from the action of the cutter, as set forth.

3. In combination with the drum of a printing-press, the metallic belt M, placed in the line of the marginal spaces in the form, and a cut-

ter acting against it to sever the paper on said line, in the manner specified.

4. The combination of the drum C, cutter K, arms E E, bar D, lug F, and set-screws *a c*, all constructed, arranged, and operating in the manner and for the purposes stated.

5. The combination, with the drum C, of the metallic belt M, strained upon the drum over the packing, in the manner described, and the blunt smooth cutter K, severing the paper by pressure upon the belt, as specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JAMES FLANDERS.

Witnesses:
L. W. MASON,
HARRY SEWALL.