

(No Model.)

J. MICHAUD.
STOP CYLINDER PRINTING MACHINE.

No. 455,901.

Patented July 14, 1891.

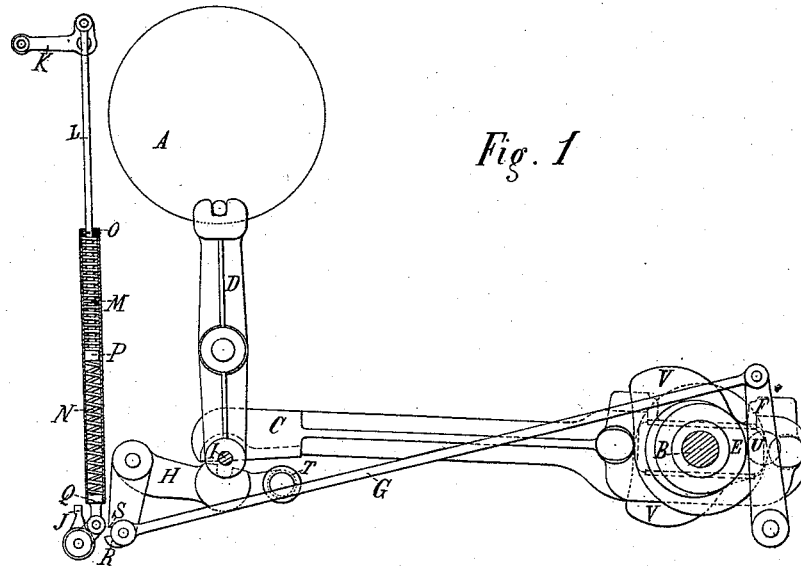


Fig. 1

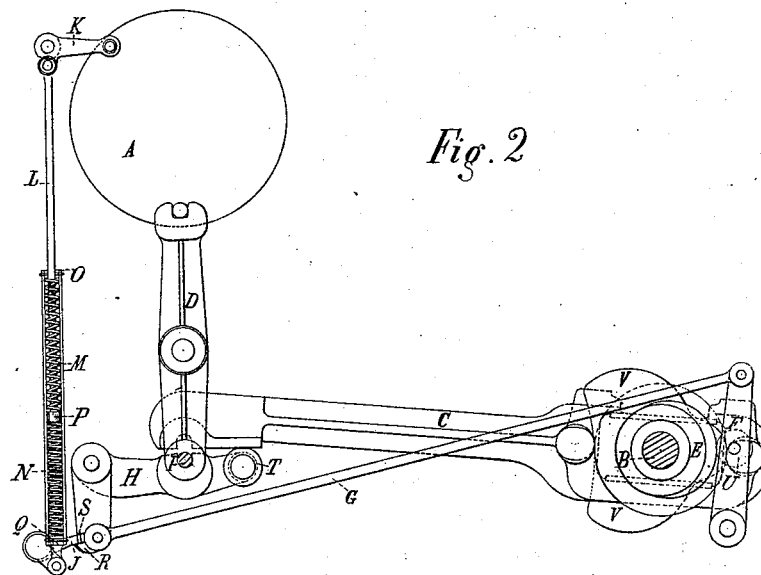


Fig. 2

Witness:
E. P. Macfarlan
Ch. F. Thirion

Jules Michaud
Inventor
by Foster & Freeman Attys

UNITED STATES PATENT OFFICE.

JULES MICHAUD, OF PARIS, FRANCE.

STOP-CYLINDER PRINTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 455,901, dated July 14, 1891.

Application filed March 3, 1887. Serial No. 229,600. (No model.)

To all whom it may concern:

Be it known that I, JULES MICHAUD, residing at No. 96 Rue d'Assas, in the city of Paris, Republic of France, have invented a new and
5 useful Improvement in Stop-Cylinder Printing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of
10 this specification.

The improvement which forms the subject of the present application for Letters Patent consists in a certain and peculiar arrangement or disposition of the machine parts by means
15 of which a stoppage of the cylinder is obtained in typographic and lithographic printing-machines, called "in white," during which stoppage the bed carrying the marble or press-stone continues its forward and backward
20 movement. This disposition of the machine parts can also be applied to typographic or zincographic cylinder machines in such manner as to obtain a stoppage of the cloth-covered cylinder, during which stoppage the cylinder holding the stereotype or zinc plate
25 continues its rotary motion, and the plate is inked the number of times desired. This disposition is such that the manipulation necessary to obtain the stoppage of the cylinder or to start it again can be effected at any
30 moment during the course of the bed in flat-surface machines, and during the rotation of the cylinders in rotary machines.

In the accompanying drawings, Figures 1
35 and 2, I have only shown the cylinder A, the one on which the sheet of paper is margined, and which coacts with the bed or marble in the case of a flat-surface machine, and with the cylinder holding the form in the case of a
40 cylindrical or rotary machine, the shaft B, which holds the cams V, producing the ordinary stop by the medium of the connecting-rod C and of the catch-lever D. I also show the different parts serving to obtain the result
45 indicated above. On the shaft B is mounted a tappet or cam E, which acts on a roller U, fixed to the lever F, which is attached by a coupling-rod G to the double lever H, whose roller T contacts with the connecting-
50 rod C. The tappet E is secured to the shaft B in such a manner as not to set in motion the

lever F during the movement of the lever D under the action of the cam V, and to act on the lever F during the ordinary stoppage of the cylinder—that is to say, during the stoppage of the catch-lever D. During this stoppage the connecting-rod C is raised up, as
55 shown on the drawings, Fig. 2. The lever D is none the less held in a fixed position, the bolt I, which terminates it, being seized by the fork 60 on the bell-crank lever H at the same time the connecting-rod leaves it. The bell-crank lever H has a notch into which the part J catches. This tongue J is attached by a rod L to a handle-lever K. The coupling-rod L
65 runs in a tube O. It is terminated by a head P, above and below which are two springs N and M, inclosed in the tube O, one of the extremities of which tube is closed by a ring letting
70 pass the coupling-rod L and the other extremity by an eyelet-stopper Q, joined to the tongue J. It results from this disposition that when the handle-lever K is moved from the position as in Fig. 1 into the position
75 shown in Fig. 2 the tongue J is lowered. If at this moment the roller U of the lever F is on the upper part of the tappet E, the tongue J will take the position shown in Fig. 2. In
80 case the tappet E is not acting on the lever F the tongue J touches the arm of the bell-crank lever H, the compressed spring N makes it close upon it, and at the moment when, under the action of the tappet E, the bell-crank lever H recedes, the tongue J,
85 pushed by the spring N, falls upon the little heel R and remains held to it until the inverse movement is made. It appears by these indications that although the lever K may be acted upon at any given moment the tongue J does not rest itself upon the
90 heel R, except at the moment corresponding to the stoppage of the cylinder; but once the tongue J is in this position the connecting-rod C is held in a raised position and performs its forward and backward movement on the
95 roller T without acting on the lever D, and consequently the cylinder remains at rest. If the lever K is brought back from the position shown in Fig. 2 into that shown in Fig. 1, and if at this moment the upper part of
100 the tappet E does not act on the lever F to draw the notch from engagement with the

tongue J it cannot leave the notch made in the lever H, as it is held by the heel S. The lever K, in being shifted, however, compresses its spring M, thus tending to raise the tube O and rock the tongue. The rocking of the tongue will, however, occur when the bell-crank lever H (under the action of the upper part of the tappet) has receded—that is to say, at the moment corresponding to the stoppage of the cylinder—so as to release its hold upon the tongue J and permit the spring M to force the tube O upward, which thus rocks the tongue J into the position shown in Fig. 1. The movement of the bell-crank lever H being no longer restricted, it is able to descend when the roller of the lever F descends upon the lower part of the tappet E, the connecting-rod C redescends likewise and seizes the bolt I in such manner that when, under the action of the stop-cams V, the connecting-rod C displaces itself the cylinder will be started at the proper moment. This same disposition can be applied by modifying the tappet E, so as to obtain automatically periodical and regular stops of the cylinder A. For this it suffices to mount the tappet E on a shaft making one revolution for two revolutions of the shaft which carries the cams V V, or making one revolution for three of this same shaft in order to produce a stop of the cylinder A during the number of courses of the bed or marble that it would be necessary to make without causing the cylinder A to turn. Thus there is obtained a double, triple, &c., touch and distribution, according to the needs of the work.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination, with the catch-lever for arresting and starting the cylinder or equivalent device of a printing-machine and its actuating connecting-rod, of a bell-crank lever and means, substantially as described, for rocking it to connect and disconnect the catch-lever and connecting-rod, a tongue for holding the connecting-rod disengaged, and

a spring-seated hand-lever for operating said tongue, substantially as described.

2. The combination, with the catch-lever for arresting and starting the cylinder or equivalent device of a printing-machine and its actuating connecting-rod, of a bell-crank lever, a tappet carried by the cam-shaft operating the connecting-rod, and connections independent of the said connecting-rod between said tappet and double lever for connecting and disconnecting the catch-lever and connecting-rod, substantially as described.

3. The combination, with the catch-lever, its actuating connecting-rod, and bell-crank lever for connecting and disconnecting said catch-lever and rod, of a tongue for engagement with said bell-crank lever to hold the connecting-rod and catch-lever disengaged, and a spring-seated hand-lever for operating said tongue, whereby said connecting-rod is connected and disconnected from the catch-lever only at the proper times, substantially as described.

4. The combination, with the catch-lever, its actuating connecting-rod, and bell-crank lever for connecting and disconnecting said catch-lever and rod, of a tongue for engagement with said bell-crank lever to hold the connecting-rod and catch-lever disengaged, an operating hand-lever, rod L, connected thereto, tube O, connected with the tongue, and springs M N interposed between said rod L and tube, substantially as described.

5. The combination of the catch-lever, its actuating connecting-rod, a bell-crank lever having at one end a roller for contact with said connecting-rod and at the other a notch R S, and operated by a tappet on the cam-shaft that operates the connecting-rod, a tongue for engagement with said notch, and a spring-seated hand-lever for operating the tongue, substantially as described.

JULES MICHAUD.

Witnesses:

EDWARD P. MACLEAN,
CH. F. THIRION.