M. LAEMMEL.

Printing Press.

No. 123,266.

Patented Jan. 30, 1872.

Fig. 1.

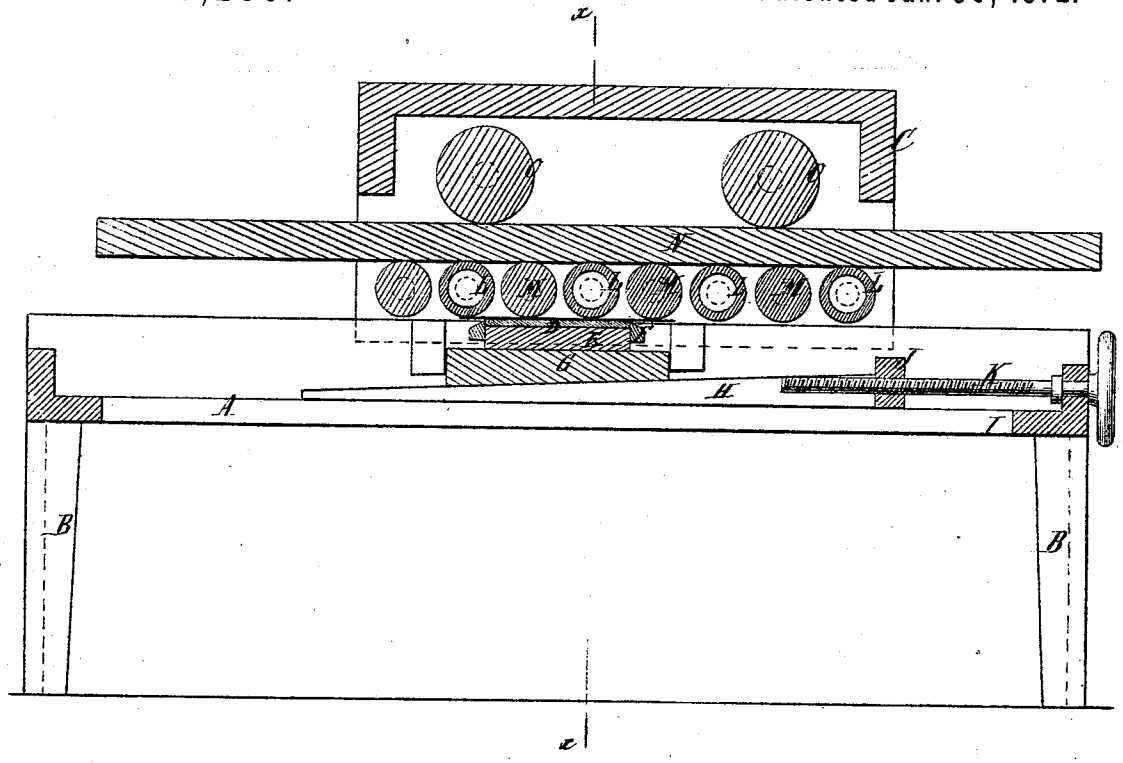
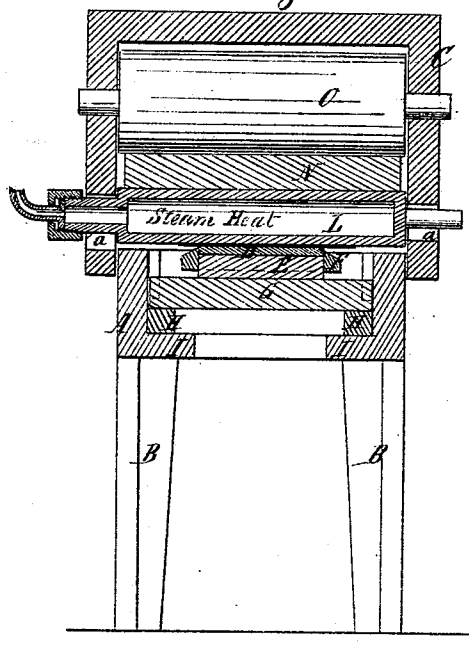


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

MORITZ LAEMMEL, OF BAY RIDGE, NEW YORK.

IMPROVEMENT IN PRINTING-PRESSES.

Specification forming part of Letters Patent No. 123,266, dated January 30, 1872.

To all whom it may concern:

Be it known that I, MORITZ LAEMMEL, of Bay Ridge, in the county of Kings and State of New York, have invented a new and Improved Printing-Machine; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a longitudinal vertical section of my invention. Fig. 2 is a transverse section of the same in the plane indicated by the line *x x*, Fig. 1.

Similar letters indicate corresponding parts.

This invention relates to a printing-machine intended particularly for the production of many-colored prints from blocks made of a compound of resin and suitable pigments, from which such prints showing all the different colors desired can be taken by one impression. My press consists of a series of rollers, which are alternately hot and cold, and which are mounted in a carriage which travels on guide-ways, between which the block or die containing the design is placed in such a manner that, by spreading a sheet of paper on the block or die and moving the roller-carriage over the same, said paper is depressed on the block or die alternately by a hot and then by a cold roller, and a good impression is produced each time the roller-carriage is moved over the block or die. The printing-block is placed on a bed or platen which rests on wedges, to which a sliding motion can be imparted, by a hand-screw or other suitable means, in such a manner that by the action of said wedges the block or die, as its surface wears off, can be fed up and retained in the proper relation toward the impression-rollers. With the impression-rollers is combined an equalizing-plate, bearing against friction-rollers in the upper part of the roller-carriage in such a manner that all the impression-rollers are caused to bear down upon the paper with a uniform pressure throughout their whole length.

In the drawing, the letter A designates a frame supported by legs B, and forming the guide-ways for the carriage C. Between these guide-ways is situated the printing-block D, which rests upon a plate, E, which is provided with an adjustable rim, F, to prevent the block from sliding off. The plate E is supported by a bed, G, which rests upon two wedges, H, placed upon flanges I in the lower part of the frame A. Said wedges are connected by a cross-bar, J, into which is tapped a screw, K, the shank of which is swiveled in a bearing in the frame A, as shown in Fig. 1. By turning this screw in the proper direction the bed, together with the printing block or die, are fed up; and the surface of said block can be adjusted at all times in the proper relation toward the impression-rollers L M. These impression-rollers are mounted in the carriage C, the bearings of their axles or gudgeons being in slots *a* in the sides of the carriage, (see Fig. 2,) so that they can freely rise and fall. The rollers L are hollow and connect with steam-pipes, so that they can be heated and kept at the temperature most advantageous for the operation, and are cooled by means of streams of cold water passed through them. On the impression-rollers is placed an equalizing-plate, N, which extends through the carriage C and bears against friction-rollers O mounted in the upper part of said carriage. By means of this equalizing-plate all the impression-rollers are depressed upon the surface of the printing-block with a uniform pressure; and, furthermore, each impression-roller acts with a uniform pressure throughout its entire length; whereas if the equalizing-plate is not used the impression-rollers are liable to spring up in the middle, whereby the uniformity of the impression is disturbed. The carriage is loaded with sufficient weight to produce the desired effect, and a reciprocating motion is imparted to it by hand or by any suitable power.

By spreading a sheet of paper on the printing-block and moving the carriage over the same, an impression is produced; and as the surface of the printing-block wears off said block is gradually fed up by means of the wedges, and a large number of impressions can be produced in quick succession.

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

The equalizing-plate N and friction-rollers O, in combination with the rollers L M and bed G, supporting the printing-block D, substantially as set forth.

This specification signed by me this 13th day of November, 1871.

MORITZ LAEMMEL.

Witnesses:
W. HAUFF,
E. F. KASTENHUBER.