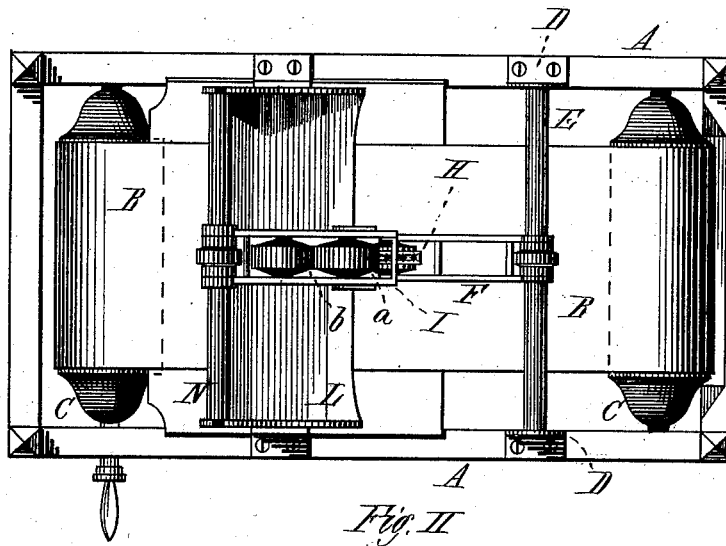
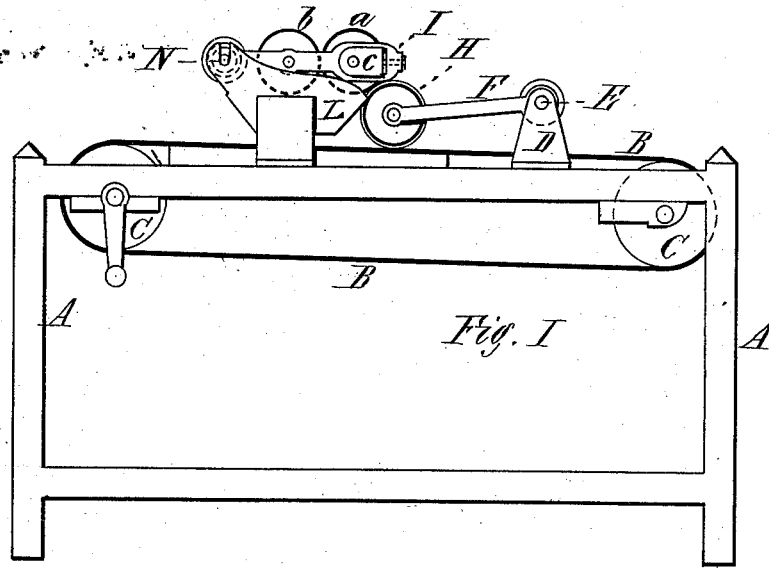


J. E. TAYLOR.
 Printing-Attachment for Paper-Ruling Machine.

No. 199,003.

Patented Jan. 8, 1878.



Witnesses
 Thomas W. Mack
 C. E. Buckland.

Inventor
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UNITED STATES PATENT OFFICE.

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JOHN E. TAYLOR, OF SPRINGFIELD, MASSACHUSETTS.

IMPROVEMENT IN PRINTING ATTACHMENTS FOR PAPER-RULING MACHINES.

Specification forming part of Letters Patent No. **199,003**, dated January 8, 1878; application filed November 20, 1877.

To all whom it may concern:

Be it known that I, JOHN E. TAYLOR, of Springfield, in the State of Massachusetts, have invented a new and useful Printing Attachment for Paper-Ruling Machines; and that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, and to the letters of reference marked thereon.

My invention has for its object the printing of ornamental or other matter upon sheets of paper at the same time they are being ruled; and to this end my invention consists of a printing-roll, revolving in a frame, which is pivoted to a rod attached to the ruling-machine, the roll resting upon the paper as the latter is carried along upon the feeding apron or tapes, and having ink applied to the printing-surface upon its periphery by means of one or more rolls pivoted in another frame and attached to the machine, all which will be more fully hereinafter described.

Figure I is a side elevation of a machine having my invention applied thereto, and Fig. II a plan view of the same.

In the drawings, A is the frame of any ordinary paper-ruling machine, which, in this case, contains two drums or cylinders, C, which carry the endless feeding-apron B, or the ordinary endless feeding-tapes, upon which the paper is placed and carried beneath the ruling-pens, which are attached in the usual manner.

A rod, E, has its bearings in or is fixed to two uprights, D, attached to the frame, one on each side, and to this rod is pivoted, so as to swing freely thereon, a frame, F, in which is pivoted a wheel or roll, H, having upon its periphery any desired printing characters or ornamentations. This roll may be made of any suitable material; but I prefer to make it of either wood or metal, with a rubber band, having the desired printing-characters made on its outer surface, stretched around the periphery of the roll.

A similar frame, I, is loosely attached to another rod, N, fixed in the ends of the trough L, and in this frame are pivoted two other rolls, *a* and *b*, the latter revolving sufficiently low in the trough to take up some of the ink

therein and convey it to the roll *a*, as the peripheries of the rolls *a* and *b* roll in contact, while the periphery of the roll *a*, to which ink is conveyed by the roll *b*, touches and rolls upon the printing-surface on the periphery of the roll H.

Both frames F and I are so hung to the rods E and N that they may be moved either way along the rods, and secured at any point by a set-screw.

The operation of the invention is as follows: If it is desired to print an ornamented border upon paper while it is being ruled, the frames F and I are secured to the rods E and N at the desired point, the ruling-pens being secured in the ordinary manner, with ink in the tray or trough L sufficient to touch the periphery of the roll *b* as it revolves, so that it may be conveyed to the roll *a*. The roll *a* or *b* may, however, be first saturated with ink, if desired, the periphery of said rolls being covered with some absorbent for the purpose of retaining the ink, instead of taking it from the trough L, and fresh ink supplied thereafter as often as required.

A small box, *c*, may be inserted in the frame I, in which the wheel or roll *a* may be pivoted or have its bearings, and a small spring in the end of the frame I, bearing against the box, to keep the two rolls *a* and *b* always in contact; but this is not an essential feature of the invention.

It is evident that any number of the frames F may be hung upon the rod E, with printing-rolls H pivoted thereon, with a corresponding number of frames and ink-supply rolls, *a* and *b*, attached to the machine.

As the paper is placed upon the endless apron B, and is carried along and being ruled, the roll H rests with its own weight, and the weight or partial weight of the frames F and I, upon the paper being carried along, and the roll being thereby caused to revolve, the desired matter is printed upon the paper.

The printed matter upon bill-heads may be printed in this manner while the paper is being ruled, thus saving extra handling of the paper for printing, and saving expense; and ornamental borders may be printed upon writing-paper while being ruled, and upon envelopes at the same time, making such station-

ery very attractive and comparatively inexpensive.

Having thus described my invention, what I claim as new is—

The combination of the rod E, the frame F, hung thereon and provided with the printing-roll H, the rod N, with the frame I hung thereon and provided with the rolls *a* and *b*,

all constructed substantially as described, and adapted to be attached to a paper-ruling machine.

JOHN E. TAYLOR.

Witnesses:

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