

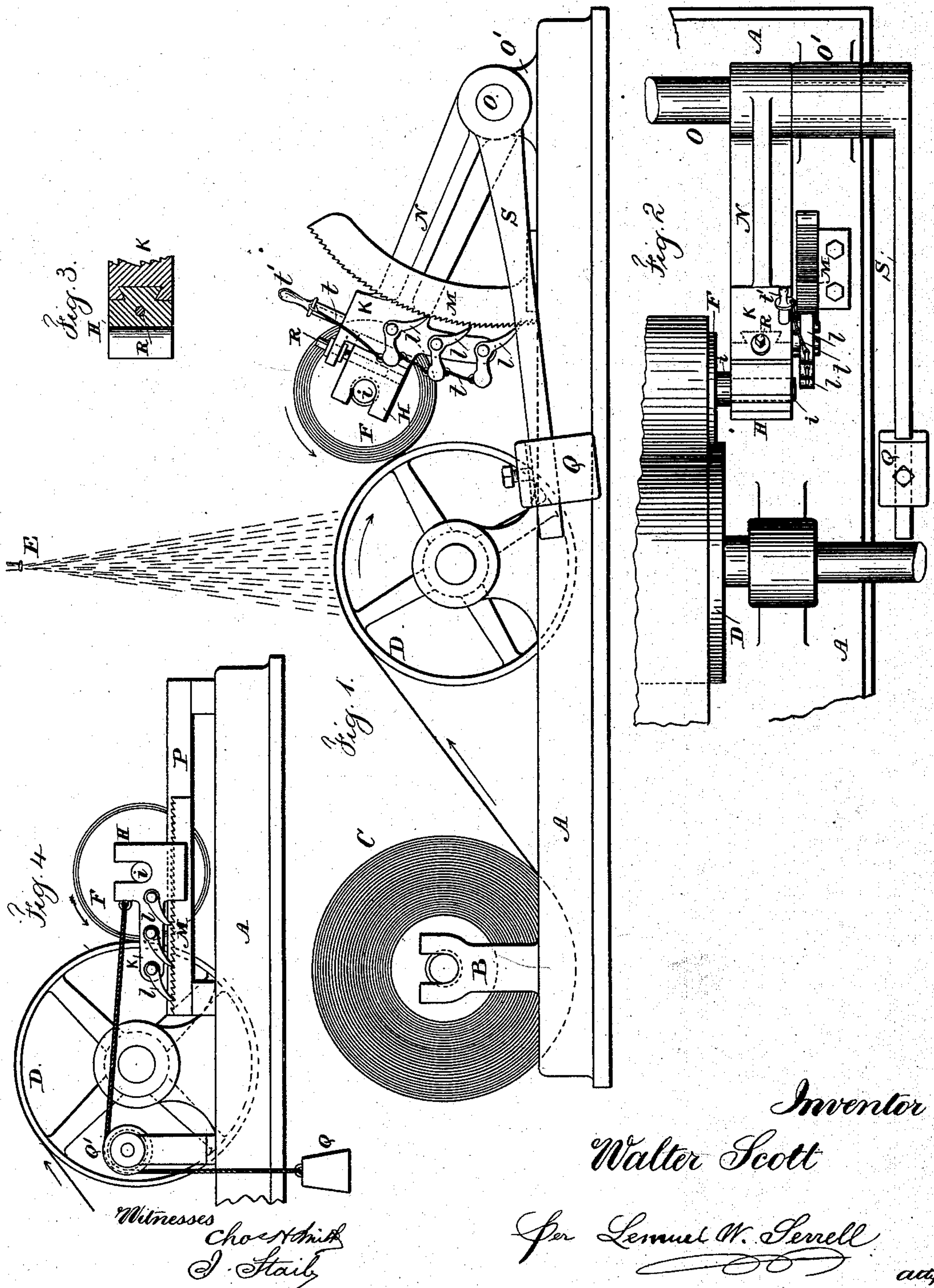
(No Model.)

W. SCOTT.

DAMPENING MACHINE FOR PRINTING PRESSES.

No. 325,867.

Patented Sept. 8, 1885.



Inventor
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UNITED STATES PATENT OFFICE.

WALTER SCOTT, OF PLAINFIELD, NEW JERSEY.

DAMPENING-MACHINE FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 325,867, dated September 8, 1885.

Application filed February 24, 1885. (No model.)

To all whom it may concern:

Be it known that I, WALTER SCOTT, of Plainfield, in the county of Union and State of New Jersey, have invented an Improvement in Dampening - Machines for Printing-Presses, of which the following is a specification.

Machines have heretofore been made in which the web of paper from a roll is passed over a convex surface, or over a driving-drum, where it is exposed to a spray of moisture directed downwardly upon the paper, and from this convex table or roller the paper passes to a shaft, upon which it is wound.

In machines of this construction the roll of paper, as it is wound upon the shaft, bears with more or less force, according to its weight, upon the drum, and it sometimes happens that the paper is more solid at one place than it is at another as the damp paper is wound up in a roll; hence the more solid portion of the roll of paper, as it comes in contact with the winding-drum, lifts the roll of paper and its shaft, and these fall again when a less solid portion of the paper rests against the winding-drum. The consequence of this is, that the roll of paper vibrates up and down or wabbles, and this inequality is augmented by the paper as it is wound upon the roll, and the paper winds crooked and sometimes creases.

The object of my invention is to prevent the jumping or vibrating action of the roll of paper as it is wound, and also to adjust the winding shaft or roller in its relation to the winding-drum, so that the action in winding the paper will be true and uniform.

In the drawings, Figure 1 is a side elevation of the dampening apparatus. Fig. 2 is a plan of the same at one end of the winding drum and roller. Fig. 3 is a section through the bearing-box for the journal of the winding-roller. Fig. 4 is an elevation of the winding apparatus with sliding bearings for the winding-roller.

A represents a frame of suitable character, upon which are bearings B for the shaft of a roll of paper, C.

D is a winding-drum, over which the paper is passed, and which drum is rotated by competent power and gives motion to the paper in drawing the same along and in winding it up.

E represents the spray-nozzle or atomizing device, by which the water or other dampening-liquid is scattered uniformly upon the surface of the paper.

F represents a roller, upon which the paper is wound after being dampened. *i* is one journal of the roller in a journal-box, H; and K is a stock, to which two, three, or more pawls, *l*, are pivoted, and M is a rack of teeth into which such pawls *l* catch.

It is to be understood that there is a box, a stock, pawls, and a rack at each end of a winding-roller, F, when the device is in the form shown in Fig. 4; but when the arms N are permanently connected to the shaft O but one set of pawls is needed. I have only represented in the drawings the devices at one end of the roller F.

The journal-boxes H may slide upon ways P by the action of a weight, Q, and cords over pulleys Q', as seen in Fig. 4, so that the winding-roller F is drawn toward the winding-drum D; but I prefer to form the stocks *k* at the ends of arms N, that project from the cross-shaft O in bearings O' upon the frame A. In this case the weight Q will be upon a lever-arm, S, that projects from the shaft O.

The pawls *l* are to be placed in such a relation to each other and to the rack M that all the points of the pawls are not simultaneously in contact with the teeth of the rack; for instance, the end pawl may be in contact with a tooth, the end of the next pawl may be distant one-third of the width of a tooth, and the third pawl may be distant two-thirds the width of a tooth; hence the pawls will drop in succession and hold against their respective teeth, thereby dividing up the action of the pawls, and rendering it unnecessary to have the ratchet-teeth very fine.

As the winding of the paper progresses upon the roller F, such roller is moved away from the winding-drum by the intervening paper, and the pawls catch and hold in succession upon the rack M. If the paper is thicker or more solid at one place upon the winding-roller than at another, the winding-roller will be moved back by the thicker or more solid portion of the paper, and will be held by the pawls, so that the roller F will not move toward the winding-drum when the paper which intervenes is either softer or

thinner. Thus the winding action will be equalized and the web of paper be wound straight, and the winding-roller F will be held from vibrating toward the drum D.

5 Either one or both of the journal-boxes H are made with dovetailed slides at their back edges, which slides are received into corresponding recesses in the stocks K, and each journal-box is provided with a screw, R, passing through a projection upon the stock K into the journal-boxes H, so that the said boxes H can be adjusted to bring the shaft and journal *i* of the roller F perfectly parallel to the shaft of the winding-drum D. This prevents the paper being pressed more closely at one edge of the sheet than at the other, and insures a uniform action in winding the sheet.

I prefer to connect the pawls *l* together by cords or chains *t*, and to connect thereto the handle *t'*, so that upon pulling the handle upwardly out of a socket, into which the inner end is received, the pawls will all be liberated, and the parts will be freed, so that the arms N and shaft O may be turned to give facility for commencing the winding operation.

I claim as my invention—

1. The combination, with the winding-drum D and winding-roller F, of the journal-boxes H, stock K, pawl *l*, and rack M, substantially as set forth.

2. The combination, with the winding-drum D and winding-roller F, journal-boxes H, stock K, and rack M, of two or more pawls pivoted upon the stock, and catching succe-

sively upon the rack-teeth, substantially as set forth. 35

3. The combination, with the winding-drum D, winding-roller F, journal-boxes H, arms N, and cross-shaft O, of the stocks K, rack M, the pawls *l* upon the stocks, the cords or chains *t*, and handle *t'*, whereby the pawls can be all lifted together, substantially as specified. 40

4. The combination, with the winding-drum D and winding-roller F, of the arms N, the cross-shaft O, to which said arms are rigidly connected, and the journal-boxes H, for the winding-roller F, one of which is adjustable in a direction at right angles to one arm N, substantially as specified. 45

5. The combination, with the winding-drum D and winding-roller F, of arms N, a cross-shaft, O, to which said arms are rigidly connected, the journal-boxes H for the winding-roller F, one of which is constructed with a dovetail which fits a corresponding slot in the stock K at the end of one arm N, and the screw R, to adjust said journal-box in a direction at right angles to one arm N, so as to give an equal pressure upon the paper as it is wound, substantially as specified. 50

Signed by me this 20th day of February, A. D. 1885. 55

WALTER SCOTT.

Witnesses:

GEO. T. PINCKNEY,
WALLACE L. SERRELL.