

(Model.)

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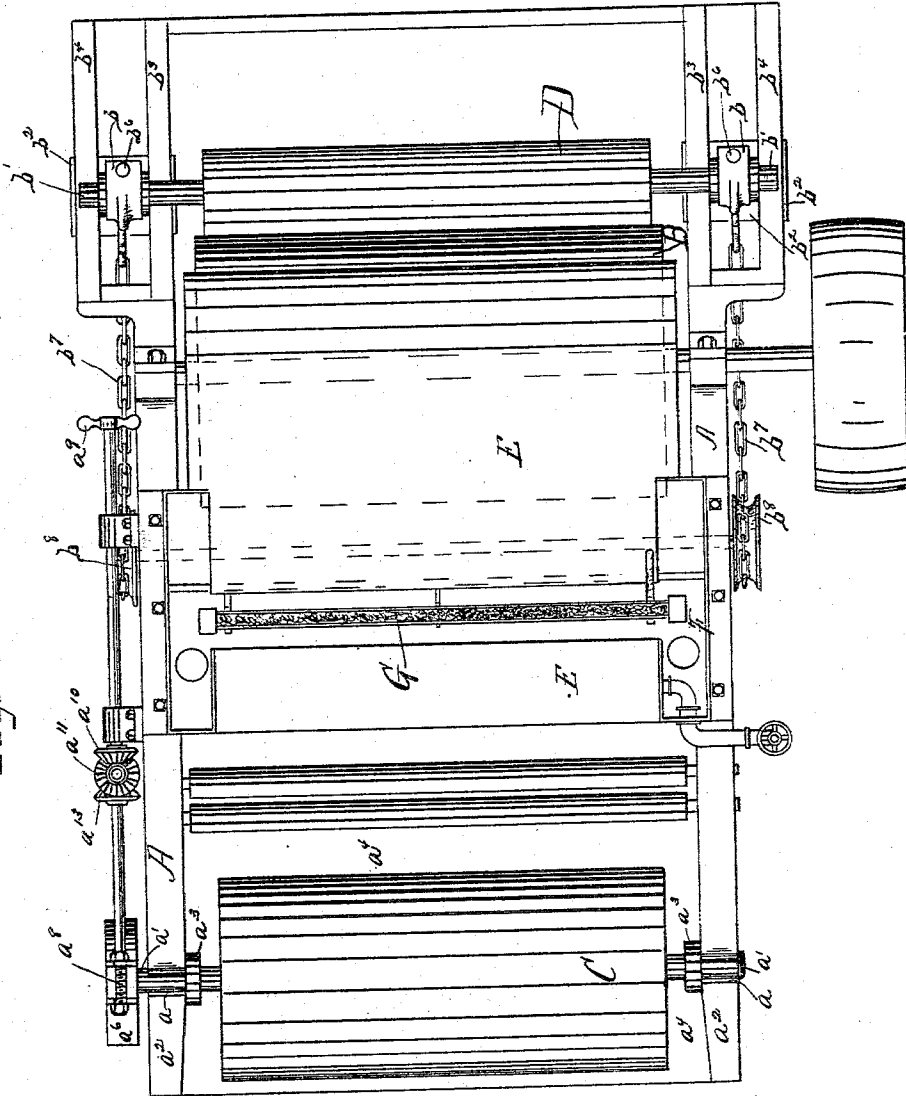
J. J. CLAUSE.

PAPER DAMPENING MACHINE.

No. 286,591.

Patented Oct. 16, 1883.

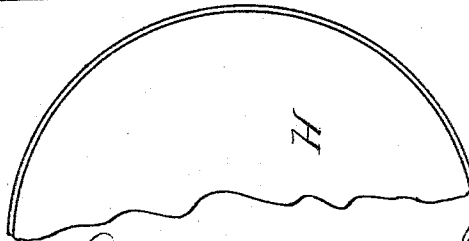
Fig. 1.



WITNESSES—

J. Everett Brown

A. M. Munday.



INVENTOR—

John J. Clause,

per Munday Evans & Aldcock
his Attys.

(Model.)

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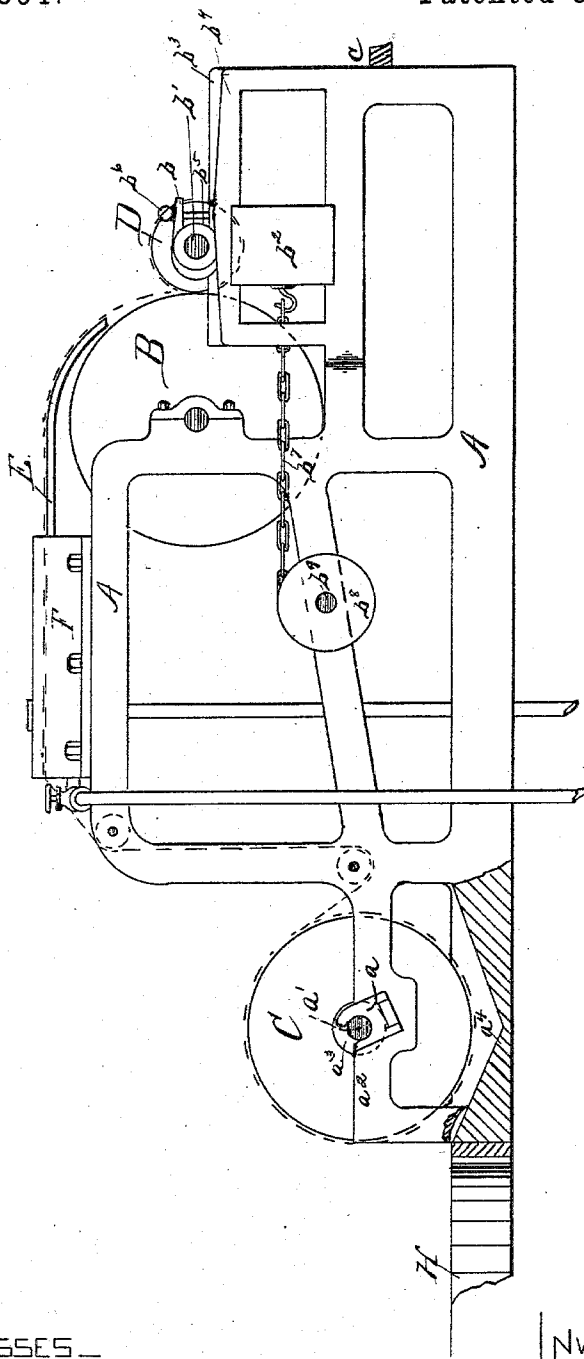
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Fig 2.



WITNESSES—
N. Everett Brown
A. M. Munday.

INVENTOR—
John J. Clause,
per Munday, Evans & Adeock
his Attys.

(Model.)

3 Sheets—Sheet 3.

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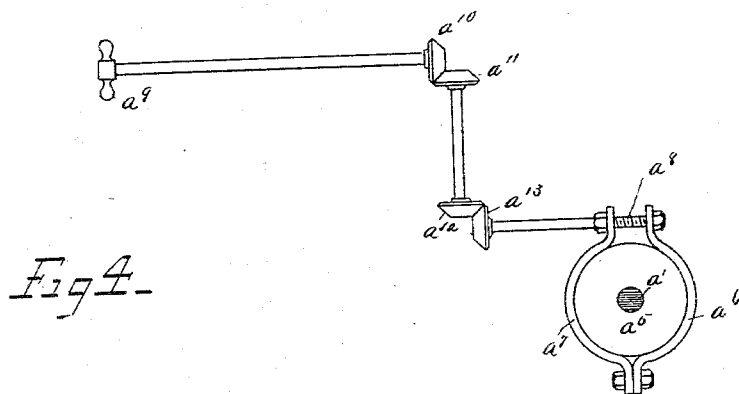
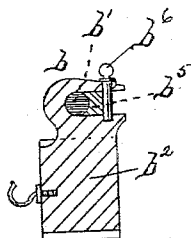


Fig 3.



WITNESSES—

J. Everett Brown

H. Munday

per *Munday* *Evett* *Tancock*
his Attys.

INVENTOR—

John J. Clause

UNITED STATES PATENT OFFICE.

JOHN J. CLAUSE, OF CHICAGO, ILLINOIS.

PAPER-DAMPENING MACHINE.

SPECIFICATION forming part of Letters Patent No. 236,591, dated October 16, 1883.

Application filed August 22, 1881. (Model.)

To all whom it may concern:

Be it known that I, JOHN J. CLAUSE, of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Paper-Dampening Machines, of which the following is a specification.

My invention relates to improvements in means for placing the paper roll in the machine and removing it therefrom after it has been dampened.

Heretofore paper-dampening machines have been so constructed that it is necessary to lift the roll of paper in and out of the machine, for which purpose various devices have been used, such as differential pulleys, cranes, and inclined planes.

The object of my invention is to provide a paper-dampening machine into and out of which the rolls may be moved without raising or lifting them at all, and thus at the same time dispense with the more or less complicated and expensive devices heretofore employed for raising the heavy rolls of paper, and avoid the trouble and inconvenience incident to their use.

In the present invention the bearings for the axle of the dry roll are mounted upon two supports, guides, or frame-pieces at a suitable distance apart, so that the roll of paper may be suspended or rolled between them. The height of these frame-pieces or supports above the floor or approach to the machine is somewhat less than the radius of the roll of paper, so that as the paper is rolled into the machine the axle inserted in the center of the roll of paper will clear or come above the frame-pieces, and the platform or base of the machine between these frame-pieces is depressed or inclined toward the axle-bearings, so that as the roll of paper rolls into place its periphery will clear said base and be supported by its axle resting on the frame-pieces or guides. The bearings for the roll have side openings, so that the axle of the roll resting upon the frame may be rolled directly therein without lifting the paper. The size of paper rolls usually varies from about fifteen to twenty-two inches in radius, and the depression in the base or platform beneath the bearings should be made great enough to accommodate the larger rolls, while at the same time the axles of the smaller ones may

clear the frame and be rolled directly in. The sides of the frame are made tapering, so that the collars on the axle of the roll will adjust the same laterally into place as it is rolled into the machine. The bearings for the axle of the dampened roll are mounted on a sliding block or cross-head, and are provided with side openings for removing the axle, the upper guide-bars for said cross-head being on a level with the bearings, so that the axle may be rolled directly out of the bearing onto the guide-bars and out of the machine.

My invention will be more fully understood by reference to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a plan view of a device embodying my invention. Fig. 2 is a side elevation. Fig. 3 is a detail sectional view of the sliding block and bearing, and Fig. 4 is a detail side view of the tension device.

In the drawings similar letters of reference indicate like parts.

In said drawings, A represents the frame of the machine; B, the friction driving-cylinder; C, the dry roll of paper, and D the dampened roll. The web of paper passes over the plate E, which forms part of the cover of the water-tank F, and is moistened as it passes by the sponge G, the lower edge of which is immersed in the water of the tank.

The bearings a , for the axle a' , of the dry roll are mounted on the frame-pieces or guides a'' in suitable sockets therein, the upper front edge of said bearings being on a level with the upper surface of said guides. The guides a'' are made tapering toward their outer ends, and their height is somewhat less than the radius of the roll. The axle a' is provided with collars a^3 , one on each end, which serve to adjust the roll into place as the axle is rolled forward on the guides, and to keep the same in place after it rests in the bearings while the machine is in operation. The casting a^4 , which forms the bottom or base of the machine, is depressed, cut away, or inclined under the bearings a , so that the periphery of the roll will clear the same when the roll drops into the bearings. This depression or incline also serves to carry the roll into place when the same is rolled off the level of the floor in front

of the machine, as the momentum the roll acquires while supported on the inclined base will continue to roll it along after its axle strikes the frame-pieces or guides. The axle
 5 a' is provided with a tension device for regulating the tension of the web of paper, consisting of a friction-wheel, a^5 , on the end of said axle, friction clamping-jaws a^6 a^7 , operated by the adjusting-screw a^8 from the handle a^9
 10 through the connecting-gears a^{10} , a^{11} , a^{12} , and a^{13} . The clamping-jaw a^7 fits loosely on the screw a^8 , said jaw bearing against a shoulder or jam-nut on said screw, and the clamping-jaw a^6 is threaded to fit the screw a^8 , so that
 15 the operator, by turning the handle a^9 , may tighten or loosen the clamping-jaws on the friction-wheel, and thereby increase or diminish the tension of the web of paper. The intermediate gearing between the handle and adjusting-screw a^8 is employed simply to bring
 20 the handle into convenient position for the operator to reach it.

H is a turn-table, which I usually provide in front of the machine for turning the roll
 25 square with the machine, and which is specially serviceable where there is a limited amount of room.

The bearings b for the axle b' of the moistened roll are secured to or form part of the sliding blocks or cross-heads b^2 , mounted on
 30 the frame A, and which project between the guide-bars b^3 and b^4 . The bearings b are U-shaped in form, and the lower leg of each of said bearings is on a level with the upper surface of the guide-bars b^3 , so that the axle of the
 35 roll will be supported on said guide-bar when rolled out of the bearing. The movable part b^5 of the bearing is secured in place by a pin, b^6 . The dampened roll is pressed against the

friction driving-pulley and allowed to recede
 40 therefrom as it increases in size by means of the chains b^7 b^7 , connected with pulleys b^8 b^8 on the shaft b^9 , which is provided with a friction device.

c represents a portion of the floor or platform in the rear of the machine, upon which
 45 the dampened rolls are delivered as they are rolled from the machine. The height of the guide-bars b^3 above this floor or platform should be a little greater than the radius of
 50 the larger-sized rolls of paper, so that the same may be readily rolled from said guides without being raised.

I claim—

1. In a paper-dampening machine, the combination of a turn-table, an inclined base or
 55 platform, side rails or guides, a^2 a^2 , adapted to support the roll from its axle, and provided with bearings for the axle, having side openings, all arranged and operating substantially
 60 as specified.

2. The combination, with the axle of the roll, provided with collars a^3 , of tapering guides
 65 a^2 , provided with bearings having side openings, and base a^4 , depressed under said bearings, substantially as specified.

3. In a paper-dampening machine, the combination, with sliding blocks or cross-heads b^2 ,
 70 of bearings b , having side openings closed by movable parts b^5 , with guides b^3 , arranged on a level with said bearings, so that the roll supported by the axle may be rolled from said bearings on said guides out of the machine, substantially as specified.

JOHN J. CLAUSE.

Witnesses:

H. M. MUNDAY,
 T. EVERETT BROWN.