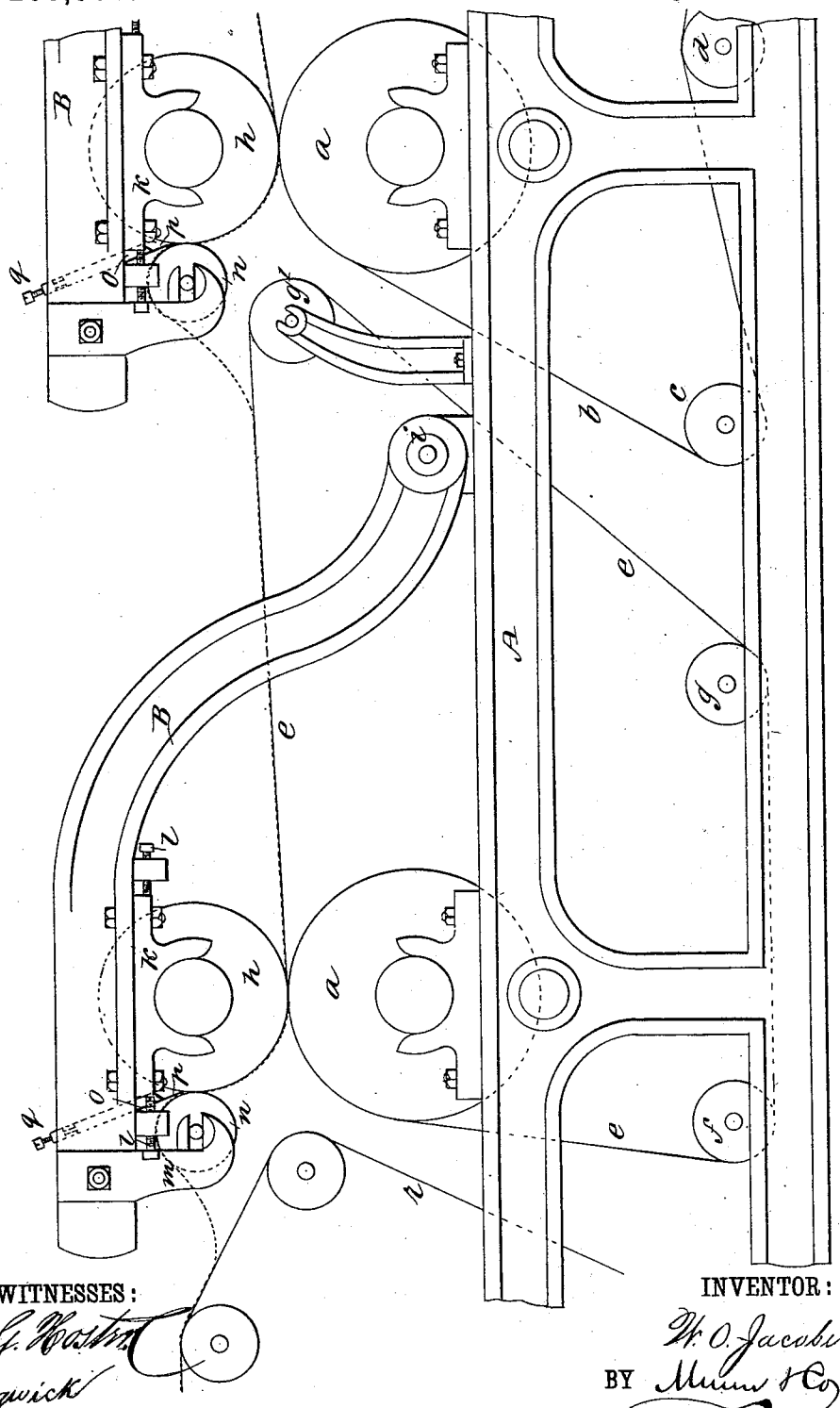
(No Model.)

W. O. JACOBI.

PAPER MACHINE.

No. 260,988. Patented July 11, 1882.



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UNITED STATES PATENT OFFICE.

WILLIAM O. JACOBI, OF BUTLER, NEW JERSEY.

PAPER-MACHINE.

SPECIFICATION forming part of Letters Patent No. 260,988, dated July 11, 1882.

Application filed May 20, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM O. JACOBI, of Butler, in the county of Morris and State of New Jersey, have invented certain new and useful Improvements in Paper-Machines, of which the following is a full, clear, and exact description.

My improvements relate to the presses of both Fourdrinier and cylinder machines; and they consist in certain novel features of construction of the presses, having the object to dispense with the use of roll-covers as used in straw wrapping or board mills to prevent the making of so much broken paper and avoid the necessity of using so much skilled labor to attend to the machine as is now required.

Reference is to be had to the accompanying drawing, wherein a press of my improved construction is shown by a side elevation.

A is the frame of the machine.

a a are the lower rolls of the first and second presses, supported upon suitable bearings on the frame A.

b is the felt of the first press, passing over the roll *a* and over the jack-roll *c* and guide-roll *d* to the vat. (Not shown.)

e is the felt of the second press, passing over its roll *a*, jack-roll *f*, guide-roll *g*, and holding-roll *g'*, the latter one being placed in front of and contiguous to the press-roll *a* of the first press, so that the felt is sustained in position for receiving the paper from the first press.

h h are the upper rolls of the presses, and their construction and arrangement being the same in both instances, the following description applies to either.

B is a swing-frame formed by side arms of suitable shape, that are connected together and pivoted at *i* upon the press-frame A.

On each side of the swing-frame B is fixed a box, *k*, for receiving the axle of the roll *h*, and the boxes *k* are adjustable by set-screws *l*, so that the roll *h* can be adjusted in position directly over or parallel to the lower roll, *a*.

On hangers *m*, at the outer end of the swing-frame B, a cushion-roll, *n*, is sustained at the front of the press-roll *h*, the two rolls being in contact, and the cushion-roll *n* being pressed in contact with roll *h* by springs.

In the outer end of the swing-frame B is fitted a "doctor," *o*, the lower edge of which terminates in a thin blade, *p*, that bears upon the surface of the roll *h*. The doctor *o* is adjustable to and from the roll *h* by means of the screw *q*. This device is for separating the web of paper from the upper press-roll, *h*, so that it shall pass directly upon the roll *n*.

In operation a web of paper coming from the vat upon the felt *b* passes beneath the press-rolls *h a* of the first press, and the paper adhering to the roll *h* is carried upward between rolls *h n* until it comes in contact with the edge of the doctor, which separates the paper web from the press-roll *h*, when the web passes over cushion-roll *n* to the felt of the second press. The operation is repeated at the second press, from which the paper passes to the drier felt *r*. It will be seen that the web of paper is wiped from the upper press-roll by the doctor-plate, and, being thus prevented from adhering to the press-rolls, the labor and attention heretofore required to insure the proper passage of the web of paper is saved, as the web will pass through the presses continuously without requiring but little attention. Further, as heretofore constructed, to remove the upper press-rolls the bearings must first be removed, and unless accurately replaced the felts would tend to run off at the side.

With my improved construction, to remove the upper rollers it is only necessary to raise the swing-frame B, and in returning them they come accurately to place, with the rollers *h* in position above the lower rolls. This facilitates the renewal of the endless felts, which as heretofore required removal of the supporting-standards of the rolls.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In paper-machines, the swing-frame B, carrying the upper rolls, *h*, of the presses, and cushion-rollers *n*, substantially as shown and described.

2. The combination of the swing-frame B, carrying rolls *h n*, and the lower rollers, *a*, of the paper-machine, substantially as shown and described.

3. In paper-machines, the cushion-rollers *n*, upper press-rollers, *h*, and the doctors *o*, substantially as described, combined for operation as set forth.

WILLIAM O. JACOBI.

Witnesses:

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