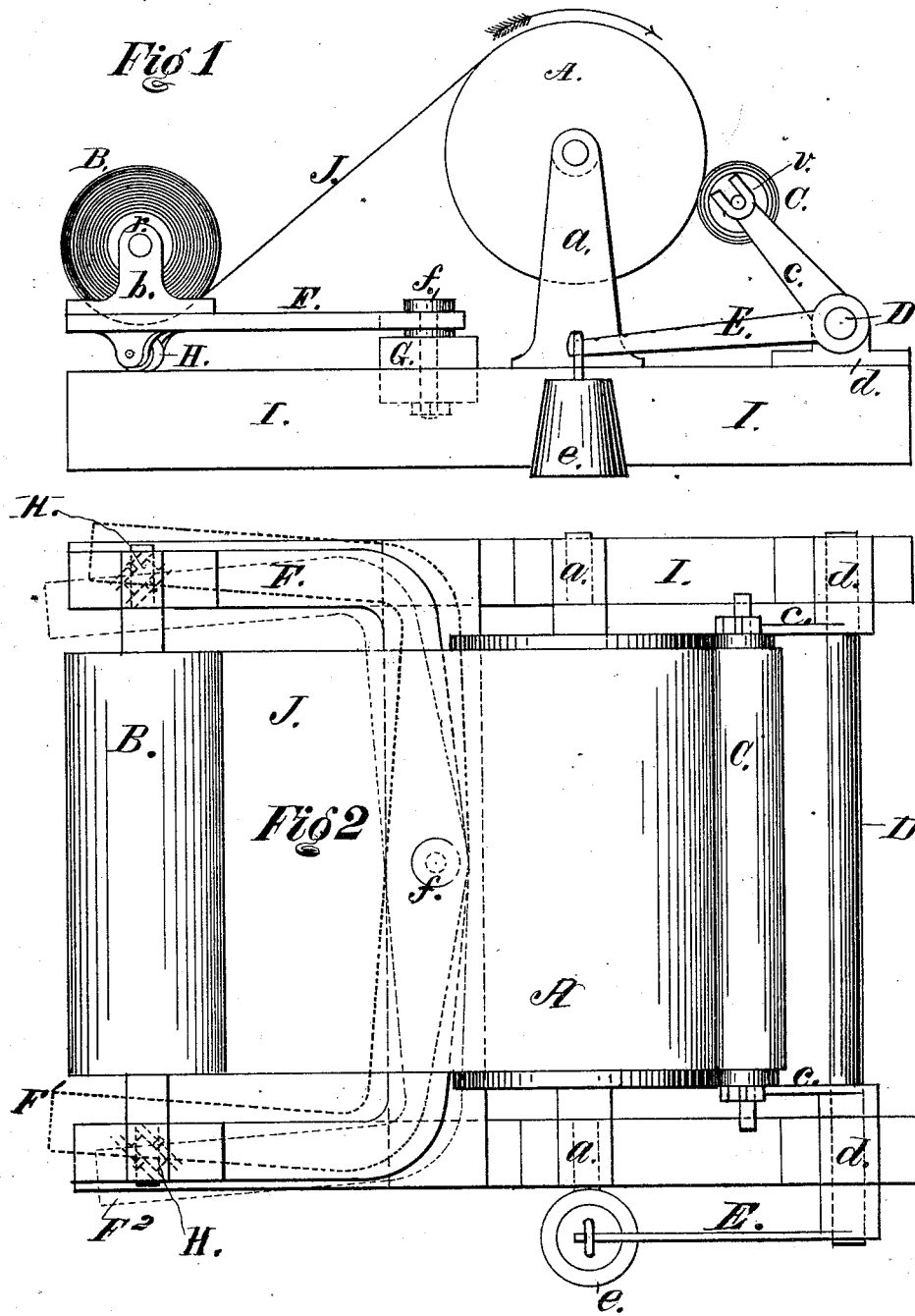


G. ROSQUIST.

Machine for Wetting Printing-Paper.

No. 162,499.

Patented April 27, 1875.



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UNITED STATES PATENT OFFICE.

GEORGE ROSQUIST, OF NEW YORK, N. Y., ASSIGNOR TO THE BULLOCK PRINTING-PRESS COMPANY.

IMPROVEMENT IN MACHINES FOR WETTING PRINTING-PAPER.

Specification forming part of Letters Patent No. 162,499, dated April 27, 1875; application filed July 22, 1874.

To all whom it may concern:

Be it known that I, GEORGE ROSQUIST, of New York, county of New York and State of New York, have invented certain Improvements in Machines for Wetting Printing-Paper, of which the following is a specification:

My invention relates, first, to constructing and mounting the frame in which the feed or paying-out roller for the dry paper in a paper-wetting machine has its bearings in such a manner that such frame will yield and oscillate horizontally upon the application of a certain amount of force to either end of the spool or roller. The object of this construction is to have the spool to accommodate itself in position to the inequalities in length of the opposite side edges of the dry paper, as the latter is unwound from the former, so that the paper shall not be torn or unduly stretched on the one hand, or allowed to wrinkle on the other.

My invention further relates to the mounting of a large cylinder having its journals in bearings upon the main frame, in combination with a small shaft, also mounted upon and across the same frame, and provided at each end with arms in the upper ends, of which a roller or spool for the wetted paper has its bearings for its journals. The object of this combination of devices is to afford a proper amount of tension to the web of wetted paper, and stretch and smooth it out evenly as it is passed over the large cylinder A, from roller *r* to roller *v*, it being wetted during such passage.

In the accompanying drawings, Figure 1 represents a side view of a portion of a paper-wetting machine embracing and illustrating my improvements, and Fig. 2 a plan view of the same.

D is a shaft journaled in the main frame I, provided with arms *c c*, one fixed upon each end thereof, and the lever E, fixed upon one end of the same. The spool *v*, for the wetted paper, has its bearings in the tops of the arms *c c*, and in the passage of the web of paper over the cylinder, from spool *r* to spool *v*, it is properly dampened for printing by the application of water by any suitable devices for that purpose, and afforded the proper degree

of tension by the pressure of the roll C against the cylinder A.

This pressure may be increased or diminished by moving the weight *e* farther from or nearer to the shaft D on the lever E; but, independently of the weight and arm, the shaft D and its arms *c c* and roller *v* so coact with cylinder A as to produce nearly a uniform tension, whether the quantity of paper on the roller *v* be great or small. Thus, if the roll of paper be large the arms *c c* will stand nearly in a vertical position, and will then sustain nearly the whole weight of the roll, and cylinder A will be relieved almost entirely of the same; but then, on the other hand, a greater amount of force will be required to revolve the roller *v*, because of the weight of the large quantity of paper thereon. But when the quantity of such paper has been reduced, and the roll C has become comparatively light, the roller *v* will, of course, revolve more easily in its bearings; but then, on the other hand, on account of the diminished diameter of the roll of paper, the arms *c c* will incline, and throw the roll C more heavily against the cylinder A, and thus increase by friction the tension of the paper in the process of unwinding it from the spool *r* upon spool *v*.

In the process of winding the dampened paper upon the receiving-spool *v* the opposite edges of the web of paper are often found to be unequal in length, resulting from unequal wetting or other causes; and to prevent injurious results produced by such inequalities the frame F, upon one end of which the roller *r* is mounted, is pivoted upon the main frame of the machine, as shown at *f* and G, Fig. 1, and to diminish friction the under side of the end of the frame F, immediately under the roller *r*, may be provided with rollers H and H, as shown, to travel upon the top of the main frame, and thus facilitate the horizontal oscillation of that end of the frame carrying the roller *r*.

The paper itself will oscillate the roller *r*, and the amount of force required to give it this motion will depend upon its own weight, that of the paper upon it, that of the frame F, and the amount of its friction upon its rollers H H and the pivot-pin *f*.

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

The combination of the large cylinder A, the shaft D, with its arms *c c*, the roller *v*, journaled in the upper ends of said arms, the lever E, with its weight *e*, and the roller B, mounted on a pivoted frame, F, all constructed

and arranged to operate substantially as described.

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