No. 638,757. Patented Dec. 12, 1899.

G. T. PRATT.

ATTACHMENT FOR WETTING CALENDER ROLLS OF PAPER MAKING MACHINES.

(Application filed July 5, 1899.)

(No Model.)

Fig. 1.

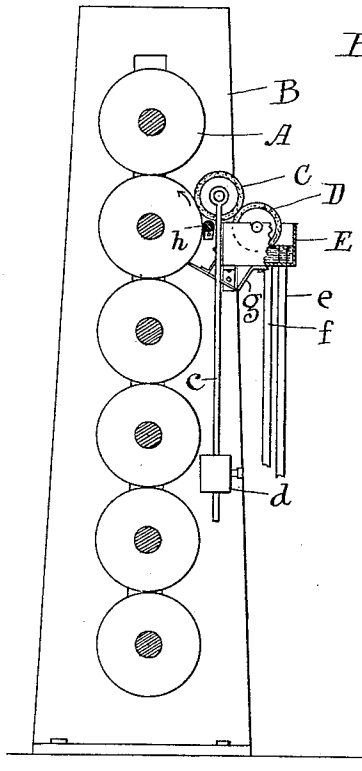
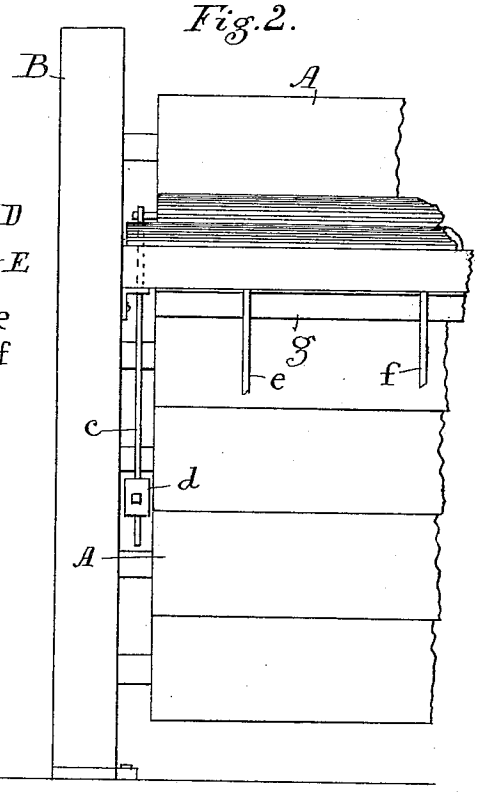


Fig. 2.



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UNITED STATES PATENT OFFICE.

GEORGE T. PRATT, OF WINDHAM, MAINE.

ATTACHMENT FOR WETTING CALENDER-ROLLS OF PAPER-MAKING MACHINES.

SPECIFICATION forming part of Letters Patent No. 638,757, dated December 12, 1899.

Application filed July 5, 1899. Serial No. 722,810. (No model.)

To all whom it may concern:

Be it known that I, GEORGE T. PRATT, a citizen of the United States of America, and a resident of Windham, Cumberland county, State of Maine, have invented certain new and useful Improvements in Attachments for Wetting Calender-Rolls of Paper-Machines, of which the following is a specification.

My invention relates to an attachment to be applied to the calender-rolls of paper-machines for wetting the face of such rolls when a "water-finish," so called, is to be applied to the paper.

I have devised this attachment particularly to be used in paper-machines making thick paper or "wood-board," in which the paper or board is made up of several layers; but it may be applied to any paper with good results.

In the accompanying drawings I have illustrated the form of my invention which I actually use and prefer; but it will be understood that other forms may be devised while keeping within the limits of the invention.

Figure 1 of the drawings shows the general form of a stack of calender-rolls looking at their ends and with one side of the frame removed and with my attachment applied, and Fig. 2 is a front elevation of the same.

A represents the calender-rolls, and B is the frame. The water or moisture is applied to one of the rolls by a wetting-roll C, which is wound, preferably, with a layer of felting or with a layer of thin cloth on the outside, thereby producing an absorbent surface. One side of the roll C rests on and runs in contact with the calender-roll above its center, while the other side rests on and runs in contact with a feed-roll D, which is journaled in a water-box E, where it runs in water, the water-box being secured by its ends to the sides of the frame. The roll D has its surface covered with pervious material, the same as the roll C. The water in the box E is kept at a constant level by means of a supply-pipe *f* and an overflow-pipe *e*, which latter may be raised and lowered to vary the level of the water according to the amount desired on the face of the calender-roll. The wetting-roll C is here shown as weighted with weights, one at each end, suspended from the journal of the roll by rods *c*, and by changing these weights a greater or less pressure may be put on the roll and the roll may be run more or less damp, according to the pressure. The amount of water put on the face of the calender-roll can thus be regulated in two ways—first, by the depth of water in the water-box, and, second, by the weights on the roll C.

In order to prevent any surplus water running from the roll C down the face of the calender-roll and dropping on the paper below, I place a wiper *h* beneath the roll C and in contact with the face of the calender-roll. This wiper is a rod of absorbent material, here shown as cylindrical in form. If any water gets by the wiper, it is caught by the drip-pan *g*, which is secured to the under side of the water-box, and it has an edge which runs in contact with the calender-roll.

The attachment is here shown as applied to one roll; but it is evident that when it is desired to finish both sides of the paper a like attachment is applied to the other side of the stack of rolls.

The water-finish which is applied to the paper by the use of this invention gives to the paper a smooth surface, prevents the breakage of the paper, and it enables the calender-rolls to be run light or with little weighting, and thus produces a board of smooth finish and relatively great thickness, which is to be desired in the manufacture of this kind of paper.

I claim—

The combination with one of the calender-rolls of a paper-machine of a water-feed roll adjacent to said calender-roll and parallel therewith, a wetting-roll resting on and running in contact with said calender and feed rolls, weights attached to the journal of said wetting-roll and means for supplying water to said feed-roll.

Signed by me at Portland, Maine, this 30th day of June, 1899.

GEORGE T. PRATT.

Witnesses:
S. W. BATES,
J. C. FOSTER.