(No Model.)

R. BROWN.

DANDY ROLL FOR PAPER MAKING MACHINES.

No. 407,992. Patented July 30, 1889.

FIG. 1.

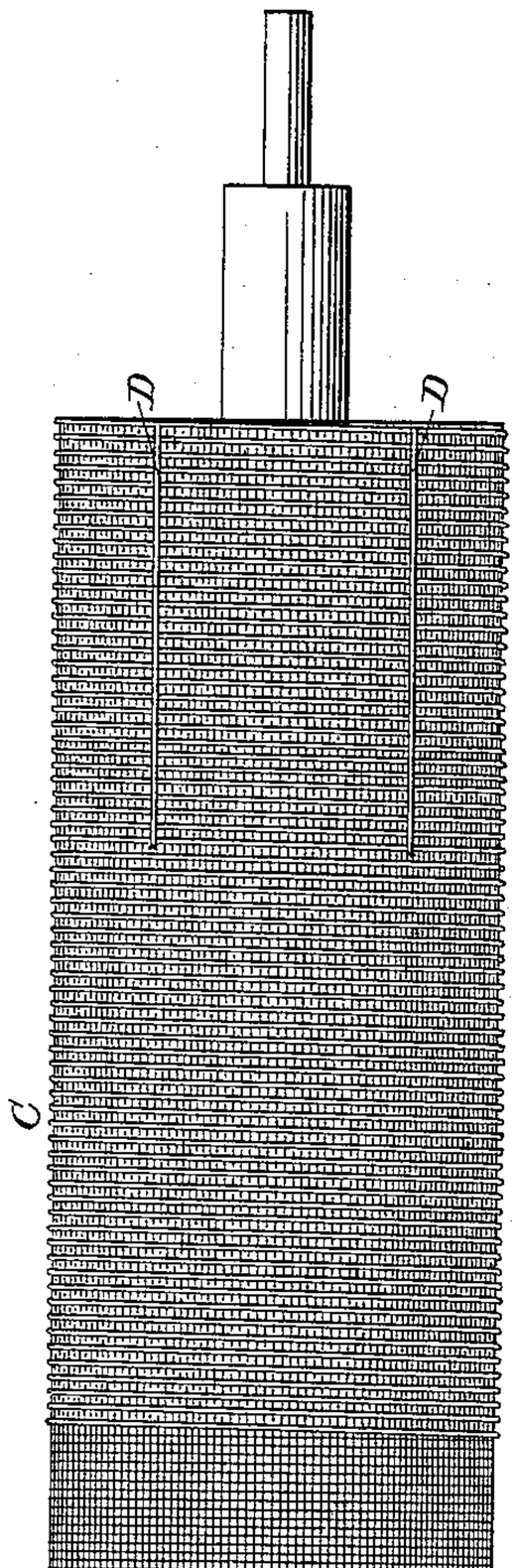
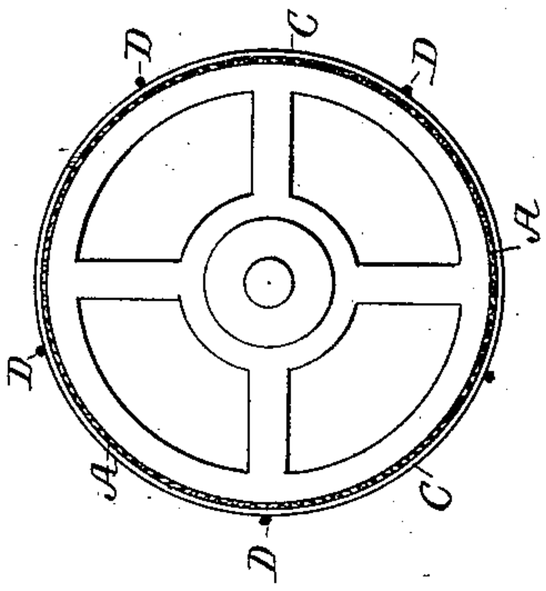


FIG. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

ROBERT BROWN, OF PENICUICK, COUNTY OF MID-LOTHIAN, SCOTLAND, ASSIGNOR OF ONE-HALF TO GEORGE DINWOODIE, OF NEW YORK, N. Y.

DANDY-ROLL FOR PAPER-MAKING MACHINES.

SPECIFICATION forming part of Letters Patent No. 407,992, dated July 30, 1889.

Application filed August 13, 1888. Serial No. 282,563. (No model.) Patented in England May 4, 1887, No. 6,563.

To all whom it may concern:

Be it known that I, ROBERT BROWN, a subject of the Queen of Great Britain and Ireland, and a resident of Penicuick, county of Mid-Lothian, Scotland, have invented Improvements in Dandy-Rolls for Paper-Making Machines, (for which I have obtained Letters Patent in Great Britain, No. 6,563, dated May 4, 1887,) of which the following is a specification.

My invention has reference to and comprises improvements in the construction of "dandy-rolls" of paper-making machines—that is, rolls for making the longitudinal and transverse lines or water lines or marks in "laid-lined" paper, with the object and for the purpose of making a more uniform and laid line, of equalizing the color of the paper on both sides, and allowing the machine to be driven at a higher speed than heretofore.

In the accompanying drawings, Figure 1 is a longitudinal view of a dandy-roll constructed according to my invention. Parts of the rolls have been broken away to illustrate their construction more effectually. Fig. 2 is an end of the same.

The frame B of the roll may be constructed in any usual manner, and upon this frame I first secure a cover A of woven wire. Upon this woven wire is then wound around spirally or laid wire C, which is secured to the woven cover at its end by soldering or otherwise. Over this spiral wire are secured line-mark wires D longitudinally of the axis of the roll. These wires D may be secured to the spiral wires by means of solder. It will thus be seen that whereas the ordinary roll has only one cover my improved roll has a woven cover placed on it first. A wire is then run over this woven cover, and the line-marks secured on the top of the laid wire. The laid marks there run longitudinally of the machine instead of across, as is the case with ordinary laid rolls. The under woven cover is so woven or so laid upon the roll as to allow thereon the reverse way of the ordinary woven wire, or it would be impossible to run the line-wires around the body or frame with an ordinary woven wire.

The advantages to be derived from the above are as follows: It makes a more distinct laid mark, and the laid is more equal on both sides of the sheet. It also aids materially in keeping the color equal on both sides of the sheet, because the woven cover, which is underneath, keeps the water on the paper, and therefore does not allow the fiber to be opened up so much. The paper-machine can be worked at a higher rate of speed, as the woven part of the roll, which keeps the water more on the paper, prevents its lifting the fiber. The woven cover also prevents the liquid material or stuff from getting into the inside of the roll, (which happens in the case of the ordinary roll,) and thus saves the time and the paper which is lost while cleaning the ordinary roll.

It is evident that my arrangement of wires for producing the laid and line marks can be easily applied to the laid cover on rolls at present in use. In order to produce laid-line writing-papers, the wires are soldered on about a quarter of an inch apart, or whatever distance is required for the laid-line mark on the paper. I use either copper or brass wires for my dandy-roll.

I claim as my invention—

1. A dandy-roll having a woven-wire cover over the frame and laid wires on this woven cover.

2. A dandy-roll having a woven cover on the frame, a wire wound spirally on the woven cover, and wires running longitudinally of the roll, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

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