

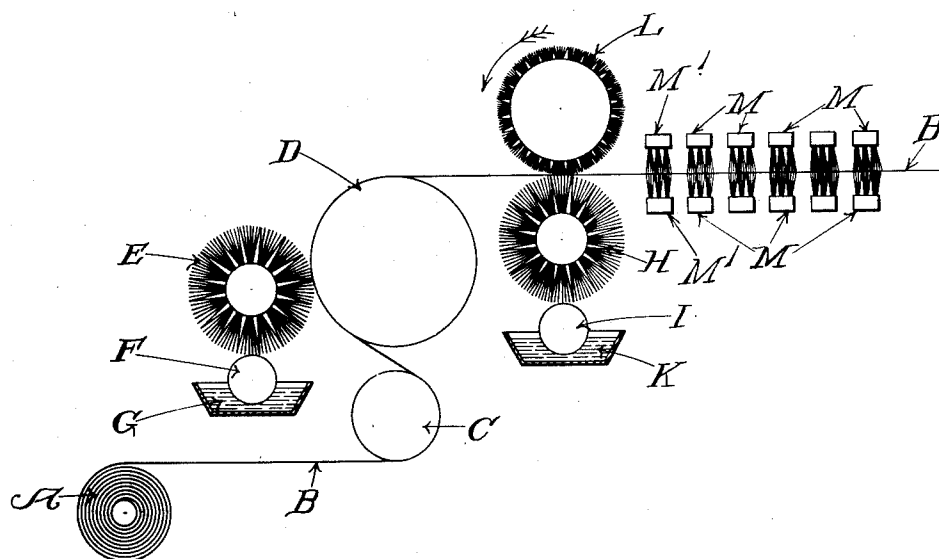
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No. 826,518.

PATENTED JULY 17, 1906.

J. B. MORROW.
COATING MACHINE.

APPLICATION FILED AUG. 23, 1905.



Witnesses:

J. Henry Parker
Robert Wallace.

Inventor:

John B. Morrow
by Machod, Calver, Cushman & Dix,
Attorneys.

UNITED STATES PATENT OFFICE.

JOHN B. MORROW, OF PEPPERELL, MASSACHUSETTS, ASSIGNOR TO
PEPPERELL CARD & PAPER COMPANY, OF PEPPERELL, MASSA-
CHUSETTS, A CORPORATION OF MASSACHUSETTS.

COATING-MACHINE.

No. 826,518.

Specification of Letters Patent.

Patented July 17, 1906.

Application filed August 23, 1905. Serial No. 275,400.

To all whom it may concern

Be it known that I, JOHN B. MORROW, a citizen of the United States, residing at Pepperell, county of Middlesex, State of Massachusetts, have invented a certain new and useful Improvement in Coating-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention has for its object to produce a machine for use in the manufacture of so-called "coated" papers which have a thin layer of coating material applied to each side of the paper. This coating material is applied in the form of a liquor and after being properly spread or laid upon the paper is dried.

In the manufacture of coated papers a coating is frequently put on one side of the paper, after which the paper is dried and then coating is put on the other side and the paper allowed to dry a second time. This method requires a double heating of the paper during the drying process, which has an injurious effect upon the finished paper. To avoid this, both sides of the paper are sometimes coated at substantially the same time without drying the paper between the successive applications of the coating. When this latter process is employed and the coating is applied to the paper by rolls or brushes instead of by immersing the paper in the liquor, I find that the finish of the paper is injured by passing the coated side of the paper over a roll of ordinary construction during the application of the coating to the second side of the paper.

My invention provides means for coating the two sides of the paper by means of coating-brushes and without doing injury to the finish of the side of the paper which is first coated during the application of the coating to the other side.

The invention will be fully understood from the following description, taken in connection with the accompanying drawing, and the novel features thereof are pointed out in the claims at the close of this specification.

Referring to the drawing, the figure is a diagrammatic view of a machine embodying my invention.

In the drawing there is indicated at A a

roll of paper and at B the sheet of paper to be coated. The sheet of paper B passes from the roll of paper A around a guide-roll C to a bed-roll D of considerably larger diameter. While the paper B is passing over the bed-roll D the coat for the upper side of the paper is applied to it by means of a brush-roll E, which receives the coating mixture from a wallower F, which runs in a trough of liquor G. By varying the speed of the wallower-roll F, which takes up from the trough a constant amount of liquor for each revolution, I am enabled to regulate with great nicety the amount of coating applied by the coating-brush E to the surface of the paper.

After leaving the coating-brush E the paper B passes along in a substantially horizontal plane to the point where the coating for the under side is applied. This coating is applied by means of a set of instrumentalities similar to those by which the first or upper coating was applied—namely, a revolving brush H, which takes the liquor from the wallower-roll, running in the trough K. The two applying-brushes E and H are provided with long bristles, as shown in the drawing, and may be run at suitable speeds and in the direction determined by the conditions of the work to be produced by any particular machine.

To support the paper during the application of the second or under coating, I provide a supporting-brush L on the upper side of the paper. This brush is made with very short fine bristles and is of a considerable diameter to provide as large an area of surface for the support of the paper B as is possible. The supporting-brush L runs in the direction of the movement of the paper and has a linear speed substantially equal to the speed of the paper B. It will thus be seen that the supporting brush-roll L does not injuriously disturb the coating which has already been applied to the upper surface of the sheet of paper B by the first applying brush-roll E, but, if anything, puts the coating in a more satisfactory condition. After passing the second applying-brush H the paper passes between a pair of stationary brushes M' and the ordinary jigger-brush M, which are located on opposite sides of the paper and which put the coating in final shape for dry-

ing. These jigger-brushes are of the well-known form and operation.

What I claim is—

1. In a coating-machine, the combination
5 of applying mechanism for one side of the sheet of paper, a rotary support coöperating with the said applying mechanism, applying mechanism for the other side of the said
10 sheet of paper and supporting mechanism comprising a brush-roll coöperating with the said second applying mechanism.

2. In a coating-machine, the combination of applying mechanism comprising a wallower-roll and an applying-brush, a roll for

supporting the paper during the application 15 of the coating by the said applying mechanism, a second applying mechanism comprising a wallower-roll and an applying-brush, and a brush-roll for supporting the paper during the application of the coating by the 20 said second applying mechanism.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN B. MORROW.

Witnesses:

GEORGE G. TARBELL,
EDWARD B. PARKHURST: