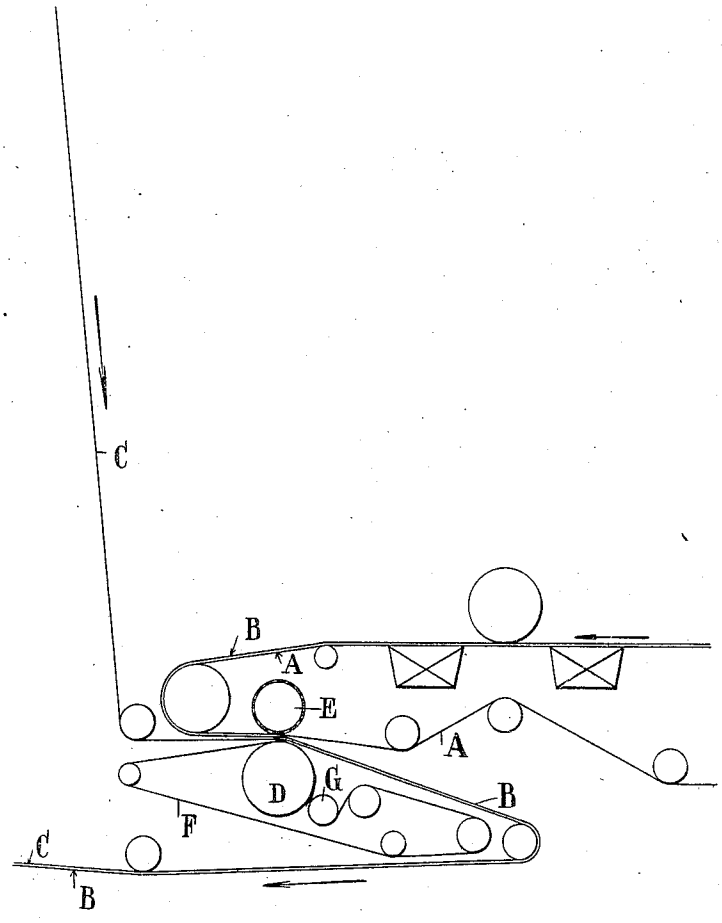
No. 877,836. PATENTED JAN. 28, 1908.

J. A. DUPONT.

PAPER MAKING MACHINE.

APPLICATION FILED JAN. 16, 1906.



WITNESSES :

W. M. Avery

A. H. Davis

INVENTOR

Jean Albert Dupont

BY

Munn & Co

ATTORNEYS

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JEAN ALBERT DUPONT, OF PARIS, FRANCE.

PAPER-MAKING MACHINE.

No. 877,836. Specification of Letters Patent. Patented Jan. 28, 1908.

Application filed January 16, 1906. Serial No. 296,276.

To all whom it may concern:

Be it known that I, JEAN ALBERT DUPONT, a citizen of the Republic of France, residing at 142 Boulevard Pereire, in Paris, France, engineer, have invented a certain new and useful Improvement in Paper-Making Machines, of which the following is a full, clear, and exact description, and for which I have applied for Letters Patent in France, dated January 21, 1905 (not issued); Austria, June 2, 1905; Hungary, May 31, 1905; Russia, May 24, 1905, and Germany, May 31, 1905.

Paper-making machines of the type called plate machines or web machines, are well known and in these the web of damp paper coming from the wire cloth is transferred to a second wire-cloth which is endless and by which it is carried through the drying chamber.

The present invention relates to a special arrangement of this second wire cloth with regard to the principal wire cloth, for the purpose of insuring the transfer of the sheet of paper to this second wire cloth under such conditions as reduce to a minimum the pressures upon the damp sheet and obviate crushing and distortions which may arise therefrom. This discharge or transfer of the sheet of paper from the first wire cloth to the second takes place directly at a point of the first wire cloth at which the sheet is turned downwards. At the point of transference is arranged a presser roller perforated or of woven wire, which in conjunction with the couch roll placed at this point maintains the two metallic cloths in perfect contact while at the same time allowing free admission of air. This construction is diagrammatically represented in the annexed drawing.

The sheet of paper B which is in course of manufacture and traveling on the principal metallic cloth A of the paper machine, is afterwards carried on the couching and drying wire cloth C. The wire gauzes or cloths A and C are caused to meet, the paper-web being placed between them, and they pass together over the couch roll D, above which is arranged a pressure roller E perforated or wire-woven.

An endless damp felt F passes between the wire C and couch roller D from which latter it is taken off to be exposed and dried by a roller G.

The working of the apparatus is as follows;—The damp web manufactured in the ordinary way and traveling on the wire gauze A is directly transferred to the wire cloth C by immediate contact owing to the passage of the two cloths A and C between the rollers D and E, the transfer being facilitated by the felt F. The roller E is perforated or woven so that during the passage between the rollers E and D, the air can have free access to the paper web; in consequence of this the web can detach itself from the wire cloth A and be transferred to the cloth C without difficulty. The damp web carried on the wire cloth C is then exposed and dried by any ordinary methods.

It will be evident from the description, that the felt belt by reason of its dampness exercises a considerable adhesion on the web of paper, thus creating a hydraulic suction between the belt and the paper. The other roller being perforated, minimizes the adhesion between the roller and the web, thus permitting the belt to exercise a maximum traction on the web.

Having thus described my invention, what I claim as such and desire to secure by Letters Patent, is;—

1. In web machines for the manufacture of paper, the combination with an endless belt of wire cloth, of a second endless belt of wire cloth having its upper run in contact with the lower run of the first belt, a couch roll beneath the second belt at the point of contact, a perforated roll coacting with the couch roll and above the first belt, and an endless belt of felt between the couch roll and the second belt.

2. In web machines for the manufacture of paper the combination with a wire cloth for receiving the paper web, of a second wire cloth contacting with the first wire cloth, a couch roll contacting with the second wire cloth, at a point of contact of said wire cloths, a perforated roll coöperating with the couch roll and contacting with the first wire cloth, and a belt of felt between the couch roll and the second wire cloth.

3. In web machines for the manufacture of paper, the combination with an endless belt of wire cloth, of a second endless belt

of wire cloth having a run in contact with a run of the first belt, rollers between which said contacting portions of the belts pass, and means in connection with one of said rollers for causing adhesion of the web of paper passing between the belts, the other of said rollers being perforated whereby to minimize the resistance to the means for causing adhesion.

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

JEAN ALBERT DUPONT.

Witnesses:
GUSTAVE DUMONT,
HANSON C. COXE.