

A. OUTERSON.
PAPER MAKING MACHINERY.
APPLICATION FILED JUNE 16, 1902.

NO MODEL.

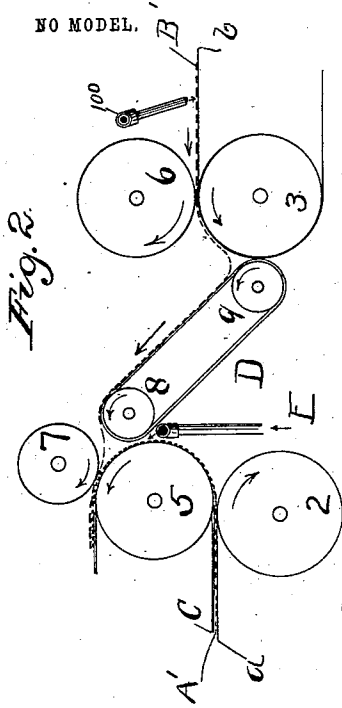
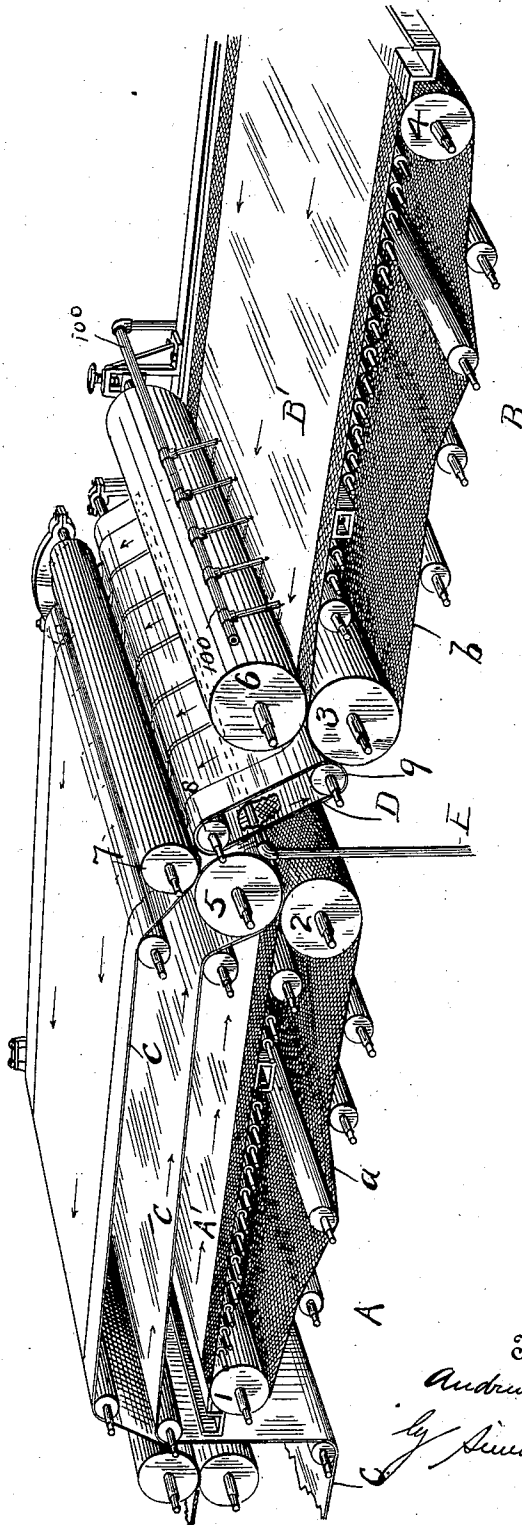


Fig. 1



Witnesses
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UNITED STATES PATENT OFFICE.

ANDREW OUTERSON, OF WINDSOR LOCKS, CONNECTICUT.

PAPER-MAKING MACHINERY.

SPECIFICATION forming part of Letters Patent No. 726,980, dated May 5, 1903.

Application filed June 16, 1902. Serial No. 111,809. (No model.)

To all whom it may concern:

Be it known that I, ANDREW OUTERSON, a citizen of the United States of America, residing at Windsor Locks, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Paper-Making Machinery, of which the following is a specification.

The object of this invention is to provide a machine which will produce a paper which shall be free from the markings caused by the wire on which the paper is made.

My invention has particular reference to paper made on Fourdrinier machines and does not concern itself with paper made by other processes.

Another advantage resulting from my invention is the combination with this machine of means for making what is known as a "deckle-edged" paper.

Figure 1 is a perspective view of part of a machine in which my invention is embodied. Fig. 2 is a diagrammatic view showing the delivery ends of the machines and the devices between them.

In carrying out my invention I make use of two Fourdrinier machines. The operation of these Fourdrinier machines is well known to those familiar with this art, the pulp being flooded onto the wire at one end, which is sometimes called the "making" end of the machine, and as it travels toward the other end of the machine it is felted and dried, so that it is taken off at what is called the "delivery" end of the machine in a continuous sheet. I arrange these machines with their delivery ends opposite one another.

A denotes one Fourdrinier machine of the Harper type, and B another.

a denotes the ordinary Fourdrinier wire of the machine, passing about the rolls 1 2.

A' denotes the sheet of pulp formed on the wire.

b denotes the Fourdrinier wire of the machine B, passing about the rolls 3 4.

B' denotes the sheet of pulp formed on the wire b. The wires travel in the direction indicated by the arrows, the roll 2 being the delivery end of the machine A and the roll 3 being the delivery end of the machine B. Each

machine is provided with the ordinary couch-rolls 5 6.

The machine A is provided with the ordinary felt C, which passes over suitable idler-rolls and between the roll 2 and the couch-roll 5, then between the couch-roll 5 and the pressure-roll 7, back in the direction of the arrows. As the felt C comes in contact with the pulp on the wire it picks it off from the wire and carries it around the couch-roll 5 and between it and the pressure-roll 7. Between the delivery ends of the machines I position a conveyer of any kind, as a short endless belt D, which travels about the rolls 8 9. This short endless belt takes the pulp from the wire b after it has passed between the roll 3 and the couch-roll 6 and carries it up, as indicated by the arrows, and delivers it onto the sheet of pulp A', which is carried by the felt C. These two sheets then pass between the couch-roll 5 and the pressure-roll 7 and are united. It will be seen that by this arrangement the wire sides of the two sheets of pulp are laid together and that the finished surfaces will be entirely free from any marks of the wire, which are objectionable for many reasons. I provide a sprayer E, which dampens the wire sides of the sheets before they are joined and insures a more perfect union.

As above stated, I provide in connection with this machine means for cutting one of the sheets of pulp, as B', into strips with deckle edges. This is done by arranging the jets 100 so that they will be projected upon the sheet just before it is couched by the rolls 3 6. In making paper for special uses—as, for instance, envelops—it is sometimes desirable to reinforce certain parts of the sheet—as, for instance, the parts which make up the front or back of the envelop. To do this, only the alternate strips which are formed by the jets 100 are carried up by the felt D, the others being carried around the roll 3 and back into the pulp-chest. In other respects the machine operates exactly as above described.

I claim as my invention—

1. In a machine of the class specified, in combination, the two Fourdrinier machines

arranged with their delivery ends opposite one another, a felt for one of said machines, and an endless belt or conveyer arranged between the ends of the two machines as and
5 for the purposes specified.

2. In a machine of the class specified, in combination, the two Fourdrinier machines arranged with their delivery ends opposite one another, a felt for one of said machines
10 passing about the couch-roll, a pressure-roll coöperating with the couch-roll, and an endless belt or conveyer located between the delivery ends of the two machines, as and for the purposes specified.

15 3. In a machine of the class specified, in combination, the two Fourdrinier machines arranged with their delivery ends opposite

one another, couch-rolls for each of said machines, a felt for one of the machines passing about its couch-roll, a pressure-roll coöper- 20 ating with said couch-roll, an endless belt located between the delivery ends of the machine and adapted to carry the paper from the second machine to the first-named felt, and means for cutting the one sheet of paper 25 into strips, substantially as described and for the purposes set forth.

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

ANDREW OUTERSON.

Witnesses:

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