March 23, 1926. 1,577,897

A. DANNINGER

PAPER MAKING MACHINE

Filed Dec. 12, 1924

Fig:1.

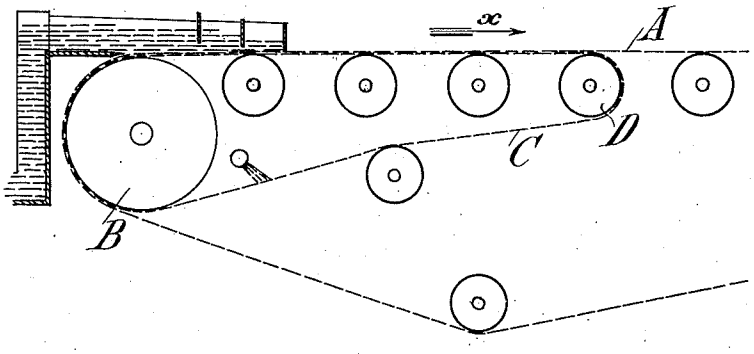
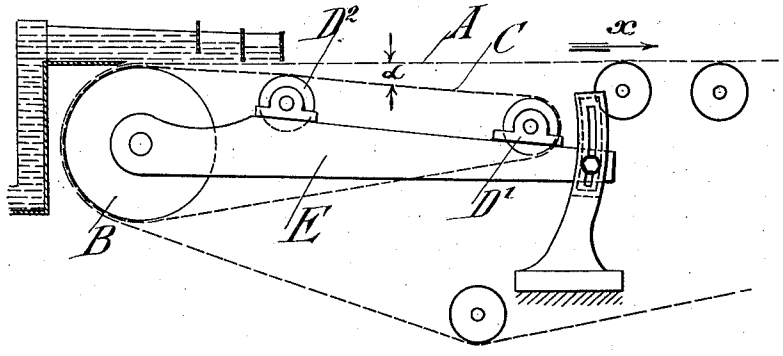


Fig:2.



INVENTOR

Alois Danninger

BY C. P. Goepel.

ATTORNEY.

Patented Mar. 23, 1926. 1,577,897

UNITED STATES PATENT OFFICE.

ALOIS DANNINGER, OF STEYRERMUHL, UPPER AUSTRIA.

PAPER-MAKING MACHINE.

Application filed December 12, 1924. Serial No. 755,391.

To all whom it may concern:

Be it known that I, ALOIS DANNINGER, a citizen of the Republic of Austria, and residing at Steyrermuhl, Upper Austria, have invented certain new and useful Improvements in Paper-Making Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a wire part of Fourdrinier machines, especially of those with high travelling speed, and has for its object to retard the removing of the water from the stock, especially on the foremost portion of the wire, in order to allow the fibres of the stock to settle and to felt in a suitable manner.

Another object of the invention is to provide a construction by which the intentioned retarding action of the device is regulatable in certain limits, according to the quality of the stock and the travelling speed of the wire.

The practice with high speed Fourdrinier machines has shown that the settling of the fibres and by this the sight of the sheet suffers, when the removing of the water on the first part of the wire is effected too rapidly.

As it is well known, the table rolls exert a considerable sucking effect on the stock liquid, and this suction is the more impetuous the faster the wire travels. In the case of high speed, consequently, the removing of the water occurs so suddenly that there is no time for the fibres to settle on the wire in an even layer, and this the more, as the stock has no time to calm down from the waving motion with which it arrives on the wire.

This inconvenience is met with by the invention by means of a device which is apt for delaying the removal of the stock water and even for regulating this delay in accordance to the quality of the stock, the thickness of the sheet and the travelling speed of the wire.

In the accompanying drawings—

Fig. 1 is a longitudinal section of a flow box with the adjacent parts of the wire part showing an embodiment of my invention and

Fig. 2 is a similar section showing an arrangement by which the delay of the water removal is regulable in a suitable manner.

Referring to Fig. 1, I have indicated on the inside of the wire A an endless web C shorter than the wire A, which also travels round the breast roll B together with the wire A. This latter, on its way in the direction of the suction boxes, is being accompanied by the web C till it reaches the table roll D. Then the web C, around the roll D, returns to the breast roll B as shown in the drawing. By this arrangement, the web C between the breast roll B and the table roll D, serves to tighten the wire A and in this way to slow down the removal of water from the stock, by the breast roll and the table rolls.

Referring to Fig. 2, I have indicated an arrangement by which the web C, travelling likewise round the breast roll, may be lowered beneath the wire A, in order to reduce the tightening effect of the web as described above and to let greater quantities of stock water pass through. For this purpose, the table roll D^1, round which the web C returns to the breast roll, is supported by an adjustable arm E, swinging round the axis of the breast roll B and being fixable in different heights. By this means, the angle a between the wire A and the web C may conveniently be altered and the passage of the stock water regulated according to the travelling speed and the quality of the stock.

The kind of the web C may be altered in accordance with the working conditions. It may, e. g., consist of wire cloth, felt, or the like

It will be understood that changes and modifications may be made without departing from the spirit of the invention as defined in the appended claims.

What I claim is:

1. In a Fourdrinier machine, the combination of a wire travelling round a breast roll, an endless perforated web through which water may pass inside of the wire travelling likewise round the breast roll and accompanying the upper portion of the wire underneath in contact with same on a part of its way toward the suction boxes.

2. In a Fourdrinier machine, the combination of a wire travelling round a breast roll, an endless perforated web through which water may pass travelling likewise round the breast roll and in contact with the

wire underneath same and returning to the breast roll round one of the table rolls.

3. In a Fourdrinier machine, the combination of a wire travelling round a breast roll, an endless web travelling likewise round the breast roll inside of the wire and in contact with same near to the breast roll, a table roll round which the endless web returns to the breast roll and being supported at each side by an adjustable arm, swinging round the axis of the breast roll and being susceptible to be fixed in different heights.

4. In a Fourdrinier machine, the combination of a wire travelling round a breast roll, an endless web travelling likewise round the breast roll inside of the wire and in contact with same near to the breast roll, a table roll round which the endless web returns to the breast roll and being supported at each side by an adjustable arm, swinging round the axis of the breast roll and being susceptible to be fixed in different heights, further table rolls located between the breast roll and the above mentioned table roll being likewise supported by the adjustable arms.

5. The method of wholly or partially tightening the wire of a Fourdrinier machine after the breast roll by inserting an endless perforated web through which water may pass inside of the wire which travels along with the wire underneath the same.

6. The method of tightening the wire of a Fourdrinier machine after the breast roll by an endless web inside of the wire returning to the breast roll round one of the table rolls, the latter being adjustable in different heights in order to vary the angle between the wire and the web and thus to regulate the quantity of stock water passing through the wire in the foremost part of same.

In testimony that I claim the foregoing as my invention, I have signed my name.

ALOIS DANNINGER.