

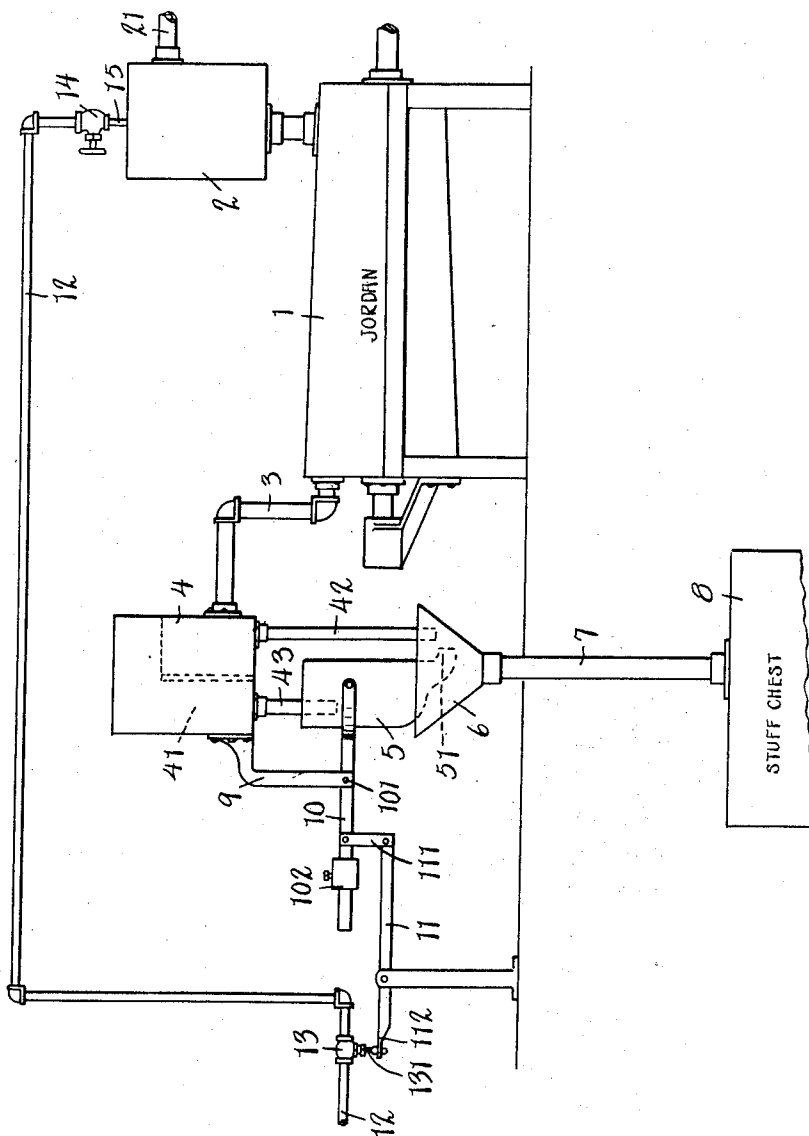
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J. R. SPOOR

STOCK REGULATING MECHANISM FOR PAPER MAKING MACHINES

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 BY

INVENTOR

John R. Spoor
Chapman & Earl
ATTORNEYS &

UNITED STATES PATENT OFFICE.

JOHN ROBERT SPOOR, OF KALAMAZOO, MICHIGAN.

STOCK-REGULATING MECHANISM FOR PAPER-MAKING MACHINES.

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The main objects of this invention are:

First, to provide a simple and effective means for controlling the weight of stock delivered to the stuff chest of a paper making machine.

Second, to provide an improved method or process for controlling the weight of the stock.

Objects pertaining to details and economies of construction and operation of my invention will definitely appear from the description to follow. The invention is pointed out in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawing, in which:

1 is a Jordan beater of the usual construction supplied from supply chest 2. 21 is the stock pipe delivering into the supply chest. The Jordan delivers under pressure through the pipe 3 to the regulating stuff chest 4, which is provided with a constant level compartment 41. It has an overflow pipe 42. 43 is a regulating discharge pipe from the constant level compartment which delivers into the balanced controlling hopper 5. The hopper 5 has a restricted outlet 51. These deliver into the hopper 6 and discharge through the pipe 7 to the stuff chest 8 of a paper making machine.

The balanced hopper 5 is supported by the lever 10 which is fulcrumed at 101 on the bracket 9, and is provided with an adjustable counterweight 102. This lever 10 operates the lever 11 through the connecting link 111. The lever 11 controls the supply of water through the pipe 12 by controlling the needle valve 13 which is of usual construction controlled by the reciprocation of the lever 11, the valve stem 131 being connected to the end 112 of the said lever 11. The valve 14 is provided to cut off pipe 12 which delivers water through a restricted pipe 15 into the supply chest 2 to cause jet action to facilitate the admixture of the water with the stock at that point.

In operation it will be observed that when the apparatus is adjusted for a definite weight of paper the control of stock is automatic by the weight of the stock itself. The balanced hopper operates the lever 10 which, through its connections to the lever (these parts constituting a compound lever), opens the needle valve when the stock is heavy, and

water under pressure is delivered through the pipe 12 to the supply chest 2. This immediately dilutes the contents of the chest, which when delivered to the Jordan beater is thoroughly admixed and delivered in required strength to the regulating supply chest 4.

Immediately the weight of the stock is reduced by this action it flows more freely from the balanced hopper 5 which swings that end of the lever 10 upwardly and closes or partially closes the needle valve 13, thus lessening or stopping the dilution as soon as the stock is sufficiently diluted.

By this means the weight of stock is regulated and the variation in weight of the sheet delivered from the paper machine is controlled within very narrow limits, and the paper stock is thus conserved.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a stock control means for paper making machines, the combination with the Jordan beater and stuff supply box therefor, of a regulating supply chest with a constant level chamber, delivery pipes therefrom, a balanced hopper with restricted outlet, a counterbalanced lever carrying said hopper, a water supply pipe, a needle valve for controlling the same, and connections from said valve to the said counterbalanced lever, as specified.

2. In a paper stock control means, the combination of a constant level regulating supply chest, a counterbalanced hopper for receiving stock therefrom, a water supply pipe for delivering water directly to the paper stock supply, a needle valve, and a lever connection from the said hopper to control said valve to regulate the opening.

3. In a paper stock control means, the combination with the Jordan beater and stuff supply box therefor, a regulating supply chest delivery connections from said Jordan beater to said regulating supply chest, a counterbalanced hopper with restricted discharge opening, a delivery pipe from the regulating chest to the said counterbalanced hopper, a water supply pipe, and a valve with connections to the counterbalanced hopper to control the water supply to the Jordan beater, as specified.

4. In a paper stock control means, the com-

bination with the Jordan beater and stuff supply box therefor, a regulating supply chest, a delivery connection from said Jordan beater to said regulating supply chest, a counterbalanced hopper with a discharge opening, a delivery pipe from the regulating chest to the said counterbalanced hopper, a water supply pipe, and a valve with connections to the counterbalanced hopper to control the water supply to the Jordan beater, 10 as specified.

In witness whereof I have hereunto set my hand.

JOHN ROBERT SPOOR.