

(No Model.)

J. H. SHORROCK & J. MARTIN.
PAPER MAKING MACHINE.

No. 495,950.

Patented Apr. 18, 1893.

Fig. 1.

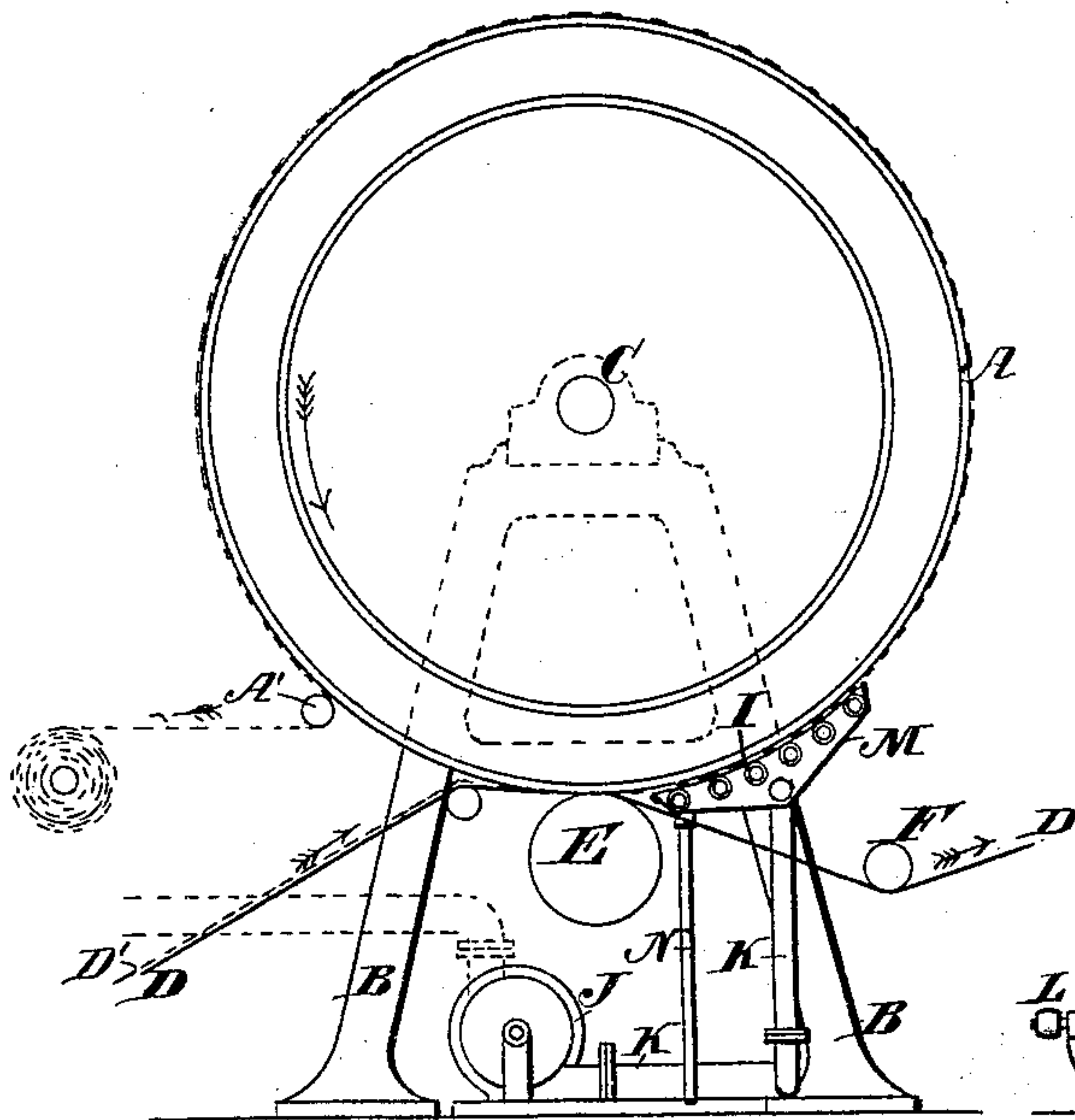


Fig. 2.

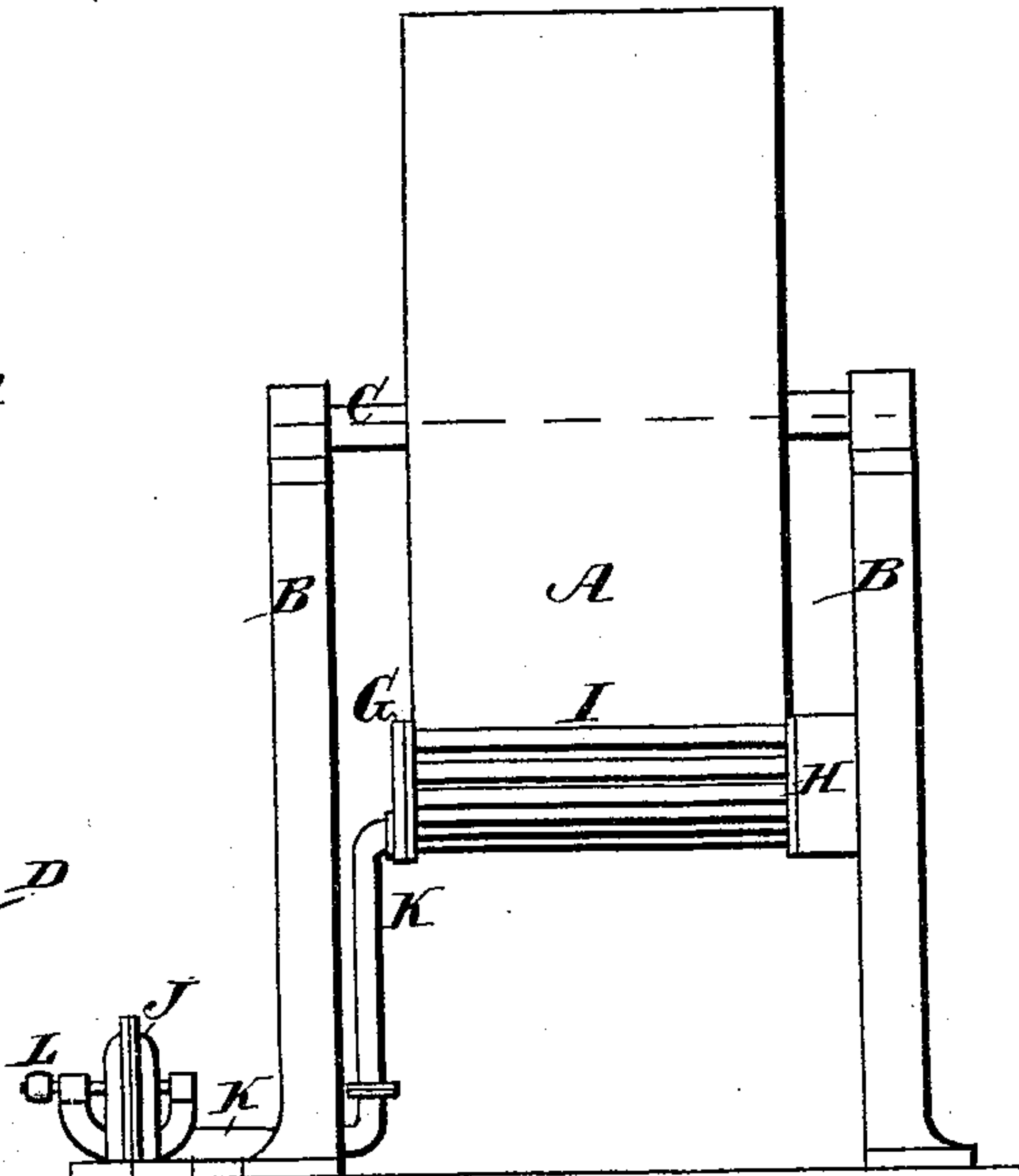


Fig. 3.

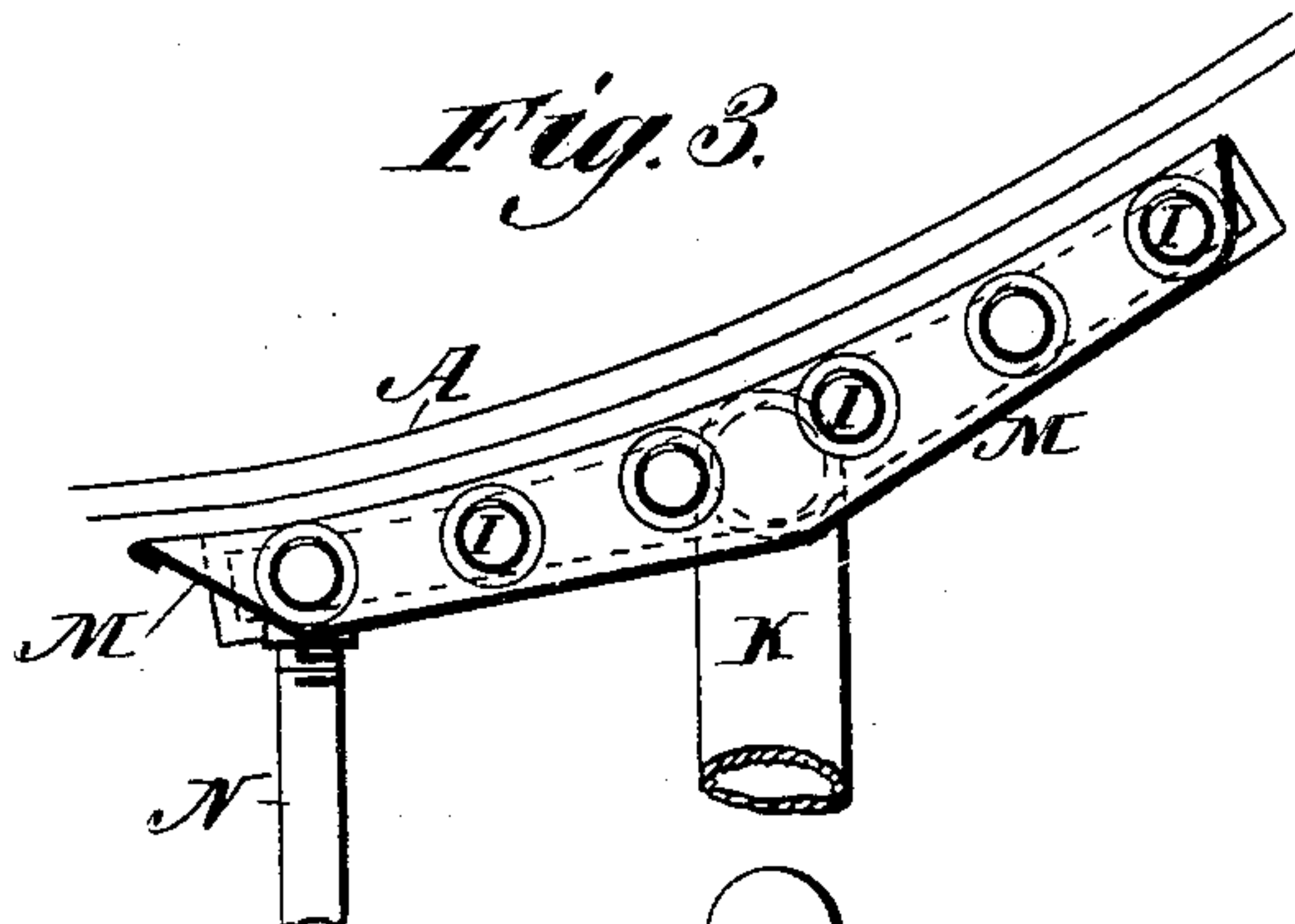


Fig. 4.

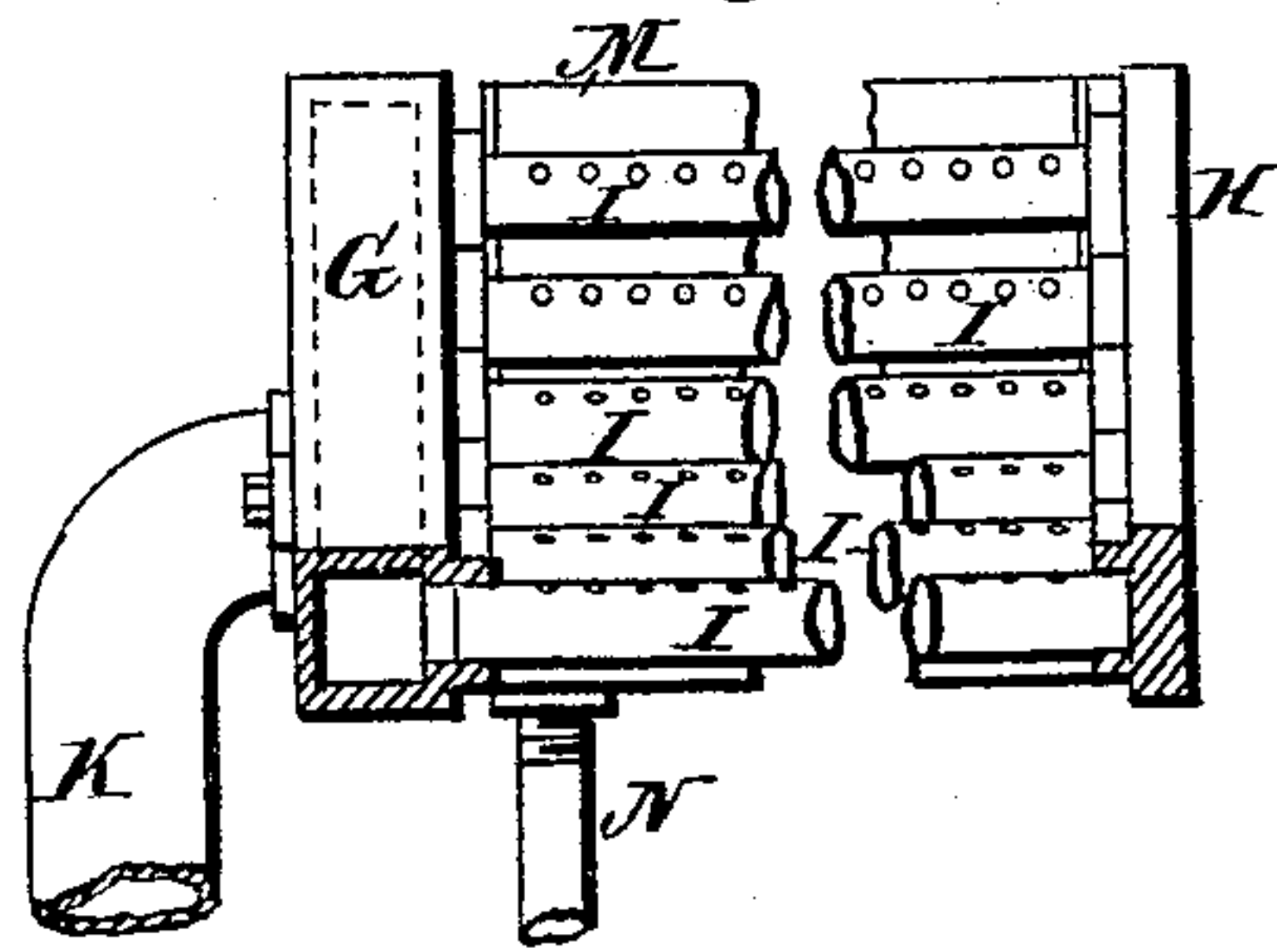
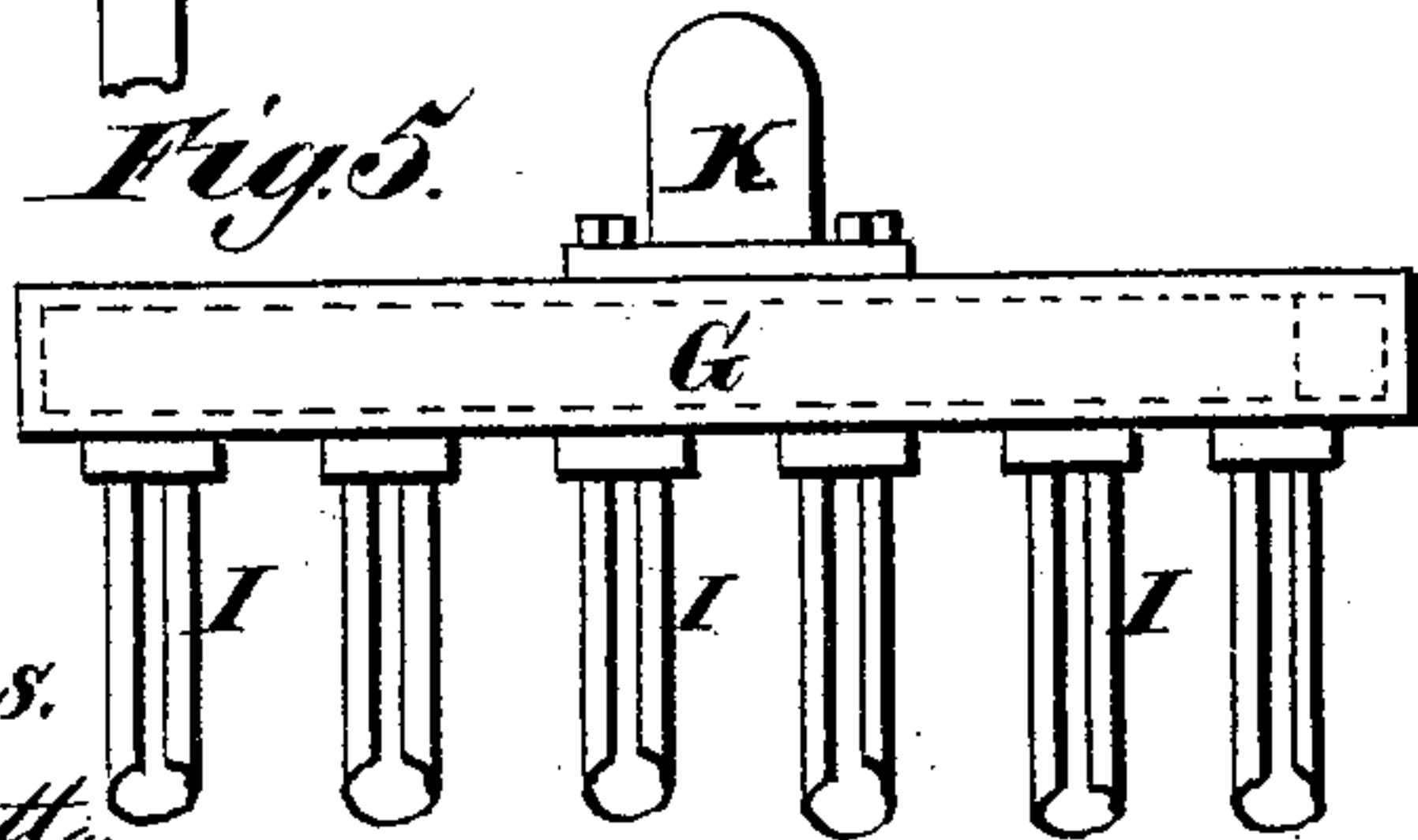


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN HUTCHINSON SHORROCK, OF DARWEN, AND JOHN MARTIN, OF
CALDER GROVE, ENGLAND.

PAPER-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 495,950, dated April 18, 1893.

Application filed February 2, 1892. Serial No. 420,076. (No model.) Patented in England August 15, 1890, No. 12,791.

To all whom it may concern:

Be it known that we, JOHN HUTCHINSON SHORROCK, of the firm of J. & R. Shorrock, engineers and iron-founders, of Bolton Road and Lee Foundries, Darwen, and JOHN MARTIN, of Calder Grove, near Wakefield, England, subjects of the Queen of Great Britain, have invented new and useful Improvements in Paper-Making Machines, (for which we have obtained a patent in Great Britain, No. 12,791, dated August 15, 1890,) of which the following is a specification.

This invention refers to improvements in or relating to paper-making machinery and has for its object that of increasing the production of paper. This we effect by suitably disposing one or more perforated or slotted tubes alongside the surface of the drying cylinder or cylinders, and charging the said pipe or pipes with a blast of air from a fan or its equivalent to impinge on the surface of the paper on the drying cylinder or cylinders or otherwise. Suitable arrangements are provided for conveying away condensed steam or water.

Figure 1 is a side elevation of the drying cylinder of a paper making machine. Fig. 2 is an end elevation of Fig. 1. Fig. 3 is an enlarged sectional elevation of perforated air pipes. Fig. 4 is a broken longitudinal elevation of Fig. 3. Fig. 5 is a plan of slotted pipes.

In all the figures the same letters are employed to indicate corresponding parts.

A is the drying cylinder or cylinders of a paper-making machine; B the standards carrying pedestals or bearings to support the shaft or center C on which the cylinder or cylinders A are mounted; D the felt employed for carrying the pulp or wet paper to the drying cylinder or cylinders A; E the roller for delivering the pulp or wet paper D' to the drying cylinder or cylinders, and F the roller for conveying the felt back to the other end of the machine.

The drying cylinder, or cylinders, rotates and the felt travels in the direction indicated by the arrows. The pulp or wet paper, des-

ignated by the dotted line D' in Fig. 1, is passed along a portion of the felt D to the roller E and thence around the cylinder A to and beneath a guide roller A' whence it passes off to a receiving roll.

To the standards B, or other convenient part of the machine, is attached the cavity-box or chamber G and the supporting plate H, in which are mounted the perforated or slotted pipes I. The cavity-box or chamber G is supplied with air or wind pressure from the fan or blower J by means of the pipe K. The pipes I are placed in close proximity to the roller E employed for delivering the pulp or wet paper to the drying cylinder or cylinders A; and the perforations or slots are so disposed that the blast of air or wind pressure is directed so as to impinge on the pulp or wet paper immediately it is received by the drying cylinder or cylinders, and by which the drying of the same will be considerably increased, thus allowing of the paper-machine being accelerated with a corresponding increase in the production of paper. The fan or blower J is fitted with the pulley L, which can be driven by a strap or belt or other equivalents from any convenient part of the paper-machine, or from other gearing convenient or suitable for the purpose. Underneath the pipes I is placed the dish or receptacle M to collect condensed steam or water as it is formed by the action of the blast of air or wind pressure on the pulp or wet paper on the drying cylinder or cylinders. Condensed steam or water as it is collected in the dish or receptacle M flows to the lowest point and down the outlet pipe N to the floor or other pipe or drain it may be coupled with.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is—

In a paper-making machine, the combination with the drying cylinder A, of the perforated or slotted pipes I extended across the entire width of the drying cylinder to impinge a blast of air from a fan or blower

over the entire surface of the wet pulp or paper, the cavity-box or chamber G, the supporting plate H, the fan or blower J, pipes K, dish or receptacle M, and the condensed
5 water pipe N, as and for the purposes herein set forth.

In testimony whereof we have hereunto set

our hands and affixed our seals in presence of two subscribing witnesses.

JOHN HUTCHINSON SHORROCK. [L. S.]

JOHN MARTIN. [L. S.]

Witnesses:

ERNEST GIBBONS,

EDMUND CHADWICK.