

J. P. Sherwood.

Paper Mach.

N^o 95,153. Patented Sept. 21, 1869.

Fig. 1.

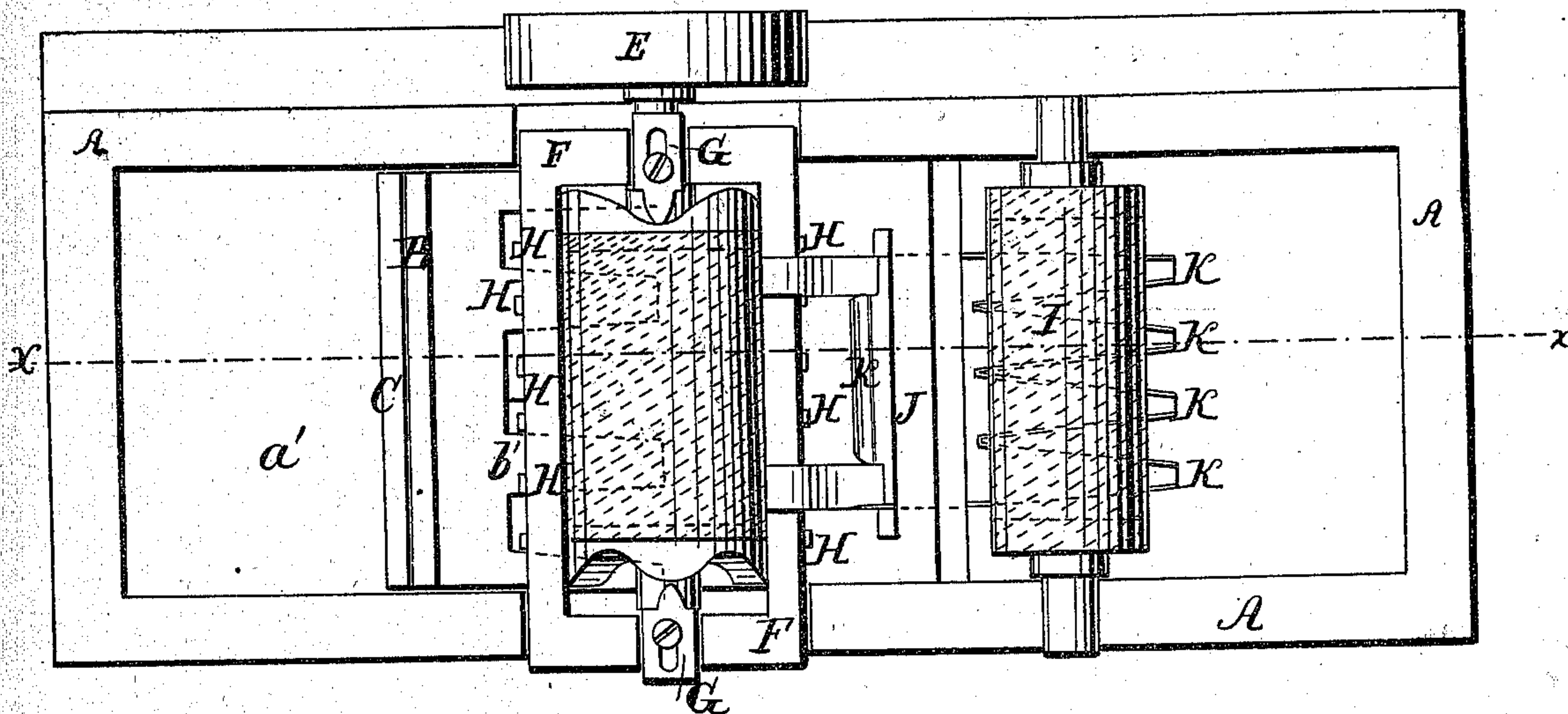


Fig. 2.

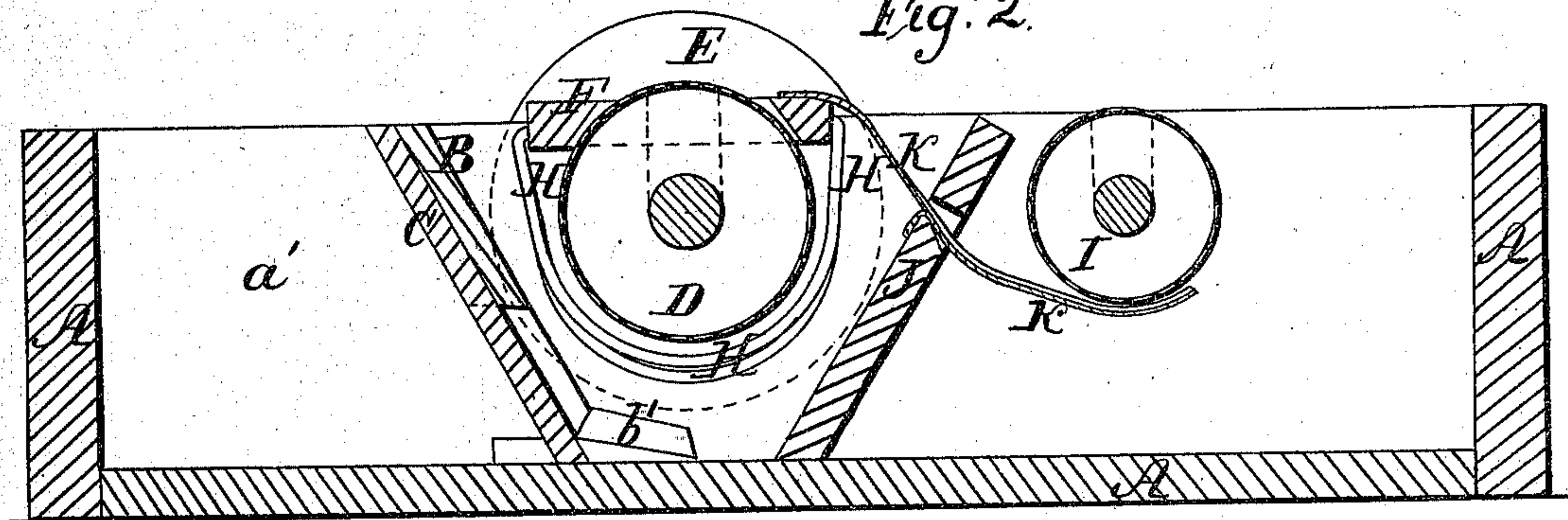
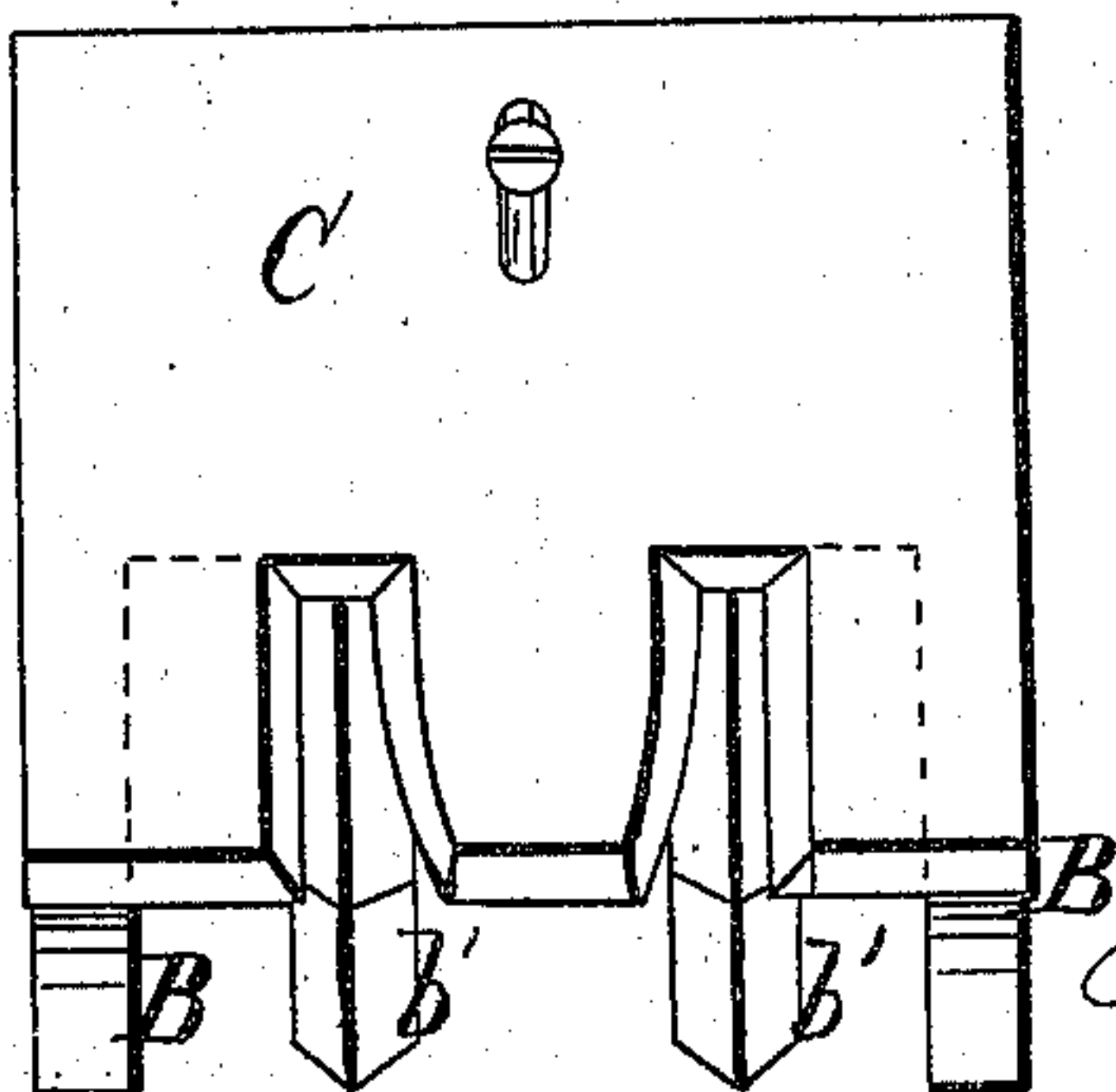


Fig. 3.



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JOHN P. SHERWOOD, OF FORT EDWARD, NEW YORK.

Letters Patent No. 95,153, dated September 21, 1869; antedated September 10, 1869.

IMPROVED CYLINDER PAPER-MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN P. SHERWOOD, of Fort Edward, in the county of Washington, and State of New York, have invented a new and useful Improvement in Cylinder Paper-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

Figure 1 is a top or plan view of my improved machine.

Figure 2 is a vertical longitudinal section of the same, taken through the line *x x*, fig. 1.

Figure 3 is a detail view of the regulating-gate.

Similar letters of reference indicate corresponding parts.

My invention has for its object to improve the construction of paper-machines, so as to make them more convenient and effective in operation, and especially so as to cross or interlace the fibres of the pulp, to produce a paper equally strong in every direction; and

It consists in the construction and combination of various parts, as hereinafter more fully described.

A is the vat, into which the paper-pulp is placed, and from which it is removed by the cylinder or cylinders to an ordinary paper-machine.

B is a partition, which separates the compartment *a'*, into which the pulp is placed, from the compartment or compartments in which the cylinder or cylinders work.

From the compartment *a'* the pulp passes into the cylinder-compartment through openings in the lower part of the partition B, the size of which openings is regulated by the sliding gate C, adjustably attached to the said partition B, as shown in fig. 3.

Upon the lower part of the partition B are formed or to it are attached arms, *b'*, projecting into the cylinder-compartment, directly opposite the induction-openings, and the lower edges of which are bevelled off, so that, as the pulp flows in through the said induction-openings, it may be divided by the said arms into a number of lateral currents, the tendency of which is to cross or interlace the fibres of the pulp.

D is the cylinder, by which the pulp is taken up, and from which it is transferred to the paper-machine.

The journals of the cylinder work in bearings in the sides of the vat A, and motion may be communicated to said cylinder by means of a pulley, E, attached to one of said journals.

The ends of the cylinder D are notched or serrated in such a way that the depressions in the one end may be directly opposite the projections in the other end, as shown in fig. 1.

F is a frame, resting and sliding in notches or grooves in the upper edges of the vat A, and to the end bars

of which are adjustably attached tongues, G, the inner projecting ends of which are rounded off to correspond with the teeth or notches in the ends of the cylinder D, so that, as the said cylinder is revolved, the frame F may be moved back and forth, the amount of movement being regulated by the adjustment of the tongues G.

To the frame F are attached the ends of bars or rods, H, which may be made round or flattened, and which are curved so as to pass around beneath the cylinder D, as shown in fig. 2, so that, as the frame F is vibrated, the rods H, moving through the pulp, may cross and interlace the fibres of the pulp, so that when taken up by the cylinder D, they may cross each other, and be interlaced with each other in every direction, giving a uniform texture and strength to the paper in every direction.

When the machine is made double, or is provided with a second cylinder, I, for the manufacture of heavy paper, the partition J, that separates the two compartments in which the two cylinders D and I work, is slotted horizontally near its upper edge, from which slot a series of open spouts or troughs, K, leads, which said spouts are curved to pass beneath the cylinder I, and are at the same time connected with the frame F, so as to receive a lateral movement from said frame F, causing the pulp-fibres to cross and be interlaced with each other as they are being taken up by the said cylinder I.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The arms *b'*, bevelled off upon their lower edges, in combination with the induction-openings through the partition B, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the sliding or vibrating frame F, and curved rods or bars H, whether round or flattened, with the cylinder D, substantially as herein shown and described, and for the purpose set forth.

3. Operating the sliding or vibrating frame F by means of the tongues G adjustably attached to the said frame F, and the notches or teeth formed in or upon the ends of the cylinder D, substantially as herein shown and described.

4. The series of curved spouts K, in combination with the cylinder I, slotted partition J, and sliding or vibrating frame F, substantially as herein shown and described, and for the purpose set forth.

The above specification of my invention signed by me, this 3d day of July, 1868.

JOHN P. SHERWOOD.

Witnesses:

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