

T. B. DE FOREST.

Improvement in Machines for Calendering Paper.

No. 125,548.

Patented April 9, 1872.

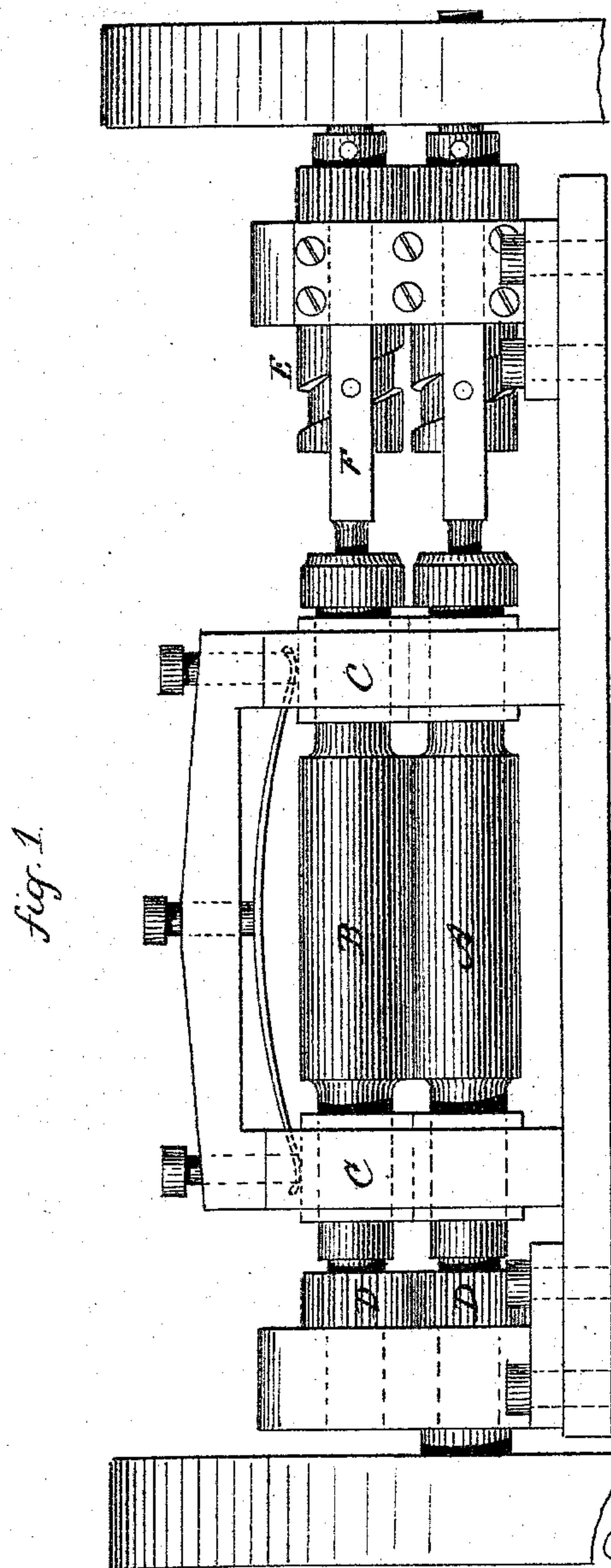
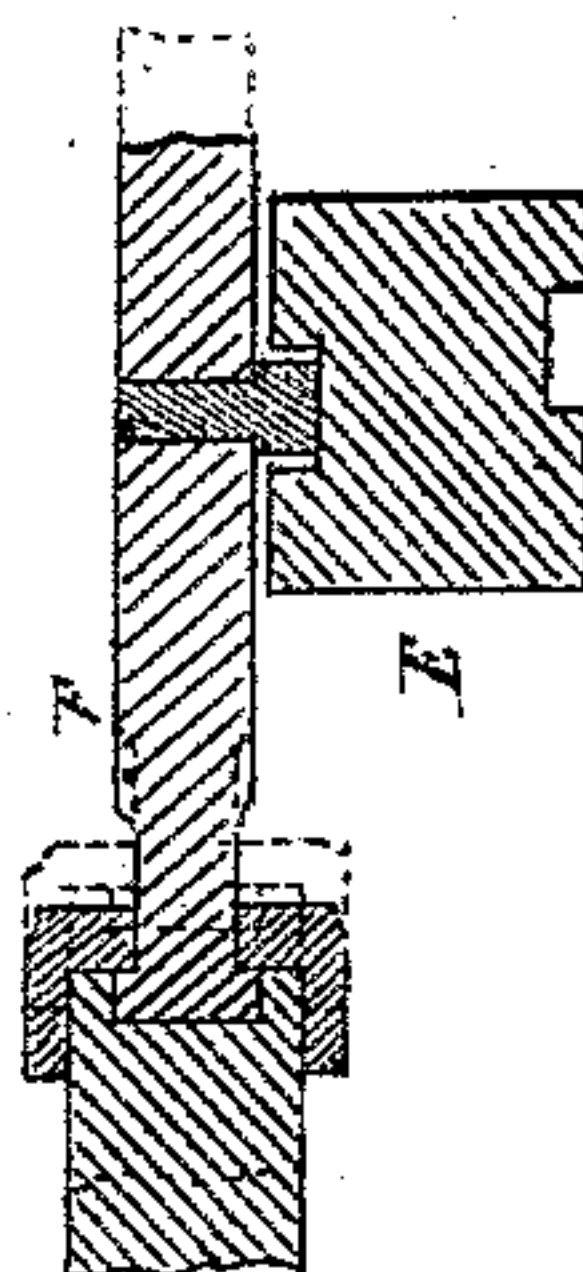


fig. 2



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IMPROVEMENT IN MACHINES FOR CALENDERING PAPER.

Specification forming part of Letters Patent No. 125,548, dated April 9, 1872.

To all whom it may concern:

Be it known that I, THOMAS B. DE FOREST, of Birmingham, in the county of New Haven and State of Connecticut, have invented a new Improvement in Calendering Paper; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification, and represents, in—

Figure 1 a front view of a pair of rolls embodying my improvement, and in Fig. 2 a partial section.

This invention relates to an improvement in calendering paper; the object being to burnish or polish the surface of the paper as it comes from the drier and passes between the rolls; and it consists in imparting to one or more of the rolls a combined reciprocating and rotary movement, whereby the roll is made to slide upon the paper at the same time the paper passes directly through between the rolls.

A B are two common chilled or similar rolls arranged in suitable frames C, and compressed together by springs or screws in the usual manner; one of the rolls being driven by power applied thereto causes the other roll to revolve in like manner by means of pinions D D. Passing between rolls thus constructed the paper receives simply a pressure between the rolls. To accomplish the object of my invention and impart a reciprocating movement to the rolls, I arrange a cam, E, by the revolution of which a slide, F, is made to move forward and back in a line axially with the roll to be moved, and is connected with the roll, as seen in Fig. 2, so that the roll will be allowed to revolve freely notwithstanding the connection

with this slide. As the cam E revolves it carries the slide F back and forth, and, being in connection with the roll, imparts the same movement to the roll as denoted in broken lines, Fig. 2. The paper passing from the drier to the revolving rolls is received between them and hard pressed between the two. The surface to be polished being next the reciprocating roll, the reciprocating movement of the roll, at the same time of its revolving, causes the roll to slide back and forth on the surface of the paper. This sliding movement should be at a greater velocity than the revolution of the roll, and consequently will burnish the surface, giving it a high luster and extreme nicety of finish. If both surfaces are to be polished, then a like reciprocating movement should be given to both rolls, but in such case one should be in reverse of the other, or two sets of rolls should be used. One in each set, upon opposite surfaces of the paper, may have a like reciprocating movement, the combined rotating and reciprocating movement of one of the rolls acting upon one surface, with a corresponding bearing upon the other surface, accomplishing the object of this invention.

I claim as my invention—

A calender for paper, in which one or more of the rolls are constructed and provided with mechanism substantially such as described, to impart to the said one or more rolls a longitudinal and reciprocating movement, combined with a revolving movement of the said roll or rolls.

THOMAS B. DE FOREST.

Witnesses:

A. J. TIBBITS,
J. H. SHUMWAY.