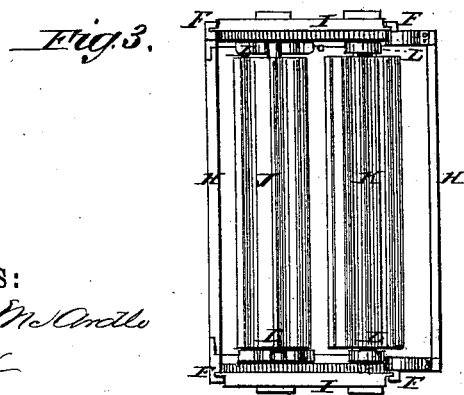
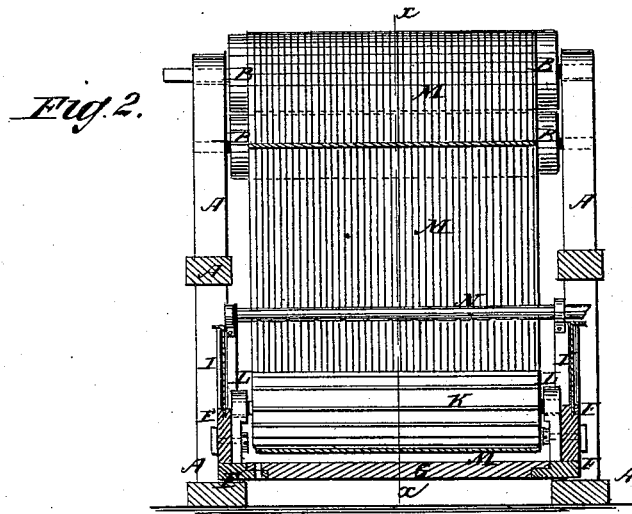
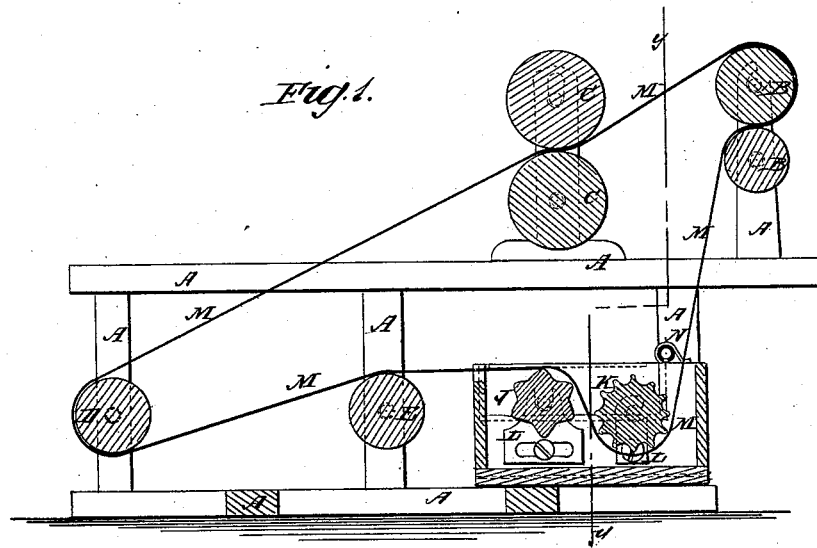


G. W. LEWTHWAITE.
 Felt-Washer for Paper-Making Machines.
 No. 200,209. Patented Feb. 12, 1878.



WITNESSES:
Francis McAnillo
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UNITED STATES PATENT OFFICE.

GEORGE W. LEWTHWAITE, OF FORT MILLER, ASSIGNOR TO EZEKIEL INMAN, OF SOUTH ARGYLE, NEW YORK.

IMPROVEMENT IN FELT WASHERS FOR PAPER-MAKING MACHINES.

Specification forming part of Letters Patent No. 200,209, dated February 12, 1878; application filed January 18, 1878.

To all whom it may concern:

Be it known that I, GEORGE WALTER LEWTHWAITE, of Fort Miller, in the county of Washington and State of New York, have invented a new and useful Improvement in Felt Washers for Paper-Making Machines, of which the following is a specification:

Figure 1 is a vertical longitudinal section of a part of a paper-making machine to which my improvement has been applied, taken through the line *x x*, Fig. 2. Fig. 2 is a cross-section of the same, taken through the broken line *y y*, Fig. 1. Fig. 3 is a detail top view of the washer-rollers and their box.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved device for washing and cleaning the felt of a paper-making machine, which shall be so constructed as to clean the felt without injuring it, and which shall be simple in construction, convenient in use, and effective in operation.

The invention consists in the combination of the fluted washer-rolls and a washer-box with the frame, the felt, and the perforated water-pipe of a paper-making machine, as hereinafter fully described.

A represents the frame of a paper-making machine. B are the squeeze-rolls. C are the press-rolls. D is the stretch-roll, and E is the guide-roll. F are the end frames of the washer-box, which are bolted to the frame A, and which have grooves or rabbets formed in their inner sides, to receive the ends of the bottom G and the sides H of the said box. I are the ends of the box, which are slid into grooves in the end frames F, so that they can be readily removed to give convenient access to the washer-rolls J K when desired.

The journals of the rolls J K may be made of iron, steel, or other suitable metal, and revolve in notches in the upper ends of the standards L, which notches are designed to be provided with boxes or bearings of some suitable anti-friction metal. The lower ends

of the standards L are secured to the inner sides of the end frames F of the washer-box F G H I.

The lower ends of one or both the pairs of standards L have transverse slots formed in them to receive the fastening-bolts, so that the rolls J K may be adjusted closer together or farther apart, as may be desired.

The rolls J K are fluted longitudinally with the same or a different number of flutes. The rolls J K may be made of wood, or of wood covered with sheet metal, or wholly of metal.

M is the endless felt apron, which passes over one of the fluted rolls J K and under the other, as shown in Fig. 1.

With this construction, by the action of the fluted rolls, and of the water set in motion by said rolls upon the felt M, the said felt will be cleaned very effectively. As the felt M passes up from the washer-rolls J K, it is acted upon by water from the perforated pipe N, which water flows down the said felt into the washer-box F G H I. The rear side H of the washer-box F G H I is made a little lower than the other side, so that the dirty water may flow out over the upper edge of the said lower side as clean water flows in from the pipe N.

If desired, a beater may be used in the usual way; but, if desired, it may be so arranged as to strike the felt gently, so as not to wear or injure it.

The construction of the washer-box F G H I may be varied as the construction of the machine may require or render most convenient.

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

The combination of the fluted washer-rolls J K and a washer-box, F G H I, with the frame A, the felt M, and the perforated water-pipe N of a paper-making machine, substantially as herein shown and described.

GEORGE WALTER LEWTHWAITE.

Witnesses:

JOHN THORPE,
JOHN WAGMAN.