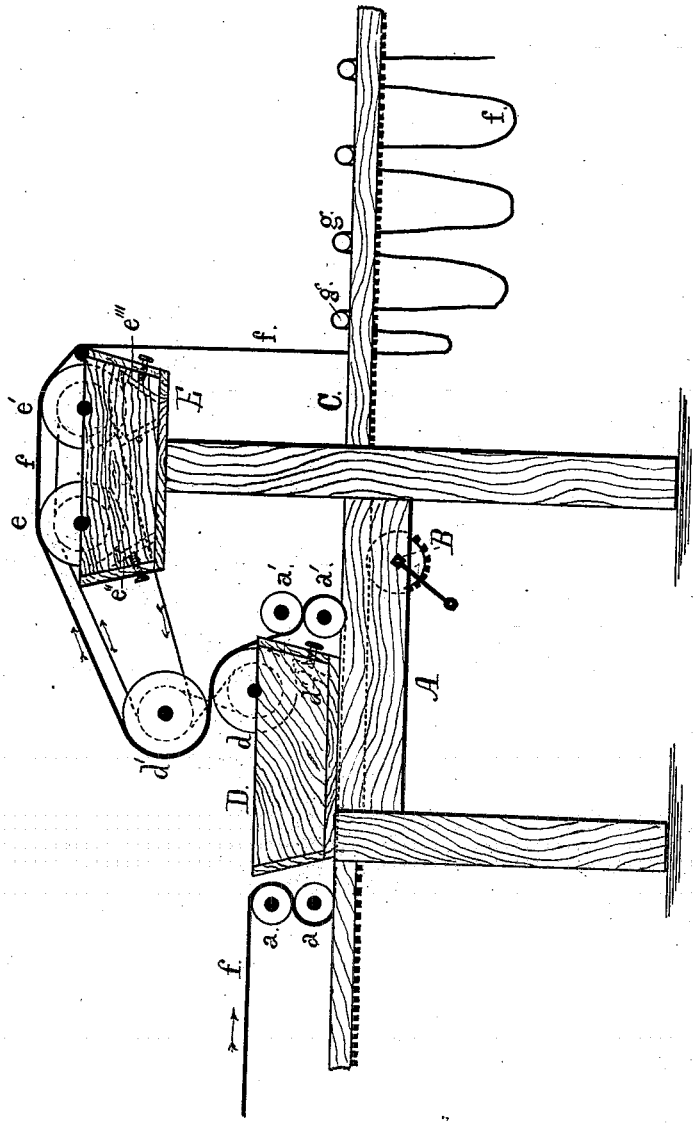
T. J. FERGUSON.

Machine for Coating Paper with Tobacco-Pulp.

No. 201,340. Patented March 19, 1878.



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IMPROVEMENT IN MACHINES FOR COATING PAPER WITH TOBACCO-PULP.

Specification forming part of Letters Patent No. **201,340**, dated March 19, 1878; application filed January 26, 1878.

To all whom it may concern:

Be it known that I, THOMAS J. FERGUSON, of Pikesville, Baltimore county, State of Maryland, have invented certain new and useful Improvements in Machines for the Manufacture of Imitation Tobacco; and I hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawing, in which is illustrated, in side elevation, the apparatus which I employ.

This invention relates to devices for coating sheets of fibrous material with tobacco pulp in imitation of the natural leaf; and it consists in certain details of construction and combinations of parts constituting such a machine, whereby a superior article of artificial tobacco-leaf is produced.

Heretofore, in practicing this art, it has been customary to disintegrate tobacco scraps, either by the action of heat with or without chemical reagents, or to submit the tobacco to a process of rotting or decay, and finally to coat sheets of paper or similar tissue with the so-prepared tobacco. In either case the product is inferior, as the flavor of the tobacco is greatly impaired by the preliminary processes referred to.

I obviate these objections by certain processes hereinafter described, and produce an artificial tobacco-leaf closely resembling the natural one in outward appearance, and undistinguishable from it in flavor.

The apparatus I use is shown in the accompanying drawing, and consists of a frame, A, in which is journaled the crank-shaft B, carrying a gear-wheel, which meshes with a rack on the under side of the frame C. Above the rack are mounted two pairs of rollers, *a a a' a'*, and between them a tank or trough, D, is placed, in which latter a roller, *d*, is journaled, its lower portion dipping in the trough.

The roller *d* is connected with another cylinder, *d'*, and this in turn drives, by means of a belt or other gearing, two other rollers, *e e'*, mounted in a second trough, E. The rollers *d*, *e*, and *e'* are furnished with scrapers *d'' e'' e'''*, adjusted by set-screws, as shown.

Such is a description of the apparatus in general terms.

The supports or bearings for the rollers and tanks are omitted in the drawing in order to better illustrate the construction and arrangement of the other parts.

Obviously, the adaptation and attachment of such supports may be changed or modified without departing from the spirit of my invention.

In practice I proceed as follows: Tobacco clippings from which the larger and coarser stems are removed are reduced to pulp by any suitable means, and the pulp is placed in the tanks D and E. A sheet of fibrous tissue, *f*, such as ordinary "tissue-paper," is then led between the rollers, as shown, and out at the end of the machine.

In passing over the roller *d* the side of the paper which is uppermost as it is delivered to the machine is coated with a uniform supply of the tobacco pulp, which process is repeated as to the other side of the paper by the rollers *e e'* in the second tank. A perfectly uniform delivery of tobacco pulp is insured by the scrapers *d'' e'' e'''*, producing an article of artificial leaf of superior appearance and texture.

It will be seen that two rollers are used in the second tank, in order to insure a delivery of pulp equal to that applied to the other side of the paper—a construction which is necessary on account of the capacity of the sheet for absorbing liquid being diminished by the first application of pulp.

Obviously, the surface speed of the various rollers must be uniform, in order to prevent on one hand the sagging, and on the other the tearing, of the sheet.

As the sheet is delivered at the end of the machine it is hung, as shown, upon rods *g g*, laid upon the frame C, where it is allowed to dry. The frame C is moved, as occasion requires, by means of the gear-wheel upon the shaft B.

Any suitable flavoring may be added, if desired, to the tobacco pulp, and the power for driving the mechanism may be applied in any suitable and convenient manner.

The process hereinbefore described and the article thereby produced I propose to make the subject of a separate application for Letters Patent.

Having thus described my invention, what

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

1. In a machine for applying tobacco pulp to paper, a pair of tanks for containing the pulp, each having a coating-roller, in combination with an intermediate roller for directing the paper from one coating-roller to the other, so that the sheet is coated successively on both sides, substantially as described.

2. The combination, with the coating-rollers *d e e'*, of the scrapers *d'' e'' e'''* and reversing-roller *d'*, substantially as described.

3. In a machine for applying tobacco pulp to paper, the movable frame C, having rods *g*, adapted to receive the sheet directly from the coating-rollers, substantially as described.

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