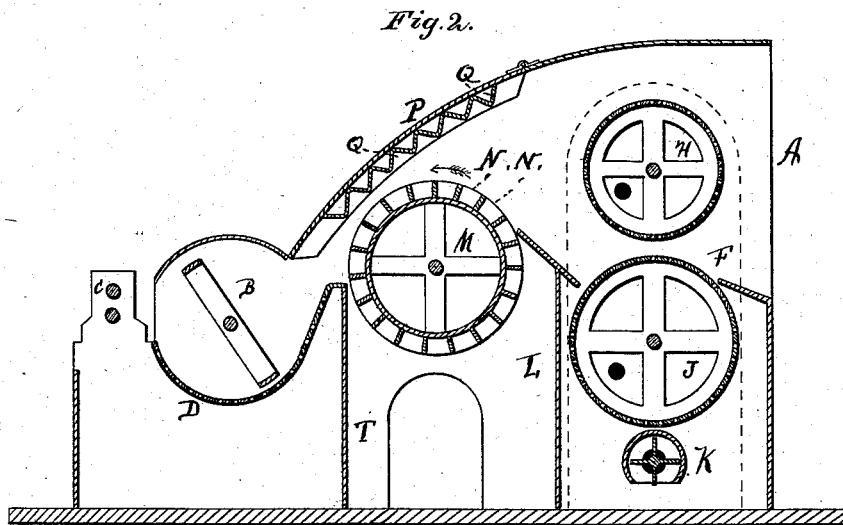
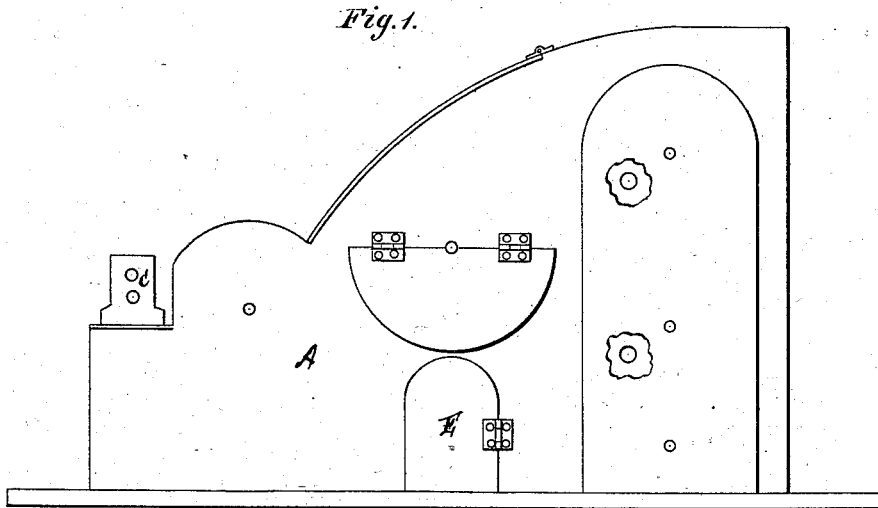


W. E. WHITEHEAD & A. T. ATHERTON.

MACHINE FOR OPENING AND CLEANING COTTON.

No. 190,107.

Patented April 24, 1877.



WITNESSES

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WILLIAM E. WHITEHEAD, OF MILES PLATTIN, ENGLAND, AND ABEL T. ATHERTON, OF LOWELL, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR OPENING AND CLEANING COTTON.

Specification forming part of Letters Patent No. **190,107**, dated April 24, 1877; application filed March 3, 1877.

To all whom it may concern:

Be it known that we, WILLIAM E. WHITEHEAD, of Miles Plattin, county of Lancaster, England, and ABEL T. ATHERTON, of Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented certain Improvements in Machines for Opening and Cleaning Cotton, of which the following is a specification:

Our invention relates to an improved device for removing the dust and other foreign substances from cotton; and consists of an improved cylinder, located between the beater and collecting-cages, operating either in connection with a series of bars projecting from the cover of said cylinder, upon the inside of the cover, or without the connection of said bars, as may be desired.

The accompanying drawing represents our invention.

A is the frame of the machine. B is the beater. C is the feed-rolls. D is the screen, beneath the beater. E is a door opening into the dust-chamber beneath the improved cleaning-cylinder. F is one of two dust-pipes, exactly alike, and disposed on both sides of the machine. H shows the location of the upper wire collecting-cage, and J the lower wire collecting-cage. K shows the relative position of the exhaust-fan, which removes the air generated by the beater, and at the same time causes the cotton, by such exhaustion of the air, to collect upon the wire cages. L and T are two girts of the machine, by means of which a dead-air chamber is formed beneath the improved cleaning-cylinder. M is the improved cleaning-cylinder, so constructed that it has upon its periphery a surface so formed as to offer an impediment to the free passage of the cotton from the beater to the collecting-cages.

This surface may be formed in various ways, to obstruct the free passage of the cotton, other than that herein shown and described.

The object of said rough surface is for the purpose of collecting from the cotton the dust and other foreign substances previous to the cotton being collected on the cages.

This cylinder is revolved slowly by the operation of the machine.

N N are ribs upon the cylinder M. The covering P, over the cleaning-cylinder M, is provided with one or more projections, Q Q, upon the inside of said cover.

These projections also serve to retard the cotton on its passage to the collecting-cages, and cause a portion of the foreign substances to become detached from the fibers of the cotton.

During the operation of the machine the cotton passes between the feed-rolls C to the beater B, which acts upon and forces it inward over the top of the cleaning-cylinder M, which removes from the cotton a large proportion of the foreign substances connected therewith.

After passing over the cleaning-cylinder M the cotton is collected by the wire-cage cylinders H J, and delivered at the rear end of the machine.

It may not be necessary, in working some kinds of cotton where the quantity of heavy waste is greater than the lighter waste, to use the projections Q Q, as the waste will fall of its own weight onto the cleaning-cylinder, and be removed from there; but where cotton is used that contains a preponderance of light waste, this is easily detached from the cotton by its coming into contact with the projections Q Q.

We claim as our invention—

1. The cleaning-cylinder M, having a roughened surface, in combination with the beater B and wire collecting-cages H and J, substantially as herein set forth.

2. The covering P of the frame A, provided with under projections, in combination with the cleaning-cylinder M, the beater B, and wire collecting-cages H and J, all substantially as set forth.

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Witnesses:

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