

United States Patent Office.

RICHARD R. GWATHMEY, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR
TO HIMSELF AND CHARLES W. MATTHEWS, OF SAME PLACE.

Letters Patent No. 101,610, dated April 5, 1870.

IMPROVEMENT IN COTTON-GINS.

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, RICHARD R. GWATHMEY, of the city of Philadelphia, in the county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Flues for Cotton-Ginning, Hulling, and Cleaning-Machines; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings making a part of this specification, in which—

The figure represents the longitudinal sectional elevation of a cotton-ginning or hulling-machine, red lines showing the upper part of the frame and general disposition of the sundry parts of said machines, blank lines showing the lower part of the frame or wood-work, and parts of the machine in direct contact with the flue, also represented in black lines.

The nature of my invention consists in the application to cotton-cleaning, ginning, or hulling-machines, especially of the style of my patent No. 72,846, of a flue composed of several partitions, concave and plane, and so combined and constructed as to direct and discharge the lint at the front end of the machine, instead of at the back end, as has heretofore always been the case in all such cotton-machines.

To enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

A is the front end of the ginning-machine, as it is known that, in all cotton-ginning, &c., machines, the front end is where the cotton is dropped into the feeder, or the end where the feeding devices are set.

Dⁱⁱ Dⁱⁱⁱ P Pⁱⁱⁱ Pⁱ P^v P^{iv} are a series of flat inclined and concave partitions, fitting from one side to the other of the frame-work of the machine, thereby forming a flue designed to discharge the clean cotton or lint at the front A of the machine.

G and F are the brush cylinders which are generally found, from one to two or more, in all cotton-machines of this kind, and I have given them in the drawing simply to show that the mouth or apertures M and M', in the body of the said flue, should always correspond with the back of said brush cylinders.

It is known that in cotton-cleaning, ginning or hulling-machines, the brush cylinders are designed to give the last cleaning to the cotton and rid it of all impurities that may have escaped the action of the cleaning devices of the machine, and also that the said brush cylinders, revolving very rapidly, send the cotton in all possible directions in the inside of

the machine, while the impurities by their greater weight, fall at the bottom of the machine.

Now, when, as is customary, the lint is discharged at the back of the machine, a great deal of the lint is not driven out, falls and accumulates in remote corners, and parts of the machine where it is hard to reach it, and this, solely because the flue does and cannot extend or be made to extend further enough toward the front, or else it (the flue) would interfere with the cleaning, ginning, or hulling devices, and therefore it has no communication with the brush cylinders or whatever revolving fans or other like devices there may be at the front of the machine.

Whereas, by incasing the flue by a series of partitions, as above described, and having, in the body of the said flue, as many apertures as brush cylinders; and having the egress or discharge mouth of the said flue toward the front of the machine, I thereby take advantage of every current of air thus created, and am sure that, from all parts of my machine, the lint must be driven out.

At first sight, on examination of the drawings in my patent No. 72,846, it might be objected that a flue like the one I claim could operate as well, whether its mouth or discharge aperture be at the back or front of the machine.

I will easily demonstrate that this is a mistake.

If the discharge mouth or direction of my flue were toward the back of the machine, the apertures in the body of the flue corresponding with the front brush cylinder G, would correspond with the front of said cylinder, and also and unavoidably with part of the hulling, cleaning, or ginning devices of the machine in front of the brush cylinder, and the current of air created by brush cylinder G and the machinery in its neighborhood would drive the greater part of the cotton into the flue before it (the cotton) had been worked and finished by the brushes, and when it is imperfectly cleansed.

It is, therefore, obvious that with a flue-incased as above described, for the whole length of the machine, it is necessary that the aperture in the body of said flue should always correspond with the back of each brush cylinder or fan or like arrangements, and especially that the discharge mouth be at the front A of the machine.

I do not intend claiming broadly the mode of constructing flues of the above description; but their application to cotton-hulling, cleaning or ginning-machines is novel, and no machine of the kind has a flue discharging the lint at the front of the machine.

Therefore, having thus described my invention,

What I claim as such, and desire to secure by Letters Patent of the United States, is—

1. The application to cotton-cleaning, hulling, or ginning-machines of a flue running the whole length of the machine, and constructed and operating in the manner and for the purpose above set forth and described.
2. The mode of discharging the lint at the front

of cotton-cleaning, hulling or ginning-machines by means of a flue constructed and operating in the manner and for the purpose above set forth and described.

RICHARD R. GWATHMEY.

Witnesses:

LIONEL D'EPINEUIL,
J. H. BOWDEN.