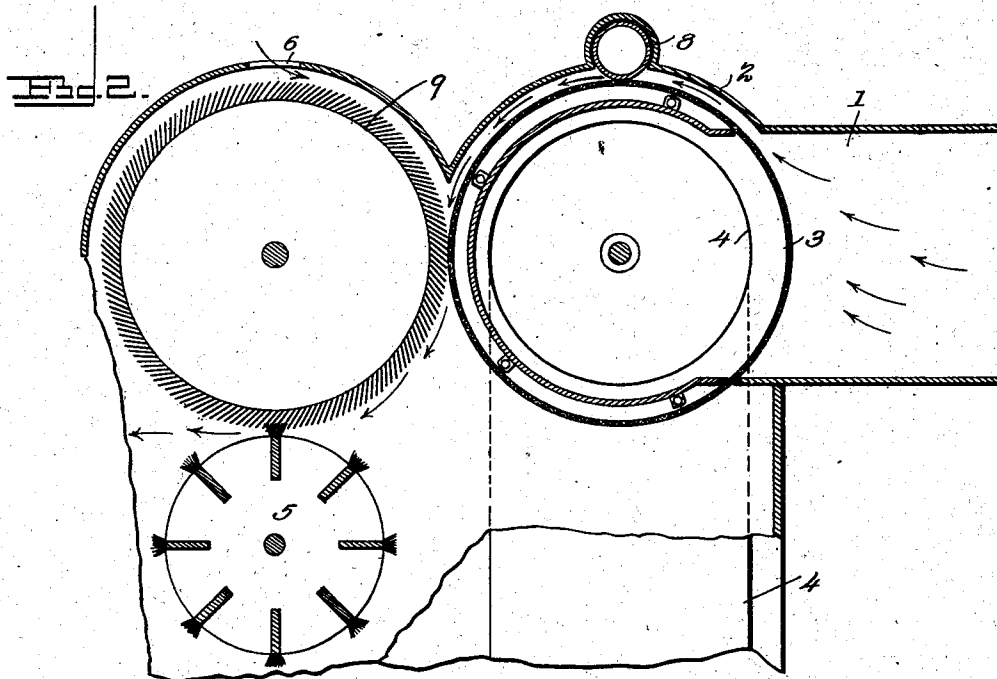
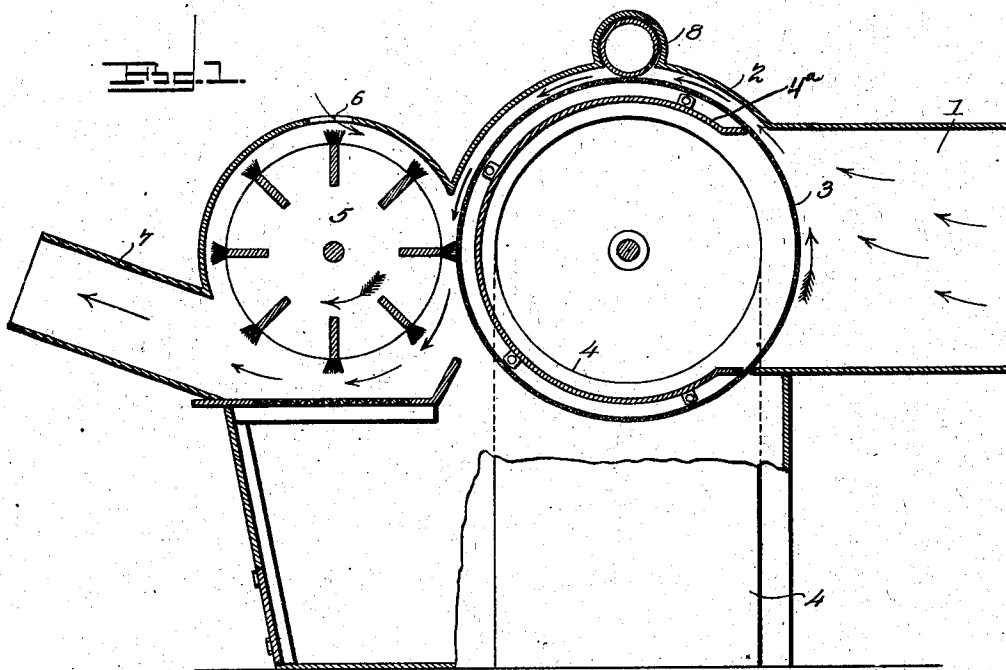


No. 730,158.

PATENTED JUNE 2, 1903.

H. REMBERT.
METHOD OF CLEANING GINNED COTTON.
APPLICATION FILED MAY 31, 1901.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY REMBERT, OF HOUSTON, TEXAS.

METHOD OF CLEANING GINNED COTTON.

SPECIFICATION forming part of Letters Patent No. 730,158, dated June 2, 1903.

Application filed May 31, 1901. Serial No. 62,639. (No specimens.)

To all whom it may concern:

Be it known that I, HENRY REMBERT, a citizen of the United States, residing at Houston, in the county of Harris and State of Texas, have invented a new and useful Method of Cleaning Ginned Cotton, of which the following is a specification.

This invention relates to a method of cleaning ginned cotton.

The object of the invention is in a ready, simple, thoroughly feasible, and practical manner to clean ginned cotton while passing from the gin to the condenser and to eliminate therefrom all objectionable matter.

With these and other objects in view, as will appear as the nature of the invention is better understood, the same consists, generally stated, in initially subjecting the cotton to the cleaning action of a current of air, diverting the dust-laden air therefrom, and subsequently forcing a current of clean air through the cotton from a point in advance of it and in a direction at an angle to its path of movement. The invention consists, further, in initially subjecting the cotton to the action of a current of air, diverting the dust-laden air therefrom, then brushing the cotton and at the same time forcing a current of clean air there-through from a point in advance of it and in a direction oblique to its path of movement.

The invention consists, further, in subjecting the cotton to the cleaning action of a current of air, diverting the current of dust-laden air therefrom, forming the cotton into a sheet permeable by air, then brushing the cotton and at the same time forcing a current of air therethrough from a point in advance of it and in a direction oblique to its path of movement.

The invention consists, further, in initially subjecting the cotton to the action of a current of air, diverting the dust-laden air therefrom, and brushing the cotton and at the same time forcing a current of clean air there-through at the point of brushing from a point in advance of it and in a direction oblique to its path of movement.

The invention consists, finally, in initially subjecting the cotton to the cleaning action of a current of air by which it is carried, diverting the current of dust-laden air therefrom, forming the cotton into a sheet permeable by air,

disintegrating said sheet and forcing clean air therethrough at the point of disintegration from a point in advance of it and in a direction oblique to its path of movement.

In the accompanying drawings, forming a part of this specification, and in which like characters of reference indicate corresponding parts, there are illustrated two forms of apparatus capable of carrying the procedure into effect, it being understood that the method may be carried out in other ways than that shown and still be within the scope of the invention, and in these drawings—

Figure 1 is a vertical longitudinal sectional view of one form of apparatus adapted for the purpose. Fig. 2 is a similar view of a slightly-modified form of apparatus.

The apparatus shown in Fig. 1 is a modification of a cotton-cleaner forming the subject-matter of Letters Patent of the United States, No. 530,458, granted to me December 4, 1894, and which in operation is located between a cotton-gin and a condenser, neither of which is herein indicated. In the patent above referred to the clean air supplied to the apparatus is taken in through lateral flues disposed within the screen-drum and projecting but a short distance therein. It is found in practice that where the air-flues are thus disposed the current of air against the sheet of cotton will not be uniform across its entire width. Thus, for instance, if the currents through the flues be strong they will be projected toward each other and will be deflected outward from the screen-drum at a point near its center, thus causing the intermediate portion of the sheet of cotton to receive the bulk of the current and effecting proper cleansing thereof, while the side portions will not be properly acted upon. If the current through the flues be weak, the side portions of the sheet of cotton will receive the bulk of the air-currents and will thus be thoroughly cleansed, while the intermediate portion thereof will not be properly treated. In other words, the currents of air are supplied to the sheet of cotton on lines parallel with its path of travel. Moreover, the flues of the said patent are disposed back of the sheet and will thus operate to blow any impurities toward the fan-brush, which will have a tendency to carry them around

and mix them with the incoming portion of the cotton sheet.

By the manner of supplying air to the apparatus as shown in the present invention the current is supplied from a point in advance of the sheet of cotton and at right angles thereto and impinges its entire horizontal surface at the point where it is acted upon by the brush with equal intensity throughout. By supplying the air from a point in advance of the screen-drum any impurities in the cotton will be blown therefrom and driven into the mote-box, the result being that the sheet of cotton will be thoroughly cleansed from any extraneous matter.

Referring to the drawings, 1 designates a flue leading from a cotton-gin to a casing 2, in which at a point opposite the inner end of the flue is located a cylindrical open-ended screen-drum 3, which is rotated by any suitable means in the direction indicated by the arrow. Dust-flues 4 communicate with the open air or with a suitable dust-collecting receptacle. Disposed within the screen-drum is a stationary shield-casing 4^a, which is of substantially cylindrical shape, is open at its ends, and has its side open at the point opposite and proximate to the inner end of the intake-flue 1. Arranged on the side of the screen-drum opposite the intake-flue 1 is a revoluble brush-fan 5, which coacts with the screen-drum and also by its rotation in the direction indicated by the arrow draws air through the intake 6 in the casing directly above the brush-fan, and thus at a point in advance of the screen-drum, the air thus taken in being in part discharged through the outlet-flue 7 into the condenser, a portion of the current of air escaping into the mote-box 4. Disposed above the screen-drum and bearing upon it is a roller 8, which may be constructed of any suitable material—such as tin, wood, or the like—and revolves by contact with the screen-drum and operates to cut off passage of air from the flue 1 over the drum. This roller is light in weight in order that it will not operate to pack down the sheet of cotton on the drum.

The lint cotton from the gin is carried by the current of air through the flue 1, and the passage of the cotton is arrested by the screen-drum at the inner end of the flue, while the dust-laden air is arrested by the shield-casing 4^a and is diverted to the flues at the ends thereof and escapes, carrying with it the dust and other impurities dislodged from the cotton. This current of air performs the initial step of cleaning the cotton as it passes from the gin. The cotton strikes against and lodges on the screen-drum and is carried thereby upward and is subjected to the compressing action of the roller 8, the speed of the revoluble screen being such that the cotton is condensed into a sheet of slight density which is readily permeable by a current of air. The term "sheet" is employed to distinguish the mass of cotton from a "bat" as the same

is understood in this art, the sheet formed by the screen-drum and roller being of less density than a bat and of such slight texture that a current of air may be readily forced therethrough, which is not true of a bat.

The brush-fan draws in clean air through the intake 6 and at the coacting contacting portions of the screen-drum and brush-fan, and the latter forces a current of clean air through the sheet of cotton while beating the same, the said current operating effectually to discharge any foreign substance that has been dislodged by the action of the screen-drum and the fan. It will be understood that the current of air created by the brush-fan operates to discharge the cleansed cotton through the flue 7, which leads to the condenser.

In Fig. 2 of the drawings is illustrated a modified form of apparatus, in which a card-roll 9 is employed and is interposed between the screen-drum and the brush-fan. It will be understood that this card-roll disintegrates the sheet of cotton while the same is being subjected to the action of the clean current of air forced therethrough, thereby subjecting the cotton more effectively to the action of the air-current, and, further, the card-roll serves to straighten the fibers of the cotton and to deliver them evenly to the condenser, thereby increasing the value of the product.

Having thus described the invention, what I claim is—

1. The method of cleaning cotton which consists in initially subjecting the cotton to the cleaning action of a current of air, diverting the dust-laden air therefrom and subsequently forcing a current of clean air through the cotton from a point in advance of it and in a direction oblique to its path of movement.

2. The method of cleaning cotton which consists in initially subjecting the cotton to the action of a current of air, diverting the dust-laden air therefrom, then brushing the cotton and at the same time forcing a current of clean air therethrough from a point in advance of it and in a direction at an angle to its path of movement.

3. The method of cleaning cotton which consists in subjecting the cotton to the cleaning action of a current of air, diverting the current of dust-laden air therefrom, forming the cotton into a sheet permeable by air, then brushing the cotton and at the same time forcing a current of air therethrough from a point in advance of it and in a direction oblique to its path of movement.

4. The method of cleaning cotton which consists in initially subjecting the cotton to the action of a current of air, diverting the dust-laden air therefrom, and brushing the cotton and at the same time forcing a current of clean air therethrough at the point of brushing, from a point in advance of it and in a direction oblique to its path of movement.

5. The method of cleaning cotton which consists in initially subjecting the cotton to

a current of air by which it is carried, divert-
ing the current of dust-laden air therefrom,
forming the cotton into a sheet permeable by
air, disintegrating said sheet and forcing
5 clean air therethrough at the point of disin-
tegration from a point in advance of it and
in a direction oblique to its path of movement.

In testimony that I claim the foregoing as
my own, I have hereto affixed my signature in
the presence of two witnesses.

HENRY REMBERT.

Witnesses:

WM. SULLIVAN,
JAS. RAVELL.