

No. 631,800.

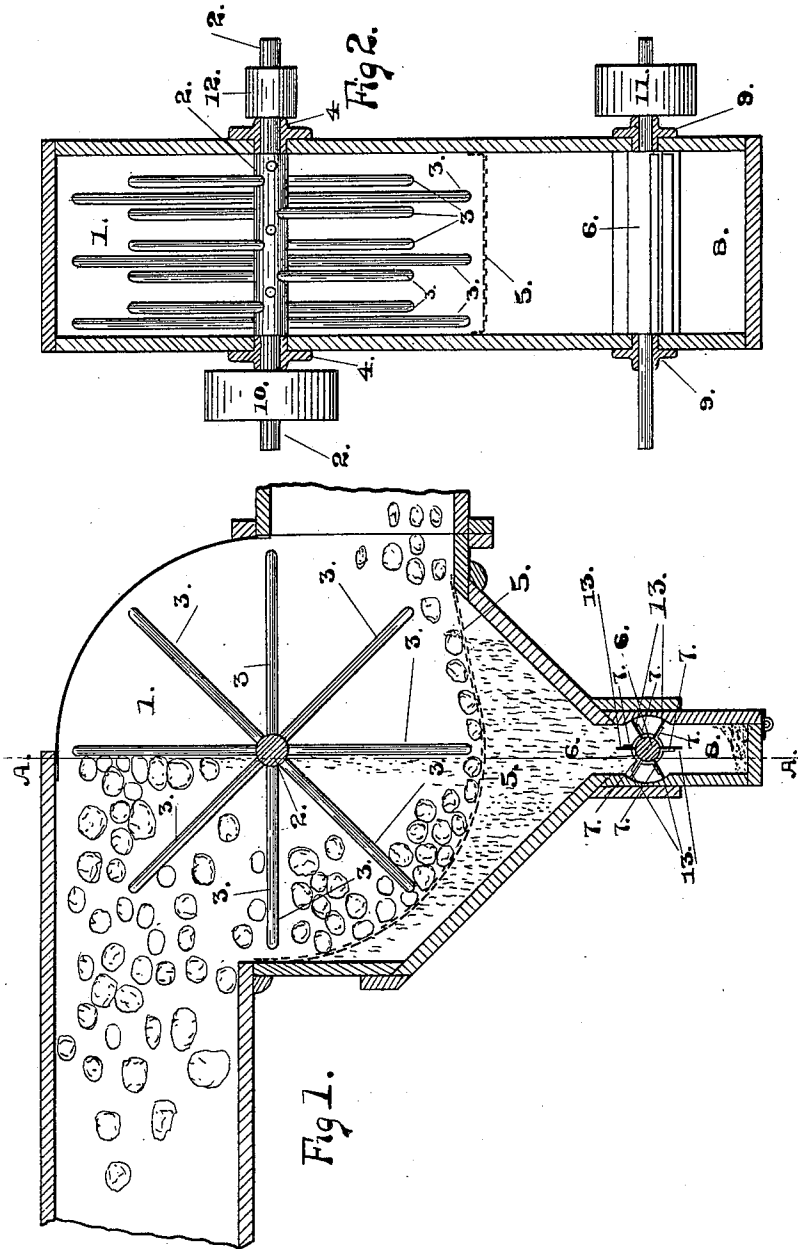
Patented Aug. 29, 1899.

G. LEMOINE.
COTTON CLEANER.

(Application filed May 9, 1899.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses
J. M. Cloud
H. E. Sipron

Georg Lemoine

Inventor

By his Attorney *Thomas P. Paulk.*

No. 631,800.

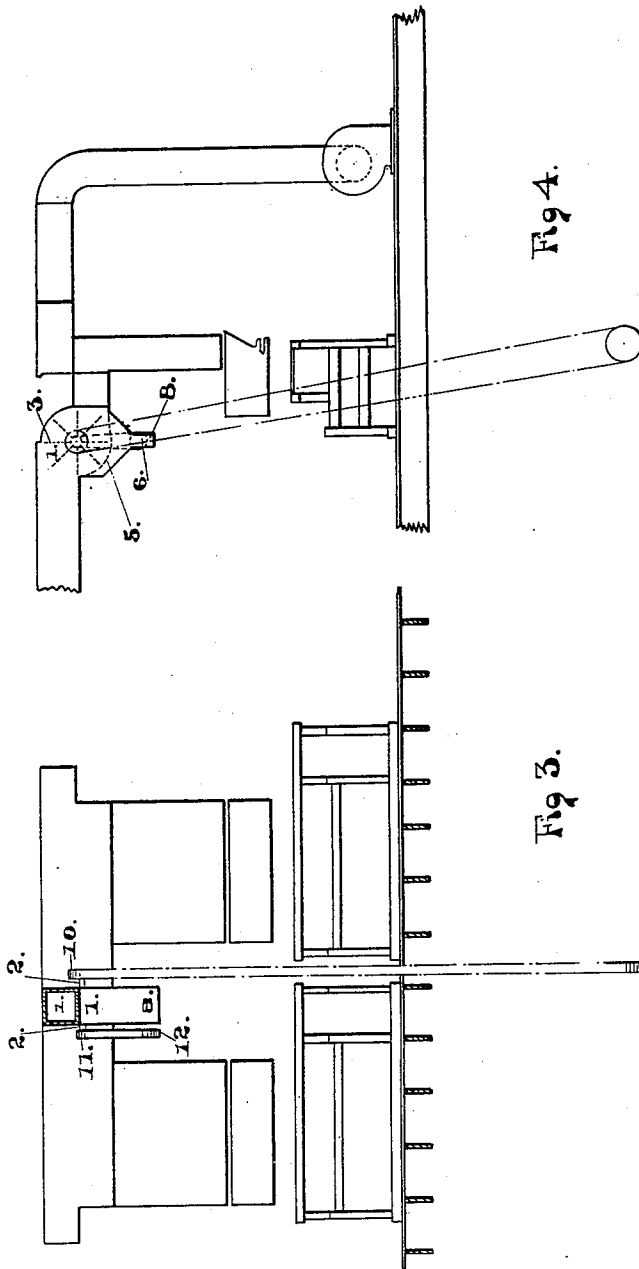
Patented Aug. 29, 1899.

G. LEMOINE.
COTTON CLEANER.

(Application filed May 9, 1899.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses
Jim Cloud
H. E. Lipson

By his Attorney *Thomas P. Baulg.*

G. Lemoine
Inventor

UNITED STATES PATENT OFFICE.

GEORGE LEMOINE, OF PRATTVILLE, ALABAMA.

COTTON-CLEANER.

SPECIFICATION forming part of Letters Patent No. 631,800, dated August 29, 1899.

Application filed May 9, 1899. Serial No. 716,180. (No model.)

To all whom it may concern:

Be it known that I, GEORGE LEMOINE, a citizen of the United States, and a resident of Prattville, in the county of Autauga and State of Alabama, have invented certain new and useful Improvements in Cleaning Cotton Pneumatically, of which the following is a specification.

My invention relates to improvements in pneumatic apparatus for handling and cleaning cotton, preferably that class of apparatus adapted to pneumatically elevate seed-cotton and deliver the same to the gin, the cotton being cleaned of dust and sand in transit, as more fully hereinafter set forth.

The invention consists in certain matters of construction and arrangement of parts hereinafter described, and particularly pointed out in the claims appended.

To enable others to more readily understand and practice my invention, I will now proceed to a detailed description thereof, in connection with the accompanying drawings, in which—

Figure 1 is a sectional elevation. Fig. 2 is a cross-section on line A A of Fig. 1. Figs. 3 and 4 are a partial front and end elevation, respectively, of a pneumatic system of handling cotton and shows how my system is to be operated and placed. The receptacle, however, may be placed in any convenient position in the suction-pipe and operated either from the line-shaft or from a counter-shaft.

Like numerals of reference denote corresponding parts in all of the figures of the drawings, referring to which—

1 is the receptacle or box in which the cleaning is done.

2 is the revolving shaft, which runs through the body of the receptacle.

3 are the beaters or paddles.

The shaft 2 is supported at each end of the receptacle by bearings 4. The screen 5 is fastened to the interior lower side of the receptacle in any convenient manner and in the position shown.

6 is the dirt or sand feeder and consists of either a wooden or metal cylinder with a plurality of blades 7 fastened to it and which in turn are provided with rubber flaps 13.

8 is the dirt or sand box into which the refuse falls as it is released from the recep-

tacle above by the revolutions of the cylinder 6.

9 are the bearings which support the cylinder 6 at each end of the dirt-box 8.

10 is the pulley where the power for driving the cleaner is applied; and 12 is the pulley which drives the pulley 11, which operates the sand-feeder.

The operation and advantages of my invention will be readily understood and appreciated from the foregoing description taken in connection with the drawings.

As the cotton is drawn into the receptacle 1 by the suction of the fan, the paddles or beaters 3, which are run against the direction of the suction, strike violently against the incoming cotton, which is thereby precipitated on the screen at the bottom of the receptacle, thereby dislodging dust and sand from the cotton and causing it to fall through the screen into the dirt-receptacle below, the air passing on between the beater-arms to the exit. The screen being curved, the cleaned cotton is carried around by the paddles or beaters to the discharge end of the receptacle, where the suction takes it up and distributes it to the chutes which lead to the gins. The portion of the conduit which conveys the cotton to the receptacle 1 is designated by the numeral 14 and the part which conveys it away from the receptacle is designated by the numeral 15, it being obvious that this latter portion of the conduit is below and out of line with the former part, the receptacle 1 forming, in effect, a lateral offset of the main conduit leading to the gins.

In addition to being an exceptionally effective cleaner my apparatus possesses two important advantages which contribute materially to its value: First, if the belt which drives the rotary beating-arms breaks or slips off the operation of the system will not be interrupted, because the beaters or paddles will then be free to rotate with the stream of air and cotton; but of course when this beater is thus rotated with the current the cleaning action is suspended; second, in case it is not desired to use the cleaner the belt may be slipped off and the beater allowed to rotate with the current.

I am aware that my improvement can be applied to other kinds of pneumatic systems

than the one shown and that changes in the form and proportion of parts and details of construction of the mechanism herein shown and described as an embodiment of my invention can be made without departing from the spirit or sacrificing the advantages of my invention.

It will be observed that an essential feature lies in connecting the inlet part 14 of the conduit to the upper part of the casing 1 above the plane of the horizontal shaft carrying the beater-arms, whereby the incoming cotton will strike only against the upper forward-moving arms of the beater, the cotton being deflected and carried downward out of the direct draft onto the curved screen, moving around on said screen until it is brought again into the direct draft and carried out by the suction, it being also essential that the outlet part 15 of the conduit shall leave the casing at a point below the plane of the beater-shaft. With this arrangement the cotton is thrown violently against only the forward-moving arms, which are rotating against the draft, and should the drive-belt break or slip off one of its pulleys the operation of the apparatus will not be interrupted, although the cleaning action will of course not be as thorough, and should it be desired to dispense with the preliminary beating that this device

performs this may be done without stopping the machine or dismantling it and without materially, if at all, interrupting the supply of cotton.

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

In an apparatus of the sort described, the combination of a chamber or receptacle, a horizontal shaft journaled therein and provided with radial beating-arms adapted to stop the cotton but permit the air-current to pass, a screen below the beater within the box, a dust-receptacle below the screen, an inlet-conduit entering the receptacle at a point above the plane of the beater-shaft, an outlet-conduit leading from the receptacle at a point below the plane of the shaft at the opposite side of the receptacle, means for creating a suction through this latter conduit, and means for rotating the beater against the air-current, as and for the purposes set forth.

Signed at Prattville, in the county of Autauga and State of Alabama, this 21st day of March, A. D. 1899.

GEORGE LEMOINE.

Witnesses:

JIM CLOUD,
H. E. GIPSON.