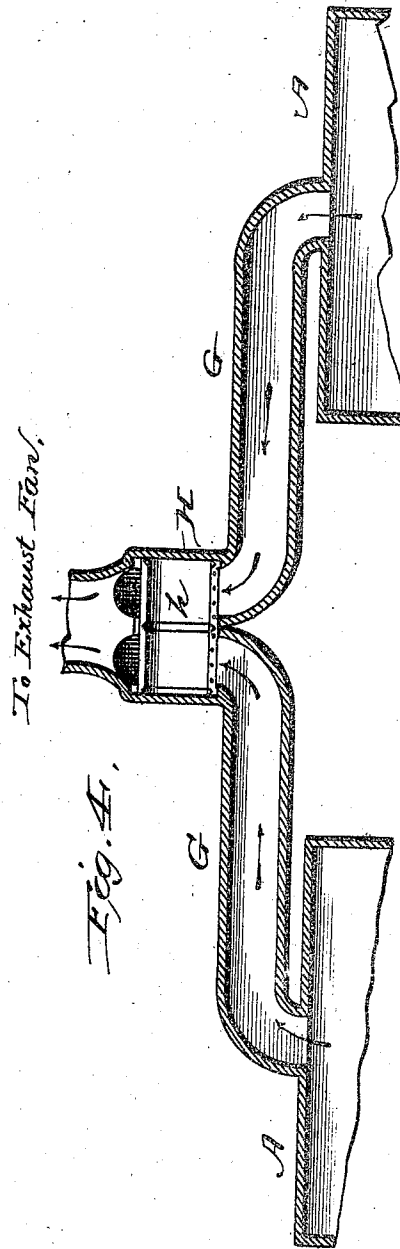
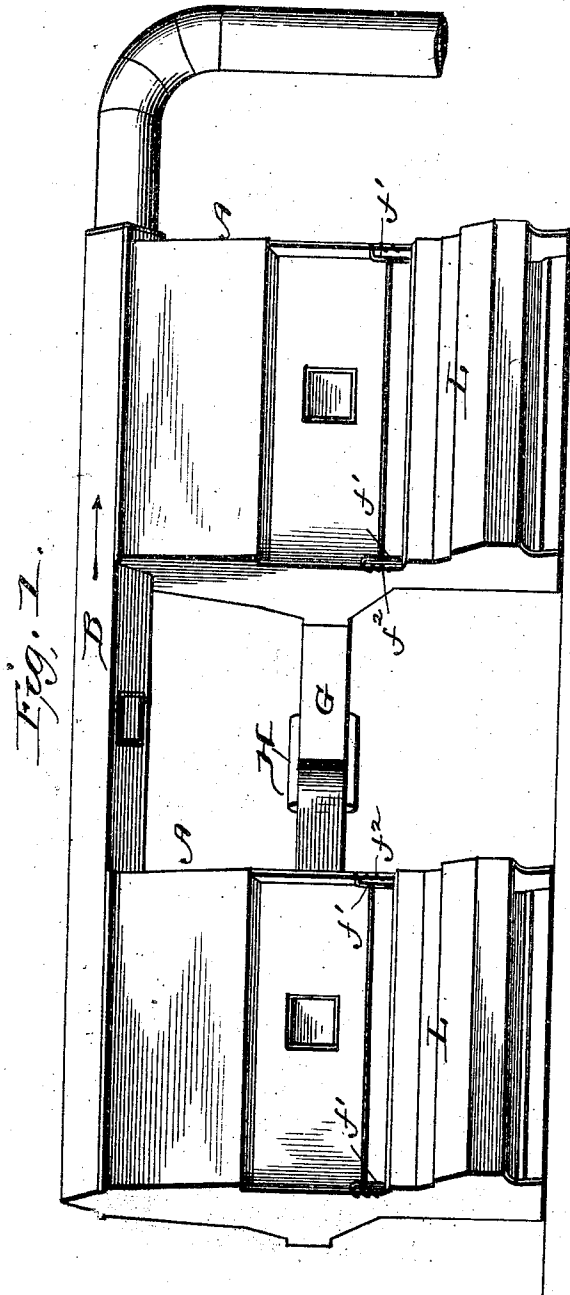


(No Model.)

2 Sheets—Sheet 1.

M. M. GINN.
COTTON ELEVATOR, CLEANER, AND DISTRIBUTER.
No. 544,036. Patented Aug. 6, 1895.



Witnesses
Wm. L. Quinn
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Inventor
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(No Model.)

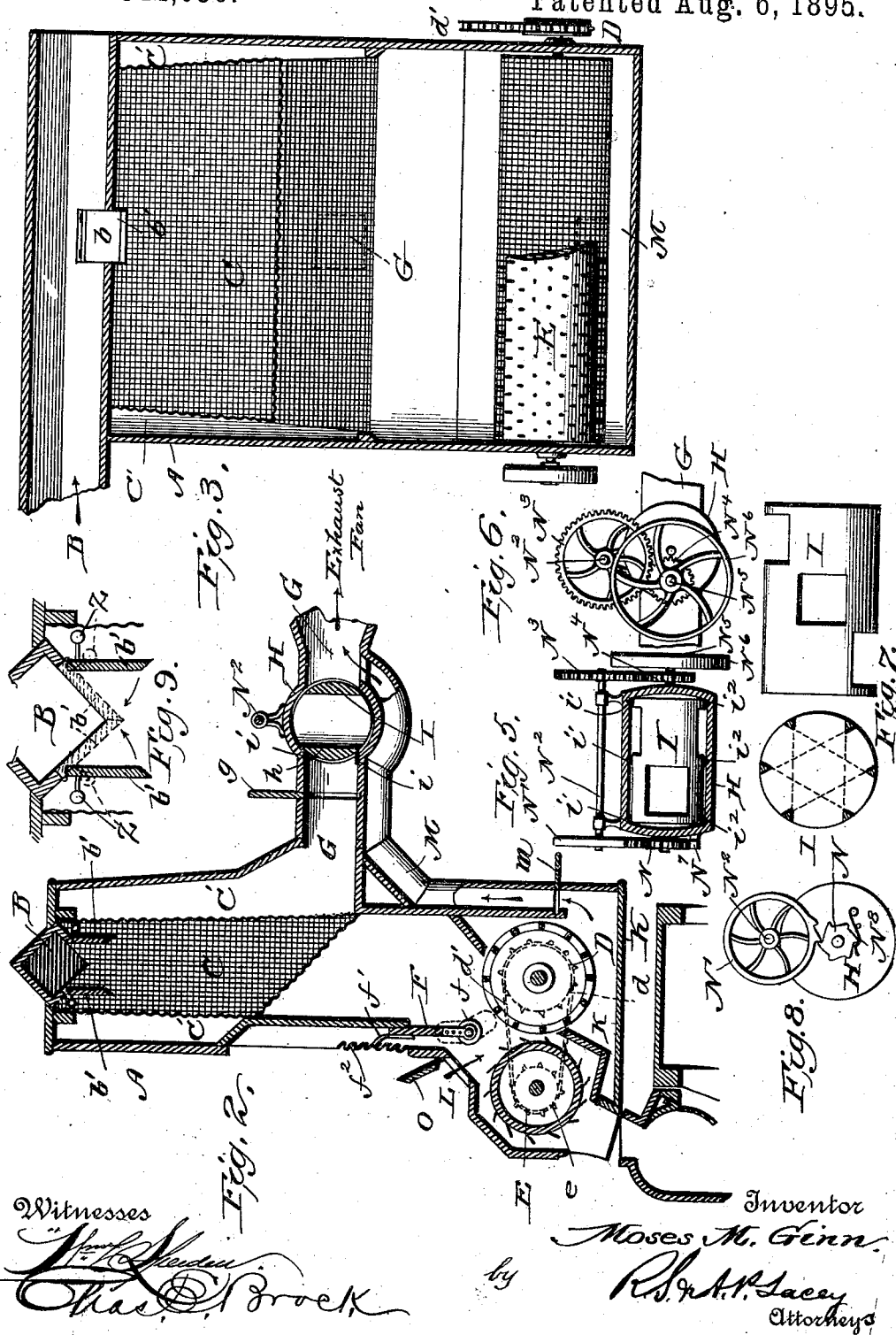
2 Sheets—Sheet 2.

M. M. GINN.

COTTON ELEVATOR, CLEANER, AND DISTRIBUTER.

No. 544,036.

Patented Aug. 6, 1895.



UNITED STATES PATENT OFFICE.

MOSES M. GINN, OF BRENHAM, TEXAS, ASSIGNOR OF ONE HALF TO JOSEPH BEAUMIER AND GEORGE A. SHEPHERD, OF SAME PLACE.

COTTON ELEVATOR, CLEANER, AND DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 544,036, dated August 6, 1895.

Application filed September 25, 1894. Serial No. 524,036. (No model.)

To all whom it may concern:

Be it known that I, MOSES M. GINN, a citizen of the United States, residing at Brenham, in the county of Washington, State of Texas, have invented certain new and useful Improvements in Cotton Elevators, Cleaners, and Feeders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention is an improved cotton elevator, cleaner, and feeder to be used in connection with cotton-gins.

The object of this invention is to provide a simple device by means of which the cotton is withdrawn from a wagon or store-house and subjected to a blast whereby it is thoroughly dried and cleaned just previous to being fed to the gin.

The invention consists in the peculiarity of the several parts and their novel combination or arrangement, all of which will be fully described hereinafter and pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a front view of two of my machines connected to act together. Fig. 2 is a transverse vertical section of the machine. Fig. 3 is a view of the machine with the front removed. Fig. 4 is a view of the flues and valve. Fig. 5 is a view of the valve, (a four-way one.) Fig. 6 shows the mechanism for operating the same, and Fig. 7 is view of a six-way valve. Fig. 8 is a view of the valve-actuating mechanism taken from the side opposite to Fig. 6. Fig. 9 is a detail sectional view of the doors b' and the means for closing the same.

It will of course be understood that I can use any number of machines together, but in the present instance I use only two and therefore a four-way valve. Should three machines be used, then a six-way valve would be necessary. The machines are all alike, so a description of one will suffice for all.

In constructing this machine I employ a suitable case A, which contains the mechanism and is connected at its upper end with a delivery chute or flue B, which leads from a wagon or store-house and feeds cotton to the

machine; and it will be noted that where more than one machine is used they are all arranged in series upon the flue or chute B. The flue B is formed with an opening b inside the case A, and at each side of said opening are hung the doors b' , said doors being provided with spring-hinges, or said doors may have weighted rods, as shown at Z, the tendency of said weights being to drop, whereby said doors close automatically.

Within the case A is arranged a cage C of wire-gauze on all sides for the passage of air, and open at the bottom for the discharge of cotton, said cage being considerably smaller than the case, so that an air space or chamber C' entirely surrounds said cage. In the lower part of the case are journaled the wire-screen drum D and the spiked drum E, and operating in conjunction therewith is a leveling-board F, which is hung about midway between said drums and levels the cotton as it passes from the cage to the picker or spiked drum, the end of said board being provided with an antifriction-roller f . This board is vertically adjustable, and is supported by means of hooks f' , which hang in notches f^2 made in the front edges of the end of the case. By this means the board can be adjusted to any height desired. Connected with the air-space C' and leading from the back of the machine is a flue G which leads to the exhaust-fan, and when more than one machine is used these flues G all meet in a valve-casing H, which contains a rotary valve I, which in the present case is a four-way valve, but for each extra machine increases two ways. From this valve-casing the flue to the fan is continued as a single flue. This valve is also a balanced valve and is provided with rubber packing-strips i , at the juncture of the casing and flue, and where the edges of the flues join said case they are grooved as shown at i' to accommodate a rib i^2 upon the valve. The drums D and E carry sprockets d and e , respectively, upon the outer ends of the shafts, and over said sprockets is passed a chain d' . The spiked drum is driven from the gin-shaft and thus drives the screen-drum by means of chain d' . Directly beneath the spiked drum and bearing against the screen-drum is a board K, adapted to catch the dirt that drops

between the said drums, but the greater portion of said dirt will be drawn through with the air, which comes in through an opening L in the front of the machines, passes through the screen-drum and out at the back of the machine to the flue M, which joins the main flue beyond the valve I. This flue M is provided with a cut-off slide *m*, and the flues G are also provided with cut-off slides *g*. The mechanism for operating the valve is shown in Fig. 6, in which II is the valve-casing and I the valve. Upon one end of the valve-shaft is mounted a gear N, which meshes with a mutilated gear N', carried at one end of a shaft N², and at the other end of said shaft is a gear N³, which in turn meshes with a pinion N⁴, upon a pulley-shaft N⁵, carrying also a pulley N⁶, which receives its power from any source. A spring N⁷ holds the gear N in place against movement after it is once adjusted, and the various gears are so cut that the valve is given a quarter-turn at each revolution of the mutilated gear. In this manner only one of the machines is in connection with the suction-fan at a time. The opening L at the front end of case can be closed by a door O, and also the opening at the front of the spiked drum.

In operation the cotton is fed to the cage from the wagon or house by the flue or chute B, and the cage being of wire-gauze on all sides the cotton is thoroughly subjected to the action of the air on all sides. If the cotton is very damp I leave the slide *g* open all the way, but should the cotton be quite dry I nearly close the said slide. The cotton is then fed to the screen-drum and picker, where it is separated, so that the air passing through the machine at that point can have full force upon it and cleanse it of all the dirt which passes through the screen-drum or falls upon the board K, from which it can be removed whenever desired. The valve being operated in-

termittently causes all the suction to be applied to one machine at one time and thus render the operation more efficient. The doors *b' b'* close automatically whenever the cage becomes thoroughly empty, so that the exhaust will not be expended upon an empty machine.

It will thus be seen that I provide a simple and efficient machine for elevating, separating, and cleaning the cotton as it comes from the wagon or store-house and passes to the gin.

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

1. The combination with a case, of a foraminous cage arranged therein and open at the top and bottom, the flue G, leading from the case, the screen and picker rolls arranged within the case and below the cage, the flue M, leading from the bottom of the case, at the rear of the screen roll and the exhaust connected with both the flues G and M, substantially as shown and described.

2. In a machine of the character described, the combination with the case, of the screen and picker rolls, the said case having an opening L, and flue M, and the catch board K, arranged between and below the screen and picker drums, the flue B, leading into the case, and the flue G, leading from said case, substantially as shown and described.

3. The combination with the case having a cage, the flues G and M leading therefrom, the exhaust, the screen and picker drums located in the case and below the cage, the leveler board, and the catch board K, all arranged substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

MOSES M. GINN.

Witnesses:

THOMAS T. SHOPORD,
LUTHER B. STOCKBRIDGE.