

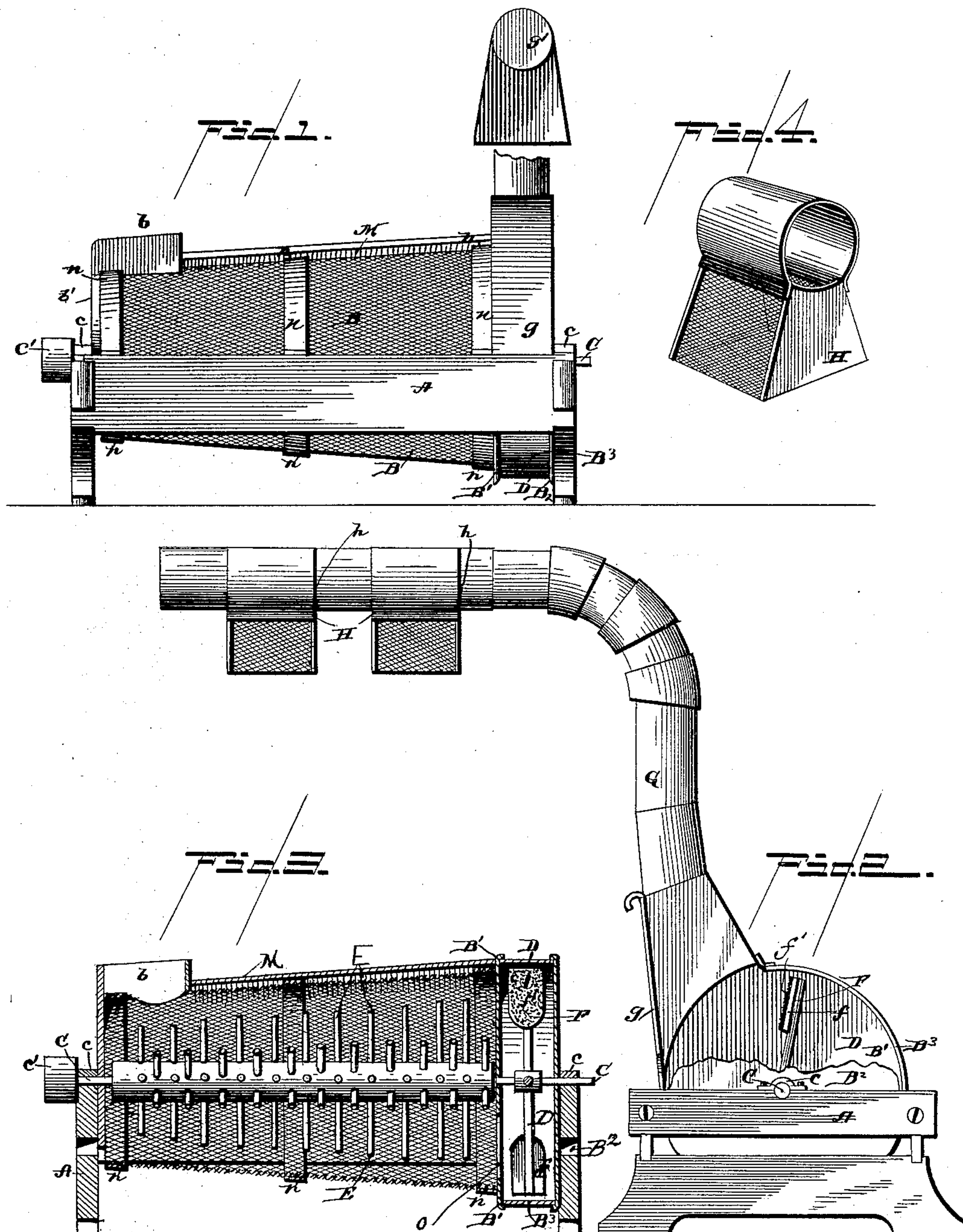
(No Model.)

J. W. ELLIOTT.

SEED COTTON CLEANER AND DISTRIBUTER.

No. 410,962.

Patented Sept. 10, 1889.



WITNESSES

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UNITED STATES PATENT OFFICE.

JAMES W. ELLIOTT, OF COLUMBUS, TEXAS, ASSIGNOR OF ONE-HALF TO
GEORGE WITTING, OF SAME PLACE.

SEED-COTTON CLEANER AND DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 410,962, dated September 10, 1889.

Application filed May 21, 1888. Serial No. 274,571. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. ELLIOTT, of Columbus, in the county of Colorado and State of Texas, have invented certain new and useful Improvements in Seed-Cotton Cleaners and Distributers; 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.

My invention relates to an improvement in seed-cotton cleaners and distributers; and it consists in the construction and arrangement of parts more fully hereinafter described, and pointed out in the claims, the object of my improvements being to provide a machine which will thoroughly clean the seed-cotton from foreign matter and quickly distribute the same to the respective gins or depositories in the simplest and most effective manner without injury to the fiber of the cotton. I attain this object by the machine illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation thereof; Fig. 2, an end view, partly broken away; Fig. 3, a vertical longitudinal section thereof, partly in elevation; and Fig. 4, a detail of one of the discharge spouts or guides.

In the drawings similar letters of reference indicate corresponding parts in the several views, and in which—

A represents the bench or supporting-frame.

B represents a cylinder longitudinally secured to the frame A. This cylinder is constructed in the shape of a frustum of a cone, is made of coarse wire-cloth, perforated sheet metal, or perforated wood or wood slats, or of other suitable material, and is arranged horizontally on the frame, its small end being capped by a metallic plate b' . The upper part of the small end of the cylinder is provided with a suitable hopper b , by means of which the seed-cotton is fed into the cylinder.

A shaft C, mounted in bearings c on the ends of the frame A, extends through the center of the cylinder, its outer projecting end being provided with a pulley c' , on which works the driving-belt. The shaft C has a series of radially-extending arms E, projecting out therefrom, they differing in lengths from the small end of the cylinder to the large end, and are

arranged spirally around the shaft and their outer ends coming in close proximity to the cylinder. The large end of the cylinder B is capped by a metallic plate B' , which has an opening o in its lower portion leading into a drum D at the end of the cylinder. The drum D is formed of the cap B' and the end B^2 , the two being united by a metallic peripheral band B^3 .

Situated within the drum D is a fan F, which is mounted on the shaft C, its arms being provided with metallic beaters or blades f , which have elastic material f' —such as rubber or soft leather—secured on their front faces, for purposes hereinafter stated.

Leading tangentially out from the fan-drum D is a discharge-pipe G, which is carried up to the gin stands or bins. The lower end of this pipe G has an opening formed in its side adjacent to the drum, which is opened or closed by means of the slide g , working in grooves or having its edges overlapping and bent back of a beading on the pipe.

The upper end of the pipe G is preferably closed by a cap g' , the discharge-openings being formed in the pipe at the points h a short distance from said end, as shown. These openings are opened or closed by guides or conductors H, constructed in the shape of inverted hoppers, having two of their sides formed of wire-cloth. They are connected to the pipe by metallic bands or sleeves, which encircle the pipe of a width equal to the width of the guides, so that by turning the latter the bands are brought over the openings h and close the same, each working independently of the other. I do not limit myself to the exact number of openings and guides, as it is evident that as many may be employed as there are gins to supply.

To more effectually separate the sticks and dirt from the cotton as it passes through the cylinder, I employ one or more brushes M, placed longitudinally on the outside of the cylinder, the bristles of which extend through the meshes of the wire into the cylinder. These brushes are preferably placed on the outside to admit of their ready removal and replacement when they become worn or damaged.

The cylinder is held rigidly in place by me-

tallic bands *n*, which span the same, and are made fast to the frame A.

The construction of my invention being as described, the operation thereof may be stated as follows: When the cotton is placed in the hopper, it immediately falls into the cylinder B, where it is caught by the spirally-arranged arms, the latter being rapidly revolved, and is then agitated and by centrifugal force pressed against the meshes of the cylinder and against the brushes. This agitation loosens the dirt and foreign matter from the cotton, and, owing to the cylinder being entirely perforated or slatted, the foreign substance is ejected from the same between the meshes. The spiral arrangement of the arms carries the cotton down the inclined sides of the cylinder and discharges the same through the opening *o* in the cap B' into the drum D, where it is subjected to the blast caused by the fan-blades, and is in contact with the fan-blades, which, owing to their soft elastic faces, gently gather the cotton and prevent the impact of the blades from injuring the fiber, and at the same time force it up the pipe G and out the openings *h* through the guides H into the gins, the wire sides of the guides permitting the air and dust carried up the pipe to escape.

When the cotton is to be discharged into a bin or other receptacle, the cap *g'* on the end of the pipe is removed and the discharge-openings closed by turning the guides up.

When it is desired to clean the pipe or fan-drum, the slide *g* is raised, permitting access to the interior of those parts.

It is obvious that many minor changes in the construction and arrangement of the parts of my machine can be made and substituted for those shown and described without in the least departing from the nature and principle of my invention.

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

1. The combination, with the cylinder and drum, of a shaft mounted in bearings on the frame and extending through the said cylinder and provided with the blades E of varying length, a fan located in the drum, a pipe leading tangentially out from said drum, said pipe having openings formed therein, and guides secured on said pipe over said openings, said guides having wire sides, substantially as described, and for the purpose specified.

2. The combination, with the fan, of a pipe leading out from its casing, said pipe having discharge-openings therein, and guides having bands or sleeves surrounding said openings and retained in place and allowed a lateral movement by said bands or sleeves surrounding said pipe, said sleeves being in width equal to the width of the said discharge-openings, substantially as and for the purpose specified.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAMES W. ELLIOTT. [L. s.]

Witnesses:

J. H. JOHNSON,

HENRY BORDCHET.