

(No Model.)

J. A. ELLIOTT.

COTTON PLANTER AND GUANO DISTRIBUTER COMBINED.

No. 287,014.

Patented Oct. 23, 1883.

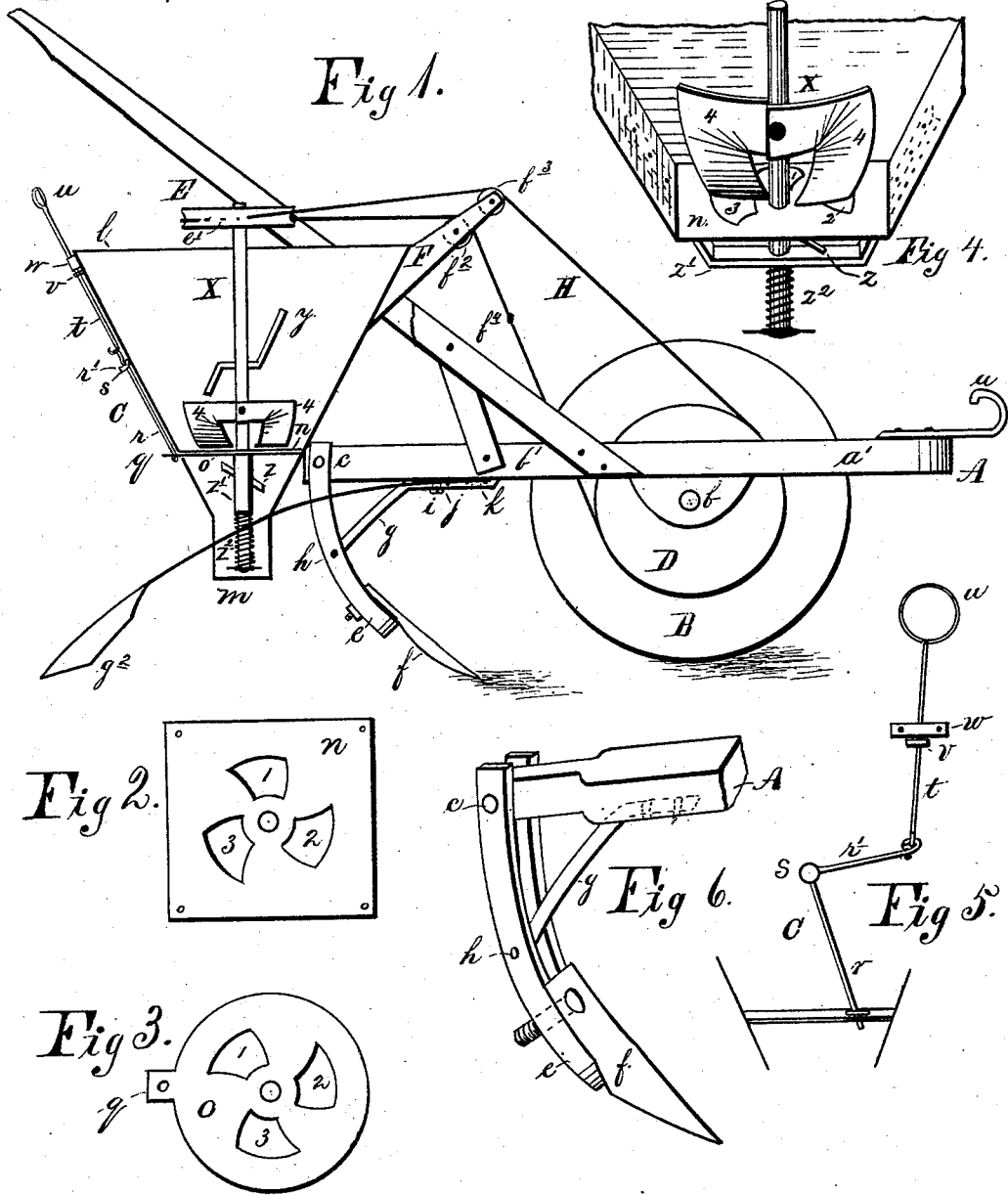


Fig 2.

Fig 3.

Fig 6.

Fig 5.

Witnesses:

C. P. Swett.
Shenwood Welch.

Inventor:

James A. Elliott.
By J. S. Duffie.
Attorney.

UNITED STATES PATENT OFFICE.

JAMES ALLEN ELLIOTT, OF ANDERSON COURT-HOUSE, SOUTH CAROLINA.

COTTON-PLANTER AND GUANO-DISTRIBUTER COMBINED.

SPECIFICATION forming part of Letters Patent No. 287,014, dated October 23, 1883.

Application filed June 14, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES ALLEN ELLIOTT, a citizen of the United States, residing at Anderson Court-House, in the county of Anderson and State of South Carolina, have invented certain new and useful Improvements in Cotton-Planters and Guano-Distributers Combined; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to cotton-planters and guano-distributers combined; and it consists in the novel construction, combination, and arrangement of its parts, as hereinafter shown and described.

In the accompanying drawings, Figure 1 represents a side elevation of my machine with the upper part of the right handle and the right side of the hopper and shoe cut away. Fig. 2 represents a face view of the bottom of the hopper. Fig. 3 represents a face view of the feed-regulator. Fig. 4 is an inside perspective view, showing the lower part of the shaft X, the sweeps or force-feeders 4 4, the perforated bottom *n* of the hopper, and the combined cross-bar and brace *z'*, and spiral spring *z''*. Fig. 5 represents the lever and attachments for setting the feed-regulator. Fig. 6 represents a perspective view of the slotted foot *e* and brace *g*.

My invention is described as follows: There is a beam of wood, A, about four feet long, four inches wide, and three inches thick, on the front end and upper side of which is secured a hook, *a*, to which the double-tree is attached. This hook is attached to the upper side, so that the weight of the double-tree will weigh down the front end of the beam, and thus bring sufficient weight on the driving-wheel B to cause it to revolve when the horses move forward. There is a slot cut perpendicularly in this beam from points *a'* to *b'*, for the drive-wheel B to work in. This drive-wheel is pivoted to the beam by means of clip *b*, secured on the under side of the beam, and a similar clip opposite. To the rear end of this beam is pivoted, at *e*, slotted foot *e*. This

foot is slotted, so that the plow-point *f* may be moved up or down any distance, so that it may be set deep or shallow. This foot is also given proper pitch by means of brace *g*, which is pivoted to the foot *e* at point *h*, and secured to the under side of the beam A by bolt *i*, passing through holes *j* or *k*, as I wish to set the foot at a greater or less angle. This brace may have as many such holes in its upper and front end as may be desired. From this beam A are extended two ordinary plow-handles, secured to the same in any usual and substantial manner; and between these two handles, and just in the rear of the foot *e*, I secure a hopper, *l*, and to the bottom of the same I secure a shoe, *m*, for the purpose of directing the seed or guano into the furrow made by the plow-point *f*. In the bottom *n* are three openings, (marked 1 2 3.) Immediately under this bottom *n* is secured a feed-gager, *o*, fitting up closely to the lower face of the bottom *n*, which has corresponding openings to those in the bottom, and are marked, also, 1 2 3, so that when one hole is brought over the other the seed or guano will pass out in large quantities, but, when partially closed, in less and less, until entirely closed, so that the quantity escaping may be regulated at will. This feed-gager *o* is pivoted around shaft X, and is held up to its place by a sheet of perforated tin secured to the bottom of the hopper, the opening being as large as to the circumference or outer edges of openings 1, 2, and 3 in the feed-regulator. This feed-gager has a perforated arm, *q*, which extends out a little from the rear of the hopper. Through this arm is inserted the lower end of elbow-lever C. This lever is pivoted at its elbow *s*, at about the center of the back of the hopper *l*, which brings the upper end, *r'*, to the right side of the hopper. To the end of *r'* is hinged or hooked a rod, *t*, having hand-hold *u*, which hand-hold extends above the top of the hopper, and is in easy reach of the operator or driver. This rod *t* is kept in place by staple *v*, and is kept tight by a piece of spring-steel, *w*, put over the rod just above staple *v*, and is screwed down at both ends. The operation of this lever *r* is apparent. In the center of this hopper is perpendicularly journaled an iron shaft, X, its upper end being pivoted in a brace across the upper end or top of the hopper, and its lower end being piv-

oted in combined brace and cross-piece z' , which passes across the middle and bottom crosswise—*i. e.*, from the right to the left side—its ends extending up the outside thereof, and is secured in place by screws, (indicated in the dotted lines, Fig. 4.) About the middle of this shaft X is inserted a double-elbowed wire, y , to keep the guano stirred up and prevent it from clogging. Below the bottom n there is inserted in the shaft at an angle of forty-five degrees another wire, z , to keep the guano from clogging in the shoe m . Being inserted at this angle, it answers the purpose of two wires, each end cutting in different directions.

Immediately above the bottom n , and sweeping over the holes 1 2 3, are sweeps or force-feeders 4 4, firmly secured to shaft X by a bolt and nut. These force-feeders are as wide as the holes 1 2 3 are large. They are set at an angle of forty-five degrees, the upper end of the wing pointing upward and forward and the lower end extending downward and backward. Thus the front end cuts the guano down, while the lower end presses it through the openings 1 2 3. The shaft X is so journaled that it can rise and fall about two or three inches, so that when any pieces of hard substance get under the sweeps the sweeps will not be broken, but may rise and pass over it. This is of consequence in distributing guano, which often contains unground rock or bone. The shaft X has secured around its lower end, by a pin or screw, a spiral spring, z^2 , the upper end thereof resting up against the under side of the combination brace and cross-piece z' , so that when the sweeps 4 4 come in contact with any hard substance, as above mentioned, the spring gives and allows the sweeps to rise; but the spring is strong enough to crush any lumps of guano or soft pieces of bone.

To the bottom and on either side of beam A is a spring, consisting of a flat piece of metal or wood, which extend to the rear of the plow point and cover up the guano. One of these springs is shown in Fig. 1, and is marked g^2 .

To the drive-wheel B, and secured to its side, is a large pulley, D, with a groove for a band or coil chain to work in. When a rope or round leather band is used, there are small pins in the groove, as indicated at e' on pulley E, to keep the band from slipping, the band H being cut away at that point to show the pins. When a coil chain is used, the grooves in these pulleys are cut to fit the links of the

chain. Pulley E is horizontally and rigidly secured to the upper end of shaft X.

F is a beam extending out in front of hopper l , and has a slot in its upper end, which contains guide-wheels $f^2 f^3$, to keep the band or chain H in the grooves of the pulleys.

The operation of my machine is as follows: When the machine is complete, I put the band or chain H around pulley D, pass it over guide-wheel f^3 , then from the left side of pulley E to the right, then over guide-wheel f^2 , then unite it at point f^4 . When the team moves forward, the pulley-wheel E is driven around, and consequently the shaft X and sweeps 4 4, which force the feed through openings 1 2 3 in the bottom n .

The whole machine is compact and neatly made, and can be operated close to stumps and near fence-corners.

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

1. The combination, with the beam A, the handles, hopper l , and shoe m , of drive-wheel B, journaled in said beam, with pulley-wheel D, secured on the side of said wheel and revolving therewith, band H, passing around said pulley D, thence over guide-wheels $f^2 f^3$, thence around pulley E, secured on the upper end of revolving shaft X, shaft X, bearing wires $y z$, sweeps or force-feeders 4 4, and spiral spring z^2 , bottom n , feed-gager o , having perforated arm q , elbow-lever C, pivoted at its elbow s to the rear end of hopper l , its lower end, r , working in perforated arm q , its upper end, r' , attached to rod t , secured on the rear end of hopper l by staple v , and spring w , all combined and operating in the manner set forth, and for the purposes described.

2. The combination, with the cotton-planter and guano-distributor above described, of revolving shaft X, having sweeps 4 4 and spiral spring z^2 around the lower end of said shaft X, its upper end resting up against the under side of combined cross-piece and brace z' , adapted to allow the shaft X and sweeps 4 4 to rise and pass over any hard substance found in the guano, substantially as shown and described.

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

JAMES ALLEN ELLIOTT.

Witnesses:

W. M. S. BROWN,
W. D. BEWLEY.