(No Model.)

A. B. ELMORE.

FERTILIZER DISTRIBUTER OR SEED PLANTER.

No. 593,087. Patented Nov. 2, 1897.

FIG. 1.

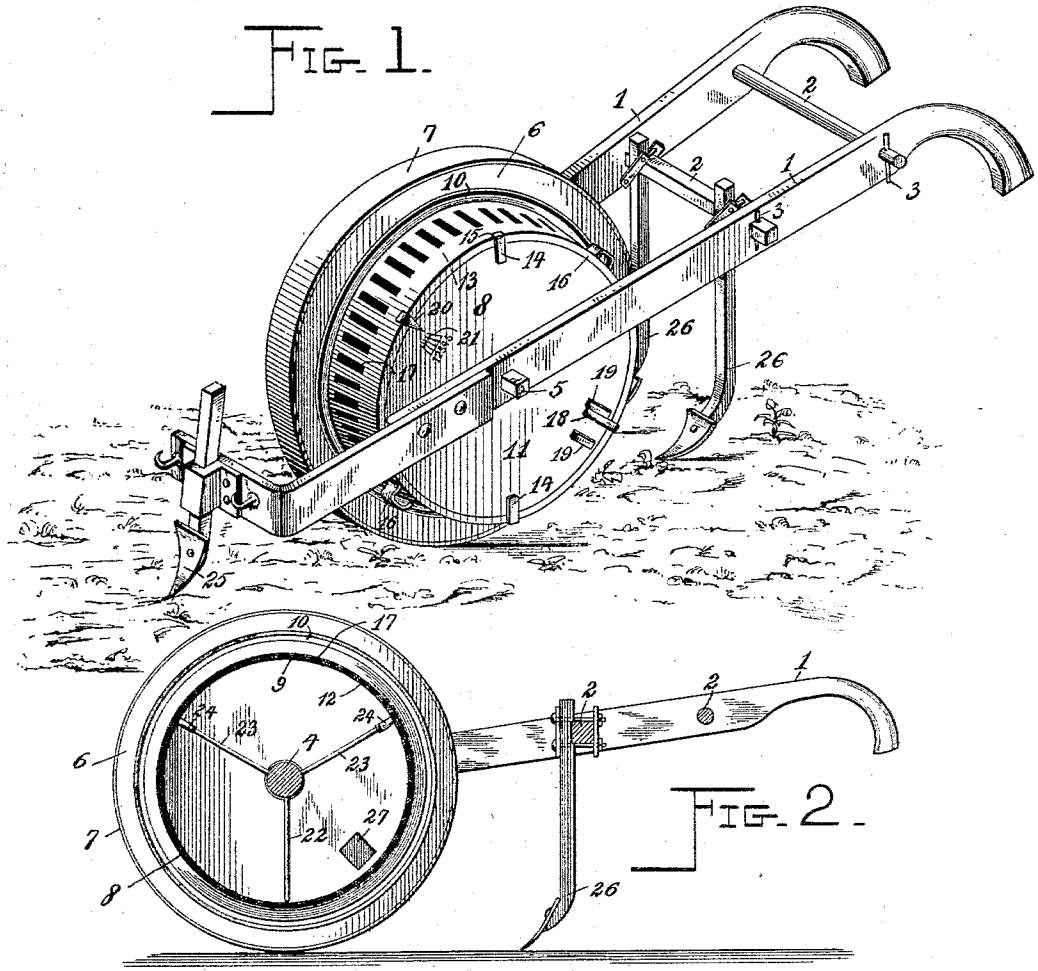
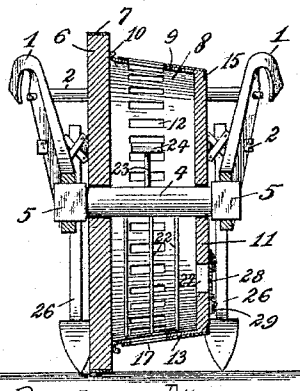


FIG. 2.

FIG. 3.



Witnesses
John F. Dewerwid
Edwin Cruse.

Inventor
Alonzo B. Elmore.

By his Attorneys,
C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

ALONZO B. ELMORE, OF MAGNOLIA, ARKANSAS.

FERTILIZER-DISTRIBUTER OR SEED-PLANTER.

SPECIFICATION forming part of Letters Patent No. 593,087, dated November 2, 1897.

Application filed May 27, 1897. Serial No. 638,423. (No model.)

To all whom it may concern:

Be it known that I, ALONZO B. ELMORE, a citizen of the United States, residing at Magnolia, in the county of Columbia and State of Arkansas, have invented a new and useful Fertilizer-Distributer or Seed-Planter, of which the following is a specification.

This invention relates to fertilizer-distributers or seed-planters, its object being to provide a simple, cheap, and efficient device of this character in which the discharge of the fertilizer or seed from the hopper may be accurately regulated and will be uniform.

With this object in view the invention consists of the several details of construction and combination of parts to be hereinafter fully described, and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of my improved distributer. Fig. 2 is a vertical longitudinal section. Fig. 3 is a vertical transverse section.

Similar reference-numerals indicate similar parts in the several figures.

1 indicates the handles, which are spaced apart by the cross-bars 2 and secured in proper position by the tie-bolts 3.

4 indicates the axle, which is preferably provided with angular ends 5, which fit in similarly-shaped openings in the forward ends of the handles in order to secure the axle against rotation. The axle may, however, be mounted in the handles in any other suitable manner to prevent its rotation.

6 indicates the wheel, which consists of a wooden disk provided with a metal tire 7. The axle between the handles is round, and the wheel 6 is provided with a circular aperture to fit over the axle in order that the wheel may turn freely thereon.

8 indicates the hopper, which is formed of a sheet-metal cylinder 9, provided at one end with a flange 10, which is firmly secured to the wooden disk 6 of the wheel. The other end of the cylinder is closed by a wooden disk or head 11, which fits snugly within the cylinder, and the latter is secured to the disk 11 by any suitable fastening devices. The disk 11 is provided with a central circular opening to fit over the axle and the wheel, and the cylinder will therefore turn on the axle. The periphery of the cylinder 9 is provided with a series of holes 12, which holes may be of any suitable size and of any suitable shape, either square, round, or oblong, as may be desired.

13 indicates a sleeve of sheet metal which fits over the cylinder 9 to turn thereon. This sleeve preferably abuts at one end against the flange 10, and it is held in position on the cylinder by means of a series of metal strips 14, which are secured to the wooden disk 11, and the ends 15 of which are bent over to engage the sleeve 13, and thereby prevent it from becoming disengaged from the cylinder 9, but permitting it to turn freely thereon. In order to facilitate the turning of the sleeve on the cylinder, it is provided with finger-pieces 16, which may be secured to it in any suitable manner, preferably by soldering.

The sleeve 13 is provided with a series of holes 17, which will be of the same size and shape as the holes 12 in the cylinder 9, and the holes in the sleeve are adapted to register with those in the cylinder. In order to limit the movement of the sleeve 13 on the cylinder 9, the arm 18 is secured to the sleeve and projects downwardly in contact with the wooden disk 11, between two lugs 19, which are firmly secured to the disk. When this arm 18 is in engagement with one of the lugs 19, the holes in the cylinder 9 will be fully open, and when the arm 18 is in engagement with the other lug the holes in the cylinder 9 will be entirely closed by the metal which is between the holes 17 in the sleeve 13. It is therefore obvious that when the arm 18 is at any intermediate point between the lugs 19 the holes in the cylinder will be partially open, and the discharge of fertilizer or seed from the hopper can therefore be regulated.

In order that the discharge may be accurately gaged, I provide a pointer 20 on the sleeve 13, which projects over against the face of the wooden disk, and the latter is provided with a scale 21. This scale is so arranged that when the pointer is opposite the highest number on the scale the holes in the cylinder will be fully open and when opposite the lowest number on the scale they will be almost closed. The amount of seed or fertilizer discharged from the hopper can thus be accurately regulated.

22 indicates wires which are secured at one

end to the axle and extend downwardly in substantially a vertical plane into close proximity with the inner face of the cylinder, and these wires are for the purpose of agitating the fertilizer or seed in order that it may be discharged freely through the holes in the cylinder.

23 indicates rods which are also secured to the axle at one end and extend therefrom in substantially a horizontal plane. These rods are provided at their outer ends with strips of leather 24 or other suitable flexible material, the outer edge of which extends in close proximity to the inner face of the cylinder and is for the purpose of preventing the holes in the cylinder from becoming choked up with the fertilizer or seed.

The cylinder is of less diameter than the wheel and preferably tapers outwardly from the wheel to its other end. The inner face of the cylinder therefore inclines downwardly toward the discharge-openings, and the fertilizer or seed will therefore gravitate more freely toward the discharge-openings.

25 indicates a furrow-opener which is detachably connected to one of the handles to operate in front of the distributer, and 26 indicates cover-shovels which are detachably secured to the handles in any suitable manner to cover up the seed or fertilizer that is dropped from the cylinder.

The wooden disk 6 of the wheel is provided with a suitable opening 27, which communicates with the hopper and through which the seed or fertilizer is introduced into the hopper. This opening is closed by a door 28, which is hinged at one end to the disk 6 and secured in place by means of a turn-button 29, which is pivoted on the disk.

A distributer made in accordance with my invention can be manufactured at a very low cost, and it is obvious that the distribution of seed or fertilizer may be uniform and that it may be regulated with great nicety.

It will be understood that changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what I claim is—

1. In a fertilizer-distributer or seed-planter, the combination with the frame and a stationary axle secured therein, of a wheel mounted to revolve on the axle, a hopper secured to one side of the wheel and provided with discharge-holes in its periphery, agitating-wires secured to the axle within the hopper and extending downwardly in substantially a vertical plane in close proximity to the inner face of the hopper, rods secured at one end to the axle and projecting therefrom in a substantially horizontal plane, and strips of flexible material secured to the free ends of the rods with their forward edges in close proximity to the discharge-holes in the hopper, substantially as and for the purpose specified.

2. In a fertilizer-distributer or seed-planter, the combination with the frame and a stationary axle secured therein, of a wheel consisting of a wooden disk mounted to revolve on the axle and having a metal tire, a cylinder having a flange at one end secured to the wheel-disk, and provided with a series of holes in its periphery, a wooden head secured in the other end of the cylinder, a sleeve fitted over the cylinder to turn thereon and provided with a series of holes adapted to register with those in the cylinder, spaced lugs secured on the wooden head, an arm secured to the sleeve to work between the lugs, a pointer on the sleeve, and a scale on the wooden head, substantially as and for the purpose specified.

3. In a fertilizer-distributer, or seed-planter, the combination with the frame and a stationary axle secured therein, of a wheel consisting of a wooden disk mounted to revolve on the axle and having a metal tire, a hopper consisting of a tapering cylinder having a flange at one end secured to the wheel-disk and provided with a series of holes in its periphery, and a wooden head secured in the other end of the cylinder, the wheel-disk having an opening communicating with the hopper, a hinged door to close the said opening, a tapering sleeve fitted over the cylinder to turn thereon, and provided with a series of holes adapted to register with those in the cylinder, metal strips secured to the wooden head to engage the outer end of the sleeve, and means to turn the sleeve on the cylinder and limit its movement in either direction, substantially as described.

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

ALONZO B. ELMORE.

Witnesses:
C. C. LYLE,
R. B. VAUGHAN.