No. 743,949. PATENTED NOV. 10, 1903.

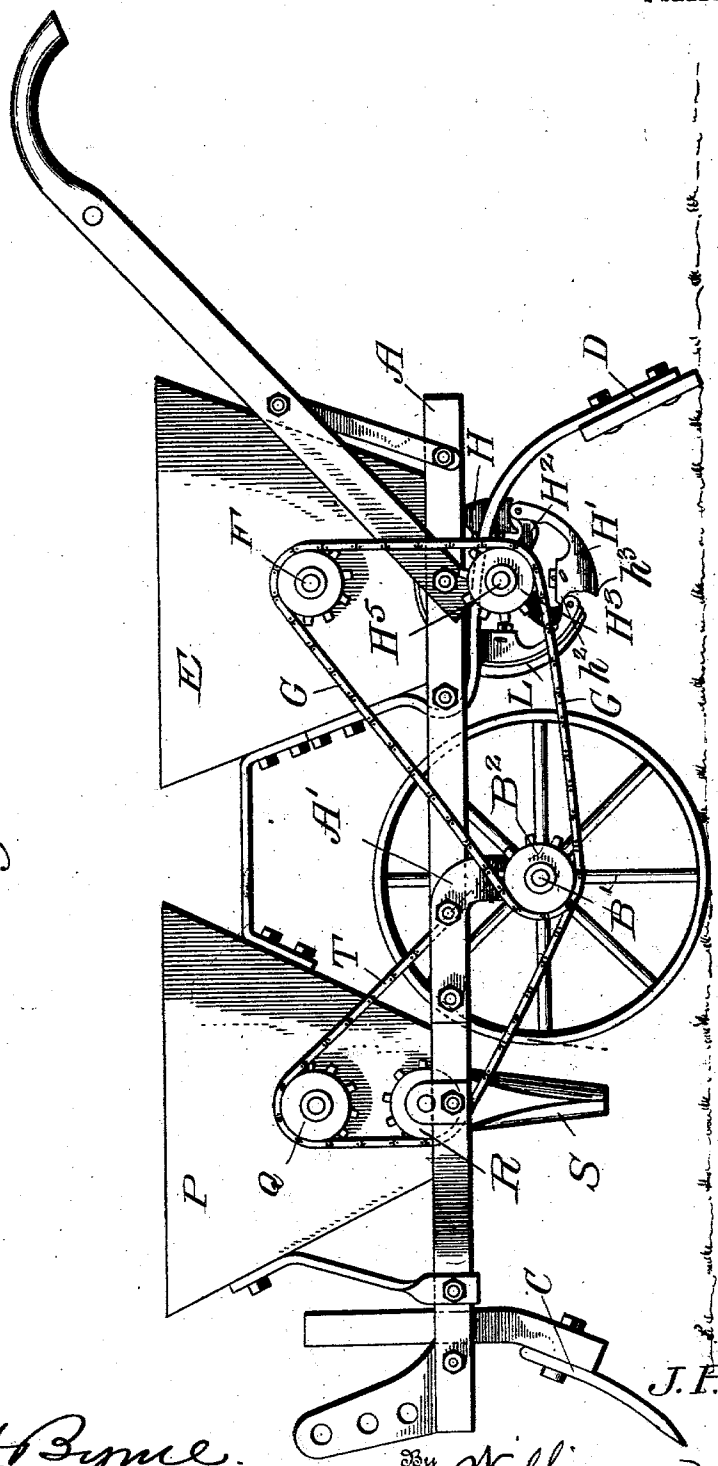
J. P. STEVENS.

COMBINED SEED PLANTER AND FERTILIZER DISTRIBUTER.

APPLICATION FILED JULY 28, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 2.

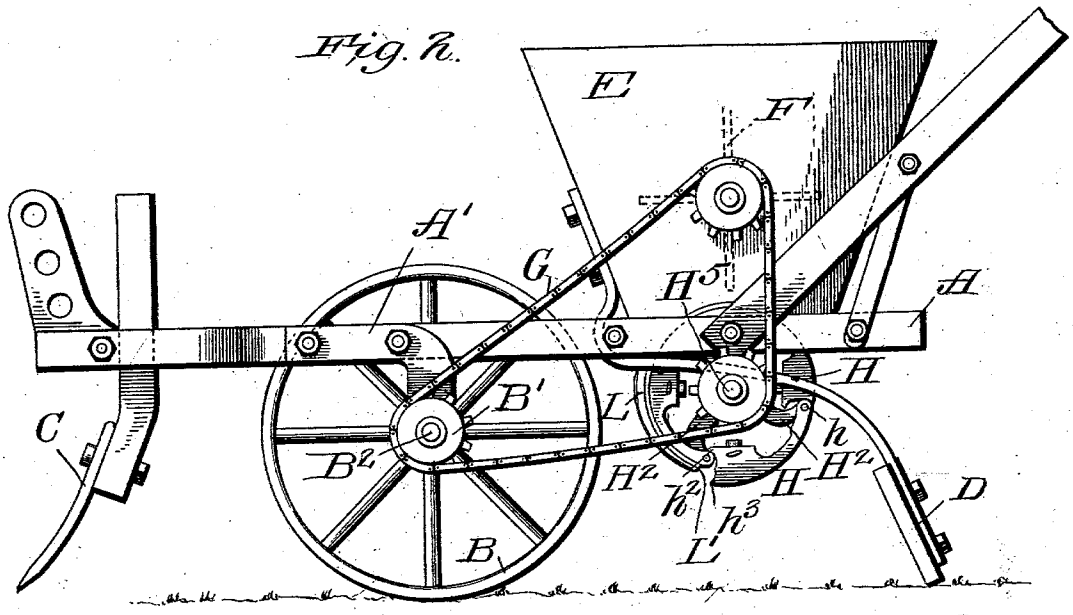


Fig. 4.

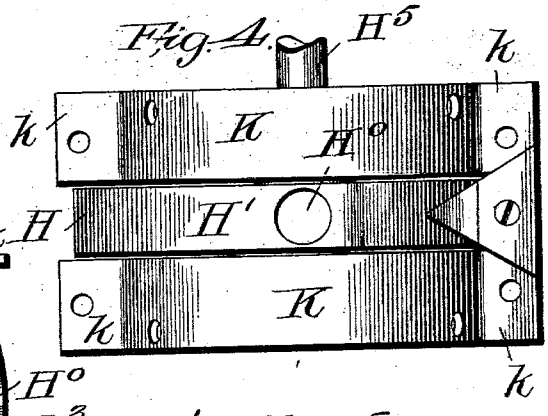


Fig. 3.

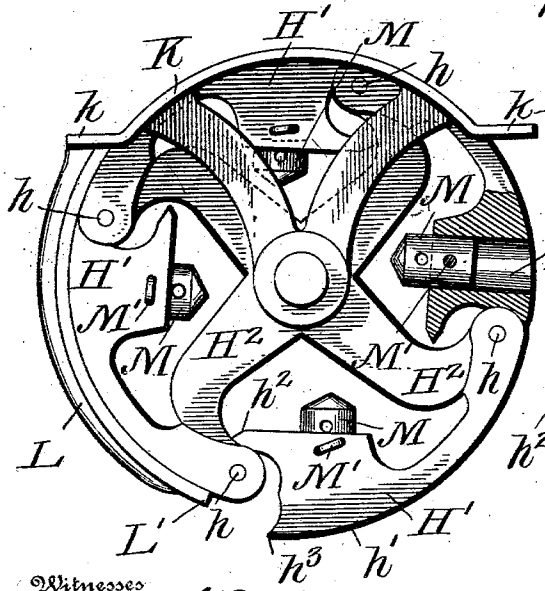
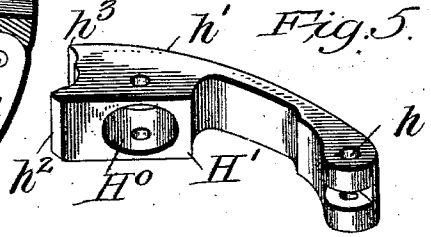


Fig. 5.



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No. 743,949. Patented November 10, 1903.

UNITED STATES PATENT OFFICE.

JOSIAH PERCY STEVENS, OF ATLANTA, GEORGIA.

COMBINED SEED-PLANTER AND FERTILIZER-DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 743,949, dated November 10, 1903.

Application filed July 28, 1903. Serial No. 167,320. (No model.)

To all whom it may concern:

Be it known that I, JOSIAH PERCY STEVENS, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in a Combined Seed-Planter and Fertilizer-Distributer; 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 improvements in agricultural implements, and it is intended to provide certain new and useful improvements in seed-planters and fertilizer-distributers, and more especially in seed-planters. It consists in certain novel features that will hereinafter be described and claimed.

Reference is had to the accompanying drawings, in which the same parts are indicated by the same letters throughout the several views.

Figure 1 is a side elevation of a combined seed-planter and fertilizer-distributer constructed according to my invention. Fig. 2 is a side elevation of the implement with the fertilizer-distributer omitted. Fig. 3 is an enlarged side elevation of the feeding-wheel and its casing. Fig. 4 is a plan view of the bottom of the seed-hopper, and Fig. 5 is a detail showing in perspective one of the pivoted seed-buckets used in the invention.

A represents the ordinary frame, carrying shaft-hangers A′, in which the axle B′ of the wheels B is journaled.

C represents an ordinary shovel-plow for opening the furrow, and D represents a coverer for covering up the furrow.

E represents a seed-hopper carrying a stirrer F of any suitable construction. The bottom of the seed-hopper is closed by two arched plates K, with a slot between them for the feeding-wheel H. These arched plates K are secured by flanges k to the bottom of the seed-hopper, while the feeding-wheel H rotates between the said plates.

The feeding-wheel is mounted on the shaft H^5 and driven by a sprocket-chain G, which passes over a sprocket-wheel B^2 on the shaft B′, and said sprocket-chain also drives the stirrer F; but independent driving means may be supplied for the feeding-wheel and the stirrer, if desired, or the stirrer may be omitted, if preferred.

The feeding-wheel H carries a number of buckets H′, pivoted to the spokes H^2 of the wheel, as at h. These buckets have a rounded outer face h' and have their free end recessed, as shown, and terminating in the engaging lugs h^2 and h^3. Near the ends of the buckets are seed-chambers H^0, in which are adjustably-mounted plugs M, which are preferably held in place by cotter-pins M′. I have shown two holes in the plug; but it will be obvious that the number may be increased or diminished at will. The contents of these chambers above the plugs may be varied at will or the chambers may be closed up entirely by adjusting these plugs therein by means of the cotter-pins. The buckets on the upper part of the wheel will have their chambers H^0 pass under the opening in the bottom of the hopper and will receive more or less seed or none at all, according to the position of the plugs therein. As the buckets move forward, these chambers will be closed, and the seed will be prevented from falling out by means of the curved guard L, and as soon as the lug h^3 on the bucket passes clear of the lower end L′ of the guard L the bucket will swing about its pivot h until the stop h^2 is arrested by the face of the opposite spoke H^2, as shown most clearly in Fig. 3. The sudden arrest of the bucket from further swinging about its pivot will cause the seed to fly out through the now open bottom of the chamber H^0 and the seed will scatter. The effect will be not only to positively throw the seed out of the chamber and prevent any sticking therein, but also cause the seed to scatter instead of dropping all in a bunch, which is a very desirable feature of my invention.

It will be readily seen that the capacity of the seed-chambers may be varied at will, and therefore a greater or less number of seeds may be thrown out from each bucket, as desired. Moreover, some of the seed-chambers may be closed altogether, thus rendering it possible to throw the seeds only once each revolution of the wheel, or twice each revolution, or more times during each revolution of the wheel, if desired. In this way the implement may be caused to drop the seed at the

desired interval, and the interval may be varied at will.

It will be obvious that the number of the spokes and buckets of the feeding-wheel may be varied to suit varying requirements of the machine. Thus different wheels may be provided for feeding corn, cotton, or other seeds which may be used with the other parts of the implement.

It will be seen that the cotter-pins and plugs are readily accessible, so that the same wheel may be quickly adjusted to plant different kinds of seeds or different quantities of the same seed, if desired.

The herein-described seed-planter may be used in connection with the fertilizer-distributer, as shown in Fig. 1, in which P represents a hopper for the fertilizer; Q, a stirrer; R, a distributer for withdrawing the fertilizer from the base of the hopper P, and S represents a chute to direct the fertilizer in the proper direction and prevent the same from blowing away or scattering unduly. This fertilizer-distributer may be operated by the sprocket-chain T. It will be obvious that the fertilizer-distributer may be removed from the implement shown in Fig. 1 and that that implement may be used as a seed-planter alone or as a combined fertilizer-distributer and seed-planter, as may be preferred.

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

1. In an agricultural implement, a feeding-wheel, provided with spokes, and buckets, each pivoted to one of said spokes, and having its free end when released, adapted to strike the adjacent spoke, the said wheel being mounted beneath the seed-hopper, a curved guard for said buckets extending partly down the front side of said wheel, and means for rotating said feeding-wheel thus causing said buckets to pass *seriatim* beyond the edge of said curved guard, substantially as described.

2. In an agricultural implement, the combination with a hopper for the seed, of a feeding-wheel mounted beneath said hopper and provided with a plurality of pivoted buckets, with radial chambers therein, means for varying the cubical contents of said chambers, and a curved guard along the forward portion of said wheel adapted to retain said buckets, but to release the same at the desired moment, allowing said buckets to swing about their pivots, substantially as described.

3. In an agricultural implement, the combination with a drive-wheel, of a feeding-wheel, provided with spokes, and buckets, each pivoted to one of said spokes, and having its free end when released, adapted to strike the adjacent spoke, the said wheel being mounted beneath the seed-hopper, a curved guard for said buckets extending partly down the front side of said wheel, and means operated by the drive-wheel for rotating said feeding-wheel thus causing said buckets to pass *seriatim* beyond the edge of said curved guard, substantially as described.

4. In an agricultural implement, the combination with a drive-wheel, and a hopper for the seed mounted in the rear of said wheel, a stirrer in the seed-hopper, driven by said drive-wheel, of a feeding-wheel mounted beneath said hopper and provided with a plurality of pivoted buckets, with radial chambers therein, means for varying the cubical contents of said chambers, and a curved guard along the forward portion of said wheel adapted to retain said buckets, but to release the same at the desired moment, allowing said buckets to swing about their pivots, substantially as described.

5. In an agricultural implement, the combination with a frame, a drive-wheel, and a seed-hopper, of a feeding-wheel, mounted beneath the seed-hopper and provided with spokes, and buckets, each bucket being pivoted to one of said spokes, and having its free end, when released, adapted to strike the adjacent spoke, a curved guard for said buckets extending partly down the front side of said wheel, and means operated by the drive-wheel for rotating said feeding-wheel thus causing said buckets to pass *seriatim* beyond the lower edge of said curved guard, substantially as described.

6. In an agricultural implement, the combination with a hopper for the seed, of a feeding-wheel mounted beneath said hopper and provided with a plurality of pivoted buckets, with radial chambers therein, plugs adjustably mounted in said chambers, and a curved guard along the forward portion of said wheel adapted to retain said buckets, but to release the same at the desired moment, allowing said buckets to swing about their pivots, substantially as described.

7. In an agricultural implement, the combination with a drive-wheel and seed-hopper, of a feeding-wheel mounted below the seed-hopper and provided with spokes, and buckets, each bucket being pivoted to one of said spokes, and having its free end, when released, adapted to strike the adjacent spoke, the said buckets being provided with radial chambers near the fore ends thereof, plugs adjustably mounted in said chambers, a curved guard for said buckets extending partly down the front side of said wheel, and means operated by the drive-wheel for rotating said feeding-wheel and causing said buckets to pass *seriatim* beyond the lower edge of said curved guard, substantially as described.

8. In an agricultural implement, the combination with a drive-wheel, and a hopper for the seed mounted in the rear of said wheel, a stirrer in the seed-hopper, of a feeding-wheel mounted beneath said hopper and provided with a plurality of pivoted buckets, with radial chambers therein, means for varying the cubical contents of said chambers, a

curved guard along the forward portion of said wheel adapted to retain said buckets, but to release the same at the desired moment, allowing said buckets to swing about their pivots, and means operated by said drive-wheel for driving said stirrer and said feeding-wheel, substantially as described.

9. In an agricultural implement, the combination with a hopper for the seed, and a drive-wheel, of a feeding-wheel, provided with pivoted buckets, with chambers therein mounted beneath the seed-hopper, means for varying the capacity of said chambers, a curved guard for holding said buckets with the chambers closed, and means operated by the drive-wheel for rotating said feeding-wheel, thus causing said buckets to pass *seriatim* beyond the lower edge of said curved guard, substantially as described.

10. A seed-dropping wheel for use in seeders and planters, comprising a hub with spokes, buckets each pivoted at one end to one of said spokes, and having a free end with radial chambers near said free end, means for feeding seed to said chambers when the buckets are on the upper side of said wheel, and for closing the outer ends of said chambers until they reach substantially the inverted position, with means for causing the free ends of said buckets to swing quickly about their pivoted ends when in the inverted position with the seed-chambers opening downward, substantially as and for the purposes described.

11. A seed-dropping wheel for use in seeders and planters, comprising a hub with spokes, buckets each pivoted at one end to one of said spokes, and having a free end with radial chambers near said free end, means for varying the capacity of said chambers, means for feeding seed to said chambers when the buckets are on the upper side of said wheel, and for closing the outer ends of said chambers until they reach substantially the inverted position, with means for causing the free ends of said buckets to swing quickly about their pivoted ends when in the inverted position with the seed-chambers opening downward, substantially as and for the purposes described.

12. In a seeder and planter, the combination with a seed-dropping wheel, comprising a hub with buckets mounted thereon, each bucket being pivoted at one end to said wheel, and having a free end with a radial chamber near said free end, plugs adjustably mounted in said chambers, means for rotating said wheel, means for feeding seed to said chambers when the buckets are on the upper side of said wheel, and for closing the outer ends of said chambers until they reach substantially the inverted position, with means for causing the free ends of said buckets to swing quickly about their pivoted ends when in the inverted position with the seed-chambers opening downward, and for suddenly arresting the outward travel of said free ends, substantially as and for the purposes described.

13. In a seeder and planter, the combination with a seed-dropping wheel, comprising a hub with buckets mounted thereon, each bucket being pivoted at one end to said wheel, and having a free end with a radial chamber near said free end, means for varying the cubical contents of said chambers, means for rotating said wheel, means for feeding seed to said chambers when the buckets are on the upper side of said wheel, and for closing the outer ends of said chambers until they reach substantially the inverted position, with means for causing the free ends of said buckets to swing quickly about their pivoted ends when in the inverted position with the seed-chambers opening downward, and for suddenly arresting the outward travel of said free ends, substantially as and for the purposes described.

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

JOSIAH PERCY STEVENS.

Witnesses:
WM. J. MILLS,
J. M. MARKLEY.