

J. S. KEMP.
FERTILIZER DISTRIBUTER.
APPLICATION FILED JAN. 16, 1907.

Patented Sept. 21, 1909.

2 SHEETS—SHEET 1.

934,671.

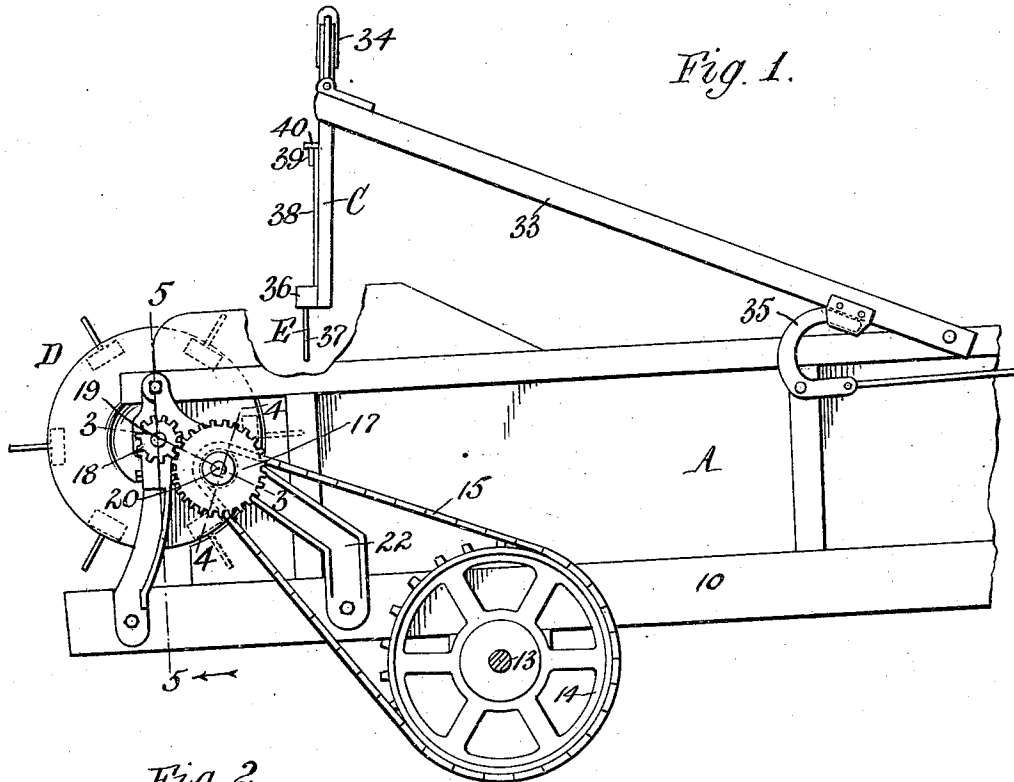


Fig. 1.

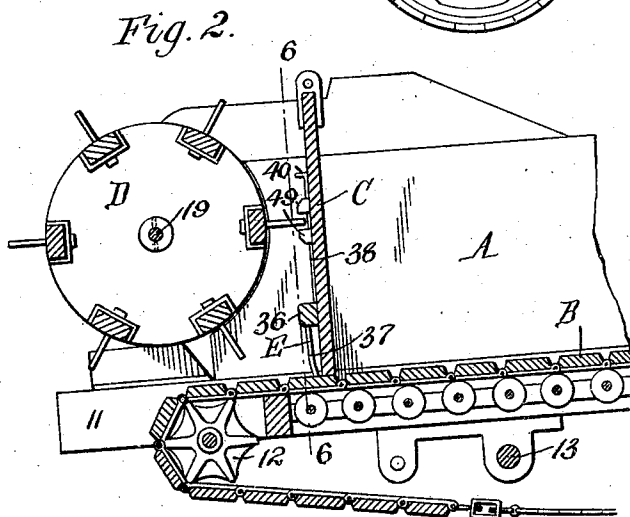


Fig. 2.

Witnesses:

A. B. Diamond.

E. A. V. H. K.

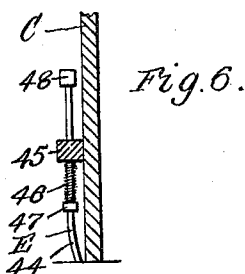
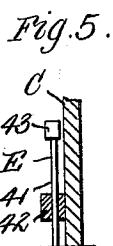
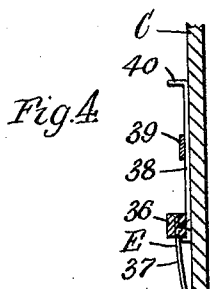
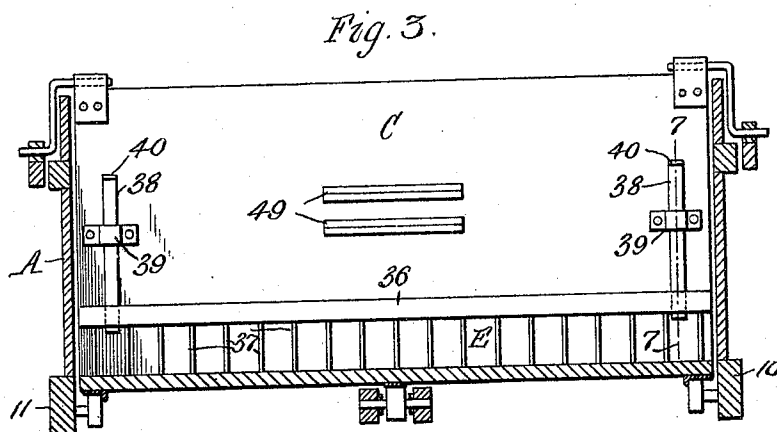
Inventor.

By Joseph S. Kemp.
Wilhelm, Parker & Hard
Attorneys.

934,671.

J. S. KEMP.
FERTILIZER DISTRIBUTER.
APPLICATION FILED JAN. 16, 1907.

Patented Sept. 21, 1909.
2 SHEETS—SHEET 2.



Witnesses:
A. G. Dimond.
E. A. Volk.

Inventor
Joseph S. Kemp.
by Wilhelm, Parker & Hard.
Attorneys.

UNITED STATES PATENT OFFICE.

JOSEPH S. KEMP, OF NEWARK VALLEY, NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS, TO INTERNATIONAL HARVESTER COMPANY, A CORPORATION OF NEW JERSEY.

FERTILIZER-DISTRIBUTER.

934,671.

Specification of Letters Patent. Patented Sept. 21, 1909.

Application filed January 16, 1907. Serial No. 352,647.

To all whom it may concern:

Be it known that I, JOSEPH S. KEMP, a citizen of the United States, residing at Newark Valley, in the county of Tioga and State of New York, have invented a new and useful Improvement in Fertilizer-Distributers, of which the following is a specification.

The object of this invention is to mount the comb on the safety gate movably in such manner that when the gate is in position to protect the beater the comb is retracted, while when the gate is moved to a position which permits the beater to operate upon the material to be distributed the comb is projected to an operative position.

In the accompanying drawings, consisting of two sheets: Figure 1 is an elevation of the rear portion of the machine, viewed from the right hand side, showing the safety gate raised. Fig. 2 is a vertical longitudinal section through the rear portion of the machine, showing the safety gate lowered. Fig. 3 is a transverse vertical section in line 6-6, Fig. 2, through the body of the machine in rear of the safety gate looking forward. Fig. 4 is a fragmentary vertical section in line 7-7, Fig. 3, through the safety gate in its lowered position. Fig. 5 is a fragmentary vertical section through the safety gate, showing a modified construction of the movable comb thereon. Fig. 6 is a fragmentary vertical section through the safety gate, showing another modified construction of the movable comb.

Like letters and numerals of reference refer to like parts in the several figures.

A represents the fertilizer receptacle or box which is mounted on wheels in the usual manner. 10 represents the right hand side sill and 11 the left hand side sill of the receptacle. B represents the movable slat bottom or apron and 12 one of the rotary spiders on which the bottom is carried at the rear end of the machine. C represents the safety gate or board and D the beater or distributor. 13 represents the rear axle from which the beater is driven and 14 the driving sprocket wheel mounted on the right hand portion of the axle and driven therefrom by a clutch in the usual way. All of these parts may be of any suitable or well known construction. The beater is driven from the sprocket wheel 14 by a chain 15 running around a

sprocket pinion 16 which is secured to a spur gear 17 meshing with a pinion 18 on the beater shaft 19.

E represents the comb which is attached to the safety gate C so as to be raised and lowered with the same and to be held in its operative position with reference to the beater when the gate is raised. The gate may be raised and lowered by any suitable means, for instance, as shown, by pivoted arms 33, to the rear ends of which the gate is hung by links 34 and which are raised and lowered by cams 35. The comb E, as shown in Figs. 1, 2, 3 and 4, comprises a cross bar or head 36 and teeth 37 secured thereto. The cross bar is capable of up and down movement on the rear side of the gate and is attached to the gate and guided thereon by upright bars 38 extending upwardly from the cross bar 36 through guide straps 39 secured to the gate. The upper ends of the guide bars are provided with stop shoulders 40 which limit the downward movement of the comb on the gate to the working position of the comb when the gate is raised, as represented in Fig. 1.

When the gate rests on the slat bottom, as represented in Figs. 2, 3 and 4, the comb stands in its raised position on the gate and the comb teeth are retracted and do not protrude beyond the bottom edge of the gate. The comb, therefore, does not interfere with the formation of a close joint between the bottom edge of the gate and the slat bottom.

In raising the gate from the slat bottom the comb descends by gravity on the gate and the comb teeth protrude beyond the lower edge of the gate. When the gate has been raised the comb stands in the proper position for operation in connection with the beater in the usual way. Instead of mounting the comb on the gate in such manner that the comb is bodily movable thereon as a single device, the comb teeth may be made individually movable on the gate, as represented in Figs. 5 and 6.

In the construction represented in Fig. 5, each tooth 41 is movable up and down in a guide 42 secured to the gate and the downward movement of each tooth is effected by the weight thereof and limited by a head 43 at the upper end of the tooth.

In the construction represented in Fig. 6,

each tooth 44 is movable up and down in a guide 45 secured to the gate and the downward movement is effected by a spring 46 applied to the tooth below the guide 45 and pressing against a collar 47 on the tooth, the downward movement of the tooth being limited by a head 48 at the upper end of the tooth.

49 represents the usual cleats on the rear side of the gate for fixing the position of the gate, when lowered, with reference to the beater.

I claim as my invention:

1. The combination of a receptacle for the material to be distributed, a beater, a safety gate arranged on the receptacle adjacent to the beater and adapted to be lowered to a position in which it protects the beater or to be raised to a position in which the beater is exposed and permitted to operate upon the material in the receptacle, and a comb movably mounted on the lower portion of said gate and adapted to be retracted when the gate is in its lower position and to be projected when the gate is raised, substantially as set forth.

2. The combination of a receptacle for the material to be distributed, a beater, a safety gate arranged in the receptacle adjacent to the beater and adapted to be moved from a position in which it protects the beater to a position in which the beater is exposed for operation upon the material, and a comb which is movably mounted on said gate and retracted when the latter is in its protecting position and automatically projected to an operative position when the gate is moved to the position in which the beater is exposed, substantially as set forth.

3. The combination of a receptacle for the material to be distributed, a beater, a safety gate arranged in the receptacle adjacent to the beater and adapted to be raised and lowered, and a comb attached to said gate and

capable of up and down movement thereon, substantially as set forth.

4. The combination of a receptacle for the material to be distributed, a beater, a safety gate arranged in the receptacle adjacent to the beater and adapted to be raised and lowered, a comb movably attached to said gate, and means for projecting the comb teeth from the gate upon raising the latter and for retracting the teeth upon lowering the gate to the bottom of said receptacle, substantially as set forth.

5. The combination of a receptacle for the material to be distributed, a beater, a safety gate arranged in the receptacle adjacent to the beater and adapted to be raised and lowered, a comb movably mounted on said gate, and upright guides on said gate in which said comb is capable of sliding up and down, substantially as set forth.

6. The combination of a receptacle for the material to be distributed, a beater, a safety gate arranged in the receptacle adjacent to the beater and adapted to be raised and lowered, retractable teeth mounted on said gate, means for projecting the teeth when the gate is raised, and means for limiting the projection of the teeth, substantially as set forth.

7. The combination of a receptacle for the material to be distributed, a beater, a safety gate arranged in the receptacle adjacent to the beater and adapted to be raised and lowered, a comb movably mounted on said gate, upright guide bars on said comb, guides on said gate in which said bars are slidably arranged, and stops on said bars which limit the downward movement of the comb on the gate, substantially as set forth.

Witness my hand this fifth day of January, 1907.

JOSEPH S. KEMP.

Witnesses:

EDWARD C. HARD,
EDWARD WILHELM.