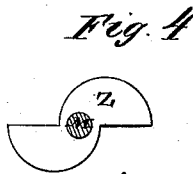
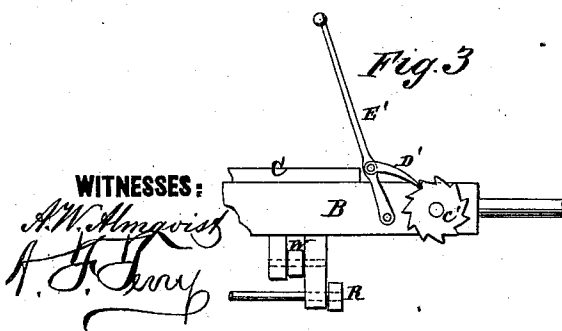
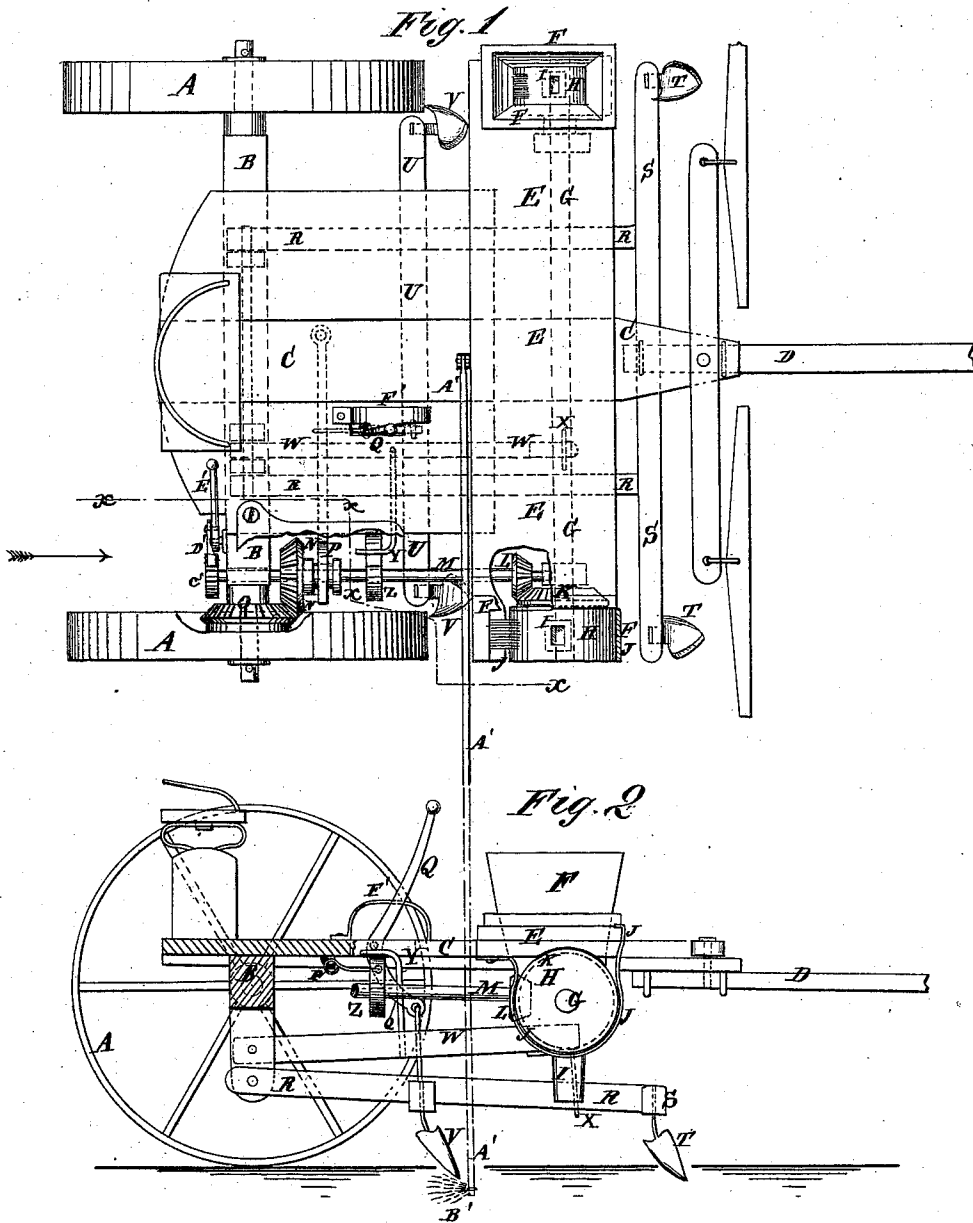


J. V. REAMS.
CORN-PLANTER.

No. 174,301.

Patented Feb. 29, 1876.



WITNESSES:
A. W. Montgomery
H. J. Terry

INVENTOR:
John V. Reams
BY *Murray*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN V. REAMS, OF MIDLAND CITY, MICHIGAN.

IMPROVEMENT IN CORN-PLANTERS.

Specification forming part of Letters Patent No. **174,301**, dated February 29, 1876; application filed July 10, 1875.

To all whom it may concern:

Be it known that I, JOHN V. REAMS, of Midland City, in the county of Midland and State of Michigan, have invented a new and useful Improvement in Corn-Planters, of which the following is a specification:

Figure 1 is a top view of my improved machine. Fig. 2 is a side view of the same, partly in section, through the line *x x x x*, Fig. 1. Fig. 3 is a detail view of the dropper-setting device, looking in the direction of the arrow in Fig. 1. Fig. 4 is a detail view of the double cam for operating the marker.

Similar letters of reference indicate corresponding parts.

The invention relates to the construction and arrangement of parts for throwing the seed-dropping mechanism out of gear and raising the furrowing-plows from the ground simultaneously, and also for operating the seed-wheel independently, when thrown out of gear with the revolving axle, as and for the purpose hereinafter specified.

A are two wheels, which revolve upon the journals of the axle B. To the middle part of the axle B is attached the rear end of a wide bar, C, to the forward end of which is attached the tongue D, and to which, a little in the rear of the tongue D, is attached a cross-bar, E. To the upper side of the ends of the cross-bar E are attached the open-bottomed seed-hoppers F, and to the under side of which are attached bearings for the shaft G. To the ends of the shaft G are attached the dropping wheels or cylinders H, in the opposite sides of which are formed recesses or cups of such a size as to contain enough corn for a hill. The upper parts of the dropping-wheels project through openings in the bar E, so as to receive corn from the hoppers F and convey it to the spouts I, by which it is conducted to the ground. The spouts I are attached to and supported by the cases or bands J that surround the lower parts of the dropping-wheels H, are attached to the ends of the bar E, and prevent the seed from dropping out before reaching the spouts I. To the shaft G, near one end, is attached a bevel-gear wheel K, into the teeth of which mesh the teeth of the bevel-gear wheel L, attached to the forward end of the shaft M. The forward part of the

shaft M revolves in bearings attached to the bar E, and its rear part revolves in bearings formed in or attached to the axle B. Upon the rear part of the shaft M is placed a bevel-gear wheel, N, the teeth of which mesh into the teeth of the bevel-gear wheel O, attached to the hub of the wheel A, so that the dropping device may be operated by the advance of the machine. The gear-wheel N is connected with the shaft M by a tongue and groove, so that it may carry the said shaft M with it in its revolution, and at the same time may be moved longitudinally to throw it into and out of gear with the wheel O. Upon the hub of the gear-wheel N is formed a ring-groove, to receive the forked end of the lever P, the other end of which is pivoted to the bar C, and which is connected with the lever Q. The lever Q is pivoted to the bar C, and its upper end projects into such a position that it may be conveniently reached and operated by the driver from his seat, to throw the wheel N into and out of gear with the wheel O.

To the axle B, or to short hangers attached to said axle, are pivoted the rear ends of two bars R, to the forward ends of which, a little in front of the cross-bar E, is attached a cross-bar S. To the ends of the cross-bar S, directly in front of the lower ends of the spouts I, are attached two plows T, to open furrows to receive the seed. The plows T are so formed as to throw the soil inward. To the bars R, in the rear of the cross-bar E, is attached a cross-bar, U, to the ends of which are attached two plows V, which are so formed as to throw the soil outward. The plows V are attached to the cross-bar U in such positions as to throw the soil turned by the plows T back into the furrows, and thus cover the seed. The lower part of the lever Q is bent forward, and its end is connected with the cross-bar U, so that all the plows may be lowered to and raised from the ground by operating the said lever Q, and so that the operations of raising the plows from the ground and throwing the dropping device out of gear may be performed by one movement of the lever Q, and the operations of lowering the plows to the ground and throwing the dropping device into gear may be performed by another movement of the lever Q. W is a bar, the rear end of which

is pivoted to the axle B, or to a hanger attached to said axle. The bar W passes forward above the rear cross-bar U of the plow-frame R S U, and to its forward end, in line with the lower ends of the conductor-spouts I, is attached a marking plate or shovel X.

To the bar W is attached a rigid arm, Y, the outer end of which rests upon the double cam Z, which is so formed as to drop the marker at once, and raise it quickly after it has marked the ground. The cam Z is attached to the shaft M, and is so arranged in connection with the dropping-wheels H that the marker and seed may be dropped at the same time, so that the ground may be marked in line with the hills. To the center of the bar C is pivoted the end of a rod, A', so that it may be turned down upon either side of the machine. To the outer end of the rod A' is attached a tassel, B', and the rod A' is made of such a length that, when the machine is in position and the rod A' turned down, the tassel B' may be directly over the track made by the outer wheel of the machine in the previous round, so that the rows of hills may be parallel with each other. To the rear end of the shaft M is attached a ratchet-wheel, C', upon the teeth of which rests the engaging-end of a pawl, D', pivoted to the lever E'. The lower end of the lever E' is pivoted to the axle B, and its upper end projects into such a position that it may be conveniently reached and operated by the driver from his seat, to set the dropping device when starting in at the side of the field. In using the machine, it is driven along one side of the field, planting

two rows of hills. The plows are then raised, the dropping device thrown out of gear, and the machine turned around and brought into position at the proper distance from the previous row, and with the marker X in line with the last previous mark. The lever E' is then operated until the dropping-wheels drop seeds for hills, and the machine is drawn forward, planting the hills in accurate check-row. The lever Q is locked in position, when holding the plows raised and the dropping device out of gear, by catching it in a notch in a curved bar, F', attached to the bar C at the side of the said lever Q.

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

1. The plow-frame R S U, pivoted at its rear end to axle B, the sliding-gear wheel N, the pivoted lever P, the seed-dropping mechanism, and the elbow-lever Q, arranged as shown and described, whereby the seed-dropping mechanism is thrown out of gear and the plows simultaneously raised from the ground, as shown and described.

2. In the corn-planter herein described, the combination of the pivoted hand-lever E', its attached pawl D', and the ratchet-wheel C', in combination with the shaft M, bevel-gears, and rotating seed-dropping wheels, as shown and described, to operate as specified.

JOHN V. REAMS.

Witnesses:

SAMUEL FOSTER, Jr.
MAX ANDERSEN.