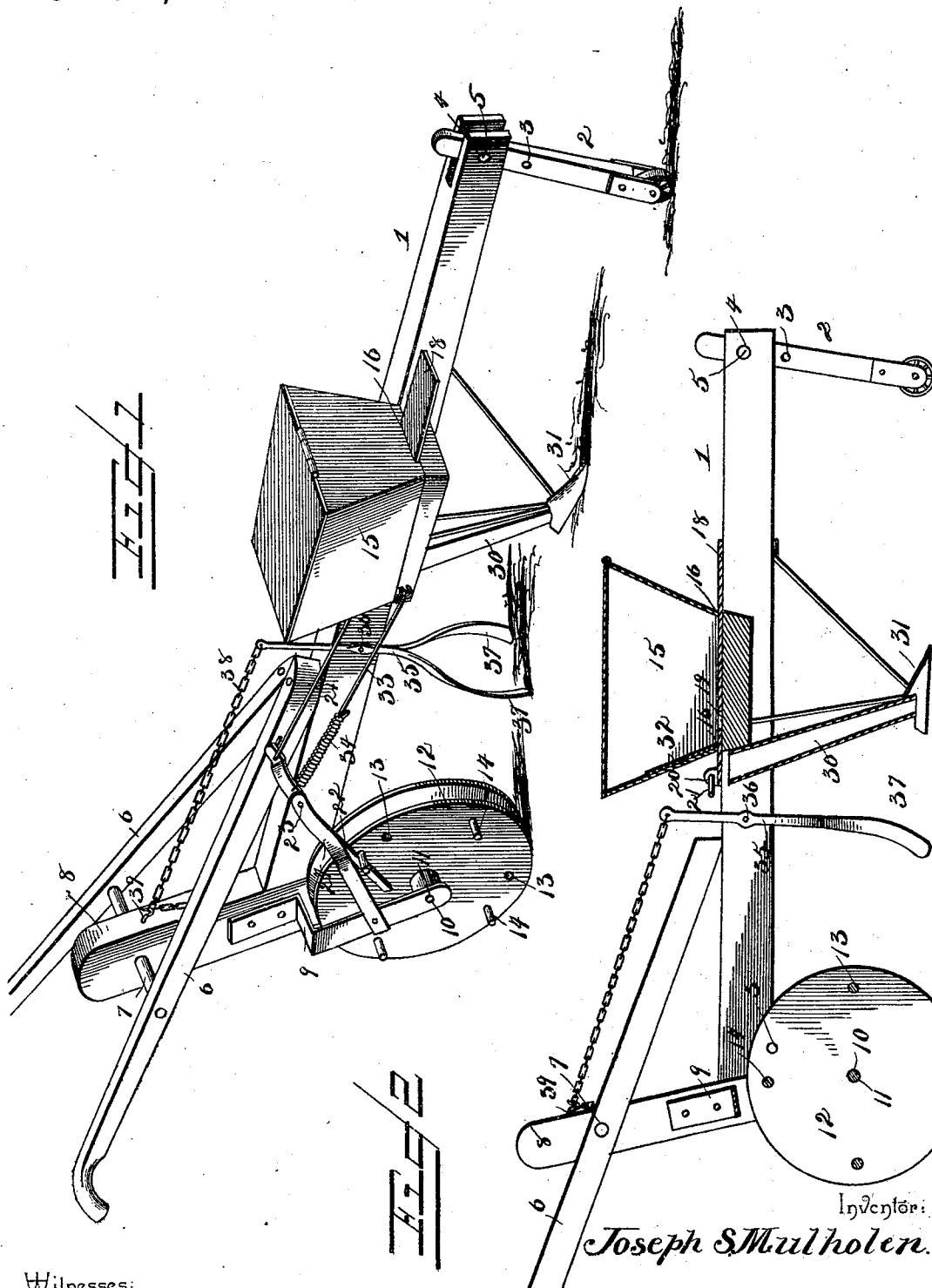


(No Model.)

J. S. MULHOLEN.
CORN PLANTER.

No. 511,354.

Patented Dec. 26, 1893.



Inventor:

Joseph S. Mulhollen.

Witnesses:

W. E. Schneider.
W. S. Duval.

By his Attorneys.

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UNITED STATES PATENT OFFICE.

JOSEPH S. MULHOLEN, OF FOSTORIA, PENNSYLVANIA.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 511,354, dated December 26, 1893.

Application filed May 16, 1893. Serial No. 474,396. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH S. MULHOLEN, a citizen of the United States, residing at Fostoria, in the county of Blair and State of Pennsylvania, have invented a new and useful Corn-Planter, of which the following is a specification.

My invention relates to improvements in corn-planters; the objects in view being to produce a cheap and simple construction of corn-planter adapted to deposit predetermined quantities of corn, to open the furrow for receiving the same, close and pack the furrow, depositing the corn in hills; and to provide means for limiting the depth of penetration of the covering-devices, for dropping the corn at predetermined distances, and for operating the slide.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings:—Figure 1 is a perspective view of a corn planter embodying my invention. Fig. 2 is a vertical longitudinal sectional view through the hopper, seed-slide, and discharge-spout.

Like numerals of reference indicate like parts in all the figures of the drawings.

I employ in the construction of the planter the usual beam 1, bifurcating the front end of the same for the reception of the upper end of a wheel carrying standard 2, the said standard being provided with perforations 3, any one of which may be brought coincident with transverse perforations 4 formed in the bifurcations of the beam and through which a bolt 5 may be passed for the purpose of vertically adjusting the said standard. By bolts 6 or otherwise there are attached to the upper side of the beam the usual handles 6, whose rear ends diverge and are connected between said ends by a rung 7. The rung also passes through the upper end of an inclined post or standard 8 into which the rear end of the beam 1 is let at a point between the ends of said post or standard. It will therefore be seen that the lower end of the post or standard is below the rear end of the beam. An angle-iron 9 has its upper end secured to this post and extends laterally and downwardly therefrom terminating at a point coincident

with the lower end of the post. The angle-iron and the post are provided with transversely opposite bearing openings 10 and 55 journaled therein is the transverse axle 11 of the ground wheel 12, whose periphery is concaved, as shown, whereby said wheel is adapted to aid in the formation of the hills and to pack the soil about the seed. The outer face 60 of the wheel 12 is provided with an annular series of perforations 13, and into the same at intervals are inserted removable pins or tappets 14. Mounted at one side of the beam 1 and in longitudinal alignment with the wheel 65 is the hopper 15, and said hopper has its bottom made imperforate and its opposite ends provided with longitudinally opposite and transversely disposed slots 16. Mounted for reciprocation in these slots and over the imperforate bottom is the reciprocating seed-slide 18, which is provided between its ends with a transversely disposed seed-opening 19. The slide it will be understood is removable and there may be substituted for the one shown 75 others having greater or smaller openings 19 and therefore adapted to accommodate more or less seed as the case may be. The rear end of the slide is provided with a perforated lug 20 and to it is connected the front end of 80 a rod 21, the same being hook-shaped for the purpose. The rear end of said rod is loosely connected with the upper end of a trip lever 22, which between its ends is fulcrumed as at 23 to the upper end of an inclined arm 24 that 85 extends from the angle-iron before mentioned. The lower end of the trip lever extends into the path of the series of tappets, so that as the wheel revolves the tappets are successively brought against said lower end of the 90 lever and trip the same, causing a rearward movement or reciprocation upon the part of the seed slide. Each rearward movement of the slide carries a deposit of seed contained in the seed-opening to and beyond the back 95 end of the hopper and drops the same into the inclined seed-spout 30, which it will be seen, is supported in rear of the hopper under the rear opening 16 and is suitably braced. The lower end of the seed-spout is provided 100 with the usual furrow-opening shoe 31. In order to prevent any choking in the slide the hopper has its rear wall provided with a rubber or other flexible cut-off strip 32.

A rod 33 is loosely connected to the wall of the hopper and between the rear end of the same and the trip-lever immediately above its fulcrumed point there is interposed a coiled spring 34, whose function is to retract the lever and therefore return the seed-slide after each rearward reciprocation, whereby a fresh supply of seed falls into the opening to be subsequently delivered.

A standard 35 is pivoted as at 36 between the seed-discharge and the covering-wheel, and the lower end of the standard is bifurcated and shaped to produce a pair of covering-blades 37, which following immediately after the planting-mechanism and preceding the ground-wheel cover the seed and produce the hill or ridge, which is afterward rolled by the said ground-wheel.

The upper end of the standard has attached thereto a chain 38, and the rear end of said chain is made adjustable over a hook 39 which projects from the front face of the post or standard 8. Through the medium of this chain the covering-blades may be adjusted so as to throw more or less soil over the grain, as may be desired, thus covering it to any depth.

This completes the construction and operation of the machine, and it will be seen that the same is exceedingly simple, durable, and efficient; that it is positive in its action; that a predetermined quantity of seed may be delivered and may be observed by the operator following the machine; and that by reason of the transverse disposition given the seed opening in the slide, the seed is dropped as an entirety into the upper end of the seed-discharge and deposited as such in the furrow in contradistinction to the stringing out of the seed, which would occur if the seed opening were arranged longitudinally of the slide.

Having described my invention, what I claim is—

1. In a corn-planter, the combination with a beam, a standard at the rear end thereof a hopper having an imperforate bottom, a discharge-spout arranged at the rear side of the hopper and openings formed in the front and rear walls of said hopper, a seed-slide mounted for reciprocation in said opening and having

a seed-opening adapted to be brought to a point above the discharge, a bearing frame secured to the standard and provided with a bearing laterally opposite one in the standard a ground-wheel in rear of the hopper, an axle for the same arranged in the bearings of the frame and standard, a bracket arm extending therefrom a trip-lever arranged at the side of the ground-wheel, tappets in said ground-wheel for engaging the lower end of the lever, a rod connected loosely with the upper end of the lever and to the rear end of the slide, and a coiled spring for retracting the arm and seed-slide, substantially as specified.

2. In a corn-planter, the combination with the beam, the rear inclined post, the angular frame having a bearing aligning with that in the post, the ground-wheel having its axle arranged in the bearings and provided with tappets, the upwardly inclined arm extending from the frame, the trip-lever arranged in the path of the tappets and fulcrumed upon the upper end of said arm, of the hopper arranged in advance of the arm at the side of the beam and having front and rear openings, the seed-slide arranged in the slots of the hopper, the rod connecting the upper end of the trip-lever with the seed-slide, and the coiled retracting spring between the hopper and the lever and connecting the same, substantially as specified.

3. In a corn planter, the combination with the beam, and the inclined post at the rear end thereof provided with a hook, of the bifurcated standard pivoted to one side of the beam, extending above the same, and having its lower terminals shaped to form diverging covering-blades, and the chain connected to the upper end of the standard and adjustably engaged with the hook of the post, substantially as specified.

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

JOSEPH S. MULHOLEN.

Witnesses:

C. G. NISSLEY,
H. H. KEPHART.