

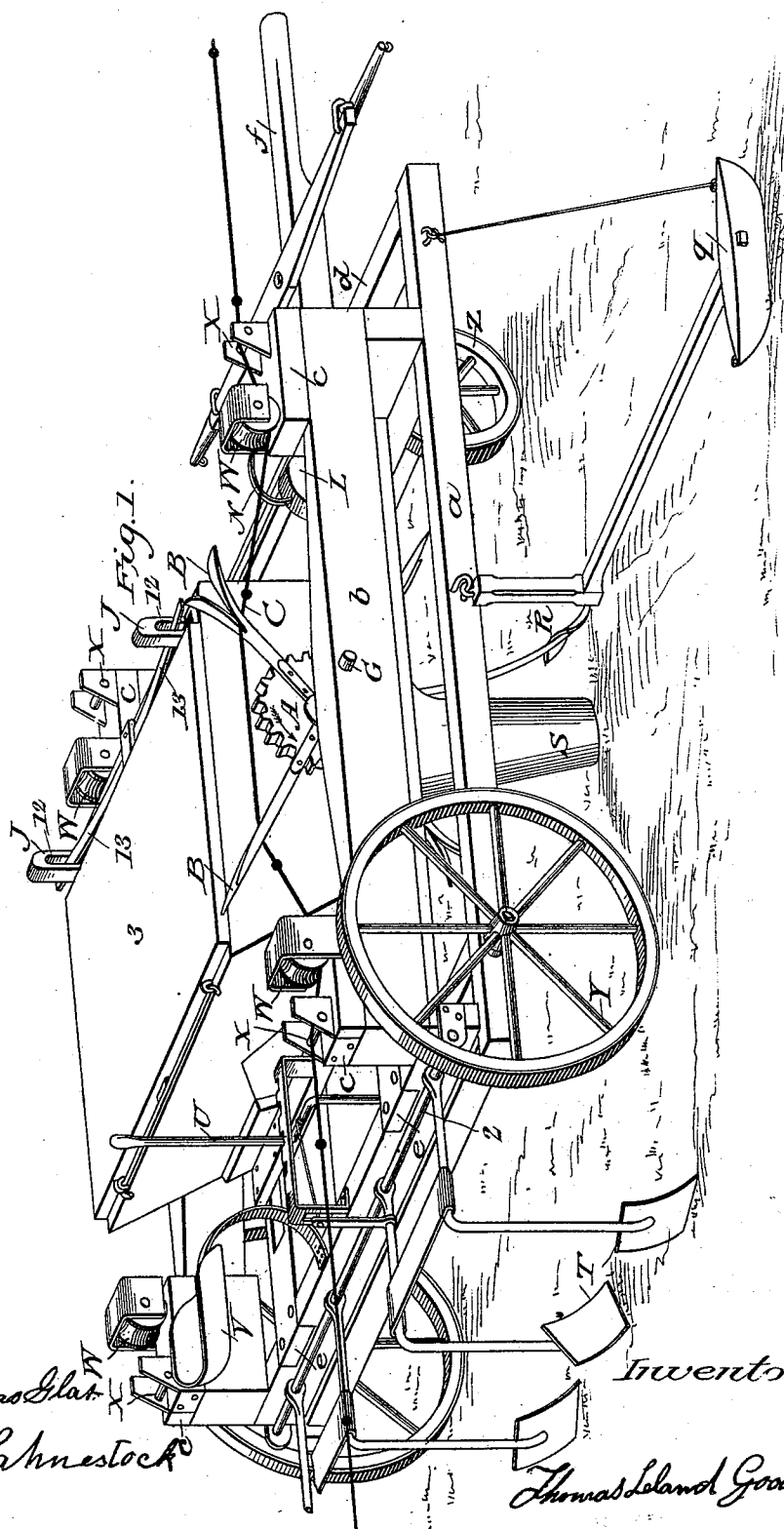
(No Model.)

2 Sheets—Sheet 1.

T. L. GOOD.
POTATO PLANTER.

No. 518,141.

Patented Apr. 10, 1894.



Witnesses.

James Thomas Glat.

Jacob K. Rahnestock

Inventor.

Thomas Leland Good.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

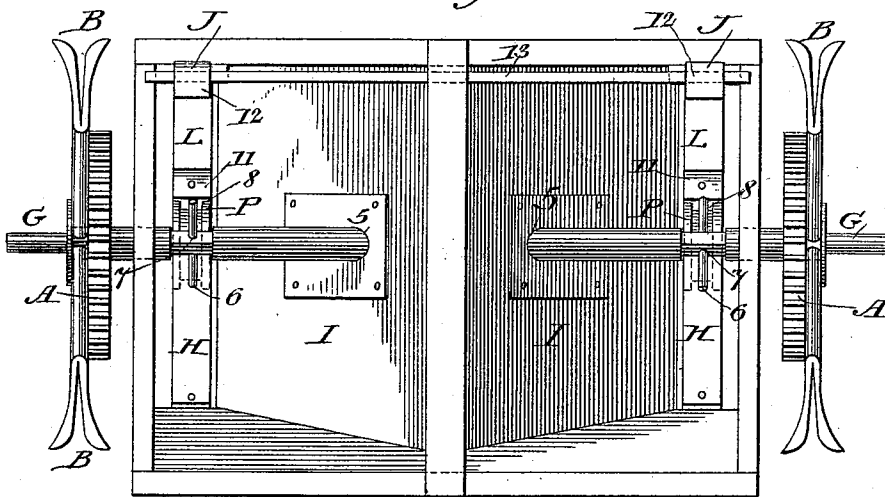


Fig. 3.

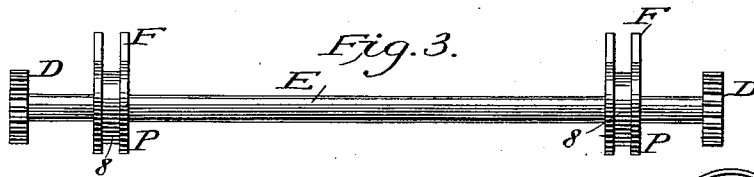


Fig. 4.

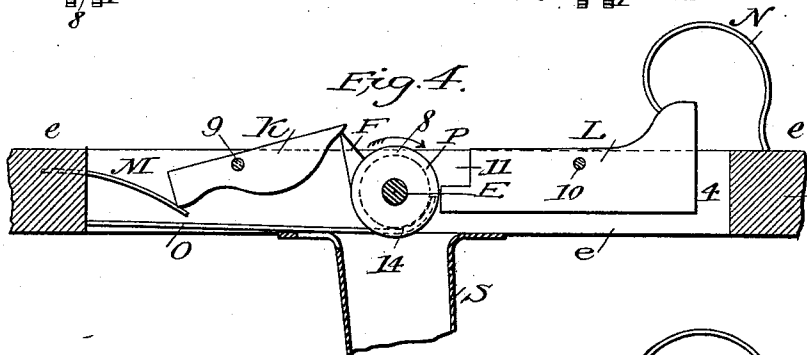
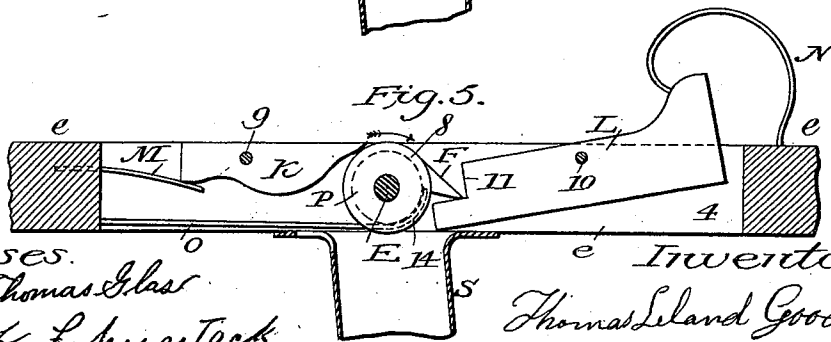


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE

THOMAS LELAND GOOD, OF WANDA, ILLINOIS.

POTATO-PLANTER.

SPECIFICATION forming part of Letters Patent No. 518,141, dated April 10, 1894.

Application filed May 29, 1893. Serial No. 475,991. (No model.)

To all whom it may concern:

Be it known that I, THOMAS LELAND GOOD, a citizen of the United States, residing at Wanda, in the county of Madison and State of Illinois, have invented a new and Improved Check-Row Potato-Planter, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to the class of planters which have a force feed mechanism.

The objects of my invention are to provide an improved two row potato planter with an accurate check-row mechanism; to provide such planter with a very secure and steady main frame and carrying wheels, whereby jarring and bounding of the machine during use will, in a great measure, be prevented; and, finally, to provide a machine of this class with an improved force-feed dropping-mechanism, whereby fresh hand-cut seed-potatoes may be positively fed and planted regardless of their propensity to adhere to the contiguous parts of the mechanism.

In the drawings, Figure 1 is a perspective view of a machine embodying my invention. Fig. 2 is a detail plan-view of the hopper and adjacent parts, detached from the frame of the machine. Fig. 3 is a detail elevation of a feed-disk shaft and parts carried thereby. Fig. 4 is a detail sectional side-elevation of a portion of the bottom of the hopper, and feed-mechanism contained therein. Fig. 5 is a similar view to the last, with same parts in different relative positions.

I prefer building my improved planter with two frames, a lower coupling frame *a* and an upper frame *b*, which are each composed of suitable side, end and intermediate bars. The lower frame is provided with two rear carrying-wheels *Y* and at least one forward carrying-wheel, such as *Z*, all of which are located so far apart that the main-frame and parts carried thereby will move above the ground a great deal more smoothly than it would if only two ground wheels were employed, and much jarring and bounding of the machine during use will be prevented, in a manner readily apparent to those skilled in the art.

Of course the wheels which carry the machine, as well as the frame, may be of either iron or wood, or part wood and part iron.

A suitable marker *g*, of any approved form, is attached to one of the side-bars of the lower frame *a* by means of common staples or hooks, so as to mark the ground, in a manner well known.

A pole or tongue *f* is attached to the front portion of the machine, and is provided with the usual draft-attachments. This tongue may be connected, in any known manner, to the front cross-bar *d* of the lower frame.

As my improved machine is designed to plant two rows at same time, it is provided with two complete sets of seeding or feeding-mechanism, one of which is located at one side of the machine and one at the opposite side thereof.

As the mechanism on both sides of the machine is identical, in all essential particulars, I will limit my description to the mechanism on one side.

R indicates a furrow-opening shovel, which is secured to the machine directly in advance of the seed-chute. Directly in rear of the seed-chute are two covering-shovels *T*, the faces of which are set at about a right-angle to each other, as shown, so that as the machine is moved forward said shovels will form a ridge of earth over each row of potatoes that is deposited. Said shovels are of common construction, and have their beams secured together in pairs and attached to an iron rod or bar *2* extending across the rear of the machine, so that the shovels may be raised and lowered simultaneously, by means of any of the well-known hand-levers, such as *U*, which is connected to said beams for such purpose. Secured in position on top of the side-bars of the upper frame, at the front and rear ends thereof, are blocks *c* of wood, and mounted on each of said blocks is a grooved guide-pulley *W*, under which the check-row wire *C* passes. There is also mounted on said blocks, in suitable brackets, a small bar *X*, which acts to support said wire during operation. The pulleys and bars just described, are set relative to the frame in longitudinal alignment with each other.

I make use of what may be termed a single large hopper, formed into two smaller ones. This hopper has bottom-plates I, I, which are inclined from the center outward and downward to points adjacent the outer sides of the hopper, so that when seed are placed on said plates they will gravitate toward said outer sides. The hopper is mounted on two side-bars *e* on the upper frame, and extends laterally in the space between the outer side-bars of said frame. The hopper is provided with a single cover 3, which extends above and over the inclined-plates I, I of each division of the hopper. Formed in the bottom of the hopper, at the base of the inclined-plate I, is an opening H. Formed in the bar *e* and located below the opening H, is a similar opening, which registers with the opening 4 first-mentioned.

G represents a main-shaft, which extends across both divisions of the hopper, through opposite sides and through openings 5 in both inclined plates I I thereof, and is provided with suitable bearings in the side-bars of the upper frame *b*. This shaft drives the feed-mechanism for both divisions of the hopper. A, A, designate two gear-wheels fixed on said shaft G exterior of the hopper, one adjacent each side thereof.

B, B, designate radial forked-arms secured to the gear-wheels A, A, so as to be engaged by the check-row wire, in the usual manner during operation. The forked arms of each gear-wheel are in longitudinal alignment with the rollers W and bars X, that are on the same side of the machine.

E indicates a feed-disk-shaft which extends across the machine directly beneath and parallel to the main shaft G, through the side bars *e*, and is provided with any suitable bearings in which it may revolve. This shaft E is provided at its opposite ends with pinions D, which mesh with said gear wheels A.

The main shaft G extends above and across the openings H of both divisions of the hopper. (See Fig. 2.) Short stirring pins 6 are passed through suitable openings 7 in the main shaft G and are located one directly above each opening H, for the purpose of agitating the potatoes located in each division of the hopper.

P P designate two feed-disks having U-shaped grooves 8 in their peripheries and fixed upon the feed-disk-shaft E, one adjacent each end thereof so as to revolve therewith. These feed-disks are each provided with two pointed projections F, which extend parallel from the peripheries of the said disks for a purpose hereinafter mentioned. One of these feed-disks is located in the opening or slot 4 in one of the side bars *e*, and the other feed-disk is located in the like opening or slot of the other side bar *e* on the opposite side of the machine. (See Figs. 4 and 5.) Pivottally mounted one in each of the open-

ings or slots just mentioned, and at a point in the rear of each feed-disk, is an oscillating finger K. Said finger K is pivoted at a point about midway of its length upon a pin or bolt 9 so that its front end projects in the path of the projections F of the contiguous feed-disk P. The front end of said finger K normally rests in contact with the periphery of said feed-disk, in which position it is clearly shown in Fig. 5. A spring M of any suitable material has its rear end secured to the side bar *e* in the rear of said finger K, so that its front end projects free and rests beneath the rear end of said finger, so as to press against the same, which causes its front end to normally rest in contact with the periphery of the contiguous feed disk. Pivottally mounted in the forward portion of said opening or slot in the said side bar *e*, upon a pin or bolt 10 in advance of the feed disk in said opening, is another finger L, the rear upper corner of which is provided with a rectangular recess or offset 11, and the rear end of which is normally located as closely adjacent as possible to the periphery of said feed disk P. The rear end of said finger L is adapted to be depressed by engagement therewith of the projections F of said feed disk, and to have its forward end correspondingly elevated. But the normal position of said finger is that which it occupies in Fig. 4. The front end of the finger L may be seen in Fig. 1 just in front of the hopper. Said finger L is returned to its normal position by means of a curved spring N, one end of which is secured on top of the side bar *e* at a point just in advance of the opening or slot therein, and the opposite end of which engages said finger. (See Figs. 4 and 5.)

J J indicate two vertical posts which are located one in each division of the hopper, next adjacent to the front end thereof. These posts have such a length that their lower ends rest upon each of the fingers L and act to prevent the seed potatoes from collecting under the front edge of the hopper. The upper ends of said posts project some distance above the hopper, and the projecting portions thereof are provided with transverse slots 12 which are engaged by a small horizontal bar or rod, 13 secured at about midway of its length to the front of the hopper. This arrangement forms an effective guide for the said posts, retaining them at all times in the position above described. It is evident that their lower ends will be held in contact with the fingers L, by the action of gravity.

O designates a scraper or disconnecter which is formed of a flat strip of steel or other metal having a straight body, and its front end curved upward at 14. This scraper is located in the opening or slot in the side bar *e* beneath its finger K, and has its rear end secured to the said side bar, and its curved front end 14 located in the peripheral-groove

8 of the adjacent feed-disk P, said curved portion corresponding to the contour of said feed disk.

S indicates the seed-chute, the upper end of which is secured by any common fastenings to the under side of the side bar e, directly beneath feed disk P at a point in the rear of the furrow-opening shovel R, and in advance of the covering shovels T.

10 The front supporting wheels are preferably of smaller size than the rear wheels so that they may be located under the frame of the machine, whereby the machine may be turned short at the end of a row.

15 The operation is as follows:—The check-row wire C should be stretched across the field in the usual manner, and placed over the small bars, X, at front and rear of the machine, and under the grooved rollers W, and dropped into the forks of the forked-arms B. Seed potatoes should be placed in both divisions of the hopper and the cover closed down. All the shovels T should be lowered so that they may engage the ground, which may be accomplished by pulling the hand-lever U backward. The function of the marker q is substantially the same as usual, and needs no description. As the machine is drawn forward toward the right hand in Fig. 1, the main shaft G and the parts fixed thereto will be revolved in the direction indicated by the arrow, and the stirring pins 6 carried by said shaft will agitate the potatoes at the bottom of the hopper and enable them to drop through the openings H 30 onto the fingers K and L. The gear-wheels A will cause the feed-disk-shaft E, to be revolved in the direction opposite to that in which the shaft G moves. The pointed projections F carried by the feed-disks engage the potatoes and force them down through the offset or recess 11 in the rear ends of the fingers L into engagement with the curved ends of the scrapers O, which detach the potatoes from said projections and cause them to drop into the seed chutes which are directly beneath, whence they pass into the furrows made by the furrow-opening shovels, and are immediately thereafter covered by the covering shovels. It will be seen that the rear fingers K and the springs 45 M prevent the downward passage of the seed potatoes in the rear of the feed-disks, and that the front fingers L prevent such passage in front of said feed-disks except as herein-after described.

55 The mechanism of my improved machine is comparatively simple, and by it two rows are planted simultaneously.

60 A driver's seat V of any common construction is applied to the rear portion of the machine, so that the hand-lever U may be con-

veniently reached by the driver while occupying such seat.

What I claim as new is—

1. In a potato-planter, the combination of a frame supported on wheels, a single seed-hopper mounted on said frame, bottom plates I, I, fixed in said hopper and inclined from the center thereof downward and outward, said hopper having openings H formed in the bottom thereof at the base of said plates I, I, a main shaft G which extends across the hopper through each of said inclined plates I, I, and through opposite sides of the hopper, short stirring-pins passed through openings in said main shaft and projecting at right angles on opposite sides thereof directly above each of the openings H, force-feed devices located directly beneath each of said openings and constructed to force seed potatoes downward into seed-chutes located beneath them, mechanism for operating said force-feed devices, furrow-opening shovels connected with said frame, and the forked arms B for imparting movement to said shaft G and operating said stirring-pins as the machine is moved forward, substantially as herein specified.

2. In a potato-planter, the combination of a frame, a hopper located on said frame and extending across the same, said hopper having openings formed in the bottom thereof, a feed-disk-shaft, E, feed-disks P, P, fixed on said shaft E, one beneath each of the openings in the hopper and having L-shaped grooves in their peripheries, said feed-disks each having two pointed projections F which extend parallel from the peripheries of said disks, an oscillating finger K pivotally mounted in the rear of each of said feed-disks so that its front end is normally in contact with the periphery of the adjacent feed-disk, springs which hold the fingers in the position just mentioned, and a finger L pivotally mounted in front of each feed-disk and having a rectangular recess or offset in its rear upper corner, and the rear end of which is normally located closely adjacent the periphery of the contiguous feed-disk, so that the rear end of this finger will be depressed by engagement therewith of the projections F of the contiguous feed-disk and have its forward end correspondingly elevated, a spring N which returns said finger L to its normal position after its rear end has been depressed, and proper operative connections, substantially as herein specified.

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Witnesses:

ELIHU VANCOURT,
JAMES THOMAS GLAS.