3 Sheets—Sheet 1.

T. J. DAVIS.

Potato-Planter.

No. 209,607. **Patented Nov. 5, 1878.**

Fig. 1.

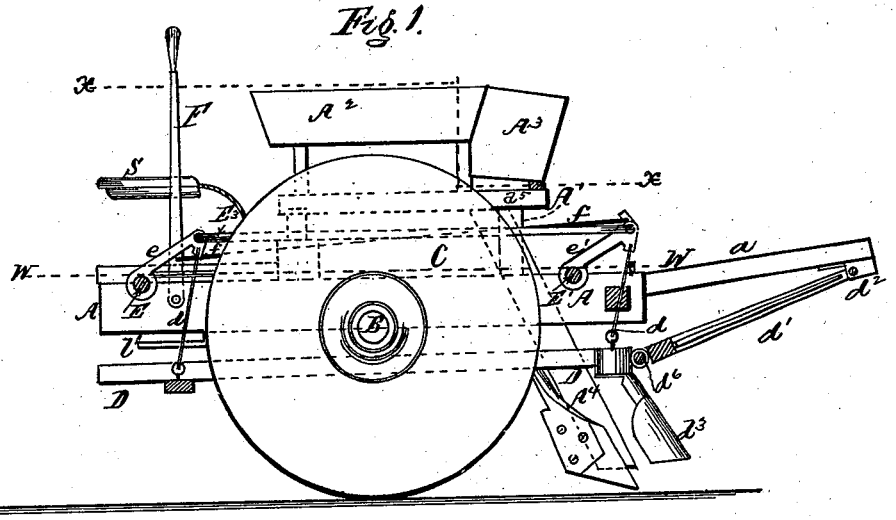
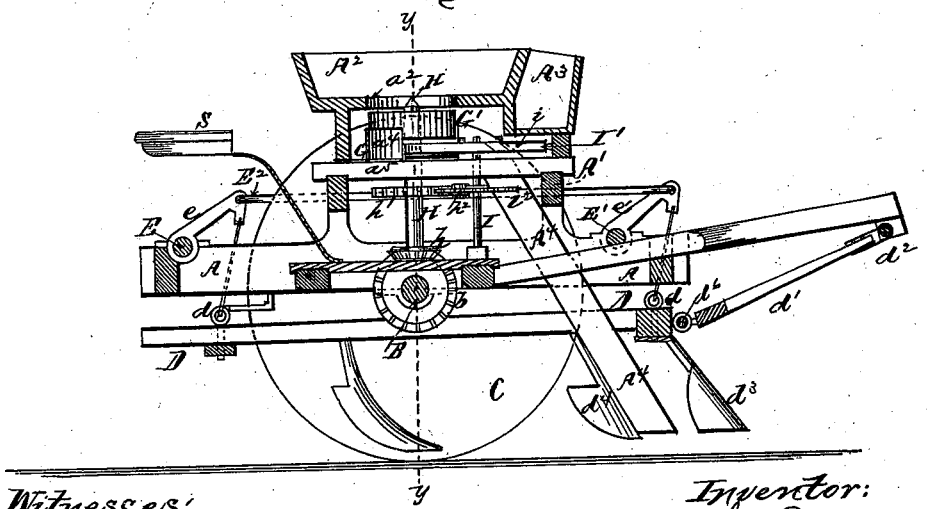


Fig. II.



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Per Henry Gerner
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3 Sheets—Sheet 2.

T. J. DAVIS.
Potato-Planter.

No. 209,607. Patented Nov. 5, 1878.

Fig. III.

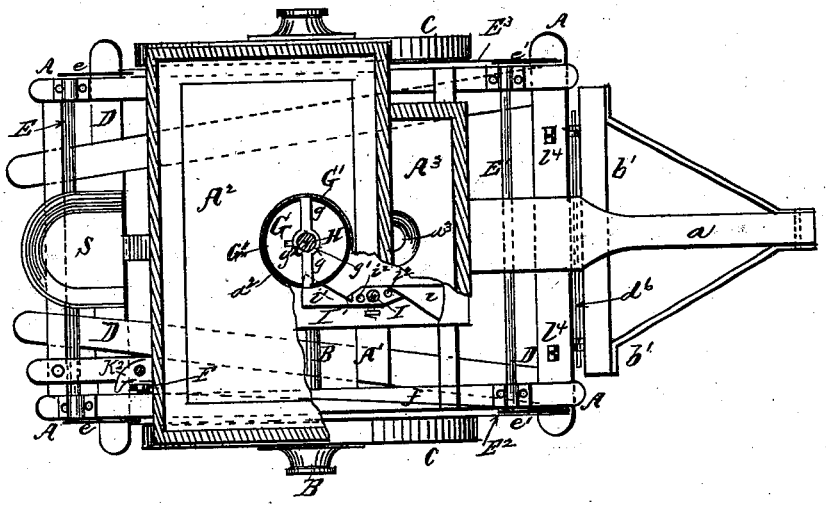
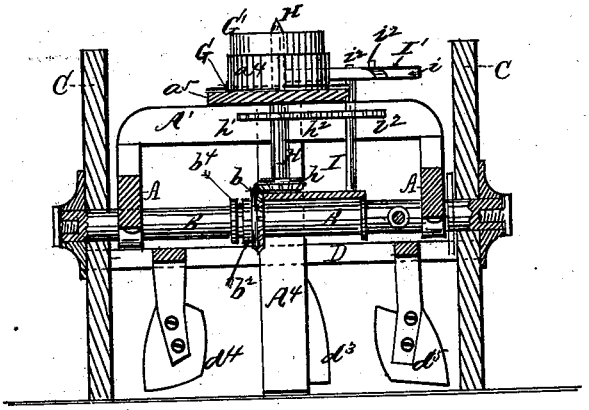


Fig. IV.



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Potato-Planter.

No. 209,607. Patented Nov. 5, 1878.

Fig. V.

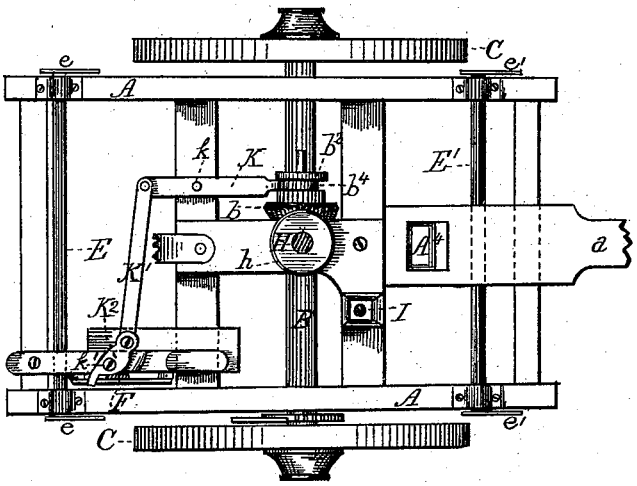
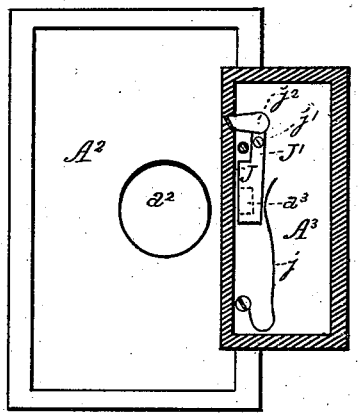


Fig. VI.



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UNITED STATES PATENT OFFICE.

THOMAS J. DAVIS, OF FAIR HAVEN, NEW YORK.

IMPROVEMENT IN POTATO-PLANTERS.

Specification forming part of Letters Patent No. **209,607**, dated November 5, 1878; application filed July 28, 1876.

To all whom it may concern:

Be it known that I, THOMAS JEFFERSON DAVIS, of Fair Haven, in the county of Cayuga and State of New York, have invented a new and useful Improvement in Potato-Planters, of which the following is a specification:

The invention will be readily understood by the accompanying drawings, of which—

Figure 1 is a side elevation of my improved machine. Fig. 2 is a central longitudinal sectional elevation. Fig. 3 is a plan sectional view taken on line *x x*, Fig. 1. Fig. 4 is a transverse sectional view taken on line *y y*, Fig. 2. Fig. 5 is a plan sectional view taken on line *w w*, Fig. 1. Fig. 6 is a detached bottom view of the potato-hopper.

The operative parts of this machine are built upon or attached to the horizontal frame A, which rests upon the transverse axle B, which in turn is supported upon the bearing-wheels C. The axle B is fixed to the wheels C, and turns with them, and cog-wheel *b*, placed upon the said axle, turns with it and imparts motion to other parts of the machine hereinafter described. The wheel *b* fits loosely upon the axle, and is engaged by a tongue upon the said axle, which fits into a groove in the wheel, so that the latter may be moved into or out of gear with its connection, as hereinafter more fully explained. The wheel *b* has a projecting hub, b^2, on the periphery of which there is a groove, b^4, into which the clutches of the operating-lever K engage to move it as required.

A plow-frame, D, is attached to the frame A by means of suspending-links *d* and a draft-rod, d^1, which has its front end connected with the pole *a* by means of a hinge-joint, d^2, that permits the frame D and its connections when down to be raised in a slightly-backward direction. The upper ends of the links *d* are attached to arms *e e*, which have a swinging movement in a forward direction, and are fixed to the ends of two transverse rock-shafts, E E^1, that have their bearings in the top part of the frame A. The outer extremities of the arms *e e'* are connected together on both sides of the machine by the parallel rods E^2 E^3, so that both rock-shafts are made to move simultaneously. The lever F, which is fulcrumed to the frame A by the side of the driver's seat S, is connected by means of the rod *f* with one of the forward arms *e'* of the rock-shaft E^1, and by moving this lever F backward or forward the plow-frame D and its connections may be raised or lowered, as desired.

On top of the frame A, and fixed to it, is a top frame, A^1, that supports two hoppers, A^2 and A^3. The larger hopper, A^2, is intended to be used as a reservoir for the seed-potatoes that are to be distributed by it. A circular aperture, a^2, in the bottom of the hopper A^2 permits the discharge at that point of the contents of the said hopper, and a small aperture, a^3, in the bottom of the fertilizer-hopper A^3 permits the discharge at that point of the fertilizer. Directly below the aperture a^2 is a feeding apparatus, consisting of a disk, G, which is fixed to the vertical shaft H, and an adjustable cylindrical rim, G', which is supported by the arms *g* from the hub g^1, which fits on the shaft H so as to be easily moved up or down thereon, and is fixed in position by means of the set-screw g^2. The disk G and the rim G' are partly surrounded by the segmental casing a^4, which is fixed to the top platform a^5 of the frame A^1.

In front of the feeding apparatus G G', and a little to one side of the same, is a vertical shaft, I, the top end of which carries a distributing-arm, I', that rotates with it. Pockets *i*, the edges of which constitute cutting-knives on the ends of the arm I', pass through the opening in the side of the casing a^4, and between the disk G and the rim G', and as the said knives rotate they draw out and slice the potatoes, which are carried forward to the top end of the chute A^4, down which they pass to the furrow that has just been opened by the plow d^3. The arm I' is made to slide up or down on the shaft I, and the set-screw i^1 fixes the same in position as required.

As shown in Fig. 6, there is a slide, J, on the bottom side of the fertilizer-hopper A^3, which slide is habitually closed over (or under) the aperture a^3 by means of the spring *j*. The slide J is fixed to a lever, J', that is fulcrumed to the bottom side of the hopper A^3 by the screw or pin j^1. A lug, j^2, on the end of the lever J' is arranged so as to be engaged by the pins i^2 on the arm I, as the said arm rotates, and the valve or slide J will thereby be

opened and closed twice at every revolution of the arm I′ by the combined action of the said arm and its pins i^2 and the spring j. The arrangement of the parts is such that the pins i^2 will open the valve or slide J and permit the potatoes and the fertilizing material to be dropped together down chute A^4 into the furrow prepared by the plow d^3. The plows d^4 d^5 will then follow and cover up the potatoes and the fertilizer, and the planting operation will then have been completed. The vertical shaft H, which operates the feeding apparatus above described, has its bearings in the frame A A^1, and receives its motion through the miter-gear wheel h, which is fixed to its lower end, the said wheel h being actuated by the bevel-geared driving-wheel b. The driving-wheel b may be moved into or out of gear with the wheel h by means of the lever K, which is fulcrumed at k to the frame A, and has its front end forked, so as to engage the groove b^4 of the hub of the wheel b. The rear end of the lever K is connected by means of the rod K^1 with the short lever K^2, which is fulcrumed to the frame A by the pin k'. The outside face of the lever K^2 is curved or broken into two faces, and this outside face is placed in contact with the lever F, so that the same motion of the lever F which is made to raise or lower the plow-frame D will also, through the medium of the lever K^2, rod K^1, and lever K, move the wheel b into gear with its mate h, or out of gear, as the case may be; and the operation of the lever F in setting the plows into the ground will also simultaneously start the feeding and dropping mechanism of the machine.

A cogged wheel, h^1, on the shaft H gears into a cogged pinion, h^2, and this pinion in turn gears into and sets in motion the cogged wheel i^2, upon the shaft I and thus the two shafts H and I and their attachments are actuated simultaneously.

I do not broadly claim mechanism for raising and lowering the plow-frame of a potato-planter, but my claims relate to the improved construction herein shown.

Having thus described my invention, I desire to claim—

1. The feeding mechanism consisting of disk G, adjustable rim G′, shaft H, provided with gear-wheel h, segmental casing a^4, and shaft I, carrying the distributing-arm I′, in combination with the bevel-geared driving-wheel b, having on its hub the groove b^4, and adjustable on the axle, as shown, lever K, rod K^1, short lever K^2, and hand-lever F, whereby the movement of the hand-lever lowers the plow-frame and also starts the feeding mechanism, as specified.

2. The revolving feeding apparatus G G′ I i, constructed and operated as and for the purpose set forth.

3. The feed-arm I′ and the feed-slide J, with its arm J′, the lug j^1, and spring j, all arranged and operated as and for the purpose set forth.

This specification signed this 13th day of June, 1876.

THOMAS JEFFERSON DAVIS.

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