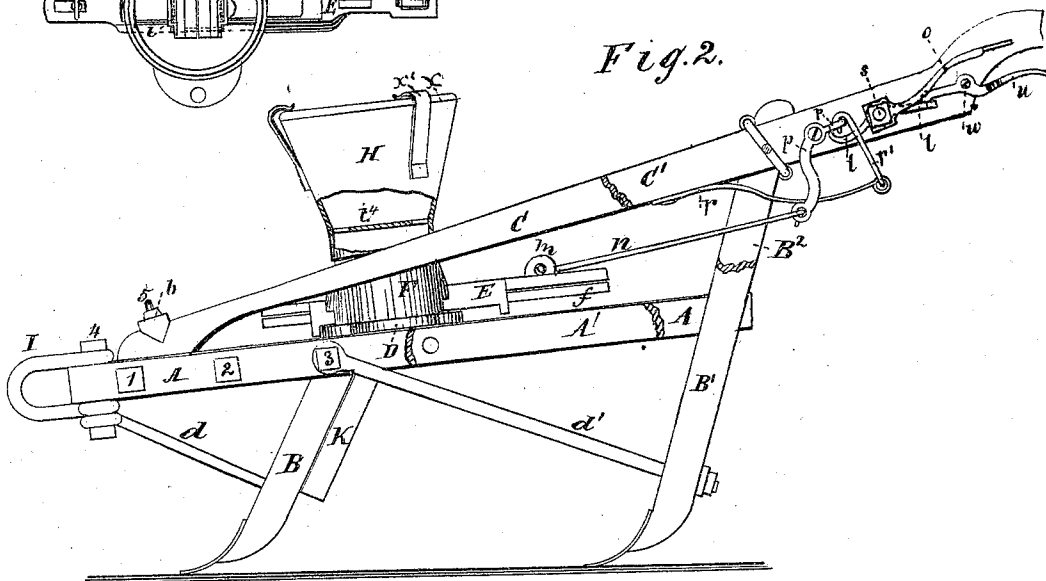
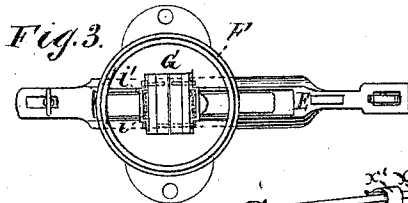
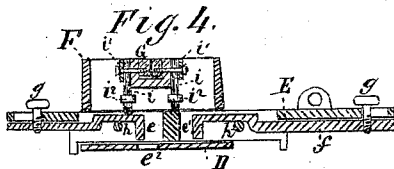
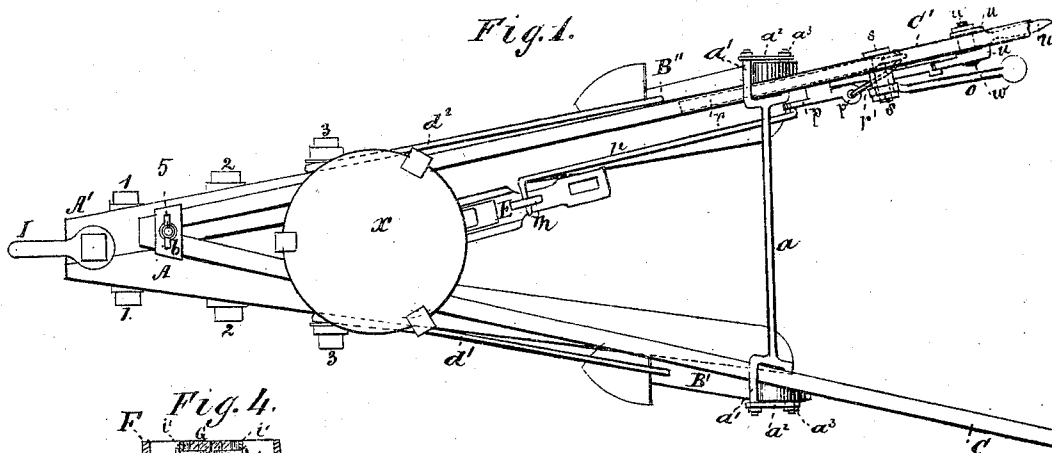


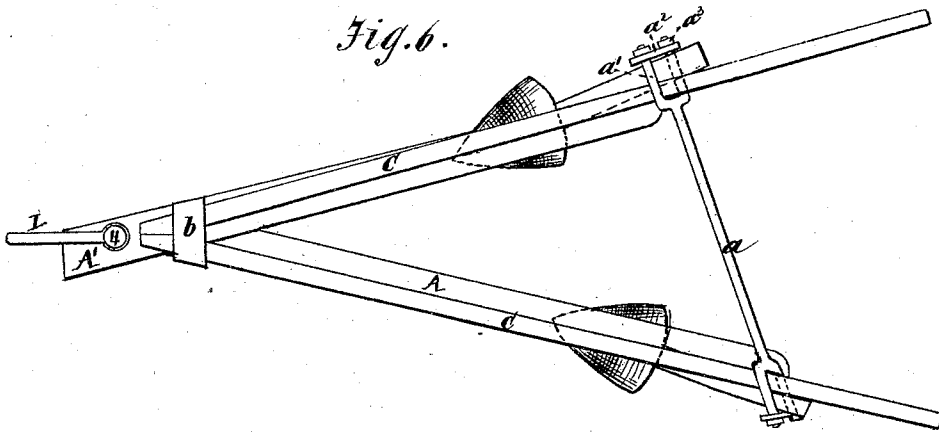
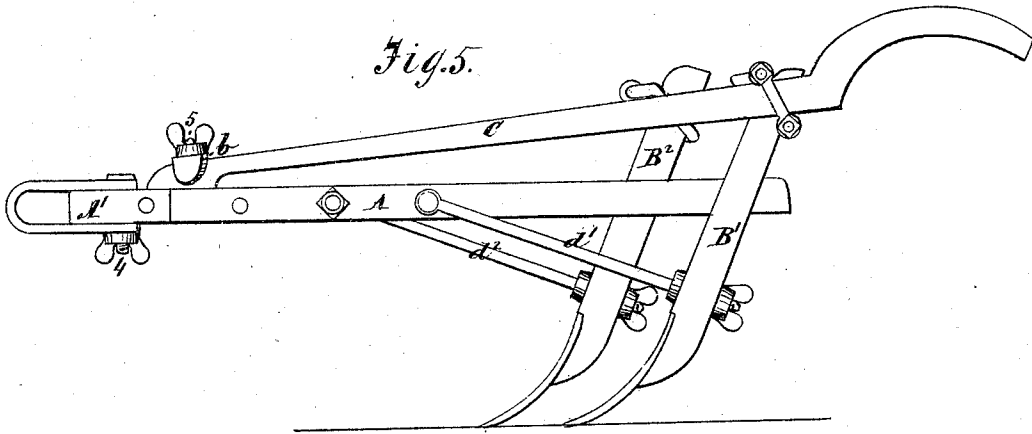
G. De VANY, Jr.
 Combined Corn-Planters and Cultivators.
 No. 140,254. Patented June 24, 1873.



Witnesses:
 G. Mathey.
 John Kemou

Inventor:
 George De Vany Jr.
 PER *[Signature]*
 Attorneys.

G. De VANY, Jr.
Combined Corn-Planters and Cultivators.
No. 140,254. Patented June 24, 1873.



Witnesses:
G. Meathys.
Solon Cremon

Inventor:
George De Vany Jr.
PER *[Signature]*
Attorneys.

UNITED STATES PATENT OFFICE.

GEORGE DE VANY, JR., OF DARBYVILLE, OHIO.

IMPROVEMENT IN COMBINED CORN-PLANTERS AND CULTIVATORS.

Specification forming part of Letters Patent No. **140,254**, dated June 24, 1873; application filed January 10, 1873.

To all whom it may concern:

Be it known that I, GEORGE DE VANY, JR., of Darbyville, in the county of Pickaway and State of Ohio, have invented a new and Improved Combined Walking Planter and Cultivator; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to a combined walking seed-planter and cultivator, the component parts of which are so constructed as to permit the planter to be changed either into a three or double shovel cultivator by a simple transposition of the parts, as will be hereinafter more fully described and subsequently pointed out in the claims.

In the accompanying drawings, Figure 1 is plan or top view of a walking-planter embodying my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a detail plan view of the dropping-slide and seed-box. Fig. 4 is a sectional view of the same. Fig. 5, Sheet 2, is a side elevation, showing the parts when converted into a double-shovel cultivator. Fig. 6, Sheet 2, is a plan or top view of the same.

The frame of the planter or cultivator is composed of two beams, A A', converging from each other in a rearward direction, and connected together at their forward ends by means of transverse bolts and nuts 1 2. B designates the forward standard, carrying either an ordinary shovel-plow, sweep, or other plow-point, according to the kind of work to be performed, and attached to the beams A A' by means of a transverse bolt, 3, which passes through both beams and has applied to it an ordinary retaining-nut, A. A diagonal brace, d, attached and extending from the forward standard B, has its upper or front end bent so as to permit of the passage through it of a vertical bolt, 4, which serves also to secure the draft-clevis I to one of the beams. The rear standards or shetles B¹ B² are attached to the beams by suitable bolts, and to the handles C C' by a transverse rod, a, which is provided with bifurcated or forked ends a¹ embracing the handles and standards. A clamp or clip plate, a², and nuts a³ are fitted on the screw-threaded ends of the bifurcated

rod for maintaining the handles and standards firmly in position. The front ends of the guide-handles are secured to the stationary or right-hand beam A' by means of a bolt, 5, passing vertically through the beam, and having applied to its upper end a nut, which is caused to bear upon a clamping-plate, b, with ears embracing the handles. The standards B¹ B² are provided with brace or stay-rods d¹ d² secured detachably to the same by screw-threaded ends and nuts applied thereto, and to the beams by means of the bolt 3 of the front standard B. The seed-distributing mechanism is detachably secured to the frame so as to be readily removed when required, and is disposed in proper relation to the front shovel-standard B, which has applied to its rear side a conductor-spout, K, for delivering the seed into the furrow opened by the front shovel or into furrows previously laid out. To the beams or frame is secured a base-plate, D, provided with a central opening, e², in line with the mouth of the conductor-spout, and adapted for the reception of a cylindrical box, F, which is formed or cast with a central bridge or block, G. Said bridge covers nearly the entire central space of the box F, thus dividing it into two compartments, in which the seed is alternately received by the distributing-slide through a slot in the bottom of the box and conveyed to the discharge-opening in the base or supporting-plate D. Brush cut-offs i i are attached to the sides of the bridge G by means of clamp-plates i¹ i¹ and transverse bolts i³, or, instead of said bolts, screws, entering a packing of leather or wood, in the upper end of the bridge may be resorted to. The cut-offs or brushes i are encircled by clasps or rings i², which are capable of being raised or lowered for increasing or diminishing the stiffness of the bristles. H represents a receiving-hopper, which is detachably secured to the box F by simply making it large enough so as to fit over the same, and said hopper is further provided with a removable cover, x, retained in position by bent plates or spring-catches x'; or, instead of this method of securing the cover, a flanged slide moving in guides may be employed. The lower end or mouth of the hopper is partially covered or closed by a plate, i⁴, which is so shaped as to permit the discharge of the seed into the two

compartments of the box F in quantities not large enough to cause the clogging or packing of the box.

The slide for distributing the seed, shown at E, is made with tapering or inclined sides, and travels in a correspondingly-shaped seat or guide-way formed in the lower surface of the box F. The central portion of the slide is solid, and on both sides of the same are formed elongated slots or openings *e e'*, in which are located movable plates *f*, the inner ends of which are enlarged or shaped so as to extend from the upper to the lower surface of the slide.

The object of the plates *f* is to enable the size of the opening in the slide E to be varied for discharging more or less seed, as may be required, this adjustment being effected at will without removing any of the parts by simply loosening the retaining-screws *g* extending through the slotted end of the slide. Transverse pins or guide-plates *h*, fitted into the slotted distributing-slide beneath the adjustable plates *f*, serve to support and to guide the movement of the same.

The devices for imparting a reciprocating movement to the seed-distributing slide are located at the upper end of one of the guide-handles, and consist of a thumb-lever, *o*, which is hung upon a fulcrum-bolt, *s*, attached to, or journaled in, the handle, and carrying a curved arm, *t*, extending both in front and rear of the fulcrum or axis bolt. The front portion of the arm *t* is curved in an upward direction, and engages with the short arm of an elbow-lever, *p*, which is connected with the seed-dropping slide E by means of a rod, *v*. A secondary hand-lever, *u*, movable toward the handle, is employed in connection with the thumb-lever *o* for operating the slide, or said levers may be separately or interchangeably used with each other, as they are susceptible of being attached and removed from their bolts or stems. The hand-lever *u* is pivoted to the handle by a fulcrum-bolt, *w*, and its front portion is caused to engage with the rear upper surface of the curved arm *t*.

It will be perceived that, by depressing the thumb-lever *o* when the same is employed, or by elevating the lever *u*, by an upward pressure of the hand, the elbow-lever *p* will be turned on its axis, thus imparting a reciprocating movement to the dropping-slide for discharging the seed. When the thumb and finger levers are combined every facility is offered for permitting the slide to be actuated without fatigue to the hand of the operator, as he may occasionally rest the thumb and continue the operation with the fingers, or vice versa. A decided advantage derived from the use of the elbow-lever *p* is the reduction of the stroke of the operative-levers, as will be obvious. The counter or reverse movement of the system of levers is effected by a spring, *r*, which is connected, by means of a link, *r'*, to the rear portion of the lever *p*. The discharge of the seed, when both openings

in the slide are used in the dropping-operation, is alternately from both sides of the box F, *i. e.*, while one opening is discharging, or in line with the conductor-spout, the other is receiving the seed.

To convert the machine into a single dropper it is only necessary to insert a block or plug into one of the compartments of the box F, which will serve to prevent the entrance of seed from the hopper.

A three-shovel cultivator is formed by removing the dropping mechanism without altering the position of the beams and standards, and, as will be apparent, hoes or plows, of various patterns may be interchangeably used according to the kind of work to be performed.

In converting a three-shovel cultivator or planter into a double-shovel plow it is only necessary to remove the clevis-bolt, for permitting the brace of the front plow to be removed, then remove the three bolts that secure the beams together, and unloose the nuts, and remove the clamps on the top of the left standard or handle. This accomplished, the left beam is capable of being moved back, when the bolts are restored to their positions, as heretofore, excepting that the bolts, while being passed through their own holes in the left beam, are fitted into holes further to the rear on the right-hand beam, as shown in Fig. 5 of the drawing. The shovels are thus brought one in advance of the other. The clevis, in order to enable the draft to be direct, or from the center, is then turned on its bolt, as shown in Fig. 6. Every facility is offered for raising and lowering the handles, in order to suit the height of the plowman, by the clamps and bifurcated connecting-rod; and the angle or inclination of the standards themselves may be varied by turning the nuts on the screw-threaded ends of the standard-braces.

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

1. In a walking seed-planter the combination of the lever *o*, fulcrum-bolt *s*, projecting-arm *t*, elbow-lever *p*, link *r'*, and spring *r*, used either with or without the secondary lever *u*, to constitute a mechanism for operating the seed-distributing slide, when all the parts are constructed and relatively arranged, in the manner herein shown and described.

2. The seed receiver or box F adapted for the reception of hopper H, and provided with a central bridge or partition, G, and brushes or cut-offs *i i*, as and for the purpose set forth.

3. The rear shovel-standards B¹ B², and handles C C', connected by means of a transverse rod, *a*, provided with bifurcated ends *a¹*, and clamp-plates *a²*, as shown and described.

GEORGE DEVANY, JR.

Witnesses:

J. I. RADCLIFF,

W. H. KIRKENDALE.