

J. F. WALKER.

Corn Planter.

No. 83,677.

Patented Nov. 3, 1868.

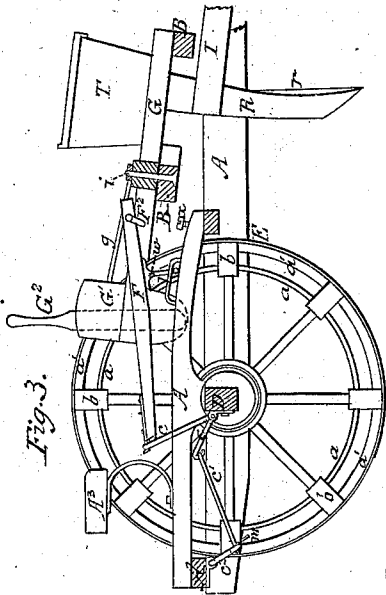


Fig. 3.

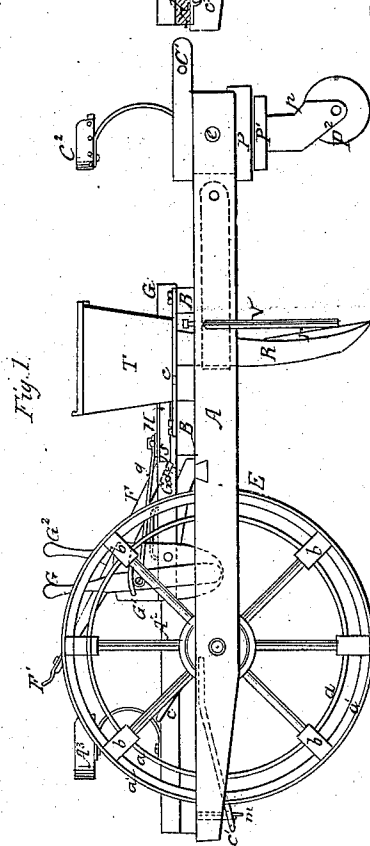


Fig. 1.

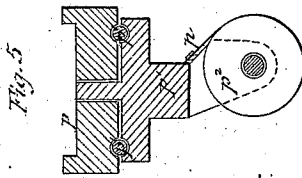


Fig. 5.

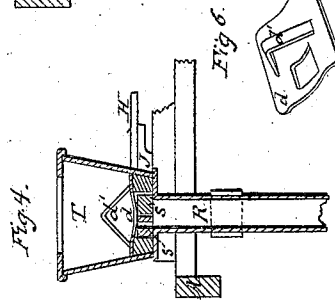


Fig. 4.

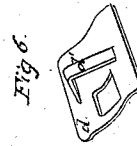


Fig. 6.

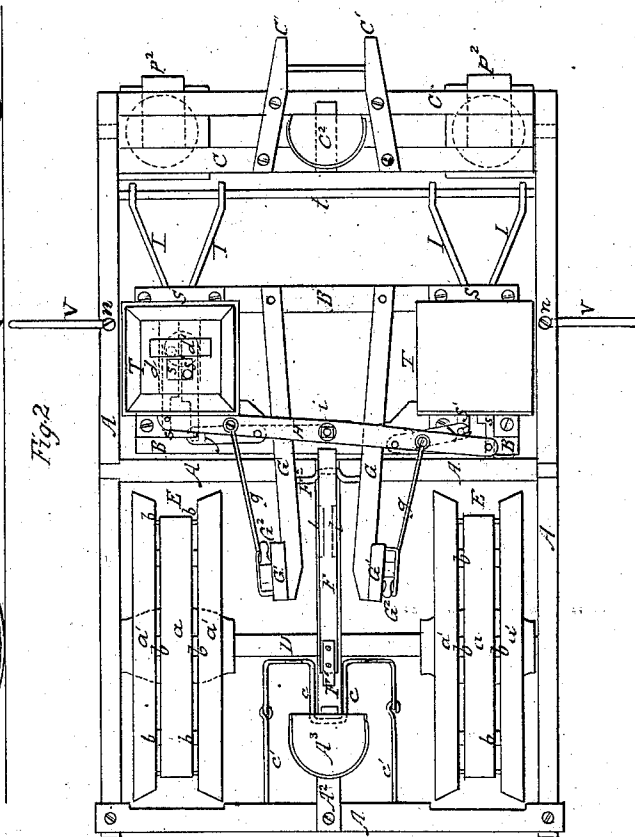


Fig. 2.

Witnesses:
J. F. Walker
J. M. Campbell

Inventor:
James F. Walker
by
Mason Fenwick Lawrence

United States Patent Office.

JAMES F. WALKER, OF MURRAYVILLE, ILLINOIS.

Letters Patent No. 83,677, dated November 3, 1863.

IMPROVEMENT IN CORN-PLANTERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, JAMES F. WALKER, of Murrayville, in the county of Morgan, and State of Illinois, have invented a new and improved Corn-Planter; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is an elevation of one side of my improved corn-planter.

Figure 2 is a plan view of the corn-planter, with the cover of one of the hoppers removed.

Figure 3 is a sectional view, showing the portion of the parts when the drill-teeth are raised above the surface of the ground.

Figure 4 is a section taken transversely and in a vertical plane through one of the hoppers.

Figure 5 is a sectional view of one of the front supporting-wheels of the main frame.

Figure 6 is a perspective view of one of the covers to the seed-slides.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to certain novel improvements on that class of corn-planners wherein the devices for opening the earth and dropping the grains are applied to a vibrating frame, and mounted upon a two-wheel transporting-frame, upon which the driver and dropper sit.

The invention provides for dropping in two hills at the same time, from hoppers whose seed-slides are operated by compound levers that are applied to the vibrating-hopper frame, and controlled by hand-levers placed within reach of the person stationed upon the main frame of the machine, to effect the dropping, as will be hereinafter explained. Provision is also made for enabling the dropper to raise and depress the hopper-frame at pleasure, and to clear the peripheries of the rear transporting-wheels, the same lever which is used to operate the clearers being adapted to serve as a means for holding the dropper-frame in an elevated position, when adjusted to such position.

Provision is also made, in the construction of each one of the covering-wheels, for allowing earth to pass freely through its tread, so as to facilitate the clearing of the tread, and preventing to a great degree the accumulation of earth upon the tread, as will be hereinafter explained.

I also provide removable perforated covers for the seed-slides, coulters for the hoes or drill-teeth, markers for laying off the ground to guide the machine by, and also anti-friction bearings for the front guiding and supporting-wheels, all as will be hereinafter explained.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawings, A represents a rectangular transporting-frame, which is supported at its

rear end upon two large wheels, E E, and at its front end upon two caster-wheels, P² P². The wheels E E are applied upon a horizontal transverse axle, D, and each wheel is constructed with three circular tires, *a*, *a'* *a'*, which are made and applied to spokes, so as to form a tread which, in cross-section, is concave, thereby adapting the wheel to serve as a coverer for the corn, and to leave the earth in ridges or hills over the corn. By reference to fig. 2, it will be seen that the two outer tires, *a'* *a'*, of each wheel E are of greater diameter than the intermediate tire, and that these outer tires are inclined toward the intermediate tire, and applied to flaring forked portions *b*, on the ends of the spokes, so as to leave annular spaces through which earth and other substances will readily escape as the wheel rolls over the ground. These openings prevent the clay from accumulating and becoming packed in the channel forming the tread of the wheel.

The front wheels are applied to a horizontal transverse beam, C, to which the hounds C² are secured, and upon which the driver's seat C³ is mounted. The wheels P² are applied to swivel-standards, P¹, the pintles of which pass through blocks P, that are flanged, as shown in fig. 5, to embrace beam C, and be rigidly secured to it, as shown. The wheels P² turn freely about their axes, and are also allowed to swivel horizontally, like common caster-wheels. To prevent undue friction at the bearing of the standard P, I form an annular groove in the bottom surface of each flanged block, P, and a corresponding groove in the top surface of the standard P¹, and interpose spheres or balls, *p'*, between said surfaces, so that they will roll freely in the said grooves, and thereby prevent the sliding friction which would be caused should said surfaces come in contact with each other. The balls *p'* form anti-friction rollers, and allow the standard P¹ to swivel freely. The small cross-plate *p*, which is secured to each standard, P¹, above its wheel, P², serves as a scraper, and keeps the tread of such wheel free from anything which would, without this scraper, adhere to it.

In rear of the cross-beam C, and extending transversely across the frame A, is a rod, *t*, to which the forked ends of drag-bars I are pivoted, which bars extend back, and are rigidly secured to tubular standards R of the hoes that open the earth to receive the grains of corn. These tubular hoes or drill-teeth are secured to the bottoms S S of the hoppers T, and serve to conduct the grains of corn into the drills made in the earth. The blades *r*, which are secured to the front sides of the drill-teeth or hoes R, serve as coulters for cutting through sods and other obstructions in their path, and preventing such objects from gathering upon these teeth or hoes.

The hoppers T are secured to two transverse beams, B B, which form a frame that is allowed to move vertically about the cross-bar *t*, so that, when desired, the teeth or hoes R can be raised free from the ground. This vertical adjustment of the hopper-frame and its

attachments is effected by a person who sits upon the rear seat A³, through the following contrivance: Two beams, G G, are secured to the cross-beams B B, and extend back nearly to the seat A³, and to these beams a lever, F, is pivoted by a transverse-cranked rod, F², shown in figs. 2 and 3. This lever is connected to a longitudinal central beam, A², which is rigidly secured to frame A and axle-tree D by means of a longitudinally-movable fulcrum-standard, W, and staple L, as shown in fig. 3, which allow this lever F to receive a bodily movement, longitudinally, in raising and lowering the hopper-frame. The lever F has a hooked plate, F¹, applied to its rear end, which receives a looped lever, c, when adjusted as shown in fig. 3, thus holding the hopper-frame in an elevated position, and the teeth or hoes free from the ground. By moving the looped lever c backward, as shown in figs. 1 and 2, the lever F will be released, and its front end will rest upon adjusting-screw X, the hopper-frame, and its attachment, thus being brought into working position.

The looped lever c is pivoted to the back of the axle-tree D, and its rear outer ends or arms are bent backward and connected to rods c¹ c¹, which are pivoted to arms c² of rods that carry v-shaped scrapers or clearers, m. The rods of arms c² are pivoted beneath and to the rear cross-beam of frame A, in such positions, with relation to the wheels E E, that when the looped lever c is moved forward, as shown in fig. 3, the scraper-plates m will both be brought in positions for clearing the peripheries of said wheels of anything which might adhere to them.

Each one of the hoppers T is constructed with a central longitudinal depression in its bottom, in which play two perforated slides, s s', having alternate reciprocating movements for receiving the grains of corn from the hopper, and dropping them into the tubular tooth or hoe R beneath. The slides of both hoppers receive their movements from vibrating hand-levers, G², acting through the medium of rods g, lever H, and short levers J J, as shown in fig. 2. The lever H is pivoted centrally to the rear beam B of the hopper-frame by a vertical pin, i, and its extremities are suitably pivoted to the outer slides s s'. The inner slides s' s' are pivoted to the outer ends of short levers J J, the inner ends of which are pivoted to the lever H. Beneath this lever, H, and at an intermediate point between each one of these short levers, J, a pivot connects such lever to the beam B. Thus it will be seen that when lever H is vibrated, the seed-slides s s' of each hopper receive al-

ternate movements, and at every forward stroke of each slide, grains of corn will be dropped.

The movements are imparted to the lever H by a person who sits upon the seat A³, within reach of the upright hand-levers G² G², who can effect said movements by vibrating either one or both of said levers, G².

The hoppers are provided with removable covers, and the seed-slides are also provided with removable covers, one of which is shown in fig. 6. This cover, d, is provided with a bail, d', and it also has an opening through it of such size as to allow grains of corn to fall through into the seed-cups or holes, which are through the slides s s', when such holes are moved beneath the hole through the covering-plate d. This covering-plate serves as a cut-off for the grains of corn, and also as a division for preventing the corn, which is above it in a hopper, from pressing upon the slides s s'.

Having described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The construction of the tread of each covering and transporting-wheel, E, of three tires or rings, a a' a', so applied to forked ends, b, of the spokes of the wheel as to leave spaces for the escape of earth, substantially as described and shown.

2. The lifting-lever F, in combination with the looped lever c and scrapers m, when these parts are constructed and arranged so as to operate as herein described.

3. The looped lever c, the longitudinally-movable and vibrating lever F, and the vibrating hopper-frame, when these parts are arranged, combined, and constructed, substantially in the manner described.

4. The levers H, J J, connected to the seed-slides s s', and operated by means of one or two hand-levers, G², substantially as described.

5. Removable perforated cut-off plates, d, applied to hoppers above the seed-slides, substantially as described.

6. While not claiming broadly anti-friction casters, I do claim providing the transverse beam O with channelled blocks P, having supporting-wheels P², and swivelling-standards, P¹, applied to said blocks, with anti-friction balls, p', interposed between said blocks and standards, as described.

JAMES F. WALKER.

Witnesses:

HAMILTON SOOY,
WILEY P. KENNEDY.