

C. A. HASKELL.
Corn-Planters.

No. 157,752.

Patented Dec. 15, 1874.

Fig: 1.

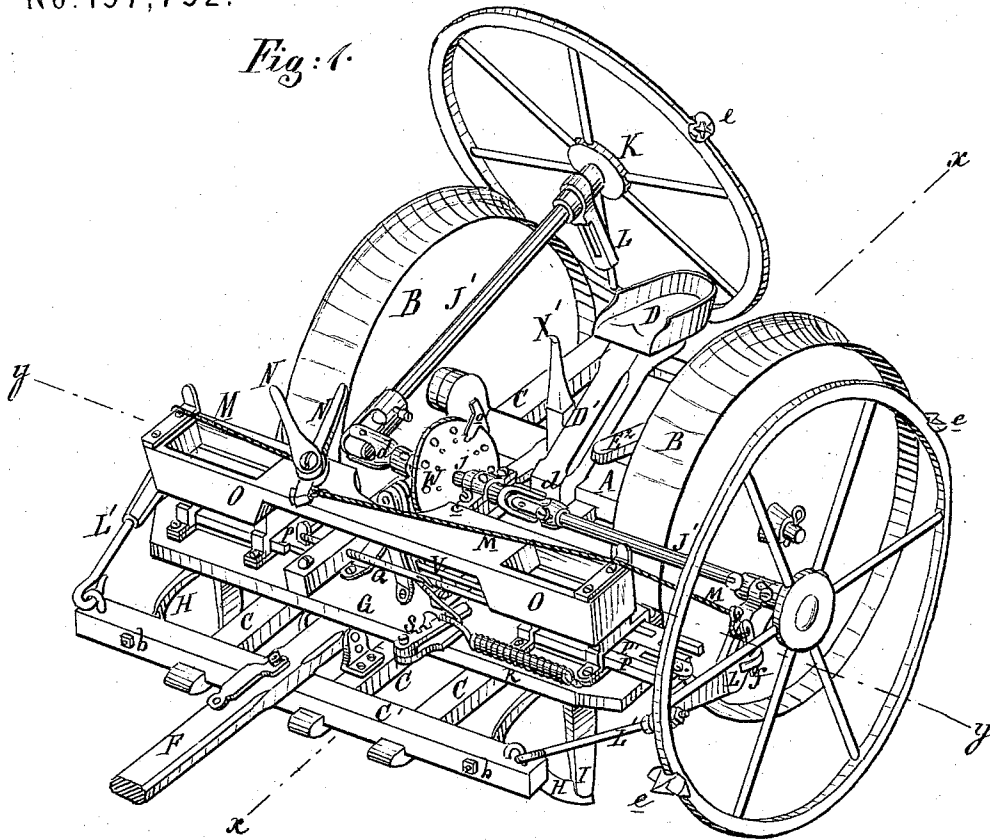
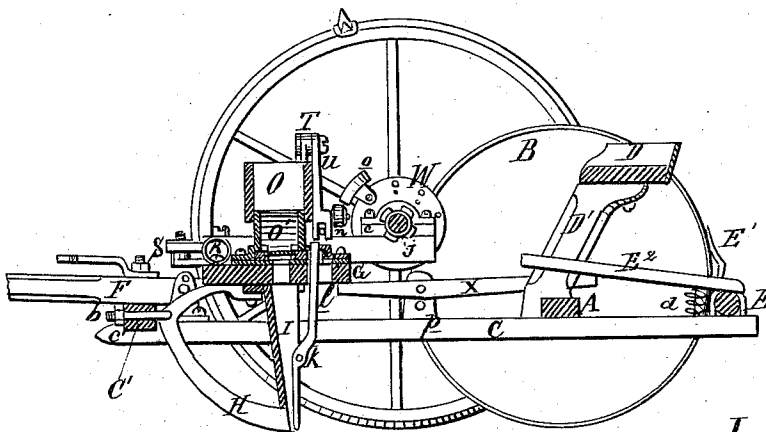


Fig: 2.



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Fig: 3.

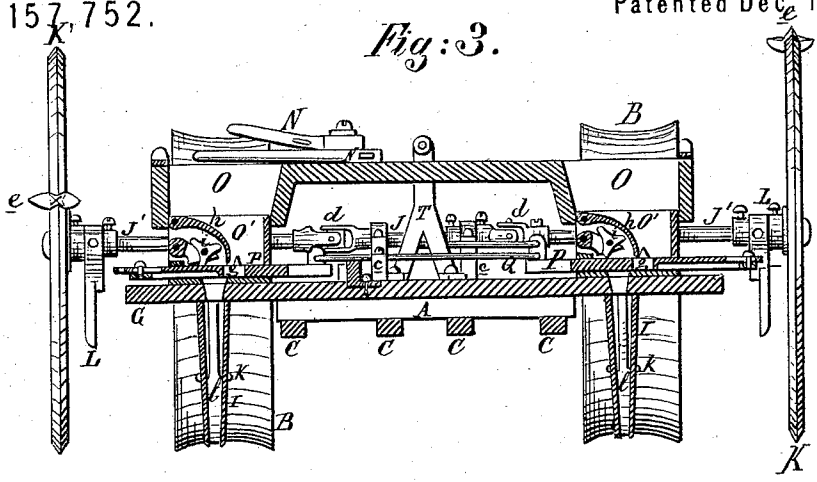
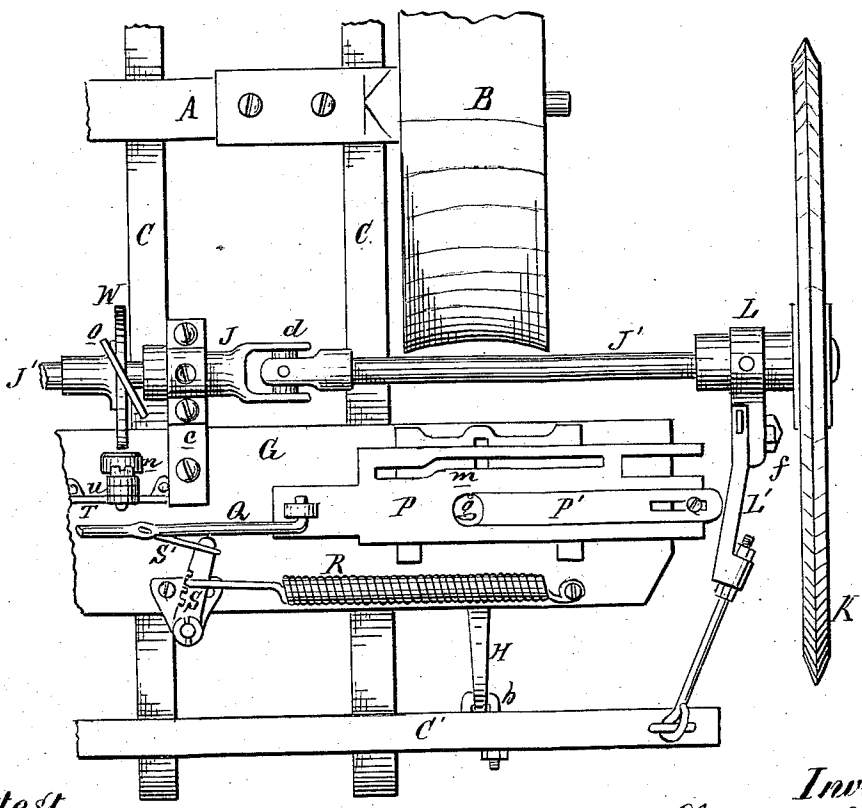


Fig: 4.



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UNITED STATES PATENT OFFICE

CHARLES A. HASKELL, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF
HIS RIGHT TO GEORGE F. KNOXES, OF SAME PLACE.

IMPROVEMENT IN CORN-PLANTERS.

Specification forming part of Letters Patent No. **157,752**, dated December 15, 1874; application filed
August 8, 1874.

To all whom it may concern:

Be it known that I, CHARLES A. HASKELL, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Corn-Planter, of which the following is a specification:

The nature of this invention relates to an improvement in corn-planters of that class wherein the dropping mechanism is actuated by the wheels which mark the ground and lay off the rows; and has for its object to so construct the machine that, by means of universal couplings, either end of the marking-wheel shaft (with its wheel) may be folded over the frame of the machine, to enable the driver to plant close up to the edge of a ditch, to a fence, or hedge. The invention also relates to the peculiar construction of and method of operating the seeding mechanism, and to the general arrangement of the various parts, as more fully hereinafter set forth.

Figure 1, Sheet 1, is a perspective view of the machine with one marking-wheel folded over the frame. Fig. 2 is a longitudinal vertical section at *xx* in Fig. 1. Fig. 3, Sheet 2, is a cross-section at *yy* in Fig. 1, looking at it from the front. Fig. 4 is a partial plan view with the seed-hopper removed.

In the drawings, A represents an axle, having the traction-wheels B B mounted on its arms. These wheels have broad concave rims for the purpose of covering in the seed. C is a frame, secured to the under side of the axle. C' is a girt, extending across the front ends of all the bars in the frame. D is the seat for the driver, on top of a standard, D', erected on the axle. E is a rock-shaft, journaled across the rear end of the frame, with a scraper, E¹, secured to each end, for cleaning the rim of the traction-wheels whenever forced against by partially rotating the rock-shaft, which is effected by depressing a treadle, E², at the left of the seat-standard. This lever has a spiral spring, *a*, under it to throw it up, and to retract the scrapers from the wheels. F is the draft-pole, attached to the frame C and to its girt C'. G is a seeder-board, lying across the front part of the frame C, but not upon it, being secured to the top parts of two metallic

furrow-openers, H, whose upper front corners are pivoted to the girt C' by eyebolts *b*. To the rear ends of the furrow-openers the seed-spouts I are secured, directly under the openings in the seed-board. J is a short shaft, journaled in brackets *c*, projecting rearwardly from the seed-board, and to each end is connected, by universal couplings *d*, a longer section of shaft, J'. To the outer end of each a wheel, K, having a sharp or wedge-shaped rim, is secured, and to which two markers, *e*, are secured diametrically opposite each other. On each arm of the shafts J', between the wheel-hub and a collar on said arm, there is sleeved the eye of a draft-iron, L, which may be connected with the end of the girt C' by a bent draft-iron, L, having a staple on one face or side, which projects through a slot in the adjacent side of the iron L, the two parts being secured together by dropping a key, *f*, through the staple.

By withdrawing the key, either arm J', with its wheel, may be folded over the frame, as seen in Fig. 1, without interfering with the rotation of the shaft by the other wheel, thereby enabling the driver to plant close up to a fence, hedge, or ditch.

The shaft-arms are raised up by a chain, M, attached to their draft-irons L at one end, and to levers N at the other, both levers being pivoted by a single bolt to the top of the seed-box O, and either may be locked by a latch pivoted to the rear side of said box, to keep the marking-wheels in their elevated position, so that they will clear the ground when it is not desired to have either or both operate. The seed-box O has a pocket at each end to contain the seed, and below it is a metallic dropper-case, O', in the lower part of which is a dropper-plate, P, reciprocating through slots in the ends of the casing, with a seed-hole, *g*, which slides under a curved plate, *h*, hinged at its top to the upper inner corners of the casing at each reciprocation. Under the plate *h* a three-armed spider, *i*, is journaled between a pair of plates, which spider will catch any grains lodging in the seed-hole *g*, and force them down as the plate slides under it. The size or opening of the seed-hole is variable,

and adjustable by a plate or tongue, P', Fig. 4, sliding in a slot in the plate P, in which it is secured at any point by a set-screw passing through a slot in its outer end into the main body of the plate. Each dropper-spout is open at its rear side, in which is pivoted at *k*, Figs. 2 and 3, a tongue, *l*, whose upper end is curved to project up through a slot, *m*, in the dropper-plate. This slot is curved, as seen in Fig. 4, to give the tongue a vibratory movement at each reciprocation of the dropper, and thus prevents the seed from clogging in the spout. The reciprocation of the sliding dropper-plates is effected in the following manner: Both plates are connected by a rod, Q, and to it is connected one end of a spiral spring, R, on the seed-board, through a notched rocker-arm, S, and a link, S'. These latter I employ to enable me to change the tension of the spring on the rod Q, the tendency of the spring being to pull the plates toward one end of their movement. A standard, T, is erected on the seed-board, behind the seed-box, and to its top is pivoted a pendulum, U, having a roller, *n*, on a stud at its lower end. This pendulum is also connected by a rod, V, with the dropper-plate next or alongside the spring R. On the central shaft J is secured a disk, W, on whose periphery are secured two or more cam-plates, *o*, which, in the rotation of the said shaft, pass to the left of the roller *n*, and move the pendulum and the dropper-plates to the right, dropping the charge of

seed in the throat of one, the spring retracting them and discharging the seed from the other. The cam-plates are movable and adjustable on the disk, so as to enable the operator to time the dropping as circumstances may require.

The dropping mechanism, including the furrow-openers, may be instantly elevated by a lever, X, pivoted to a short standard, *p*, on the main frame. The short arm of this lever reaches under the seed-board, while the longer extends past the driver's-seat standard, to which an eccentric lever, X', Fig. 1, is pivoted, so as to enable the driver to depress that end of the lever X, and thus raise up the dropping and marking mechanisms bodily in passing over obstructions, or in moving from place to place.

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

The combination, with the frame C C' and shaft J, driven by the marking-wheel K, of the seed-board G, furrow-openers H, seed-spouts I, seed-boxes O O', seed-plates P, connecting-rod Q, spring R, standard T, pendulum U, roller *n*, disk W, and cams *o*, constructed and arranged substantially as and for the purpose set forth.

CHARLES A. HASKELL.

Witnesses:

WM. H. LOTZ,
HERMAN A. KROESCHELL.