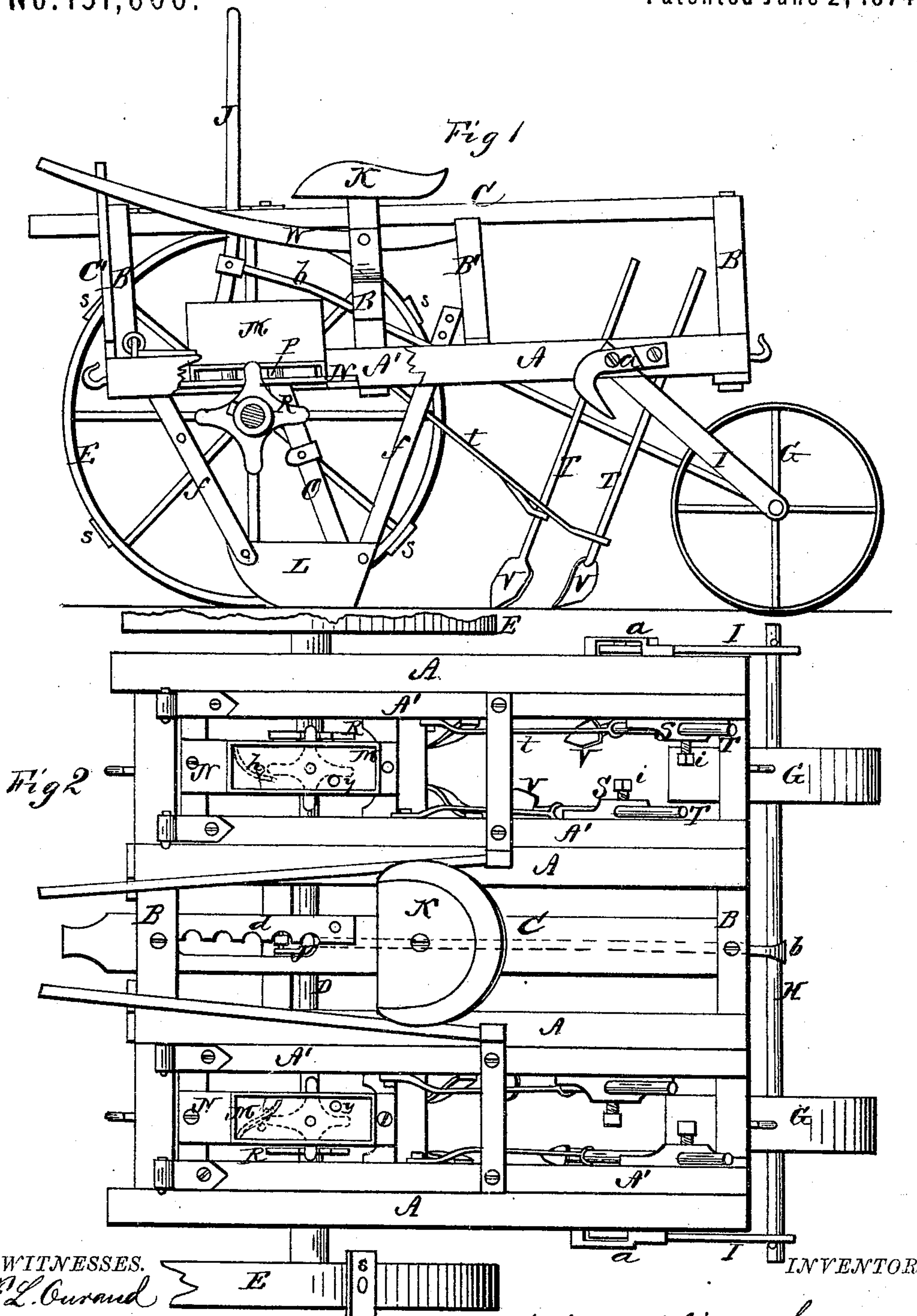


H. M. KINGSBURY.  
Corn-Planters.

No. 151,600.

Patented June 2, 1874.



WITNESSES.

F. L. Ourand

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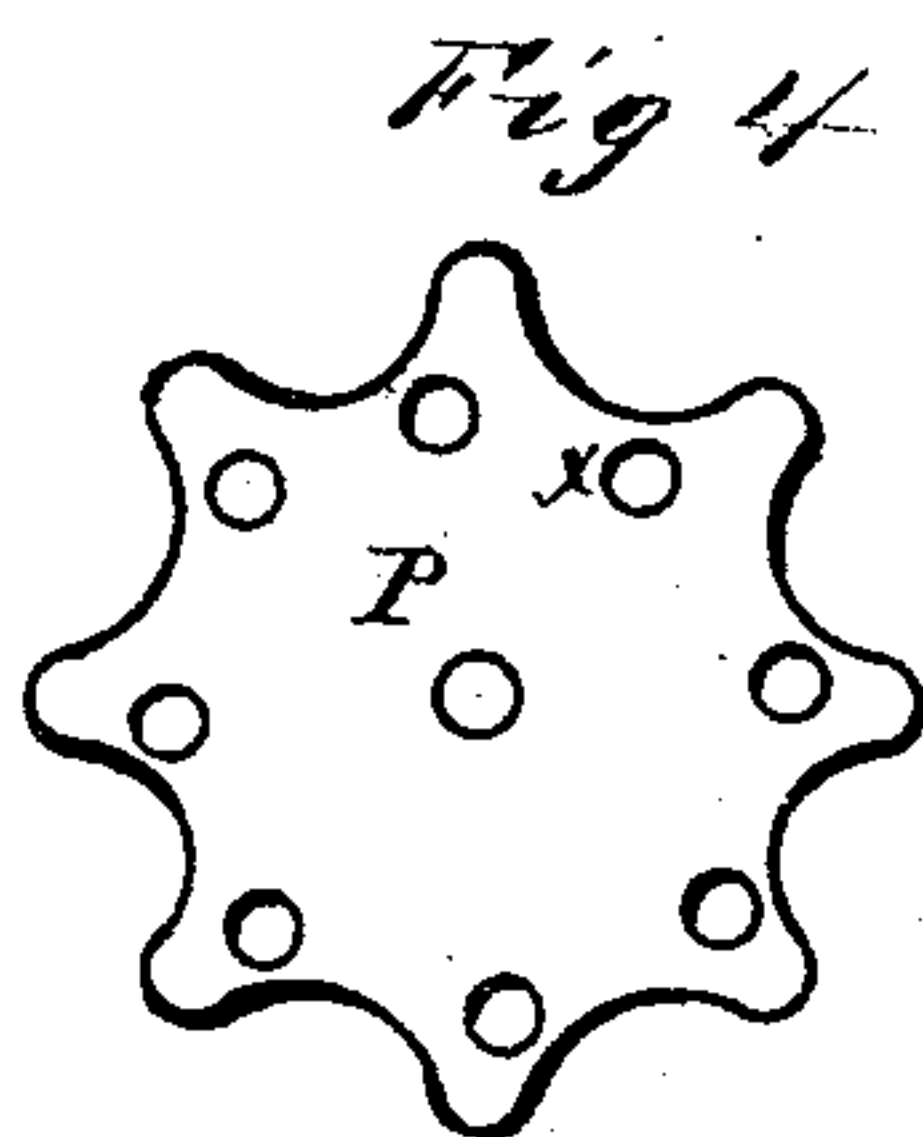
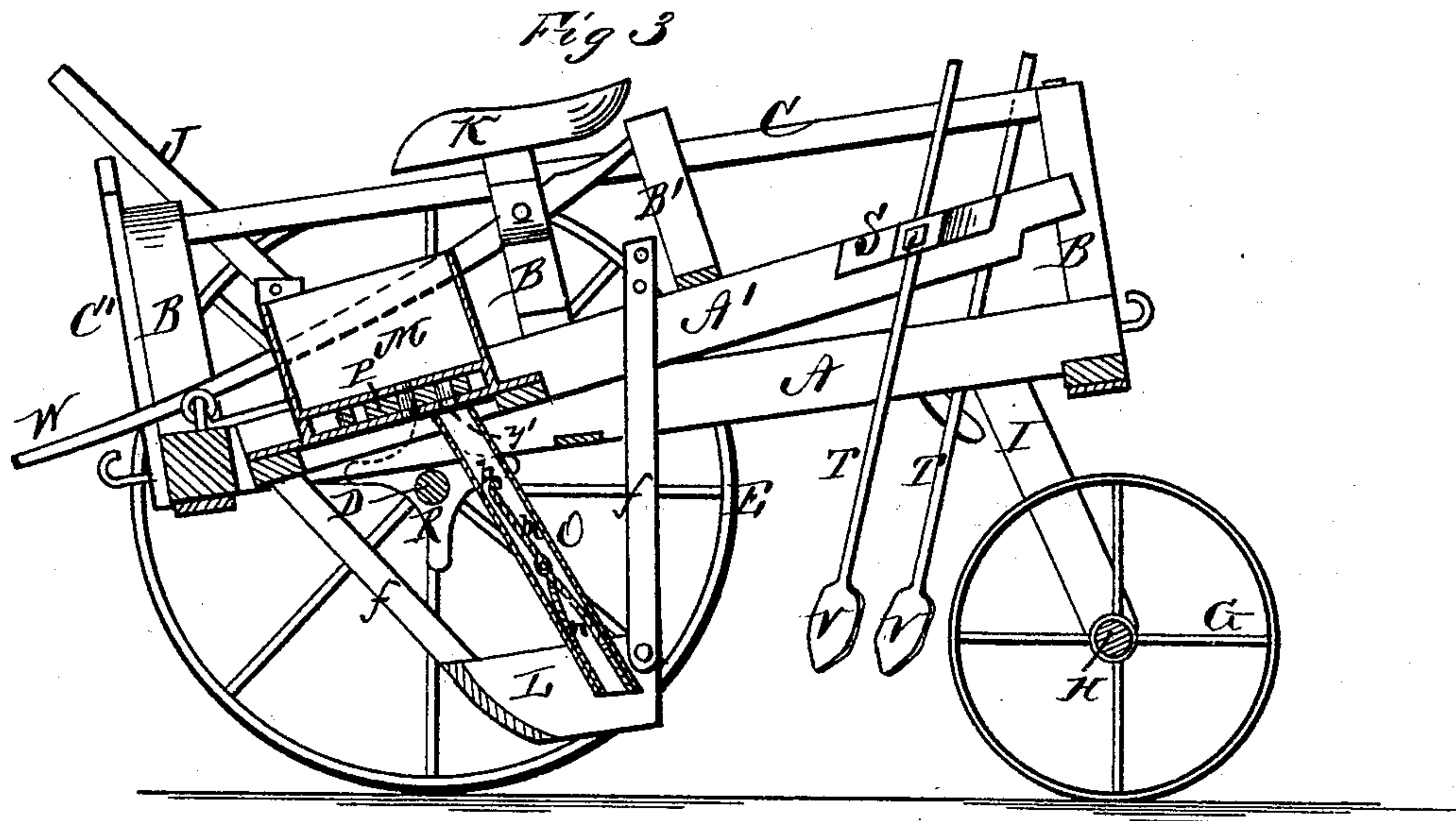
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# UNITED STATES PATENT OFFICE.

HENRY M. KINGSBURY, OF CUBA, MISSOURI.

## IMPROVEMENT IN CORN-PLANTERS.

Specification forming part of Letters Patent No. **151,600**, dated June 2, 1874; application filed September 24, 1873.

*To all whom it may concern:*

Be it known that I, HENRY M. KINGSBURY, of Cuba, in the county of Crawford and in the State of Missouri, have invented certain new and useful Improvements in Corn-Planters; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a corn-planter, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation, Fig. 2 is a plan view, and Fig. 3 a longitudinal section, of my machine. Fig. 4 is a plan view of one of the dropping-wheels.

The frame-work of my machine consists of two rectangular frames, A A, placed parallel with each other a suitable distance apart, and connected together by means of angular irons B B, to the upper central parts of which the tongue C is attached, said tongue being thus elevated above the frames. In suitable boxes attached to the under sides of the frames A A, near or a short distance from the front end, is placed the axle D, to the ends of which the driving-wheels E E are firmly secured. The rear part of the machine rests on two wheels, G G, placed loosely on a shaft or axle, H, which has its bearings in the lower ends of two arms, I I, the upper ends of which are pivoted to the outer sides of the frames A A in guards *a a* attached thereto. The axle H is, by a rod, *b*, connected with a lever, J, which is pivoted to a cross-bar connecting the two frames A A, immediately in front of the front axle D. The lever J extends up through a slot in the tongue C, and is held in a notched plate or bar, *d*, attached thereto.

The object of the hind wheels G G is two-fold—to cover the corn after it is dropped, (they being placed in line with the dropping devices,) and to turn the machine on. When the machine is in operation, the lever J is drawn as far back as it will come, when the

wheels G G are pushed back, and the entire weight of the machine rests on the wheels E E. When the lever J is pushed forward, the wheels G G are drawn forward up under the machine, raising the front wheels off from the ground, the tongue being supported on the neck-yoke, and the machine can then be turned at the end of the row, and set to drop in the proper place again.

K represents the driver's seat, located on the tongue C of the machine.

This completes the carriage of my corn-planter, and as the planting devices are precisely alike on both sides of the tongue I will only describe one, such description answering for both.

At the front end of the rectangular frame A is hinged a similar frame, A', of such dimensions as to fit within the frame A and rest upon the rear cross-bar thereof. To the frame A' is, by connecting-bars *f f*, attached the furrow-opener or runner L, for opening the ground to receive the corn. The runner L is attached to the frame A' by one bar, *f*, at the front and two at the rear, the two rear ones being made adjustable up and down, to regulate the depth of the runner. M represents the corn box or hopper, attached to a flanged plate, N, which is secured to the frame A', and has an inclined conductor, O, attached to its under side, and extending downward into the runner L. Between the bottom of the box M and the plate N is pivoted an eight-armed dropping-wheel, P, provided with an aperture, *x*, in or near each arm. In the bottom of the box M is a countersunk opening, *y*, and in the plate N is a corresponding opening, *y'*, opening into the conductor O. The openings *y* and *y'* are not directly opposite each other, but the same distance apart as the openings *x x* in the dropping-wheel P. This dropping-wheel is operated by a four-armed wheel, R, keyed or otherwise firmly secured on the front axle D. The wheel R, at every one-fourth of a revolution, moves the dropping-wheel P one-eighth of a revolution, allowing the same to be at rest for an instant between each movement. The corn passes through the aperture *y* in the bottom of the box M into that aperture *x* in the wheel P which is directly under it. This corn is at the next movement of the wheel P carried



directly over the opening  $y'$  in the plate N, and drops through the same into the conductor O. A spring,  $h$ , arranged between the bottom of the box M and the plate N, and bearing against the ends of the arms on the wheel P, stops the wheel and holds at the proper place to receive and discharge the corn. Within the conductor O is pivoted a bar,  $m$ , which is held in the position shown in Fig. 3 by means of a spring,  $n$ , so that the corn discharged from the dropping-wheel P into the conductor will be retained therein until the next movement of the dropping mechanism, when one of the arms of the wheel R will strike a pin,  $p$ , attached to the upper end of the bar  $m$ , and projecting through a slot in the side of the conductor, and turn said bar on its pivot, allowing the corn retained by it to drop down into the ground. As soon as the pin  $p$  clears the arm of the wheel R the spring  $n$  throws the bar  $m$  back in its position in time to retain the next lot of corn discharged from the dropping-wheel.

This device for retaining the corn in the conductor is of very great importance for the following reason: If the corn were allowed to drop directly, or at one operation, from the dropping-wheel P, through the conductor, into the ground, a certain never-varying length of time would elapse from the time the corn leaves the wheel till it reaches the ground, and hence the distance between the hills would of course vary, according to the speed at which the machine is driven.

The driving-wheels E E are provided with plates  $s s$ , to mark the ground at the same time as the corn is deposited, and the wheels are placed at such distances from the dropping mechanisms that one wheel can always run in the track made by it while going in the opposite direction, care being taken to set the dropping mechanism properly. This is done by raising the wheels E E up from the ground by the means above described, and turning one of said wheels till one of the plates or markers  $s$  gets in the mark previously made, when the front end of the machine is lowered again and the machine started ahead. To the inner side of each side beam of the frame A' is secured a metal socket, S, through which

passes the round shank T of a plow, V, said shank being fastened by a set-screw,  $i$ . The plows V can thus be set in or out at any angle desired, and each plow is braced by a rod,  $t$ , connecting the shank with the frame. The frame A' may be raised on its hinges by means of a lever, W, so as to raise the plows out of the ground, and at the same time throw the dropping mechanism out of gear. This lever W is pivoted to the center iron B, its rear end connected to an iron, B', on the frame A', and its front end held in a notched bar, C', as shown.

The corn-planter thus constructed, or rather the frame thereof, may be used for a cultivator by removing the wheels G G, boxes M M, runners L L, and axle D, and using an axle with a bend in the center corresponding with the irons B B, so as to leave the center of the machine open for the corn to pass through when large; or two short axles may be used, one bolted to each side of the frame. The wheels are then set close to the frame, and the tongue and plows turned around, reversing the machine and bringing the plows in front of the operator.

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

1. The combination of the frames A A, angle-irons B B, tongue C, axle D, wheels E E and G G, axle H, arms I I, rod  $b$ , and lever J, all constructed and arranged substantially as shown and described, to form the carriage of a corn-planter, as herein set forth.

2. The combination, with the main frame A and hinged frame A', of the box M, with opening  $y$ , armed dropping-wheel P, with openings  $x x$ , spring  $h$ , plate N, with opening  $y'$ , the armed wheel R on the axle D, and the conductor O, with pivoted bar  $m$ , pin  $p$ , and spring  $n$ , all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 28th day of August, 1873.

H. M. KINGSBURY.

Witnesses:

C. L. EVERT,

J. R. BLANKENSHIP.