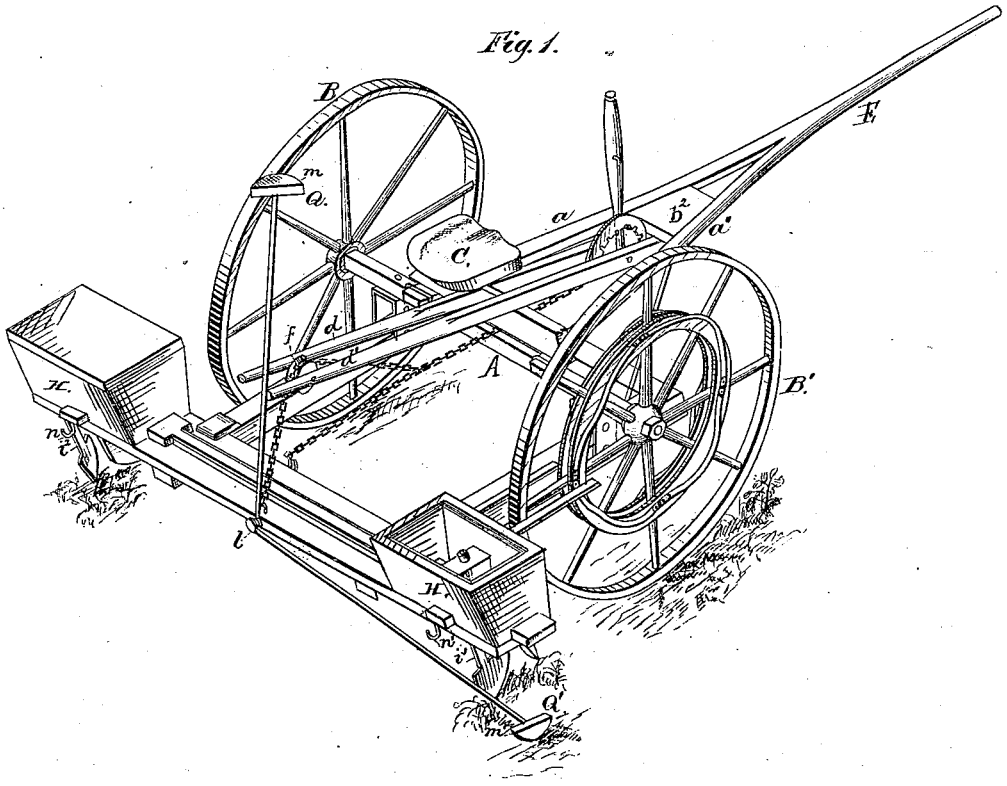
3 Sheets—Sheet 1.

H. JONES.

CORN-PLANTER.

No. 186,844. Patented Jan. 30, 1877.

Fig. 1.



Attest:
R. T. Dyer
L. M. Seely

Inventor:
Henry Jones
by Geo. W. Dyer & Co
Attys.

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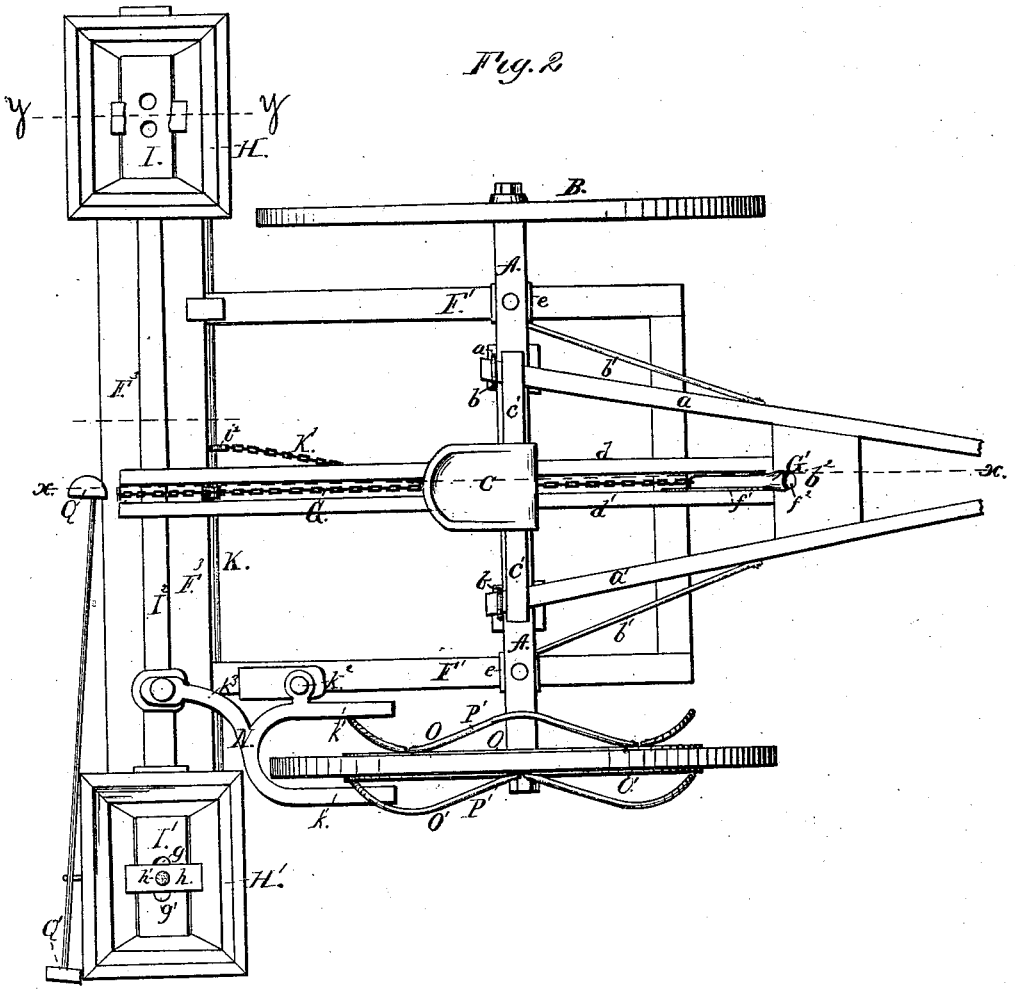
Fig. 2



Attest
R. T. Dyer
K. M. Seely

Inventor:
Henry Jones
by Geo. W. Dyer & Co
attys

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H. JONES.

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Fig. 3.

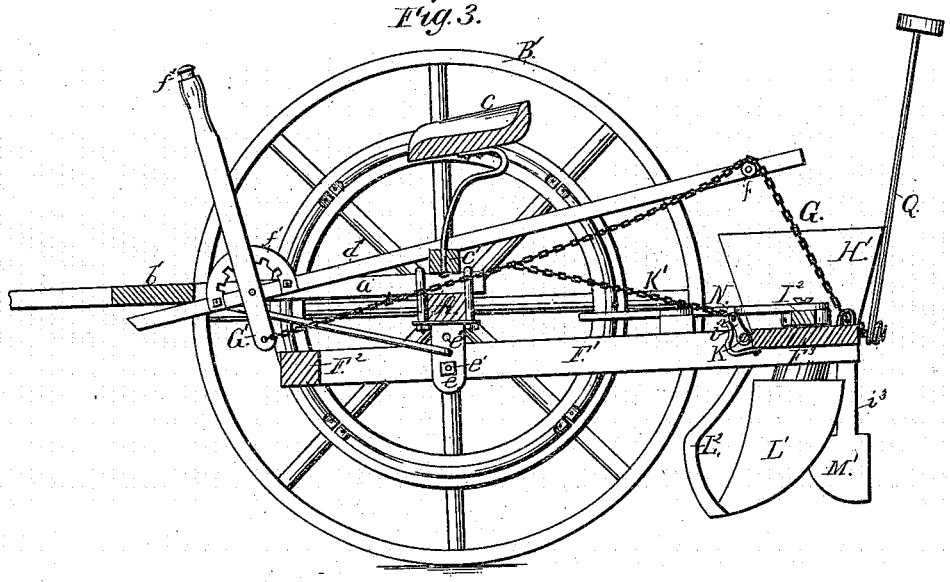


Fig. 5.

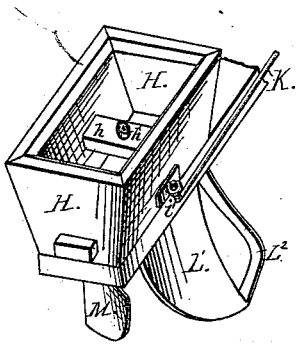
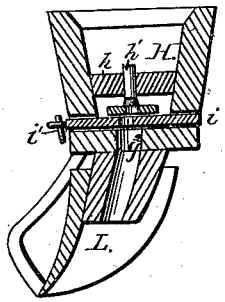


Fig. 4.



Attest:
R. T. Dyer
C. H. Selby

Inventor:
Henry Jones
by Geo. W. Dyer & Co
attys.

UNITED STATES PATENT OFFICE.

HENRY JONES, OF COSHOCTON, OHIO.

IMPROVEMENT IN CORN-PLANTERS.

Specification forming part of Letters Patent No. **186,814**, dated January 30, 1877; application filed October 31, 1876.

To all whom it may concern:

Be it known that I, HENRY JONES, of Coshocton, in the county of Coshocton and State of Ohio, have invented a new and useful Improvement in Corn-Planters; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of my invention is the production of a corn-planter which will be simple and cheap in construction, conveniently operated, and durable in use. My invention therein consists in the peculiar means for raising the frame of the machine and operating the cut-off simultaneously, and in the peculiar cut-off for preventing the dropping of seed when the frame is in an elevated position; further, in the novel combination and construction of the furrow-openers and seed-spouts, cutters, and leveling-shovels, and in the peculiar marker, all as more fully hereinafter explained.

To enable others skilled in the art to manufacture my corn-planter, I now proceed to describe the same in connection with the drawings, in which—

Figure 1 is a perspective view; Fig. 2, a top view with the covers to the seed-boxes removed; Fig. 3, a central longitudinal section of the machine on the line *x x*, Fig. 2; Fig. 4, a section through one of the seed-boxes on the line *y y*, Fig. 2; and Fig. 5, a separate view of one of the combined seed-spouts, furrow-openers, and covering-shovels.

Like letters denote corresponding parts in each figure.

A represents the axle, upon the ends of which are mounted two wheels, B B′. E is the tongue, which is supported from the axle by the hounds *a a′*. These hounds are secured to the top of the axle at their inner ends by the straps *b*, and are supported by braces b^1. A block, b^2, is secured between the forward ends of the hounds. The driver's seat *c* is supported from a cross-piece, *c′*, resting upon the inner ends of the hounds, and a pair of parallel bars, *d d′*, extend from under the block b^2, over this cross-piece, to the rear of the machine. F is a rectangular frame, supported below the axle, consisting of side bars F^1 F^1, a cross-bar, F^2, forming the forward end of the frame, and the bar F^3 carrying the seed-boxes, forming the rear of this frame. The side bars F^1 are supported from the under side of the axle by hangers *e e* and bolts e^1 e^1, passing through the hangers and side bars. These hangers are provided with two or more holes, e^2, for the reception of the bolts *e*, allowing a limited adjustment of the frame F, so that it can be pivoted the desired distance below the axle.

The frame F is adapted to be raised at its rear end by a chain, G, which is secured at one end to the cross-bar F^3, passes over a sheave, *f*, situated between the ends of the parallel bars *d d′*, and extends to the lower end of a lever, G′. This lever is pivoted between the parallel bars *d d′*, in front of the operator's seat, and within easy reach, and by removing the same the frame F is raised and lowered. A semicircular ratchet, f^1, secured to one of the bars *d d′*, and a spring-pawl, f^2, on the lever, hold the lever in any desired position.

H H′ represent the seed-boxes, mounted on the ends of the bar F^3. In the seed-boxes reciprocate the seed-slides I I^1, connected rigidly together by a bar, I^2, and operated by means hereinafter described. These seed-slides occupy the entire bottom of the seed-boxes, and are each provided with two seed-holes, *g* g^1. These seed-holes are reciprocated over a single seed-hole, g^2, in the bar F^3, below the center of each seed-box, the holes *g* and g^1 being alternately over said hole g^2 at the limit of the stroke of the seed-slides.

A bridge-piece, *h*, is secured centrally in each seed-box, which bridge-piece supports a brush, *h′*, rubbing against the seed-slide. These brushes clear the surplus grain from off the seed-slides and holes *g* g^1 as they pass under the bridge-piece to deposit the grains of corn in the seed-holes g^2 at each movement of the said seed-slides. A cut-off slide, *i*, is situated between each of the seed-slides and the holes g^2, and has a seed-hole bored through it to correspond with the seed-hole g^2, over which it is placed. These cut-off slides project through the side of the seed-boxes, and are connected to arms i^1 i^1 at the end of a rock-shaft, K. This rock-shaft passes later-

ally across the machine, and has near its center an upwardly-projecting arm, i^2, which is connected with a chain, K′, secured at the opposite end to the chain G, which raises the frame F. By the raising of the frame F the chain K′, moving toward the front end of the machine with the chain G, operates the rock-shaft K, which, in turn, moves the cut-off slides *i i*, and closes the seed-holes g^2. By these means the machine is prevented automatically from dropping the seed while the frame F is in an elevated position.

To the under side of the bar F, at the ends thereof, are secured the furrow-openers and seed-spouts L L^1, of the triangular form shown, the seed-spouts being connected with the seed-holes g^2. Cutters L^2 L^3 are secured, one to each of the furrow-openers, at the inner edges of the same; and leveling-shovels M M′ are supported in the rear of the seed-spouts. These leveling-shovels have a rounded front edge, and are supported from the bar F^3 by spring-arms i^2 i^3.

The seed-slides are operated in the following manner: A lever, N, having forked arms k k^1, which inclose a portion of one of the wheels, and project forward toward its hub, is pivoted at k^2 to one of the side bars F^1, and has an arm, k^3, extending to the rear, and pivoted to the bar I^2, which connects the seed-slides.

The lever N is shown as placed on the right side of the machine; but it can be situated, with equal advantage, on the left side.

To the spokes of the wheel inclosed by the forked lever are secured two circular boards or plates, O O′. These boards or plates are rigidly attached to the spokes opposite each other, and about half-way between the hub and the rim of the wheel. Upon them are removably secured the cam-irons P, which are constructed of iron rods bent outwardly at the center, and secured at their ends to the said circular boards by screw-bolts or otherwise. These cam-irons are so secured to the circular boards or plates that the ends of two irons on one of the said boards or plates come opposite the outwardly-bent portion of an iron on the other board, thus forming a zigzag cam, which is inclosed by the arms k k^1 of the lever N, to impart a reciprocating motion to the seed-slides.

Any necessary number of the cam-irons are attached to the circular boards, so as to operate the seed-slides to drop the grain at the desired intervals; and by the construction of the cam-irons a portion of them may be removed to drop the seed at longer intervals; or all of such cam-irons can be removed, and a greater number of shorter length and sharper pitch secured in their place, to increase the speed of the seed-slides, and shorten the distance between the hills planted. These peculiar cam-irons form a cheap and efficient device for operating the seed-slides.

Q Q′ are the two arms of a marker, which are rigidly attached at an angle to each other. These arms, at their angle, are pivoted to the rear side of the bar F^3 by a bolt, *l*, and are adapted to be thrown to either side, for marking the row, the driver in his seat being within easy reach for that purpose. At the ends of the arms Q Q′ are attached marking boards or wheels *m m′*. Two hooks, *n n′*, secured to the bar F^3, support the marking-arms the required distance above the ground.

This marker is cheap in construction, and very convenient in use.

By the construction of the various parts of my corn-planter a machine is furnished which is simple in construction and operation, can be manufactured cheaply, and is convenient, efficient, and durable in use.

Having thus fully described my corn-planter, and explained some of its advantages, what I claim as new therein, and desire to secure by Letters Patent, is—

1. In a corn-planter, the combination, with the pivoted frame F, supported below the axle, and carrying the seed-boxes, of the lever G′, chain G, and chain K′, for elevating such frame and operating the cut-off simultaneously, substantially as described and shown.

2. In a corn-planter, the combination, with the pivoted frame F, chain G, and lever G′, of the cut-off slides *i i*, rock-shaft K, and chain K′, constructed and arranged substantially as described and shown.

3. In a corn-planter, the combination of the triangular furrow-openers and seed-spouts L L^1, the cutters L^2 L^3, and leveling-shovels M M, constructed and arranged substantially as described and shown.

4. In a corn-planter, the marking-arms Q Q′, rigidly secured together, and pivoted to the frame of the machine, constructed and arranged substantially as described and shown.

This specification signed and witnessed this 11th day of September, 1876.

HENRY JONES.

Witnesses:

WM. H. ROBINSON, Jr.,

S. B. MADDEN.