

(Model.)

A. & M. RUNSTETLER.
CORN PLANTER.

2 Sheets—Sheet 1.

No. 261,048.

Patented July 11, 1882.

Fig. 1.

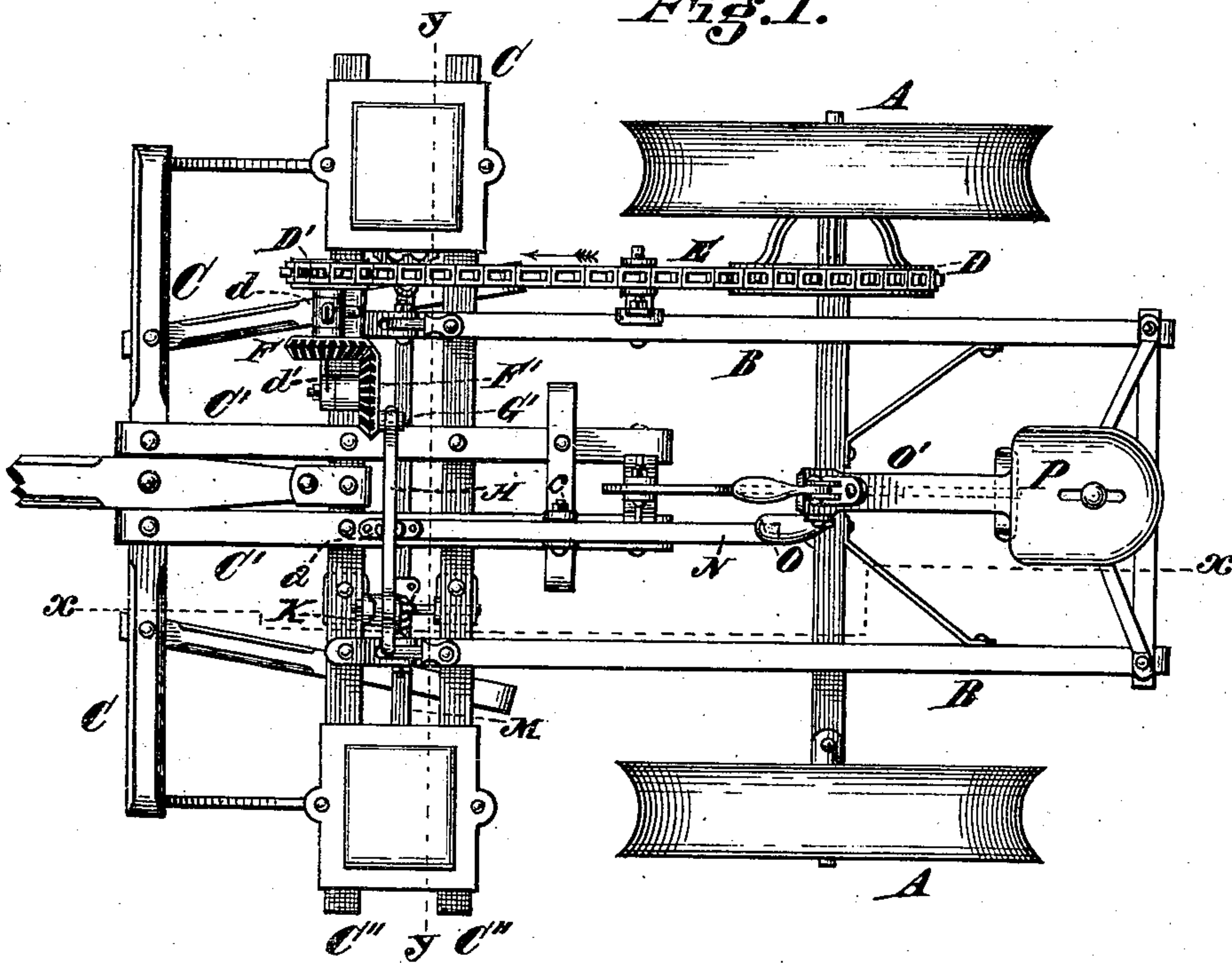


Fig. 2.

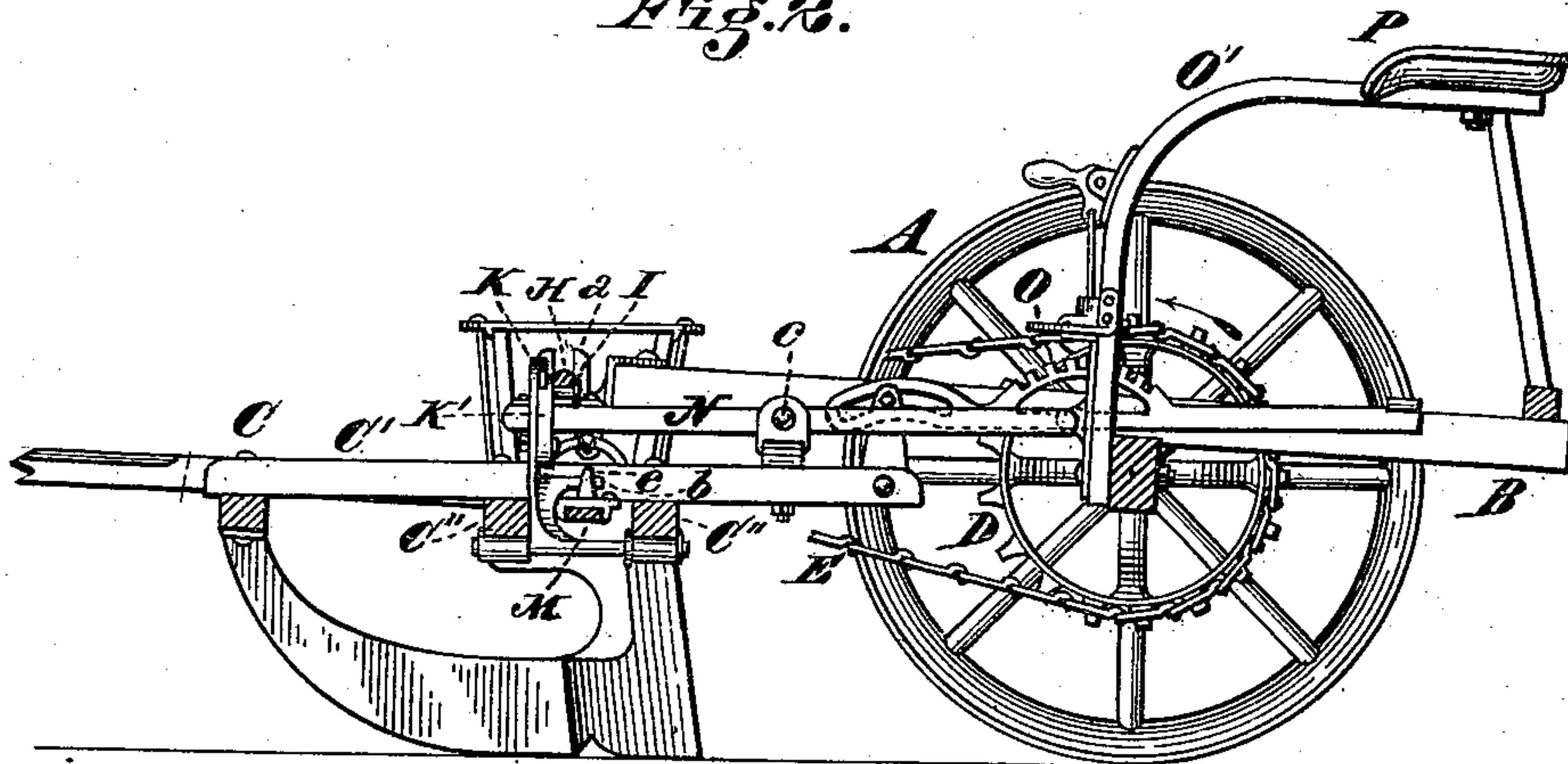
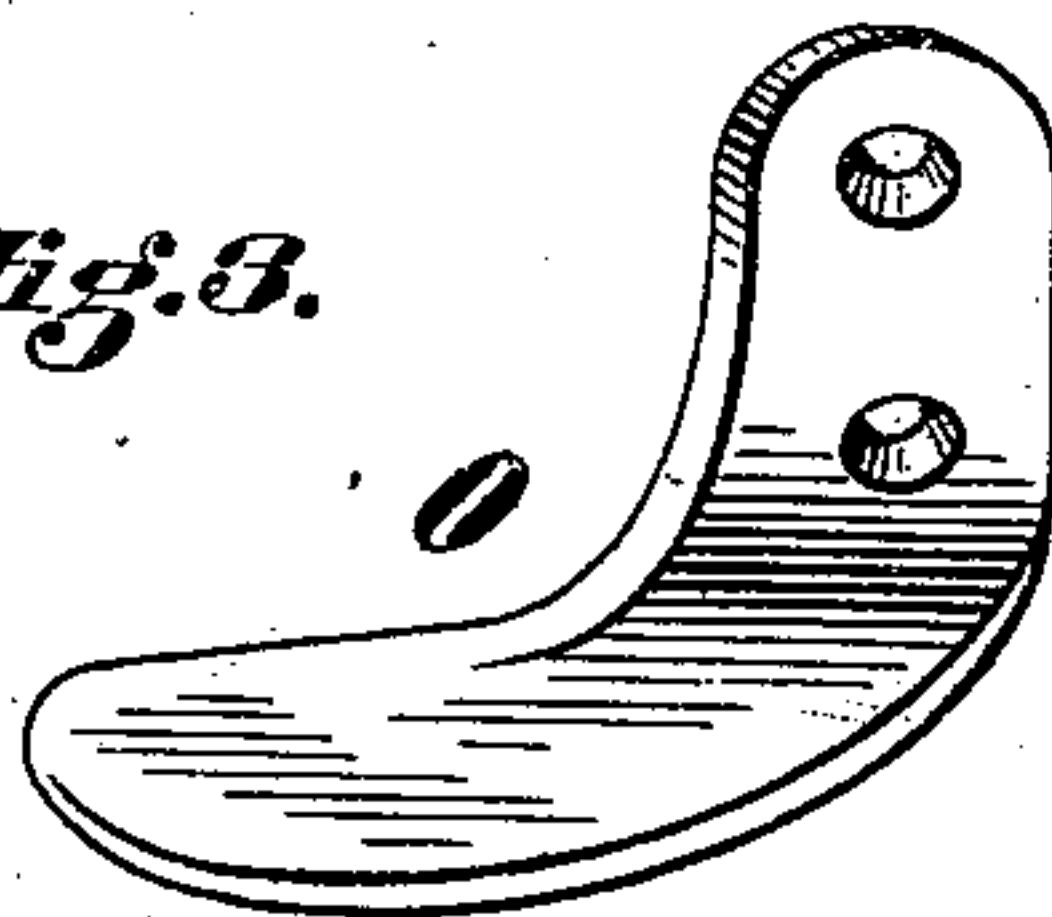


Fig. 3.



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Their Attorneys

(Model.)

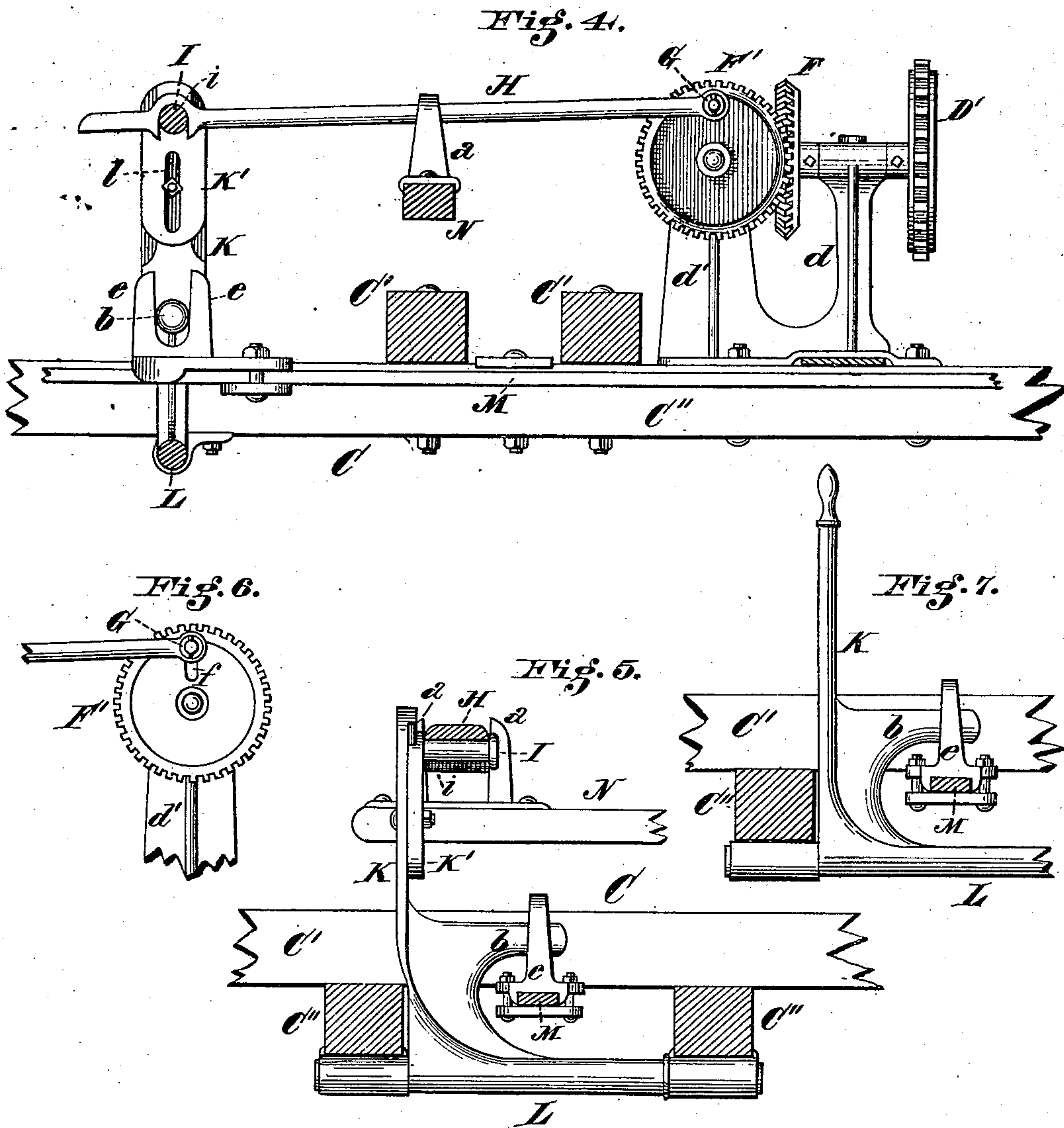
2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

ANDREW RUNSTETLER AND MICHAEL RUNSTETLER, OF DAYTON, OHIO,
ASSIGNORS TO THE FARMERS FRIEND MANUFACTURING COMPANY, OF
SAME PLACE.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 261,048, dated July 11, 1882.

Application filed March 14, 1882. (Model.)

To all whom it may concern:

Be it known that we, ANDREW RUNSTETLER and MICHAEL RUNSTETLER, citizens of the United States, and residents of Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Corn-Planters, of which the following is a specification.

This invention relates to improvements in check-row corn-planters; and it consists in a rocking lever pivoted to the runner-frame between the seed-boxes and below the bar which rotates the seed-droppers for imparting motion from the driving to the seed-dropping mechanism.

The invention also consists in the combination, with the reciprocating bar of a corn-planter, of a rocking lever pivoted to the runner-frame below said bar and made adjustable radially to the line of its axis.

The invention also consists in the combination, with a corn-planter having a drill attachment, of a pitman connecting the driving mechanism with the seed-dropping mechanism arranged for automatically disconnecting the seed mechanism when the runners are raised.

The invention also consists, in the combination, in a corn-planter having a drill attachment, of a pivoted lever under control of an operator and a pitman connecting the driving mechanism with the seed-dropping mechanism, said lever serving to disconnect the drill mechanism from the seed-dropping mechanism.

The invention also consists in the combination, with a reciprocating bar, of a rocking lever pivoted to the runner-frame below the reciprocating bar, adapted to operate as a hand-lever when the pitman is disengaged.

Other features of our invention will be fully explained in the description of the accompanying drawings, in which—

Figure 1 is a plan view of a corn-planter embodying our improvements. Fig. 2 is a longitudinal sectional elevation on line *x x*, Fig. 1. Fig. 3 is a detail view of the arm on the seat-standard for automatically tripping the lever connecting with the dropping devices to release the driving mechanism from connection

with the dropping mechanism. Fig. 4 is an enlarged transverse section on line *y y*, Fig. 1, showing the runner-frame broken off at both ends and the hoppers removed. Fig. 5 is an enlarged broken sectional elevation of the runner-frame, showing the crank-lever mounted thereon, and its driving-connection with the driving mechanism and reciprocating dropper-bar, and the end of the lever for disengaging the driving and dropping devices. Fig. 6 is a broken detail elevation, showing a modified form of connecting the transverse driving-pitman with the driving-gear to increase or decrease the speed of the pitman and regulate the operation of the seed-dropping devices. Fig. 7 is a broken sectional elevation, showing a hand-lever device for driving the dropper mechanism.

A represents the ground driving-wheels; B, the riding-frame mounted thereon.

C C' represent the runner-frame.

D represents a sprocket-wheel driven by the main axle.

D' represents a sprocket-wheel journaled on a bracket, *d*, mounted on the runner-frame C.

F represents a bevel-gear mounted on the opposite end of the shaft on which is mounted the sprocket-wheel D'.

F' represents a bevel-gear meshing with gear F. It is preferably journaled upon the bracket *d'*, which may be made integral with bracket *d*.

G represents a crank-pin on the disk of the driving-gear F'.

H represents a pitman journaled at one end upon the crank-pin G. It is detachably connected with the wrist-pin I at or near its opposite end. This detachable connection of the pitman is preferably accomplished by a semi-circular journal, *i*, formed on the pitman H, as shown in Fig. 4. The crank-pin G, instead of being rigidly secured on the rim of gear-wheel F', may be secured radially adjustable in a slot, *f*, made in the body of said gear-wheel F', as shown in Fig. 6, to regulate the operation of the dropping mechanism.

K K' represent a crank-lever, preferably pivoted to the transverse bars C² of the runner-frame C. K' represents the adjustable portion of the crank-shaft K. It is bolted to the

part K through the slot *l*, which allows its vertical adjustment to regulate the throw of the crank-pin I and the length of the stroke of the reciprocating bar M, which bar operates the dropping mechanism.

b represents a pin projecting from the lever K and resting in the fork *e*, which is attached to the reciprocating bar M. The lever K and bar M may be attached in any manner which will allow the bar M to move in straight lines and the lever K, which moves in the arc of a circle, to reciprocate the bar M. This crank-bar K is adapted for the attachment of a hand-lever to operate the machine as a hand check-rower, the pitman H being detached or removed; or the bar K may be increased in length and a handle formed on its upper end, as shown in Fig. 7. It is also adapted to be attached to an automatic check-rowing device, and as such is an important feature of our invention.

N represents a foot-lever pivoted to the runner-frame C by bolt *c*, as shown in Figs. 1 and 2. Its rear end is located in convenient reach of the foot of the operator occupying seat P. *a* represents forks or pins upon the front end of foot-lever N, which project up each side of pitman H and act as guides to prevent lateral movement of the pitman when it is raised to detach it from wrist-pin I. The construction and arrangement of the pitman and foot-lever are such that the operator can readily detach the pitman from the wrist-pin I and stop the dropping of the seed.

In order to automatically stop the operation of dropping seed when the runner-frame is elevated, we provide a lug, O, preferably attached to the seat-standard O', so that when the operator elevates runner-frame C the rear end of foot-lever N will strike the lug O and be depressed, thereby detaching the front end of pitman H from its engagement with crank-pin I. This is an important feature, as the raising of the runner-frame by the foot of the operator will invariably disconnect the driving from the dropping mechanism and stop the waste of seed.

Several advantages are obtained by the use of this improvement.

First, it brings the operation of the dropping mechanism when used as a drill under easy control of the operator, either with or without raising the runner-frame.

Second, it is desirable to have all corn-planters readily convertible into automatic and hand check-row planters by quick and easy attachment of the devices which operate the reciprocating bar which drives the seed-dropping mechanism, and this is readily accomplished by means of our improved crank-arm K and K', in the manner above described.

The weight of the pitman is sufficient to keep it in engagement with the crank-pin I, and when it is elevated while the driving mechanism is in motion the drive-pins *a* allow it to reciprocate with the end free of engagement with the crank-pin, and allow it to automatically resume its engagement with crank-pin I when the pitman is lowered by lever N.

The dropping mechanism can be readily stopped and started by the simple raising of the lever N.

We claim—

1. In a check-row corn-planter, the rocking lever K, pivoted to the runner-frame below the bar M and between the seed-boxes, for imparting motion from the driving to the seed-dropping mechanism, substantially as herein described.

2. In combination with the reciprocating bar of a corn-planter, the rocking lever K, pivoted to the runner frame below the reciprocating bar and made adjustable radially to the line of its axis, substantially as herein set forth.

3. The combination of the reciprocating bar with the rocking lever pivoted upon the runner-frame below said bar with a pitman connected with the driving mechanism, substantially as described.

4. The combination, with a corn-planter having a drill attachment, of a pitman connecting the driving mechanism with the seed-dropping mechanism, arranged for automatically disconnecting the seed-dropping mechanism when the runners are raised, substantially as described.

5. The combination, in a corn-planter having a drill attachment, of a pivoted lever under control of an operator and a pitman connecting the driving mechanism with the seed-dropping mechanism, said lever serving to disconnect the driving mechanism from the seed-dropping mechanism.

6. In combination with the pitman H and lever N, the lug O, attached to the main frame of the planter, for disengaging the pitman when the runners are raised, substantially as herein set forth.

7. In combination with the reciprocating bar M, the rocking lever K, pivoted to the runner-frame below the reciprocating bar, and adapted to operate as a hand-lever when the pitman H is disengaged, substantially as herein set forth.

In testimony whereof we have hereunto set our hands and seals in the presence of two subscribing witnesses.

ANDREW RUNSTETLER. [L. S.]
MICHAEL RUNSTETLER. [L. S.]

Witnesses:

HARRY HOOVER PRUGH,
WARREN MUNGER.