(No Model.) 2 Sheets—Sheet 1.

J. C. WEISS.

CORN PLANTER AND CULTIVATOR.

No. 270,524. Patented Jan. 9, 1883.

Fig. 1.

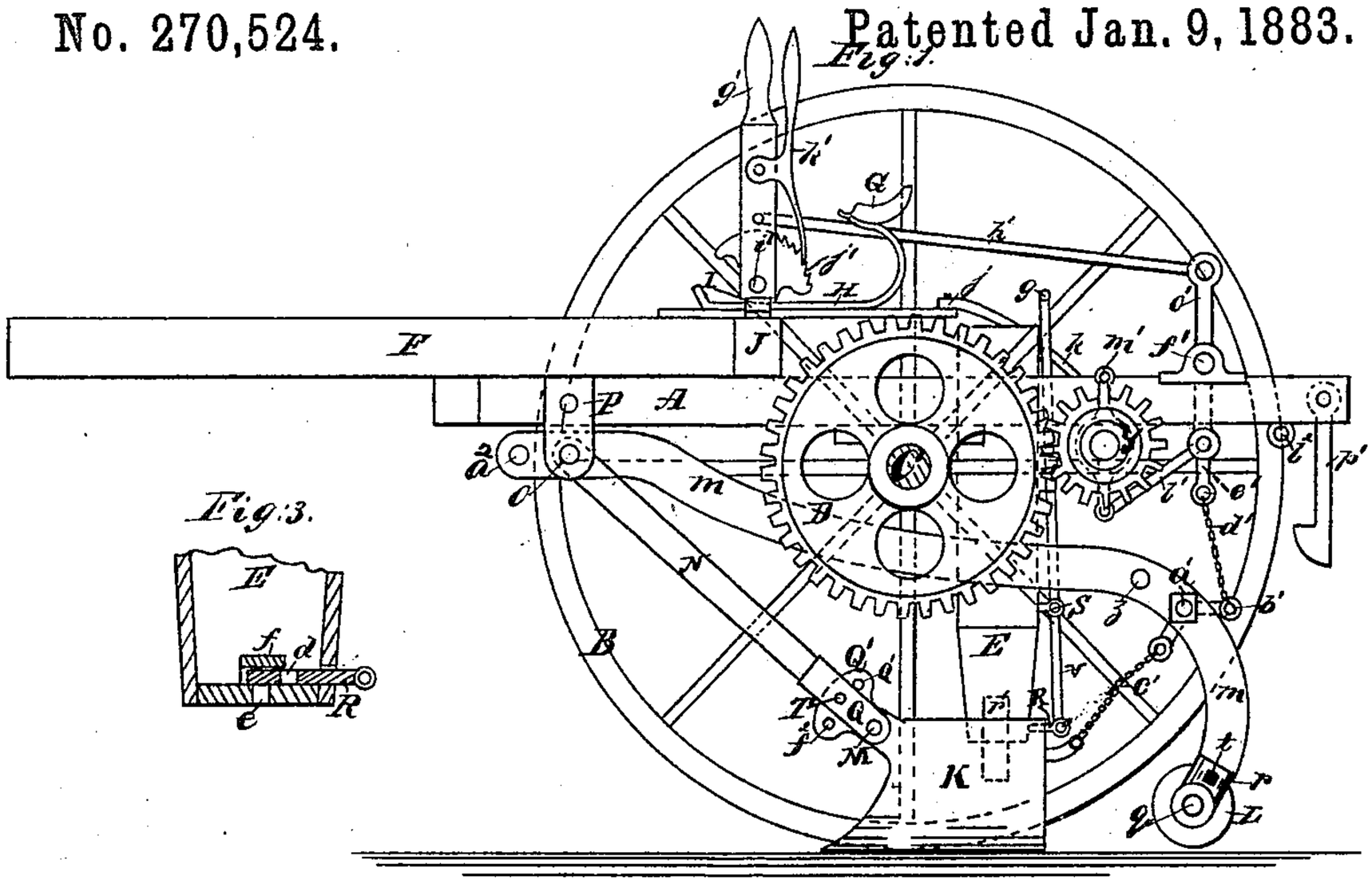
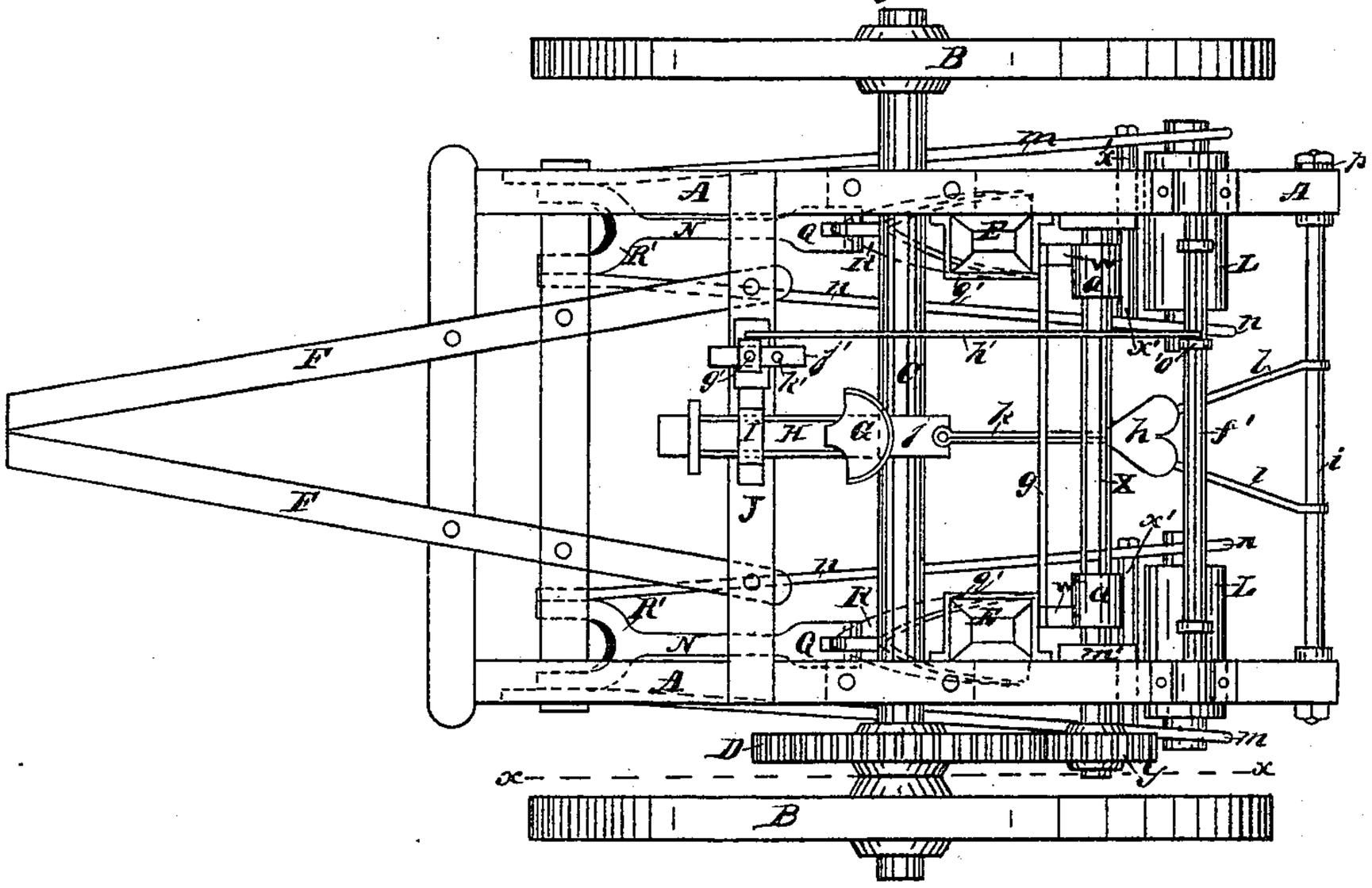


Fig. 3.

Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

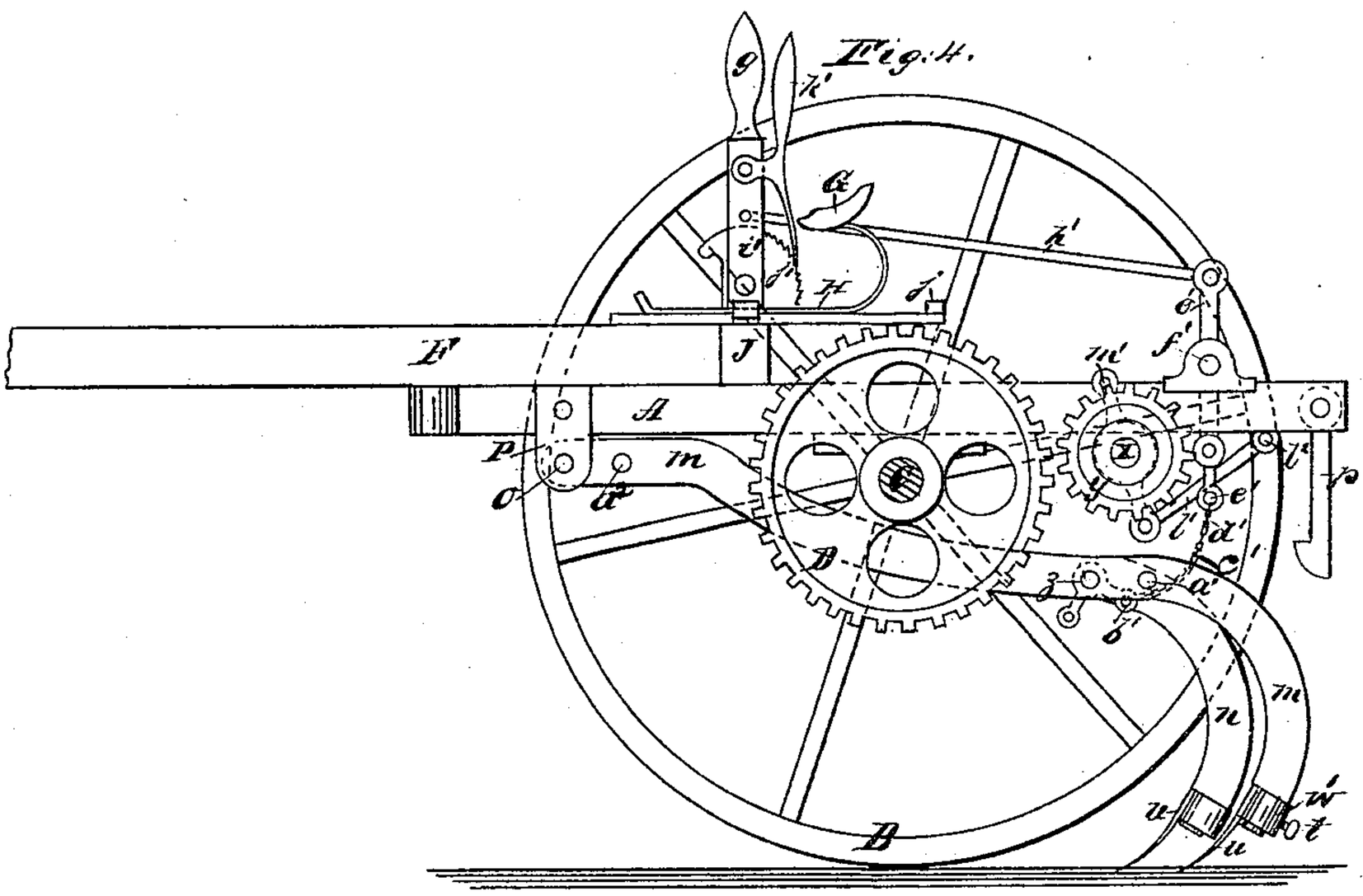
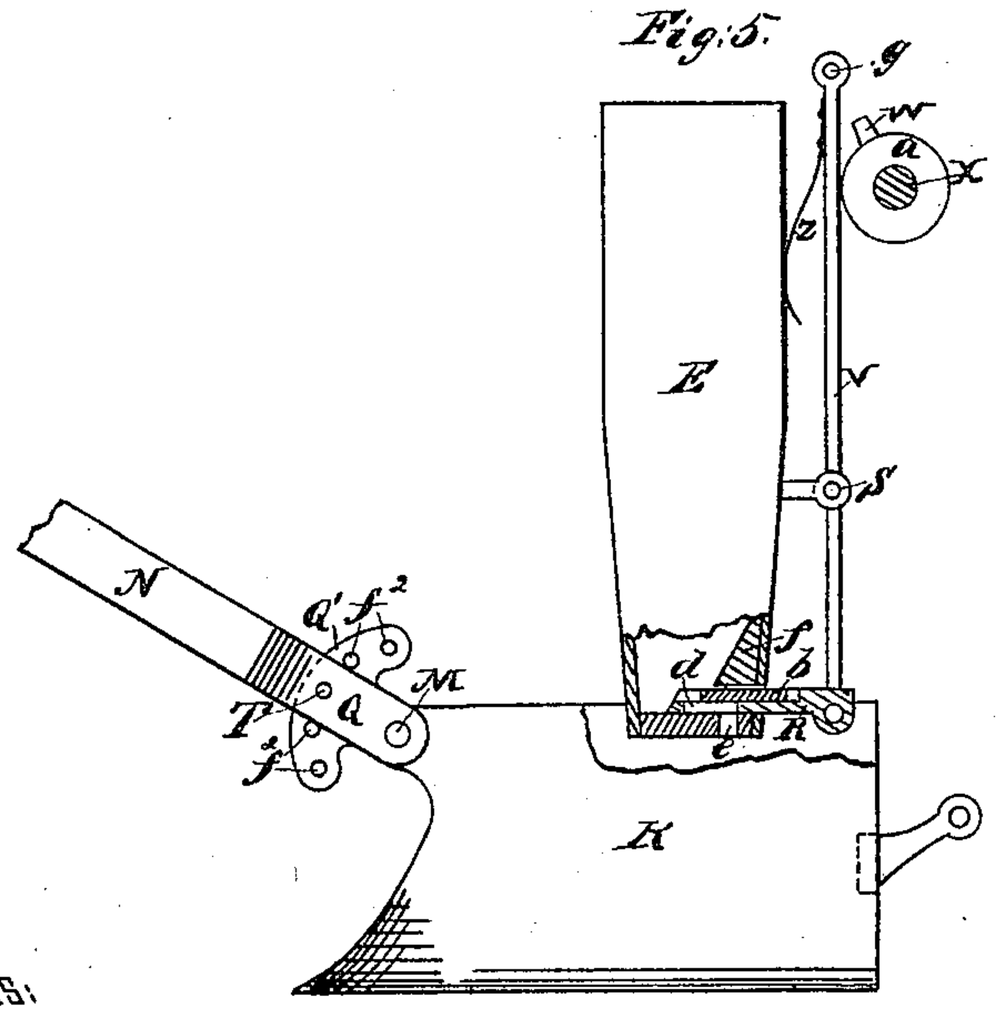


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN C. WEISS, OF PITTSBURG, KANSAS, ASSIGNOR TO HIMSELF AND ROBERT VOETH, OF SAME PLACE.

CORN-PLANTER AND CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 270,524, dated January 9, 1883.

Application filed April 8, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. WEISS, of Pittsburg, in the county of Crawford and State of Kansas, have invented a new and Improved Corn-Planter and Cultivator, of which the following is a full, clear, and exact description.

My invention relates to improvements in corn-planters and cultivators; and it consists in the peculiar construction and arrangement of parts, as hereinafter fully set forth.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal sectional elevation of my improved machine as adjusted for a corn-planter, the section being taken on line *x x* of Fig. 2. Fig. 2 is a plan view. Fig. 3 is a detail of the dropping-box in section. Fig. 4 is a sectional elevation of the machine as adjusted for a cultivator, the section being on the same line as that of Fig. 1; and Fig. 5 is a detail of the dropping apparatus and the furrowing-plow, partly in side elevation and partly in section.

The frame A is mounted on a pair of light truck-wheels, B, by the axle C, to which the wheels are made fast, for revolving the axle to transmit the motion for working the dropper-slides by the cog-wheel D. The wheels B are placed the distance apart equal to three rows, or twice the distance of the hoppers E apart, so that they constitute the self-marking device by running one wheel in one of the tracks previously made. The frame is balanced, or nearly so, on the truck-axle C, and is provided with a suitable tongue, F, or hounds for the attachment of the tongue, with a driver's seat, G, behind, the seat being attached by a bar, H, capable of sliding forward and backward between the cleat I and frame-timber J, and fastened in different positions by a key or other device, to enable the driver to shift his position from time to time, as may be required, to balance the machine.

K represents the furrow-opening plows, through which the corn is dropped from the hoppers E, to be covered by the earth falling in behind said plows, and by the rollers L, which also pack the earth over the corn. These plows K are connected by the pivots M with the forked ends Q of draw-bars N, extending up to the shaft O, suspended from the under side of the machine, at the front part of the frame, to which shaft said draw-bars are connected by forked ends R′, which said forked connections prevent lateral divergence of the plows from the straight line. The lugs Q, by which the plows connect with the draw-bars N, have a series of holes, f^2, radial to the pivot M, for altering the set of the plows by pins T to regulate the depth of the furrows.

R represents the dropper-slides at the bottom of the hoppers E, said slides being connected to levers V, pivoted to the hoppers at S, and ranging up along said hoppers to the top and a little above, to be worked by the tappets W on the shaft X, which gears by pinion Y with wheel D, the reverse motion being effected by springs Z. Two, three, or more of these tappets W may be attached by screwing into the hubs *a*, according to the distances apart it is required to drop the corn; and the quantity dropped each time may be regulated by shifting the operating-plates *b* in said slides to open or close the pockets *d* of the slides which receive the corn when thrust forward in the hoppers by the springs and discharge it through holes *e* when drawn back under the ledge *f* by the lever. When it may be desired to work these dropper-slides by hand, a bar, *g*, is extended from one lever V to the other and inserted in a hole on top of each tube, worked by a person sitting on the seat *h*, which is mounted on the rod *i* at the hind end of the machine, and on the shank *j* of the driver's seat, by the doubled and forked rod *k l*, as shown in Fig. 2; or it may be otherwise attached. When this hand contrivance is used the tappet-shaft X will be shifted out of gear with the cog-wheel D and connected by link *l′* with stud l^2, said link *l′* being disconnected from lever *e′*.

The rollers L, which follow the furrowers and droppers, are journaled between beams *m n*, also pivoted at the front of the machine on the shaft O, and serving for the beams of the cultivator-plows *u*, Fig. 4, when the machine is adjusted as a cultivator. As a corn-planter,

the roller-axles *q* are journaled in sockets *r*, fastened to the lower ends of the beams *m n* by set-screws *t*, to be detached when the cultivator-plows *u* are to be connected by similar sockets, W'. The beams *m n* have a rod, *x'*, connecting them above the rollers, to secure them on the roller-axle *q*, which rod being taken out allows the beams to separate for the discharge of the rollers. Rod *x'* is also used when the cultivators are attached; but in that case it is shifted into the forward hole *z* in the beam *m*, said beam being shifted back onto its forward hole *a'* the object being to set one cultivator a little behind the other by shifting one beam back of the position it must occupy for supporting the roller square to the line of travel.

The rod *x'* a'so serves as a pivot for the bell-cranks *b'*, to which plows K are connected by chains *c'*, to raise them out of the ground when required for turning at the sides of the field, the said bell-cranks being connected by chains *d'* with levers *e'* on the rock-shaft *f'*, worked by hand-lever *g'*, arm *o'*, and connecting-rod *h'*, said hand-lever being pivoted at *i'* to a circular rack, *j'*, to which it is secured, to hold the plows and rollers up by the latch *k'*. The rock-lever *e'* has a link, *l'*, as before stated, connecting with the hanger *m'*, in which the shaft X is journaled, so that when the plows and rollers are raised the dropper-slides will not be worked, the pinion *y* being shifted out of gear. The beams may be hooked up behind by hooks *p'*, also, when required, for supporting them more permanently above ground for removing the machine to and from the field.

The hoppers E are detachably supported in the guards *q'* of the frame, and by a lug, *r'*, (dotted in Fig. 1,) resting on the top of the plow, so that they can be lifted out with the dropper-slides and levers V attached when the planting is done and the cultivating is to begin. The plows K are then detached, also, by disconnecting the bars N from the shaft O and unhitching chains *c'*, the rollers L are detached, beams *m* shifted back, and the cultivator-plows *u* attached, thus making the machine ready for cultivating the corn when suitably grown.

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

1. The combination, with the hoppers E, the plows K, and cog D, arranged upon the driving-shaft C and engaging with the pinion Y, disposed upon the shaft X, carrying the tappets W, of the levers V, connected together at their upper ends by the rod *g*, and pivoted to the hoppers E at S, and to the slides R in the lower part of the hoppers, and the springs Z, disposed to throw the upper ends of the levers V outward from the hoppers, substantially as shown and described, and for the purpose set forth.

2. The combination, with the plows K and the beams *m n*, of the chains *c'*, the bell-crank lever *b'*, the chains *d'*, the lever *e'*, the connecting-rod *h'*, and the operating-lever *g'*, substantially as and for the purpose set forth.

3. The combination, with the cog-wheel D, the plows K, the beams *m n*, the chains *c' d'*, the bell-crank lever *b'*, the lever *e'*, connecting-rod *h'*, and operating-lever *g'*, of the pinion Y and the connecting-link *l'*, substantially as and for the purpose set forth.

4. The combination, with the rollers L, provided with the sockets *r* and set-screws *t*, of the beams *m n*, having their ends adapted to fit in said sockets, substantially as and for the purpose set forth.

5. The combination, with the beam *n* and the shaft O, of the beam *m*, provided with the holes *a' z*, and of a greater length than the beam *n*, said beams having roller-sockets *r* and rollers, as shown and described, and for the purpose set forth.

6. The combination, with the frame and the plows K, of the hoppers E, the guards *q'*, secured to the frame, and the lugs *r'*, on the plows, substantially as and for the purpose set forth.

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