(No Model.)

2 Sheets—Sheet 1.

E. GAGER.

CORN PLANTER.

No. 299,975. Patented June 10, 1884.

Fig. 1.

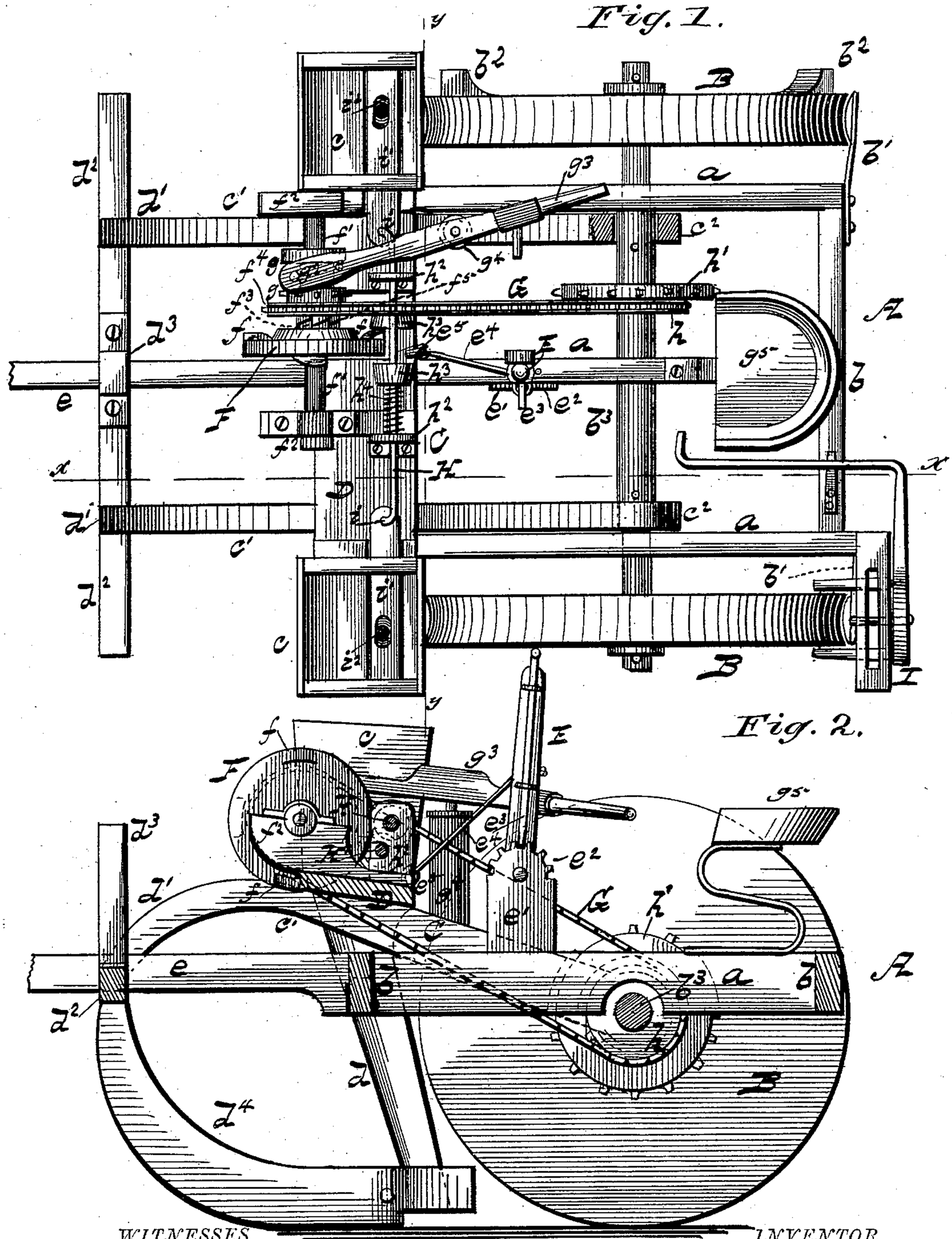

Fig. 2.

WITNESSES

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Fig. 3.

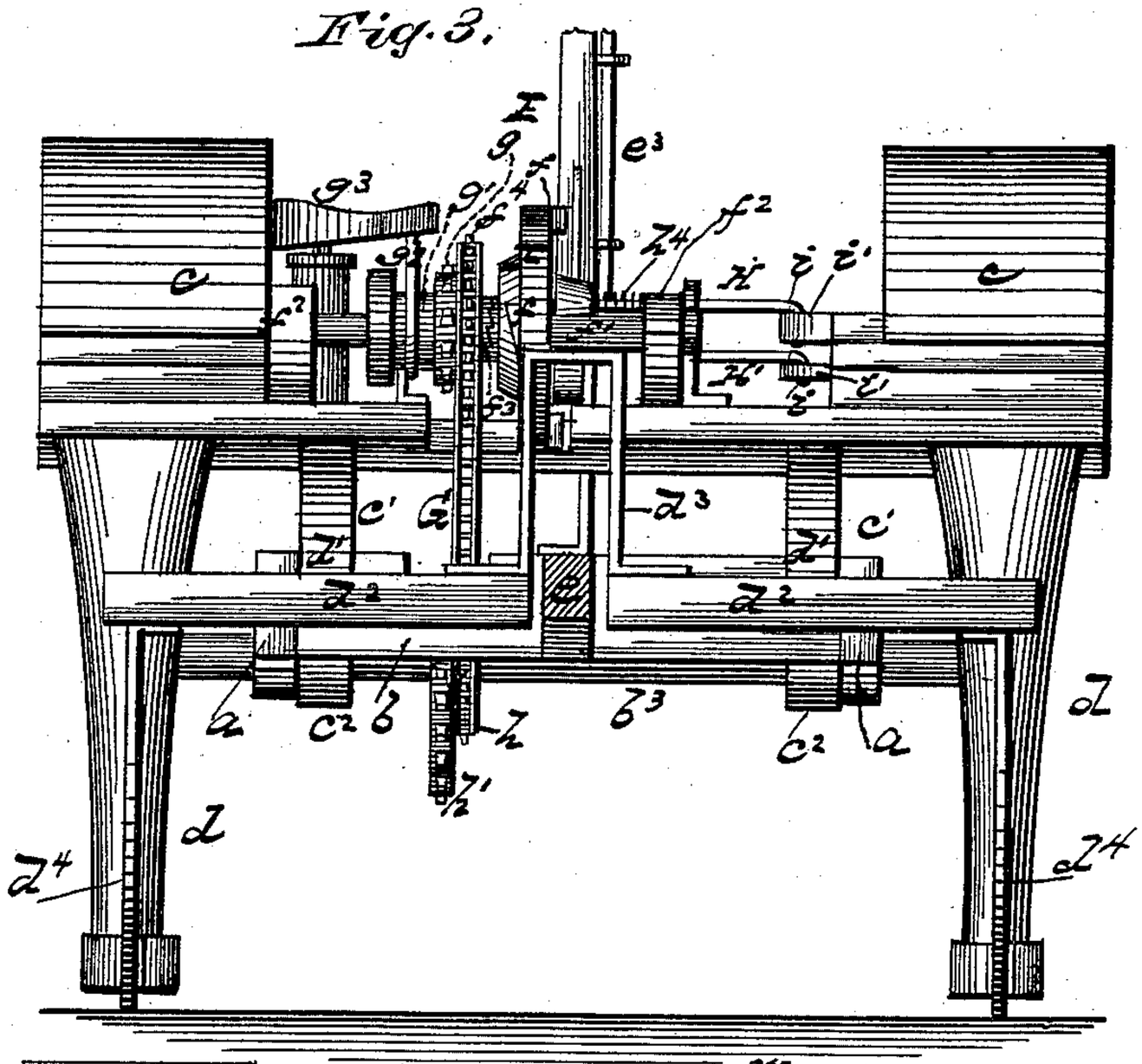
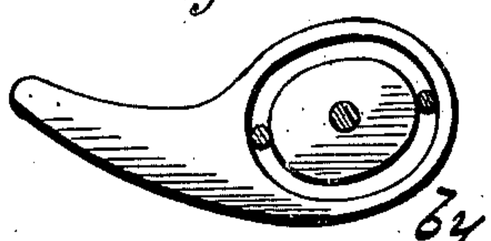


Fig. 4.

Fig. 5.



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UNITED STATES PATENT OFFICE.

EDWIN GAGER, OF NORWALK, OHIO.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 299,975, dated June 10, 1884.

Application filed February 27, 1884. (No model.)

To all whom it may concern:

Be it known that I, EDWIN GAGER, a citizen of the United States, residing at Norwalk, in the county of Huron and State of Ohio, have invented certain new and useful Improvements in Corn-Planters, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention has relation to improvements in corn-planters; and it consists in the construction and novel arrangement of the various parts of which it is composed, all as will be hereinafter more fully explained, and particularly pointed out in the appended claims.

The annexed drawings, to which reference is made, fully illustrate my invention, in which Figure 1 represents a top or plan view of my corn-planter. Fig. 2 is a vertical sectional view of the same, taken through dotted line *x x*, Fig. 1. Fig. 3 is a front view. Fig. 4 is a transverse section taken through dotted line *y y*, Fig. 1; and Fig. 5 is a detail view of the brake-cam.

Referring by letter to the accompanying drawings, A designates the frame of the machine, consisting of the longitudinal bars *a a a* and transverse bars *b b*. The outer bars *a a* are provided with boxes or bearings for the axle b^3, which latter is fixed to the supporting-wheels B B, that are concaved on their periphery, in which bear scrapers $b' b'$, secured to the rear of the frame A; and one of the wheels B is provided with lugs or projections $b^2 b^2$ on its outer face, that serve to mark the ground when the machine is planting.

C C indicate the frame, on which is mounted the seed hoppers or boxes *c c*, which frame consists of longitudinal bars $c' c'$, the inner ends of which are provided with bearings c^2 c^2, that engage the axle aforesaid; and said bars are connected in front by a broad transverse bar, D, at the ends of which, and directly in front of the wheels B B, are arranged the hoppers or seed-boxes, from the under side of which extend the tubes *d d* to the ground. The forward ends of the bars $c' c'$ are curved downwardly, as at $d' d'$, to each of which is secured a transverse bar, $d^2 d^2$, that are connected at their inner ends by a bar, d^3, in the shape of the letter **U**; and secured to the outer ends of these transverse bars $d^2 d^2$ are the runners or furrow-openers $d^4 d^4$, which are curved downward and rearward, and are secured to the lower ends of the feed-tubes.

Between the ends of the bars $d^2 d^2$, and working within the **U**-shaped bar, is the tongue *e*, which is secured to the frame A, and has a vertical movement within said **U**-shaped bar.

Secured to the center longitudinal bar *a* is a standard, e', which is provided with a semicircular toothed rack, e^2, and to said standard is pivoted, at its inner end, a hand-lever, E, which is provided with pawl e^3 to engage said tooth-rack; and to this hand-lever E is also secured one end of a rod, e^4, the other end of which connects with an eye or staple, e^5, secured to the transverse bar D; and by operating this lever the frame, with its seed-hoppers, can be raised or lowered, as may be desired.

F designates the cam-wheel, on each side of which are the short cams *f f*, and said wheel is keyed to a transverse shaft, f', which has its bearings in boxes $f^2 f^2$, secured to the broad bar aforesaid. On one side of the cam-wheel are clutch-teeth f^3, and on the shaft is a sprocket-wheel, f^4, having clutch-teeth f^5, to engage the teeth on the cam-wheel, and said wheel f^4 has also secured to it, or a part of the same, a small sprocket-wheel, *g;* and next to the latter, and a part thereof, is a grooved wheel, g', in which groove works a pin, g^2, secured to the outer end of a hand-lever, g^3, which is pivoted to a post, g^4, on the frame A, and in convenient reach of the driver's seat, g^5; and by means of this lever the sprocket-wheel with its clutch-teeth are thrown in and out of engagement with the cam-wheel and its clutch-teeth. An endless chain, G, connects the sprocket-wheel above mentioned to a sprocket-wheel, *h*, on the axle, and on which is also a large sprocket-wheel, h', the same being keyed to said axle.

H H′ represent transverse rods, which have their bearing in standards $h^2 h^2$, secured to the broad transverse bar on the pivoted frame aforesaid, and secured to each of these rods are blocks $h^3 h^3$, each of which is arranged on opposite sides of the cam-wheel, and upon each rod is a coil-spring, $h^4 h^4$, that have their end bearings upon said blocks and the standards, whereby the blocks are kept in engagement with the

cam-wheel. The ends of the rods above mentioned are bent into hooks *i i i i*, which engage perforations in the inner ends of the hopper-slides *i' i' i' i'*, there being two arranged in the bottom of each hopper, and one above the other, as shown in the drawings, and are provided with the openings i^2 i^2, that register with the openings in the transverse bar D and the seed-tube.

I represents a brake connected to the wheel and designed to grip and firmly hold the same, in order to allow the machine to be drawn ahead or backed, as circumstances may require, thereby keeping said machine in the rows both ways.

It will be observed that my machine is easily operated by one person, and that the frame pivoted to the axle can be raised or lowered by the hand-lever on the rack-standard, to adjust the seeding mechanism, as well as the feed-tubes and runners or furrow-openers, whereby the same may be raised over any obstacle and kept off the ground when the machine is being transported from one place or field to another; and by means of the pivoted hand-lever g^3 the sprocket-wheels f^4 g on the shaft f' can be thrown in and out of engagement with the cam-wheel at pleasure, thereby stopping the feed-slides in the hoppers and starting the same in operation at will. When the machine is drawn forward, the revolution of the drive-wheels B B turns the sprocket-wheels on the axle, and, through the medium of the endless chain, engaging the sprocket-wheel on the shaft f', causes the cam-wheel to revolve, which latter acts upon the blocks on the rods H H', causing the latter, with their hopper-slides, to operate alternately, thus feeding the grain from the seed-boxes. The smaller sprocket-wheel on the axle of the machine corresponds in size with a similar wheel, f^4, on the cam-shaft, and when the chain is attached to these wheels the planting is made in hills of equal distance apart; and when the chain belt is attached to the large sprocket-wheel on the axle and the small sprocket-wheel on the shaft f' the machine is arranged for planting in drills, and the markers above mentioned indicate upon the ground where each hill is situated.

This machine being a self-dropper or feeder, it requires but one person to operate it, and does not require the ground to be marked prior to starting the machine, as it is a self-marker. At the same time it is durable, easy to operate, and cheap to manufacture.

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

1. In a corn-planter, the combination, with the frame A, axle b^3, and drive-wheels B B, having concaved peripheries and markers, of the frame C, pivoted to the axle b^3, connected in front by the transverse bar D, and the side bars, *c' c'*, extending forward and curved downwardly, and having the cross-bars d^2 d^2, connected to one another by the U-shaped bar d^3, straddling the tongue of the machine, and having the runners or furrow-openers secured to the outer ends of the cam-wheel, the sprocket-wheels having the clutch, the rods H H', provided with the block, the springs upon the rods, the slides, one arranged above the other in the hoppers, the standards h^2 h^2, semicircular rack-standard *e'*, secured to the frame A, lever E, pivoted to this standard, rod e^4, connected to the lever, and broad transverse bar D, clutch-lever g^3, sprocket-wheels on the axle, and endless chain connecting the same to the sprocket-wheels on the shaft f', the whole operating as herein shown, described, and for the purposes specified.

2. In a corn-planter, the combination of the parts herein shown and described, consisting of the main frame A, the axle b^3, carrying the sprocket-wheels, and the drive-wheels, concaved on their periphery, the markers, the standard *e'*, lever E, rod e^4, the pivoted frame C, constructed as described, and having the transverse bar D, the cam-wheel, clutch, and sprocket-wheels on the shaft f', journaled in the bearings f^2 f^2, rods H H', having the blocks and springs, the feed-slides arranged one above the other in the seed-boxes, standards h^2 h^2, clutch-lever g^3, and brake I, the whole operating as described, and for the purposes specified.

In testimony whereof I affix my signature in presence of two witnesses.

EDWIN GAGER.

Witnesses:
ETHAN A. PRAY,
SAMUEL K. MARNE.