

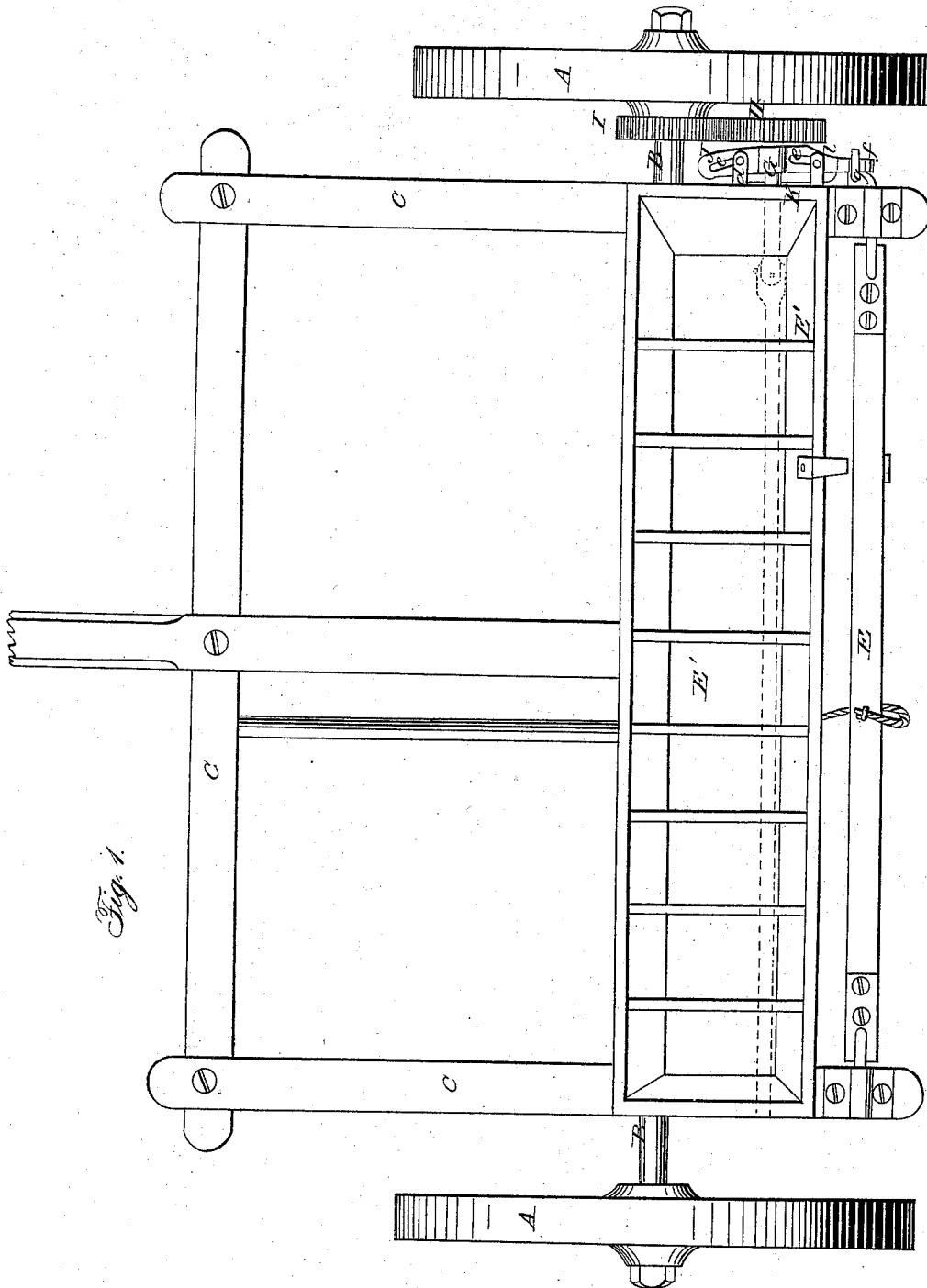
J. S. MARSH.

2 Sheets—Sheet 1.

Grain-Drill.

No. { 1,298, }
 { 32,302 }

Patented May 14, 1861.



Witnesses:

Gustavus Dulwich
Goodwin Y. W. S.

Inventor:

James S. Marsh
by Robt W. Yawcock
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Fig. 2.

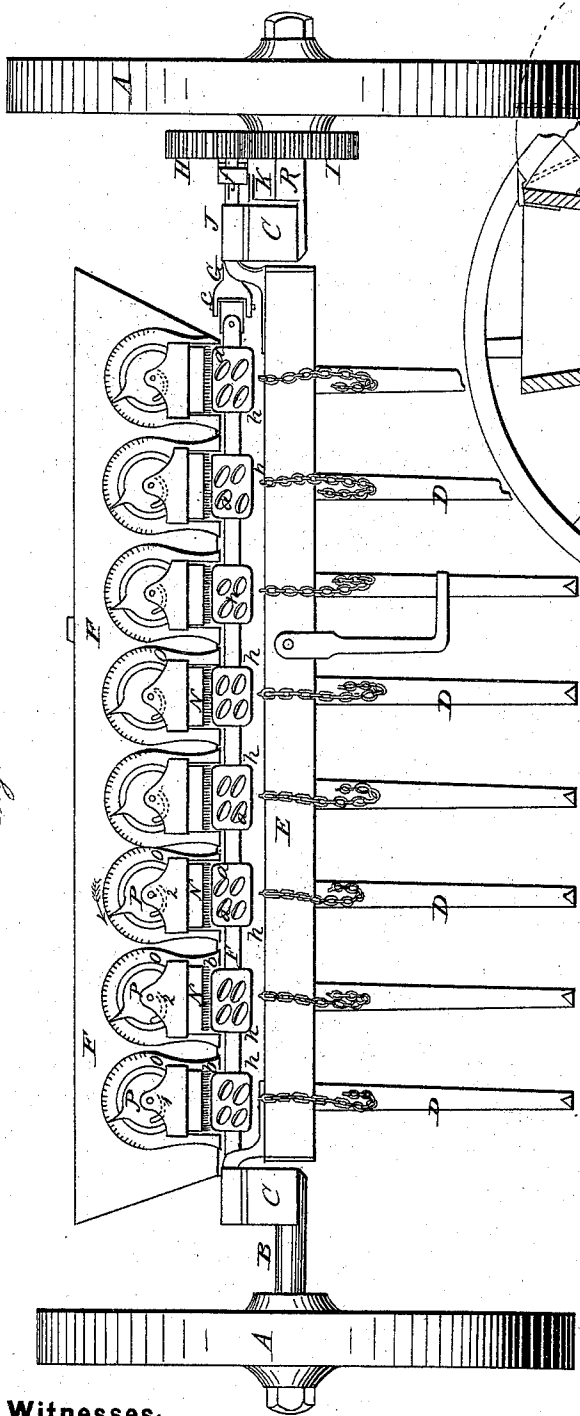
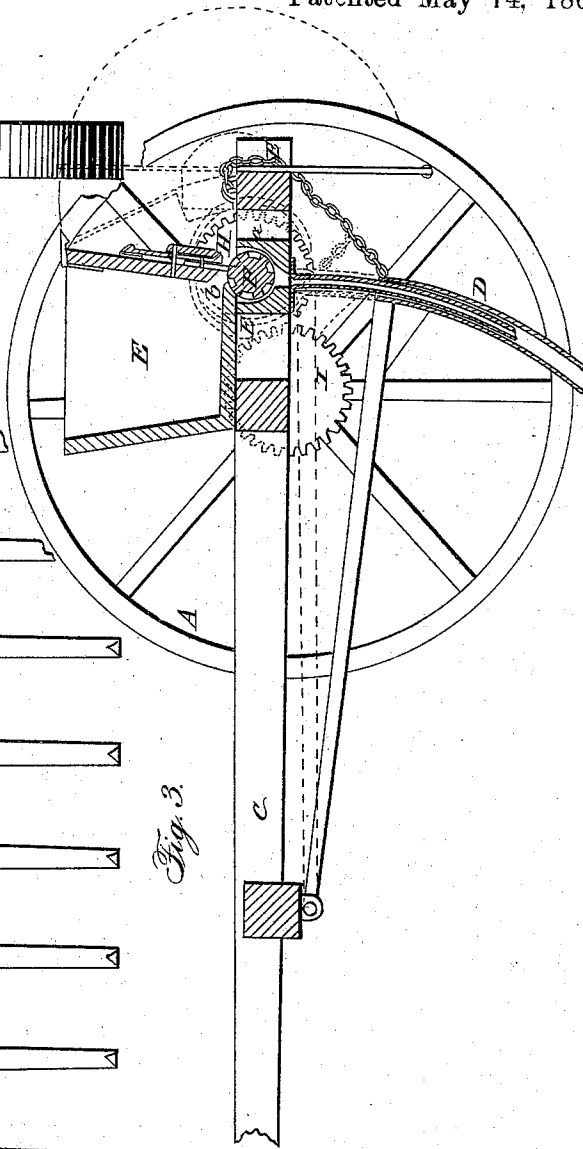


Fig. 3.



Witnesses:

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Inventor:

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UNITED STATES PATENT OFFICE.

JAMES S. MARSH, OF LEWISBURG, PENNSYLVANIA.

IMPROVEMENT IN SEED-DRILLS.

Specification forming part of Letters Patent No. 32,302, dated May 14, 1861.

To all whom it may concern:

Be it known that I, JAMES S. MARSH, of Lewisburg, in the county of Union and State of Pennsylvania, have invented a new and useful Improvement in Seed-Planters; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan or top view of a seed-drill with my improvements applied to it. Fig. 2 is a rear end view of the same, and Fig. 3 is a vertical longitudinal section of the same.

Similar letters of reference in each of the several figures indicate corresponding parts.

My invention consists, first, in a new arrangement for throwing the seeding-roller out of gear and simultaneously therewith elevating the drill-teeth.

It consists, second, in a new combination of a distributing-roller, seed-hopper, adjustable gates, and eccentrically-slotted plates.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A A are the wheels, B B the axles, C the frame, D the teeth, E the transverse lever-bar for raising the teeth, and E' the hopper, of my improved seed-drill. The parts named are constructed and arranged in substantially the same manner as in drills now commonly used, except in particulars hereinafter mentioned.

F is a distributing-roller with seed-cells *a* in its circumference. It is arranged to revolve in a circular recess formed in one of the transverse timbers of the frame, being located directly over the drill-teeth and under the discharge-passages *b b* formed in the rear corner of the hopper, as shown. To one end of this roller a journal, G, is attached by a loose horizontal joint, *c*, and on the extreme end of said journal is arranged a pinion, H, and the same is made to gear with the spur-wheel I, which is attached to the hub of one of the propelling-wheels A, as represented. The journal is supported by and turns in a box formed on a sliding plate, J, which has its support on a casting, K, attached to the side of the drill-frame, and is loosely coupled to said casting by means of guide-pins *d d*, said pins passing up through curved oblong slots *e e* in the sliding plate, as represented. The extreme rear end of the

sliding plate terminates in an open box, *f*, which receives a crank-shaped journal, *g*, attached to the end of the transverse drill-tooth, elevating bar E in the manner shown.

From the description given above it will be seen that when the lever-bar E is turned up from the position shown in black to the position shown in red the crank-shaped journal *g* will cause the sliding plate J, with the journal of the pinion, to move backward, the hinge-joint and slots allowing of this movement, and therefore, simultaneously with the elevation of the teeth, the pinion H is thrown out of gear with the spur-wheel I and the revolution of the distributing-roller stopped. By turning down the bar E the pinion is again thrown in gear, the teeth allowed to descend to the proper position for planting, and the roller set in motion.

The distributing-roller is made of chilled iron, and its cellular distributing portions *h h* are cast or slipped over a small shaft, as represented; and just above each distributing portion, over each of the discharge-passages of the hopper, a vertically-sliding metallic gate, N, is arranged, said gates having bristles or other soft substance attached to their lower edge for the purpose of easing the passage of the seed from the hopper to the distribution-roller. The gates N are arranged on the back of the hopper, and each being kept in place by means of a metallic guide-casting, O, and a lever-plate, P, which is coupled to the gate by means of pin *i* projecting from the gate, said pin passing loosely through an eccentric slot cut through the lever-plate, as represented. The upper part of each of the guide-castings is in nearly the form of a circle, and has its surface graduated so as to gage the size of the opening through which the seed pass from the hopper.

It will be seen that by turning the lever-plates in the direction of the arrow the gate will be lowered by the action of the eccentric slot upon the pin and the discharge-passage decreased in size. A movement in a reverse direction increases the size of the discharge-passage. At the same time that the passage is increased or decreased in size the upper end of the lever-plate, in combination with the graduated portion of the guide-castings, indicates the exact size of the passage, through which the seed is escaping.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the distributing-roller

F, hinged journal G of the distributing-roller, sliding bearing-plate J, having curved slots *ee* in it, supporting-casting K, coupling-pins *d d*, pinion H, spur-wheel I, lever-bar E, with crank-shaped journal *g* on its end, and drill-teeth D, substantially in the manner and for the purpose set forth.

2. The combination of the crank-shaped journal *g*, slotted bearing slide or plate J, and hinged journal G, in the manner and for the purpose described.

3. The combination of the revolving cellular distributing-roller F, hopper E', sliding seed-gate N, slotted lever-plate P, and guide-casting O, in the manner and for the purpose herein described.

JAMES S. MARSH.

Witnesses:

GOODWIN Y. ATLEE,
GUSTAVUS DIETERICH.