

(No Model.)

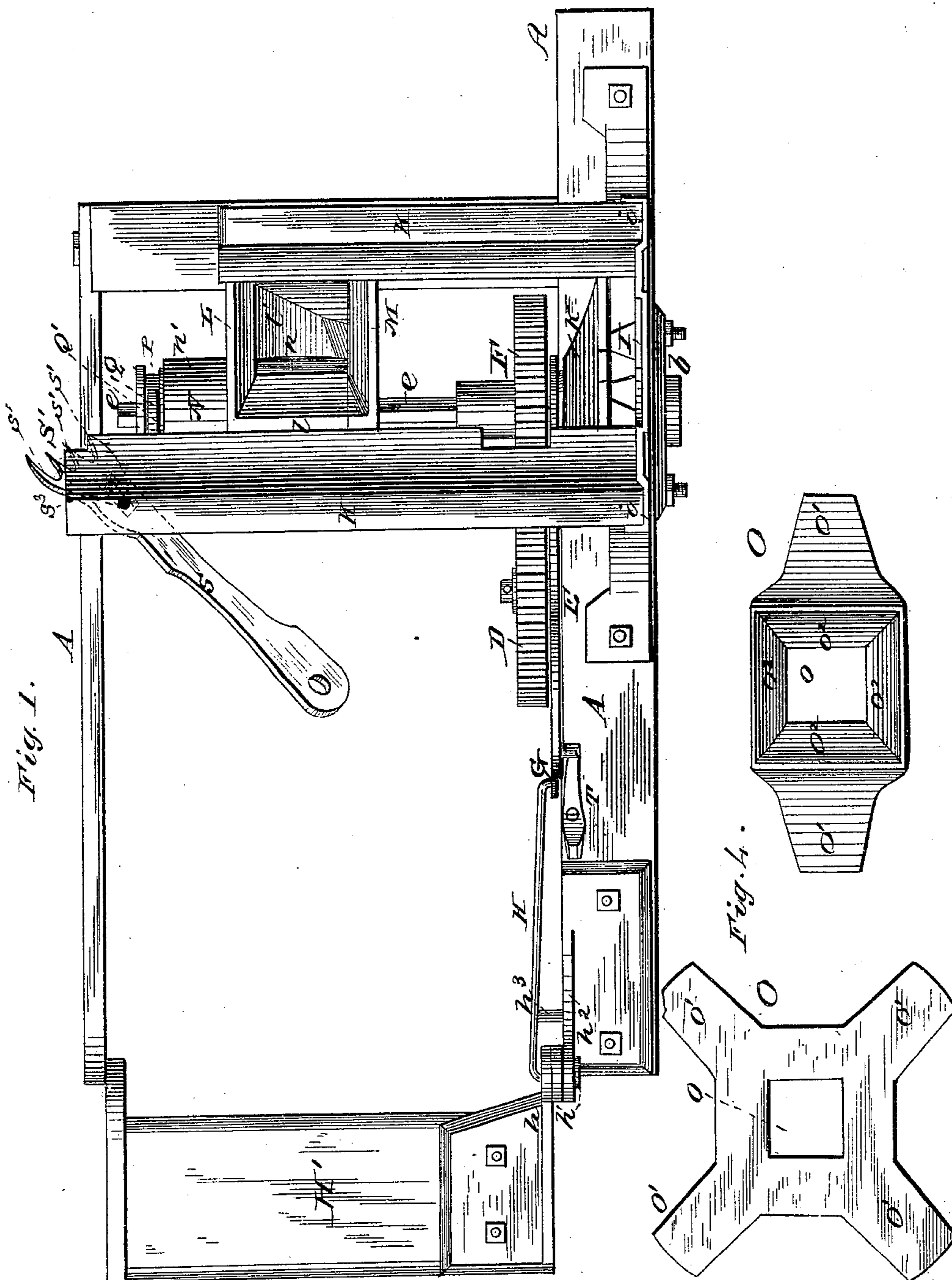
3 Sheets—Sheet 1.

L. E. PORTER.

SEED PLANTER.

No. 258,671.

Patented May 30, 1882.



WITNESSES

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INVENTOR

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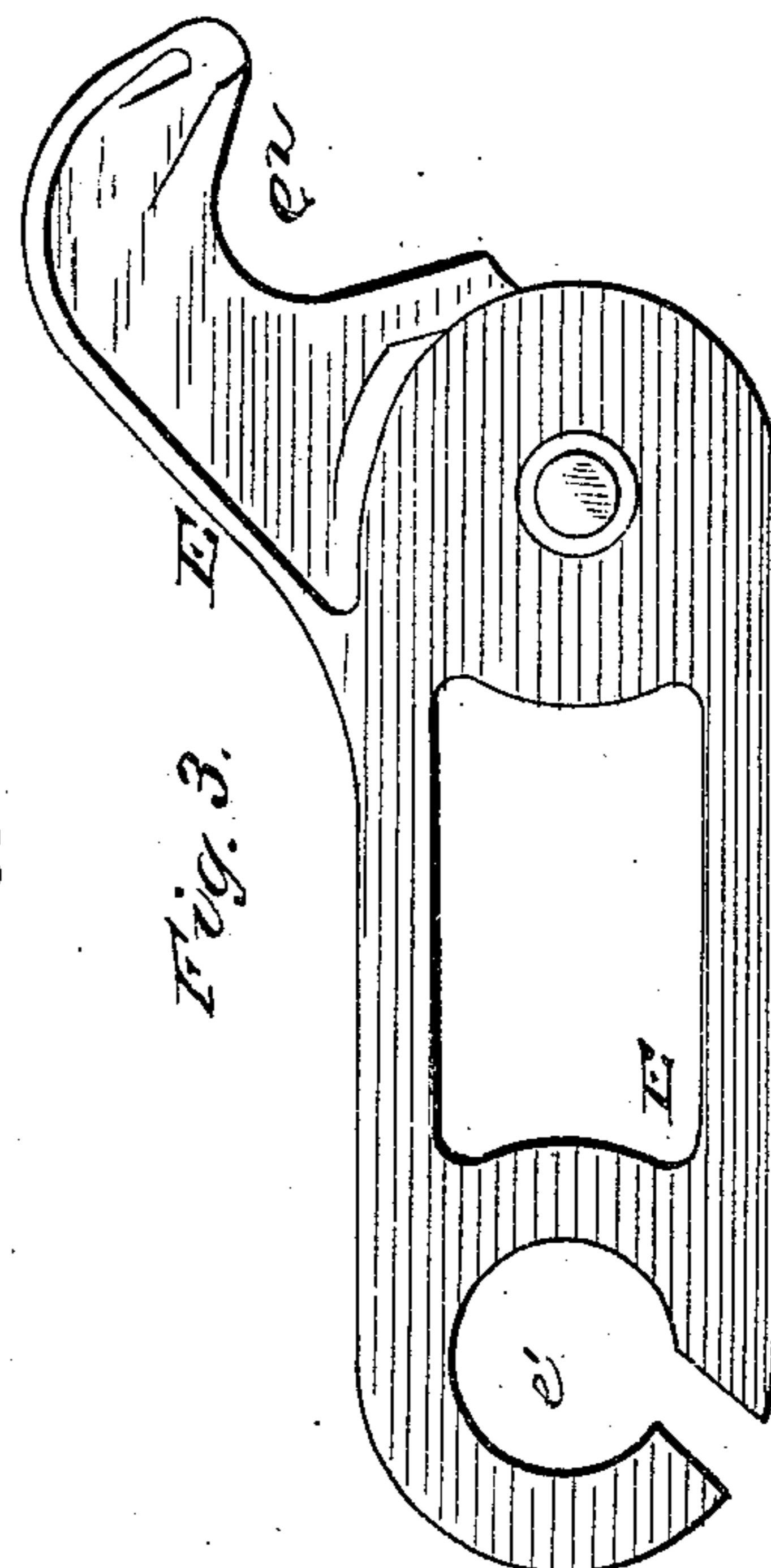
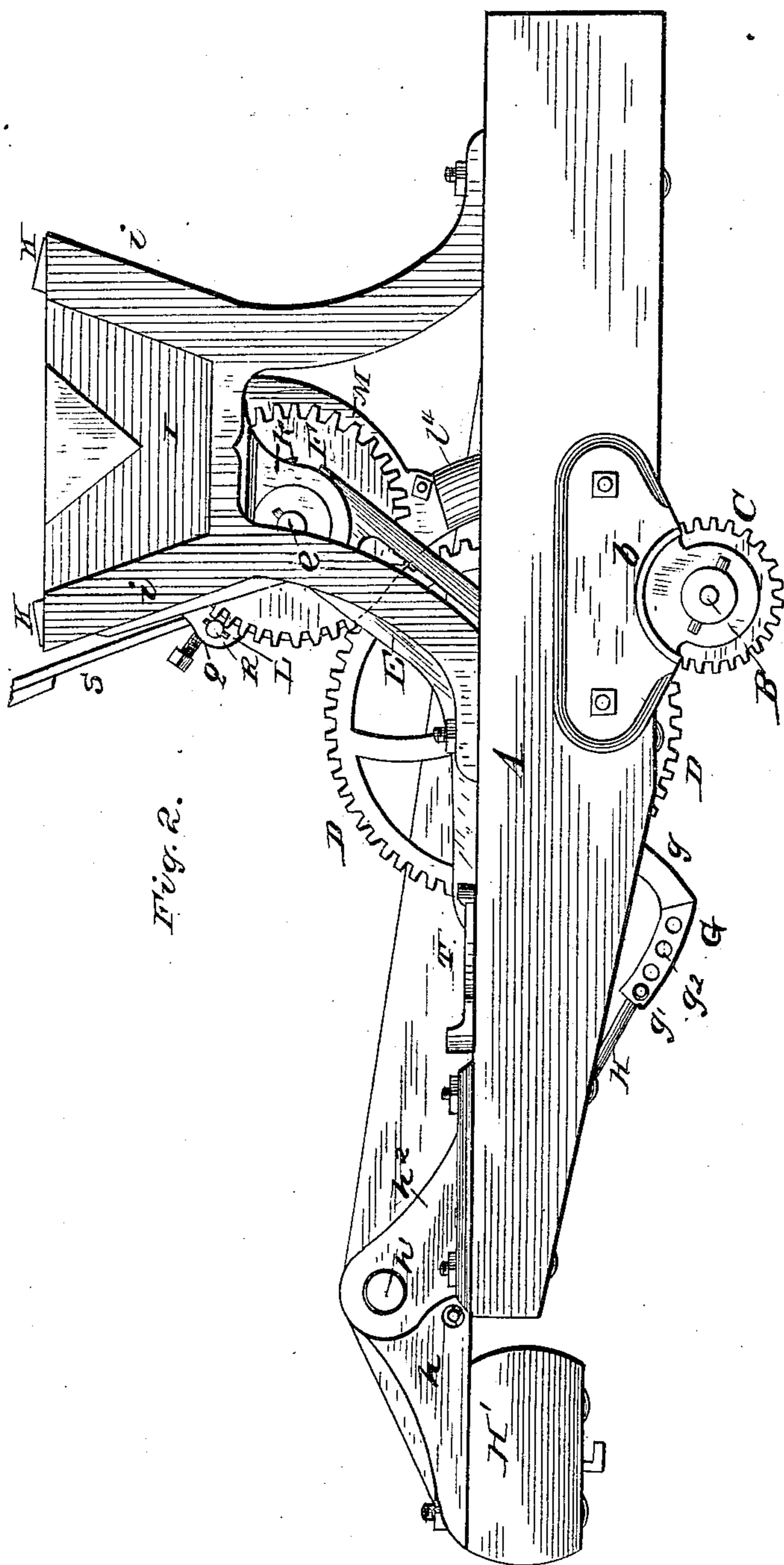
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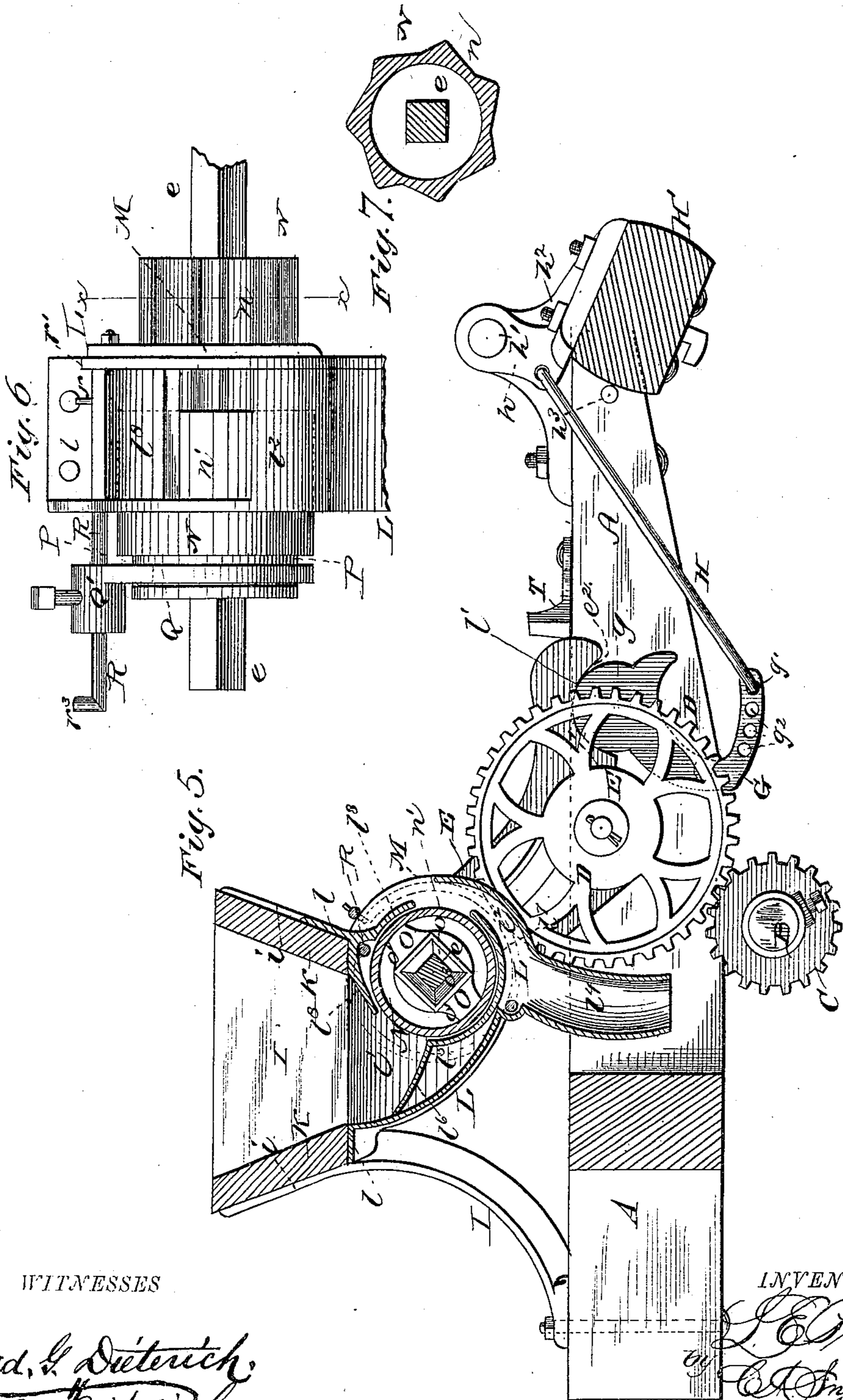
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WITNESSES

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# UNITED STATES PATENT OFFICE.

LUTHER E. PORTER, OF ST. CLOUD, MINN., ASSIGNOR OF ONE-HALF TO THE ROSENBERGER MANUFACTURING COMPANY, OF SAME PLACE.

## SEED-PLANTER.

SPECIFICATION forming part of Letters Patent No. 258,671, dated May 30, 1882.

Application filed October 15, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, LUTHER E. PORTER, of St. Cloud, in the county of Stearns and State of Minnesota, have invented certain new and useful Improvements in Seed-Planters; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

In the drawings, Figure 1 is a plan view; Fig. 2, a side view; Fig. 3, a detail view of the swinging arm or bracket; Fig. 4, a detail view representing the hub of the seeding-cylinder; Fig. 5, a vertical longitudinal sectional view; Fig. 6, a front detail view of the seed-cup and seeding-cylinder; and Fig. 7, a cross-section on the line  $x x$ , Fig. 6.

The object of this invention is to produce a simple, durable, and efficient broadcast-seeding machine.

Referring by letter to the drawings, A designates a portion of the main frame of the machine; and B is the axle, which is journaled in a bracket,  $b$ , secured to the frame.

C is a gear-wheel fixed on axle B, and adapted to intermesh with a larger gear-wheel, D, mounted on the side of a swinging bracket, E, which is hung upon the axle  $e$  of the rotary seeding-cylinder by means of a hooked or semi-circular-shaped recess,  $e'$ , at its upper end. The gear-wheel D is adapted to mesh with a gear-wheel, F, secured upon the axle  $e$ , and thus motion is transmitted from the axle B to rotate the axle or shaft of the seeding-cylinder.

G is a lifting-pawl pivoted at the side of the main frame, one arm of which,  $g$ , engages a semicircular recess,  $e^2$ , in the free or lower end of the lifting-bracket E. Its remaining arm,  $g'$ , is provided with a series of perforations,  $g^2$ , in any one of which engages the lower end of a lifting-rod, H, the upper end of said rod being adjusted in a casting,  $h$ , secured to one end of the transverse eccentric-shaft H', with which the rear ends of the drag-bars (not shown) are suitably connected. The eccentric-shaft H' is journaled at its ends, the casting  $h$  being provided with a journal,  $h'$ , having its

bearing in a bracket,  $h^2$ , secured to the main frame, so that it forms the bearing for one end of the eccentric-shaft. The vibrations of the latter, which may be effected by any suitable lever or other mechanism, will actuate the lifting-rod H and pawl G, so that the latter will raise the bracket E, thus disengaging the gear-wheel D from the gear upon the axle of the machine. A stop,  $h^3$ , may be secured to the main frame in a position to limit the downward swing or vibration of the eccentric-shaft H'.

I designates a vertical end bracket secured to the frame A, and providing supports for the bearings of the seeding-cylinder shaft. This bracket is formed with angular corner pieces,  $i i$ , which receive the ends of the transverse inclined bars K K, that form the sides of the hopper.

$k$  is a cast-metal yoke depending from the bracket I and forming a bearing for the seeding-cylinder shaft.

L denotes the seed-cup, which is composed of two parts, one forming the body of the cup and the other the side cap or plate, M, which is secured by bolts or screws to the body. The latter is formed of a single casting, having upper flanges,  $l l$ , for securing it to cross pieces or bars K K, the inclined convergent side walls,  $l'$ , and inclined curved front wall,  $l^2$ , extending to the delivery spout or tube  $l^4$ . Inside the seed-cup is provided a partition,  $l^5$ , consisting of the inclined way  $l^6$  and semicircular or curved bottom  $l^7$ , between which latter and the arched casting  $l^8$  in the top of the seed-cup the seeding-cylinder rotates and reciprocates.

N is the seeding-cylinder, arranged to slide on the square axle or shaft  $e$ , and formed with a plain cylindrical surface,  $n'$ , for a portion of its length and a longitudinally fluted or corrugated surface,  $n$ , for the balance of its length. Inside the seeding-cylinder is arranged a hub, O, consisting of a casting having a square central opening,  $o$ , through which the shaft  $e$  passes, and radial arms  $o'$ , secured to the interior sides or wall of the seeding-cylinder. The hub O not only forms a bearing or support for the shaft  $e$ , but it also strengthens the cylinder, and is cast integral therewith, and the sides of

its central opening may be inclined or beveled, as shown at  $c^2$  in Fig. 5 of the drawings, for purposes of greater strength and durability. At the smooth or plain surface end of the seeding-cylinder is formed an annular groove, P, which receives the curved ends or arms Q of a bifurcated plate, Q', that is adjustably secured upon a horizontal rod, R, arranged to slide in bearings formed in the seed-cup, and provided with a stop pin or stud,  $r$ , engaging the projecting upper edge,  $r'$ , of the plate M.

S is a hand-lever, pivoted to the under side of one of the bars K, and provided with a longitudinal slot,  $s^3$ , through which the pivot-pin passes, to admit of the free vibratory movement of the lever. The engaging end S' of the lever is forked or provided with a series of prongs,  $s'$ , which are adjusted on the rod R between its upturned end  $r^3$  and the end of plate Q. By means of this construction, when the lever is operated in different directions the rod R, on which is secured the plate Q, will be slid horizontally on its bearings in the seed-cup, and the plate Q will cause the smooth or corrugated surfaces of the seeding-cylinder to be brought within the seed-cup, as may be desired.

T is a dog or latch pivoted on the main frame, and adapted to be swung under the bracket E when the latter is raised and it is desired to keep it in this position.

The operation of my invention is as follows: The lever S is operated to bring the corrugated or fluted portion of the seeding-cylinder within the seed-cup, when, by the rotation of the cylinder communicated from the axle B by the cogs C, D, and F, the seed is fed through the seed-cup down the curved way  $l^2$  and out at the delivery-spout. To stop the flow of the seed

it is only necessary to operate the lever S to bring the plain portion of the cylinder within the seed-cup, and the seeding mechanism may be readily thrown out of gear with the gear-wheel C on the axle B by vibrating the eccentric-shaft H'.

I am aware that it is not new to provide means for lifting the seeding-gear out of engagement with that on the axle, and such I do not claim broadly as my invention, which consists in the herein-described improved arrangement, construction, and combination of parts.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

As an improvement in seed-planters, the combination of the gear-wheel C on the main axle B, the swinging bracket E, carrying the gear-wheel D, and having a hooked or semicircular recess,  $e'$ , at its upper end, by which it is hooked or hung upon the axle  $e$  of the seeding-cylinder, and a semicircular recess,  $e^2$ , in its free lower end, the lifting-pawl G, pivoted at the side of the frame, the upper arm of which,  $g$ , engages the recess  $e^2$  of bracket E, and having its lower arm,  $g'$ , provided with a series of perforations,  $g^2$ , and the lifting-rod H, the lower end of which engages the perforations  $g^2$  while its upper end is adjusted in a casting,  $h$ , on the eccentric-shaft H', all arranged and operating substantially as and for the purpose specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

LUTHER E. PORTER.

Witnesses:

JAS. R. BENNETT, Jr.,

HENRY J. ROSENBURGER.