

J. G. SNYDER.

Seed Planter.

No. 14,073.

Patented Jan. 8, 1856.

Fig. 2.

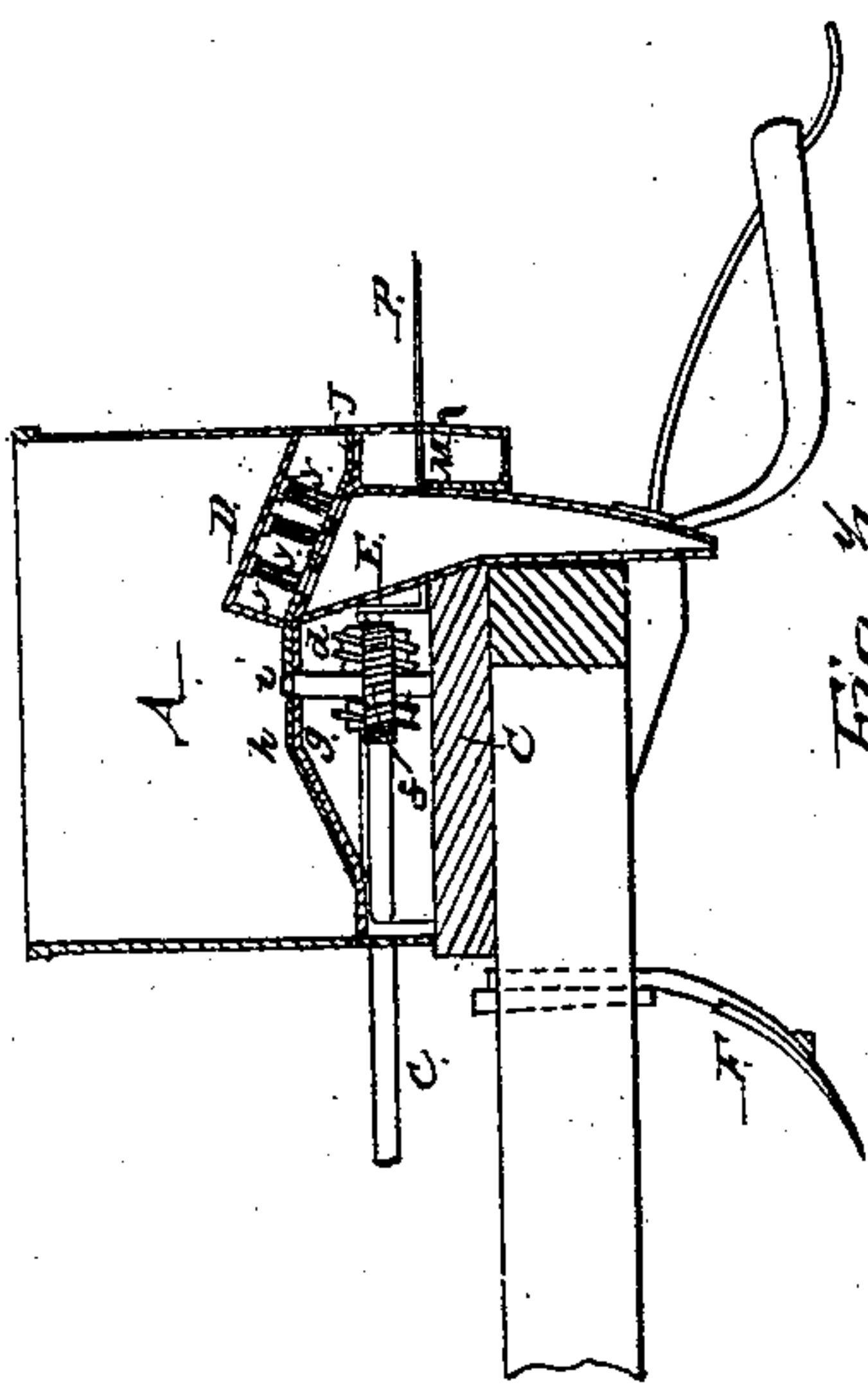


Fig. 3.

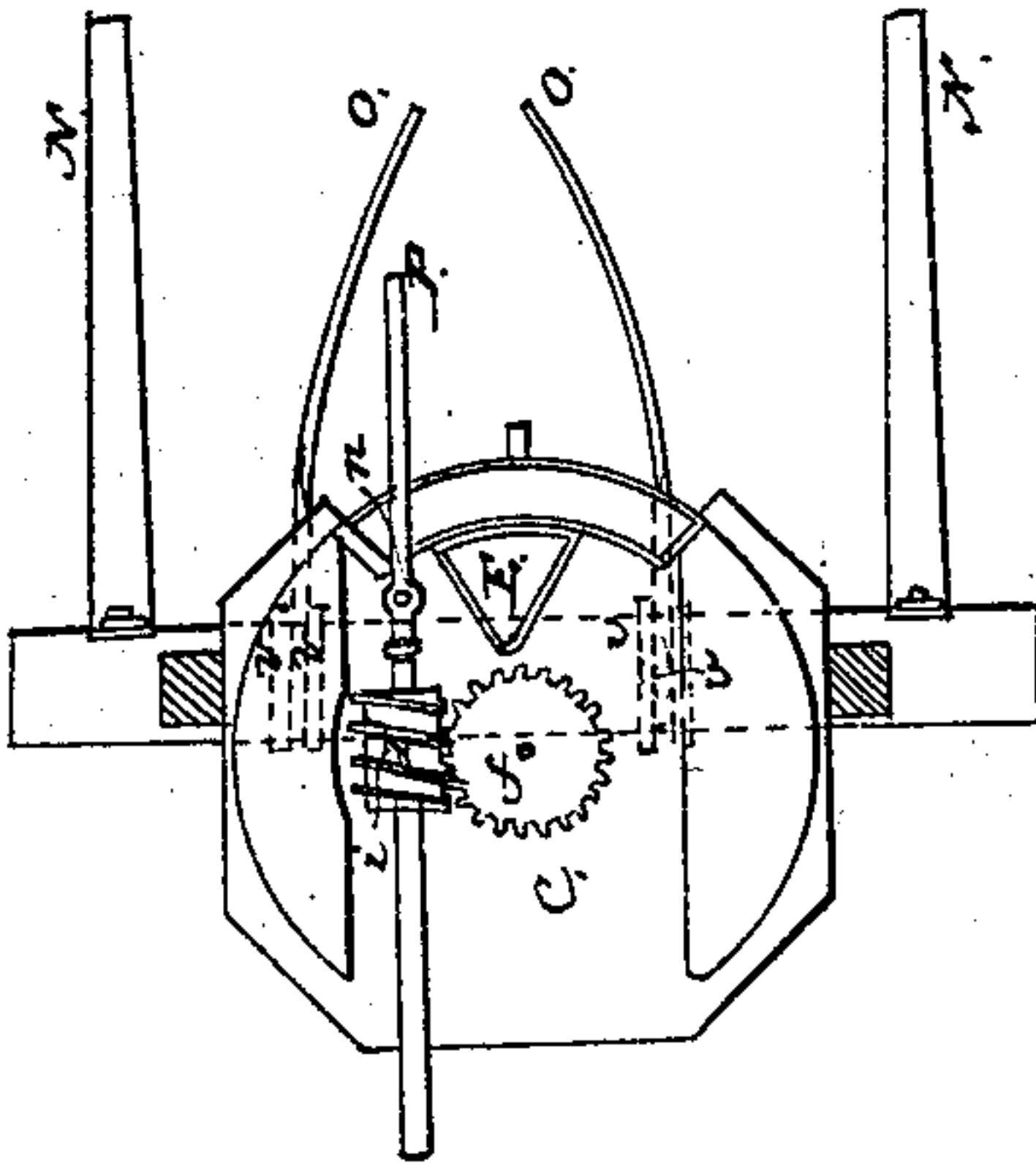


Fig. 4.

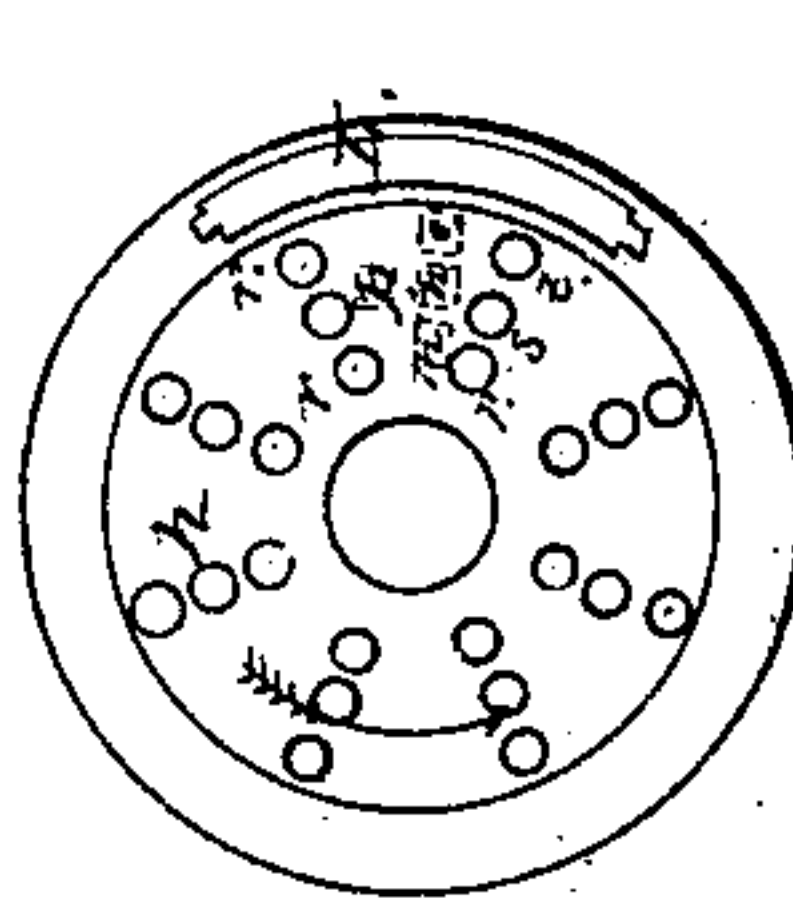


Fig. 5.

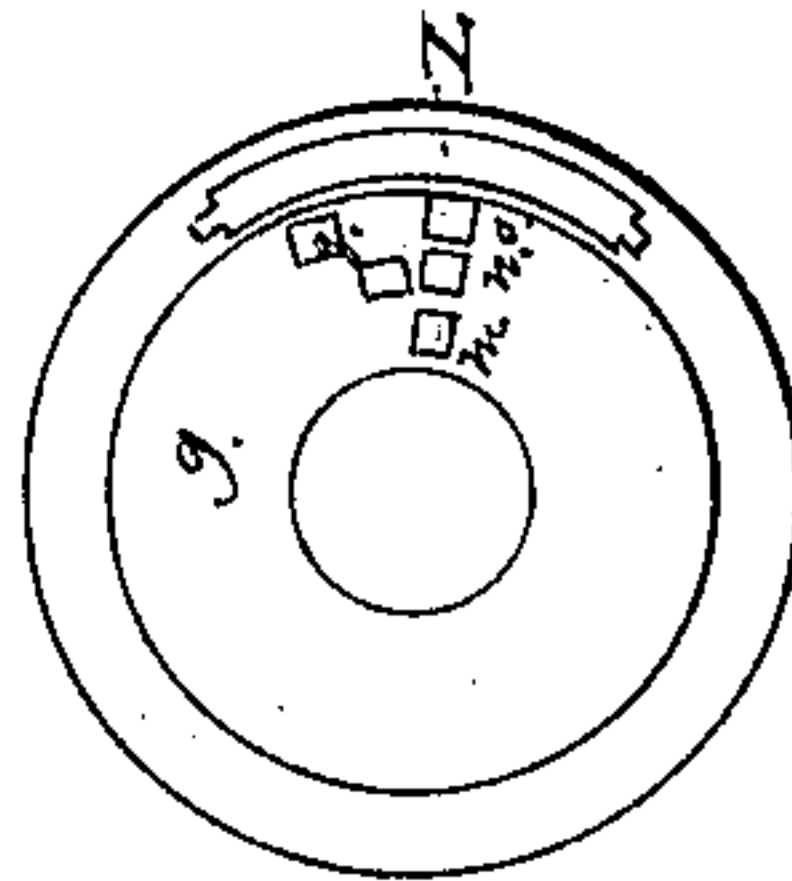
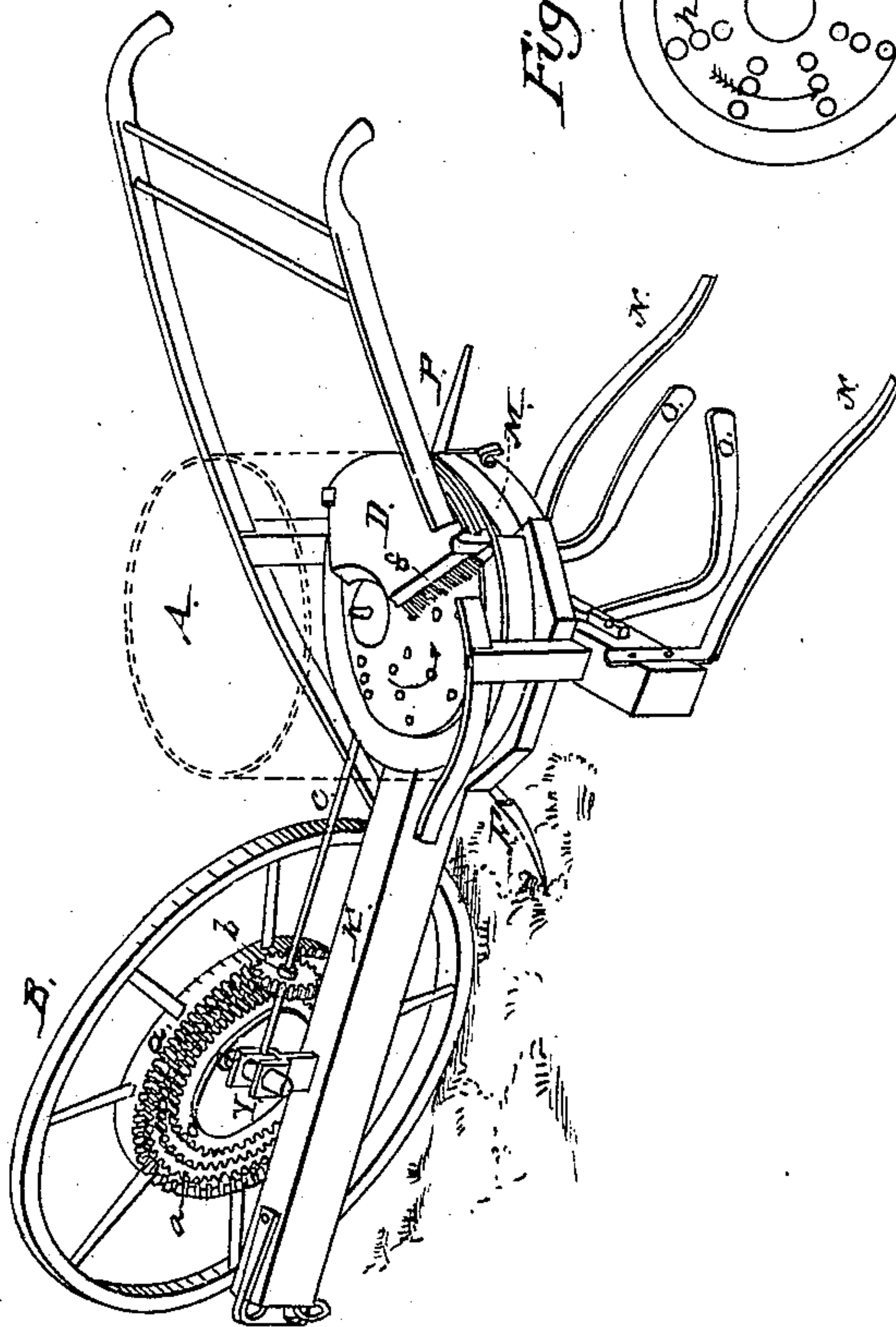


Fig. 1.





# UNITED STATES PATENT OFFICE.

JOHN G. SNYDER, OF WHEATFIELD, PENNSYLVANIA.

## IMPROVEMENT IN SEEDING-MACHINES.

Specification forming part of Letters Patent No. 14,073, dated January 8, 1856.

*To all whom it may concern:*

Be it known that I, JOHN G. SNYDER, of Wheatfield, in the county of Perry and State of Pennsylvania, have invented certain new and useful Improvements in Seeding-Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 represents a perspective view of the seed-planter with the hopper removed, but its position indicated in red lines; Fig. 2, a vertical longitudinal section through the hopper and the parts more immediately connected with it, showing the arrangements for conveying and dropping the seed. Fig. 3 represents a top view of the hopper, the dropping and bottom plates being taken off to show the parts underneath them. Fig. 4 is a top view of the dropping-plate with the bottom plate underneath it. Fig. 5 is a top view of the bottom plate.

The nature of this invention relates, first, to the manner of changing the machine so as to plant in hills or drills, as may be desired; and, secondly, to the arrangement of the hopper, the segmental apertures, and the receiving box or drawer for carrying off and collecting such seed or grains as may have passed out of the hopper but not dropped through the seeding-tube.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

The apparatus is set in motion by the supporting and driving wheel B, the hub of which is enlarged in such a manner that a number of concentric circles of cogs, *a*, can be fixed upon it, either of which can be made to operate on the pinion *b*, for a purpose to be described hereinafter. The pinion *b* can be moved on the shaft *c*, and firmly secured to it at any desired point by means of a set-screw. To the end of the shaft *c* is fixed a worm-screw, *d*, which takes into a worm-wheel, *f*. The vertical shaft of this worm-wheel is provided at its lower end with a pivot which turns in a box in the base-board C. The upper end of the shaft turns in the body of the conical-shaped bottom plate, *g*, as shown in the section at Fig. 2. This bottom plate is stationary and perforated by the cells *m n o p q*, in the manner shown in Figs. 4 and 5.

To this bottom plate is a top or dropping plate, *h*, tightly fitted, so as to allow no space between the two plates. The dropping-plate *h* is secured firmly to the shaft of the worm-wheel by means of a square head, *i*, and thus revolves with the same. It is perforated by a number of cells, *r s t*, which are arranged in a radial order, three in a line. The cap D, being of the shape of a circular sector, is fixed in such a manner on the bottom plate that it covers the dropping-plate *h* partly. It is provided at its edges with brushes *k*, and also inside with five brushes, *y*, the positions of which correspond with the cells *m n o p q*, and three of which are shown in Fig. 2. They serve to prevent the seed from clogging up the cells.

The seed which is in the hopper A settles into the cells *r s t* of the dropping-plate *h*. Thus when, as in the present arrangement, the plate moves in the direction of the red arrow it will be seen that the brushes *k* let only pass the seed which is in the cells *r s t*, which thus moves on until these cells come simultaneously onto the cells *m n o*, when the seed drops through these into the seeding-tube E, and thence into the furrow made by the plow F.

The manner just described—viz., when the three cells *r s t* discharge the seed at the same time through the cells *m n o*—is intended for hill-planting. To use this same seed-planter for drill-planting it is only necessary to reverse the motion of the driving-wheel B, and through it the motion of the whole apparatus.

As shown in Fig. 1, the shaft H of the driving-wheel turns in a box, G, which is fixed on the beam K. This box is of sufficient breadth to hold the shaft H in a horizontal and true position, and it is kept from moving sidewise by means of a key, X. By drawing out said key the driving-wheel can be easily taken from one side of the beam K and fixed in a similar manner onto the other side, when its motion will be reversed. The dropping-plate *h* will then revolve in the direction of the blue arrow, and the cell *t* will pass singly over the cell *q*, next *s* over *p*, and then *r* over *m*, thus allowing only the seeds of one cell to drop down at a time, and in a certain distance which is required for drill-planting. The distance can easily be regulated by means of the cogged circles of the wheel B, any of which can be made to operate on the pinion *b* by moving the latter to the



desired place, and thus the relative velocity of the dropping-plate to the driving-wheel can be regulated. As some grain may and probably will escape or pass by the brushes *y*, and would thus remain on the dropping-plate, they will slide down the inclined sides, pass through the segmental aperture *L* of the bottom plate, and drop into the drawer *M*, whence they can be readily removed and placed in the hopper.

The drag-springs *N* are to protect the apparatus from heavy shocks in running against stumps or obstructions, and serve in this manner like carriage-springs. They are secured to the frame by means of bolts, and can be set higher or lower by using one of the spare holes, as shown in Fig. 1. The covering-blades *O* are to cover up the furrow when the seed is in the same. They also possess a certain degree of elasticity, so as not to be broken or bent by obstructions. Their distance from each other can be regulated by means of the wedges *v*, Fig. 3, and they can thus be brought nearer together or farther apart, as the nature of the ground should require it. *P* is lever turning on its fulcrum *w* and supporting the end of the shaft *c*, by means of which the screw *d* and worm-wheel *f* can be set in or out of gear, as may be required.

In the Letters Patent granted to me in connection with Joseph Young on the 28th February, 1854, the bucket for receiving the superfluous grains was placed in the center of the hopper, making, as it were, a double hopper, which was not only expensive but inconvenient.

The seeding-plate in that machine was concave to carry the stray grains into said bucket. By my present arrangement the seeding-plate is convex and the drawer is placed outside the hopper and in convenient position for the operator to get at it, while the hopper is not incommoded by the receiver.

The arrangement for changing the machine from hill to drill planting is so obviously different from that in the machine patented in February, 1854, as not to require any special distinction further than heretofore described.

Having thus fully described the nature of my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

1. The so arranging of the openings in the seeding-plates *h g* that the machine can be converted from a drilling to a hill-planting one, or vice versa, by changing the running direction of the movable plate, as herein set forth.

2. I would state that I do not claim a secondary box or receptacle for the excess of grain, as this is not new, but what I do claim is an improvement upon the machine of Snyder and Young, patented 28th February, 1854, viz: the arrangement of the convex seeding-plate *h*, segmental opening *L*, and seed-receptacle or drawer *M*, for admitting of the location of said drawer outside of the hopper and in more convenient position for the attendant, as set forth.

JOHN G. SNYDER.

Witnesses:

JOHN SWARTZ,  
WILLIAM SWARTZ.