

H. WILLARD.

Corn Planter.

No. 18,366.

Patented Oct. 6, 1857.

Fig. 1.

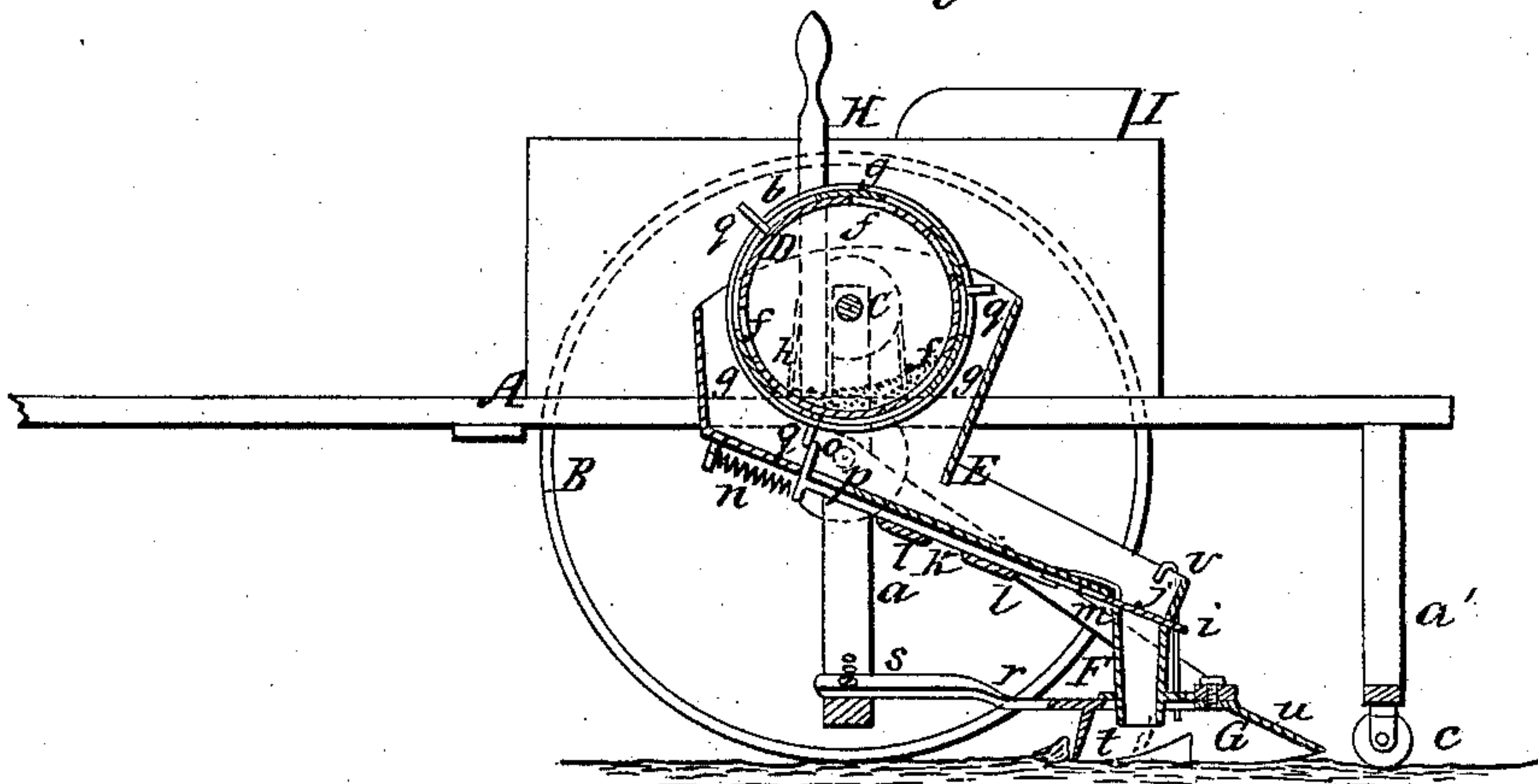


Fig. 3.



Fig. 2.

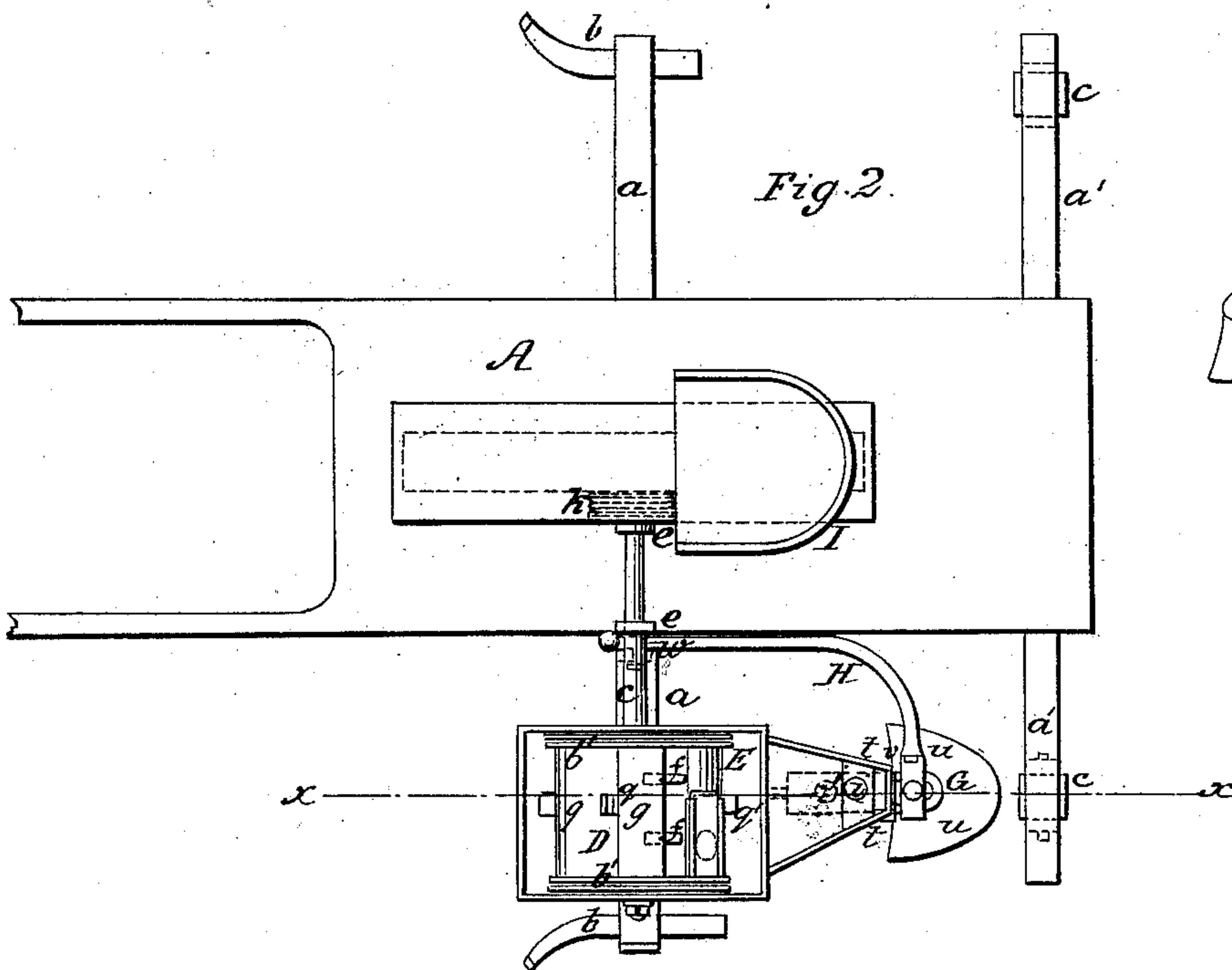
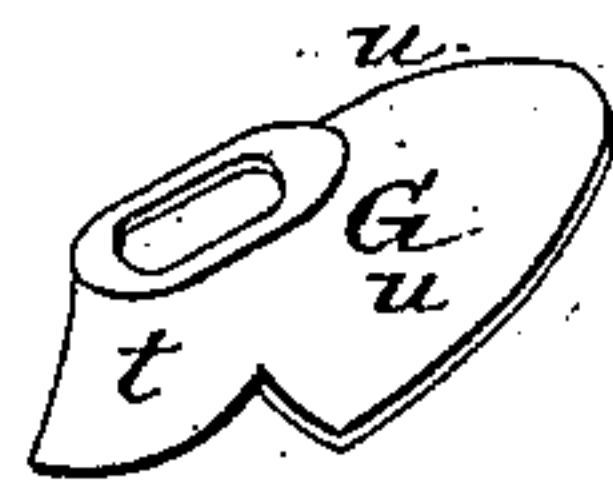


Fig. 4.



UNITED STATES PATENT OFFICE.

HOSEA WILLARD, OF VERGENNES, VERMONT.

IMPROVEMENT IN SEED-PLANTERS.

Specification forming part of Letters Patent No. 18,366, dated October 6, 1857.

To all whom it may concern:

Be it known that I, HOSEA WILLARD, of Vergennes, in the county of Addison and State of Vermont, have invented a new and Improved Seed-Planting Machine; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a longitudinal vertical section of my improvement, *xx*, Fig. 2, showing the plane of section. Fig. 2 is a plan or top view of the same. Fig. 3 is a detached front view of the share. Fig. 4 is a detached perspective view of the same.

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

My invention consists in the peculiar means employed for distributing the seed, or in conveying the seed from the hopper and measuring it in suitable quantities before it is dropped into the furrow.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a flat bed or horizontal platform, which is mounted on a single wheel, B, said wheel being fitted on an axle placed underneath the bed or plate, the wheel being near the front end of the bed or plate.

To the under side of the bed or plate A curved bars *a a' a'* are attached. These bars curve downward from the plate or bed and project a suitable distance outward, two from each side, as shown in Fig. 2. To the outer ends of the front bars, *aa*, shoes *b* are attached, one to each bar, and rollers *c* are attached to the back bars *a'*, one to each.

On the bed or plate A a shaft, C, is placed, said shaft being fitted in bearings *e e*. The outer end of this shaft has a hollow cylinder, D, on it, said cylinder being fitted within the upper end of an inclined spout, E. The cylinder D has its periphery perforated with triangular-shaped openings *f*, as shown clearly in Fig. 2. These openings are made in the cylinder at different points. Two are placed side by side in pairs, the pairs being at equal distances apart. The cylinder is encompassed by two hoops or annular rods, *b'*, which are allowed to turn freely on the cylinder, one at each end, and to these hoops or rods plates *g* are attached. These plates are shown clearly in

Fig. 2. The number of plates *g* correspond to the number of pairs of openings, and by sliding or moving the plates and rods on the cylinder D the openings *f* may be exposed to a greater or less degree, as desired, and either the small or large ends of the openings may be exposed. The shaft C and cylinder D are rotated by a cord or belt, *h*, from a pulley at the side of the wheel B.

To the lower end of the inclined spout E a vertical tube, F, is secured, and to the under side of the spout E a slide, *i*, is secured. This slide works between the upper end of the tube F and the bottom of the spout E, a hole, *j*, being made through the bottom of the spout directly over tube F. The slide *i* is attached to a rod, *k*, which is fitted within guides *l*, attached to the under side of the spout, and the slide has a hole, *m*, made in it near its front end. A spring, *n*, is attached to the front and elevated end of rod *k*, said spring having a tendency to keep the lower end of the slide interposed between the tube F and hole *j* in the spout E.

To the upper end of the rod *k* a vertical projection, *o*, is attached. This projection passes through a slot, *p*, in the bottom of the spout E, as shown plainly in Fig. 1. To the periphery of the cylinder D radial projections *q* are attached, as shown in the figures.

To the outer end of the bar *a*, which is underneath the spout E, a bar, *r*, is attached by a pivot, *s*, and to the back end of the bar *r* a share, G, is attached. This share may be described as being of dish form or hollow, and having flaring sides, the front sides, *t t*, however, being much less flaring and shorter than the back sides, *u u*. The front sides, *t t*, form the furrow, while the back sides cover and press the earth upon the seeds. The precise form of the share is clearly shown in Fig. 4. It will also be seen that the lower edges of the front sides, *t*, incline upward from their front to their back ends, so as to allow the earth to fall into the furrow behind the point. The lower end of the tube F is fitted in the upper part of the share G, and the share is connected with the lower end of the spout E by a rod, *v*.

To the share G a lever, H, is attached. This lever has its fulcrum at *w*, and it extends upward within reach of the driver, whose seat I is placed on the box or covering of the wheel B.

The operation is as follows: The seed to be

sown is placed within the cylinder D, which, as the machine is drawn along, is rotated by the means already described, and the seed is discharged by centrifugal force through the openings *f* in greater or less quantities, according as the plates *g* are adjusted. The seed passes down to the lower end of the spout E, and as the slide *i* is moved back and forth in consequence of the projections *q* striking the projection *o* on the upper end of the rod *k* and moving it in one direction and the spring *n* moving it in the opposite direction, the seed is measured and allowed to drop in suitable quantities into the tube F, by which it is conducted into the furrow made by the front sides, *t t*, of the share, the back sides, *u u*, covering the seed and pressing the earth down upon it.

The share may be raised by the driver operating the lever H in case of obstructions being in its path.

In consequence of having the seed dropped into the spout E from the cylinder D, the seed is fed in small quantities to the spout F and an even amount is measured at each dropping. If a hopper were placed directly over the tube F the seed would not be measured equally, because at first the pressure of the superincumbent seed upon the lower portion would force through the opening *j* a considerable quantity, and as the seed diminished in bulk within the hopper the quantity measured at each vibra-

tion of the slide would proportionably decrease. The distribution, therefore, of the seed into the spout E from the cylinder D causes the seed to be fed in small quantities to the tube F, so that an equal distribution of the seed is obtained.

I would remark that the pressure of the share G upon the soil may be increased or diminished as desired by varying the position of the driver's seat I.

I would also remark that a distributing device like the one described may be placed at each side of the plate or bed A, so that the rows may be planted at the same time.

I do not claim separately a perforated reciprocating slide, *i*, for distributing seed, for they are in common use. Neither do I claim a rotating cylinder for distributing seed, when separately considered; but,

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

The rotating cylinder D, provided with the taper openings *f*, and the adjustable plates *g*, in combination with the inclined spout E, tube F, and perforated reciprocating slide *i*, when arranged as shown, for the purpose specified.

HOSEA WILLARD.

Witnesses:

GEO. W. GRANDEY,
H. A. WENTWORTH.