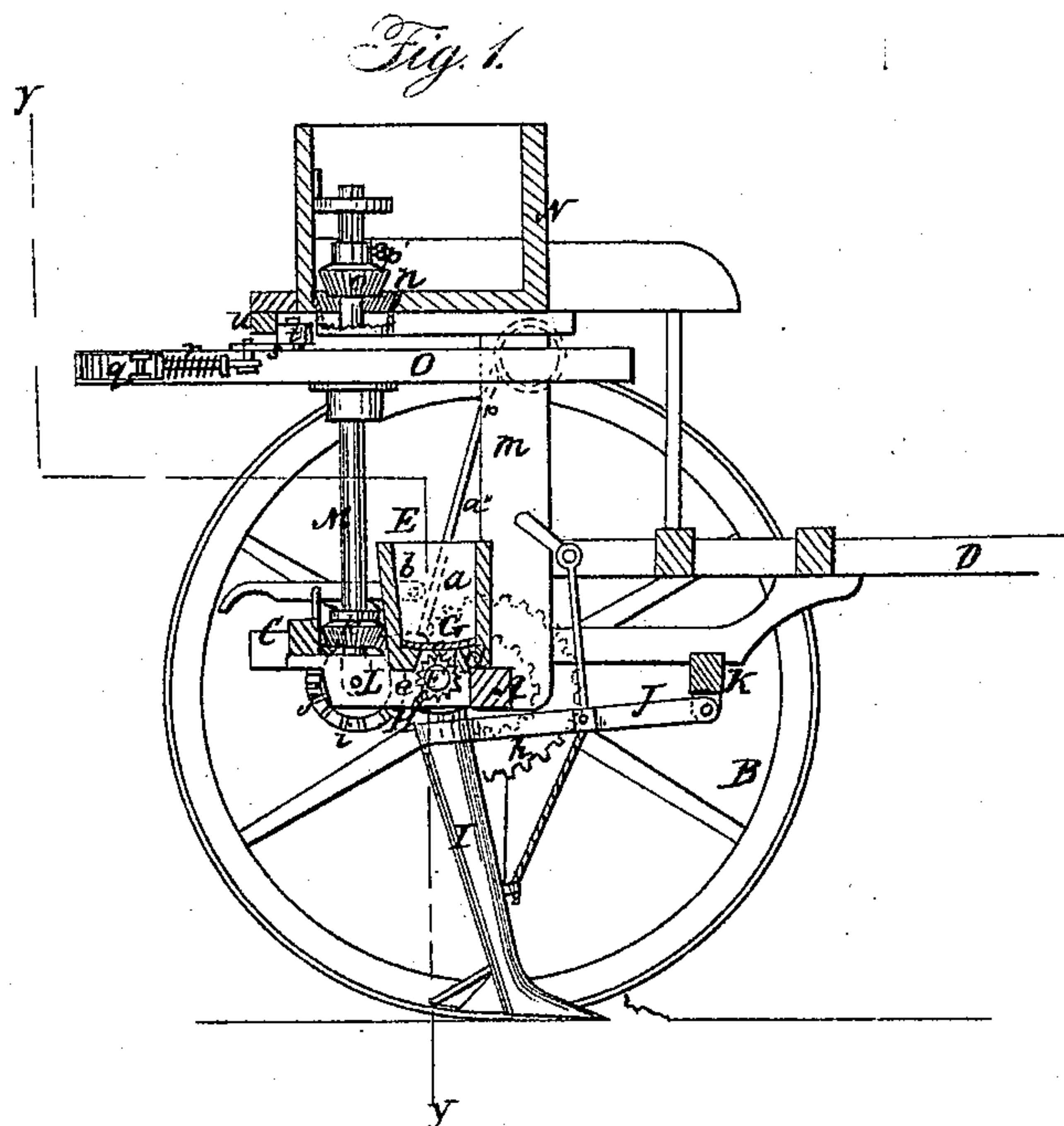
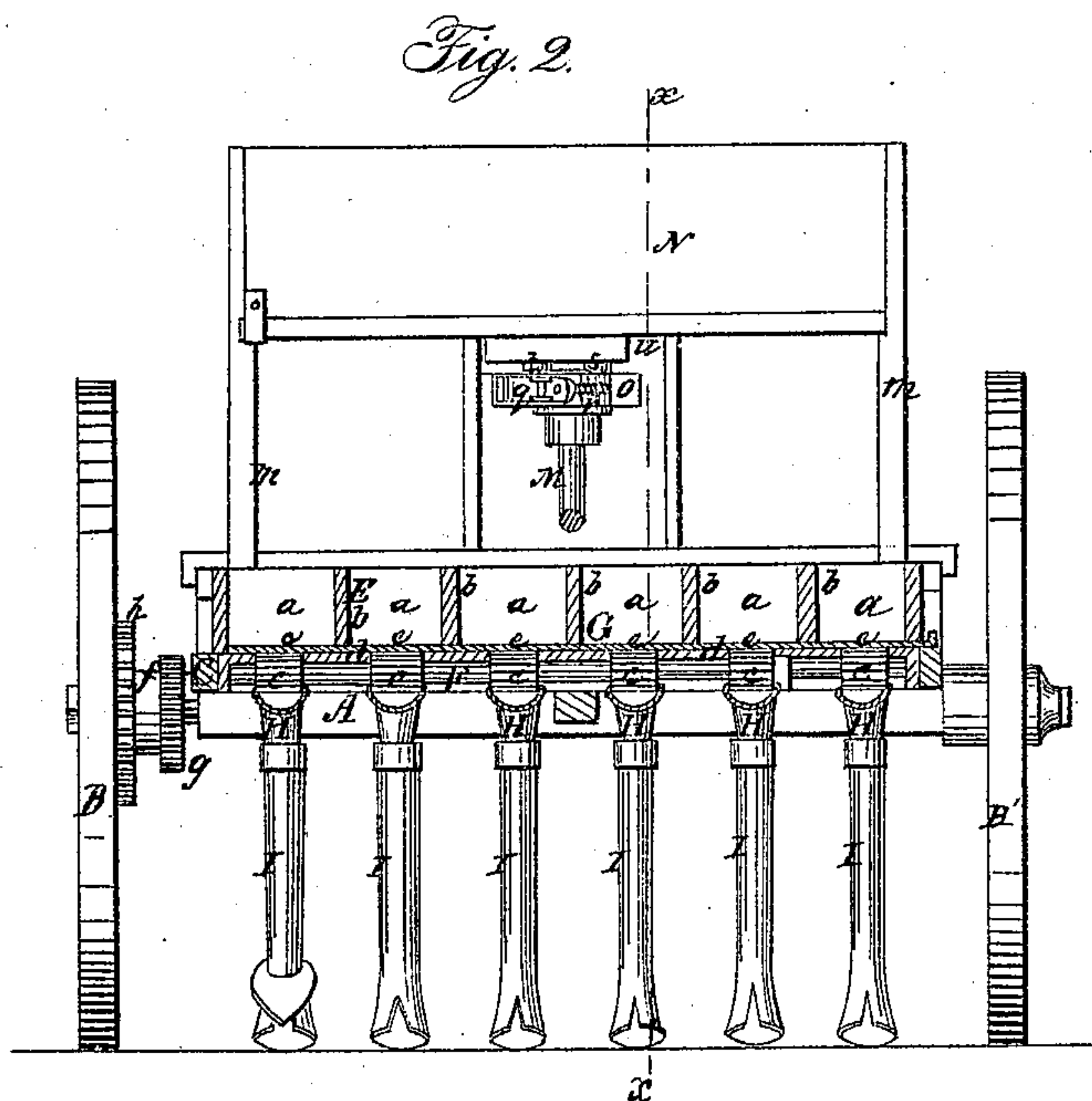


E. STIMSON.
Broadcast-Seeder

No 24,413.

Patented June 14, 1859.



Witnesses:

Asahel A. Thurston
Erna Kesselre

Inventor:

Ernest Stinson

UNITED STATES PATENT OFFICE.

ENOS STIMSON, OF PLAINFIELD, VERMONT.

IMPROVEMENT IN SEEDING-MACHINES.

Specification forming part of Letters Patent No. 24,413, dated June 14, 1859.

To all whom it may concern:

Be it known that I, ENOS STIMSON, of Plainfield, in the county of Washington and State of Vermont, have invented a new and Improved Seeding-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 vertical section of a seeding-machine constructed according to my invention. *xx*, Fig. 2, indicates the plane of section. Fig. 2 is also a vertical section of the same, taken in the line *y y*, Fig. 1, the two planes of section crossing each other at right angles.

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

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

A represents an axle, which has two wheels, B B', one on each end; and C is a rectangular frame, which is secured on the axle A, said frame having the shafts or draft-pole D attached to its front end.

On the frame C, directly behind the axle A, a seed-box, E, is placed. This seed-box extends the whole width of the frame, and it is divided into compartments *a* by partitions *b*.

Underneath the seed-box E a longitudinal shaft, F, is placed, said shaft having a series of spirally-corrugated cylinders, *c*, upon it, a cylinder being in the bottom *d* of each compartment *a*. A slide, G, is placed in the bottom of the box E, said slide being perforated, as well as the bottoms *d*, so that seed-discharge apertures *e* will be formed of greater or less area in the bottoms *d* by adjusting the slide G. This will be understood clearly by referring to Fig. 2.

To the under side of the compartment *a*, and encompassing the cylinders *c*, elastic tubes H are attached. These tubes H extend down into tubes I, which are attached to the back ends of bars J, the front ends of said bars being fitted loosely to a transverse bar, K, in the frame C, so that the tubes J may rise and fall.

On one end of the shaft F a pinion, *f*, is placed, and this pinion gears into a wheel, *g*, attached to one of the wheels, B. To this same wheel, B, a larger wheel, *h*, is attached, said wheel gearing into a pinion, *i*, which is on one

end of the shaft L, said shaft being placed transversely in the back part of the frame C.

On the inner end of the shaft L a bevel-wheel, *j*, is placed, and this wheel gears into a corresponding wheel, *k*, which is placed on the lower end of a vertical shaft, M. The shaft M passes up through a seed-box, N, which is supported by uprights *m m* on the frame C, the shaft passing through a conical thimble, *n*, in the bottom of the box N. On the shaft M, above the thimble *n*, a conical corrugated hub, *o*, is placed, said hub being secured to the shaft M by a set-screw, *p*. (See Fig. 1.)

On the upper part of the shaft M, and just below the box N, a curved hollow arm, O, is secured, and the lower end of the thimble *n* passes loosely into the center of this arm, as shown clearly in Fig. 1.

To each end of the arm O a flap or valve, *q*, is attached, and to each flap a spiral spring, *r*, is connected, said spring having a tendency to keep the flaps or valves closed.

To the inner ends of the springs *r* are attached bent levers *s*, which are secured to the upper surface of the hollow arm O. The inner ends of these levers have a friction-roller, *t*, attached.

To the under side of the box N a stationary cam, *u*, is attached.

The lower seed-box, E, is allowed to move in the frame C, so that the pinion *f* may, when necessary, be thrown out of gear with the wheel *g*. The outer bearing of the shaft L is in a lever, which may be adjusted by actuating a rod, *a'*, so as to throw the pinion *i* in and out of gear with the wheel *g*.

The operation is as follows: As the machine is drawn along the shaft M will be rotated from the wheel B by the gearing *h i j k*, and the seed in the box N will pass down through the thimble *n* into the arm O, from which it is distributed or thrown broadcast behind the machine in consequence of the rotation of said arm, the flaps or valves *q* being opened as they pass around at the back of the machine by the cam *u*, acting on the levers *s*, the flaps or valves being closed by the spring *r* when the levers are not actuated by the cams. The supply of seed to the arm O is regulated by regulating the hub *o*. Simultaneously with the rotation of the arm O the shaft F is rotated, and the seed in the box E is distributed in drills by the corrugated cylinders *c*, the tubes H I

conveying the seed to the furrows made by the lower and toothed ends of the tubes I. I would remark that in case of planting in hills two or more of the chambers *a* may be used, according to the space required between the hills, and the usual recessed cylinders may be placed on the shaft F, instead of the corrugated ones, *c*.

By this invention two different kinds of seed may be sown simultaneously, one broadcast and the other in hills or drills. Turnip-seed, for instance, may be sown broadcast with corn, and grass-seed may be sown broadcast while wheat or rye is being sown in drills, and either the broadcast seed-distributor or the other may be used separately, when desired, by simply throwing the respective driving parts out of gear.

I am aware that a rotating arm, O, provided

with valves and arranged as herein shown and described, has been previously used, such device having been patented by me May 6, 1856. I therefore do not claim separately the broadcast seed-distributing device. Nor do I claim broadly the hill or drill seed-distributing device, when separately considered; but,

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

The arrangement and combination of the shaft F, box E, shaft M, arm O, and box N, as and for the purpose herein shown and described.

ENOS STIMSON.

Witnesses:

ASHBEL A. STIMSON,
ERRA RIDDER.