

A. SIMMONS.  
Grain Drill.

No. 24,410.

Patented June 14, 1859.

Fig. 3.

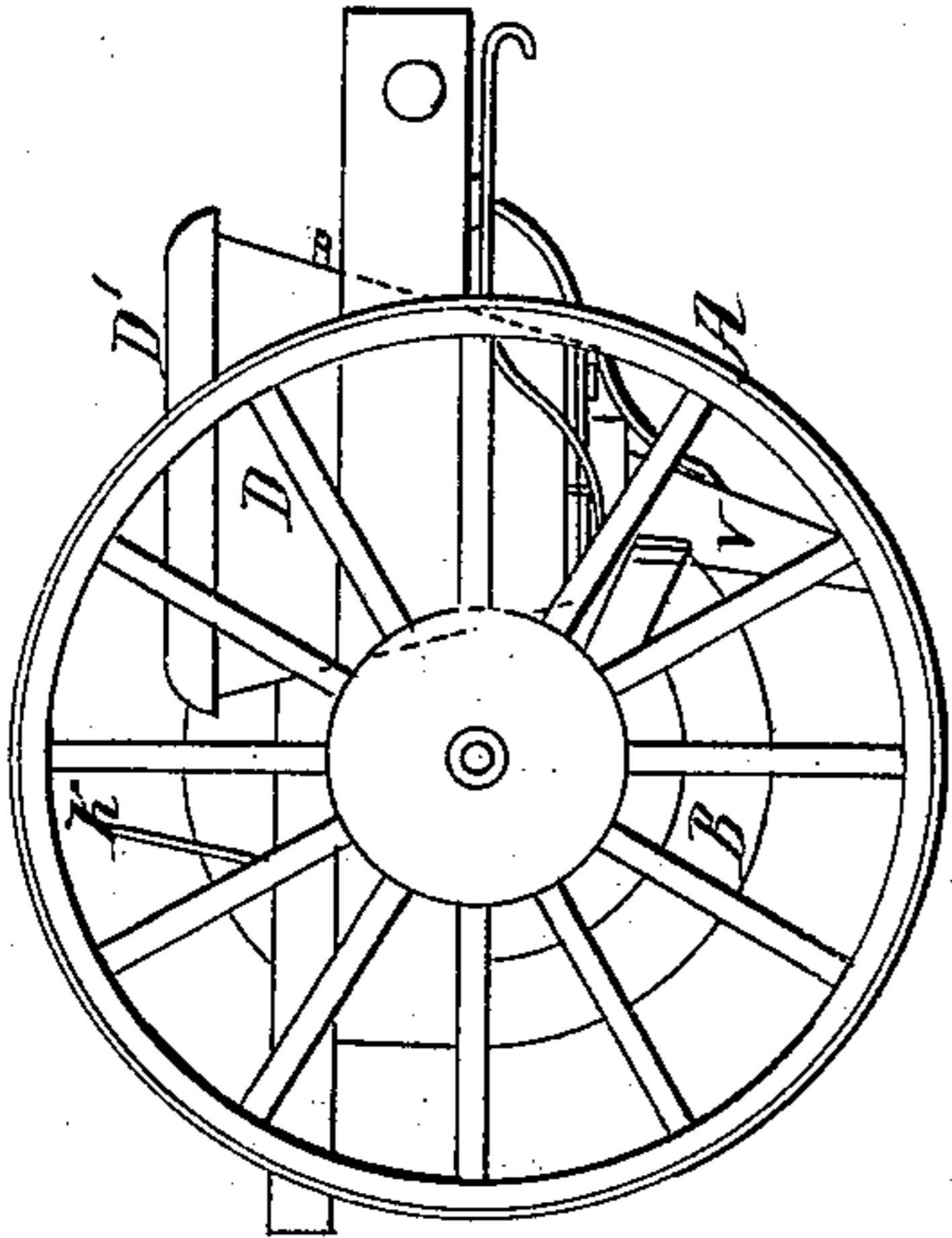
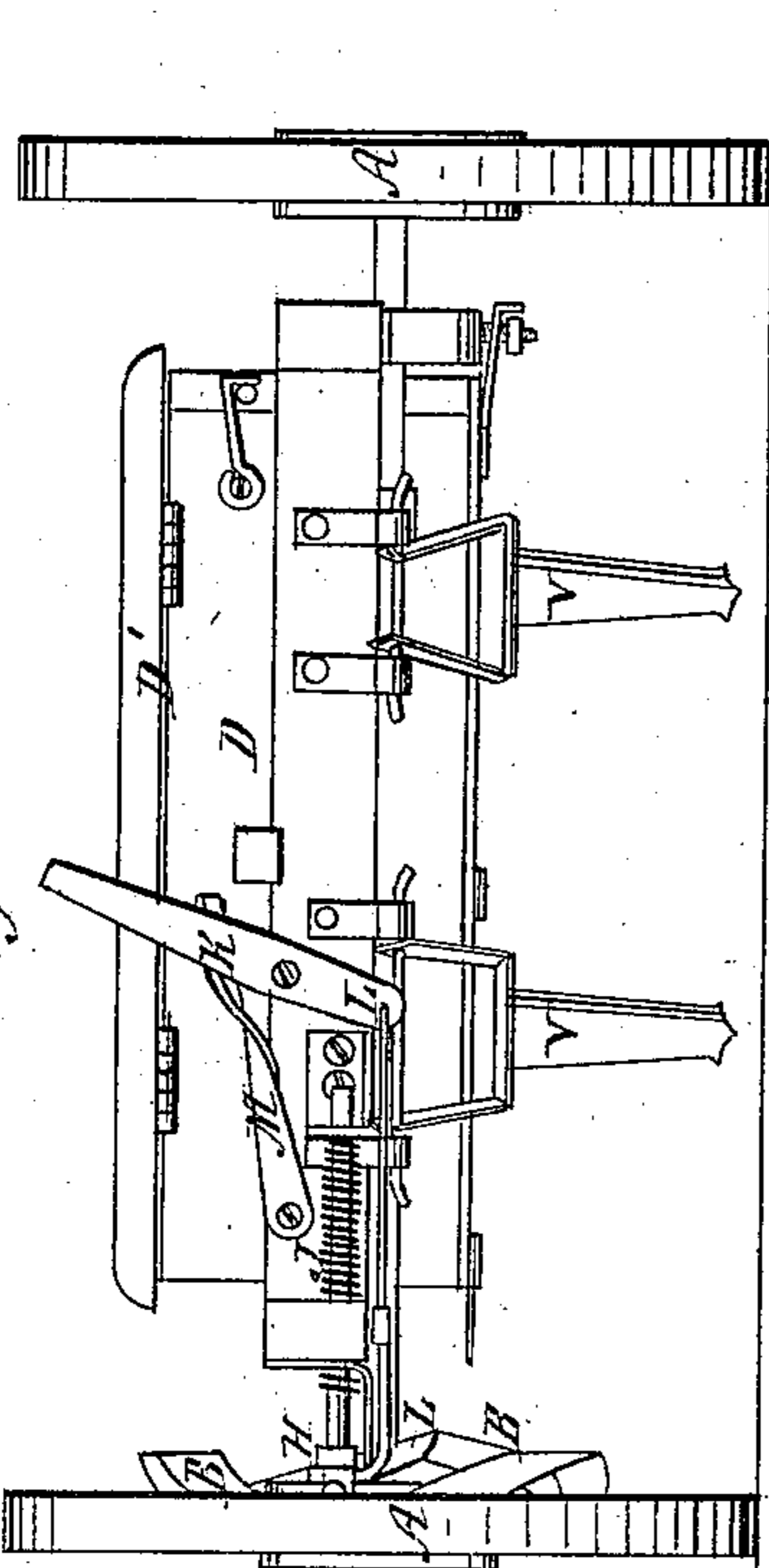


Fig. 1.



Witnesses  
W. H. Burdick.  
C. H. Ballou.

Fig. 4.

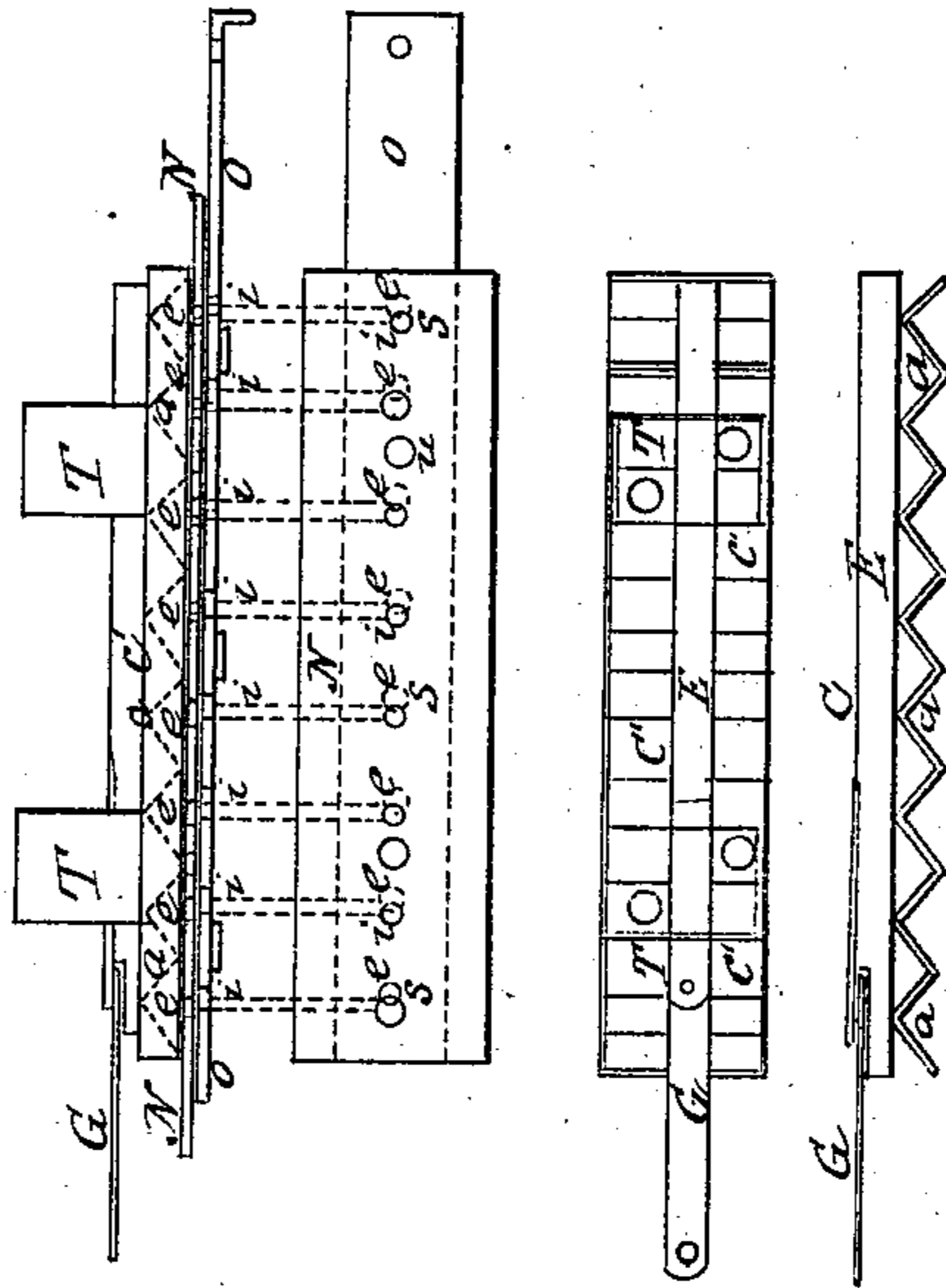
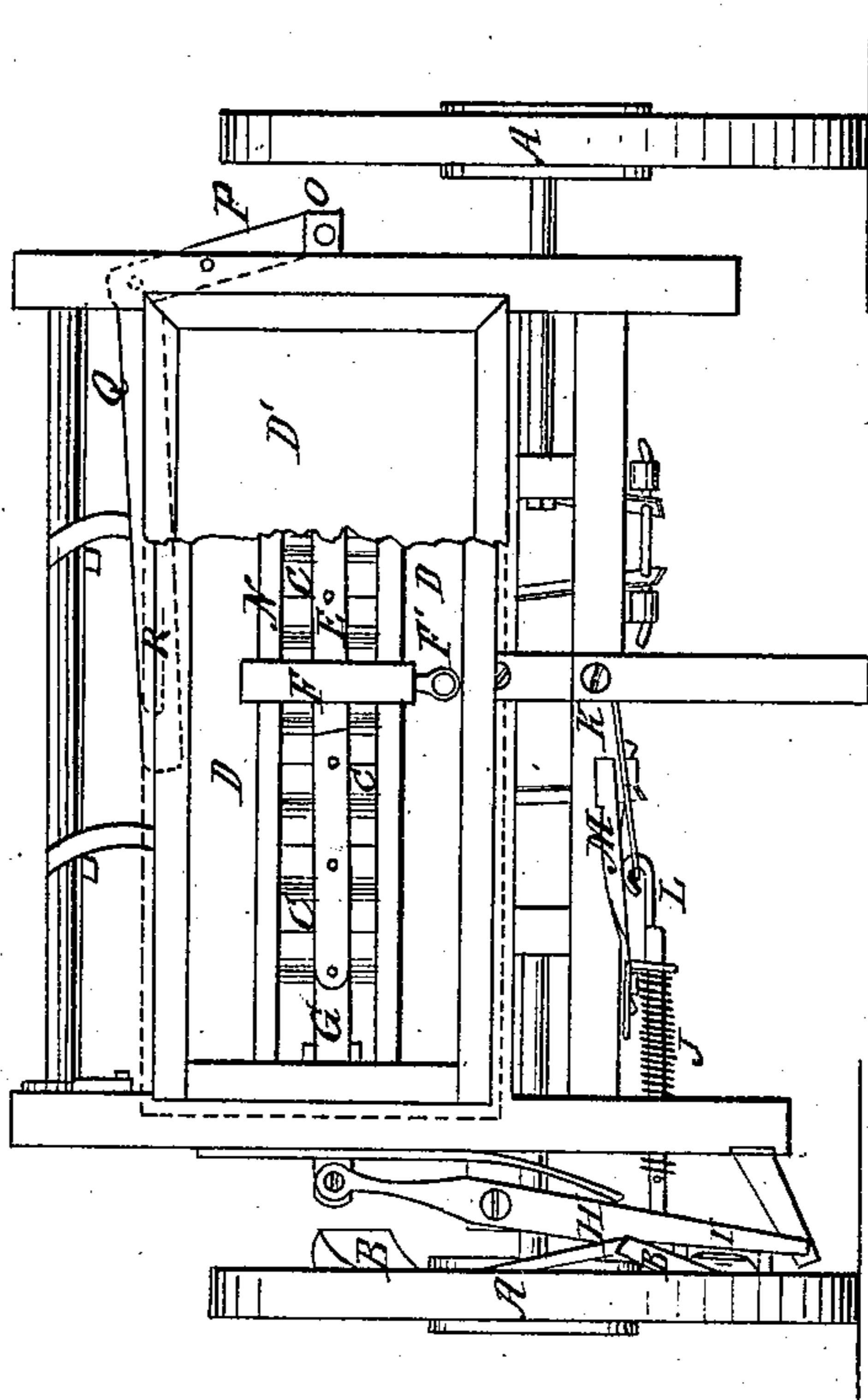


Fig. 2.



Inventor  
Andrew Simmons.

# UNITED STATES PATENT OFFICE.

ANDREW SIMMONS, OF NORA, ILLINOIS.

## IMPROVEMENT IN SEEDING-MACHINES.

Specification forming part of Letters Patent No. 24,410, dated June 14, 1859.

*To all whom it may concern:*

Be it known that I, A. SIMMONS, of Nora, in the county of Jo Daviess and State of Illinois, have invented certain new and useful Improvements in Combined Broadcast Seeding and Drilling Machines, which is an improvement on a patent granted to me October 12, 1858; and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a front view; Fig. 2, a top view; Fig. 3, an end view; Fig. 4, sectional parts which will be referred to in description.

Like letters denote like parts in the several views.

A represents the wheels, which are made of any convenient form, and revolve independent of each other. Upon one of these, as seen at B, is secured a cam, by means of which motion is given to the agitator C as the wheels and cam revolve. The agitator C C' is placed in the bottom of the seed-box D. The cover of this box is seen at D in Fig. 2. A part of the cover is removed for the purpose of showing the agitator C, which consists of a metallic strip nearly the length of the bottom of the seed-box and about two-thirds its width, corrugated or bent into obtuse angles, as seen at *a a a* in Fig. 4. Along the middle of this agitator runs a wooden bar, E, upon which is notched a guide, F, Fig. 2; held in place by the button F'. The connecting-rod G unites the agitator to the working-bar H, the long arm of which is moved inward by the cam B acting upon the friction-roller I, situated upon the bar H. This friction-roller is kept in contact with the cam by means of the spring J, and by this means the agitator C is caused to have an oscillating motion in the direction of the longest diameter of the seed-box.

Whenever it is desirable to move the seeder from place to place without disturbing the seed the bar H and roller I are drawn back from the cam by means of the lever K and rod L, and secured by means of the catch M.

The bottom of the seed-box is composed of a metallic plate, N, along the center of which

is a row of holes, *e*, of sufficient size to admit freely the passage of the grain. Directly below this plate is another plate, O, arranged between guides, so that it can be adjusted in regard to the longest diameter of the seed-box. This plate O is furnished with holes *i* corresponding in size and distance apart with the holes *e* in the plate N.

The slider O can be adjusted by means of the lever P, arm Q, and set-screw R, (indicated by dotted lines,) so as to have the holes in the two plates exactly correspond, leaving a free passage for the seed; or the plate O may be so adjusted that the holes *e* in the plate N are partially closed, as seen at S, Fig. 4. In this manner the quantity of seed distributed per acre can be perfectly regulated. The agitator C, being narrower than the bottom of the seed-box by about one-third, allows the seed to pass beneath it through the angles *a* when the agitator is in motion; but when this vibratory motion is stopped no seed will pass through; but the holes *e* may be wholly closed by adjusting the slider-plate O. This arrangement is designed for broadcast sowing.

For the purpose of planting in rows or drilling, I place upon the agitator C' two or more boxes, T, into which a small quantity of seed may be placed, and provide a perforation, *u*, in the plate N, directly below the box T. This hole *u* is usually kept closed by the plate O; but the plate O can be so adjusted that the holes *u* will be entirely open, or partially closed, and when this is the case all the holes *e* will be closed.

When this seeder is adjusted for drilling, hollow drill-teeth V or the ordinary form may be used. These can be adjusted to any depth desired by a roller and strap in the usual manner.

I am aware that none of the devices here used are in themselves new; and I am also aware that the devices for broadcast sowing are substantially embraced in a patent granted to me October 12, 1858; but I am not aware that the devices here described have ever before been so arranged as to form a combined broadcast seeder and drill, this object being effected by means of the seed-boxes T and

holes *u* in the plate O, when the other parts of the machine are arranged as specified.

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

The arrangement of the boxes T in relation to the agitator C, plates N and O, and, in combination therewith, the hollow drill-tooth V,

the several parts being so constructed as to form a combined broadcast seeder and drill, substantially as set forth.

ANDREW SIMMONS.

Witnesses:

W. SIMMONS,

GEORGE HARRISON.