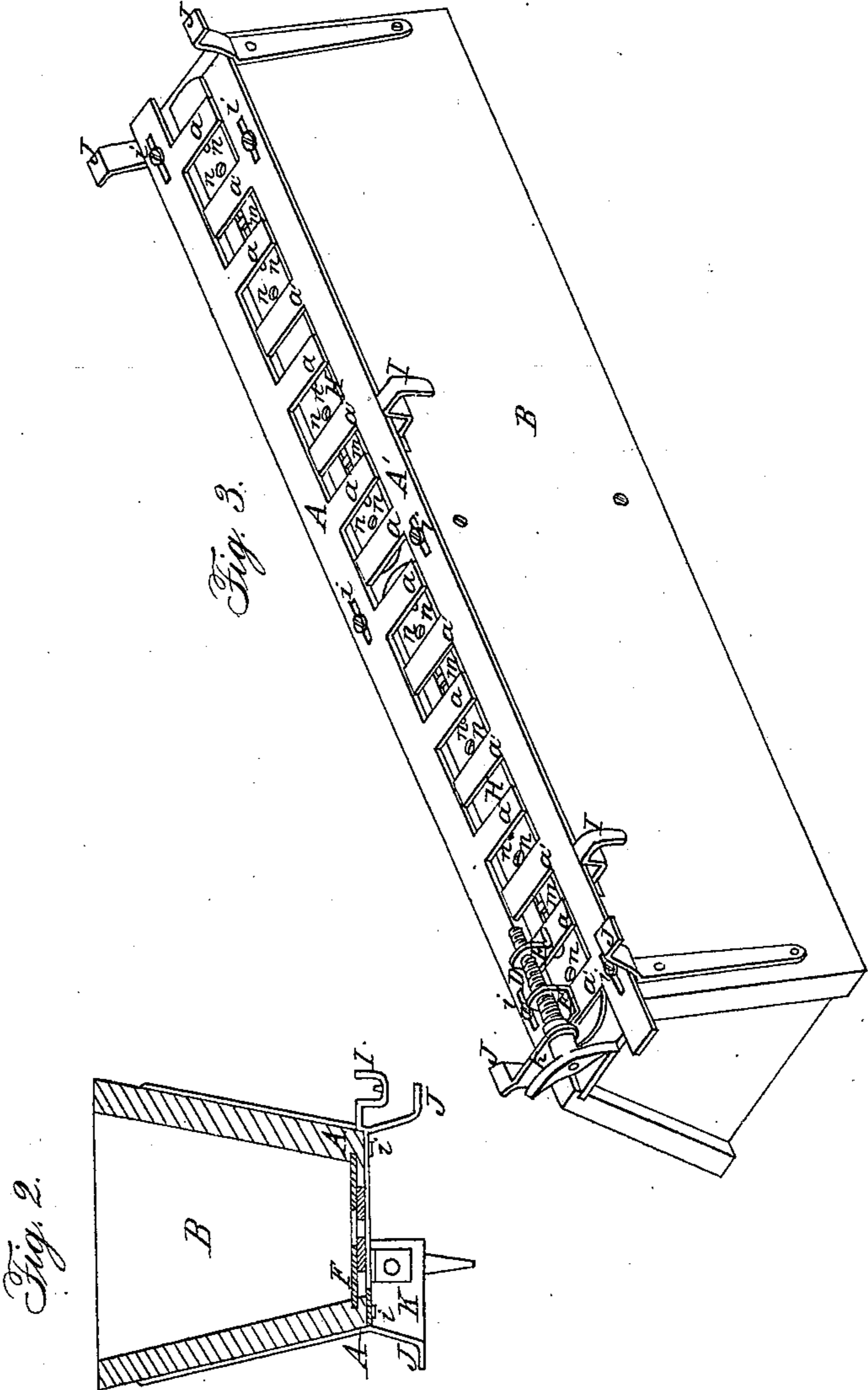
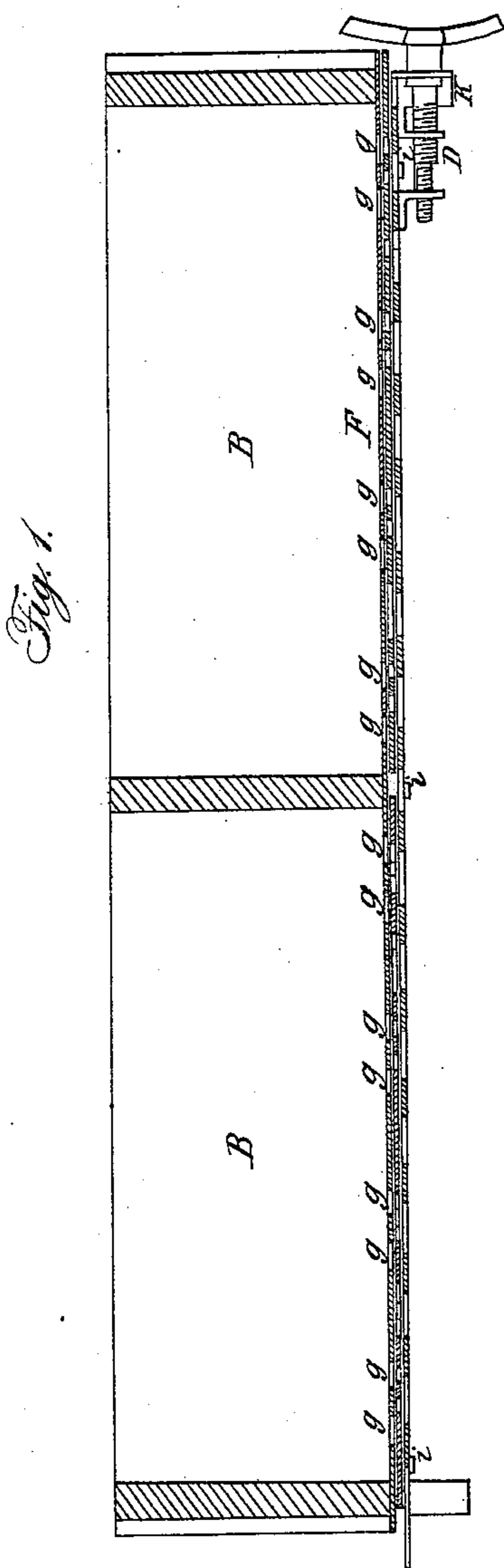


T. A. RISHER.
Seed Dropper.

No. 14,703.

Patented Apr. 15, 1856.



UNITED STATES PATENT OFFICE.

THOMAS A. RISHER, OF LANCASTER, OHIO, ASSIGNOR TO THOMAS A. RISHER
AND I. K. COOPER.

IMPROVEMENT IN SEEDING-MACHINES.

Specification forming part of Letters Patent No. 14,703, dated April 15, 1856.

To all whom it may concern:

Be it known that I, THOMAS A. RISHER, of Lancaster, in the county of Fairfield and State of Ohio, have made certain new and useful Improvements in Seeding-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a longitudinal vertical section. Fig. 2 is a transverse vertical section. Fig. 3 is a perspective view of the seed-hopper turned upside down to show the slides under the bottom.

The nature of my invention consists in the combination of the adjustable graduating bars and plates, the reciprocating slides, and double-holed bottom to regulate the quantity of seed discharged.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A A' are bars of which plates *a a'* are a part. Said bars and plates are secured in position by means of screws *i*, which pass through slots in the bars, as seen in Fig. 3.

D is a right-and-left screw, the larger portion of said screw being right and the smaller left. Said screw is secured in a stationary position by means of supporter K. The ear or projection E is secured to plate *a* in any convenient manner. Projection E' is also secured to plate *a'*. The right portion of the screw operates bar A' and plates *a'* and the left operates bar A and plates *a*. Thus it may be seen that by operating the screw in one di-

rection the plates *a a'* are drawn toward each other, thus diminishing the quantity of seed discharged. Should the screw be operated until the plates *a a'* come in contact with each other, no seed will be discharged from the hopper, from the fact that the apertures in the slides will be completely closed by said plates. Should the screw be turned in the opposite direction the quantity of seed discharged will be increased in proportion to the adjustment.

J are metallic bars in the form as shown in the drawings, for the purpose of securing the machine to the carriage.

H are the reciprocating slides, which work between the bottom of the seed-box and plates *a a'*. Said slides are provided with apertures *n*, through which the seed is discharged. Said slides are also provided with slots *m*, which work on pin O for the purpose of keeping the slides in proper position.

I are levers which are connected to and work the slides, said levers being suitably connected to the driving-gear of the machine.

g are apertures in the bottom F of the hopper, through which the seed passes to the slides.

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

Bars A A' and plates *a a'*, in combination with the reciprocating slides H and the double-holed bottom F, the whole being constructed in the manner and for the purpose described.

THOMAS A. RISHER.

Witnesses:

JOHN S. HOLLINGSHEAD,
O. C. WILLSON.