

GEISS & BROSIUS.

Seed-Dropper.

No. 18,735.

Patented Dec. 1, 1857.

Fig. 1.

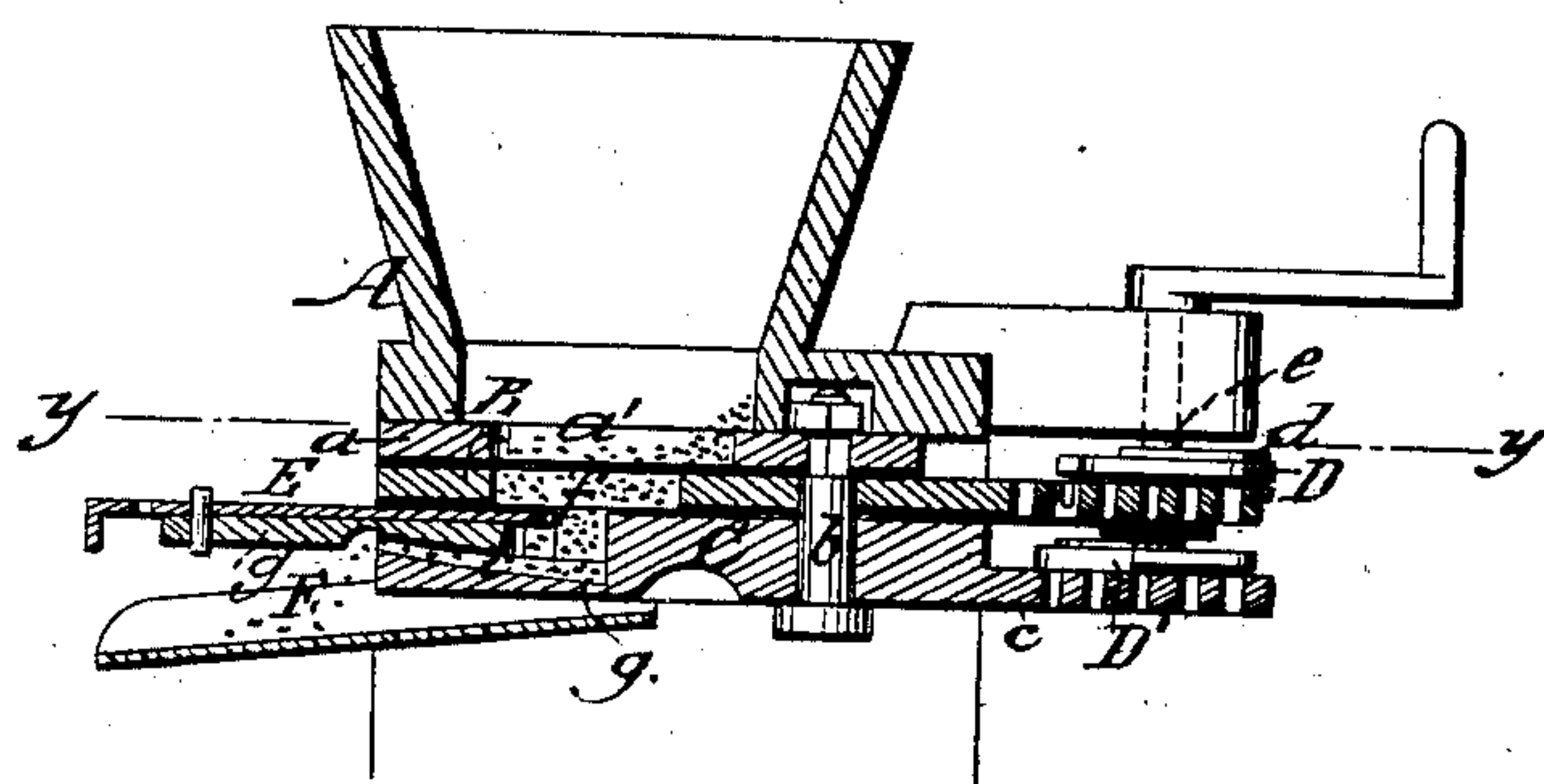


Fig. 2.

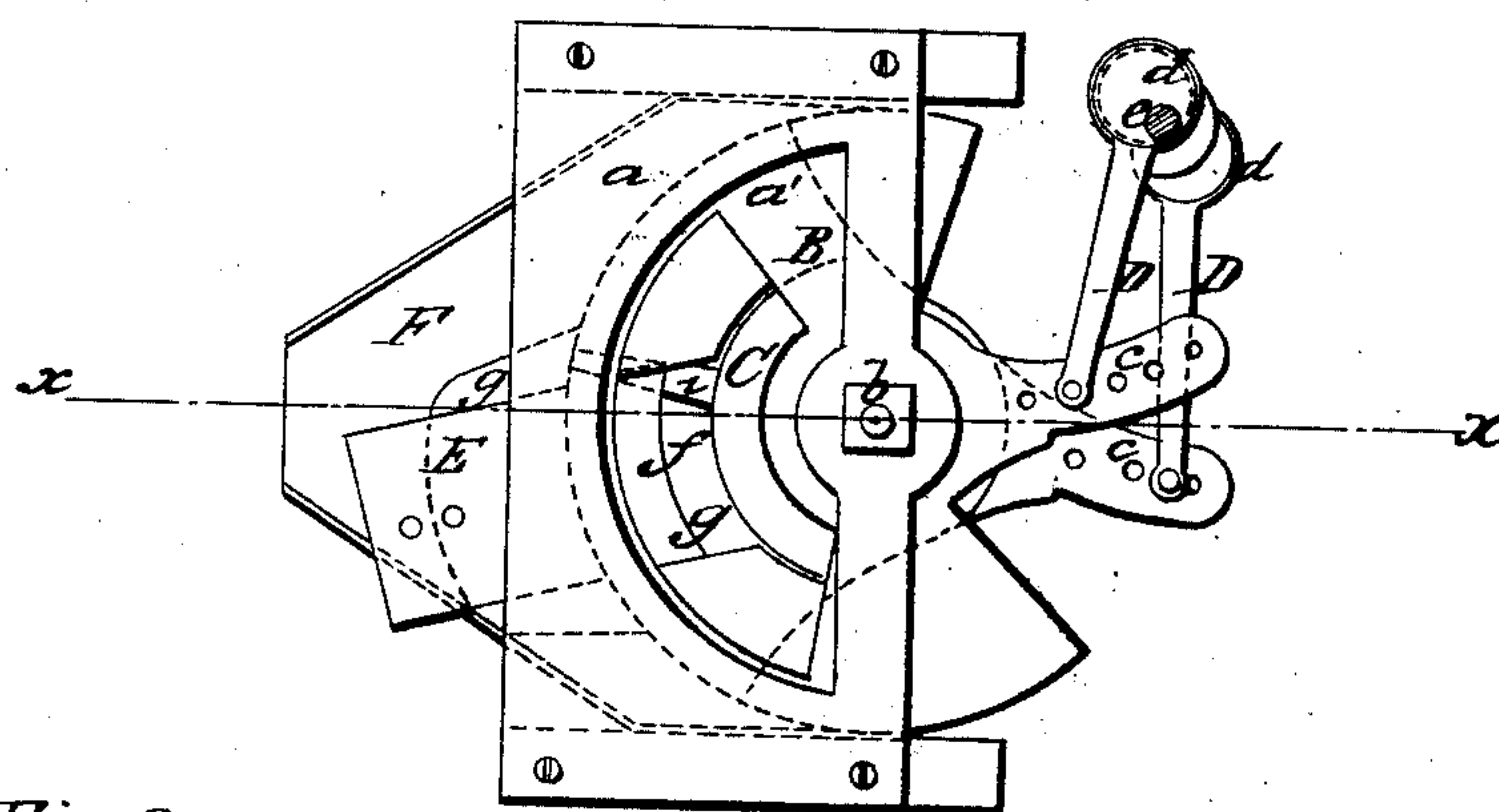


Fig. 3.

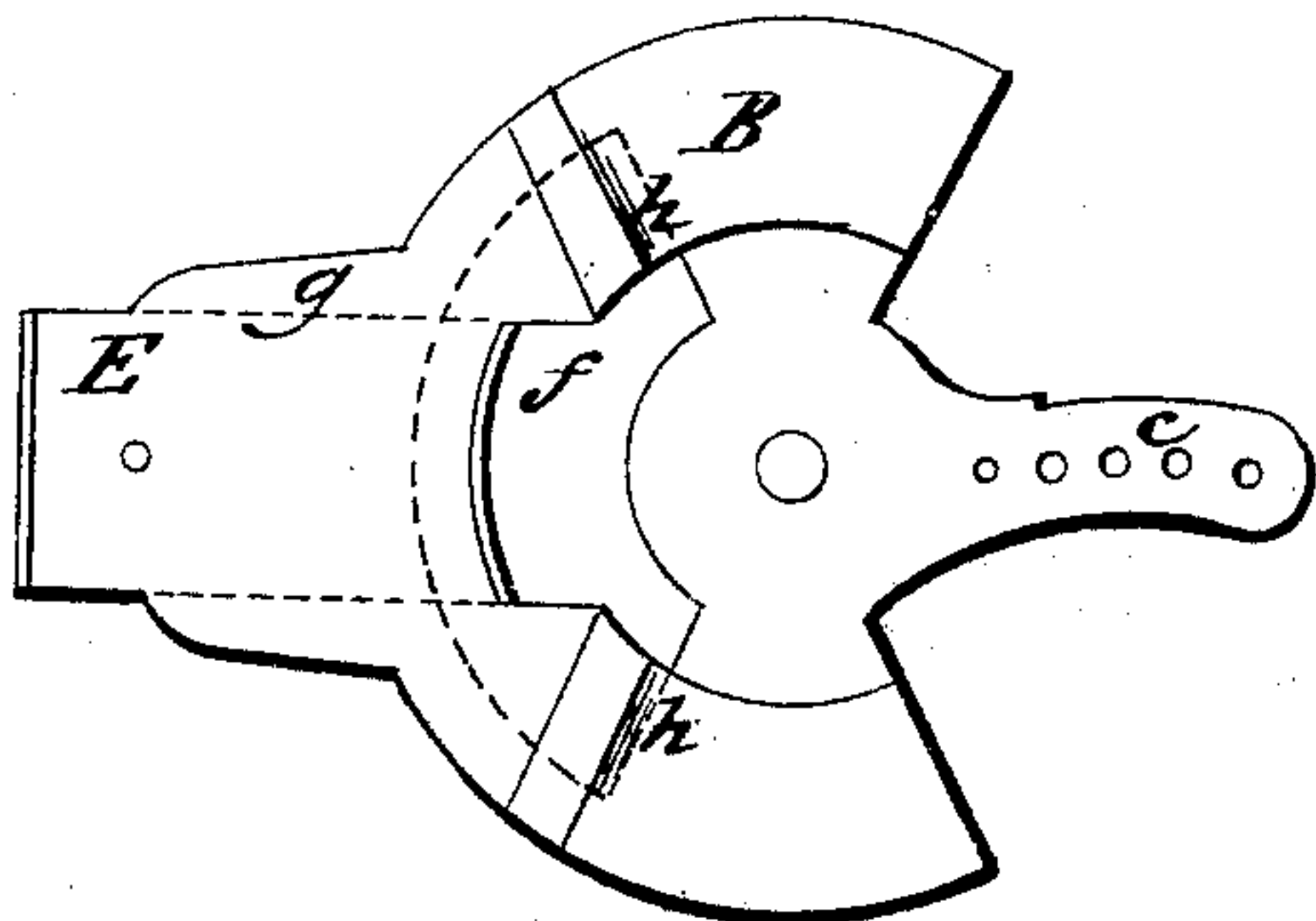
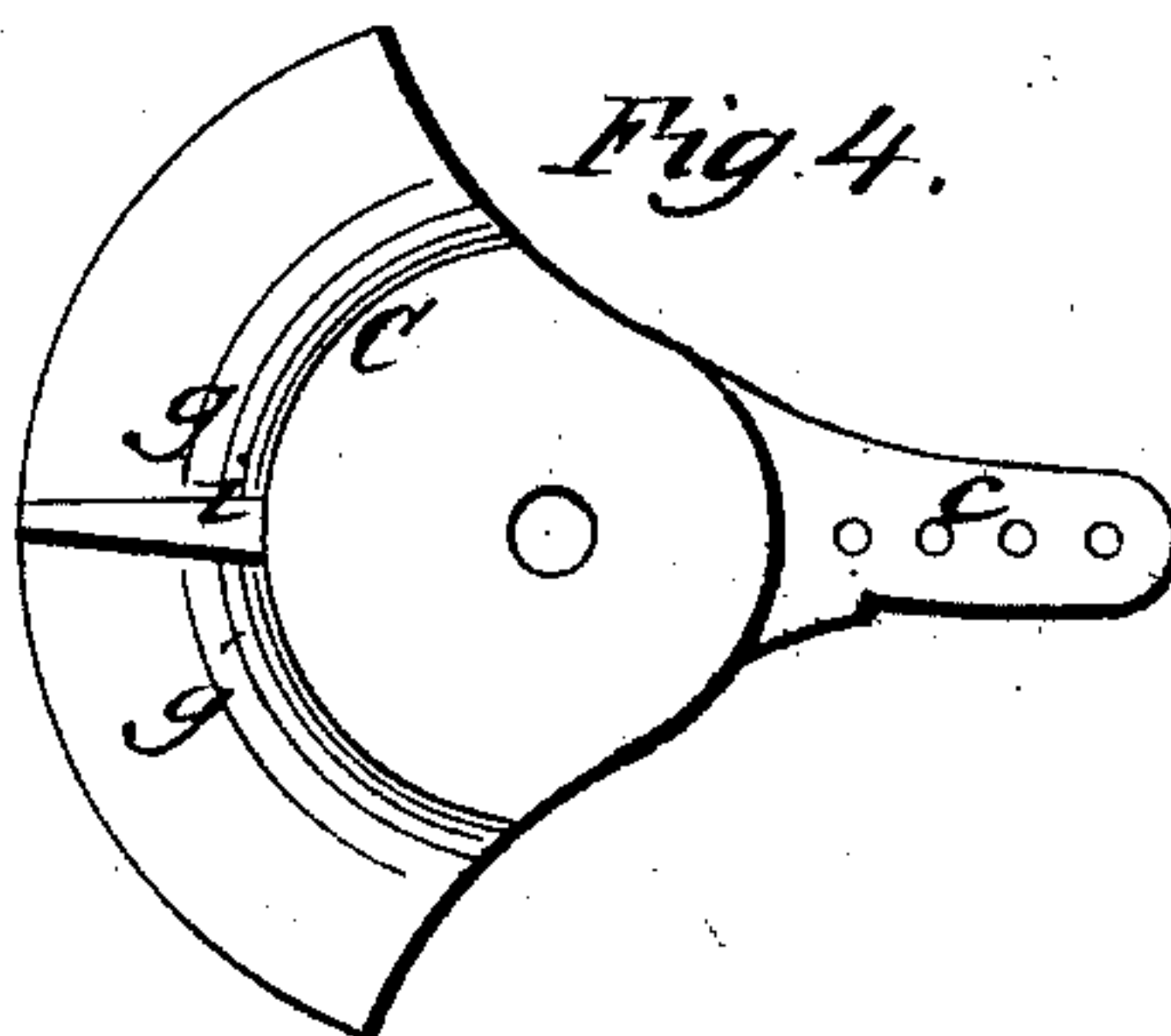


Fig. 4.



UNITED STATES PATENT OFFICE.

JACOB GEISS AND JACOB BROSIUS, OF BELLEVILLE, ILLINOIS.

IMPROVEMENT IN SEEDING-MACHINES.

Specification forming part of Letters Patent No. 18,735, dated December 1, 1857.

To all whom it may concern:

Be it known that we, JACOB GEISS and JACOB BROSIUS, of Belleville, in the county of St. Clair and State of Illinois, have invented a new and useful Improvement in Seeding-Machines; and we 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 central section of our improvement, taken in the line *x x*, Fig. 2. Fig. 2 is a horizontal section of same, taken in the line *y y*, Fig. 1. Fig. 3 is a detached inverted plan of the upper segment-plate. Fig. 4 is a detached plan or top view of the lower segment-plate.

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

This invention consists in the peculiar means employed for distributing the seed, whereby the distributing device is prevented from choking or clogging, the seed prevented from dropping from the hopper when the parts are not in operation, and the seed allowed to be measured and dropped in greater or less quantities on given areas or surfaces of ground, as may be desired.

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

A represents a hopper or seed-box of the usual form, and *a* is its bottom, which has a curved or segment opening, *a'*, made through its bottom, as clearly shown in Fig. 2.

B C represent two metal plates, which are of sector form, as shown clearly in Figs. 3 and 4. These plates are secured to the machine by a common bolt or pin, *b*, which passes through them at a point concentric with or equidistant from their curved edges. Each plate B C is provided with an arm, *c*, perforated with holes to receive the hook of a connecting-rod, D, said rods having their opposite ends attached each by the usual straps to eccentrics *d d*, which are placed upon a vertical shaft, *e*, attached to one end of the machine. These eccentrics are so formed as to give not only a vibratory movement to the two plates in opposite direction, but also prevent a cessation of movement by having both plates coincide in their movement for an instant just previous to the change of motion of each. By

this means the change of motion of the two plates does not occur at the same moment, and consequently there will be a continuous movement or not a cessation of movement of both plates at any time.

The upper plate, B, has a curved or segment opening, *f*, made through it, and said plate has a projection, *g*, at its front end, said projection having a slide, E, placed on it, by which the size of the opening *f* may be varied, as occasion may require. (See more particularly Figs. 1 and 2.)

The lower plate, C, has its front portion recessed, so as to form a groove or seed-receptacle, as shown at *g'*. (See more particularly Fig. 1.) The outer edge of this recess or groove is higher than the inner edge, so that the seed will not casually fall or pass out from it. The front part of the under side of the upper plate, B, has two ledges or flanges, *h h*, upon it, said ledges serving as boundaries to the seed-receptacle *g'*, as said ledges or flanges rest upon the bottom of the seed-receptacle. The ledges or flanges are both shown in Fig. 3. It will be seen that they are placed at equal distances from the center of the opening *f*. At the center of the groove or seed-receptacle *g* there is a ledge or projection, *i*, which extends across the whole width of the groove or receptacle, its upper edge being in contact with the under side of the upper plate, B. (See Fig. 1.)

Within the framing of the machine, and below the plate C, there is placed a discharge-spout, F, as shown in Figs. 1 and 2.

The operation is as follows: The hopper A is filled with seed, and the shaft *e* may be rotated in any proper manner. The two plates B C, it will be seen, are vibrated in opposite directions, and the seed passes from the hopper through the opening *a'* in its bottom and through the opening *f* in plate B into the groove or seed-receptacle *g'*, and by the motion of the two plates in connection with the ledge *i* on plate C the seed is kept in an agitated state and effectually prevented from clogging, the seed being discharged from the outer edge of the receptacle *g'* in plate C by the vibratory motion of the same, the seed falling into spout F, and from thence upon the ground. (See Fig. 1.)

The length of stroke of the plates B C may be varied as desired by adjusting the hooks of the connecting-rods D D in either of the

perforations of the arms *c c*, and as the opening *f* may be varied in size by adjusting the slide *E* it follows as a matter of course that a greater or less quantity of seed, as may be desired, may be planted on a given area.

It will also be seen that the distributing device cannot become choked or clogged in consequence of the continuous movement of the working parts, neither of the plates *B C* being stationary or having a cessation of movement at the same time. It will also be seen that if the machine be stopped the seed will not fall from the edge of groove or receptacle *g'*, owing to its inclined position, and that device may be operated with a reasonable expenditure of power.

We are aware that perforated slides moving rectilinearly in opposite directions have been previously used for distributing seed, and we are also aware that slides to vary the orifices of seed receptacles or cells have been previous-

ly used. We therefore do not claim broadly and irrespective of construction and arrangement such devices; but,

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

The employment or use of the two sector-plates *B C*, constructed as shown—viz., one being provided with an opening, *f*, and the other with a recess or seed-receptacle, *g'*, and ledge *i*, the plates being fitted on a common axis, *b*, and operated through the medium of the eccentrics *d d* and the connecting-rods *D D*, attached to the arms *c c* at the desired points, substantially as and for the purpose set forth.

JACOB GEISS.

JACOB BROSIUS.

Witnesses:

THEOD. I. KRAFFT,

BERNHARDT VOLLRATH.