

D. STRUNK.
SEEDING-MACHINE.

No. 173,711.

Patented Feb. 15, 1876.

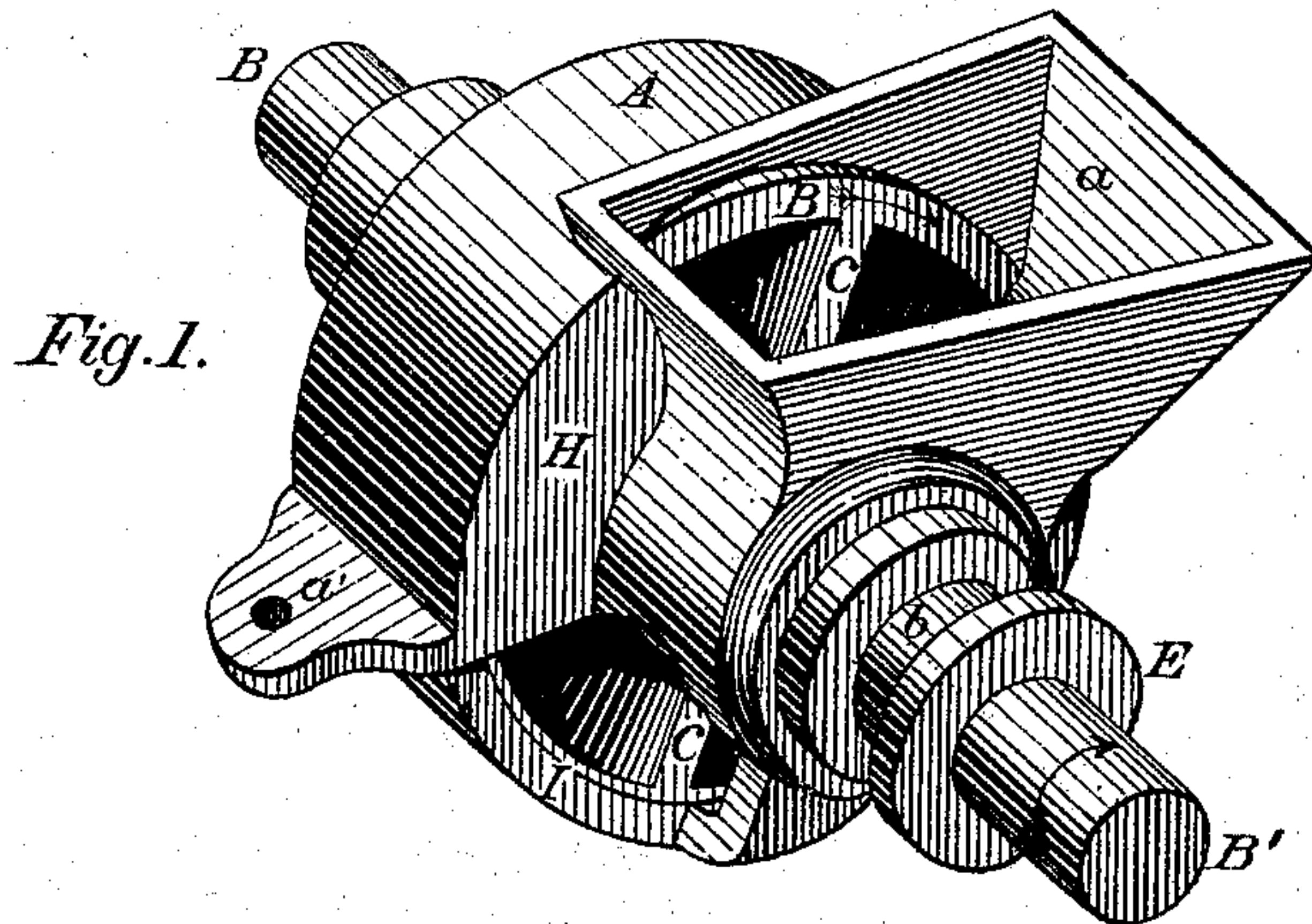


Fig. 3.

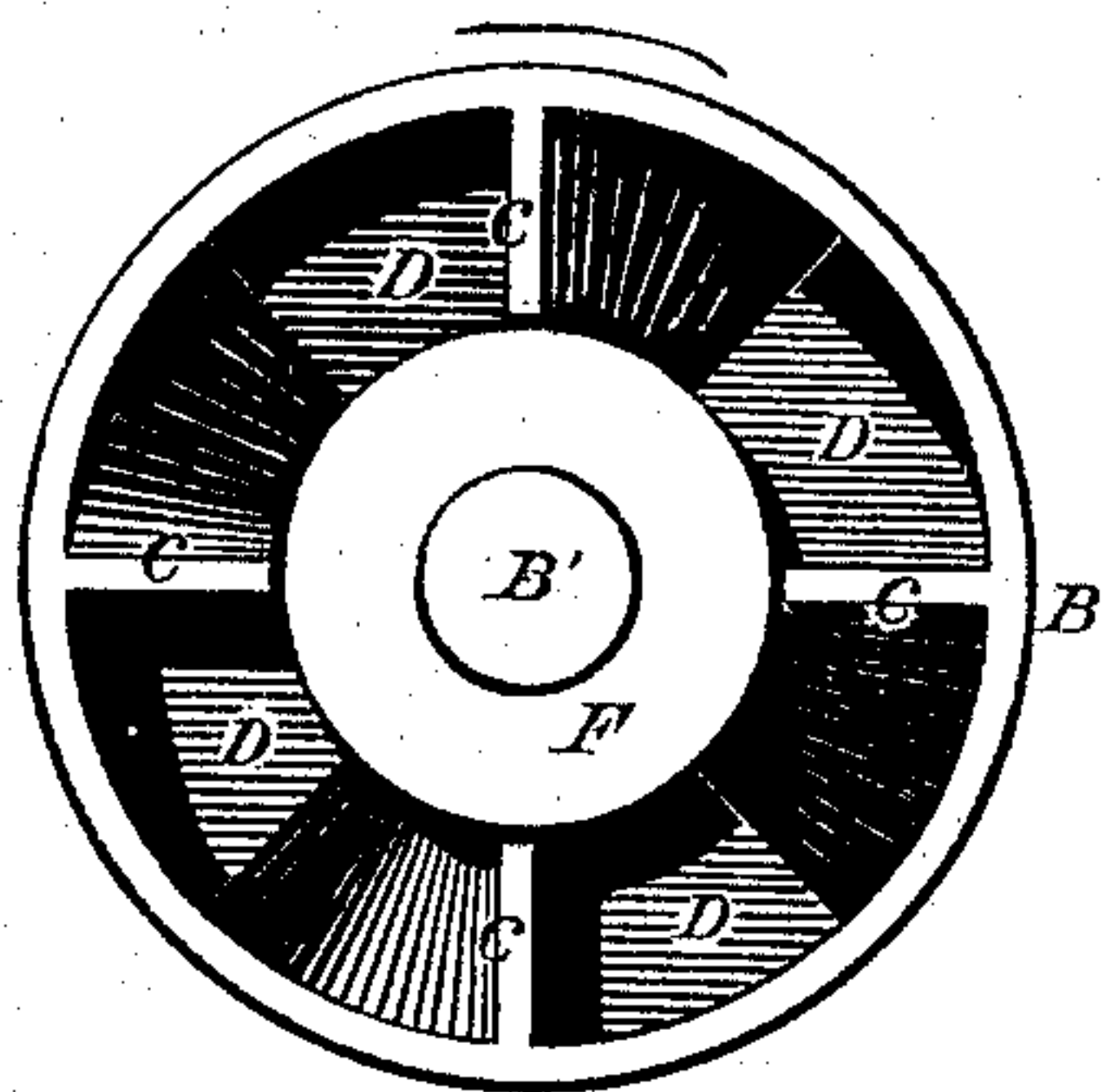


Fig. 4.

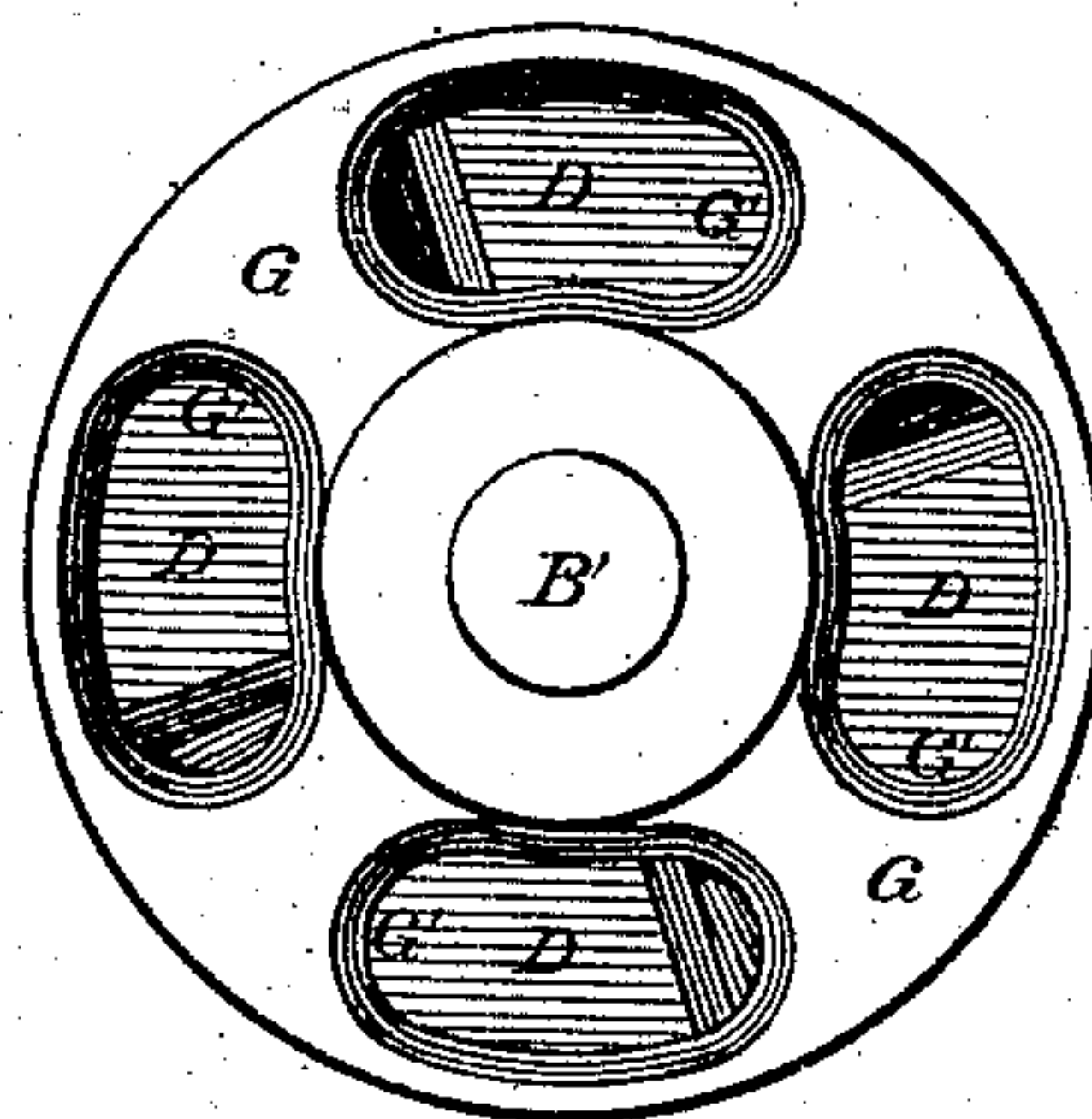
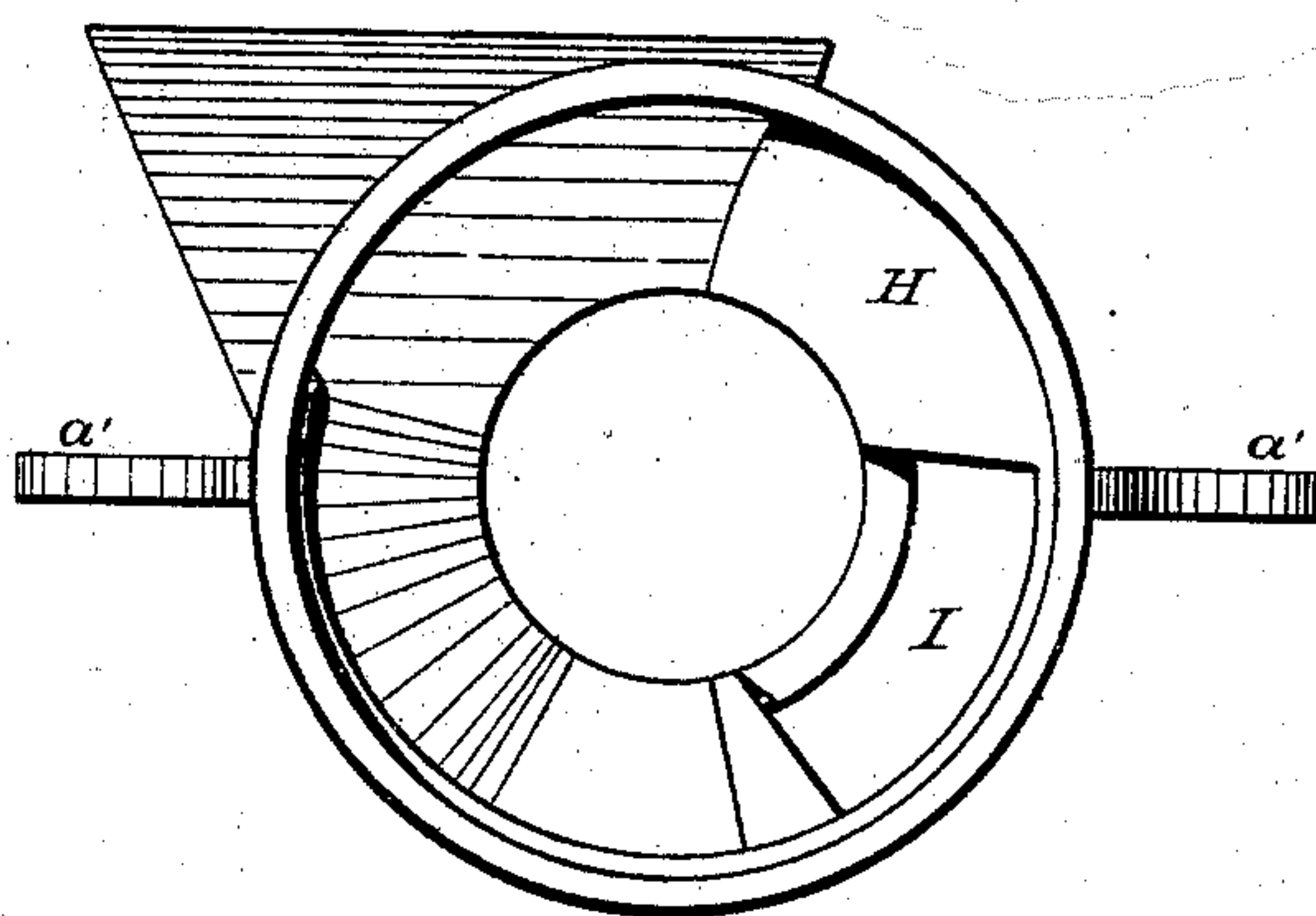


Fig. 2.



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UNITED STATES PATENT OFFICE.

DANIEL STRUNK, OF JANESVILLE, WISCONSIN.

IMPROVEMENT IN SEEDING-MACHINES.

Specification forming part of Letters Patent No. 173,711, dated February 15, 1876; application filed December 3, 1875.

To all whom it may concern:

Be it known that I, DANIEL STRUNK, of Janesville, in the county of Rock and State of Wisconsin, have invented a new and useful Improvement in Seeding-Machines; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

This invention relates to that class of seed-machines wherein the grain is distributed by a vertically-revolving cylinder having cups or receptacles filling as they revolve and discharging at any suitable point of their revolution, the quantity of grain discharged by the cups being regulated by their capacity by means of an adjustable disk; and its object is an improved seed-dropping mechanism, whereby the desired quantity of grain can be positively sown, the capacity of the seed-receptacles conveniently adjusted without changing the speed of any of the parts, and coarse or unclean grain sown without clogging or grinding.

My invention therein consists principally in dividing the inside of the vertically-revolving cylinder into independent and unconnected spirally-shaped seed-chambers; further, in the combination of the peculiar seed-receptacles and the adjustable disks; and, further, in various combinations, all as more fully hereinafter explained.

To enable others skilled in the art to make my invention, I now proceed to describe the same in connection with the drawings, in which—

Figure 1 is a perspective view; Fig. 2, a side elevation, with the seed-cylinder and adjustable disk removed; Fig. 3, an end elevation of the seed-cylinder and adjustable disk; and Fig. 4 is an end elevation of the seed-cylinder.

Like letters denote corresponding parts in each figure.

A represents the outer casing, having an opening, *a*, on its top, forming a continuation of the main hopper of the machine, and suitable flanges *a'*, by which it is secured in place. B is a cylinder, situated in the casing A and adapted to revolve therein, being rigidly secured to a shaft, B', which passes entirely through said outer casing, and is revolved by

any suitable means. On the inside of the cylinder B are cast spiral flanges or partitions C, which extend at regular intervals the entire length of said cylinder, and project inwardly from the shell of the same. D is a disk slightly smaller than the internal bore of the cylinder B, and is provided with diagonal slots, adapted to slide over the flanges C, and pass freely in and out of the cylinder, taking the direction of the flanges, but fitting snugly the several parts. The disk D is supported upon an arm, E, which is sleeved on the shaft B', and has a groove, *b*, near its end for the reception of a forked lever, adapted to move said arm and disk. This arm is just large enough to fill up the central space between the sides of the internal flanges, and thus separates the inside of the cylinder into separate and unconnected chambers F, while, by moving the disk back and forth, the size of these spaces can be regulated at will. The cylinder B is closed at one end by a head, G, through which openings G' are made, the same in number as the chambers F. H is a rectangular projection on the inside of the outer casing, having a flat, smooth face. The face of this projection is about the same in extent as the distance between two of the flanges C, one end of the cylinder and flanges bearing against such surface in their revolution. I is an opening made in the outer casing at any suitable point, and connects with a part of the open end of the cylinder and with the seed-chambers.

The operation of my device is as follows: The shaft and cylinder being revolved, by any of the well-known devices, in the direction of the arrows, the grain in the opening *a*, by its own gravity and by the weight of the superincumbent grain, flows freely and naturally into the seed-chambers, and is delivered by them into the opening I in regular quantities. The disk is adjusted to make the seed-chambers of the desired capacity.

In planting all kinds of grain, and especially unclean grain, chaff, dirt, and fine seeds are liable to get past the disk, between it and the head of the cylinder, and prevent the disk from being moved to its greatest limit.

To remedy this defect, I provide the head with openings, before described, through which the chaff, dirt, and fine seeds pass, by the

revolution of the cylinder and by the incline of the spiral flanges. The spirally-formed seed-chambers and flanges, besides throwing the dirt through the openings, allow the seed to fill them more perfectly and deliver the same more easily than if the said flanges were at right angles to the head of the cylinder.

The seed-chambers, by being independent and unconnected, have the advantage of delivering positively the same amount of grain in each. The surface H, by being about the same size as one of the spaces, prevents the backward flow or leakage of the grain, as each succeeding partition comes near enough to such surface to stop the flow of the grain through to the exit after the preceding partition has passed by the surface and the grain enters its following seed-chamber.

Instead of having the cylinder secured to the shaft B' and the disk sleeved thereon, as shown, the disk can be rigidly secured to said shaft and the cylinder sleeved, the shaft being moved when it is desired to adjust the disk, and the cylinder being turned by the disk and held in the outer casing by any suitable means.

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

1. In a seeding-machine, a vertically-revolving cylinder, having internal spiral flanges, forming independent and unconnected spirally-shaped seed-receptacles, substantially as and for the purposes set forth.

2. The combination with the vertically-revolving cylinder, having independent and unconnected spirally-shaped seed-receptacles, of the adjustable disk, substantially as described and shown.

3. The combination, with the cylinder B, of the internal spiral flanges, the disk, and the openings G' in the head of the cylinder, substantially as described and shown.

4. The combination, with the casing A and cylinder B, of the spiral flanges C and surface H, substantially as described and shown.

5. In combination, the casing A, having openings a and I and surface H, the cylinder B, having internal flanges C and openings G', and the adjustable disk D, all substantially as described and shown.

This specification signed and witnessed this 22d day of November, 1875.

DANIEL STRUNK.

Witnesses:

OBED DAWN,
L. L. ROBINSON.