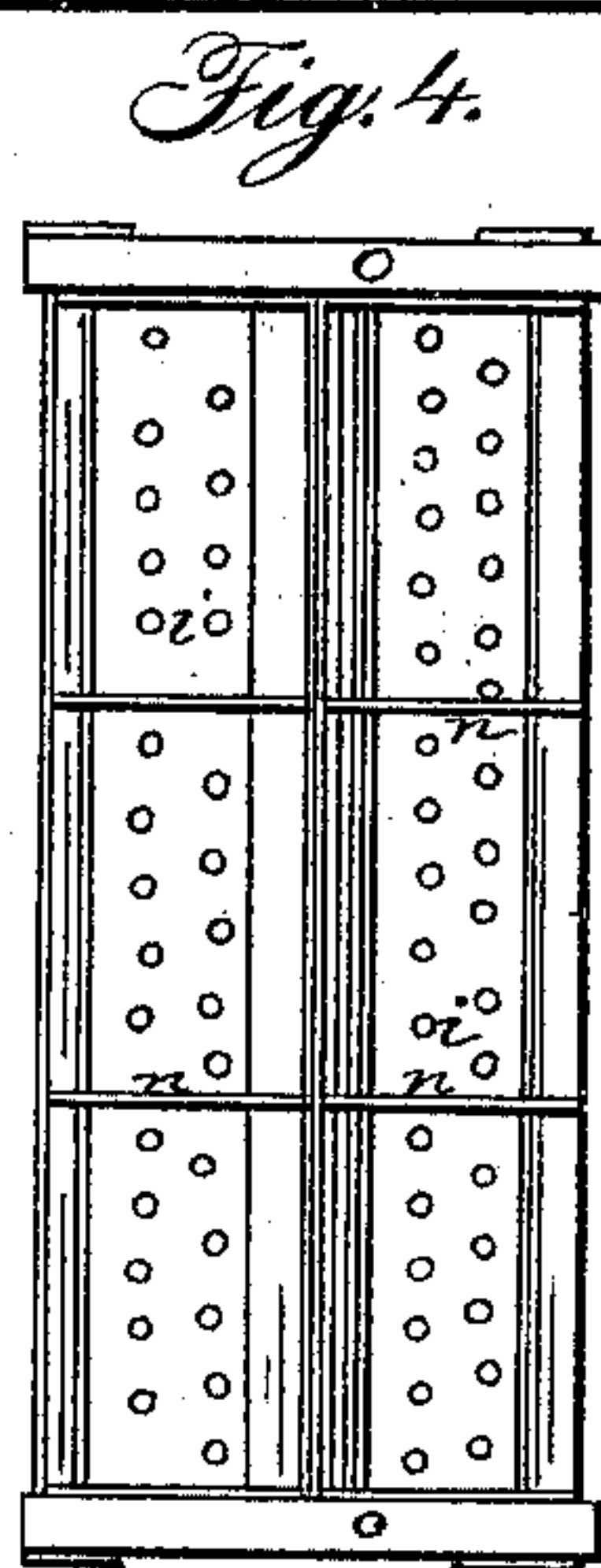
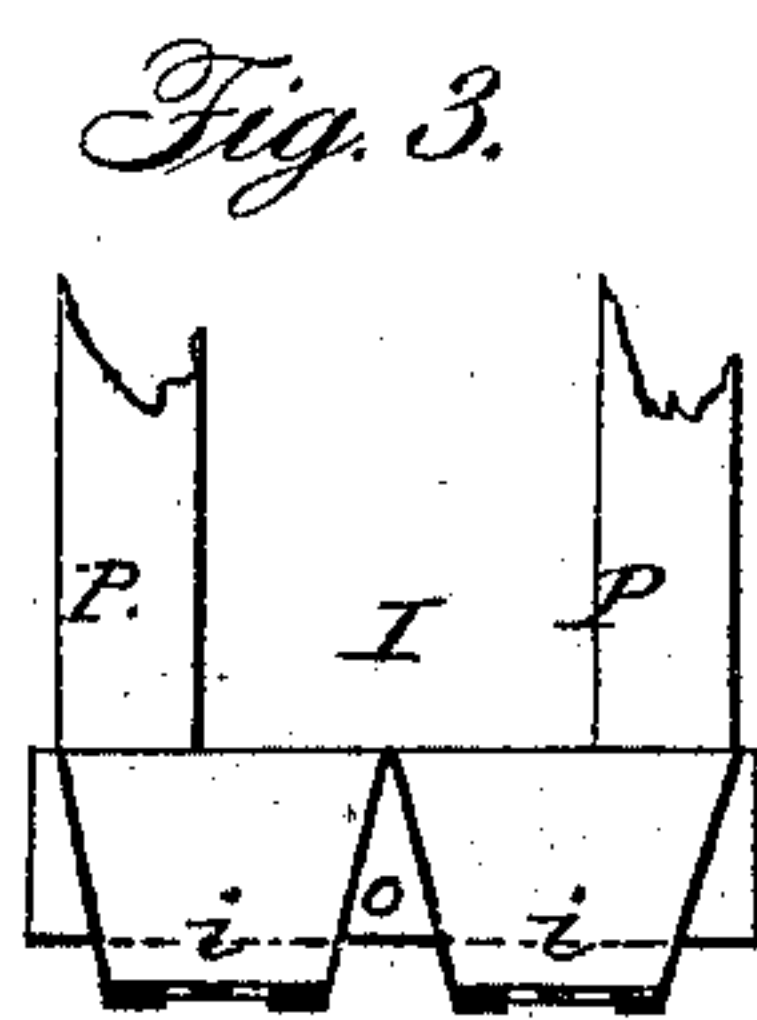
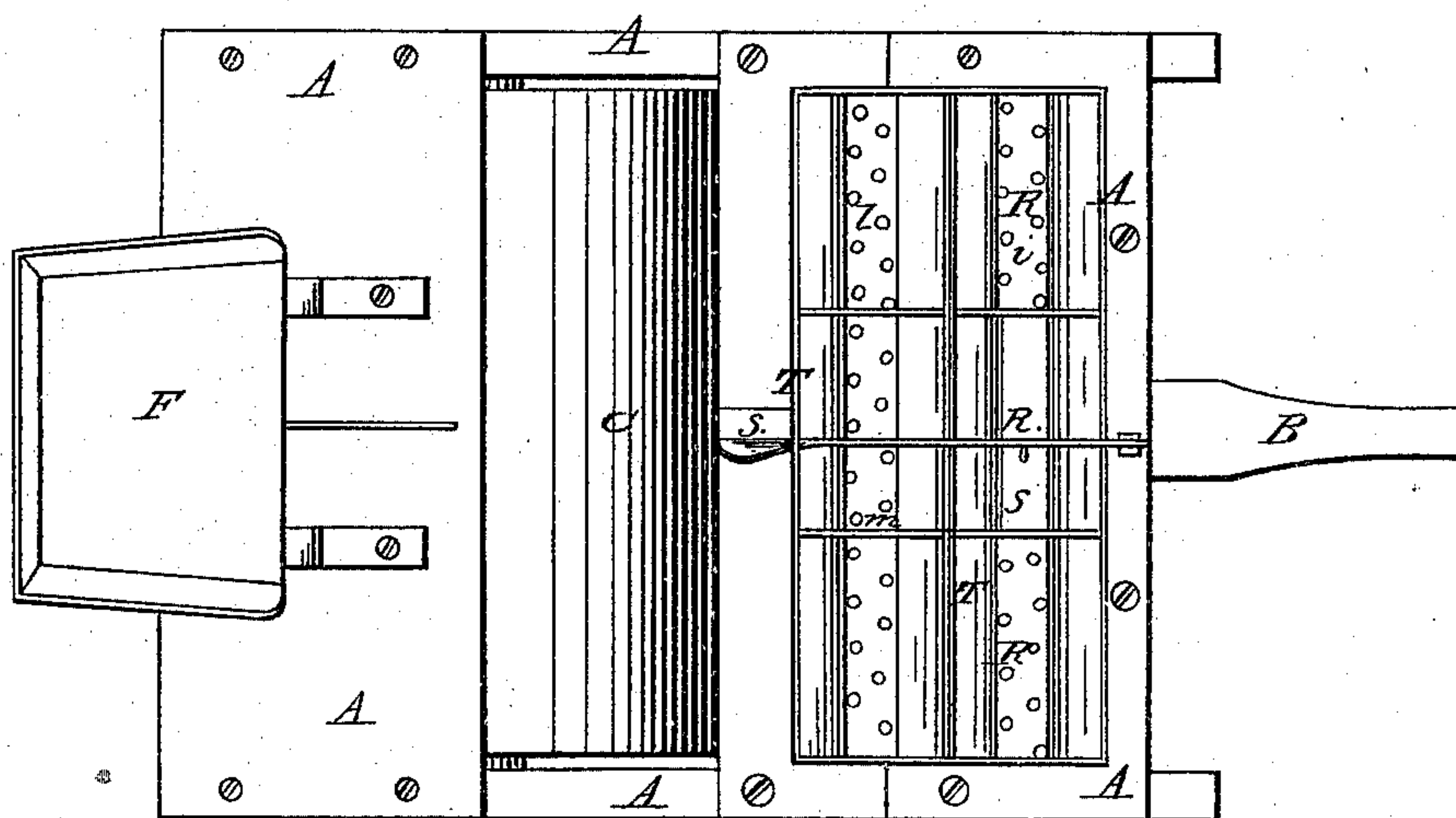
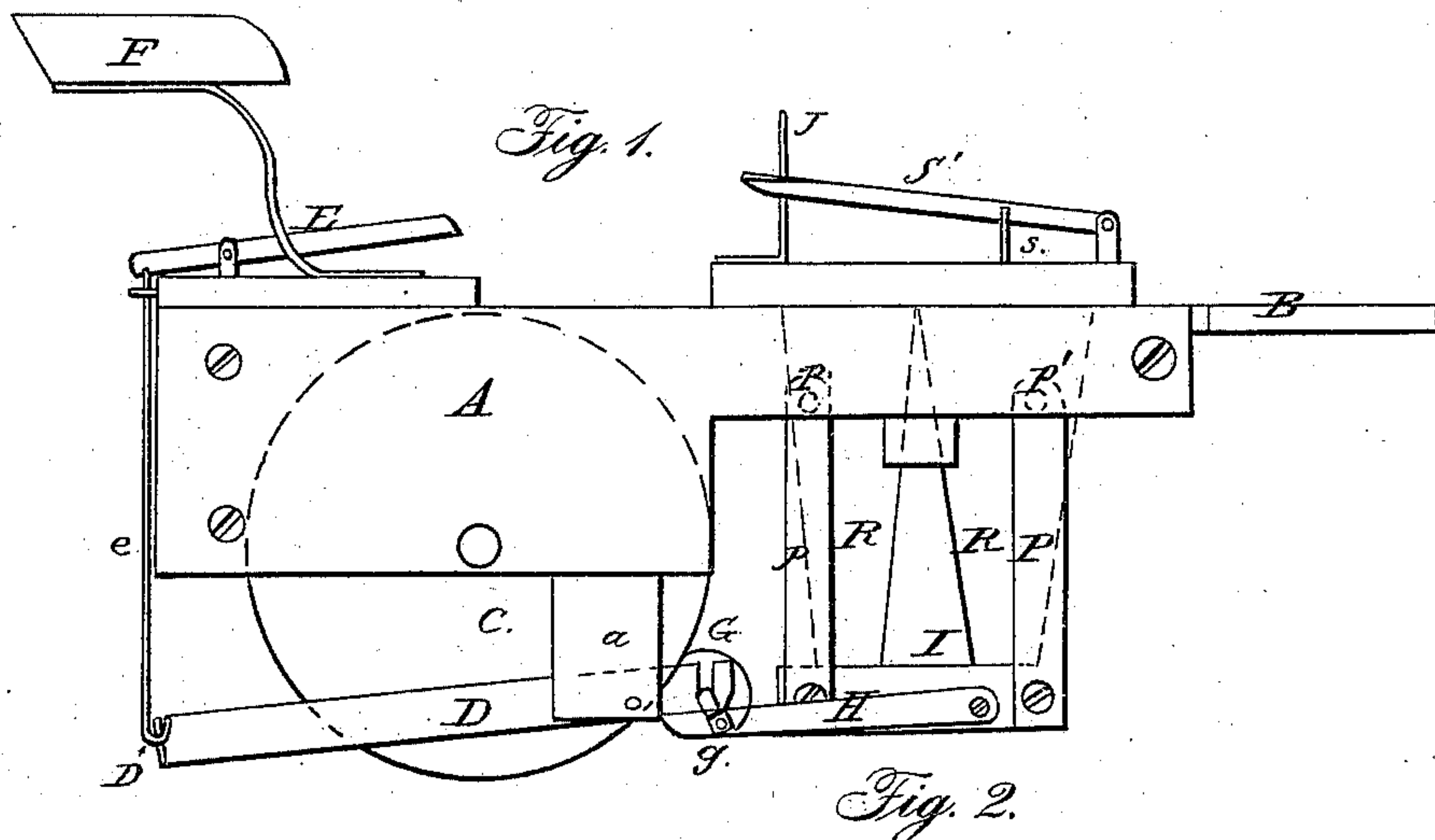


H. ZELLNER.

Grain Drill.

No. 66,768.

Patented July 16, 1867.



Witnesses:

Chas A. Pettit
John B. Kemm

Inventor:

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Attorneys

United States Patent Office.

HENRY ZELLNER, OF COLUMBIA, TENNESSEE.

Letters Patent No. 66,768, dated July 16, 1867.

IMPROVEMENT IN COMBINED SEED-SOWER AND ROLLER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, HENRY ZELLNER, of Columbia, in the county of Murray, and State of Tennessee, have invented a new and useful Combined Land-Roller and Seed-Sower; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of specification, and in which—

Figure 1 is a side elevation of my invention.

Figure 2 is a top view of the same.

Figure 3 is a cross-section; and

Figure 4, a top view of the swinging-sifter I.

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

The object of this invention is the construction of a simpler, cheaper, and more effective arrangement of land-roller and seed-sower than any hitherto in use.

In order that others skilled in the art to which my invention appertains may be enabled to make and use the same, I will proceed to describe it in detail.

In the drawings, A A represent the frame of my machine, B the draw-beam, and C the roller. These parts alone constitute the common land-roller, and contain nothing new in form or construction. The invention consists in combining and operating them with a seed-box, in a new and useful manner. Upon lugs *a a*, depending from the side pieces of the frame A, I pivot two arms or levers D D, connecting their rear extremities by a rod, D'. A hand or foot-lever, E, near the driver's seat F, serves to raise or lower the rear ends of the connected levers D D, by means of a rod, *e*, extending from the rear end of the lever E to the centre of the rod D' which unites the two levers D D. The longer ends of these arms or levers are behind the pivots upon which they work. In the forward ends of the levers D D bear the journals of an auxiliary roller, G, which, when the rear end of the levers D D is depressed, rubs against the roller C and receives motion from it, and when the rear end of the levers D D is elevated, is disengaged from the roller C, so as to take no motion from it. The weight of the roller G and the levers D D is so adjusted that the force of gravity will keep the roller G pressed against the large roller C. The shaft upon which the roller G works has upon its extremities cranks *g g*, from which pitmen H H extend to the sides of the swinging-sifter I, under the seed-box K. The sifter is made double, corresponding to the seed-box, the parts being separated by a longitudinal partition. It has sliding, detachable, perforated bottoms *i i*, the perforations corresponding to the size of the grain to be sowed. A set of these bottoms may go with a single machine, each bottom having perforations of a different size from the others. The sifters and seed-boxes are also divided into different compartments by the partitions *m m n n*, running at right angles with the partitions which separate the two sifters and the two seed-boxes. The sifters are attached together by the end pieces *o o*, and are hung upon rods *p p*, which swing backward and forward upon pins *p' p'* in the sides of the frame. Instead of this construction of seed-boxes, a whole series of small seed-boxes, R R R, may be connected together and placed over the sifter. The object of making the separate apartments in both the seed-box and the sifter is to prevent the grain from all shifting to one end of the seed-box or sifter when working on inclined ground. S represents a valve or movable bottom of each of the compartments R R of the seed-box, hung by a rod, *s*, upon the hand-lever S'. The latter projects backward till its end comes within reach of the driver, and is provided with a ratcheted post, T, by which it can be confined in any position. The compartments R R being made somewhat funnel-shaped, larger at the top than the bottom, the valve S closely fitting the bottom, will, when seated, prevent the escape of any grain from the seed-box, and may be raised to any required height, opening the aperture of the bottom of the compartments more or less, and perfectly regulating the feeding of the grain. The whole apparatus is so constructed that the driver, sitting in his seat F, can observe the supply of seed in the sifter and regulate it as he desires. The levers E and S' are placed conveniently near his seat, and by a simple push of his foot he can regulate the flow of seed perfectly, and can stop the sifter or put it in motion.

I do not intend to confine myself, however, to this particular form of seed-box and sifter, but may use any form that can be used for such purpose. My invention relates solely to the manner of combining the agitating

apparatus of any seeder with a roller, so that the revolution of the roller shall agitate that apparatus for the purpose of distributing the grain.

I do not claim the principle of combining these parts, but only my peculiar method of combination herein shown.

This instrument is not only simple and cheaper than the combined rollers and seeders now in use, but has a far greater degree of adaptability to the different uses required of such an instrument. The side pieces of the sifter to which the pitmen are attached may be of sufficient length to receive any number of sifters, arranged alongside of each other and extending across the machine. Sets of seed-boxes may be attached to correspond with the number of sifters, and in this way any number of different kinds of seed may be sown together. Where the roller C is made in sections, it will be sufficient if the roller G comes in contact only with the middle section, and it may be made smaller in front of the other sections.

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

The combination and arrangement of the roller C, arms D D, roller G, pitmen H H, and the vibrating-agitator or sifter I of a seed-box, R, substantially as and for the purpose described.

To the above specification of my improvement I have signed my hand this seventh day of June, 1867.

HENRY ZELLNER.

Witnesses:

CHARLES A. PETTIT,
SOLON C. KEMON.