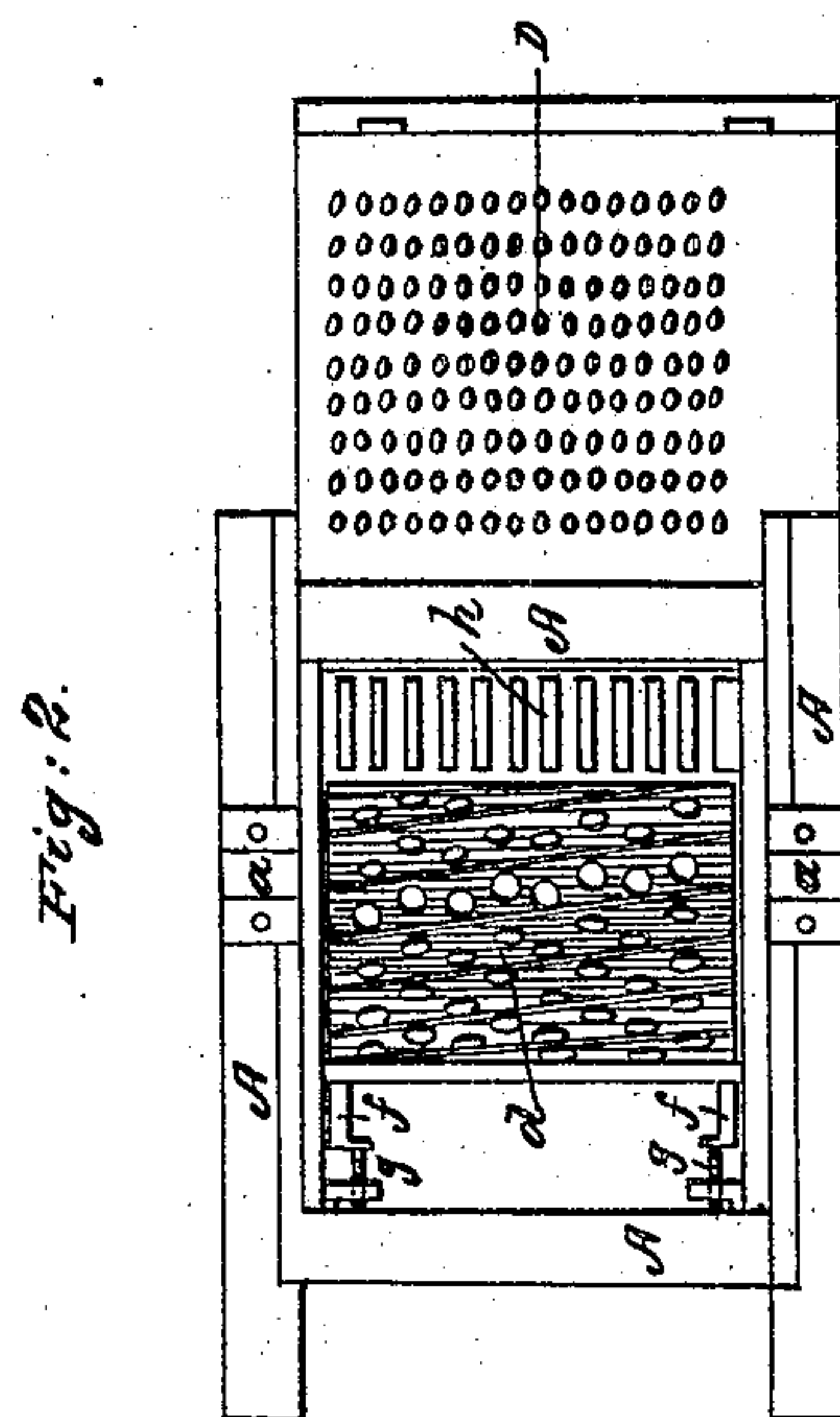
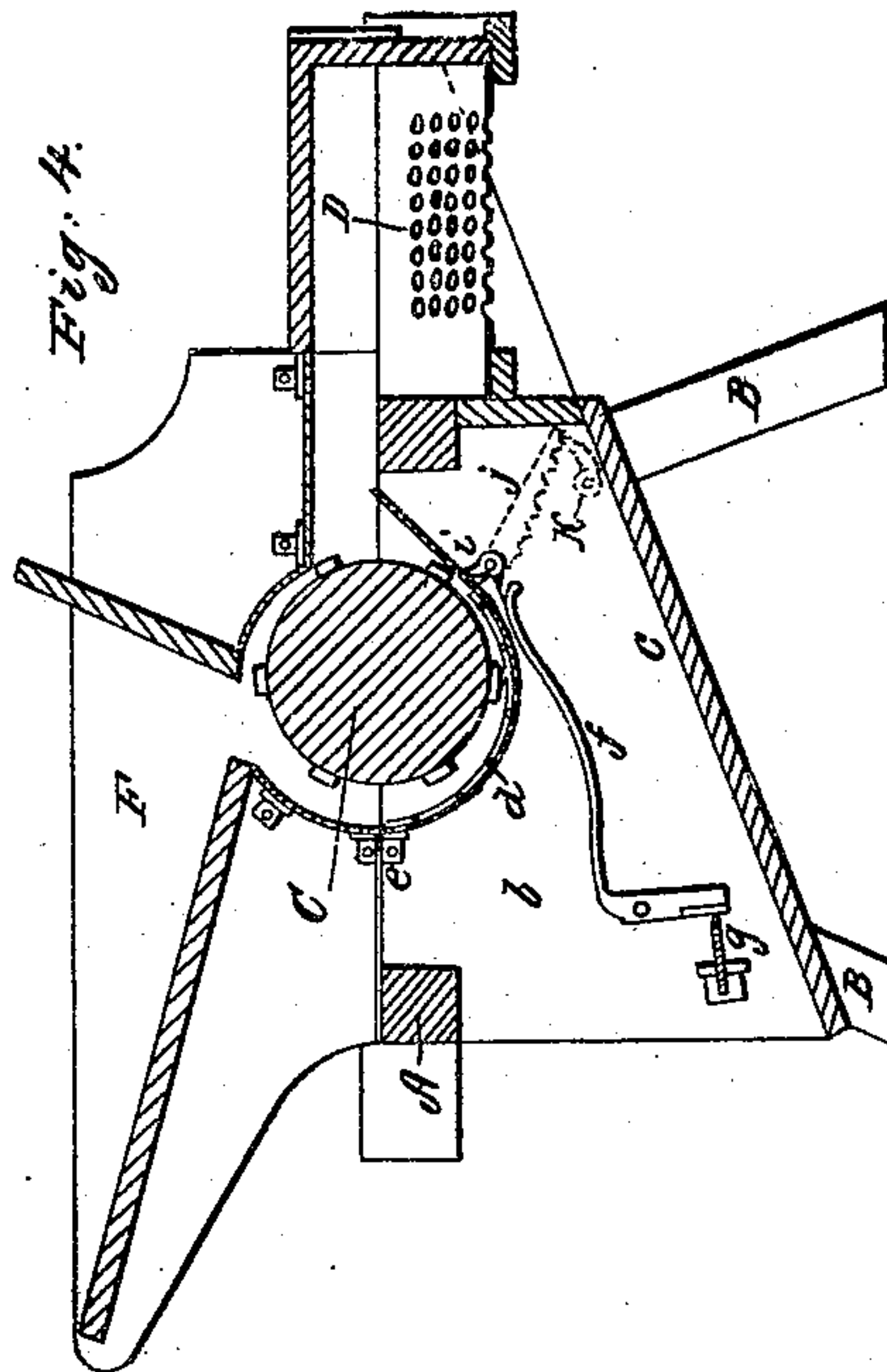
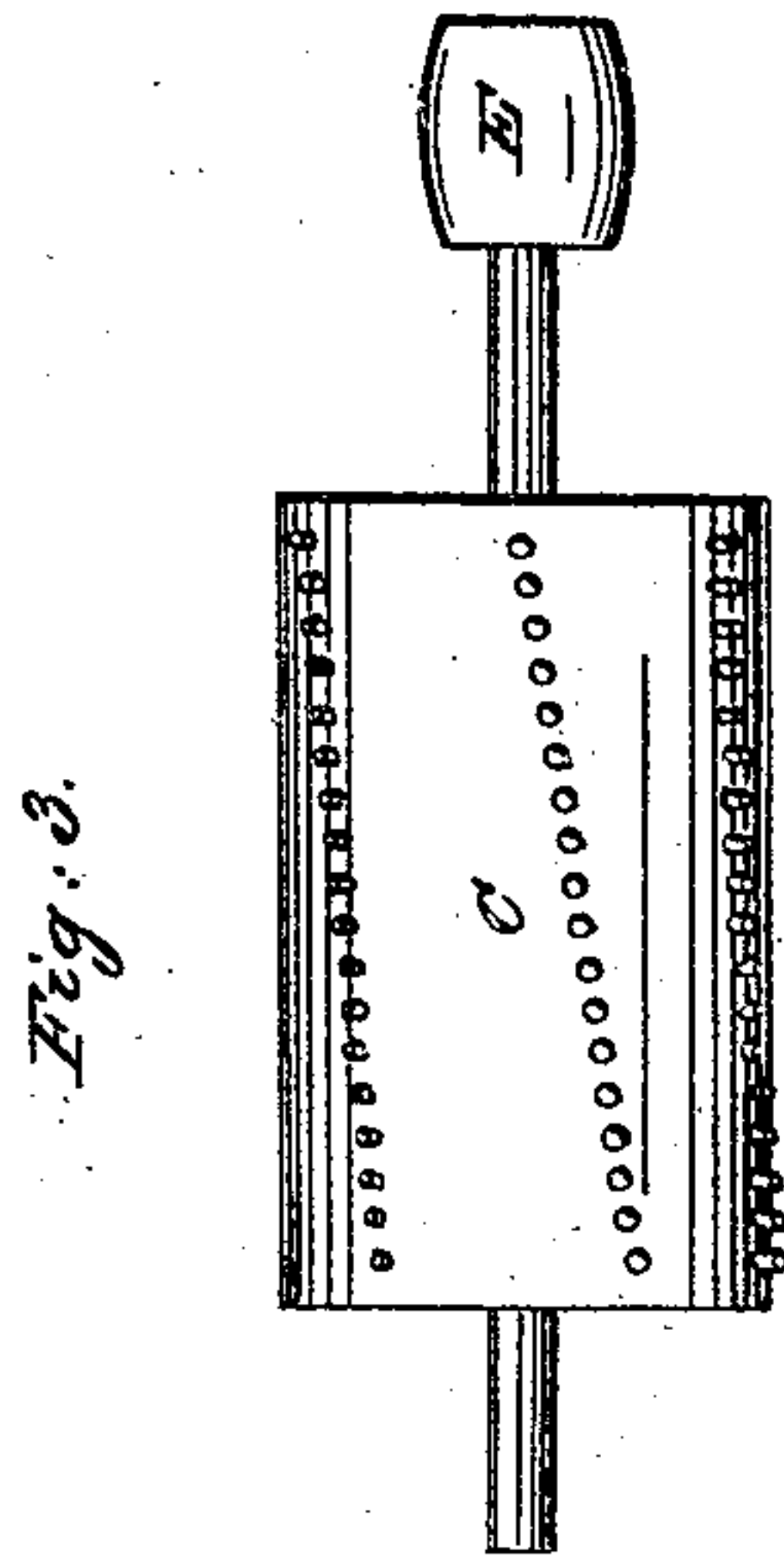
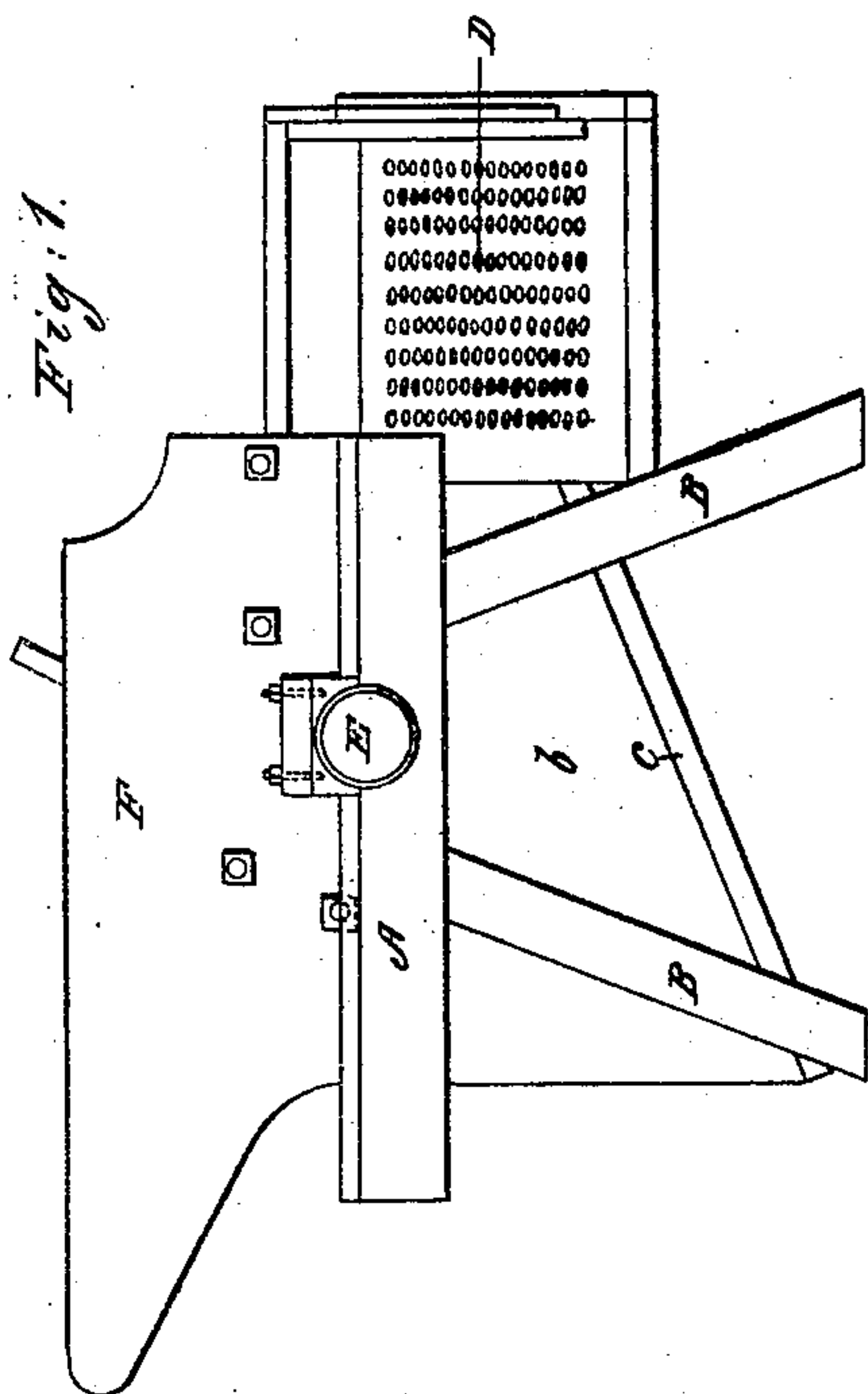


J. I. ROLLON.
Corn Shucking and Shelling Machine.

No. 13,182.

Patented July 3, 1855.



UNITED STATES PATENT OFFICE.

JOHN I. ROLLOW, OF FREDERICKSBURG, VIRGINIA.

MACHINE FOR SHUCKING AND SHELLING CORN.

Specification of Letters Patent No. 13,182, dated July 3, 1855.

To all whom it may concern:

Be it known that I, JOHN I. ROLLOW, of Fredericksburg, in the county of Spottsylvania and State of Virginia, have invented
5 a new and useful Improvement, in Machinery for Shucking and Shelling Corn; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying
10 drawing, which forms part of this specification, and in which—

Figure 1, is a side elevation of the machine. Fig. 2, is a plan of the interior, the hopper and toothed cylinder being removed.
15 Fig. 3, is a plan of the cylinder detached. Fig. 4, is a vertical longitudinal section, through the center.

My invention consists in a novel construction and arrangement of the concave, operating in combination with the toothed revolving cylinder, in such a manner, that
20 when the corn in the shuck or husk, is fed into the machine through the hopper, the husk is first parted down two opposite sides, the same as it is commonly done by hand,
25 and is turned backward one half each way, over the stalk of the cob, leaving the corn on the cob uncovered, to be rubbed or rolled off, in its progress through the machine.

30 To enable others to make and use my invention, I will proceed to describe its construction and operation by referring to the drawing, in which—

(A) represents a horizontal rectangular
35 frame, supported on four legs (B), which affords journal bearings (a) for the toothed revolving cylinder (C); from the interior of this frame downward, between the legs, the sides and one end are inclosed with thin
40 boards (b), and the bottom (c) is put in slanting, and forms a chute to catch and deliver the corn to one end of the machine; within this chute is arranged the concave (d), which is hinged at its upper edge trans-
45 versely to the frame, on pivots (e), said upper edge being on the plane of the axis of the cylinder (C), or thereabout. The curve of this concave is the arc of a circle whose length is about one third of the circumference of such circle, its lower edge is
50 supported on springs (f) one at either side. These springs are made capable of adjustment by the set screws (g), to increase or diminish the upward pressure of the lower
55 edge of the concave; continuing from this edge of the concave upward, at an angle of

about 45° degrees, is a stationary grating (h); terminating on a level with the upper side of the frame (A), over which the shuck and cob pass after the corn has been
60 shelled off.

(D) is a perforated plate of sheet iron, placed on a slant transversely to the machine, for the purpose of separating any corn from the cob and husk, that may be thrown over
65 with them, in their discharge from the machine; the cylinder (C) is supported on its axis in the bearings (a), and is provided with a small band pulley (E), which hangs outside of the frame, and through which
70 it is put in motion by a band from the horse power, or other propelling machine; it will be observed that the cylinder is arranged eccentrically, within the concave, which gradually approaches nearer to its periph-
75 ery, from the upper to the lower edge. This is necessary in order to bear the ear up to the cylinders, as it is gradually reduced in bulk by the operations of shucking and shelling, and the concave being supported
80 on springs, allows it to adjust itself to the varying sizes of ears, so that the largest ear can pass without breaking a single corn, and the smallest cannot escape without being perfectly shelled off; on the cylinder, I use
85 6 or more rows of teeth or nibs, projecting about half an inch. They are placed diagonally along the cylinder, one end being about half the distance between each of the rows, in advance of the other end, and the
90 concave is provided with 6 ribs (more or less) arranged diagonally, in the opposite direction to, or crossing those on the cylinder at about the same angle; it is also per-
95 forated, with two or three rows of holes between each of these ribs, sufficiently large for the shelled corn to drop freely through on to the chute; the proximity of the lower part of the concave to the cylinder, is adjusted by two cams (i), on a rock shaft, on the outer end of which is a notched lever (j), supported on the pawl (k). These cams bear against
lips at the lower corners of the concave, and are so formed that they prevent its rising
105 above the desired level, while they admit of its bearing downward on the springs which support it. By this arrangement the machine may be adjusted so as to take off every grain of corn from the cob, without breaking a single one, or if desired the cob may
110 be broken up, small enough for fodder.

The corn in the shuck or husk is fed into

the hopper (F) promiscuously, and on passing down, the thicker end of the ear (which is that near the stalk), is caught by the nibs on the cylinder, and brought in contact with
5 the diagonal rib on the concave, which inclines it sidewise, always in the same direction, when they split the shuck from end to end on two opposite sides, and the two diagonal projections in crossing each other,
10 turn the husk one half each way entirely back over the stalk, when the corn is exposed to the action of the diagonal ribs and nibs on the concave and cylinder, which rub, roll or pick it off the cob, the corn passing
15 through the perforated concave and grating, while the cob and shuck are discharged onto and down the perforated chute (D), which serves to free it from what few grains

might be thrown over occasionally with the shuck.

20

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

The diagonal ribbed perforated concave when hinged at the upper end, and supported on springs at the lower end, in combination with the diagonal nibbed cylinder, substantially as and for the purposes specified.

25

In testimony whereof, I have hereunto
30 subscribed my name this first day of January 1855.

JOHN I. ROLLOW.

Witnesses:

JOHN JAMES CHEW,
J. HARRISON KELLY.