

A. WICKEY & J. W. BROWN.
Corn Planter.

No. 234,447.

Patented Nov. 16, 1880.

Fig. 1.

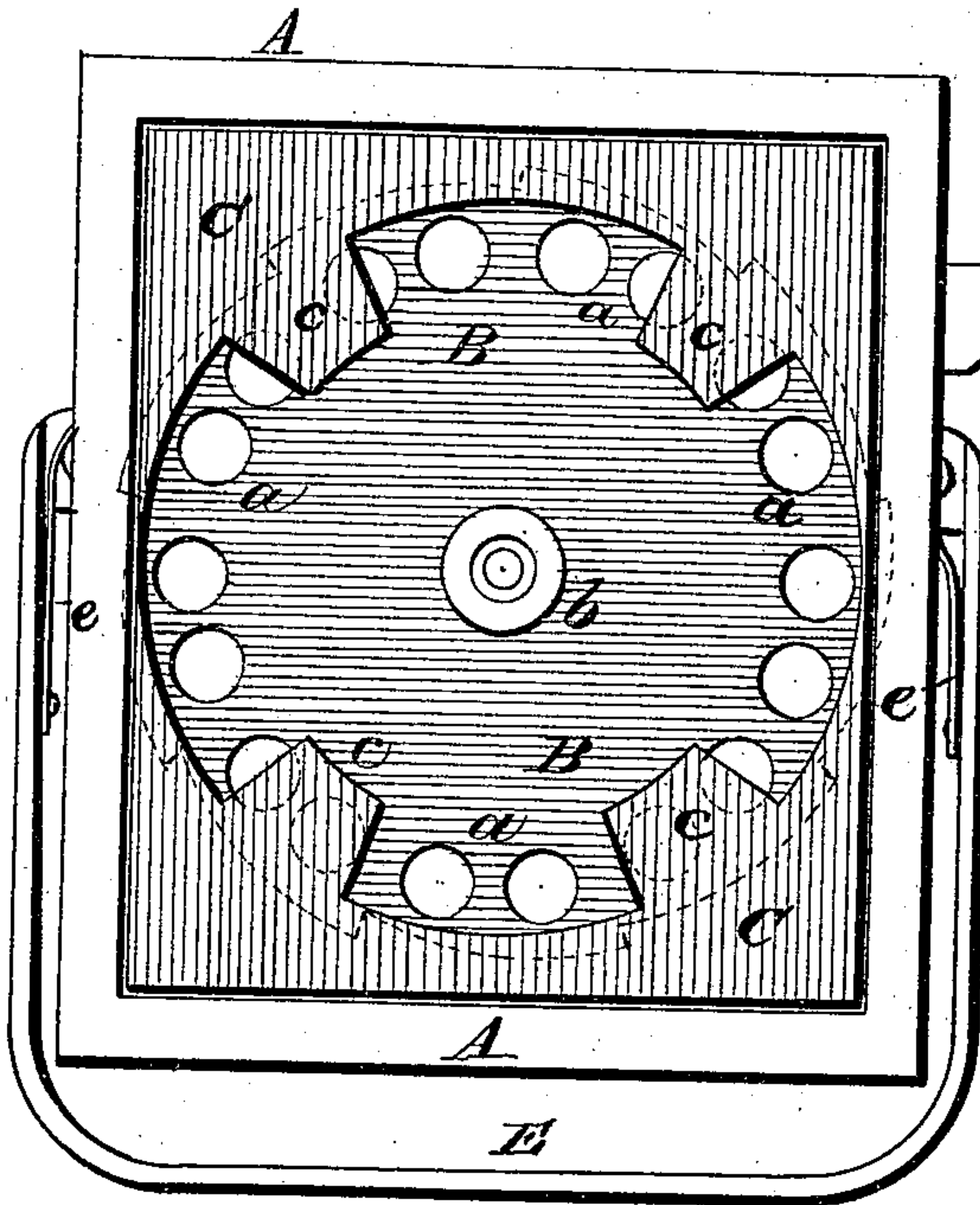


Fig. 2.

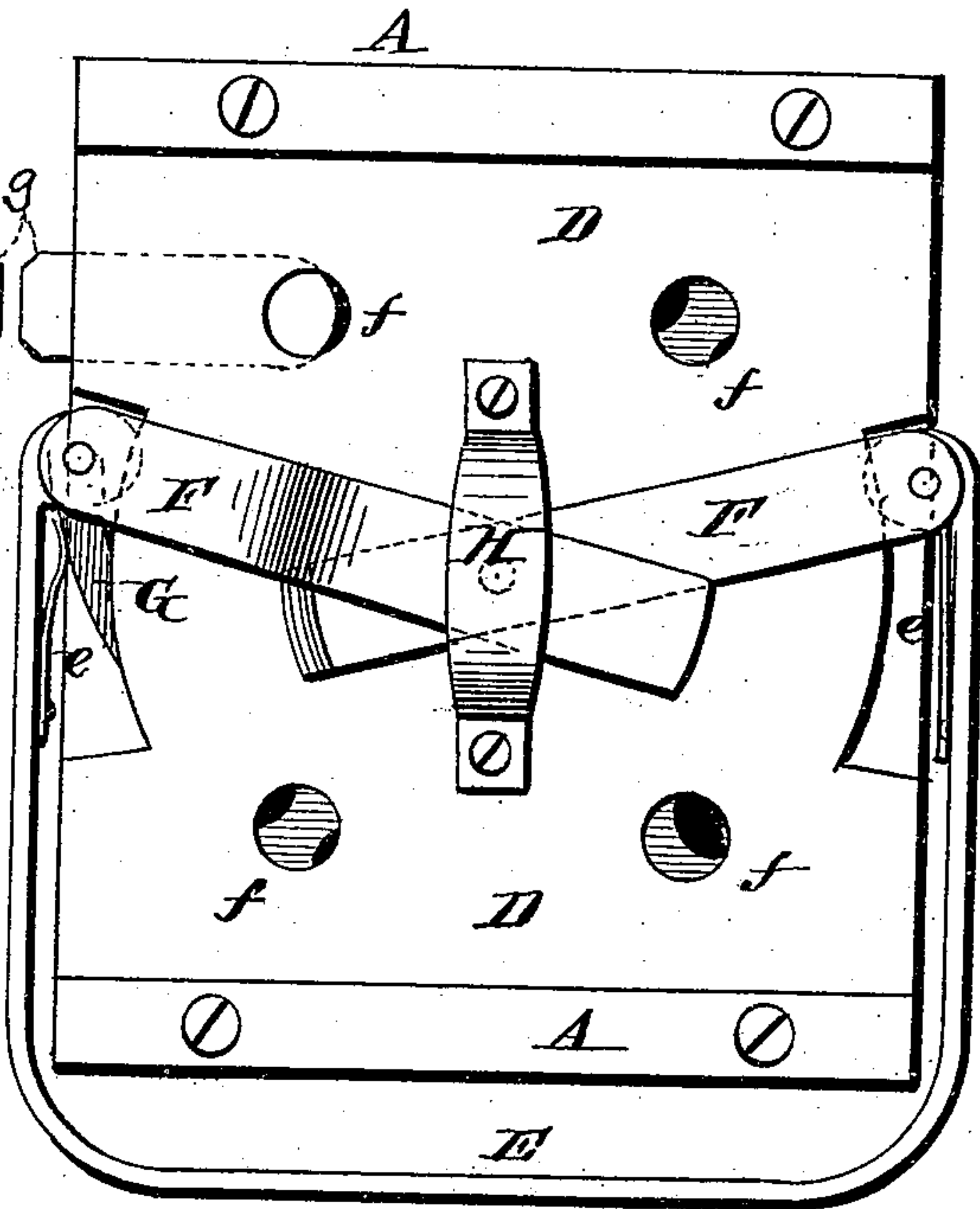
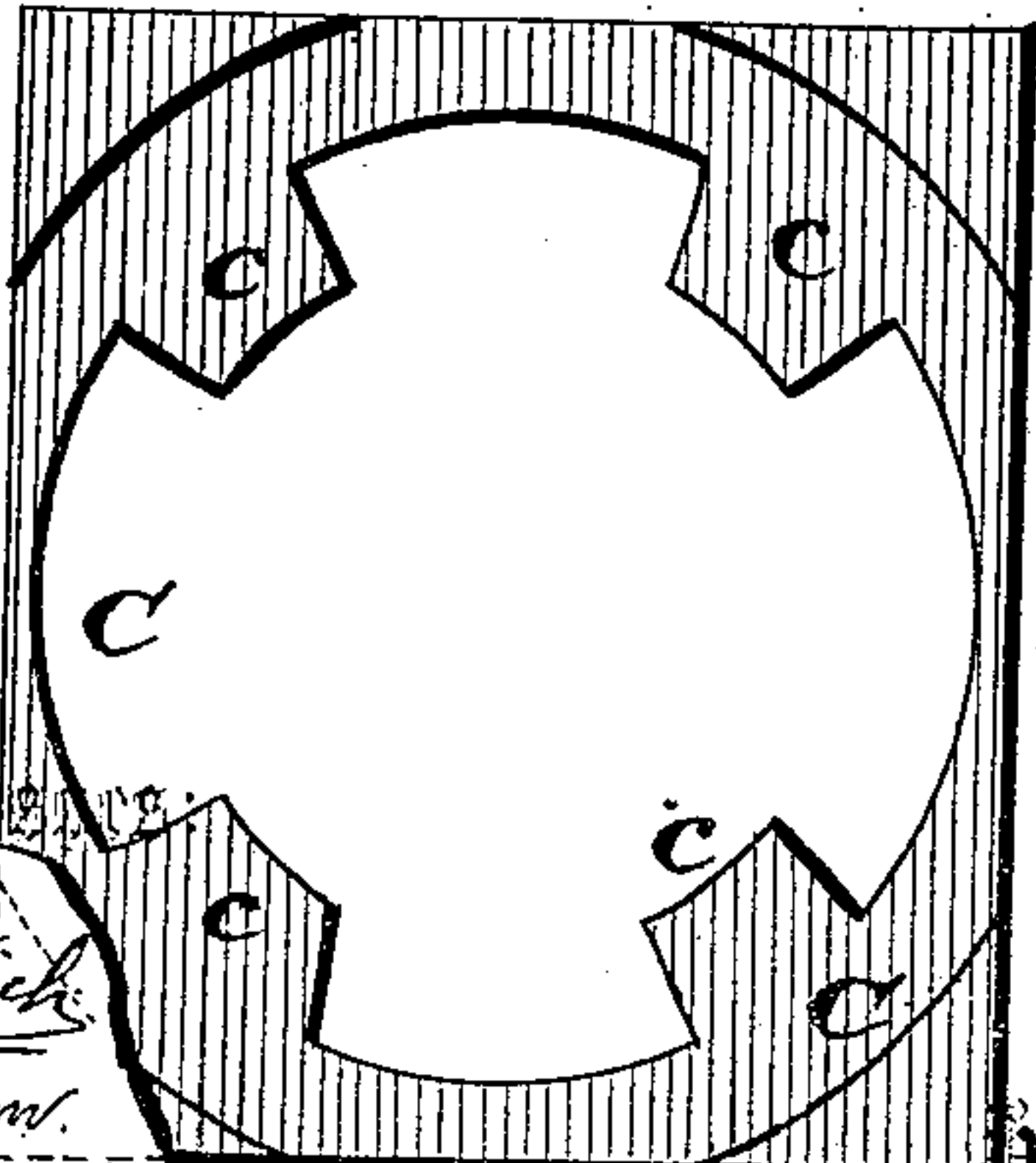
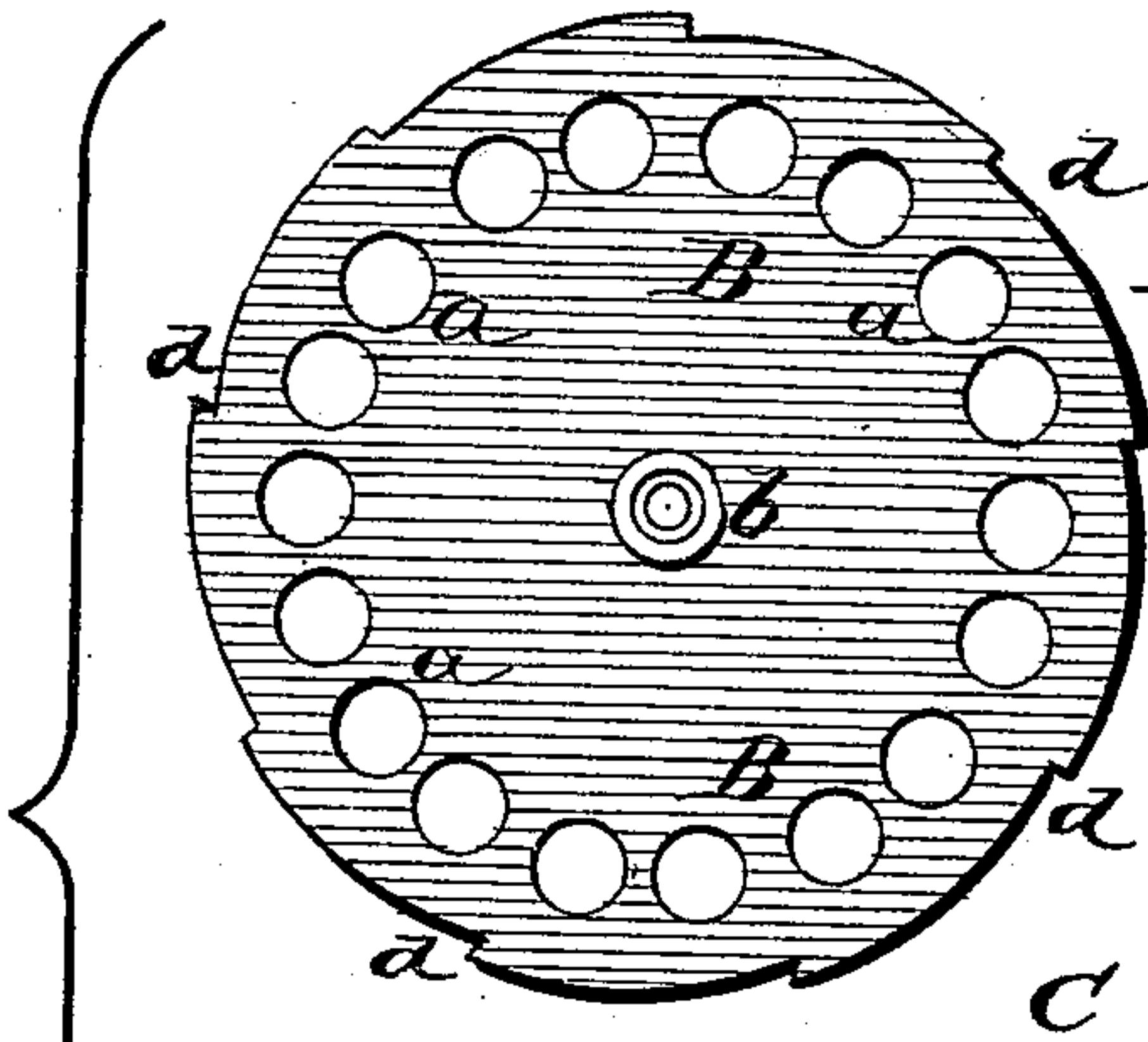
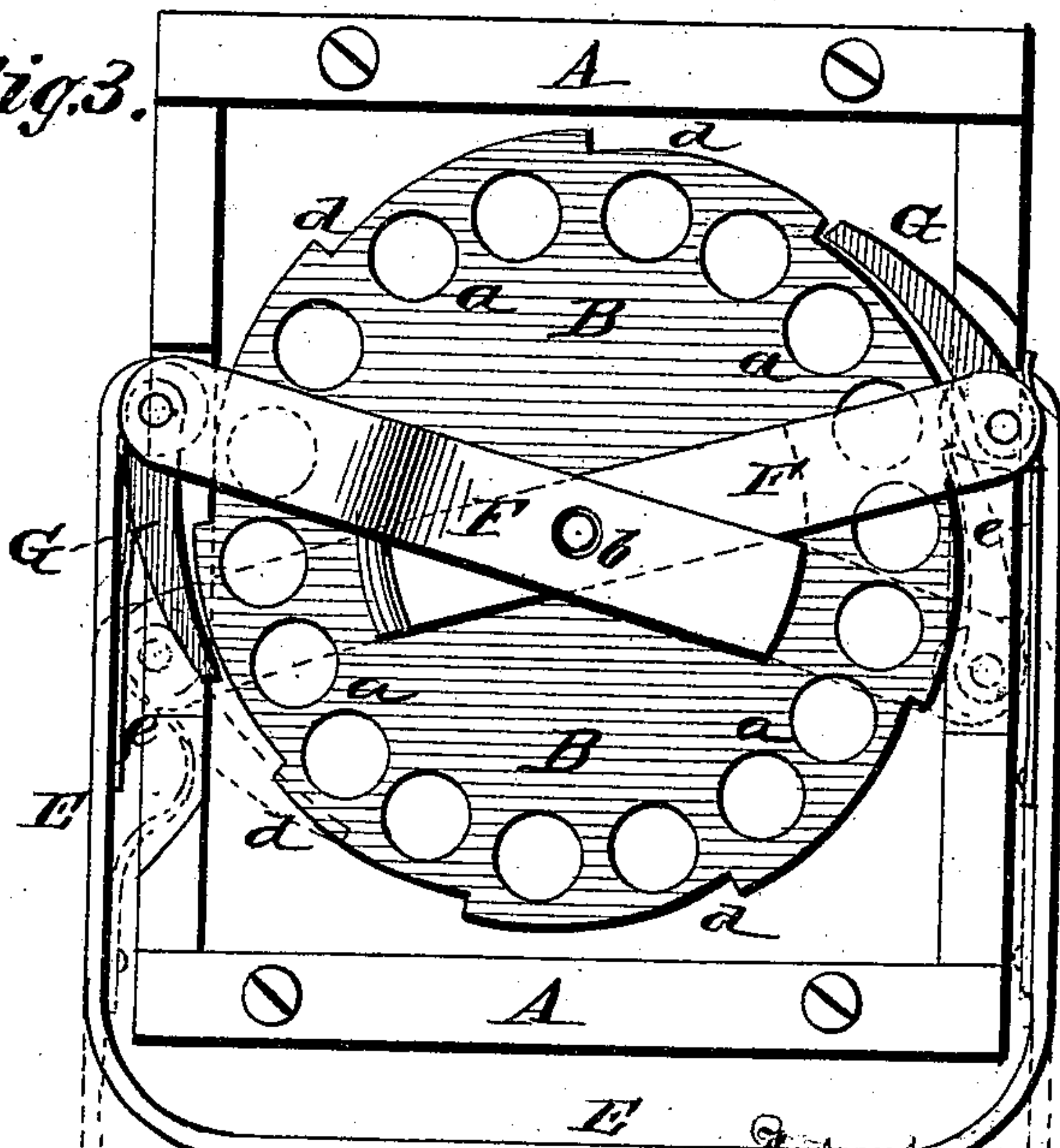


Fig. 4.



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UNITED STATES PATENT OFFICE.

ANDREW WICKEY AND JOHN W. BROWN, OF QUINCY, ILLINOIS.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 234,447, dated November 16, 1880.

Application filed January 9, 1880.

To all whom it may concern:

Be it known that we, ANDREW WICKEY and JOHN W. BROWN, citizens of the United States, residing at Quincy, in the county of Adams and State of Illinois, have invented certain new and useful Improvements in Corn-Planters; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Our invention has more special application to that class of corn-planters (drawn by two horses) by which two rows are planted at the same time, though the invention is applicable to single-row droppers, to drills, and to automatic as well as hand dropping-machines.

Our improvements have reference to the mechanism for measuring and discharging the seed from the seed-hoppers; and as the remaining parts of the planter are well known in the art, we do not deem it necessary to show or describe any other parts than those involving and exhibiting our said invention.

Our invention consists, essentially, of two departments—first, in devices for measuring and discharging simultaneously from two or more seed-cups, one grain from each cup, and second, a mechanism to compel each movement of the seed-plate to be a full stroke.

In the drawings, Figure 1 is a plan view of the upper side of the bottom of the seed-hopper. Fig. 2 is the same of the bottom of the seed-hopper. Fig. 3 is a detached view of the seed-disk and cut-off plate. Fig. 4 is a bottom view of the bow E, bow-guides F F, and pawls G G connected, with base-board D removed, the dotted lines showing the arc traversed by the outer ends of the bow-guides F F at each movement of the seed-plate.

A is the hopper containing the seed. B is a horizontal seed-disk, provided, near its outer edge, with the circular series of seed-cups *a a*, and pivoted, at its center, on the vertical post *b*.

The arrangement of the seed-cups in a circular series near the periphery of the seed-disk is very important, as it is absolutely in-

dispensable that each seed-cup, in order to contain the same quantum of seed, shall be subject to the same conditions as every other seed-cup, that all of the seed-cups shall be located alike relatively, and at each movement of the seed-disk shall traverse the same interval; and the same is true of the like distribution and location of the discharges.

C is a cut-off plate, having a circular opening corresponding to the outer line of the seed-cups *a*, and the four cut-offs, *c*, placed at intervals, as shown, and each projecting inward over one of such seed-cups. D is a base-board, fastened in any suitable manner to the bottom of the hopper A and under the seed-disk B, and having the four holes *f* directly below the cut-offs *c* for the downward passage of the seed. E is a spring-bow, pivoted at its open ends to the outer ends of the bow-guides F F, which latter are in turn pivoted, near their inner ends, below the center of the base-board D on the post *b*, the latter being formed on the upper side of the stirrup H and extending up through the base-board D and seed-disk B. The circumference of the seed-disk B is provided with notches *d*, placed at regular intervals and being in number half of that of the seed-cells *a*, fitted to receive the pawls G G, which latter are pivoted at the open ends of the spring-bow E, and have a reverse action, alternately engaging one of the notches *d*. The pawls G are forced into the notches *d* by the small springs *e e*, attached at one end to the inside of the spring-bow E, and bearing with their loose ends against the outside of the pawls G.

The operation of our invention is as follows: The spring-bow E is fastened in any suitable manner to the ordinary reciprocating bar, connecting and operating the two sets of seeding devices, and actuated by a hand-lever or otherwise. As the spring-bow E is drawn in one direction one of the pawls G engages one of the notches *d* on the seed-disk B, and revolves the latter the degree of one seed-cup. When the spring-bow E is moved in the contrary direction the other pawl G engages a notch, *d*, reversely on the opposite side, and revolves the seed-disk D in the same direction an additional degree of one seed-cup. Thus each movement of the spring-bow E revolves

the seed-disk B in the same direction the degree of one seed-cup *a*.

We make the spring-bow E of steel, and the distance between its open ends is that between the opposite ends of the two arcs described by the bow-guides F F, so that as such bow-guides traverse the arcs they distend the open ends of the spring-bow E, and the elasticity of the latter, after the guides have passed the center of their respective arcs, assists to throw the guides to the other end of the arcs. Thus the spring-bow E insures a full movement of the seed-disk B, and also increases the rapidity of the latter half of such movement—a very desirable object, especially in check-rowing.

The difficulty met in those machines which measure in but one seed-cup the entire number of kernels for each hill is, that the kernels fall into the seed-cups in such irregular and varying order and positions that it is impracticable to procure, in every instance, the same desired number.

In our invention each seed-cup is of a size to contain one kernel and no more, in whatever position such grain may fall into the seed-cup. We obtain the number of grains desired for each hill by using simultaneously that number of discharges. We provide the dropping mechanism with the maximum number of cut-offs and discharges possibly to be required at any time; and when it is desired to use a less number, one or more of such discharges can be temporarily closed by the use of the thin metal slide *g*, so that the machine can be readily adjusted to drop at each movement of the seed-disk B any number of grains, from one upward, by using the number of cut-offs and discharges corresponding to the number of grains wanted for each discharge. After the several grains pass through the holes in the base-board D, they fall together into the

ordinary vertical seed tube or boot, near the bottom of which is the usual valve, shelf, or other device, and are there held until their discharge together therefrom to the ground on the next movement of the seed-disk. In the case of check-rowers, such lower valve or shelf is usually connected in some way with the seed-disk, so that both are operated by the same movement. We make no claim to such secondary dropping, our invention being limited to the devices shown, or their equivalents, for the primary dropping from the seed-hopper.

In the case of drilling or planting without check-rows the secondary dropping could be dispensed with, and the seed dropped directly from the seed-hopper to the ground.

Our invention is adapted to be operated automatically in any of the known and usual modes of actuating, reciprocating, or revolving seed-slides.

What we claim as our invention, and desire to secure by Letters Patent of the United States, is—

1. In combination with the seed-disk B, the pawls G, spring-bow E, and pivoted bow-guides F, constructed and operating substantially in the manner and for the purpose specified.

2. The spring-bow E, bow-guides F F, pawls G G, springs *e e*, and post *b*, in combination with the seed-disk B, all constructed and operating substantially as and for the purpose described.

In testimony that we claim the foregoing we have hereunto set our hands.

ANDREW WICKEY.
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Witnesses:

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