

No. 686,611.

Patented Nov. 12, 1901.

J. J. HOEY.  
COIN SORTING MACHINE.

(Application filed Feb. 2, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1,

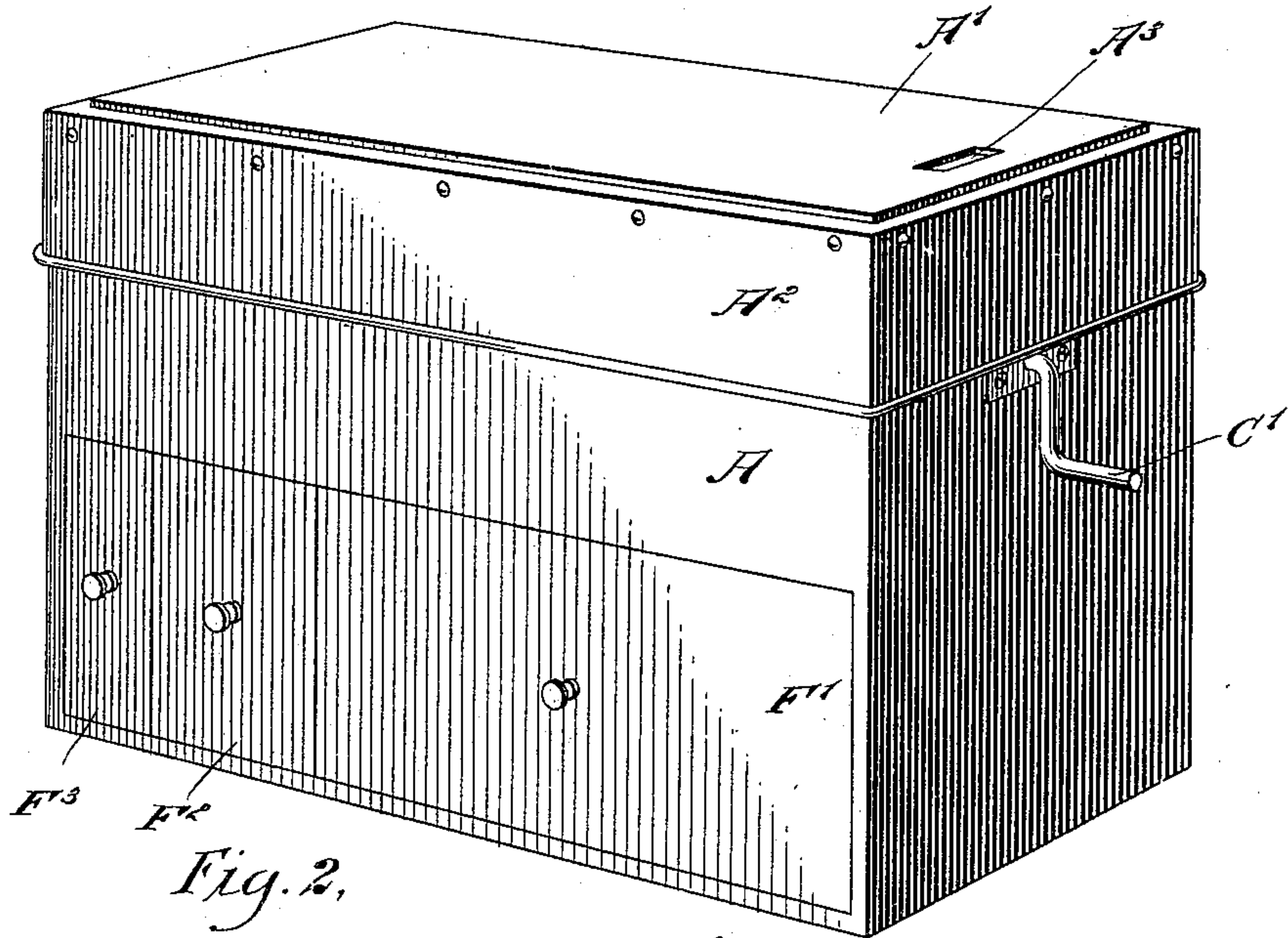
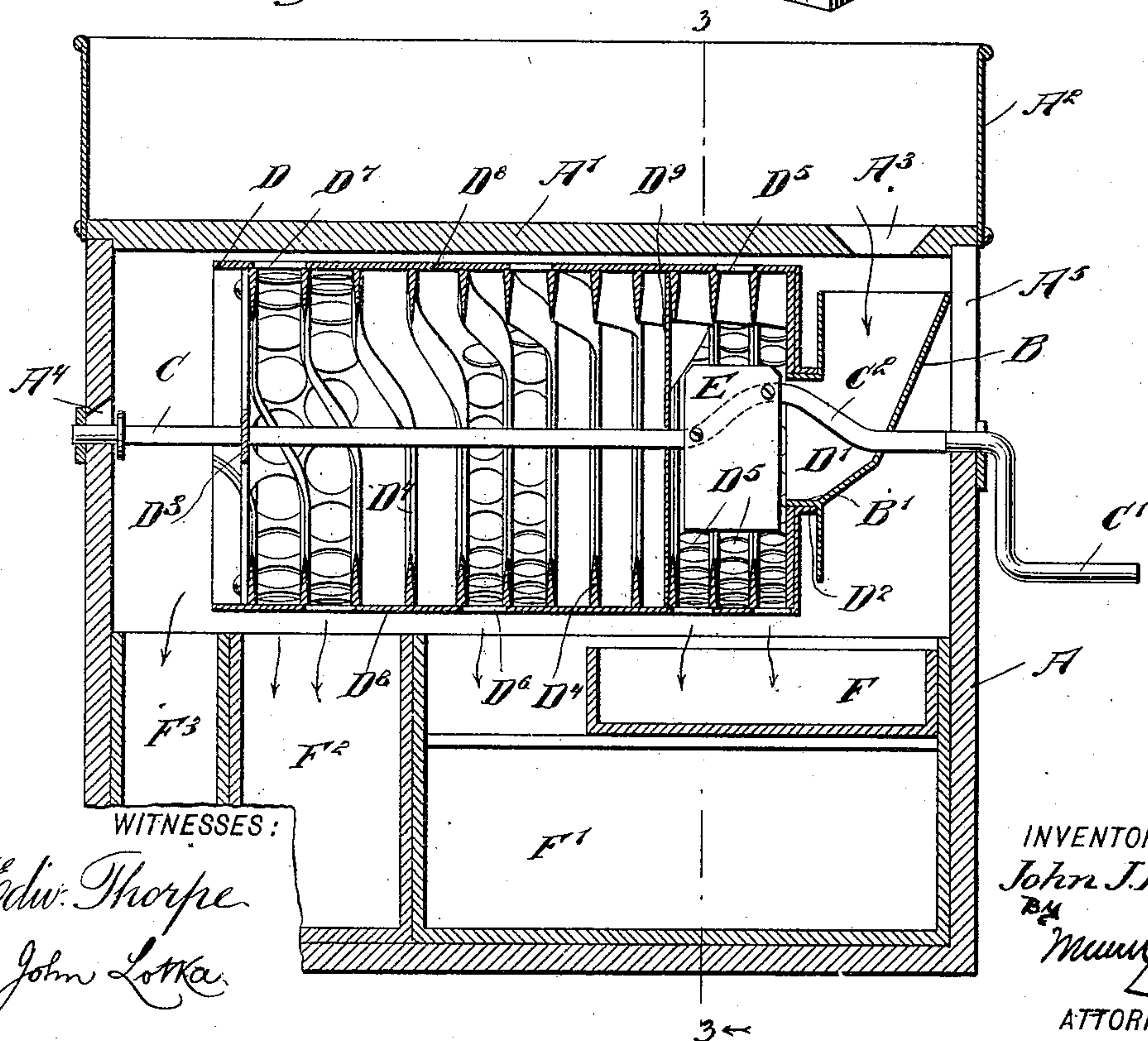


Fig. 2,



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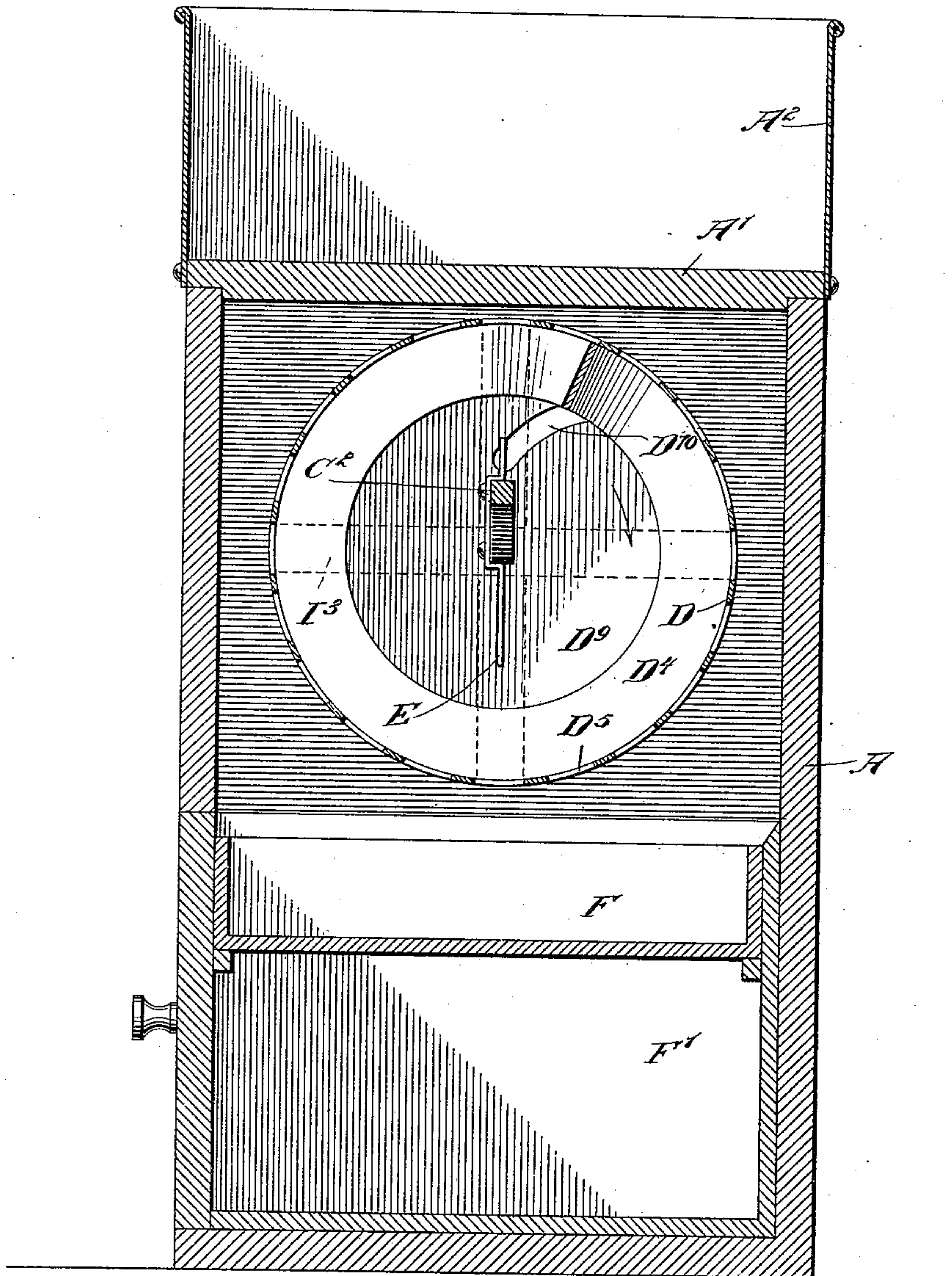
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Fig. 3.



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# UNITED STATES PATENT OFFICE.

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## COIN-SORTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 686,611, dated November 12, 1901.

Application filed February 2, 1901. Serial No. 45,713. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN J. HOEY, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Coin-Sorting Machine, of which the following is full, clear, and exact description.

My invention relates to machines for sorting coins, and has for its object to provide a machine which will be capable of quickly sorting coins of various denominations, so as to save a large proportion of the time required for the process of sorting by hand which is ordinarily employed when counting the money received at church collections and the like.

The invention will be fully described hereinafter and the features of novelty pointed out in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the improved machine. Fig. 2 is a longitudinal sectional elevation thereof with parts broken out, and Fig. 3 is a cross-sectional elevation on the line 3 3 of Fig. 2.

The improved coin-sorting machine comprises a casing A of suitable form—for instance, of rectangular prismatic shape—and a lid or cover A', having a flange A<sup>2</sup> and capable of use as a tray or pan when it is inverted, as shown in Figs. 2 and 3. Said cover is provided with an aperture or slot A<sup>3</sup>, located directly above a chute or hopper B, which is supported as will be fully described hereinafter. At the lower end of the hopper extends a shaft C, horizontal, or approximately so, and journaled in the casing A. Said shaft carries a crank C' exteriorly of the casing for the purpose of manually rotating the shaft and the parts connected therewith. In order that the shaft and the parts carried thereby may be readily removed, the casing A has a tapering opening A<sup>4</sup> to receive one end of the shaft, and the opposite end of the casing has a slot A<sup>5</sup> extending to the top, so that the shaft can be readily lifted out.

With the shaft C is held to rotate the sorting-cylinder D. At the receiving end this cylinder has a central opening D', surrounded

by a sleeve D<sup>2</sup>, into which fits loosely a sleeve B' on the hopper B. The shaft C passes through the hopper, as shown in Fig. 2, so that the hopper is supported by the shaft and by the sleeve D<sup>2</sup>. The hopper is made of a sufficient size to engage opposite side walls of the casing A, thereby holding the hopper against rotation, but allowing it to move slightly up and down, so as to preserve a proper engagement of the sleeves B' D<sup>2</sup>, even if the shaft or cylinder should not be quite true. The cylinder has a plurality of compartments arranged at different distances from the receiving-opening D'. At the discharge end of the cylinder I provide an apertured plate or a spider D<sup>3</sup>, engaging the shaft and forming a support for this end of the cylinder. The cylinder shown in the drawings has three compartments, the one adjacent to the inlet being adapted to separate dimes, the one next to it pennies, and the third compartment nickels, while larger coins, as quarters, are intended to pass out at the apertured discharge end through the spider D<sup>3</sup>. The cylinder is provided upon its inner face with a continuous rib D<sup>4</sup>, disposed spirally, and preferably the greater portion of the rib is plane, only a short portion being curved laterally, as indicated in Figs. 2 and 3, to connect adjacent turns of the rib. The distance between the turns of the spiral rib varies from one compartment to another and is preferably smaller in each compartment than the diameter of the coins which are intended to be discharged from said compartment while the other coins proceed to the next compartment. Between the ribs of each compartment the cylinder has perforations of a size but slightly larger than that of the coins intended to pass there-through. Fig. 2 clearly shows that the apertures are wider than the distance between adjacent turns of the spiral rib. The apertures or perforations are circular, and it will be understood that in the example shown the apertures D<sup>5</sup> in the first compartment are of about the size of a dime, the apertures D<sup>6</sup> of the second compartment are slightly larger than a penny, and those, D<sup>7</sup>, of the third compartment of a size corresponding to that of a nickel. The rib D<sup>4</sup> has a sharp inner edge for the purpose of preventing the coins from



traveling thereon edgewise. Between each two compartments the cylinder has imperforate portions or bands D<sup>8</sup>.

The shaft C is provided with a cranked portion C<sup>2</sup> in the hopper B and preferably also carries within the first or receiving compartment a plate or scoop E, extending to within a distance from the inner edge of the rib D<sup>4</sup>. At the farther or delivery end of the receiving-compartment a stop-plate D<sup>9</sup> is secured to the cylinder D and to the shaft C, said stop-plate being imperforate except for a slot D<sup>10</sup> adjacent to the point where the rib D<sup>4</sup> intersects the stop-plate. The latter also forms a means of supporting the cylinder.

Under the various compartments of the cylinder and at the end thereof are located boxes F F' F<sup>2</sup> F<sup>3</sup>, some or all of which may be in the nature of drawers.

The operation is as follows: The coins having been placed in the pan formed by the inverted cover A' are swept or pushed toward the opening A<sup>3</sup>, so as to pass into the hopper B and through the opening D' into the receiving-compartment of the cylinder D. As in said compartment the distance between adjacent turns of the spiral rib D<sup>4</sup> is less than the diameter of the smallest coin, (dimes,) it follows that the coins cannot lie flatwise on the inner surface of the cylinder, but will engage said surface with their edges. The stop-plate D<sup>9</sup> will prevent the coins from passing unsorted into the other compartments of the cylinder. The operator turns the crank C', (this may be done while feeding the coins into the hopper,) causing the shaft C and cylinder D to rotate. The coins will roll with their edges upon the inner surface of the cylinder between the turns of the rib D<sup>4</sup>, and the dimes will pass out through the apertures D<sup>5</sup> into the box F, while the other coins will leave the receiving-compartment through the aperture D<sup>10</sup> of the plate D<sup>9</sup>. As the shaft rotates the crank portion C<sup>2</sup> stirs the coins in the opening D', and thus insures a regular feed. At the same time the plate or scoop E lifts and turns over the coins at the center of the receiving-compartment and prevents the accumulation of coins at the center, which would interfere with the sorting. The operation proceeds rapidly, and all coins larger than a dime pass beyond the plate D<sup>9</sup>, the pennies then escaping through the apertures D<sup>6</sup> into the box F', while the nickels travel farther and are discharged through the openings D<sup>7</sup> into the box F<sup>2</sup>. Quarters and larger coins will be discharged through the spider D<sup>3</sup> at the open end of the cylinder into the box F<sup>3</sup>.

It will be seen that the machine is simple and of considerable capacity and will perform its work expeditiously, thus effecting a considerable saving of time.

The part D need not be a true cylinder, and is in the claims referred to under the generic name of "drum."

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. A sorting-machine, comprising a support or casing, a rotary drum having perforations in its surface, and provided with an axial sleeve at one end, and a non-rotatable hopper capable of moving up and down in the casing and having a sleeve coaxial with that of the drum, and in sliding engagement therewith as the drum rotates.

2. A sorting-machine, comprising a support or casing, a rotary drum having perforations in its surface, and interior ribs located between the perforations, adjacent ribs being at a distance from each other less than the diameter of the perforations between said adjacent ribs, and means for feeding the material into the drum.

3. A sorting-machine, comprising a support or casing, a rotary drum provided in its surface with perforations the size of which increases from one end of the drum to the other, interior circumferential ribs located upon the drum, the distance between adjacent ribs increasing correspondingly to the increase in the size of the perforations, and means for feeding the material to that end of the drum which has the smallest perforations.

4. A sorting-machine, comprising a support or casing, a rotary drum open at both ends, and provided in its peripheral surface with perforations the size of which increases from one end of the drum to the other, interior circumferential ribs located upon the drum, the distance between adjacent ribs increasing correspondingly to the increase in the size of the perforations, means for feeding the material to that end of the drum which has the smallest perforations, and separate boxes or receptacles arranged to receive the articles discharged from the drum through the several perforations and through the end thereof.

5. A sorting-machine, comprising a support or casing, a shaft journaled therein, a perforated sorting-drum on the shaft, and a hopper for feeding the material into one end of the drum, the shaft having a cranked portion at the outlet of the hopper.

6. A sorting-machine, comprising a support or casing, a shaft journaled therein, a perforated sorting-drum on the shaft, and a hopper for feeding the material into one end of the drum, the shaft having a lateral projection at the outlet of the hopper.

7. A sorting-machine, comprising a support or casing, a rotary perforated sorting-drum, a plate or scoop located within the central portion of the drum and held to rotate therewith, and means for feeding the material into the drum.

8. A sorting-machine, comprising a support or casing, a rotary drum having perforations increasing in size toward one end of the drum, a stop-plate for preventing the articles from passing unsorted beyond the receiving portion of the drum, and means for feeding the material into the drum.

9. A sorting-machine, comprising a support  
or casing, a rotary drum having sets of perforations and imperforate bands between them,  
a stop-plate held to rotate with the drum and  
5 arranged at the end of the first set of perforations, said stop-plate being provided with an aperture, and means for feeding the material into the drum.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN J. HOEY.

Witnesses:

JOHN LOTKA,

EVERARD BOLTON MARSHALL.