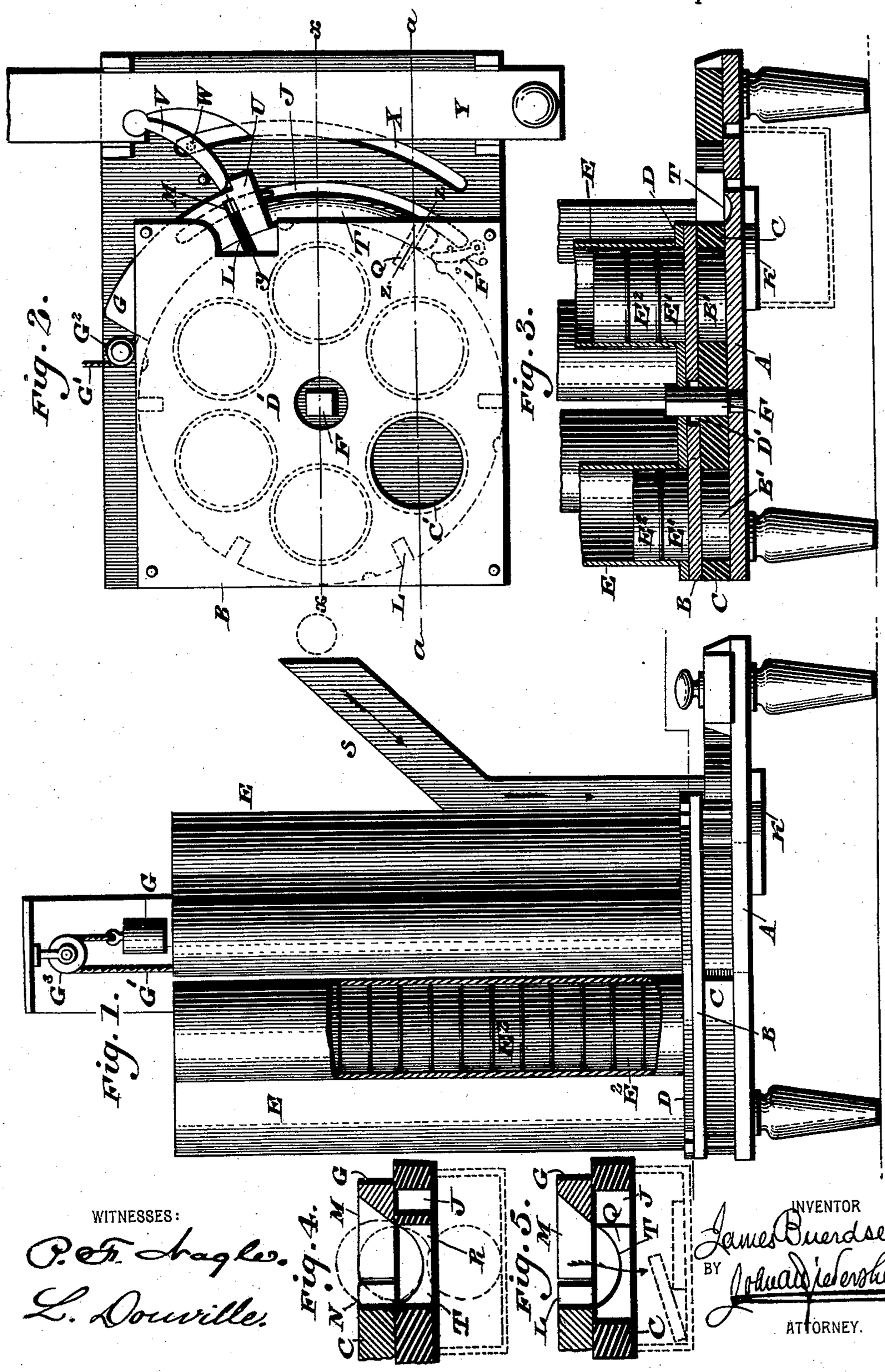
(No Model.) 2 Sheets—Sheet 1.

J. BUERDSELL.

COIN CONTROLLED VENDING MACHINE.

No. 581,194. Patented Apr. 20, 1897.



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(No Model.) 2 Sheets—Sheet 2.

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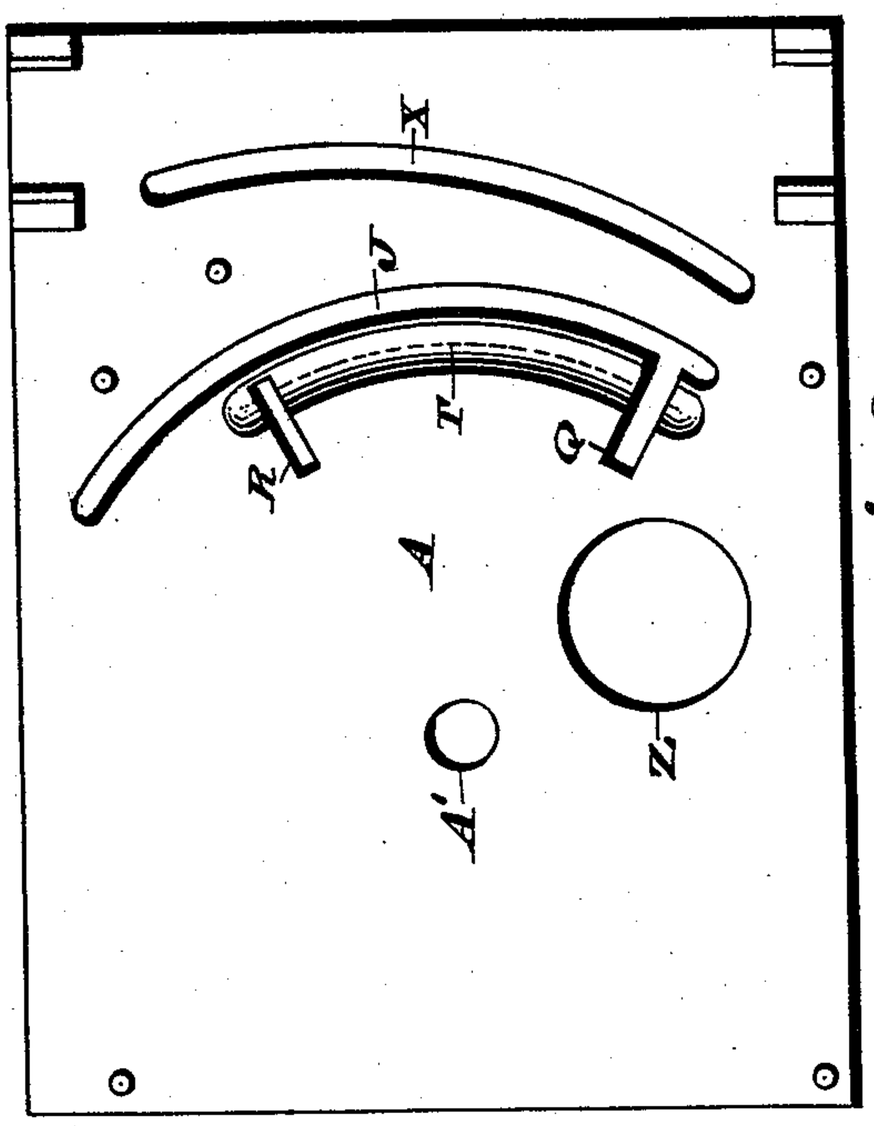

Fig. 7.

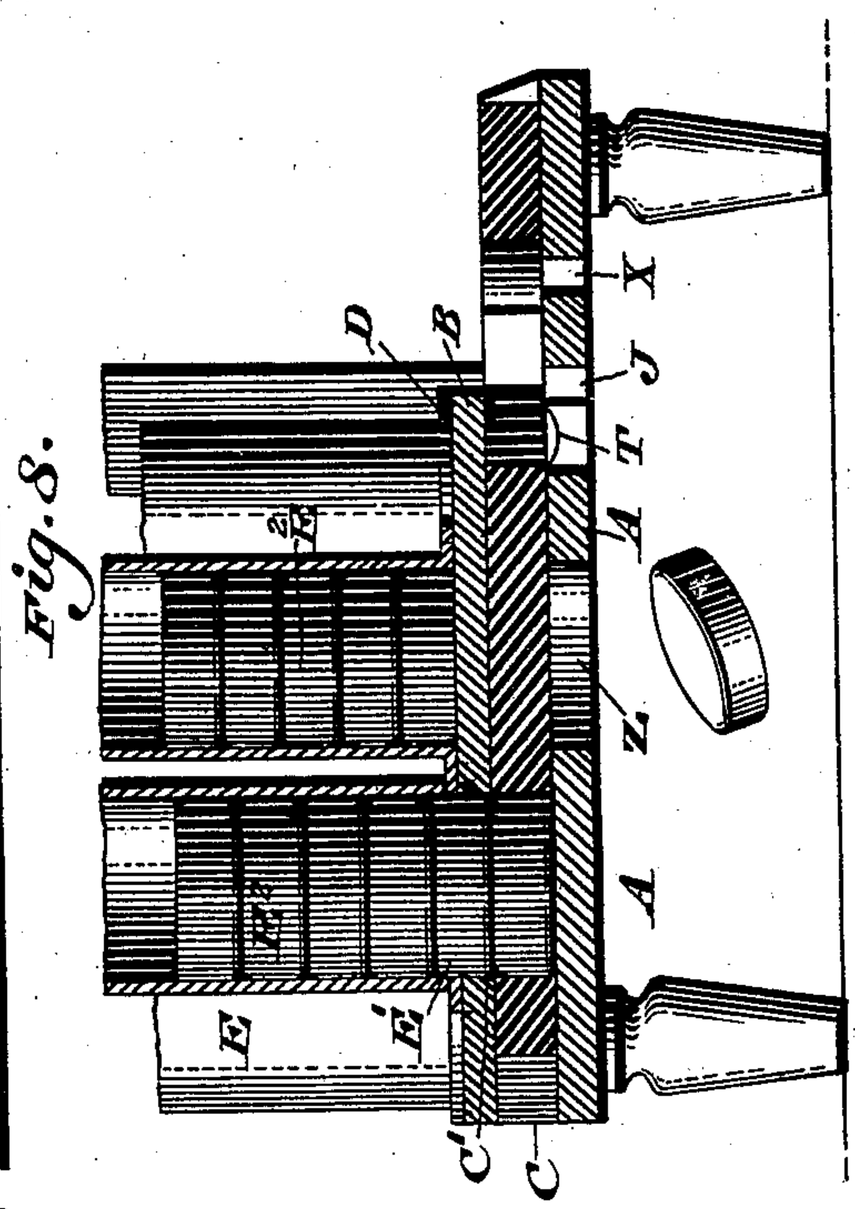

Fig. 8.

Fig. 6.

Fig. 9.

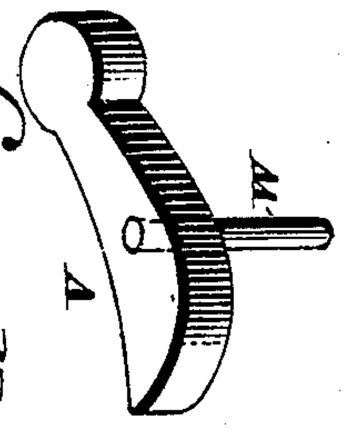

Fig. 10.

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UNITED STATES PATENT OFFICE.

JAMES BUERDSELL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-FOURTH TO JOHN W. BUERDSELL, OF SAME PLACE.

COIN-CONTROLLED VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 581,194, dated April 20, 1897.

Application filed November 21, 1896. Serial No. 612,960. (No model.)

To all whom it may concern:

Be it known that I, JAMES BUERDSELL, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Coin-Controlled Vending-Machines, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a coin-controlled vending machine or apparatus in which provision is made for coupling certain parts by the action of a proper coin, so that boxes, packages, &c., may be directed to the discharge-opening of the machine, the mechanism employed being hereinafter set forth.

It also consists of means for preventing the coupling and operation when an improper coin is introduced into the apparatus.

It also consists of details of construction, as will be hereinafter set forth.

Figure 1 represents a partial side elevation and partial vertical section of a coin-controlled vending-machine embodying my invention. Fig. 2 represents a top or plan view of the lower portion of the machine. Fig. 3 represents a vertical section of a portion of the machine on line *x x*, Fig. 2. Figs. 4 and 5 represent vertical sections of parts, showing the slots of the machine on lines *y y* and *z z*, respectively, Fig. 2. Fig. 6 represents a top or plan view of the machine below that shown in Fig. 2. Fig. 7 represents a top or plan view of the base of the machine. Fig. 8 represents a vertical section of a portion on line *a a*, Fig. 2. Fig. 9 represents a perspective view of the traveler of the machine, the same when receiving a proper coin constituting the coupler of the device. Fig. 10 represents a perspective view of the dog which engages with said traveler, and is carried by the primarily-operated slide of the machine.

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

Referring to the drawings, A designates the base of the apparatus, above which is supported the table B, between which and said base A is the rotary discharge-plate C, said base and table being stationary. On the table B is the rotary carrier D for the feed-tubes E, the same being connected with the table B by the axle or axial bolt F, which is stepped in the base A and squared for a portion, so as to engage with the plate C and carrier D, said axle also passing freely through the table B, as most clearly shown in Fig. 3.

G designates a traveler which has pins H depending therefrom, the same entering the segmental slot J in the base A, and having connected with them the bottom plate K, (see Figs. 6 and 9,) whereby the traveler is connected with said base and permitted to move in curvilinear direction thereon.

In the periphery of the discharge-plate C are the open slots L, and in the inner side of the traveler G is the open slot M, the adjacent slots L and M when in communication being adapted to receive the coin P, which couples said traveler and plate.

In the base A is the slot Q, which when the slots L and M reach the same and communicate therewith is adapted to receive the coin and allow it to drop into a box, drawer, or other receptacle below the same. In the base is also the slot R, which is of less diameter than the slots L M, so that should a smaller coin than that required to operate the apparatus be dropped into the feed-chute S and reach said slots L M it will fall through said slot R and so avoid coupling the traveler and plate, it being evident that the proper coin is prevented from entering said slot R. On the upper face of the base, beneath the slots L M, is a curvilinear slot T, which is adapted to receive the periphery of a proper coin, so that it rides therein when the traveler receives motion.

On the side of the traveler is the shoulder or tooth U, which is adapted to be engaged by the dog or pawl V, which is provided with a depending pin W, which latter enters and plays in the segmental slot X in the base A. The dog V is pivotally mounted on a transversely-arranged slide Y, which is guided on the base A.

Connected with the traveler is a cord or chain G′, which is guided on the pulleys G^2 G^3 and carries the weight G^4 for restoring the traveler and slide Y to normal positions.

It will be seen that the base A has a discharge-opening Z and a central opening A′, the latter being adapted for the reception of the axle F.

The rotary plate C has a number of open-

ings B′ therein for the reception of the articles dropped through the opening C′ in the stationary table B, the latter having also the opening D′, in which the squared part of the axle F rotates, as will be seen in Fig. 2.

The carrier D for the feed-tubes E has a number of openings E′ equal to said tubes, the latter rising from the walls of said openings, so as to be in communication therewith.

The operation is as follows: The tubes E are supplied with boxes, packages, cakes, &c., as at E^2, to be vended, the bottom boxes, &c., resting on the table B. A coin is introduced into the chute S, and the same enters the slots L M, thus coupling the parts, as heretofore stated. The slide Y is now operated, whereby the dog V is advanced, and rotary motion is imparted to the carrier D and plate C, whereby the bottom box, &c., reaches the opening C′ in the stationary table B and then drops therethrough into the communicating opening B′ in the rotary plate C, it then resting upon the base A and being carried around by said plate C until it reaches the opening Z in the base, when it drops therethrough and so is accessible, as shown in Fig. 8. When the coin carried by the traveler and the rotating plate reaches the slot Q, it drops therethrough and is directed into the box or other receiver below the same. When the slide is let go, it is returned by the traveler to its first position, owing to the weight G^4 and the engagement of the dog V with the tooth or shoulder U. Another coin may now be dropped into the chute and admitted into the slots L M, it being of course understood that one throw of the traveler moves the respective parts the distance from one tube E to another, so that after the apparatus is fully in operation every motion of the traveler will cause the discharge of one box, cake, package, &c.

The base has mounted thereon the check-pawl F′, which is adapted to engage with the periphery of the rotary plate C for preventing rotation of the latter in reverse order.

It will be noticed that the pawl V is operated entirely by the action of the pin W in the slot X, and the said pawl will always be held in the desired position. By this means the use of springs is entirely obviated and the numerous delays and stopping of the devices owing to the breaking of a spring is avoided.

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

1. In a coin-controlled vending-machine, a rotary carrier and a rotary discharge-plate having a common axle, a traveler having an open slot adapted to register with open slots on the edge of said discharge-plate and mechanism for moving said traveler.

2. A reciprocating traveler adapted to be coupled with a supply-carrier, and provided with means for guiding it in curvilinear direction on a supporting part of the machine.

3. A traveler adapted to be coupled with a supply-carrier, and a slide with a dog or pawl adapted to advance said traveler, said carrier and traveler having sections of a coin-receiving slot therein.

4. A base provided with curvilinear slots, a traveler adapted to be guided in one of said slots, a dog or pawl adapted to be guided in the other slot, and a supply-carrier, said dog being adapted to engage said traveler and being mounted on an operating-slide, said traveler and carrier having sections of coin-receiving slots therein.

5. In a coin-controlled vending-machine, a base, a supply-carrier and a discharge-plate suitably connected, a traveler guided on said base, said traveler and discharge-plate being adapted to be coupled by a proper coin, and mechanism for moving said traveler in a curvilinear direction.

6. In a coin-controlled vending-machine, a coin-carrying traveler, a dog and a slide or plunger on which it is mounted, and means for moving said dog in curvilinear direction while being engaged with said traveler.

7. A carrier with feeding-tubes thereon, a stationary table below the same, a stationary base, and a rotary plate between said base and table, means for connecting said carrier and plate, and means for operating said carrier by an engaging coin, said carrier, table, plate and base having openings which may be placed successively in communication when said carrier is operated.

8. The rotary plate C with slots L, the traveler G with the slot M, and means for operating said traveler, the base A with the slots R and Q, the slot R being of less dimensions than the slots L, M, and the slot Q being substantially the same dimensions as said slots L, M, as a discharge.

9. In a machine, a reciprocating slide, a dog mounted thereon, a pin on said dog and a wall or casing having a slot therein in which said pin is adapted to move.

10. In a coin-controlled vending-machine, a base with a stationary table, a supply-carrier with a connected discharge-plate, a traveler guided on said base and adapted to be coupled with said plate, mechanism for operating said traveler, said carrier and said discharge-plate having coinciding openings adapted to register with a single opening in said table, and said base having a discharge-opening therein, and means for resetting the operating mechanism of said traveler.

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Witnesses:
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