

J. FRITSCHÉ.
 COIN CONTROLLED MECHANISM FOR VENDING MACHINES.
 APPLICATION FILED DEC. 3, 1908.

938,419.

Patented Oct. 26, 1909.

3 SHEETS—SHEET 1.

Fig. 1.

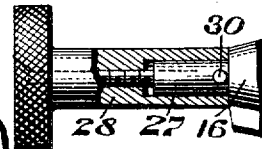
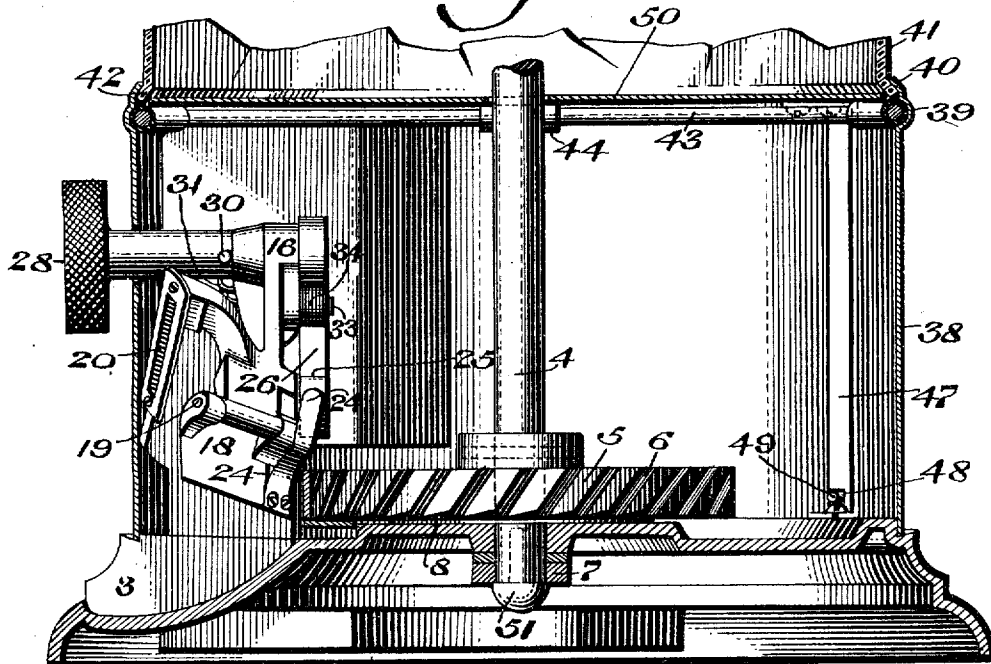


Fig. 3.

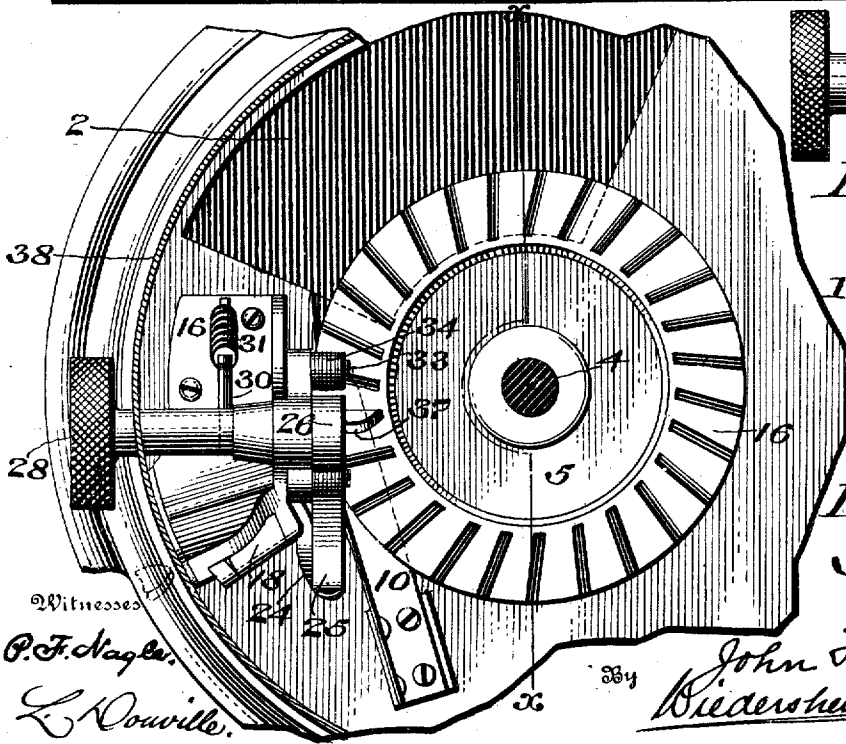


Fig. 2.

Witnesses
P. F. Nagle.
L. Douville.

Inventor
John Fritsche.
Biedersheim & Fairbanks
 Attorneys

J. FRITSCHÉ.
 COIN CONTROLLED MECHANISM FOR VENDING MACHINES.
 APPLICATION FILED DEC. 3, 1908.

938,419.

Patented Oct. 26, 1909.
 3 SHEETS—SHEET 2.

Fig. 4.

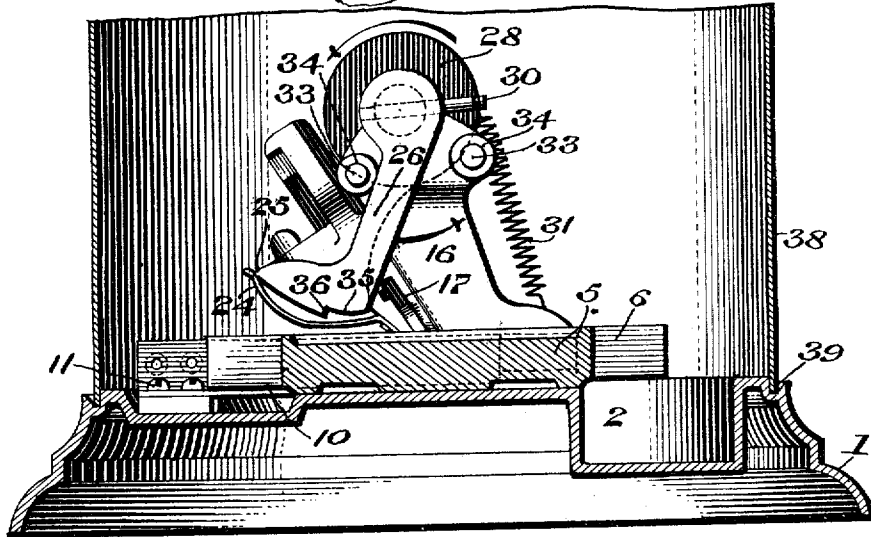


Fig. 5.

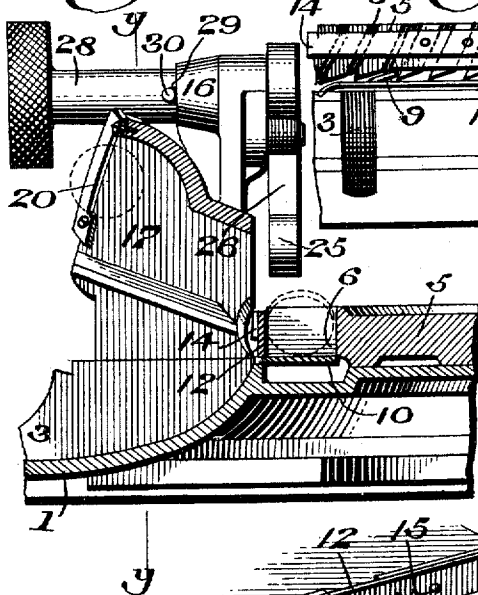


Fig. 6.

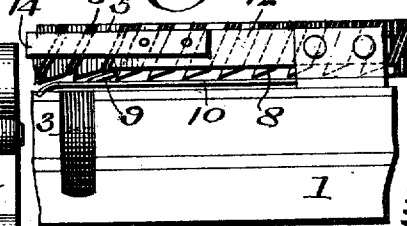


Fig. 7.

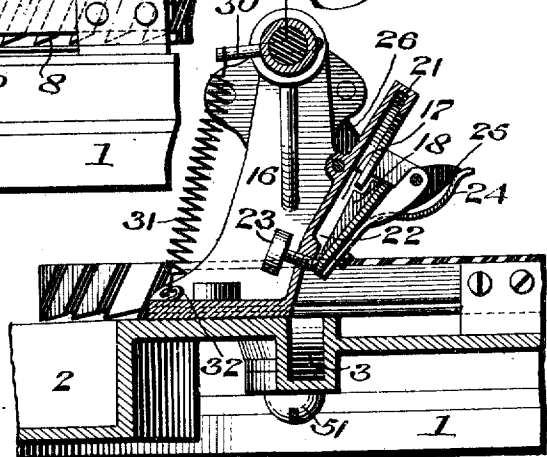
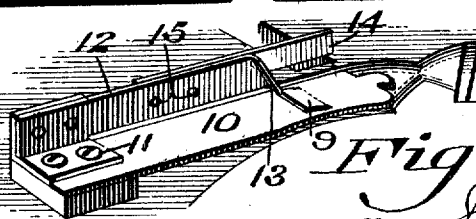


Fig. 8.



Witnesses
P. F. Nagler.
L. Douville.

Inventor
John Fritsché.
Wiedersheim Fritsché.
 Attorneys

J. FRITSCHÉ.
 COIN CONTROLLED MECHANISM FOR VENDING MACHINES.
 APPLICATION FILED DEC. 3, 1908.

938,419.

Patented Oct. 26, 1909.
 3 SHEETS—SHEET 3.

Fig. 9.

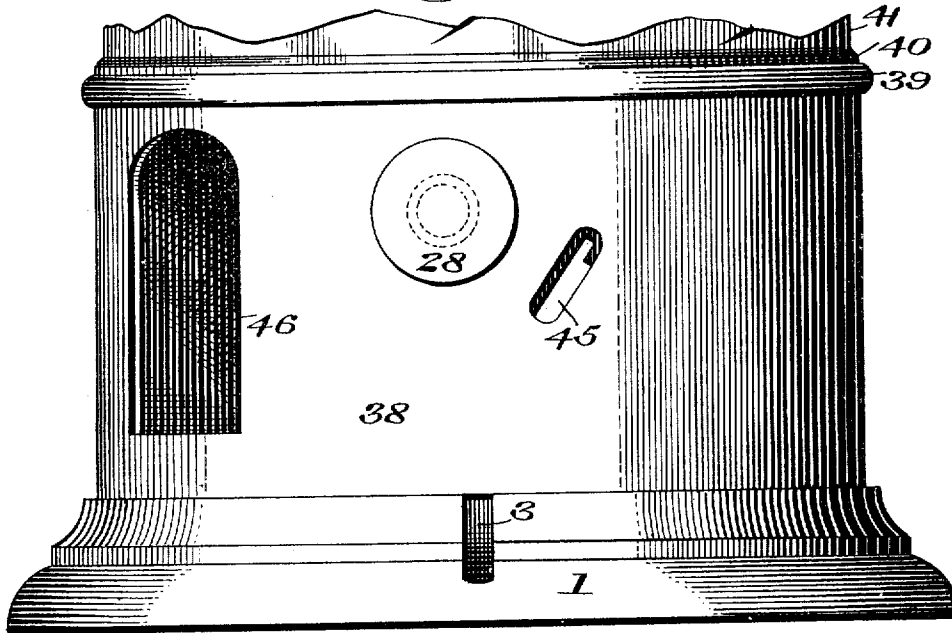
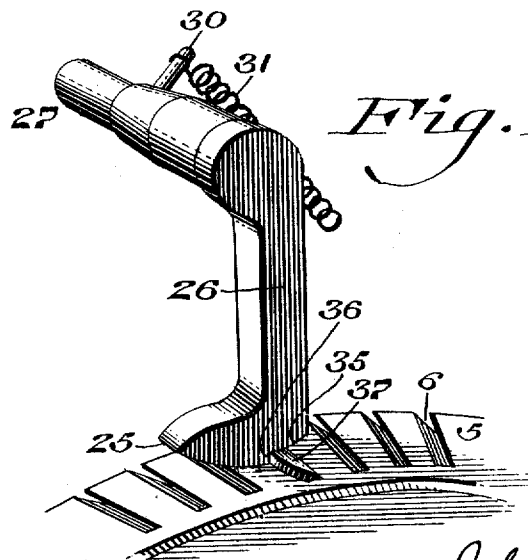


Fig. 10.



Witnesses

P. F. Nagle.
L. Roarville.

Inventor

John Fritsche.
 By *Niedersheim & Fairbanks*
 Attorneys

UNITED STATES PATENT OFFICE.

JOHN FRITSCHÉ, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE BOOK MATCH SALES COMPANY, OF CAMDEN, NEW JERSEY, A CORPORATION OF NEW JERSEY.

COIN-CONTROLLED MECHANISM FOR VENDING-MACHINES.

938,419.

Specification of Letters Patent.

Patented Oct. 26, 1909.

Application filed December 3, 1908. Serial No. 465,762.

To all whom it may concern:

Be it known that I, JOHN FRITSCHÉ, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Coin-Controlled Mechanism for Vending-Machines, of which the following is a specification.

My present invention consists of a novel construction of coin controlled mechanism for vending machines wherein any desired article may be vended owing to the intermittent movement of the article container, although my present invention is especially designed to be employed in conjunction with a vending machine for book matches such as is disclosed and broadly claimed in my prior patent No. 901,091, although it is to be understood that my present invention is not limited to use with such a construction as is shown in my prior patent to which I have hereinbefore referred.

My invention further consists of a novel construction of vending mechanism wherein novel means is employed for guiding the coin into its proper location in a coin wheel and novel means co-acting with the coin in such wheel to cause the container to be intermittently advanced step by step.

It further consists of a novel construction of a coin slot and a novel construction of a lever co-acting therewith to permit the same to open when a real or bogus coin has been held therein.

It further consists of a novel construction of a vending mechanism wherein a coin wheel is employed provided with slots or apertures at its outer periphery into which a coin is adapted to be guided, means being also provided for preventing improper movement of such coin wheel and a novel construction of a spring actuated lever being employed adapted to co-act with a coin in said coin wheel and thereby actuate the vending mechanism.

It further consists of a novel construction of a vending device of a simplified construction wherein the number of parts employed has been reduced to a minimum, the parts being so constructed that they may be readily cast or stamped out of the material with consequent reduction in the cost of manufacture.

It further consists of other novel features

of construction all as will hereinafter more fully appear.

For the purpose of illustrating my invention I have shown in the accompanying drawings but one form thereof, since this embodiment is at present preferred by me and in practice has given satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of these instrumentalities as herein illustrated.

Figure 1 represents a sectional view of a coin controlled mechanism for vending machines embodying my invention, the upper portion thereof having been removed and the section being taken on line X—X Fig. 2. Fig. 2 represents a sectional plan view of Fig. 1, a portion thereof having been cut away. Fig. 3 represents a sectional view showing more clearly the construction of a portion of Fig. 1. Fig. 4 represents a sectional view showing a portion of the machine and the rear view of the lever and its adjuncts co-acting with the coin wheel. Fig. 5 represents a sectional view showing more clearly certain details of construction. Fig. 6 represents a sectional view of a portion of the device showing more clearly the manner in which the springs co-act with the rotatable coin wheel. Fig. 7 represents a section on line y—y Fig. 5. Fig. 8 represents a perspective view of a portion of the machine showing more clearly the springs which co-act with the coin wheel. Fig. 9 represents a side elevation showing more clearly the outer casing. Fig. 10 represents a perspective view of a portion of the device showing the manner in which the actuating lever co-acts with a coin in the coin wheel.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings. In the present application I have deemed it unnecessary to show and describe in detail the container for the articles which are to be vended since I make no claims to such features in the present application since the construction of the container for the articles to be vended is described and broadly claimed in a co-pending application filed on even date with this application and to which reference may be

had for one type of a container which may be employed to advantage in connection with the coin controlled mechanism herein disclosed.

1 1 designates the base of the machine the contour of which may vary as desired, such base being cast or stamped from the metal in such a manner that a coin receptacle 2 is formed therein and a discharge opening 3, whereby coins of improper dimension and bogus coins may be automatically returned to a position accessible to the intending purchaser.

4 designates a shaft rotatably mounted in the top portion of the base 1, said shaft having secured thereon in any suitable manner a coin wheel 5, said shaft being secured in place by means of a screw 51 and suitable washers 7. The coin wheel 5 is provided with the apertures or slots 6 in its outer periphery which may be arranged thereon in any desired manner either radially or otherwise, although in the present instance I have shown these slots as being inclined; this is not essential in all cases. The bottom of the coin wheel 5 is faced off near the periphery of the wheel in order to form the ratchet teeth 8, which latter are adapted to co-act with the cam 9 carried by the spring arm 10 one end of which is free, the other end thereof being suitably secured to a fixed point such as the base 1 by means of fastening devices 11, it being understood that the cam 9 co-acts with the ratchet teeth 8 to permit the coin wheel to rotate in one direction only.

12 designates a spring one end of which is fixedly secured at any suitable point by means of suitable fastening devices, the free end of said spring being inwardly deflected as indicated at 13, whereby the movement of the coin wheel 5 in its proper direction is normally prevented.

14 designates a preferably resilient guard one end of which is secured to the spring 12 by suitable fastening devices 15, it being noted that the end of the member 14 extends beyond the outlet as will be readily understood by reference to Fig. 8, and the purpose of this member 14 will hereinafter more fully appear in the description of the operation of the mechanism.

16 designates a standard or bracket which is secured to the base 1 by any suitable means. The standard 16 is provided with a coin chute 17 of any desired or conventional type although in the present instance I have shown a coin chute which is constructed in accordance with my prior patent, Number 852,111 dated April 30th, 1907, wherein I have described and broadly claimed a construction which permits coins of improper dimension and bogus coins to be returned to a position accessible to the intending purchaser. One side of the coin chute 17 is, in

the present instance, integral with the standard 16, the other side 18 thereof being pivoted at 19 so that it normally tends to move outwardly from the stationary side due to its own weight.

20 designates an apertured plate which is secured at the outer end of the coin chute, the aperture in such plate being of the proper dimension to permit a suitable coin to pass therethrough. In my present construction the machine is adapted to be operated by a single coin. The upper portion of the coin chute is provided with a groove 21 and the lower portion thereof forms a V shaped slot 22 when the parts are in assembled position, it being noted that owing to the provision of a set screw 23, the distance to which the pivoted member 18 may approach the stationary side of the coin chute is limited as desired, thereby varying the size of the slot 22 and adapting the same for coins of different dimensions.

24 designates a spring, one end of which is secured to the pivoted member 18, the free end thereof being suitably deflected in order to co-act with the cam face 25 on a lever 26, which is fixed on a rod 27 fulcrumed in the upper part of the standard 16.

28 designates an operating handle adapted to surround the outer end of the rod 27 and to interlock therewith. Said handle 28 being provided with the apertures or recesses 29 thereby adapting the same to interlock with the pin 30 which is in fixed engagement with the shaft 27, said pin having secured thereto one end of a spring 31, the other end of which is secured to a suitable fixed point as the hook 32, carried by the standard 16. The movement of the lever 26 is limited by the stops 33 which are preferably cushioned with suitable material 34. The lower end of the lever 26 is cut away as indicated at 35 in order to form a shoulder 36, which latter is adapted to co-act with a coin 37 in a coin slot 6, as will be clearly understood by reference to Fig. 10.

38 designates a cylindrical casing, the lower end of which is adapted to be seated in an annular groove 30, located at the top of the base 1. The upper end of the casing 38 is deflected as indicated at 39, in order to form an annular groove, and the extreme upper end of said casing is deflected inwardly as is indicated at 40.

41 designates a transparent cover, having any desired contour, the lower end of said cover 41 being flared outwardly as is indicated at 42, in order to adapt the same to engage with the inwardly deflected portion 40 of the casing 38 which latter incloses the actuating parts of the machine so that the same are rendered invisible to the operator, it being understood that the only portions of the machine which are visible will preferably be the container, for the articles to

be vended, which are inclosed by the transparent cover 41. The ring 43 is preferably covered at certain places with cloth or rubber 44 so that the cover 41 will be yieldingly maintained in engagement with the casing 38, as will be readily apparent from Fig. 1. The casing 38 is provided with an opening 45 which registers with the apertured plate 20 so that the coins may be readily passed into the machine.

46 designates the discharge opening through the casing 38, whereby articles discharged from the container may pass into a location accessible to the intending purchaser.

47 designates a standard, the lower end of which is secured to the base 1 in any desired manner, said standard being provided with a recess 48 with which is adapted to engage a pin 49 carried by the casing 38. The upper end of the standard 47 is secured to a plate 50 on which the articles to be vended are supported as will be readily understood by reference to my co-pending application for container.

The operation of my novel construction of coin controlled mechanism for vending machines will now be readily apparent, and is as follows: A coin of the desired dimension is inserted in the aperture of the plate 20 and passes through the coin slot 17 over the top of the spring 14, into one of the slots 6 in the coin wheel 5, as will be clearly understood by reference to Fig. 2 of the drawings. It being understood that the spring 24 which engages with the cam face 25 on the lever 26, will cause the pivoted member 1 of the coin slot to maintain its normal position as is indicated in Fig. 7. The coin has now passed into the machine and been located in one of the slots 6 of the coin wheel 5. The intending purchaser now actuates the handle 28 thereby causing the lever 26, to move toward the left, in the direction of the arrow seen in Fig. 4, whereupon the cam face 25 moves out of engagement with the spring 24, and permits the pivoted member 1 of the coin slot to open so that if a coin of improper dimensions has been retained therein, the same may fall therefrom into the slot 3 and pass to a position accessible to the intending purchaser. As the lever continues its forward movement the shoulder 36 comes into engagement with the coin in the coin wheel 5, thereby causing the coin to depress the spring 10 so that the cam 9 thereon becomes disengaged from its ratchet tooth 8 so that on the continued movement of the lever 26 since the same is in engagement with one of the coins the coin wheel will be advanced one step, the deflected end 13 of the spring 12 engaging with the next slot in the coin wheel as is evident.

It will be understood that the coin is supported within one of the peripheral slots 6

in such a manner that it rests upon the spring 10 and is prevented from lateral movement in said slot by the extension 14 which prevents said coins from passing into the return slot 3 so that if a coin has passed through the coin slot into one of the peripheral slots in the coin wheel the coin wheel will be advanced one step on the forward movement of the lever 26. The actuating handle 28 may be secured to the rod 27 by any suitable means such as for example, a suitable screw carried by said handle and engaging with the rod 27.

When it is desired to assemble or separate the parts, it will be apparent that the casing 38 and the cover 41 may be readily removed after the actuating handle 28 has been removed and the casing 38 partially rotated, whereupon the pin and the casing 38 may be readily removed.

When it is desired to remove the coin mechanism the entire coin mechanism, with the exception of the coin wheel, and its adjuncts, may be removed by simply removing the standard 16 from the base 1 as will be evident.

In the present instance I have shown the slots in the periphery of the coin wheel 5 as being slightly inclined, but this is not essential under all conditions and these slots may be located radially or in any other desired manner, it being apparent that the coins are prevented from improper movement in their respective slot owing to the provision of the springs 10 and 14. As soon as the coins in the coin wheel 5 pass beyond the spring 10 the coins therein may fall from the coin wheel into the coin receptacle 2 and the base 1.

I wish to call special attention to the simplified construction of the coin mechanism and the manner in which the parts may be readily and cheaply manufactured. The standard 16, comprising the bearing for the rod 28 and the stationary portion of the coin slot, is all cast in one piece, and since the different parts may be readily stamped and formed from the metal, the different parts of the mechanism can be cheaply made interchangeable as will be apparent to those skilled in this art. In the present instance I have shown the exact type of coin slot employed commercially in conjunction with this type of machine although it is to be understood that other types of such coin slots may be employed and the feature of the fraud preventive devices may be dispensed with, if desired and simply a straight coin slot employed.

It will now be apparent that I have devised a novel and useful construction of coin controlled mechanism for vending machines which embodies the features of advantage enumerated as desirable in the statement of invention and the foregoing description and

while I have in the present instance shown and described a preferred embodiment thereof, which in practice has given satisfactory and reliable results, it is to be understood that the same is susceptible of modification in various particulars, without departing from the spirit and scope of the invention or sacrificing any of its advantages.

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

1. In a device of the character described, a coin wheel rotatably mounted and adapted to be connected with a container, said wheel having slots in its periphery, a spring forming a closed bottom for certain of said slots and adapted to interlock with one of said slots to normally prevent movement of said wheel in one direction, means for guiding a coin to its proper slot above said spring, and means co-acting with said coin to depress said spring and advance said coin wheel to be advanced one step.

2. In a device of the character described, a base having a coin receptacle therein, a coin wheel rotatably mounted on said base, said wheel having slots in its periphery, a spring having one end secured to said base and its free end extending beneath certain of said slots to close the bottom thereof and having means adapted to interlock with a slot, a second spring for closing the outer periphery of said slots, a coin slot leading to one of the slots in said wheel, and means for causing a coin to depress said spring to cause the latter to become unlocked from its slot to advance said coin wheel one step when such unlocking takes place.

3. In a device of the character described, a base having a coin receptacle therein, a coin wheel rotatably mounted on said base and provided with slots in its periphery, a spring one end of which is secured to said base, the other end thereof extending beneath certain of said slots to close the bottom thereof, a coin chute leading to one of said slots above said spring, said spring having means thereon adapted to interlock with said coin wheel to prevent its movement in one direction and resilient means for preventing the movement of said coin wheel in the opposite direction.

4. In a device of the character described, a base, a coin wheel rotatably mounted thereon and having peripheral slots said wheel being provided on its under side near its outer periphery with ratchet teeth, a spring having one end secured to said base and extending beneath certain of said slots to close the bottom thereof, a cam on said spring adapted to interlock with said ratchet teeth to prevent movement of said wheel in one direction, a spring adapted to interlock with the outer periphery of said slots to prevent movement of said wheel in the opposite di-

rection, a coin chute for guiding a coin into one of said slots above said spring, and means co-acting with the coin to depress said spring and unlock said cam member from its ratchet and to advance said coin wheel one step when such unlocking takes place.

5. In a device of the character described, a base, a coin wheel rotatable thereon and having slots through its outer periphery, a coin chute leading to one of said slots, a ratchet mechanism co-acting with said slots to control the rotation of said coin wheel and to prevent escape of a coin from its slot, a spring co-acting with said slots to permit forward rotation of said wheel and prevent rearward rotation thereof, and means co-acting with a coin in a slot to actuate said mechanism and coin wheel.

6. In a device of the character described, a base, a coin wheel rotatable thereon and having slots therethrough, a coin chute discharging into one of said slots, a ratchet mechanism controlling rotation of said wheel and closing the bottom of the slot in which the coin is received, a spring co-acting with said slots to permit forward rotation of said wheel and prevent rearward rotation thereof, and means co-acting with a coin in a slot to control said ratchet mechanism and actuate said wheel.

7. In a device of the character described, a base, a coin wheel rotatable thereon and having slots therethrough, a coin chute discharging into one of said slots, a ratchet mechanism controlling rotation of said wheel in one direction and closing one side of said coin receiving slot and controlled by a coin, means co-acting with said slots to permit rotation of said wheel in a reverse direction, and a lever suitably fulcrumed and adapted to co-act with a coin in said wheel.

8. In a device of the character described, a base, a coin wheel rotatable thereon and having slots therethrough, a coin chute discharging into one of said slots, a ratchet mechanism controlling rotation of said wheel closing one side of said coin receiving slot and controlled by a coin, said mechanism normally positively preventing rotation of said wheel in its operative direction, a lever suitably fulcrumed and adapted to co-act with a coin in said wheel, and a tension device for said lever.

9. In a device of the character described, a base, a coin wheel rotatable thereon and having a plurality of slots, a ratchet mechanism controlling said wheel and retaining the coins in certain of said slots, a standard carried by said base, a coin chute carried by said standard and discharging into one of said slots, and a lever mounted in said standard and co-acting with a coin to control said ratchet mechanism and said wheel.

10. In a device of the character described,

a base, a coin wheel rotatable thereon and having a plurality of slots, a ratchet mechanism controlling said wheel and retaining the coins in certain of said slots, a standard
 5 carried by said base, a coin chute carried by said standard and discharging into one of said slots, and a lever mounted in said standard and having a shoulder co-acting with a coin to control said ratchet mechanism and
 10 said wheel.

11. In a device of the character described, a base, a coin wheel rotatable thereon and having a plurality of slots, a ratchet mechanism controlling said wheel and retaining
 15 coins in predetermined slots, a standard carried by said base, and having one side of a coin chute integral therewith, the outer side thereof being pivoted thereto, a resilient member secured to said pivotal side, a lever
 20 mounted in said standard and co-acting with a coin to control said ratchet mechanism and said wheel and co-acting with said spring to control said pivoted side, and a tension device for said lever.

12. In a device of the character described, a base, a coin wheel rotatable thereon and having a plurality of slots, a ratchet mechanism controlling said wheel and retaining the coins in certain of said slots, a standard
 30 carried by said base, a coin chute carried by said standard and discharging into one of said slots, a coin return chute in proximity to said coin chute, means for preventing a coin passing from its slot into said coin return chute, and a lever mounted in said
 35 standard and co-acting with a coin to control said ratchet mechanism and said wheel.

13. In a device of the character described, a base, a coin wheel rotatable thereon and
 40 having a plurality of slots, the lower end of said slots being recessed to form ratchet teeth, a spring having one end secured to said base, the other end thereof extending beneath one of said slots, a cam on said
 45 spring co-acting with said ratchet teeth, a spring having one end fixed and the other end thereof adapted to interlock with the outer periphery of said slots and to permit rotation of said wheel in one direction, a
 50 coin chute leading to the slot closed by said springs, and means co-acting with a coin in such slot for intermittently rotating said coin wheel.

14. In a device of the character described,
 55 a base, a coin wheel rotatably mounted thereon and having a plurality of inclined slots in its outer periphery, the lower portion of said slots being recessed to form ratchet teeth, a spring having one end fixed to said
 60 base, the other end thereof closing the bot-

tom of certain of said slots, means on said spring co-acting with said teeth to prevent rotation of said coin wheel in one direction, yielding means co-acting with said slots to prevent rotation of said wheel in a reverse
 65 direction and for closing the outer periphery of said slots, a coin chute discharging into a slot closed by said springs, and devices co-acting with a coin in a chute to cause the latter to co-act with the means on said
 70 spring to depress the latter and intermittently rotate said coin wheel.

15. In a device of the character described, the combination with a base, of a coin wheel rotatably mounted thereon and provided
 75 with a plurality of inclined slots in its periphery, the lower portion of said slots being cut away to form ratchet teeth, a spring having one end fixed to said base and the other end thereof closing the bottom of a plural-
 80 ity of slots, a cam on said spring co-acting with said teeth to prevent rotation of said wheel in one direction, yielding means for permitting rotation of said wheel in a reverse direction and closing the outer periph-
 85 ery of said slots in proximity to said cam, said base having a discharge opening for coins of improper dimension, a guard carried by said resilient means and extending across said discharge opening, means for
 90 conducting a coin into the slot above said cam, and means co-acting with a coin to cause the latter to release said cam from its engagement with its tooth and to rotate said
 95 coin wheel one step.

16. In a device of the character described, the combination with a base, of a coin wheel rotatably mounted thereon and provided with a plurality of inclined slots, the lower
 100 portions of which are recessed to form ratchet teeth, a spring having one end secured to said base, the other end thereof closing a plurality of slots, a cam on said spring co-acting with said teeth, a spring
 105 having one end fixed and the other end thereof deflected to engage with the outer periphery of the coin slots, said base having a discharge opening therein, a guard carried by said second spring and extending across
 110 said discharge opening, a coin chute for conducting a coin into the slot above said cam, and means co-acting with the coin to cause the latter to release said cam from its engagement with said ratchet teeth and to rotate said container one step.

JOHN FRITSCHÉ.

Witnesses:

HERBERT S. FAIRBANKS,
 C. D. McVAY.