No. 676,531.

Patented June 18, 1901.

M. S. CODY.

VENDING APPARATUS.

(Application filed Apr. 21, 1900.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.

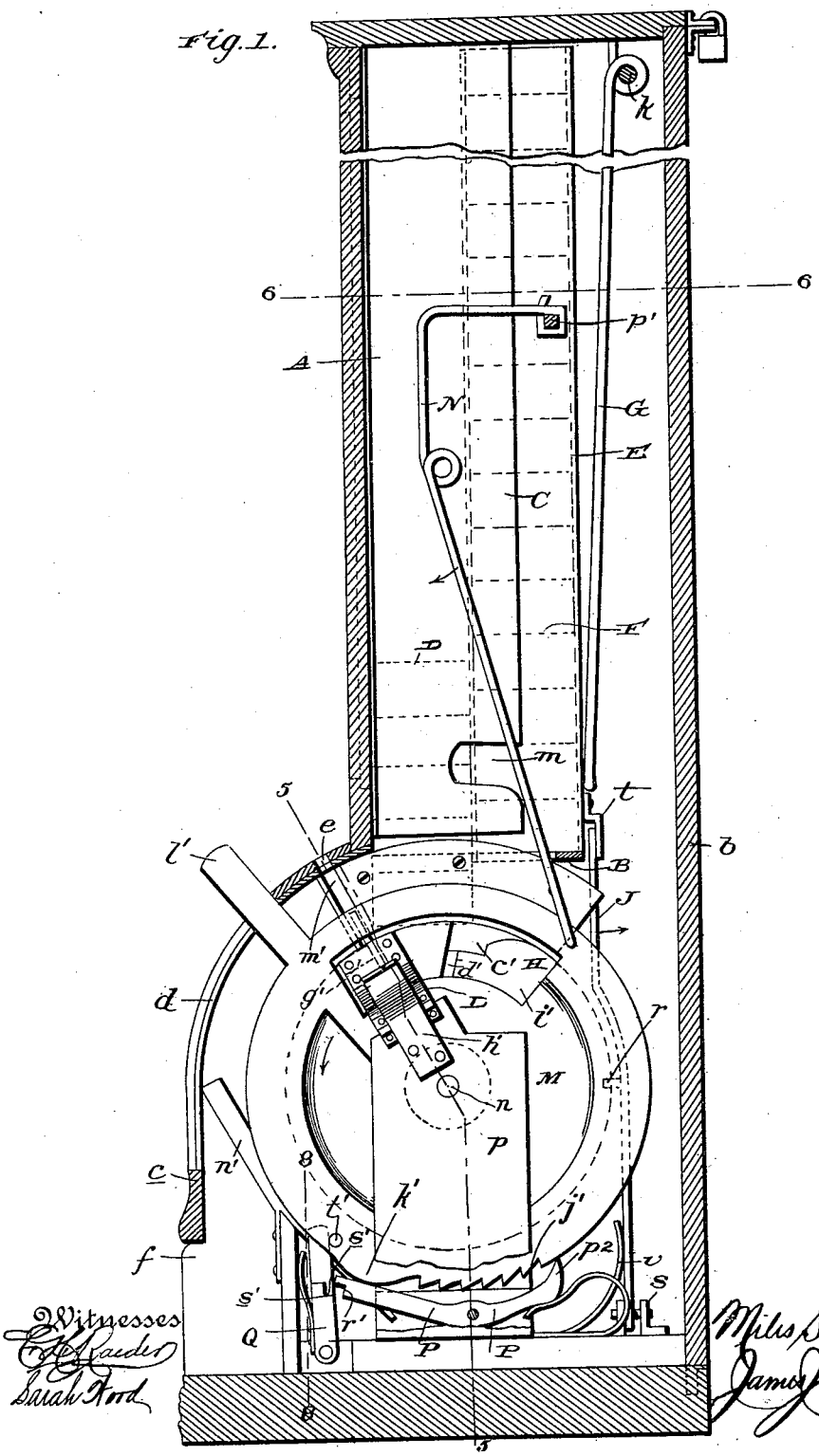

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Fig. 2.

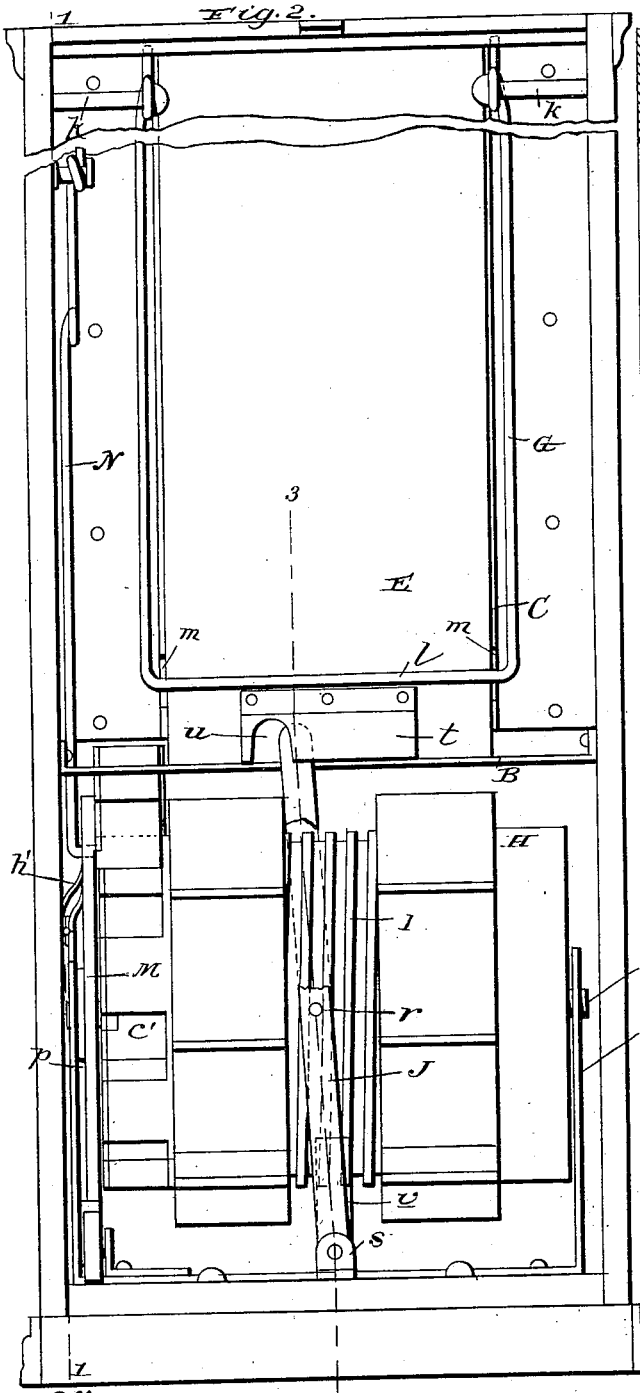


Fig. 6.

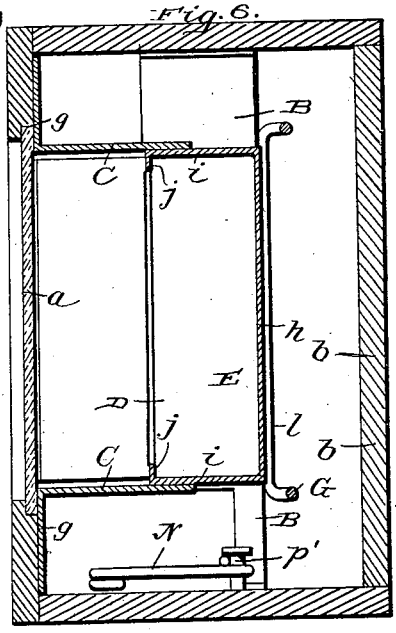


Fig. 7.

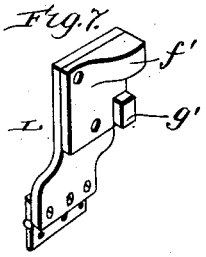
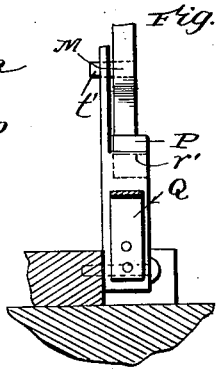


Fig. 8.



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(No Model.) 3 Sheets—Sheet 3.

Fig. 3.

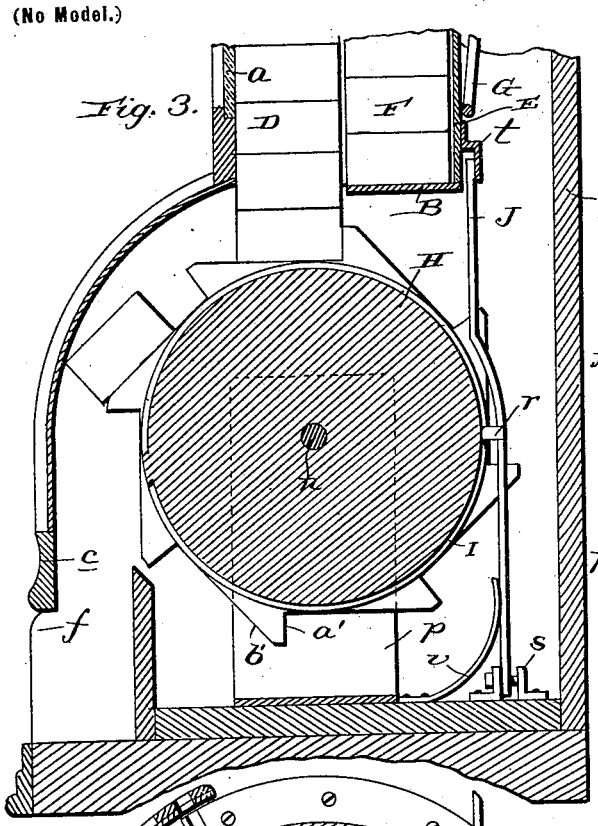


Fig. 4.

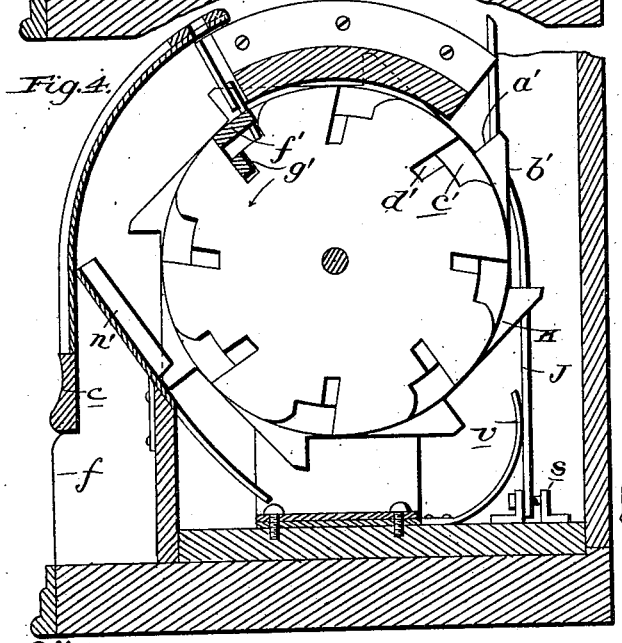
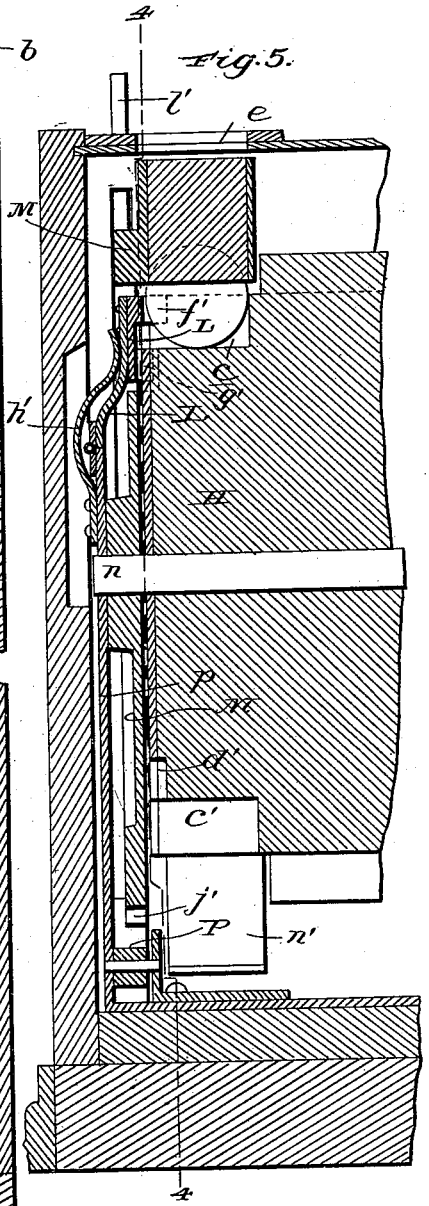


Fig. 5.



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UNITED STATES PATENT OFFICE.

MILES S. CODY, OF WASHINGTON, DISTRICT OF COLUMBIA.

VENDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 676,531, dated June 18, 1901.

Application filed April 21, 1900. Serial No. 13,756. (No model.)

To all whom it may concern:

Be it known that I, MILES S. CODY, a citizen of the United States, residing at Washington, in the District of Columbia, have invented new and useful Improvements in Vending Apparatus, of which the following is a specification.

My invention relates to improvements in coin-controlled vending apparatus; and it consists in the peculiar and advantageous vending apparatus hereinafter described, and particularly pointed out in the claims appended, which while designed more particularly for vending blocks of popcorn is calculated to be used to advantage in the selling of other articles.

In the accompanying drawings, Figure 1 is a vertical section of my improved apparatus, taken in the plane indicated by the broken line 1 1 of Fig. 2. Fig. 2 is a rear view of the apparatus with the door removed. Fig. 3 is a detail section taken on the broken line 3 3 of Fig. 2. Fig. 4 is a reduced section taken in the plane indicated by the broken line 4 4 of Fig. 5. Fig. 5 is an enlarged detail section taken in the plane indicated by the broken line 5 5 of Fig. 1. Fig. 6 is a horizontal section taken in the plane of broken line 6 6 of Fig. 1. Fig. 7 is a perspective view of the latch or securing device through the medium of which the discharge-drum of the apparatus is held against casual movement. Fig. 8 is a detail section taken in the plane indicated by the broken line 8 8 of Fig. 1.

In the said drawings similar letters designate corresponding parts in all of the several views, referring to which—

A is the case of the apparatus, which, by preference, comprises a front panel *a* of glass, a back door *b*, and a curved front wall *c*, having a vertical slot *d* and a coin-slot *e*, and is provided below said wall *c* with an opening *f* for the discharge of the blocks of popcorn or other articles to be vended.

B is a platform of the proportional width illustrated, which is fixedly secured in the case A, as best shown in Figs. 2, 3, and 6, and C C are vertical guides of sheet metal or other suitable material, which have flanges *g*, connected to the front wall of the case A at opposite sides of the glass panel *a* and extend from a point adjacent to the platform B to the upper end of the case A, as shown in Fig. 1. The guides C are designed to retain in position a front column of blocks of popcorn (indicated by D) and are also designed to serve as guides for a holder E, in which is arranged a supplemental column of blocks of popcorn, (indicated by F,) which supplemental column is designed to take the place of the front column when all of the blocks of the latter have been discharged from the apparatus, as will be presently described. The holder E, which is preferably of sheet metal and bottomless, rests at its lower end on the platform B, as best shown in Figs. 1 and 6. It comprises a back wall *h*, side walls *i*, and inwardly-directed lips *j* at the forward edges of the latter, and when the front column of blocks of popcorn has been discharged from the apparatus it is designed to be pressed forward by a bail-spring G, (see Figs. 1 and 6,) which is coiled about a transverse rod *k*, arranged adjacent to the upper end of the case, and has its upper end connected to the top of the case, as shown. In addition to pressing the holder E forwardly between the guides C and against the panel *a*, so as to enable said holder to guide the supplemental column of blocks of popcorn down upon the discharge-drum, (presently described,) the spring G serves to retain the holder in such position, its transverse portion *l* entering notches *m*, provided in the guides C.

H is the discharge-drum of the apparatus, which has trunnions *n* at its ends journaled in standards *p*, rising from the bottom of case A. This drum H is provided at its middle with a worm-screw I, the threads of which are designed to be engaged by a lug *r* on a lever J, which lever is fulcrumed at its lower end in a short standard *s* on the bottom of the case and has its upper end arranged to engage a plate *t* on the rear wall of the holder E, the said plate having a notch *u*, so as to enable a spring *v*, which bears against the lower portion of the lever, to press said lever in the direction indicated by the arrow in Fig. 1 and out of engagement with the plate after said lever has been moved laterally a certain predetermined distance by the rotation of the discharge-drum, as will be presently described.

The drum H is provided on its periphery with eight (more or less) pairs of projections K, the projections of each pair being arranged

in alinement at opposite sides of the worm-screw I and having forward sides a', disposed radially with respect to the drum, and outer flat sides b', designed to support the lowermost block of popcorn or other article to be vended. Said drum is also provided at intervals in its periphery and one of its ends with recesses c' and in said end with notches d', which communicate with the recesses c', as best shown in Fig. 4. The recesses c' are designed to receive a beveled lug f' on a latch or securing device L, (see Fig. 7,) which latch is also provided with a lug g', designed to enter the notches d' of the drum, and is connected in a hinged manner to one of the standards p and backed by a spring h'.

M is a circular disk, which is loosely mounted on one of the trunnions of the drum H and is provided with a curvilinear slot i', receiving the upper portion of the latch L, a series of peripheral ratchet-teeth j', a peripheral cam k', disposed in rear of the teeth j' with reference to the direction in which the disk is turned to rotate the drum H, and a radially-disposed handle l', which extends through and is designed to be moved in the slot d of the case. The said disk M is also provided with a coin-chute m', which is disposed laterally with respect thereto and is designed to receive a coin passed through the slot e and conduct the same to one of the recesses c' of the drum. When a coin rests in one of the recesses c' of the drum, its upper portion remains in the chute m' of disk M, and hence when said disk is turned in the direction of the arrow in Fig. 1 the coin acting against the beveled lug f' of the latch L will press said latch outwardly and remove its lug g' from the notch d' of the drum and release the latter, so that it will be turned until the coin drops out of the recess c' and chute m' and falls down a chute n' into the lower portion of the case.

N is a spring, which is connected at one end to a lug p' on one side wall of the case (see Fig. 2) and at its opposite end to the disk M and has for its purpose to return the disk to its normal position (shown in Fig. 1) after said disk has been turned in the direction indicated by the arrow to partially rotate the drum H.

P is a spring-pressed dog, which is fulcrumed at an intermediate point of its length and is provided at one end with a toe p^2, designed to engage the teeth j' of disk M, and at its opposite end with a rabbet r', and Q is a spring-backed lever which is provided with a shoulder s', designed to engage the rabbeted end of the dog P.

When the disk M is turned in the direction indicated by arrow in Fig. 1, the toe p^2 of the dog P will engage the teeth j' of the disk, and thereby prevent retrograde movement of the disk until it has been turned to a sufficient extent to discharge a block of popcorn from the drum H. When the disk has been turned to the extent stated, the cam k' of the disk will depress the toe end of the dog, and thereby raise the rabbeted end thereof sufficiently to enable the shoulder s' of lever Q to enter the rabbet r'. With this done the toe end of the dog is held out of engagement with the teeth of the disk until the disk is turned to the normal position, (shown in Fig. 1,) when the lug t' on the disk strikes against the lever Q, and thereby disengages said lever from the dog and restores the dog to its normal operative position.

With two vertical columns of blocks of popcorn in the case A the lowermost block of the front column rests on the sides b' of one pair of projections K of drum H, as shown in Fig. 3, and the general operation of the apparatus is as follows: When a coin is placed in the chute m' of disk M and assumes a position in said chute and the coincident recess c' of the drum H, the disk and drum are connected together, and hence when the disk is turned in the direction indicated by arrow and latch L is pressed out of engagement with the drum the drum will also be turned. When the drum is turned, the sides a' of the projections K in rear of those on which the lowermost block of popcorn rests will force said block forwardly and cause it to fall from the drum and the next uppermost block will then drop upon the sides b' of the first-mentioned projections K and remain thereon until the apparatus is again actuated. When the apparatus is operated, as stated, the coin drops from the recess c' and chute m' after the drum has been turned far enough to discharge a block of popcorn, and the disk M is then free to return to its normal position.

When the apparatus is filled, there are by preference twenty-four superposed blocks of popcorn in the front column and twenty-four superposed blocks in the supplemental or rear column. The drum H is provided, as stated, with eight pairs of projections K, and hence it will be seen that three complete revolutions of the drum are necessary to discharge all of the blocks of popcorn comprised in the first or front column.

The threads of the worm-screw I of the drum are so arranged that when the drum has made three complete revolutions the lever J will have been moved laterally a sufficient distance to carry its upper end into alinement with the notch u of the plate t on the holder E. When the lever J is thus moved laterally into alinement with the notch u, the spring v operates to throw the lever rearwardly, and thereby releases the holder E. When the holder is released, the spring G operates to push it forwardly into a position in advance of the platform B, so as to enable the lowermost block of the column it contains to drop upon the projections K of the drum below it. Subsequent to the forward movement of the holder and the dropping of its lowermost block of popcorn on the projections K of the drum the operation of the apparatus is the same as that before described.

While I prefer to have the columns of blocks of popcorn of such height that three revolutions of the drum are necessary to discharge all of the blocks of a column, it is obvious that the parts may be so arranged and timed that the first or forward column will be exhausted and the supplemental or rear column moved into its place at the completion of three (more or less) revolutions of the drum H.

After the apparatus is depleted of blocks of popcorn or other articles to be vended it is obvious that it may be readily refilled and the mechanism may be expeditiously reset to operate in the manner before described.

It will be readily appreciated from the foregoing that while very simple and inexpensive my improvements constitute a highly-efficient vending apparatus and one which is easily operated and is not liable to fail in operation subsequent to the deposit of a coin of proper denomination therein.

I have entered into a description of the specific construction and relative arrangement of parts comprised in this the preferred embodiment of my invention in order to impart a full, clear, and exact understanding of the same. I do not desire, however, to be understood as limiting myself to such specific construction and arrangement of the parts, as such changes or modifications may be made in practice as fairly fall within the scope of my invention.

Having thus described my invention, what I claim is—

1. In a coin-controlled vending apparatus, the combination of a rotary, article-delivery drum arranged to be engaged by a coin, a latch normally engaging the drum and arranged to be disengaged therefrom by a coin in engagement therewith, and a device for rotating the drum, movable independent of the same, and having coin-engaging means, whereby, when a coin rests in engagement with the drum and the rotating device, said drum and rotating device are connected, substantially as specified.

2. In a coin-controlled vending apparatus, the combination of a rotary drum provided at intervals of its periphery with means to receive a coin, a device rotatable independently of the drum and having a coin-chute adapted to register with the coin-receiving means of the drum, whereby when a coin is deposited in the chute the drum and device are connected thereby, and a latch normally engaging the drum and having a beveled portion arranged to rest in the coin-receiving means of the drum which is coincident with the chute of the device so as to be disengaged from the drum by a coin when the device is actuated, substantially as specified.

3. In a coin-controlled vending apparatus, the combination of a case having a coin-slot and an opening for the discharge of articles to be vended, a discharge-drum arranged in said case and having recesses in its periphery and end adapted to receive coins, a device rotatable independent of the drum and having a handle extending through an opening in the case and also having a coin-chute adapted to register with the slot in the case and the recesses in the drum, and a latch normally engaging the drum and having a beveled portion arranged to normally rest in the recess of the drum that is coincident with the coin-slot of the case and the chute of the device so as to be engaged by a coin and release the drum when the device is actuated, substantially as specified.

4. In a coin-controlled vending apparatus, the combination of a rotary drum having recesses at intervals in its periphery and end, a disk rotatable independently of the drum and having a coin-chute adapted to register with the recesses of the drum and also having ratchet-teeth on its periphery and a cam and lug arranged in rear of said teeth, a latch for the drum having a beveled portion adapted to enter the recesses thereof, a dog arranged to engage the teeth of the disk and be engaged by the cam thereof, and a lever arranged to engage the dog and be engaged by the lug on the disk, substantially as specified.

5. In a coin-controlled vending apparatus, the combination with the rotary disk having ratchet-teeth on its periphery and also having a cam and a lug arranged in rear of said teeth, a spring for retaining said disk to its normal position, a dog arranged to engage the teeth of the disk and be engaged by the cam thereof, and a lever arranged to engage the dog and be engaged by the lug of the disk, substantially as specified.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

MILES S. CODY.

Witnesses:
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THOMAS E. TURPIN.