No. 752,580. PATENTED FEB. 16, 1904.

M. J. NASH & J. T. WANIGER.

COIN CONTROLLED VENDING MACHINE.

APPLICATION FILED NOV. 2, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

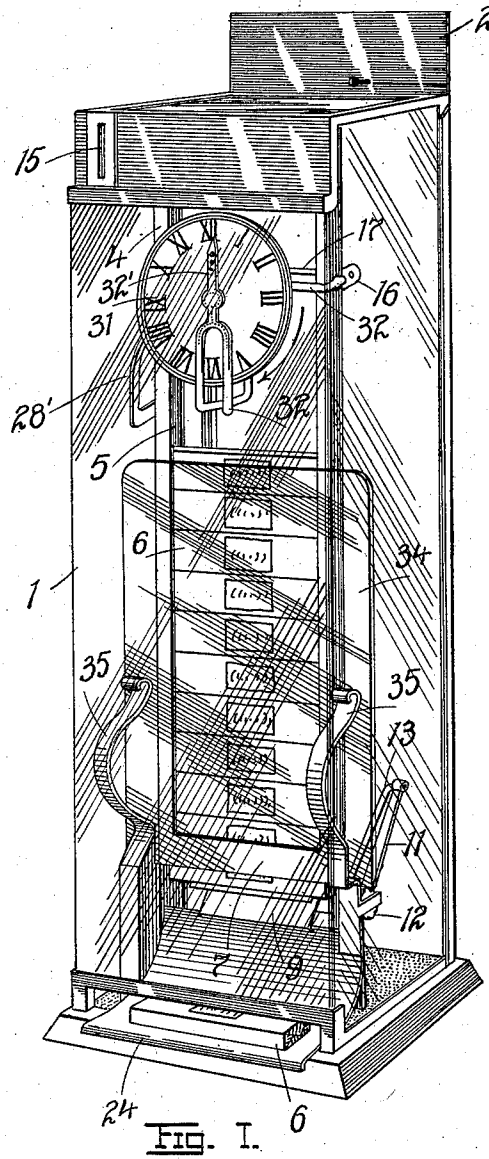



FIG. 1.

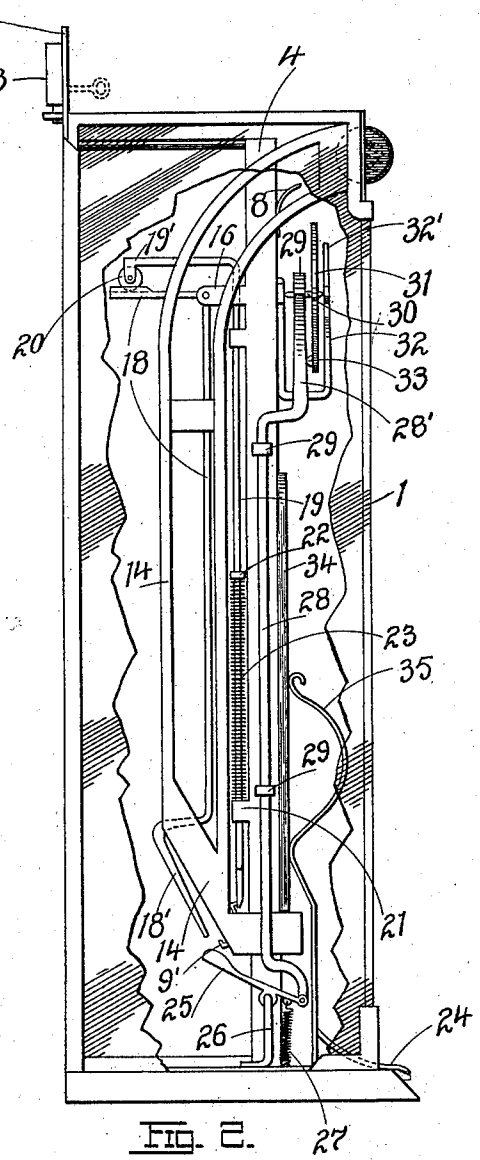



FIG. 2.

WITNESSES:

Paul J. Dawson

M. D. Whitcomb

INVENTORS

Michael J. Nash and

Julius T. Waniger

BY

Emil Starek

ATTORNEY

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 752,580. PATENTED FEB. 16, 1904.

M. J. NASH & J. T. WANIGER.

COIN CONTROLLED VENDING MACHINE.

APPLICATION FILED NOV. 2, 1903.

NO MODEL. 2 SHEETS—SHEET 2.

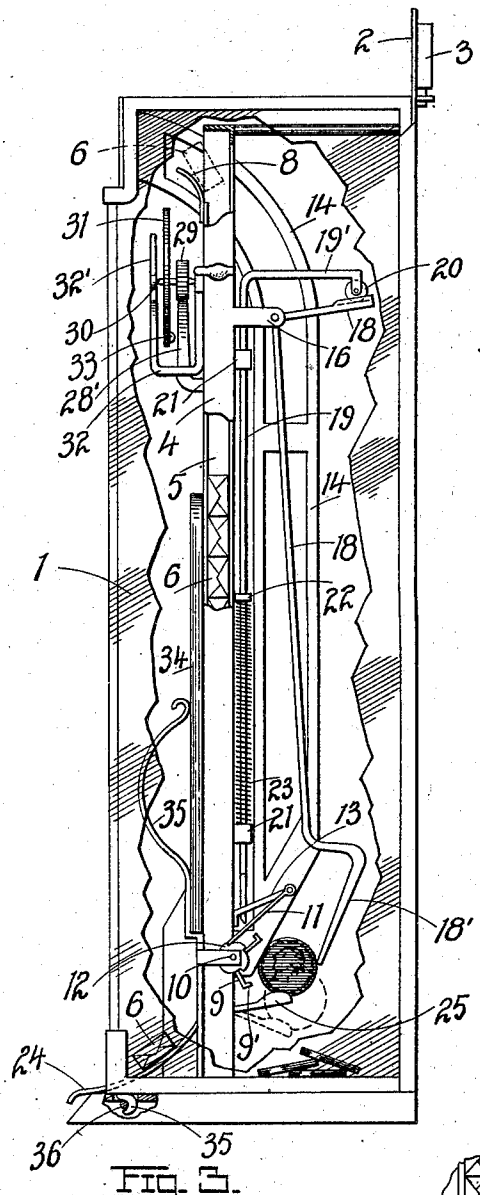


FIG. 3.

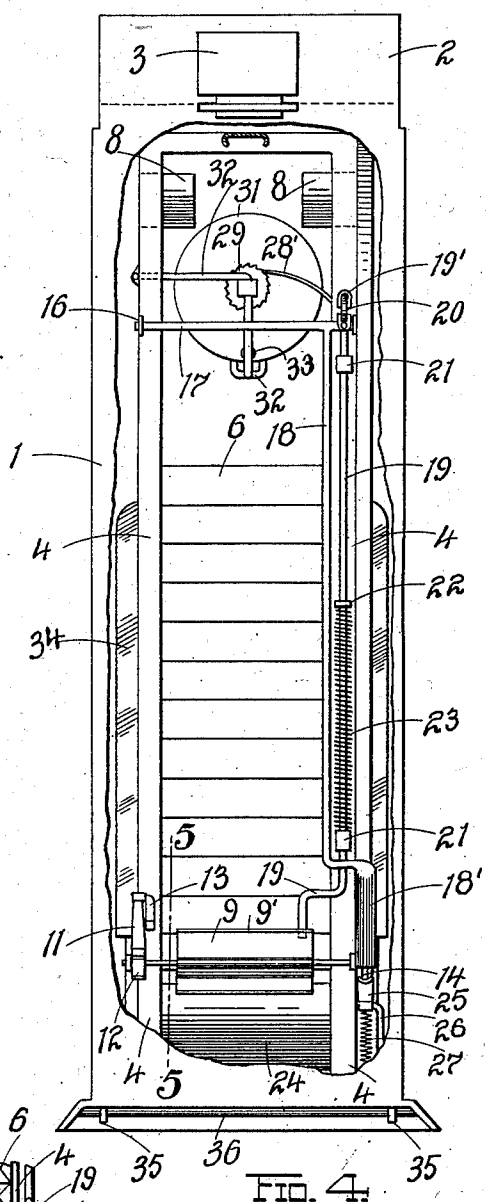


FIG. 4.

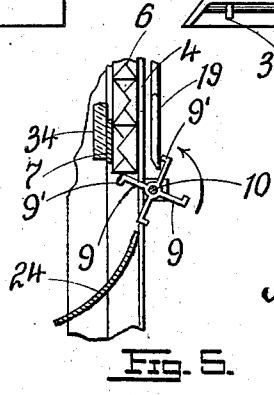


FIG. 5.

WITNESSES:

Paul J. Sawyer

M. B. Whitcomb

INVENTORS

Michael J. Nash and

Julius T. Waniger

BY

Emil Starck

ATTORNEY

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 752,580. Patented February 16, 1904.

# UNITED STATES PATENT OFFICE.

MICHAEL J. NASH AND JULIUS T. WANIGER, OF ST. LOUIS, MISSOURI.

## COIN-CONTROLLED VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 752,580, dated February 16, 1904.

Application filed November 2, 1903. Serial No. 179,517. (No model.)

*To all whom it may concern:*

Be it known that we, MICHAEL J. NASH and JULIUS T. WANIGER, citizens of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Coin-Controlled Vending-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

Our invention has relation to improvements in coin-controlled vending-machines selling single articles; and it consists in the novel construction and arrangement of parts more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a perspective view of the machine shown incased in a glass cover. Fig. 2 is an elevation of one side of the machine. Fig. 3 is an elevation of the opposite side, showing, however, the escapement-lever tripped to releasing position. Fig. 4 is a rear elevation thereof, and Fig. 5 is a vertical sectional detail on line 5 5 of Fig. 4.

The object of our invention is to construct a combined coin-controlled vending-machine and game apparatus specially designed for chewing-gum sticks, candy, and the like, which shall automatically deliver a stick of the article upon the mere introduction of a coin, the latter serving also to impart motion to a suitable dial inscribed with suitable characters operating in connection with an index registering the results, the whole apparatus being simple, cheap to construct, having a minimum number of operating parts, and possessing further and other advantages better apparent from a detailed description of the invention, which is as follows:

Referring to the drawings, 1 represents a glass casing provided with a rear cover-plate 2, to which it may be secured by any suitable lock mechanism 3. Within the casing is confined a metallic frame 4, whose vertical sides or members have formed therein longitudinal grooves or ways 5 for the reception of the opposite ends of the candy sticks or articles 6, the bottom stick being prevented from dropping out of the discharge ends of said ways by the basal transverse member 7 of the frame. The introduction and passage of the sticks 6 into the ways 5 is facilitated by the guide-lips 8 at the top of the frame, these lips virtually forming a continuation of the front walls of the guideways. The bottom of the series of articles thus confined in the ways is supported by one of a series of radially-disposed platforms 9, revolving about a common axis 10 and collectively forming a rotatable support for the articles, the axis or shaft 10 being mounted in the frame at a suitable point below the discharge end of the ways. The platforms rotate in the direction shown by arrow in Fig. 5 for purposes of discharging an article, being prevented from revolving in the opposite direction by the spring-pawl 11, engaging the ratchet 12, carried at one end of the shaft, the fixed end of the pawl being secured to an arm 13, fixed to the frame. The free edge of each platform 9 is provided with a flange 9′, deflected in the direction of rotation of the platforms for a purpose presently to appear.

Secured to one side of the frame is a coin-chute 14, leading to a coin-slot 15 in the front wall of the machine. Disposed in the rear of the upper portion of the frame are brackets 16, within which is mounted a rock-shaft 17, to one end of which—viz., the end adjacent to the coin-chute—is secured the depending bent escapement-lever 18, the free end of whose long arm is provided with a forwardly-inclined expanded portion 18′, adapted to be impinged by a coin dropping through the chute, and when impinged the lever is swung or rocked rearwardly from its normal position, as shown in Fig. 3. The rearwardly-bent short arm of the lever with such rocking swings upwardly and simultaneously raises bodily the reciprocating releasing-bar 19, whose upper end is provided with a rearwardly-bent portion 19′, carrying a roller 20, resting on the short arm of the escapement-lever, Figs. 2, 3. The bar 19 operates loosely in the bearings 21 and at a convenient point of its length is provided with a fixed collar 22, between which and the lower bearing 21 is confined an expanding spring 23, coiled about the bar, the tendency of the spring being to return the lower end of the bar into intercepting engagement with the deflected edges 9′ of the platforms 9. The moment,

however, that the bar 19 is raised by the coin tripping the escapement-lever, as indicated in Fig. 3, the release of the platforms 9 is effected, the latter revolving in the direction shown by the arrow in Fig. 5 and dumping the lowermost article 6 of the series. By the time, however, that such article is discharged the spring 23 restores the bar 19 to its normal position in time for the latter to engage the next platform 9 of the series, thus arresting the gravitation and discharge of any more articles. The latter when once discharged drop on a curved plate 24, a suitable space being left between said plate and the lower glass panel of the front of the casing for the delivery of the article into the hands of the operator. The supporting-platform 9 of the series is inclined to the horizontal, Fig. 5, for the reason (*a*) to allow the platform to swing through a sufficient length of arc for the discharge of the article before the same is intercepted by the next succeeding platform; (*b*) to allow for the presence of the flanges 9′, whose engagement with the bar 19 would impart to the platforms the inclination referred to, said flanges being desirable to insure stiffness for the free edges of the platform, and (*c*) to insure contact between the bar 19 and platforms along a line or edge instead of along a surface, (which would be the case if the flanges 9′ were absent,) thus insuring a more sensitive release at the moment of disengagement. By the time the coin has dropped to the bottom of the chute 14 and has impinged on the portion 18′ of the escapement-lever it also lands on the adjacent arm of a tilting or oscillating spring-controlled buffer-lever 25, to pass which it must depress to substantially the dotted position shown in Fig. 3, when the coin is free to drop to the bottom of the casing. Incidentally the buffer-lever forms an element of that portion of the device serving as a game apparatus and which may be described as follows: As shown, the lever 25 is mounted on a standard 26, the opposite arm of the lever being coupled to a contracting spring 27. The free end of the arm to which the spring is secured is coupled to the lower end of a vertically-movable actuating-rod 28, mounted in bearings 29, the upper forwardly and upwardly deflected extension or pawl 28′ of which is in permanent engagement with a ratchet 29, carried by the spindle or shaft 30 of a dial 31, said spindle 30 being mounted in the bent bracket 32, secured to the frame, the outer arm of the bracket having an extension 32′, serving as an index for the dial. With each tripping of the lever 25 the rod 28 is pushed upwardly, the engaging extension or pawl 28′ under the circumstances imparting rotation to the ratchet 29 and dial 31, which revolves, finally stopping at a figure uncertain to the operator at the moment of the introduction of the coin. It is this uncertainty in the result upon which guesses may be made and any kind of game played. The rear face of the dial is provided with a balance-weight 33, so as to insure its ultimate return to the figure 12 opposite the index.

To prevent the abstraction of the articles by unauthorized persons by such means as a bent wire or hook, we take the precaution of covering up the face of the series of articles by a glass protecting-plate 34, held in position by the spring-arms 35, whose fixed ends are secured to the frame in any mechanical manner. The lower edge of this plate 34 extends approximately to the corresponding edge of the basal transverse member 7 of the frame 4.

Preferably the glass casing is secured to the base of the machine by a pair of hooks 35 engaging a cross-rod 36, Figs. 3, 4, before locking the same to the back; but we do not claim these details, as they and many others may be departed from without in any wise affecting the nature or spirit of our invention.

The operation has been sufficiently described without reviewing the same at this point. Of course after the lever 25 recovers itself under the contracting action of the spring 27 the pawl 28′ slips along the teeth of the ratchet 29 to a position for reëngaging it with the impact of the next or succeeding coin.

Having described our invention, what we claim is—

1. In a coin-controlled vending-machine, a series of rotatable platforms mounted on a common axis, and adapted to consecutively support a column of the articles to be sold, a coin-chute for the coin, a bent escapement-lever pivoted in proximity to said column and having a lower end in the path of the discharge end of the chute, a reciprocating bar mounted in suitable bearings adjacent to the lever and having its lower end in engagement with one of the platforms, and having its opposite end bearing upon the upper or bent arm of the lever, a collar on said bar, a spring coiled about the bar and interposed between the collar and the lower bearing, whereby upon introduction of a coin the escapement-lever is oscillated and the bar raised, thereby releasing the platforms and permitting their rotation under the weight of the column of articles, and allowing for the discharge of the bottom article of the column, the spring restoring the bar to its normal position and causing the same to arrest further rotation of the platforms, whereupon the articles are supported on the next platform of the series, substantially as set forth.

2. In a coin-controlled vending-machine, a series of platforms rotatable about a common axis and adapted to consecutively support a series of articles to be sold, a coin-chute for the coin, an escapement-lever having one end in the path of the discharge end of the chute,

intermediate connections between said lever and platforms for normally holding said platforms stationary, but temporarily releasing the same upon the oscillation of the lever in one direction under the action of the coin to effect discharge of the bottom article of the series, means for arresting further rotation of the platforms after such discharge, and a tilting spring-controlled buffer-lever adapted to be impinged by the coin, simultaneously with the escapement-lever and tilted sufficiently to permit escape of the coin from permanent retention by the escapement-lever, substantially as set forth.

3. In a coin-controlled vending-machine, a series of platforms radiating from a common axis, means for preventing rotation of the platforms in the opposite direction, a frame having guideways for the reception of a column of the articles to be sold, the bottom article resting on one of the radially-disposed platforms, a coin-chute carried by the frame, a bent escapement-lever suspended adjacent to the chute and having its lower end in the path of the discharge-opening of said chute, a spring-controlled reciprocating bar actuated in one direction by the swinging of the lever under the impact of the coin, the lower end of said bar being normally in engagement with one of the series of platforms, but releasing the latter upon the impact of the coin against the lever, and a spring-controlled buffer-lever located in the path of the coin, and jointly intercepting the latter with the adjacent end of the escapement-lever, the depression of the buffer-lever under the impact of the coin providing sufficient space for the coin to escape from under the influence of the escapement-lever, the parts operating substantially as, and for the purpose set forth.

4. In a coin-controlled vending-machine, a series of rotatable platforms for consecutively supporting a column of the articles to be sold, in combination with a coin-actuated escapement-lever for permitting a partial rotation of said platforms to effect the discharge of the bottom article, means for arresting further rotation of the platforms upon such discharge, a buffer-lever for releasing the coin from the influence of the escapement-lever, a rotatable dial, an index therefor, and intermediate connections between said dial and buffer-lever for imparting rotation to the dial upon an oscillation of the buffer-lever under impact of the coin, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

MICHAEL J. NASH.
JULIUS T. WANIGER.

Witnesses:
EMIL STAREK,
MARY D. WHITCOMB.