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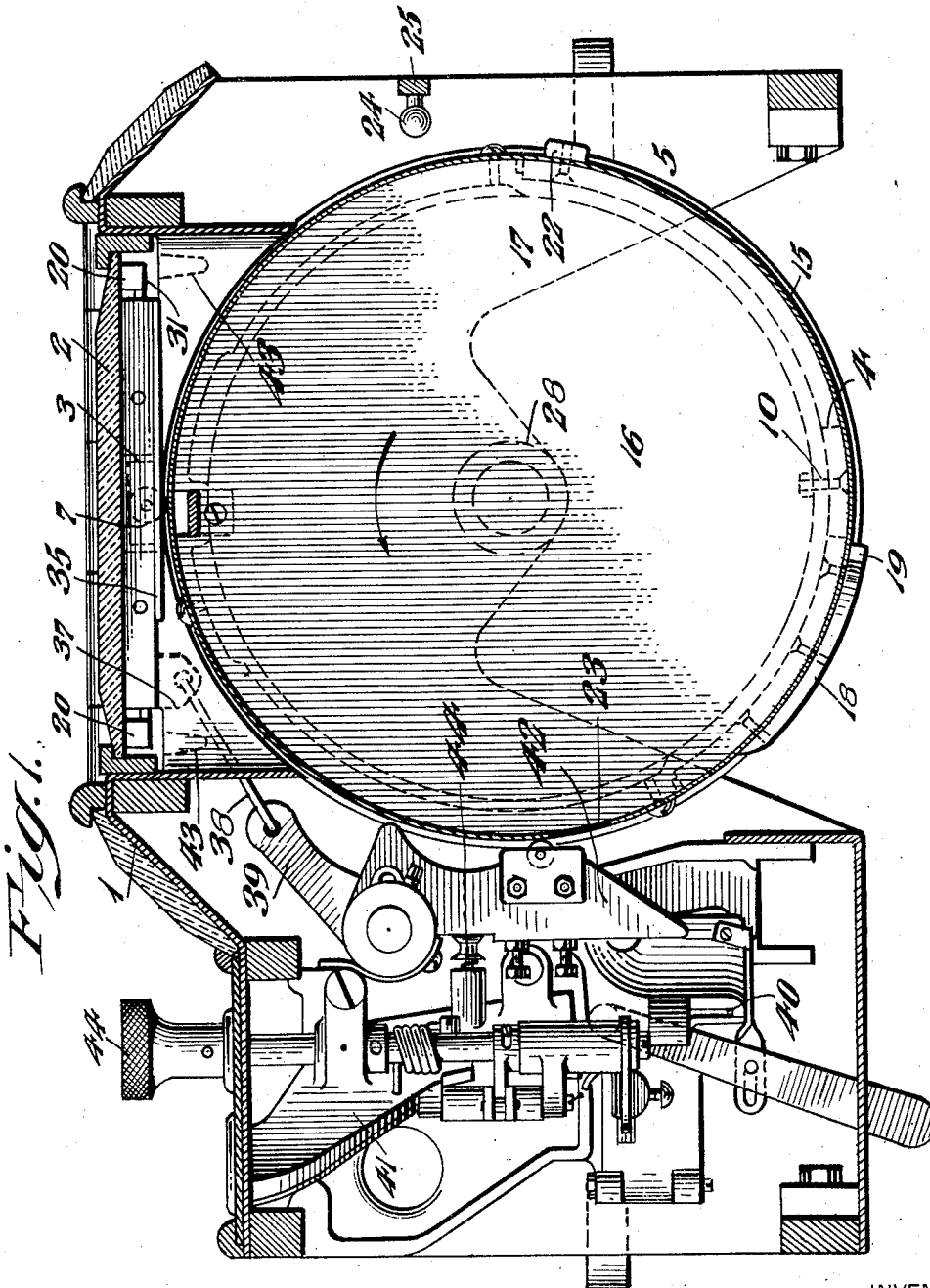
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1,905,083

VENDING DRUM FOR COIN CONTROLLED VENDING MACHINES

Filed Oct. 17, 1927

3 Sheets-Sheet 1



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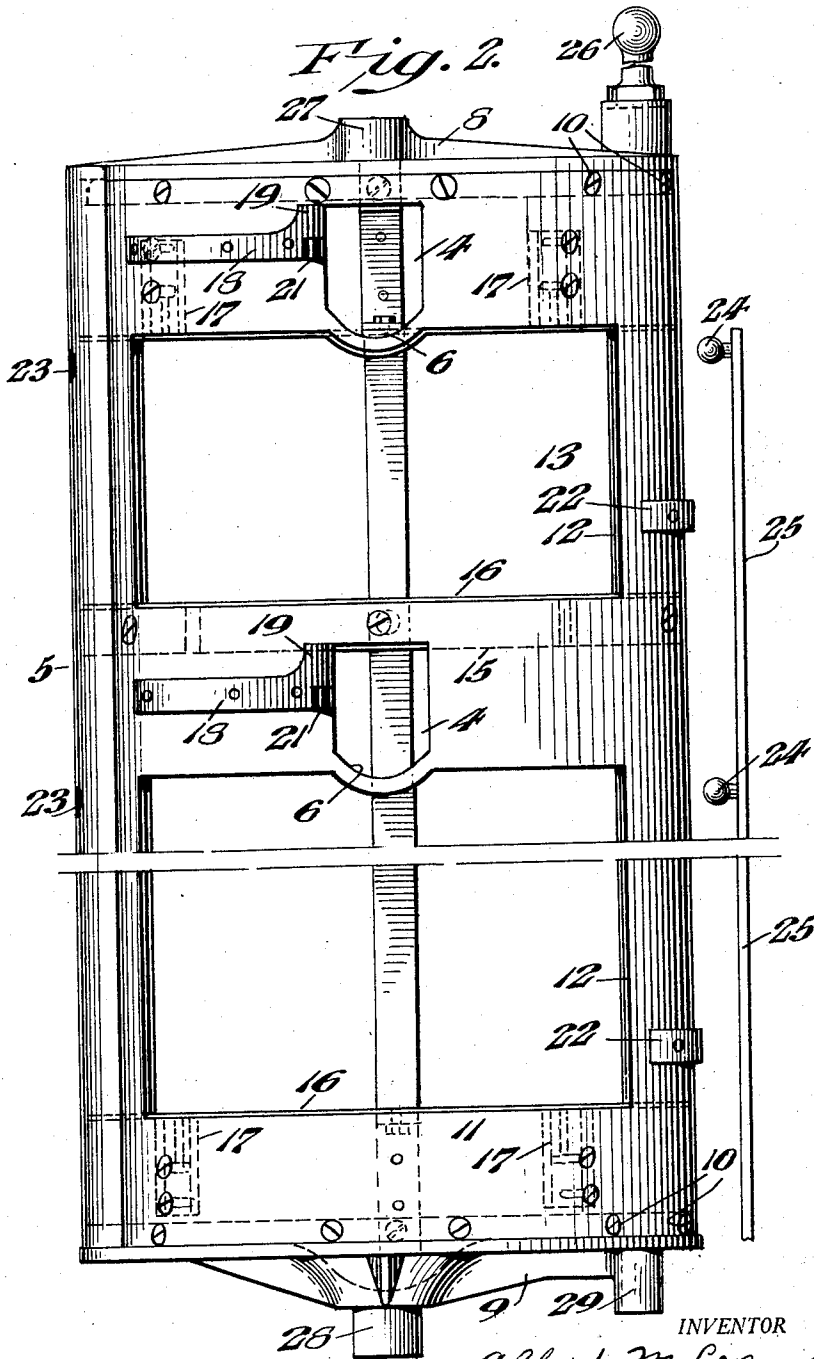
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3 Sheets-Sheet 2



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3 Sheets-Sheet 3

Fig. 3.

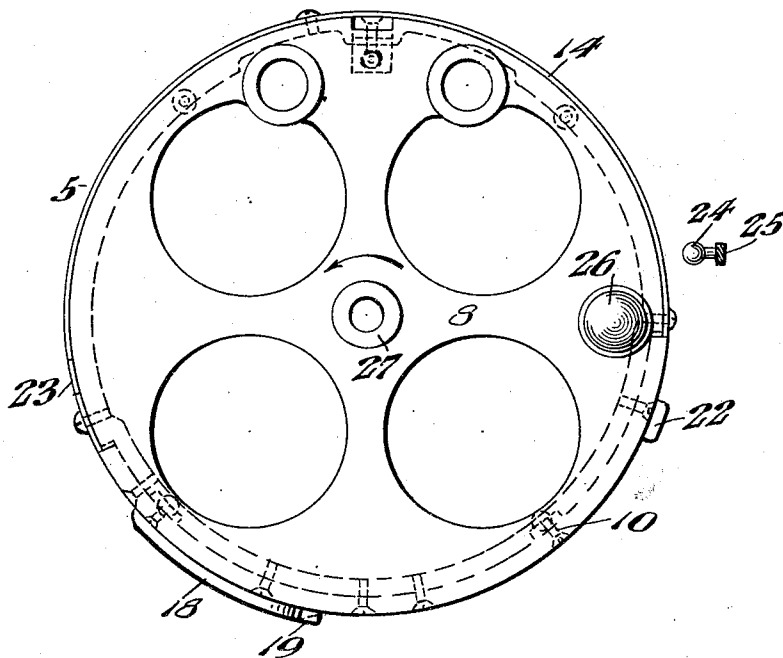


Fig. 4.

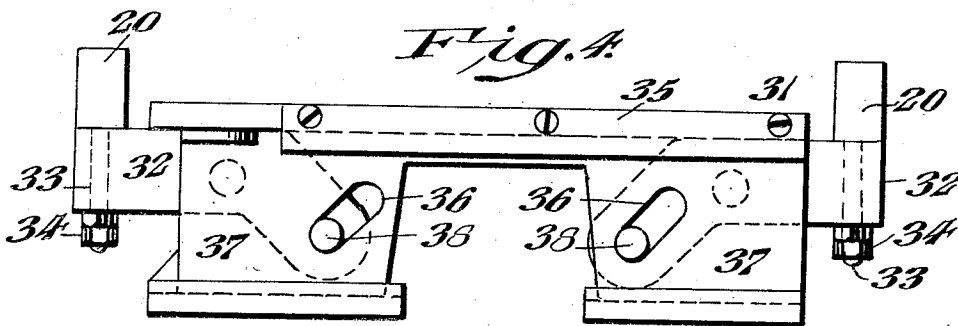
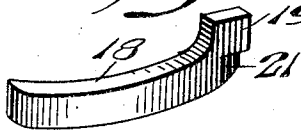


Fig. 5.



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VENDING DRUM FOR COIN CONTROLLED VENDING MACHINES

Application filed October 17, 1927. Serial No. 226,675.

The object of this invention is to devise a novel and improved construction of a rotatably mounted vending drum for coin controlled vending machines of the type disclosed in the Fritsche Patent No. 1,039,508, patented September 24th, 1912. In drums of this type they are preferably constructed so that a number of super-imposed compartments are provided, each having a single opening thereto.

When the drum is in its vending position these openings serve as delivery openings and access to them by the purchaser is controlled by means of independent coin controlled doors, the locking mechanism of each of which is released when the purchaser inserts into the coin mechanism for an individual compartment, a coin of the proper denomination and partially rotates a handle, the door being mounted in such a manner that when so released it will partially open.

When the drum is rotated to bring the openings to the rear, such openings serve as filling openings for the articles to be vended.

It has been found from the commercial use of vending drums of this type that the construction can be materially improved to enable it to be the more readily manufactured, to increase its durability, and to provide many advantageous features which were not present in prior devices.

It has been found desirable to illuminate the article receiving compartments when they are in vending position, to provide the drum with means to limit the opening movement of the doors, and to provide means to prevent the rotation of the drum by the attendant in rear of the machines when any of the doors are insufficiently closed in order to prevent injury to the intending purchaser by his hand being caught by the door.

The vending drum has been primarily designed for the vending of food but it is, of course, not limited to such use and can be employed for the vending of any desired articles which are capable of being inserted into and removed from the article receiving compartments.

With the above and other objects in view as will hereinafter more clearly appear, my

invention comprehends a novel vending drum for coin controlled vending machines.

It further comprehends a novel construction of a vending drum having novel means for limiting the opening movement of the door controlling access to the article containing compartment, and novel means for preventing the revolution of the drum when the door is not sufficiently closed.

It further comprehends novel means for effecting the proper illumination of the article receiving compartments of the drum.

It further comprehends novel means carried by the drum to effect the resetting of the coin mechanism controlling access to an article containing compartment of the vending drum.

Other novel features of construction and advantage will hereinafter more clearly appear in the detailed description and the appended claims.

For the purpose of illustrating the invention, I have shown in the accompanying drawings, a typical embodiment of it, which, in practice, will give satisfactory and reliable results. It is however, to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized, and my invention is not limited to the exact arrangement and organization of these instrumentalities, as herein set forth.

Figure 1 is a sectional plan view of a vending machine in conjunction with which a vending drum and container employing my invention is employed.

Figure 2 is a front elevation of the vending drum in detached position and its non-vending position.

Figure 3 is a top plan view of the drum.

Figure 4 is a side elevation of the door locking mechanism.

Figure 5 is a perspective view of a cam carried by the door and operative to control the door locking mechanism.

Similar numerals of reference indicate corresponding parts.

Referring to the drawings:—

In vending machines employing vending drums or article containers of the type here-

in disclosed, the vending drums are rotatably mounted in rear of a wall or partition having coin controlled delivery openings which register with the delivery openings in the vending drums so that many different types of articles are exposed for sale, and the present invention has been especially designed for the selling of articles of food.

The front of the vending machine is formed by a wall 1 consisting of a skeleton framework having ornamental plates of any desired character provided with coin receiving slots, and the actuating handles for the coin mechanisms extend through such wall so that their grasping portion is accessible to the intending purchaser. It also has pivotally mounted in it doors 2 so that when their locking mechanisms are released they will swing outwardly.

The doors 2 are provided with the lugs 3 which are adapted to enter into the openings 4 of the vending drums 5, and the extent of the opening movement of a door is limited by its engagement with the bottom wall 6 of an opening 4 in the drum. The lugs 3 have mounted in them rollers 7.

The vending drum 5 is provided with top and bottom castings 8 and 9 respectively, to which are connected, by fastening devices 10, a front casting or skeleton body portion 11 having spaced openings 12 which serve as both filling and delivery openings for the articles to be vended, which latter are placed in the compartments 13 of the drum. A drum cover 14 of circular formation surrounds the rear and sides of the drum and is secured to the body portion 11 at its front portions by suitable fastening devices. The body portion 11 has fixed to it a desired number of drum reinforcing rings 15 on which drum plates 16 are supported to form the top and bottom of an article compartment, see Figure 1. Near the top and bottom of the drum, are secured the partition plate supports 17.

Above the filling and delivery openings 13 and at one side of the openings 4, the drum has secured to it the door closing cams 18 which, in proximity to the openings 4, are provided with the upwardly extending stop portions 19 which, if the doors are not sufficiently closed to allow the door lugs 3 to clear them, will prevent the attendant in rear of the machine from revolving the drum. The cams 18 are of circular or curved formation, taper slightly towards their rear end and cooperate with the rollers 7 mounted in the door lugs 3 while the drum is being rotated into its non-vending position to move the doors into their locking position so that the doors will be automatically locked by means of bolts 20. Each cam 17 at its lower forward portion is tapered or rounded as at 21 to facilitate its cooperation with a lug roller.

The drum also has secured to its periphery, in proximity to the filling and delivery openings, cams 22 which effect the resetting of the coin mechanisms in a similar manner to that shown in the Fritsche patent aforesaid and which is now well known by those skilled in this art so that it is not believed to be necessary to illustrate and describe in detail such construction.

The cams 22 are in the form of rectangularly shaped blocks having opposite end corner portions rounded. The drum is provided in proximity to each compartment with an opening 23 through which an electric light 24 is adapted to shine when the drum is in vending position to illuminate the article receiving compartments 11 in which the articles are exposed for sale.

The lights 24 are carried by a stationary support 25 mounted in proximity to the revoluble drum 5. The top casting 8 has a grasping handle 26 secured to it. It is also provided with a recessed hub 27 adapted to receive a stationary stud, not shown. The bottom casting 9 is provided with a depending stud 28 which is rotatably supported. The bottom casting 9 is also provided with a depending lug 29 which serves as a stop and is adapted to contact with fixed portions of the vending machine frame.

The top and bottom castings of the drum are braced by a bar 30 secured to them and to the drum cover.

The doors are positively locked and unlocked by the coin mechanism. The bottom of each door has the openings 31 into which the locking bolts 20 pass. Each locking bolt 20 is rigidly fixed to its lever 32, being provided with a pin 33 which passes through its lever and is secured in position by nuts 34. Each lever 32 is fulcrumed on a support 35 and is provided with a cam slot 36. A slide 37 is guided in the support 35 and is provided with pins 38 which extend into the cam slots 36 to actuate the levers 32. The slide 37 is connected by a link 38 with a lever 39 which is connected with and forms a part of the coin retainer 40 into which the coins inserted into the machine pass from the coin chute 41. The coin retainer when released moves towards the right of its position seen in Figure 1, due to the action of a spring, and it is reset by means of a lever 42 which is in the path of the cam 22.

Each door 2 has springs 43 secured to it, see Figure 1, which tend to retain the door in its partially opened position after it has been unlocked by the coin mechanism.

The operation of the vending drum will now be clear to those skilled in this art and is as follows:

It will be understood that the vending drum having the compartments in which is contained the articles to be vended is rotatably mounted and is provided with an

opening to each compartment which forms a combined vending and filling opening.

Assuming that the drum is in its vending position, each door of a coin mechanism is in a closed and locked position. If the intending purchaser places a coin of the proper denomination in the coin chute 4, such coin passes to the coin retainer 40, and upon the partial turning of the handle 44, the coin retainer 40 is released so that it moves toward the right of its position see in Figure 1. In so doing, it exerts a pull on the link 38 thereby actuating the slide 37 in a position to rock the levers 32 and cause the locking plungers 20 to become disengaged from the walls of the opening 31 in the bottom of a door 2. The purchaser can now open the door 2 and remove from its article compartment, the article which he has purchased.

When the attendant wishes to refill the vending drum, he takes hold of the grasping handle 26 and rotates the drum 5 in a counter clockwise direction. If the door 2 is not sufficiently closed, the stop portion 19 of the cam 18 will prevent the rotation of the drum so that unless the door is sufficiently closed to prevent any one inserting his hand between the door and its door casing, the vending drum cannot be rotated.

When the doors 2 are sufficiently closed the roller 7 rides up on the incline 21, and engages the outer periphery of the cam 18 so that the door is forced into its locking position, and as soon as the cam 22 engages the roller carried by the lever 42, the lever 39 operatively connected with it is rocked, thereby actuating the slide 37 to move the plungers 20 to locking position and effecting the locking of all of the doors to the compartments.

When the vending drum is in its vending position, the cam 22 engages the lever 42 and moves it outwardly so that a stop member 44 which extends into the coin chute can be moved outwardly of such chute to permit the coin to pass freely therethrough in a similar manner to that described and broadly claimed in my co-pending application for coin controlled vending machines.

The stop 29 cooperates with fixed portions of the framework so that when the drum is rotated in one direction it will stop in its vending position and when rotated in a reverse direction it will stop in its non-vending position and in a position for replenishing the compartments with articles to be vended.

It will now be apparent that I have devised a new and useful vending drum for coin controlled vending machines which embodies the features of advantage enumerated as desirable in the statement of the invention and the above description, and while I have, in the present instance, shown and described a preferred embodiment thereof which will give in practice satisfactory and reliable results, it is to be understood, however, that

this embodiment is susceptible of modification in various particulars without departing from the spirit or 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. A rotatably mounted vending drum for coin controlled vending machines having super-imposed article receiving compartments, said drum having a second opening in proximity to each compartment provided with a bottom bar extending below the top of the juxtaposed compartment, and a door for each compartment controlling access thereto and adapted to move into a second opening and have its opening movement limited by the bar thereof.

2. A rotatably mounted vending drum having super-imposed article receiving compartments, a hinged door controlling access to each compartment when the drum is in vending position, said drum being adapted to limit the opening of said doors, and a cam on said drum for each door to effect its closing and provided with a stop portion to prevent the rotation of the drum if the doors are not sufficiently closed.

3. A rotatable vending drum for coin controlling vending machines, comprising top and bottom members, a front member secured thereto, a cover connected to said front member and contributing therewith to form super-imposed article receiving compartments, said front member having openings into said compartments forming combined delivery and replenishing openings therefor upon the proper rotation of the drum, a door closing member on said drum in proximity to each opening, and a mechanism resetting cam on said drum in proximity to each opening.

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