

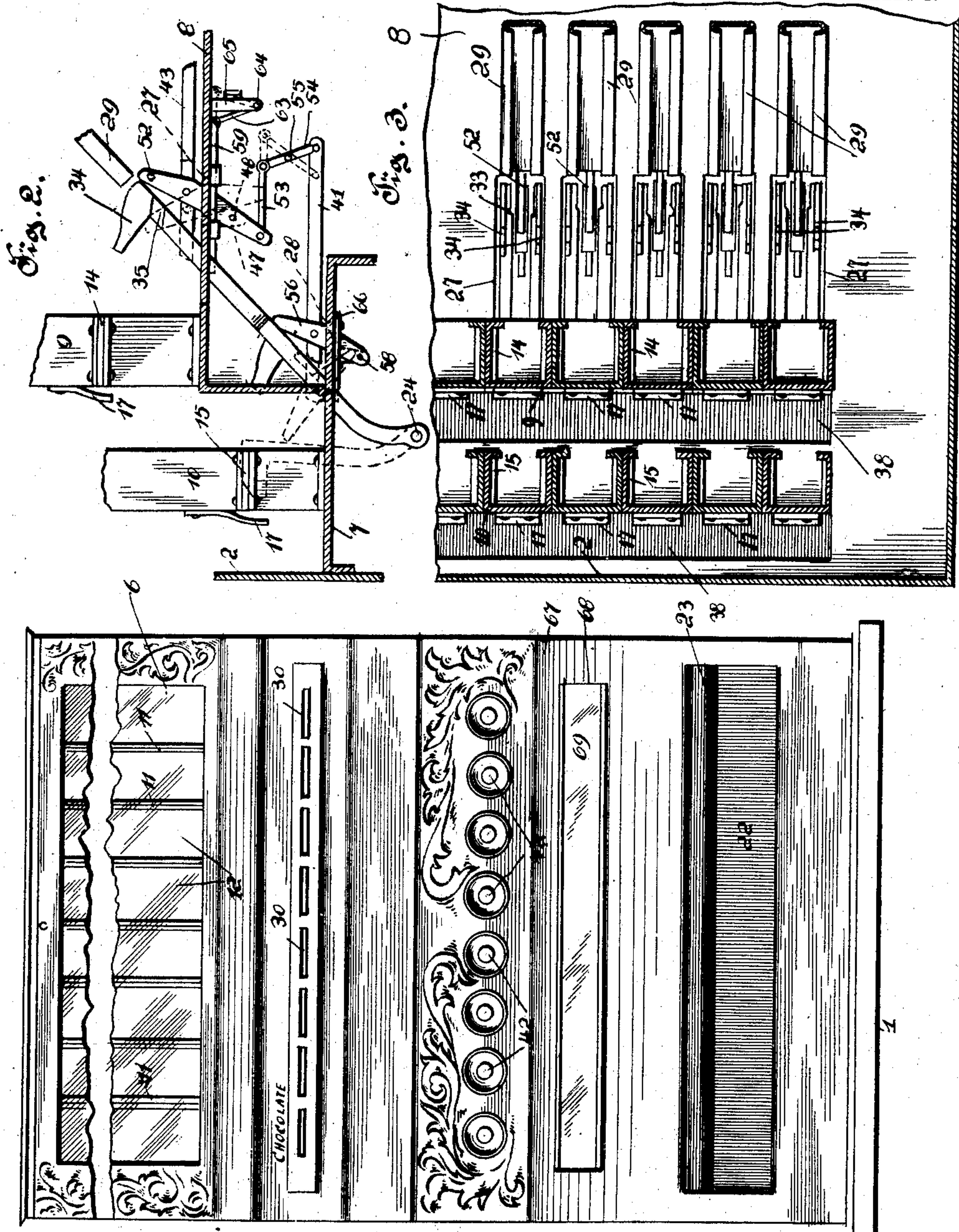
No. 865,275.

PATENTED SEPT. 8, 1907.

E. L. SONS, C. A. FOGEL & A. C. MCCOY.  
VENDING MACHINE.

APPLICATION FILED APR. 6, 1906. RENEWED JULY 22, 1907.

3 SHEETS—SHEET 1.



Witnesses:  
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Fig. 1.

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Alfred C. McCoy.

by *[Signature]*  
Attorneys.



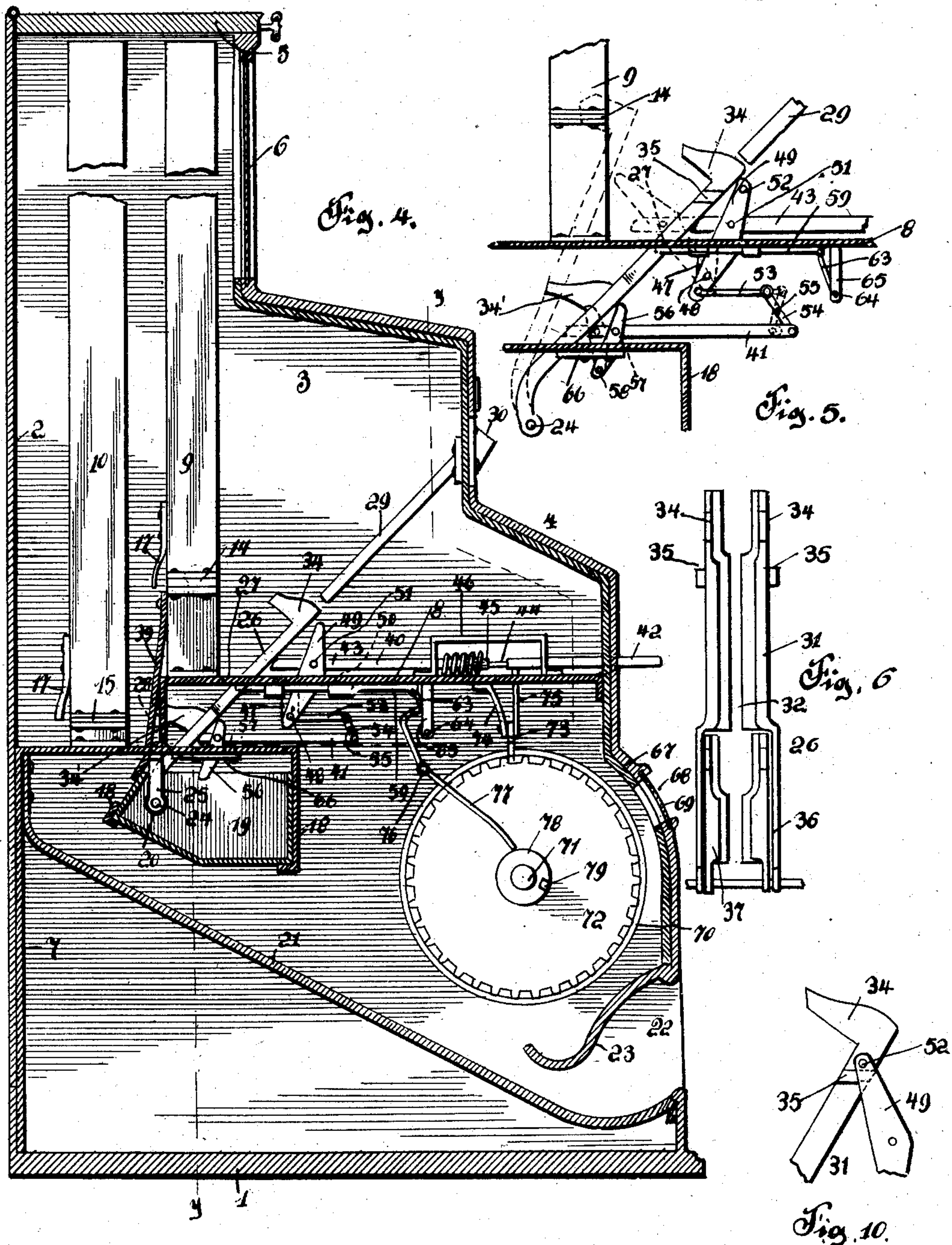
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PATENTED SEPT. 3, 1907.

E. L. SONS, C. A. FOGEL & A. C. McCOY.  
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APPLICATION FILED APR. 6, 1906. RENEWED JULY 22, 1907.

3 SHEETS—SHEET 2.



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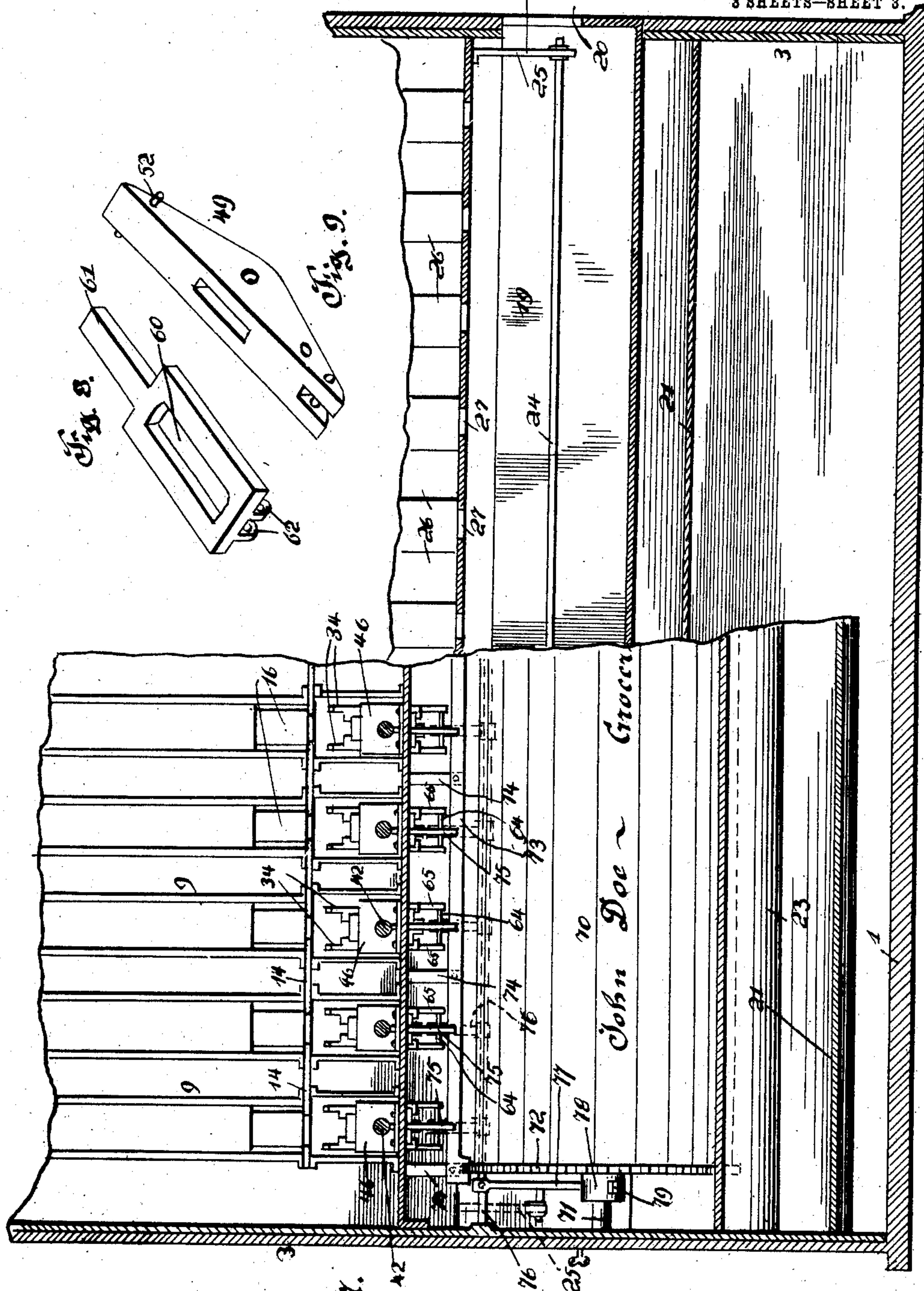
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3 SHEETS—SHEET 3.



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Fig. 1.

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# UNITED STATES PATENT OFFICE.

ERNEST L. SONS, CLIFFORD A. FOGEL, AND ALFRED C. MCCOY, OF PITTSBURG,  
PENNSYLVANIA.

## VENDING-MACHINE.

No. 865,275.

Specification of Letters Patent.

Patented Sept. 3, 1907.

Application filed April 6, 1906, Serial No. 310,383. Renewed July 22, 1907. Serial No. 384,919.

*To all whom it may concern:*

Be it known that we, ERNEST L. SONS, CLIFFORD A. FOGEL, and ALFRED C. MCCOY, citizens of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Vending-Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to certain new and useful improvements in coin controlled machines, and the invention relates more particularly to that type of machine commonly known as a "slot machine", wherein articles of merchandise are vended by depositing a coin  
15 within a machine.

Our invention aims to provide a novel and attractive vending machine for delivering articles of merchandise as chewing gum, by a coin being deposited within a machine containing the chewing gum. In this connection,  
20 our improved machine is particularly adapted for grocers, druggists and similar merchants, for vending chewing gum, the machine being placed in a conspicuous place, where its attractiveness will tend to draw the attention of the merchant's customers. To this end, we  
25 have devised a machine wherein novel means is employed for awarding prizes at predetermined times, the prizes being in the form of a quantity of chewing gum having thereon a wrapper bearing a trading stamp or similar certificate, either good for trade in the store in  
30 which the machine is used or having a valuation equivalent to or even more than the coin deposited in the machine.

The invention further aims to provide a simple and inexpensive machine having an easily manipulated  
35 coin controlling mechanism, also an advertising medium, which will display an advertisement each and every time the machine is operated.

In constructing our improved machine, we aim to provide a neat and attractive machine which will add  
40 to and enhance the general appearance of a store in which it is placed, and by the awarding of prizes by the machine we aim to increase the patronage and custom of the store.

. With the above and other objects in view, which will  
45 more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts to be hereinafter more fully described and claimed, and referring to the drawing accompanying this application,  
50 like numerals of reference designate corresponding parts throughout the several views, in which:—

Figure 1 is a front elevation of our improved machine, partly broken away, Fig. 2 is a detail sectional view of the machine, illustrating the coin controlling mechanism thereof in side elevation, also one position assumed

by said mechanism, Fig. 3 is a fragmentary horizontal sectional view of the machine, Fig. 4 is a vertical sectional view of the machine, illustrating the mechanism or contents thereof in side elevation, Fig. 5 is a detail sectional view of the machine, illustrating the coin controlling mechanism thereof in side elevation, Fig. 6 is a detached detail view of a coin carrying lever, Fig. 7 is a vertical sectional view of the machine, taken on the line  $y-y$  of Fig. 4, illustrating a portion of the advertising medium thereof in side elevation. Fig. 8 is a detail perspective view of a coin supporting slide, Fig. 9 is a detail perspective view of a lever actuating arm, Fig. 10 is a detail view of a portion of the coin controlling mechanism.

To put our invention into practice, we construct our improved machine of a casing comprising a base 1, a rear wall 2, end walls 3, 3, a stepped front wall 4, and a hinged top or cover 5. The casing is preferably constructed of metal or a similar material and the front wall 4 thereof is suitably ornamented or embossed and provided with a window or transparent plate 6, through which a portion of the articles to be vended are displayed.

The rear wall 2 of the casing is provided with a bracket 7, which, together with the front wall 4, supports a horizontal partition 8. The partition 8 and the bracket 7 support vertically disposed casings 9 and 10 respectively, said casings being vertically partitioned, as at 11 to form a plurality of compartments or chutes for pieces of merchandise 12, as chewing gum. For  
85 clearness of description, we will hereinafter consider the machine as particularly adapted for vending chewing gum, but I desire it to be distinctly understood, that the machine may be readily used for other merchandise, which can be vended in small quantities in a machine  
90 of this type.

The casings 9 and 10 near their lower ends are subdivided by slotted horizontal partitions 14 and 15, these partitions being adapted to support the pieces of chewing gum piled one above the other within the casings 9  
95 and 10. The rear wall of each casing directly above the slotted partitions 14 and 15 are provided with openings 16 and directly above said openings are mounted depending resilient arms 17, 17, the object of which will be presently described.

The horizontal partition 8 and the bracket 7 extends transversely of the casing of the machine, and the bracket 7 is provided with depending flanged frames 18, 18 to support a drawer or box 19 within the machine, the one end wall of said machine being provided with a  
105 suitable hinged door (not shown), whereby the drawer 19 may be removed at any desired time. The drawer which has its end walls cut away, as at 20, 20, is employed for collecting the coins deposited within the machine, said coins being employed in connection with the  
110



coin controlling mechanism for delivering pieces of chewing gum upon an inclined transverse plate 21 mounted between the rear wall 2, and the front wall of the machine, said plate being adapted to convey the  
 5 pieces of chewing gum to an opening 22 formed in the lower part of the front wall 4, said opening being guarded by a curved plate 23.

The coin controlling mechanism consists of a transverse rod 24 mounted in brackets 25, 25 within the  
 10 drawer 19, and upon said rod is pivoted a plurality of coin carrying levers 26, said levers extending upwardly through slots 27 and 28 formed in the partition 8 and the bracket 7 respectively. The coin carrying levers are normally retained in an inclined position and alining  
 15 with said levers is a plurality of angularly disposed coin chutes 29, said chutes being carried by the front wall 4 and registering with a plurality of slots 30 formed in said front wall, a slot, coin chute and coin carrying lever being used for each one of the compartments of the cas-  
 20 ings 9 and 10, and said slots being designated or marked according to the flavor of chewing gum carried within the compartments of the casings 9 and 10.

Each coin carrying lever comprises a body portion 31 which is slotted as at 32 and provided with side grooves  
 25 33, 33 adapted to convey a coin from one of the chutes 29 to the drawer 19 of the machine. The upper end of the lever 26 is provided with outwardly extending arms 34, 34 and with shoulders 35, 35, the object of which will be presently described. The lower ends of the levers  
 30 26 are bifurcated, as at 36, to accommodate auxiliary coin carrying levers 37, similarly constructed to the coin carrying levers 26 and being pivotally mounted upon the rod 24. The coin carrying levers are made of a sufficient length, whereby when they are swung upwardly  
 35 to engage the casings 9 and 10, the arms 34, 34 of the lever 26 will enter the slotted partitions 14 and 15 of the casings 9 and 10 respectively and force a piece of chewing gum through the opening 16 of said casings, the chewing gum striking the resilient arms 17 and being  
 40 deflected downwardly upon the inclined plate 21 of the machine, the bracket 7 being cut away, as at 38, 38 to permit of the chewing gum dropping upon the plate 21, while the casing is provided with an inclined plate 39 to give the chewing gum sufficient impetus to pass over  
 45 the rear edge of the frame 18.

To move the coin carrying lever 26 and the auxiliary lever 37, we employ a main plunger 40 and an auxiliary plunger 41, the main plunger being horizontally mounted upon the partition 8 while the auxiliary  
 50 plunger is supported directly above the horizontal portion of the bracket 7. The main plunger 40 consists of two sections, a tuberos actuating section 42 and a spring held section 43. The tuberos actuating section 42 is provided with a contracted end 44 adapted  
 55 to enter the recessed end 45 of the spring held section 43, the spring portion of said section being confined within a bracket or strip 46 mounted upon the partition 8.

The partition 8 at each end thereof is provided with  
 60 a depending bracket 47 and between said bracket is mounted a rod 48, upon which is pivotally mounted a plurality of triangular-shaped lever actuating arms 49, said arms extending upwardly through slots 50 formed in the partition 8. The arms, which are equal in  
 65 number to the coin carrying levers, and the plungers

40, are pivotally connected to the spring pressed sections 43 of said plungers as at 51, whereby when the sections 42 of said plungers are pushed inwardly, the levers 49 will be carried into engagement with the coin  
 70 carrying levers 26, while the extreme ends of the sections 43 pass through the slots 32 of the levers 26, except when a coin is retained in said levers, as will be presently described. The upper ends of the levers 49 are provided with outwardly extending pins 52, said  
 75 pins being adapted to engage the shoulders 35, 35 of the levers 26 and lock said levers in their inclined position, except when a coin is properly carried by said levers.

The lower ends of the triangular arms 49 are pivotally connected by links 53 to levers 54 fulcrumed upon  
 80 a shaft 55, mounted between the end walls 3, 3 of the casing. The lower ends of the levers 54 are connected to the auxiliary plungers 41, the opposite ends of said plungers being pivotally connected to auxiliary triangular arms 56. The auxiliary arms extend through  
 85 slots 57 formed in the bracket 7 and are pivotally mounted upon a shaft 58 extending from one end of the casing to the other, said shaft being supported by the end walls, 3, 3 of the casing.

Slidably mounted upon the underneath face of the  
 90 partition 8 are a plurality of coin supporting slides 59 a slide being used for each coin carrying lever. Each slide is slotted, as at 60 to permit of the levers 49 passing therethrough, and each slide is provided with a contracted end 61 in order that the slide may enter the  
 95 slots 32 of the coin carrying levers 26. The opposite ends of the coin supporting slides are provided with depending pierced lugs 62 and between said lugs are mounted depending arms 63, the opposite ends of said arms being mounted upon a shaft 64 extending from  
 100 one end of the machine to the other and supported in brackets 65, 65. A coin supporting plate 66, similar to the slides 59 is used in connection with each one of the auxiliary coin carrying levers 37 said plates being  
 105 secured to the underneath side of the brackets 7 and extending into the slots of the auxiliary coin carrying levers 37.

A portion of the front wall 4 is curved, as at 67, and provided with an opening 68 which is covered by a  
 110 transparent plate 69. Directly in the rear of the curved portion of the front wall 4 within the casing, we mount a roll 70, said roll being journaled upon a shaft 71 journaled between the end walls 3, 3 of the machine. Upon the roll is arranged a plurality of advertisements,  
 115 said advertisements being exposed, one at a time, through the opening 68 of the casing of the machine. The roll 70 at each end thereof is provided with a toothed wheel 72, and engaging the teeth of said wheel is a bar 73, said bar being supported by a plurality of  
 120 depending resilient arms 74. Engaging the bar are a plurality of depending rods 75 carried by the tuberos section 42 of the plungers 40, a rod 75 being carried by each plunger which in the present instance are eight  
 in number.

Mounted between the end walls 3, 3 of the machine  
 125 is a shaft 76 and upon said shaft at the ends thereof are journaled arms 77. The upper ends of the arms are adapted to engage the depending arms 63 of the coin supporting slides, while the lower ends of the arms  
 130 77 are adapted to rest upon sleeves 78 fixed upon the



shaft 71 and at predetermined times engage in notches or recesses 79 formed in said sleeves.

Operation. Assuming that the first compartments of the casings 9 and 10 contain chewing gum flavored with chocolate and that a person desires to obtain a piece of the chewing gum, a coin is deposited in the slot 30 designated "chocolate". The first chute 29 will convey the coin to the first coin carrying lever, the coin sliding in the grooves 33, 33 of said lever until the coin strikes the end 61 of a coin supporting slide 59, the coin resting in this position until the machine is operated. Upon the tuberos section 42 of the first plunger 40 being forced inwardly, the roll 70 will be partially rotated, through the medium of the depending rods 75 of said plunger and the bar 73 engaging the teeth of the wheels 72 carried by said roll. The roll 70 will gradually cease rotating on account of the frictional engagement of the bar 73 when passing over the teeth of the wheel 72, also the frictional engagement of the arms 77 with the sleeves 78. When the roll 70 ceases rotation another advertisement will be displayed through the opening 68 of the machine. Simultaneous with this movement of the roll 70, the section 43 of the plunger 40 has been forced inwardly causing the end of the section 43 to strike the coin which rests upon the coin supporting slide 59. The first coin carrying lever 26 will be moved upwardly towards the casing 9 until the coin is moved off of the contracted end 61 of the coin supporting slide 59 and permitted to further move down the coin carrying lever 26. The further movement of the section 43 of the plunger 40 causes the triangular shaped lever 49 to strike the upper end of the coin carrying lever 26 and move the arms 34, 34 of said lever into engagement with the lowermost piece of chewing gum contained within the casing 9, causing the chewing gum to pass through the opening 16 in the rear of the casing and drop upon the inclined plate 21 of the machine. The weight of the lever causes the same to return to its normal position. Should the roll 70 and the shaft 71 accidentally stop with the notches 79 of the sleeves 78, 78 opposite the lower ends of the arms 77, the ends of the arms will recede into said notches. Upon another person depositing a coin within the machine and pushing upon one of the plungers 40, the next movement of the roll 70 through the medium of one of the rods 75 and the bar 73 will move the arm 77 and pull the coin supporting slide rearwardly, permitting the coin supported in the coin carrying lever 26 to move down upon the auxiliary coin carrying lever 37, this movement of the coin occurring before the lever 26 is moved. The coin will rest upon the plate 66 in the auxiliary lever 37. A further movement of the plunger 40 causes the auxiliary plunger 41 to move the auxiliary coin carrying lever 37 forward, this being accomplished through the medium of the end of the auxiliary plunger and the auxiliary lever 56. As the auxiliary coin carrying lever 37 moves forward, without the main lever 26, the coin descends into the drawer 19 and the auxiliary coin carrying lever 37 moves towards the casing 10 and the auxiliary arms 34', 34' of said auxiliary lever 37 moves a piece of chewing gum out of the casing 10, permitting it to drop upon the inclined plate 21. The spring held section 43 of the main plunger 40 returns the auxiliary plunger 41 and its appurtenant parts to

their normal position, while the coin carrying levers 26 and 37 assume their normal position by gravity.

From the foregoing description, it will be observed that one person obtaining a piece of chewing gum may fix the coin controlling mechanism of the machine whereby the next person operating the machine will obtain one piece, the pieces of gum carried in the casing 10 being awarded as a prize and in some instances, the gum contained within the casing 9 can be provided with wrappers bearing trading stamps or similar valuable certificates.

To prevent the machine from being operated without a coin, the forward movement of any one of the plungers 40 is adapted to lock the coin carrying levers 26, unless a coin is deposited within said levers. The pins 52 carried by the upper ends of the levers 49 are adapted to engage the shoulders 35 of the coin carrying levers 26, and prevent said levers from being moved upwardly. The only time when said levers can be moved upwardly is when a coin is carried by said levers, and the ends of the plungers 40 strike the coins and slightly moves the lever 26 whereby the pins 52 of the levers 49 cannot engage the shoulders 35 of the levers 36 and lock said levers from a forward movement.

What we claim and desire to secure by Letters Patent, is:—

1. In a vending machine, the combination with a suitable casing, of two casings supported within said casing and having sets of compartments formed therein, adapted to contain pieces of merchandise, levers pivotally mounted adjacent to each set of compartments and adapted to move within said compartments to force a piece of merchandise out of said compartments, spring held plungers adapted to actuate said levers, a revoluble advertising roll journaled in said casing and actuated by said plunger, means actuated at predetermined times by said roll to control the operation of some of said levers, and means to deliver said articles of merchandise after leaving their respective compartments, substantially as described.

2. In a vending machine, the combination with a suitable casing, of casings supported within said casing and having sets of compartments formed therein adapted to contain merchandise, levers mounted adjacent to each set of compartments and adapted to move therein to deliver said merchandise, plungers mounted in said casing and adapted to actuate said levers, a revoluble advertising roll mounted in said casing and actuated by said plungers, and means carried by said plungers to temporarily lock said levers in a fixed position, substantially as described.

3. In a vending machine, the combination with a casing, of two casings mounted within said casing and having sets of compartments formed therein adapted to contain merchandise, a revoluble advertising roll mounted in said casing, a plurality of plungers mounted in said casing, controlling mechanism actuated by said plungers and adapted to move said merchandise from said compartments, means actuated by said plungers to revolve said roll, and means actuated by said roll to govern said controlling mechanism, substantially as described.

4. In a vending machine, casings, said casings having sets of compartments formed therein, levers adapted to enter said compartments, plungers mounted in said casing and adapted to actuate said levers, a roll mounted in said casing and actuated by said plungers, and controlling mechanism actuated by said plungers, and governed by said roll, substantially as described.

5. A vending machine consisting of casings having sets of compartments formed therein adapted to contain merchandise, levers adapted to move into said compartments to move said merchandise, a roll journaled in said casing and governing the movement of some of said levers, means to move the other of said levers and said roll, substantially as described.

6. In a vending machine, the combination of casings



- having compartments formed therein, an advertising roll journaled in said casing, controlling mechanism mounted in said casing, means to simultaneously revolve said roll and move the merchandise out of one of said compartments, and means governed by said roll to move the merchandise out of the other of said compartments, substantially as described.
- 5
7. A vending machine for chewing gum consisting of two casings having compartments formed therein, controlling mechanism, a revoluble roll, means to move chewing gum out of one of said casings, and means controlled
- 10

by said roll to move gum out of the other of said casings, substantially as described.

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

ERNEST L. SONS.  
CLIFFORD A. FOGEL.  
ALFRED C. MCCOY.

Witnesses:

E. E. POTTER,  
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