

June 28, 1927.

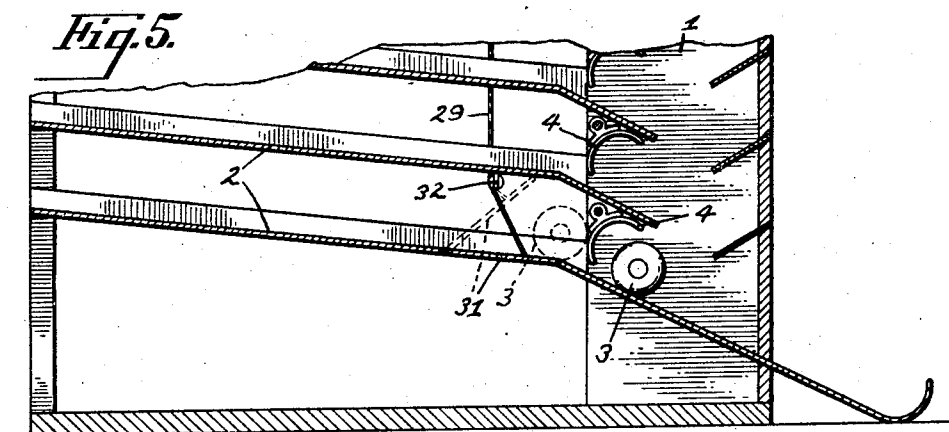
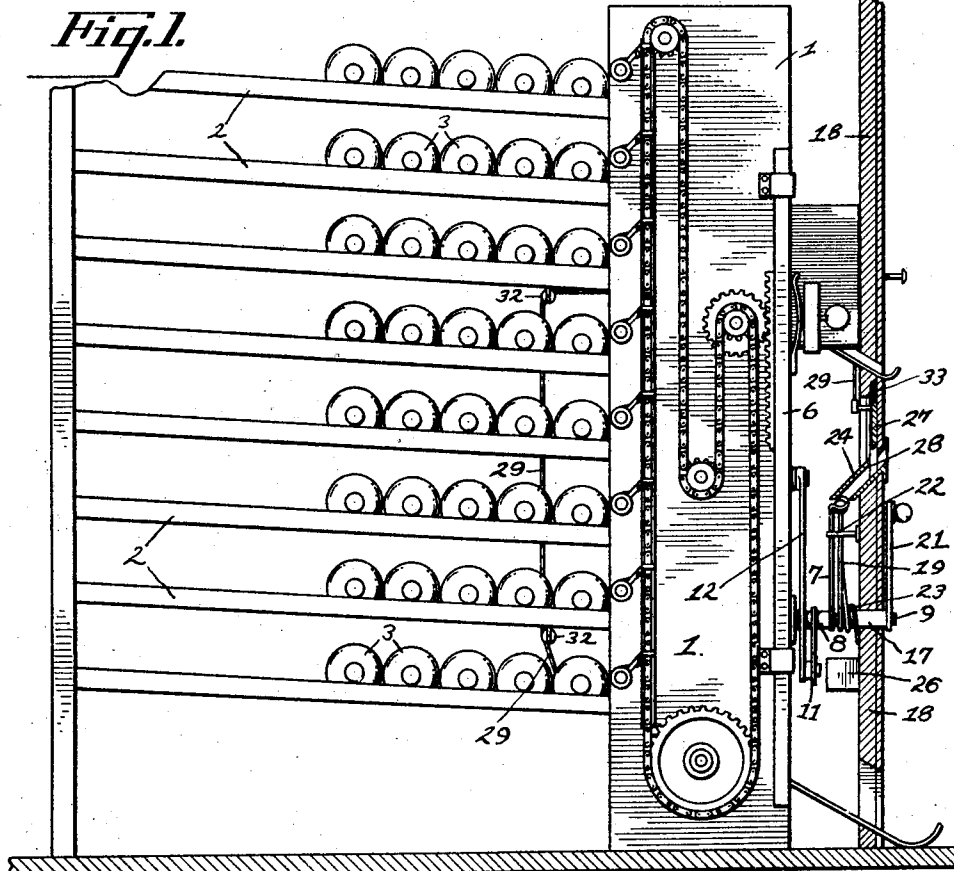
F. R. OLIVER

1,633,675

COIN CONTROLLED ACTUATING MECHANISM FOR DISPENSING MACHINES

Filed Jan. 16, 1926

2 Sheets-Sheet 1



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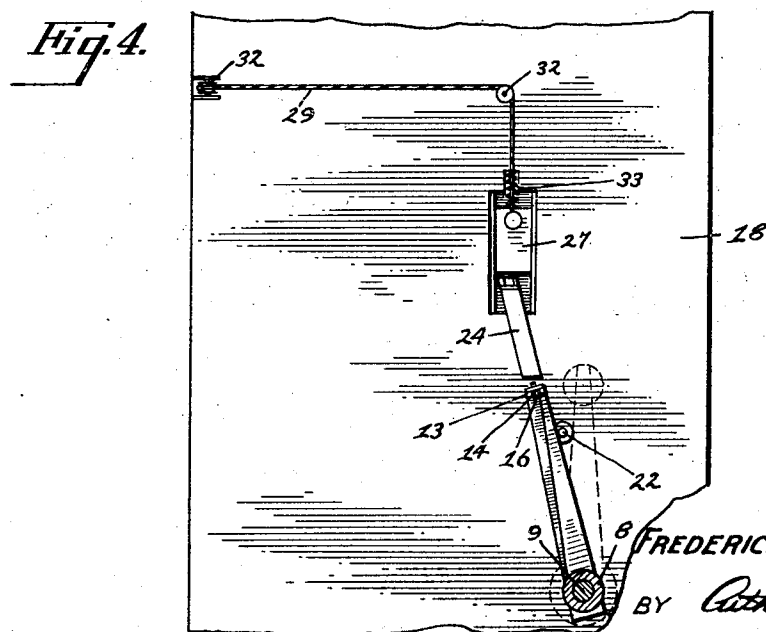
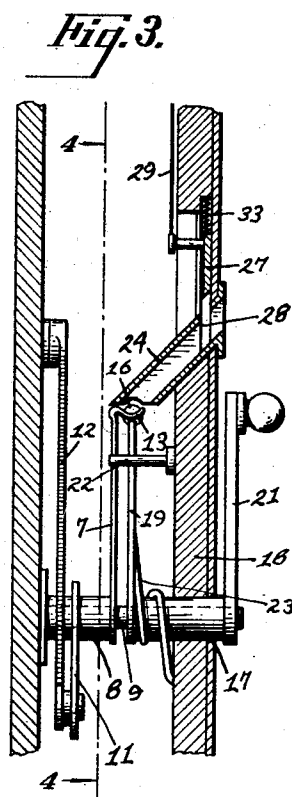
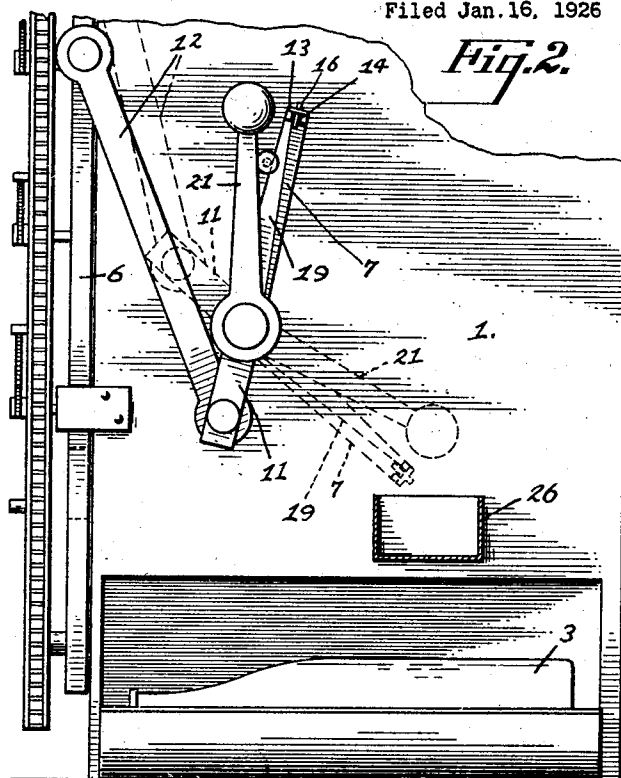
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COIN CONTROLLED ACTUATING MECHANISM FOR DISPENSING MACHINES

Filed Jan. 16, 1926

2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

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COIN-CONTROLLED ACTUATING MECHANISM FOR DISPENSING MACHINES.

Application filed January 16, 1926. Serial No. 81,682.

My invention relates to improvement in coin controlled actuating mechanism for dispensing machines whereby the dispensing mechanism may be operated only after the insertion of a coin or other token of prescribed denomination or size, and arranged to prevent the insertion of a coin after the contents of the dispensing machine have been exhausted.

The present invention particularly relates to a coin controlled actuating mechanism for beverage dispensing machines of the character disclosed in my co-pending application, Serial Number 47,875, filed August 3, 1925, wherein I have disclosed an improved dispensing mechanism for dispensing beverages or the like contained in bottles or other suitable containers.

The primary object of my present invention is to provide an improved actuating mechanism whereby the operation of such mechanism and the dispensing mechanism associated therewith may be made fully dependent upon the insertion of a coin to form an operating connection.

Another object of my invention is to provide an improved mechanism which will be positive in its action and which will transmit a relatively large amount of power adequate to efficiently operate a dispensing mechanism for dispensing relatively large and heavy articles.

A further object is to provide an improved device of the character described which will be simple in construction and operation and which will be powerful and efficient.

Another important object of my invention is to provide an improved device of the character described wherein the actuating connection is made directly through the medium of a coin, and the insertion of a coin is positively prevented after the supply of articles to be dispensed has been exhausted.

I accomplish these and other objects by means of the improved device disclosed in the drawings forming a part of the present specification wherein like characters of reference are used to designate similar parts through said specification and drawings and in which,

Fig. 1 is a broken vertical section disclosing my improved actuating mechanism as applied in connection with a beverage dispensing machine.

Fig. 2 is a broken front elevation of the actuating mechanism, the figure being drawn upon a somewhat larger scale.

Fig. 3 is a vertical section showing in side elevation the actuating mechanism as shown in Fig. 2.

Fig. 4 is a broken vertical section taken upon the line 4-4 of Fig. 3 in the direction indicated.

Fig. 5 is a broken sectional view showing how the dispensing of the last article from the container releases the coin shutter.

Referring to the drawings the numeral 1 is used to designate in general a dispensing machine of the character disclosed in my co-pending application above referred to and consisting in general of a plurality of inclined shelves 2 arranged to support a plurality of containers 3 for beverages or the like. Dispensing shutters 4 are mounted across the lower end of each shelf 2 to normally retain the containers 3 upon said shelves, said shutters being operated successively to dispense containers singly from successive shelves in the manner fully disclosed and explained in the above mentioned co-pending application.

The shutters 4 are actuated by suitable connections driven from a slidably movable rack 6 or other suitable actuating member whereby a positive driving force may be imparted.

The operation of the slidable rack or driving member 6 is made dependent for its operation upon the insertion of a coin, or other token, into engagement with my improved actuating mechanism which consists of a coin receiving arm 7 secured upon a sleeve 8 pivotally mounted upon a shaft 9 mounted in front of the dispensing mechanism as best shown in Figs. 1 and 3 of the drawings. An arm 11 is secured in connection with the sleeve 8, and a link 12 is pivotally connected between the arm 11 and the rack 6 whereby a pivotal movement of the arms 7 and 11 will impart a reciprocating movement to the rack.

The coin receiving arm 7 has a lateral extension 13 formed upon the outer end thereof, said extension having a slot 14 formed therein arranged to receive and retain a coin or other token 16 of predetermined size. The length of the slot 14 is made such that the coin 16 will be prevented from passing entirely through the slot and at the same

time permit the edge of the coin to protrude through said slot below the lowermost point of the extension.

A second sleeve 17 is pivotally mounted upon the shaft 9 adjacent the sleeve 8 and arm 7, said sleeve extending outwardly through the front wall 18 of the machine. The sleeve 17 is provided upon its inner end with a pointed lever 19 adjacent the arm 7 and arranged to be movable past said arm 7 and under the extension 13 at a point opposite the center of the coin slot 14. An operating handle 21 is secured upon the sleeve 17 just outside the wall 18.

A pin 22 is secured upon the inner side of the wall 18 and arranged to extend past both the arm 7 and the lever 19 to form a stop defining the normal position of both of said members. A spring 23 is mounted in connection with the lever 19 to normally hold said lever 19, and the sleeve 17 and handle 21 connected therewith, in normal position.

A chute 24 is mounted upon the wall 18 and arranged to open upon the outer side thereof to form a slot for the insertion of coins, said chute extending inwardly and downwardly to direct coins into the slot 14 formed in the coin receiving arm 7, the opening at the lower end of the chute being directly opposite the slot 14 so that the coin will be delivered directly into operative position in said slot.

In operation, a coin 16, inserted into the outer open end of the chute 24, rolls downwardly through the chute and is received and held in operative position in the slot 14. When now the handle 21 is turned from the position shown in full lines to the position shown in dotted lines in Fig. 2 of the drawings, the lever 19 will be moved against the coin by the first movement of the handle, and the further movement will cause the lever 19 and the arm 7 to be carried together to the position indicated in dotted lines by virtue of the connection effected through the coin 16. As the arm 7 is moved, the lever 11 and link 12 are moved a corresponding amount as shown in Fig. 2 of the drawings, thereby moving the member 6 and causing the dispensing mechanism of the machine 1 to be operated and a container or other article 3 to be dispensed. The degree of movement is such that at the end of the movement when the article has been dispensed the lever 19 and arm 7 will be disposed in a downwardly direction. When now the pressure is released upon the handle 21 the coin 16 will drop out of engagement with the slot 14 and into a suitable receiver 26. When the handle is released the lever 19 is returned to its normal position against the stop 22 with the point of the lever just back of the normal position of the slot 14. At the same time,

the arm 7 is moved back to normal position ready for operation after the insertion of another coin 16. In the type of mechanism illustrated, the weight and arrangement of the elements is such that the arm 7 and the elements actuated thereby are returned to normal position by gravity. A positive mechanical actuating means may be provided however if desired.

In order to protect persons patronizing the machine from loss due to the insertion of coins after the supply of articles 3 has been exhausted, I provide a shutter 27 slidably mounted upon the inner side of the wall 18 adjacent the chute 24, said shutter being movable downwardly into a slot 28 formed transversely to the chute to fully close the opening therein and thereby prevent the insertion of a coin. The shutter is normally held in raised or open position by means of a connection 29 connected between said shutter and a pivotally movable platform 31 mounted in connection with the lowermost shelf 2 of the dispensing machine. The platform 31 is normally held in depressed position by the weight of a container or other article 3 resting thereon, the platform being of sufficient length to insure the movement of successive containers 3 thereunto before each preceding container is dispensed. When the last container 3 is dispensed from the shelf 2, the platform is raised thereby permitting the shutter 27 to move downwardly to close the chute 24. In the preferred construction illustrated, the connection 29 consists of a flexible cord or cable extending over suitable pulleys 32 between the shutter 27 and the platform 31. When the platform is held down in its normal position the connection will be moved to raise the shutter 27 against the pressure of a light spring 33 mounted above said shutter and in engagement therewith. When the platform is released the cord or cable 29 will be slacked off, thereby permitting the shutter to be moved downwardly by the combined force of gravity and the spring 33, in this manner effectually preventing the insertion of a coin into the chute 24 until the machine has again been filled and the weight of a container 3 again applied upon the platform 31 to raise the shutter 27.

While I have illustrated and described what I consider to be the preferred construction and application of my invention, the device is of course subject to modification in various ways without departing from the spirit of my invention. I therefore do not wish to restrict myself to the specific details of construction disclosed, but desire to avail myself of all modifications which may fall within the scope of the appended claims.

Having thus described my invention what

I claim as new and desire to secure by Letters Patent is:

1. A coin controlled operating mechanism for dispensing machines comprising a pivotally movable arm provided with an arcuate downward lateral extension formed upon the outer end thereof and having a slot formed longitudinally therein to receive and normally retain a coin, the arcuate sides of the slots being arranged to engage the adjacent faces of the coin to hold said coin against pivotal movement within the slot; a lever pivotally mounted upon an axis in common with the arm, said lever being normally movable past the extension and arranged to engage a coin held in the slot of said extension; and means for pivotally moving the lever to engage the coin and thereby move the arm to operate the dispensing mechanism.

2. A coin controlled operating mechanism for dispensing machines comprising a shaft; a sleeve pivotally mounted upon the shaft; an arm secured upon the sleeve and provided with an arcuate downward lateral extension longitudinally slotted to receive and normally retain a coin; a second arm secured to the sleeve and arranged to be connected to the dispensing mechanism whereby a pivotal movement of the arm will operate said dispensing mechanism to dispense an article therefrom; a second sleeve mounted upon the shaft adjacent the first mentioned sleeve; a lever secured upon the second sleeve adjacent the coin receiving arm and arranged to be normally movable past the extension thereon, said lever being arranged to engage a coin held in the slot of said extension whereby the arm may be moved to operate the dispensing mechanism; and means connected to the second sleeve for moving the lever to engage the coin and thereby move the arm to operate the dispensing mechanism.

3. A coin controlled operating mechanism for dispensing machines comprising a shaft; a sleeve pivotally mounted upon the shaft; an arm secured upon the sleeve and provided with an arcuate downward lateral extension longitudinally slotted to receive and normally retain a coin; a second arm secured to the sleeve and arranged to be connected to the dispensing mechanism whereby a pivotal movement of the arm will op-

erate said dispensing mechanism to dispense an article therefrom; a second sleeve mounted upon the shaft adjacent the first mentioned sleeve; a lever secured upon the second sleeve adjacent the coin receiving arm and arranged to be normally movable past the extension thereon, said lever being arranged to engage a coin held in the slot of said extension whereby the arm may be moved to operate the dispensing mechanism; and means connected to the second sleeve for moving the lever to engage the coin and thereby move the arm to operate the dispensing mechanism; said arm and lever being movable to a downwardly disposed position whereby the coin may drop out of engagement with the slotted extension of the arm when an article has been dispensed.

4. A coin controlled operating mechanism for dispensing machines comprising a shaft; a sleeve pivotally mounted upon the shaft; an arm secured upon the sleeve and provided with an arcuate lateral extension slotted to receive and normally retain a coin; a second arm secured to the sleeve and arranged to be connected to the dispensing mechanism whereby a pivotal movement of the arm will operate said dispensing mechanism to dispense an article therefrom; a second sleeve mounted upon the shaft adjacent the first mentioned sleeve and extending outwardly through the front of the machine; a lever secured upon the second sleeve adjacent the coin receiving arm and arranged to be normally movable past the lower side of the extension thereon, said lever being arranged to engage the edge coin protruding through the slot of said extension whereby the arm may be moved to operate the dispensing mechanism; and a lever connected to the second outwardly extending end of the sleeve for moving the lever to engage the coin and thereby move the arm to operate the dispensing mechanism; said arm and lever being movable to a downwardly disposed position whereby the coin may drop out of engagement with the slotted extension of the arm when an article has been dispensed.

In witness whereof I hereunto set my signature.

FREDERICK R. OLIVER.