Aug. 15, 1933. D. T. HAILS 1,922,915

MULTIPLE COIN VENDING MACHINE

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Fig. 1

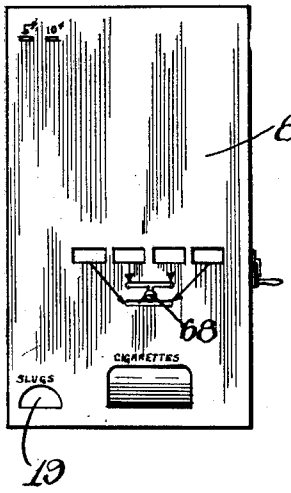


Fig. 2

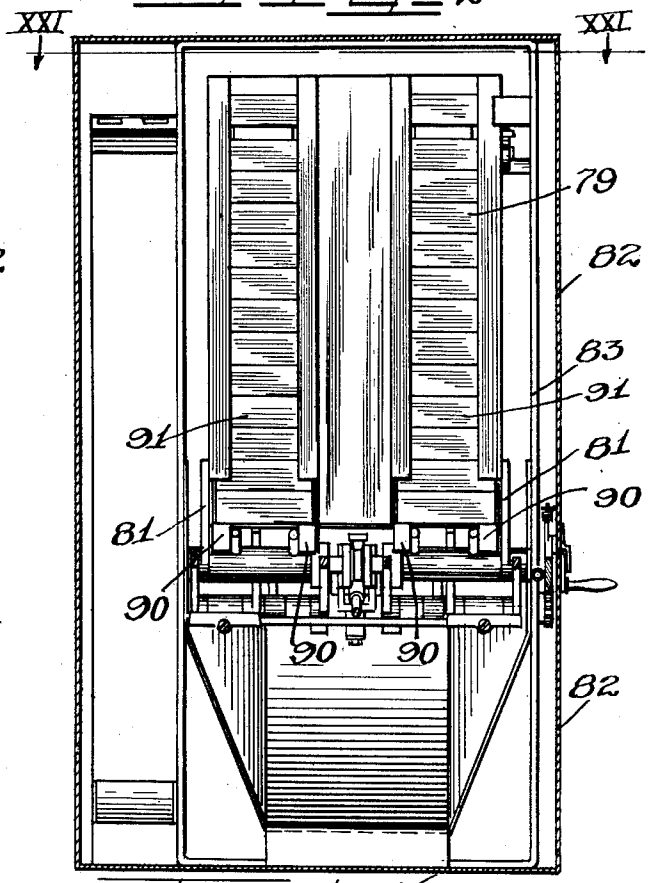


Fig. 3

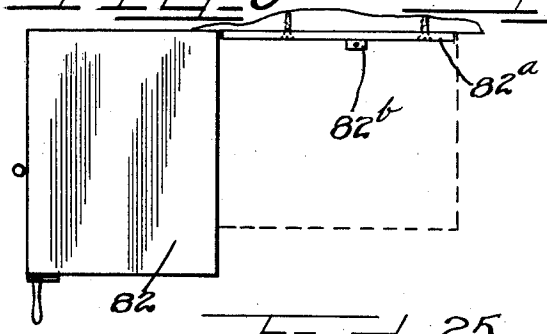


Fig. 4

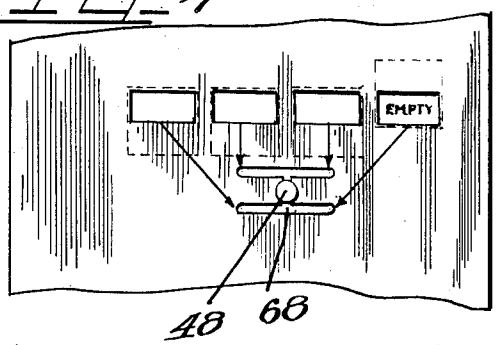
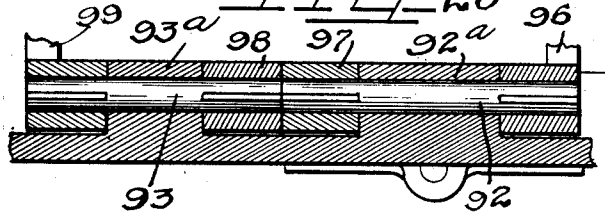


Fig. 25



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Fig. 5

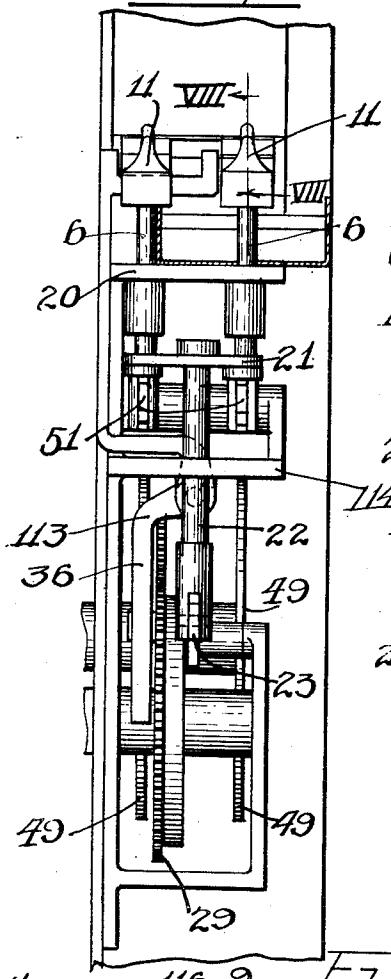


Fig. 6

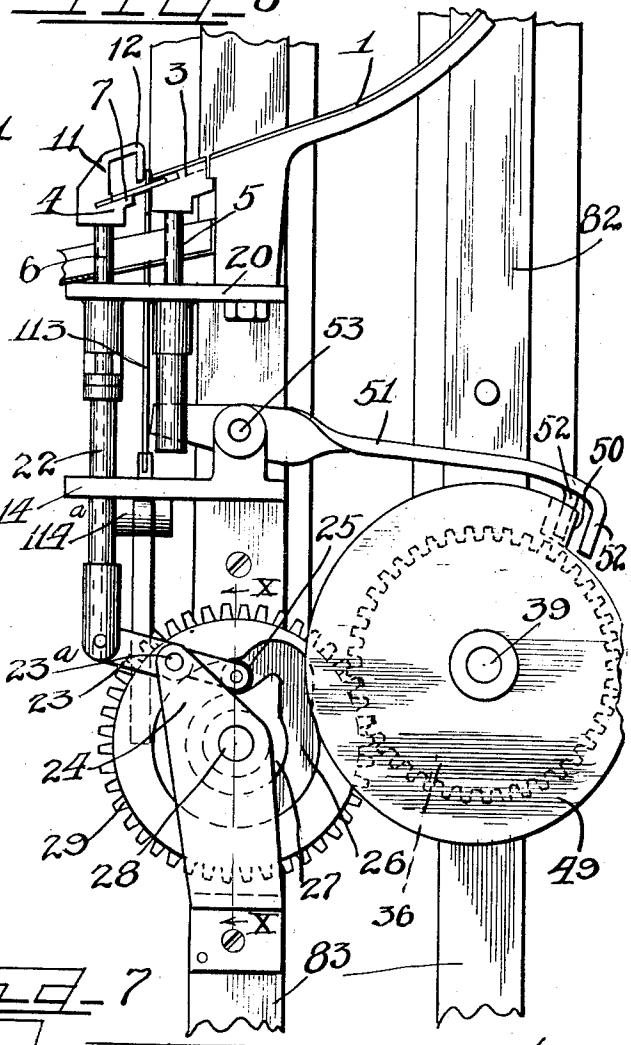


Fig. 7

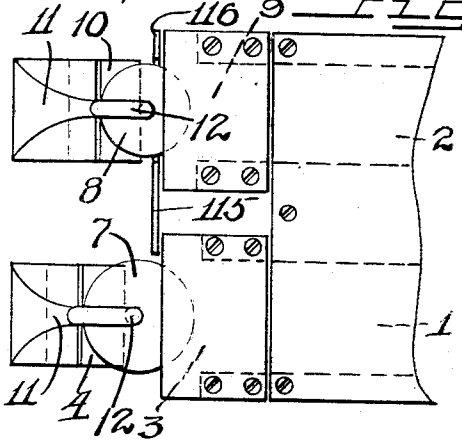
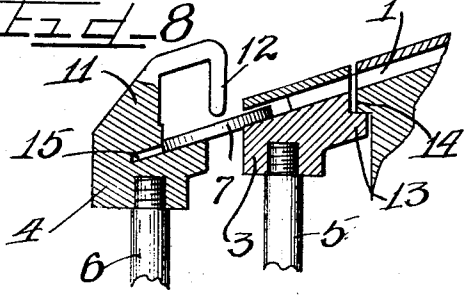


Fig. 8



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MULTIPLE COIN VENDING MACHINE

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Fig. 9

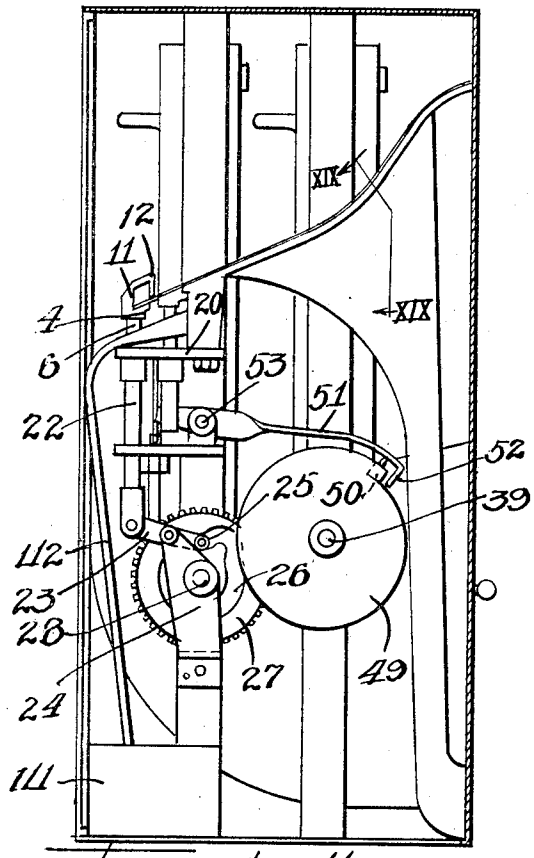


Fig. 10

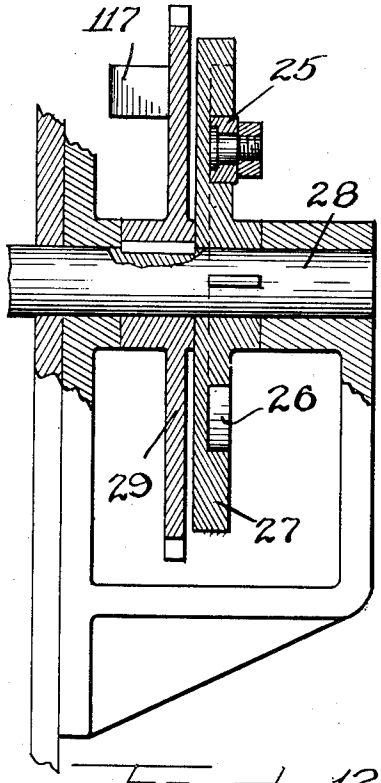


Fig. 12

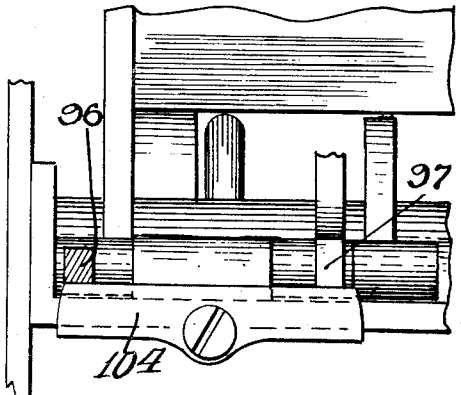
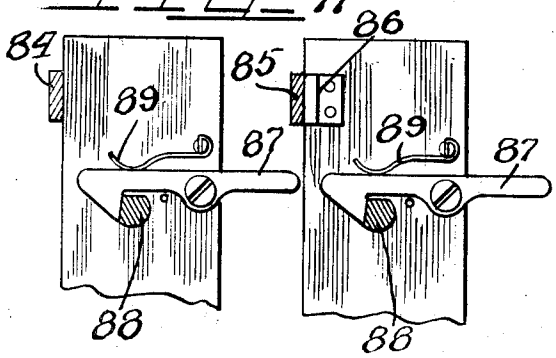


Fig. 11



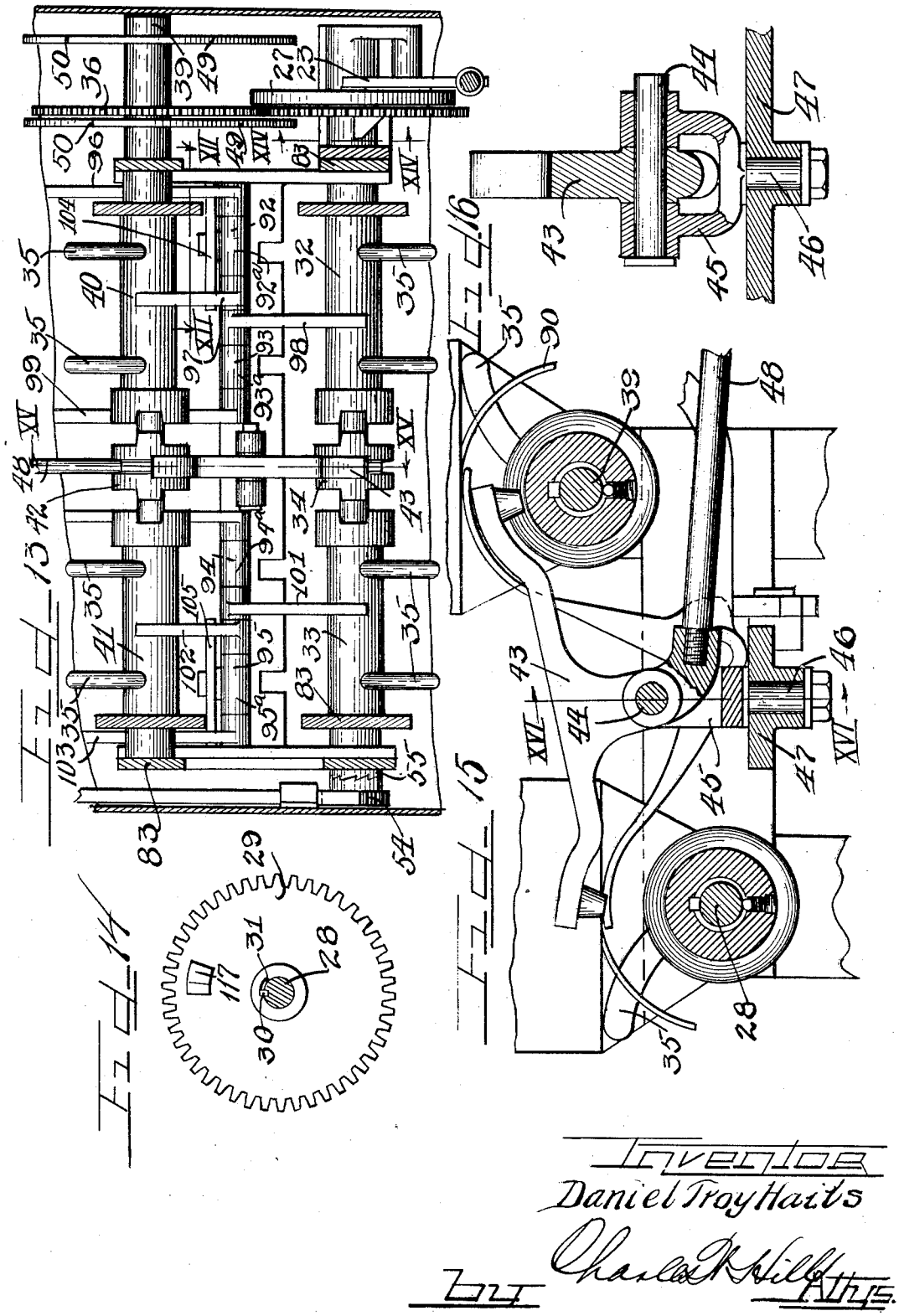
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MULTIPLE COIN VENDING MACHINE

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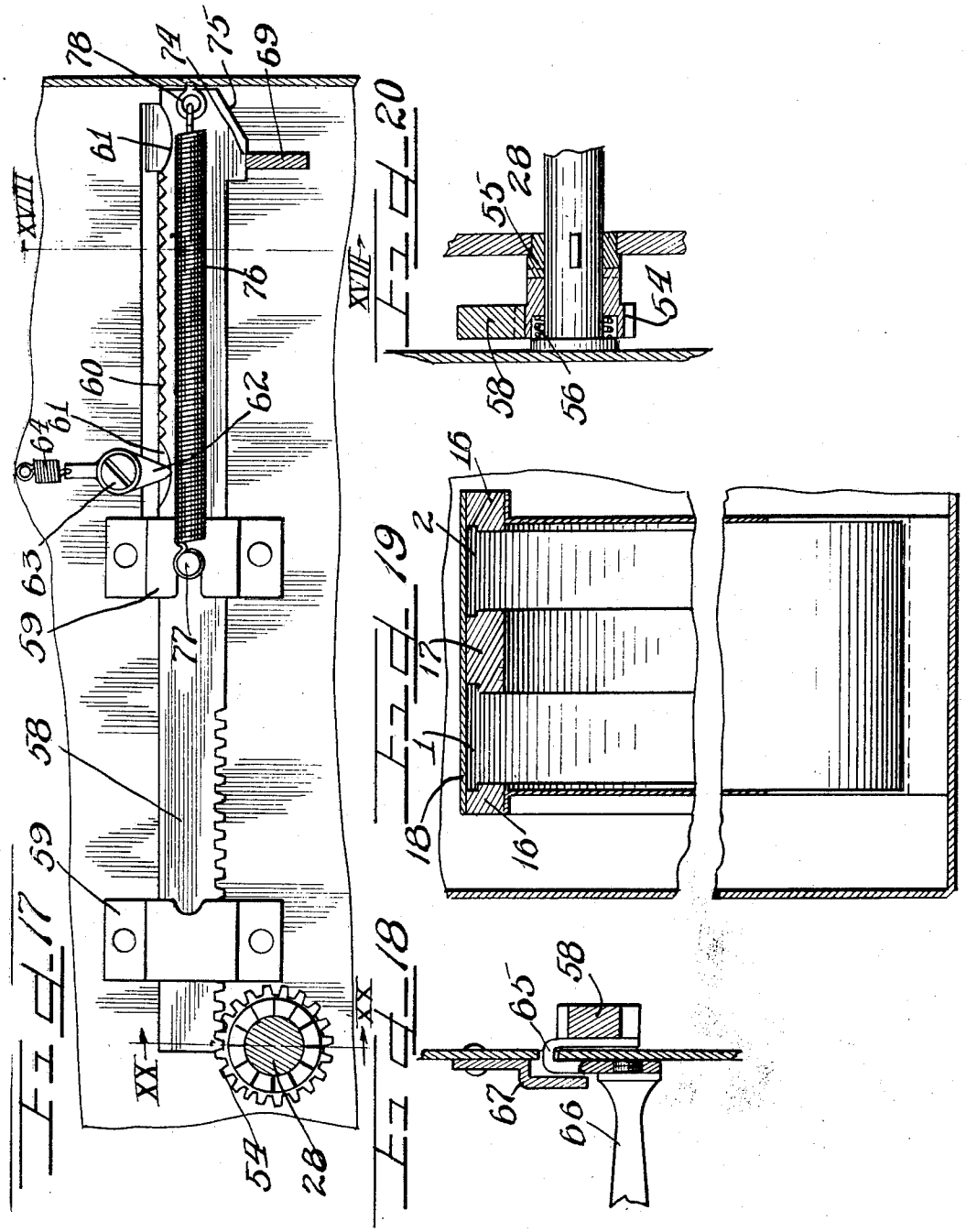


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MULTIPLE COIN VENDING MACHINE

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MULTIPLE COIN VENDING MACHINE

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Fig. 21

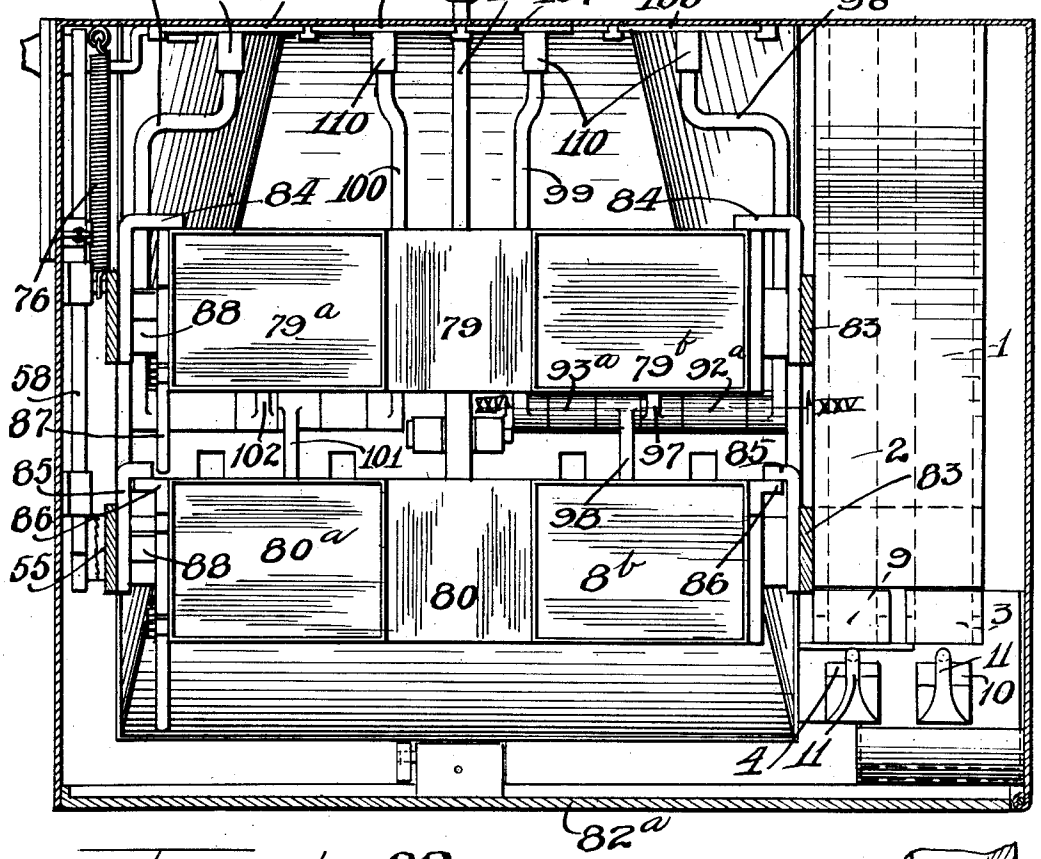
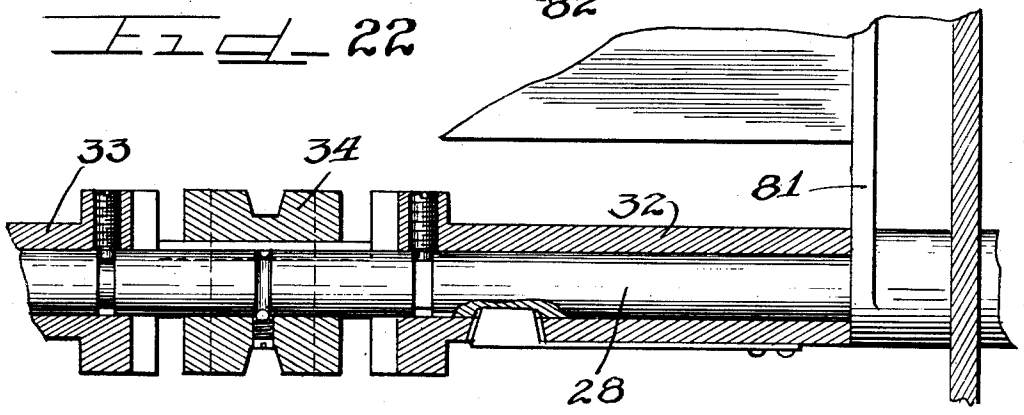


Fig. 22



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MULTIPLE COIN VENDING MACHINE

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Fig. 23

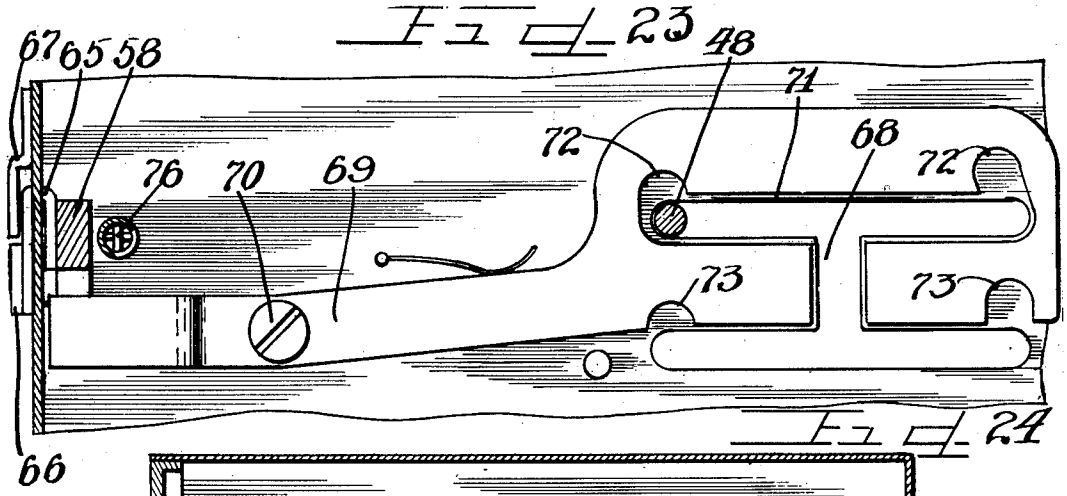
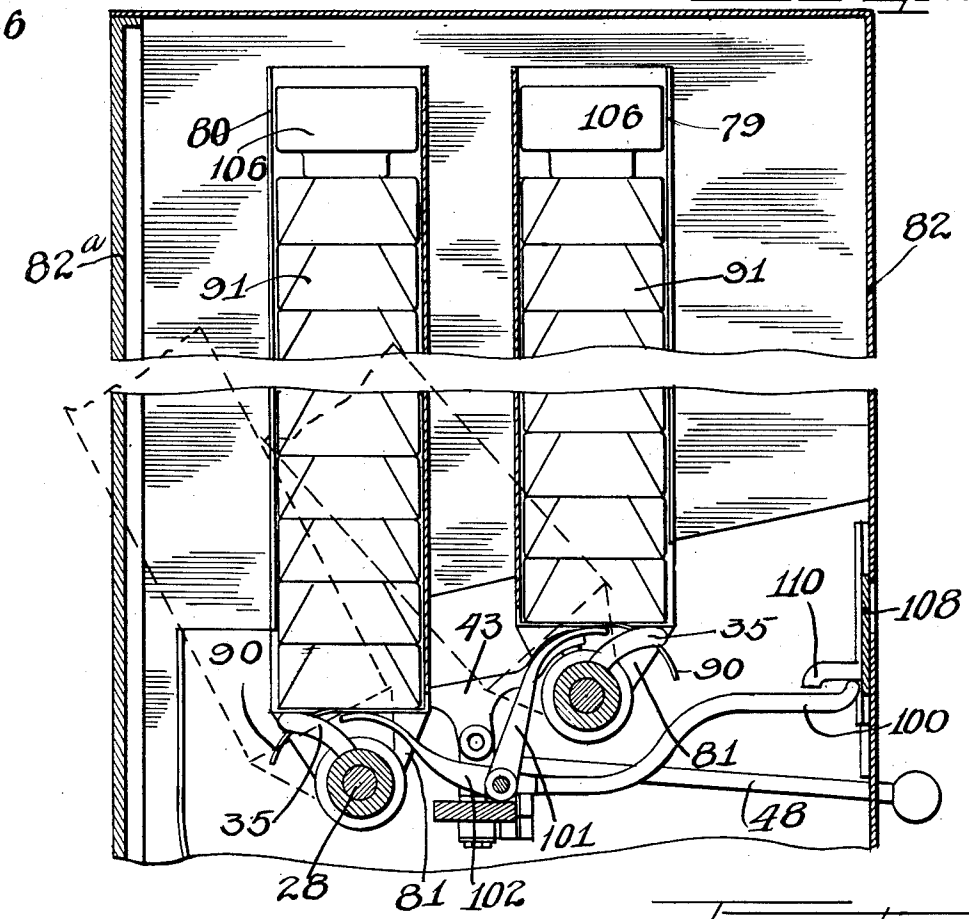


Fig. 24



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Patented Aug. 15, 1933 1,922,915

UNITED STATES PATENT OFFICE

1,922,915

MULTIPLE COIN VENDING MACHINE

Daniel Troy Hails, Coral Gables, Fla.

Application January 21, 1929. Serial No. 333,771

8 Claims. (Cl. 194—57)

This invention relates to a multiple coin controlled vending machine.

It is an object of this invention to provide a vending machine which cannot be set in operation unless the required number of proper coins of the proper denomination have been inserted.

It is a further object of this invention to provide such a machine in which slugs or tokens or coins of improper denomination are returned to the purchaser.

It is a further object of this invention to provide a vending machine which can dispense a plurality of different articles together with mechanism to be operated by the purchaser for obtaining the desired article.

It is a further object of this invention to provide such a vending machine with proper safeguards to prevent only partial operation thereof, with the result that after the proper amount of coins have been inserted, the machine must be completely operated and effect a delivery before it can be reset for a second delivery.

It is also an object of this invention to provide means for indicating the exhaustion of an article that is carried by the machine for dispensing purposes, and in connection with this, the machine embodies novelty in the manner of replenishing the magazine with the article in a very efficient and speedy manner.

With these and other objects in view, which will become more apparent in the following description and disclosures, this invention comprises the novel structure and combination of parts hereinafter described and more particularly pointed out and defined in the appended claims.

In the accompanying drawings, which illustrate a preferred embodiment of this invention, and in which similar reference numerals refer to similar features in the different views;

Figure 1 is a front elevational view of a vending machine involving this invention.

Figure 2 is an enlarged vertical sectional view through the machine.

Figure 3 is an elevational view illustrating the manner of supporting the vending machine.

Figure 4 is a fragmentary elevational view illustrating certain features.

Figure 5 is a fragmentary enlarged elevational view of a part of the machine illustrating the operating mechanism therefor.

Figure 6 is a side elevational view of the mechanism shown in Figure 5.

Figure 7 is a top plan view of the coin feeding chute and the coin receiving tables.

Figure 8 is an enlarged fragmentary sectional view taken substantially upon the line VIII—VIII of Figure 5.

Figure 9 is a vertical part sectional and part elevational view of the vending machine.

Figure 10 is an enlarged sectional view taken substantially upon the line X—X of Figure 6.

Figure 11 is a fragmentary part elevational and part sectional view illustrating a magazine and the manner of latching them in vertical position.

Figure 12 is a part sectional and part elevational view taken substantially upon the line XII—XII of Figure 13.

Figure 13 is an enlarged top plan view of certain parts of the machine with parts shown in section.

Figure 14 is a sectional view taken upon the line XIV—XIV of Figure 13.

Figure 15 is an enlarged sectional view taken upon the line XV—XV of Figure 13.

Figure 16 is an enlarged sectional view taken upon the line XVI—XVI of Figure 15.

Figure 17 is an interior elevational view of the operating mechanism of the machine showing parts in section.

Figure 18 is a sectional view taken upon the line XVIII—XVIII of Figure 17.

Figure 19 is an enlarged sectional view taken substantially upon the line XIX—XIX of Figure 9.

Figure 20 is an enlarged sectional view taken upon the line XX—XX of Figure 17.

Figure 21 is an enlarged sectional view taken upon the line XXI—XXI of Figure 2 showing the interior parts in plan view.

Figure 22 is an enlarged part sectional and part elevational view through one of the ejector shafts.

Figure 23 is a part sectional and part elevational view taken in a place through the selective mechanism.

Figure 24 is an enlarged sectional view through the casing illustrating the replenishing of the magazines and the mechanism for indicating the exhaustion of a magazine.

Figure 25 is a part sectional and part elevational view taken on line XXV—XXV of Fig. 21.

The invention, in its broadest aspects, may assume various forms of structures. In the drawings only the preferred form of structure has been illustrated.

In using this machine, the purchaser may set the selecting mechanism in accordance with the article that he desires that the machine should dispense, or he may first insert the number of

predetermined coins and thereafter set the selecting mechanism for delivery of the proper article. In the present instance the vending machine is desired for delivering cigarettes at fifteen cents per package. Assuming that the purchaser desires to first insert the coins, he will insert a nickel in the nickel slot, and then he will place a dime in the dime slot. The nickel will gravitate down the chute 1 which is sufficiently inclined for such a purpose, and will come to rest upon two spaced tables 3 and 4 with the coin bridging the gap between the two parts. The dime will gravitate down the chute 2 until it rests upon the tables 9 and 10 which are spaced apart with the table 9 adjacent the end of the coin chute with the dime bridging the gap between the two, just as in the case with the nickel. The tables 4 and 10 terminate in upright shoulders or abutments 11 which have overhanging prongs 12 which depend and are adapted for engaging the coins substantially at the central parts thereof. The shoulders 11 may be provided with a groove 15 which forms a continuation of the table proper. These grooves are cut or made smaller than the thickness of the coins in order that if a thinner or spurious coin is inserted, it will slide into the groove and fail to bridge the gap between the two tables, thus preventing operation of the machine. If a slug with a central aperture were used the prongs 12 would pass through such apertures without operating the machine thereby providing another safeguard.

The table 3 is mounted upon a vertically movable plunger 5 and the table 4 is mounted on a vertically movable plunger 6. It will be noted that the nickel which is indicated by the reference numeral 7 bridges the space between the two tables 3 and 4, with the result that as the plunger 6 is moved downwardly, it will cause the plunger 5 to follow therewith, as will later more fully appear. The dime, which is indicated by the reference numeral 8, bridges the tables 9 and 10. The tables 9 and 10 are supported upon vertical plungers 5 and 6, similar to those of the nickel plunger. Tables 3 and 9, and their associated coin chutes have coacting shoulders 13 and 14, which limit the upward movement of the plungers 5 in order that the top surfaces thereof may be flush with the surfaces of the chute, as shown in Figure 8.

In referring to Figure 19, it will be noted that the coin chutes are formed by a central block 17 and lateral blocks 16 which are grooved to form suitable guideways for receiving the proper coins, and a suitable covering member 18 forms the top of the chute. Now if a spurious or improper coin should be inserted in a coin chute, it will be apparent that the same will drop downwardly between the blocks 16 and 17. Such spurious or improper coins will drop down a suitable vertical chute and be delivered through a slot 19, in Figure 1 and be returned to the purchaser. It will be appreciated that this construction eliminates to a large extent any attempt to operate the machine by slugs or specially devised pieces which do not fit in the coin chute.

The four plungers before mentioned pass through a suitable guide plate 20, which is secured to a depending lug on the bottom of the coin chute.

The plungers 6 are connected at their lower ends by a cross-head 21, as shown in Figure 5, and this cross-head is connected with a suitable pitman 22 upon the lower end of which there is pivoted a lever 23. The lever 23 is pivoted intermediate its ends as indicated at 23a to a bracket 24 and the forward end of the lever 23 is provided with a roller 25, which operates in a cam groove 26 of a cam 27 which is keyed upon a shaft 28 which is suitably journalled in a casing surrounding the mechanism. Adjacent the cam 27, there is a gear 29 upon the shaft 28. The gear 29 has a limited lost motion connection with the shaft 28, as shown in Figure 14.

In referring to Figure 14, it will be noted that a key 30 extends from the shaft 28 into a groove 31 in the hub of the gear. This lost motion connection will allow the cam 27 to complete its effective stroke before the gear 29 is rotated by the shaft 28. A pair of article ejectors 32 and 33 are loosely mounted upon the shaft 28 (Fig. 13) and are adapted to be engaged therewith by a clutch member 34 slidably keyed between the ejectors. Each ejector consists of a sleeve-like member provided with suitable ejector prongs 35 which are adapted for engaging the article and ejecting it from the vending machine. The adjacent ends of the sleeve members are provided with suitable clutch faces for cooperating with the said clutch member 34 as will later more fully appear.

The aforementioned gear 29 meshes with a gear 36 which is secured upon a second ejector shaft 39. Upon the shaft 39 are loosely secured a pair of article ejectors 40 and 41, which are similar to the ejectors 32 and 33, in that they consist of sleeve-like members having ejecting prongs 35 thereon. The adjacent faces of the ejectors 40 and 41 are also equipped with clutch faces for cooperating with a clutch member 42 which is slidably keyed upon the shaft 39. The two clutch members 34 and 42 are adapted to be operated by a lever 43 which is rockably mounted upon a horizontal shaft 44, (Figs. 15 and 16), which is secured in a stirrup 45. The stirrup 45 is provided with a vertical journal portion 46 which is mounted for rotation in a bearing 47. The lever 43 is provided with a suitable socket for receiving an operating handle 48, as shown in Figure 15.

In accordance with this construction, it is possible to shift the lever 43 for engaging any of the ejector members by a swiveling and rocking movement.

Upon the aforementioned shaft 39, there are rigidly secured a pair of locking disks 49, provided with shoulders 50. The shoulders 50 are adapted to be engaged by hooks 52 on detent levers 51 which are pivoted on suitable brackets, as indicated at 53. The rear ends of the levers 51 are pivoted in bifurcation of the plungers 5 as shown in Figures 5 and 6. It will now be apparent that as the plungers 6 are pulled downwardly by the pitman 22, the overhanging prongs 12 will engage the coins near the central part thereof and exercise a downward thrust, and as the coins also engage the top of the plungers 5, it will be obvious that the plungers 5 will be caused to descend with the plungers 6. As the plungers 5 descend, they will cause the detent levers 51 to swing upwardly and unlock the shaft 39 for rotation.

The pitman 22 is operated through the rotation of the shaft 28 and the cam 27 thereon. The manner of rotating the shaft 28 will now be set forth. Upon the far end of the shaft 28 there is loosely journalled a pinion 54 which is adapted to be connected with the shaft 28 by a unidirectional clutch 55, (Figs. 17 and 20), which

is keyed upon the shaft 28. It will be observed that the clutch 55 has a ratchet face that cooperates with a ratchet face upon the end of the hub of the pinion 54. A spring 56 housed within a recess in the pinion 54 is adapted for normally and yieldingly clutching the pinion 54 into engagement with the clutch 55.

In referring to Figure 17, it will be noted that a rack bar 58 is in mesh with the pinion 54. This rack bar 58 is slidably retained in suitable keepers 59 which are secured upon the inside of the casing that surrounds the operating mechanism. The rack bar is provided with a serrated portion 60, and at the end of the serrated portion are suitable concave depressions 61. A detent 62 is pivoted intermediate its end as indicated at 63, to the casing, and the lower end of this detent member normally engages in the forward depression 61. The upper end of the detent member is connected by a spring 64, which is anchored to the casing. This detent will compel the rack bar 58 to make a complete forward stroke before it can be returned. Moreover, it will be obvious that as the rack bar 58 is moved forwardly to rotate the pinion 54, the detent member 62 will be inclined forwardly, and when it rides out of the depression 61, it will engage the serrated portion 60, with the result that it will prevent any reverse shifting movement of the rack bar 58. When the rack bar has made a complete forward stroke, the detent 62 will engage the rear recess 61 and will right itself, with the result that as the rack bar 58 is retracted, the detent will slide freely over the serrated portion 60.

In referring to Figure 18, it will be noted that a U-shaped member 65 is connected to the rack bar 58. One leg of the U-shaped member 65 extends to the outside of the casing and has a handle 66 attached thereto, whereby the rack bar 58 may be reciprocated. A guide member 67, preferably attached to the casing, extends over the U-shaped member 65. When it is desired to operate the rack bar 58, the operator will grasp the handle 66 and move the same forwardly.

In referring to Figure 23, it will be noted that the aforementioned lever 43 and handle 48, in reality form a selecting lever for selecting the desired article, that extends through an H-slot 68 in the casing that surrounds the machine. After a selection has been made and the operator begins to shift the rack bar 58, the selective lever 48 is locked against movement by a locking lever 69, which is pivoted intermediate its end, as indicated at 70, to the side of the casing. This lever 69 is provided with a groove 71 that is in alinement with the upper groove of the H-slot, and this groove 71 is provided with a pair of notches 72. A passage extends from the groove 71 to the bottom of the lever in accordance with the construction of the H-slot. In the bottom of the lever 69 are a pair of notches 73 similar to the notches 72. The rear end of the lever 69 projects in the path of the rack bar 58 as shown in Figures 17 and 23.

In referring to Figure 17, it will be noted that the rack bar 58 has a depending shoulder 74 which normally is engaged by the lever 69 for holding the same in its inoperative position, so that the selective lever 48 may be operated. The shoulder 74 terminates in a rearwardly inclined surface 75 down which the lever 69 may ride when the rack bar 58 is advanced. When the rack bar 58 has been advanced to rotate the pinion 54, the lever 69, upon release from shoulder 74, will swing upon its pivot 70, and the part that covers the H-slot will drop downwardly with the result that one of the notches 72 or 73 will engage the selective lever 48 and lock the same against movement. Consequently, if a purchaser wants to purchase a certain article and moves the rack bar a short distance and then changes his mind and desires to purchase a different article, it is impossible for him to do so.

The rack bar 58 is automatically returned by a coiled spring 76 which is anchored to a stud 77 upon the lever by means of a loop at one end thereof. The other end of the coil spring 76 is anchored to an eyelet 78 upon the casing of the machine. As soon as the operator has completed the forward stroke of the rack bar 58, he may release the handle 66, and the spring 76 will immediately return the bar 58 to its inoperative position. As the rack bar 58 is being retracted, it will, of course, rotate the gear in a reverse direction, but owing to the unidirectional clutch, it will not rotate the shaft 28.

The articles that are adapted to be vended by the machine are contained in a pair of magazines 79 and 80 (Fig. 24). The magazine 79 has a pair of compartments 79*a* and 79*b* (Fig. 21), while the magazine 80 also has a plurality of compartments 80*a* and 80*b*. In the present case, these compartments are desired for containing packages of cigarettes, and it is possible to dispense as many different brands as there are compartments in the different magazines. The two magazines are pivotally mounted so that they may be swung forwardly when it is desired to replenish the same. To this end, each magazine has a pair of lateral depending lugs 81, as shown in Figures 2, 22 and 24. These bearing lugs are journalled upon the shafts 28 and 39. The casing 82 surrounds the operating mechanism of the vending machine, and within this casing there is secured a pair of substantially rectangular frames 83 which are best shown in Fig. 2. There is a frame 83 adjacent or in alinement with each magazine. Upon the forward frame member 83, there are secured a pair of angular stops 84 (Fig. 21) which are adapted for limiting the forward movement of the magazine 79. Upon the rear frame member 83 are secured a pair of stops 85 which are adapted for engaging angular stops 86 upon the sides of the magazine 80. In using two stop members 85 and 86 in connection with the rear magazine 80, it will be possible to make the stop 85 shorter than the stop 84, and allow the forward magazine to swing rearwardly past the stop 85 for replenishing the same. The casing 82 embodies a removable or swingable rear end 82*a* through which the magazines may be swung when they are swung rearwardly for replenishing purposes. On each of these magazines, there is pivoted a latch 87, as best shown in Fig. 11. These latches cooperate with lugs 88 extending from the adjacent frame members 83. When the magazines are swung within the casing and occupy their normal vertical position, these latches are engaged over the lugs 88 and retain the magazines in their normal vertical positions.

The magazine 79 has a pair of lateral edges 90 which extend inwardly and forwardly at the bottom to form ledges for supporting the articles 91. These ledges curve downwardly and serve as delivery chutes for the articles. The magazine 80 has rearwardly extending curved ledges 90 for a similar purpose. In connection therewith, it will be noted that the front magazine 79 discharges in a forward direction, while

the magazine 80 discharges in a rearward direction.

In connection with the aforedescribed magazines, mechanisms have been provided for indicating when one of the compartments of a magazine is depleted. To this end, four short shafts 92, 93, 94 and 95, are mounted in alined bearings 92*a*, 93*a*, 94*a* and 95*a*, between the two shafts 28 and 29 as shown more clearly in Figure 13. In referring to Figure 13, it will be noted that the short shaft 92 journalled in the bearing 92*a* has both of its ends exposed. Upon the exposed ends of the shaft 92 are mounted the arms 96 and 97. The arm 96 is longer than the arm 97 and is adapted for operating a slide upon the casing for indicating that the compartment of the magazne has been depleted. The arm 97 is adapted to be operated by a weight 106 which normally rests upon the top of articles in the different compartments, so that when the compartment is depleted, the weight will bear upon the arm 97 and tend to rotate the same in a downward direction. The arm 97 may be loosely mounted upon its shaft 92, or may be keyed thereon, as desired. However, the arm 96 should be loose upon the shaft 92, so as to make it possible for the arms 96 and 97 to rotate in opposite directions. A lever 104 is pivoted intermediate its ends to the bearing 92*a*. This lever extends under the arm 97 and under the arm 96, with the result that as the arm 97 descends, it will cause the lever 104 to swing and cause the arm 96 to be elevated for shifting the empty sign.

The arms 98 and 99 are however keyed to their shaft 93, with the result that as the arm 98 is caused to descend by the counterweight in the compartment, the arm 99 will rise and operate the empty slide for the compartment. Arms 100 and 101 are keyed upon the shaft 94, with the result that as the arm 101 is caused to descend by the weght in the compartment, the arm 100 will be cause to rise and operate the empty slide for the compartment. Arms 102 and 103 are arranged in a manner similar to the arms 96 and 97 upon shaft 95. The arms 102 and 103 are mounted for relative movement upon their shaft 95, and these arms are connected by a lever 105 which is pivoted intermediate its ends to the bearing 95*a*, with the result that as the arm 102 is caused to descend, it will swing the lever 105 and elevate the arm 103 for operating the empty slide for the compartment.

It might be here mentioned that the arms 97, 98, 101 and 105 are located directly under the compartments of the magazines. The arms 96, 99, 100 and 103, respectively, operate the different slides 106, 107, 108 and 109, as shown in Figure 21. To this end, each slide is provided with an inwardly extending lug 110 which is shown more clearly in Figure 24. The different arms are located beneath the lugs 110, so that as the arms are elevated they will engage the lugs 110 and elevate the slide. The different slides are shifted and held in their shifted positions by the aforementioned arms as long as the counter weights 106 act upon the corresponding opposed arms. When the weights on the arms under the different compartments are removed, as when the compartments are replenished, the slides will automatically drop by gravity.

The vending machine is provided with a coin receptacle 111 (Fig. 9), to which a coin chute 112 extends. The coins are adapted to be deposited upon the chute 112 by a swingable lever 113. The lever 113 is pivoted intermediate its end to a bearing 114*a* on the bottom of a bracket 114 extending from one of the frames 83. The upper end of this lever 113 is provided with a fork, the tines of which are represented by the reference numerals 115 and 116, as shown in Figure 7. In referring to Figure 7, it will be noted that the fork straddles one coin, and one tine is adjacent the other coin, with the result that as the lever 113 is swung in the proper direction, both coins will be shifted from their respective tables and will be deposited on the chute 112 which conveys them to the receptacle 111. The lever 113 is operated by the aforementioned gear wheel 29, which has a laterally projecting cam 117 adapted for engaging the lever 113 during each operation thereof.

In Figure 3, there is illustrated a convenient way of supporting the vending machine. As illustrated, the movable back wall 82*a* which is shown as hinged to the casing may be bolted or secured to a vertical wall. This back wall 82*a* is provided with a lock 82*b* near its bottom which is adapted to lock the casing 82 thereto. When it is desired to replenish a compartment in one of the magazines, the lock 82*b* is unlocked and the vending machine is turned or swung from its dotted line position to its full line position.

In the operation of this machine, the purchaser will deposit the coins in the coin slots, as shown in Figure 1, the selective lever 48 will then be shifted in accordance with the desired article for connecting the proper ejector sleeve with its shaft. The operator will then grasp the handle 66 and shift the rack bar 58 forwardly for operating the shaft 28 and the cam thereon. The rotation of the cam will cause a downward movement of the plunger 22 and the vertical plunger 6 connected thereto with the overhanging prongs 12 engaging the tops of the coins and causing the detent plungers 5 to descend and operate the detent levers 51 for unlocking the shaft 39. This operation will be effected without giving or imparting any rotation to the gear wheel 29 on account of the aforementioned lost motion connection between said gear and its shaft 28. However, as soon as the shaft 39 is unlocked the lost motion will have been taken up and shafts 28 and 39 will be rotated through the instrumentality of the gear wheels 29 and 36. However, only the ejector that has been keyed to its shaft by the movable clutch member through the shifting of the selector lever will be rotated. The other ejector sleeves will remain idle and their shafts will merely rotate therein.

The rack bar 58 is so designed that it will impart sufficient rotation to these shafts for ejecting the article from the magazine by the engagement of the prongs 35 with the article. As soon as the rack 58 is shifted a short distance, the shoulder 74 will ride off of the locking lever 69 and allow the forward end of said lever to descend and bring one of the notches thereof into locking engagement with the selector lever 48, and lock said lever from operation. In order to unlock the selective lever 48, it is necessary that the rack bar 58 be shifted a complete stroke and then returned to its original position, as previously set forth.

Hence, if a purchaser desires to buy a certain article and starts to operate the rack bar for delivering such article, it is impossible for him to change his mind and operate the selective lever for delivering a different article; that is, it is impossible for a purchaser to change his mind concerning the article he wishes to purchase

after the rack bar has been initially operated to such an extent that the selective lever will become locked against movement. One complete operation of the rack bar 58 will set the shafts 28 and 39 for another operation. This is due to the fact that upon the return stroke of the rack bar 58, the gear 54 will rotate relative to the shaft 28 and will not cause any reverse rotation thereof on account of the unidirectional clutch.

It is characteristic of this vending machine that it is impossible to operate the same until a plurality of the proper coins have been inserted. It is further characteristic of this machine that after an initial operation thereof, it cannot be stopped or reset for delivering a different article from that for which the machine was originally set. Another feature of this machine resides in the mechanism for removing the coins from the coin tables and depositing the same in a coin chute which leads to a coin receptacle. It is, therefore, impossible to rob the machine by continuously operating the same through the same coins. Another feature of advantage resides in the simple mechanism whereby the machine will indicate when one of the compartments of a magazine has been depleted, notifying the purchaser thereby that the machine cannot deliver the particular article designated as being out.

I am aware that many changes may be made, and numerous details of construction may be varied through a wide range without departing from the principles of this invention, and I therefore do not purpose limiting the patent granted hereon, otherwise than necessitated by the prior art.

I claim as my invention:

1. In a coin controlled vending machine, a plurality of inter-geared ejector shafts, a pair of coin controlled locking members for locking one of said shafts against operation, means for rotating one of said shafts for operating said locking members, said last mentioned shaft having a lost motion connection with its gear for disconnecting said locking members in advance of the operation of said gears.

2. In a coin controlled vending machine, a plurality of ejector shafts, a gear fixed on one of said shafts, a gear having a lost motion connection with the other shaft, and geared to said first mentioned gear, a pair of movable locking detents for locking one of said shafts, a pair of plungers connected to said detents, said plungers having heads thereon adapted for receiving part of the deposited coins, a pair of coin receiving tables adjacent said plungers, and means operated by one of said shafts for moving said coin tables and conjointly operating said plungers through the instrumentality of said coins.

3. In a coin controlled vending machine, a plurality of movable coin receiving tables, means for depositing a plurality of predetermined coins upon said tables, a plurality of ejectors, means including a plurality of locking members for locking said ejectors against movement, means for operating said coin tables and means movable conjointly with said coin tables through the instrumentality of said coins for unlocking said locking members.

4. In a coin controlled vending machine, ejector mechanism, locking mechanism therefor, a pair of reciprocable plungers having flat tops in alignment for receiving a coin, one plunger having means for engaging the top of the coin and forcing it against the other plunger, a connection between the other plunger and said locking mechanism and means for operating the first plunger for operating said locking mechanism.

5. In a coin controlled vending machine, a pair of ejector shafts, a gear having a lost motion connection with one shaft, a gear rigid upon the other shaft and in meshing relation with the first gear, a reciprocable plunger, a cam upon the first shaft, a connection between said plunger and cam, a second plunger, a locking member pivoted to said second plunger, a locking disk upon said second shaft for engagement with said locking member, said plungers having means for jointly supporting a coin and said first plunger having means for engaging said coin and means for operating the first mentioned shaft.

6. In a coin controlled vending machine, a plurality of parallel reciprocable plungers having means for conjointly supporting a coin, means for actuating one plunger, said last mentioned plunger having means for engaging said coin and actuating said second plunger, ejector mechanism and means controlled by the second plunger for locking said ejector mechanism.

7. In a coin controlled vending machine, a coin chute, a pair of parallel and spaced coin receiving tables for conjointly receiving and supporting a coin, normally in alignment with said chute, ejector mechanism, locking mechanism therefor having a connection with one coin table, and means for actuating the other coin table and conjointly actuating the first table thru the instrumentality of the deposited coin.

8. In a coin controlled vending machine, a pair of reciprocable members adapted for conjointly supporting a coin, rotatable ejector mechanism, locking mechanism therefor controlled by said reciprocable members, and means controlled by said ejector mechanism for removing the coin from said members.

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