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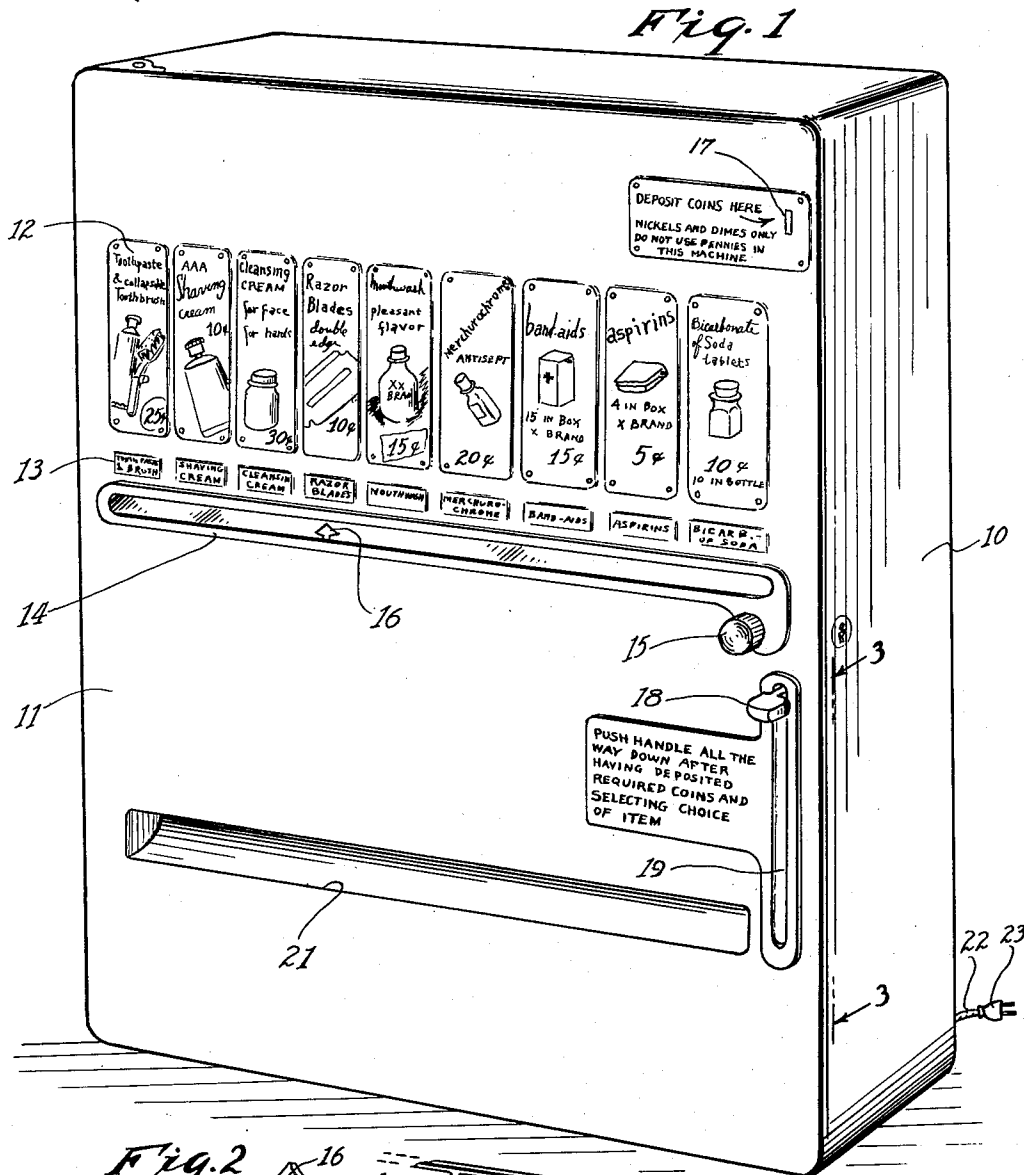
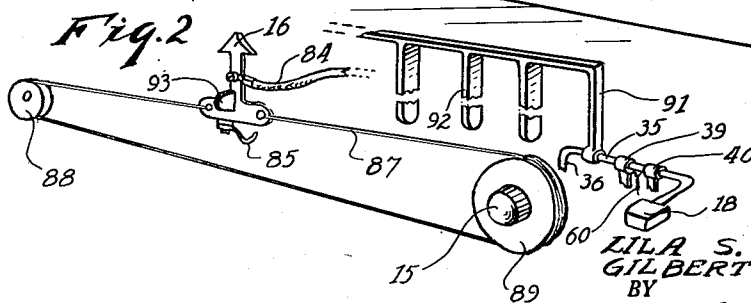
L. S. SPERO ET AL

2,656,029

VENDING MACHINE

Filed July 12, 1950

3 Sheets-Sheet 1



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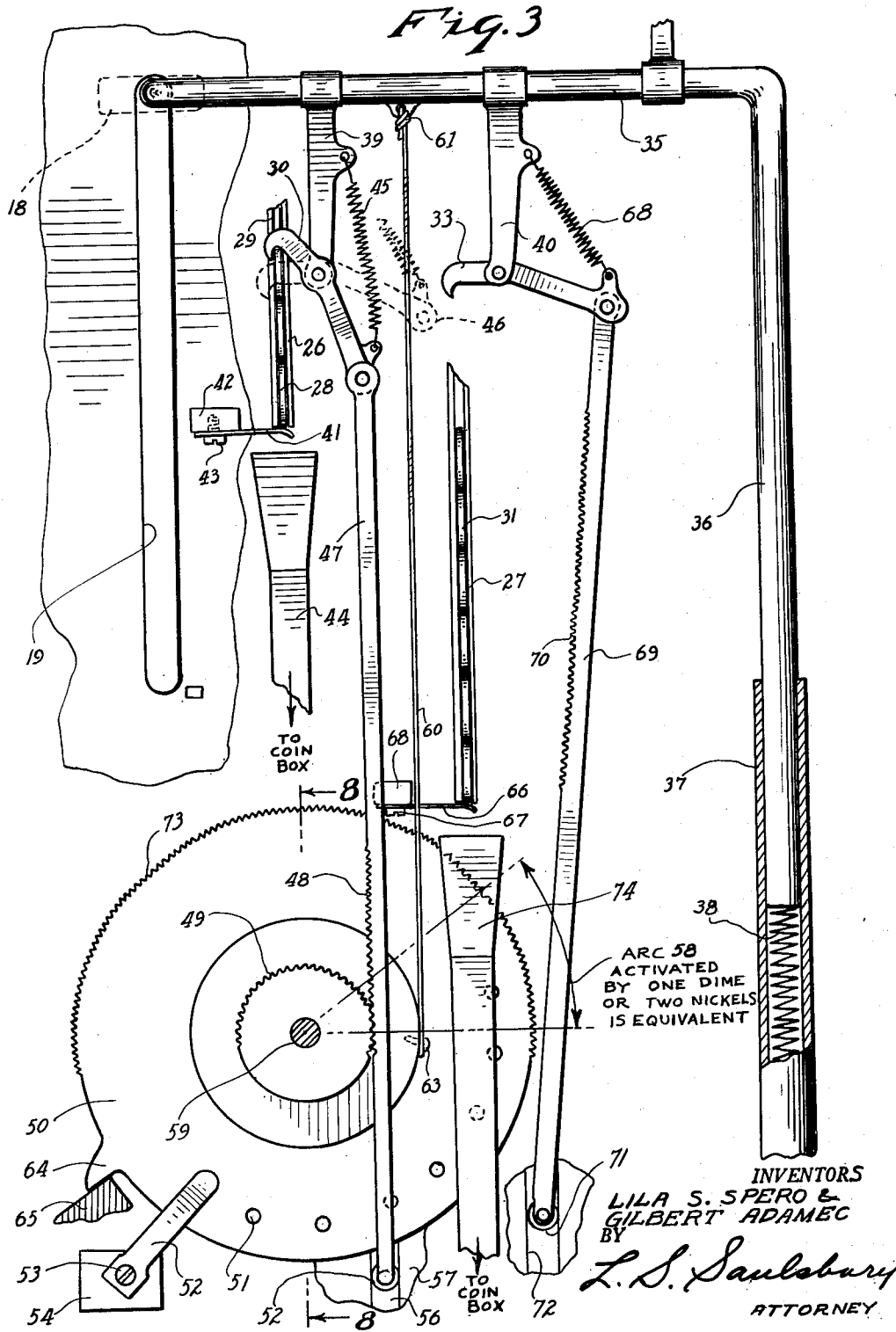
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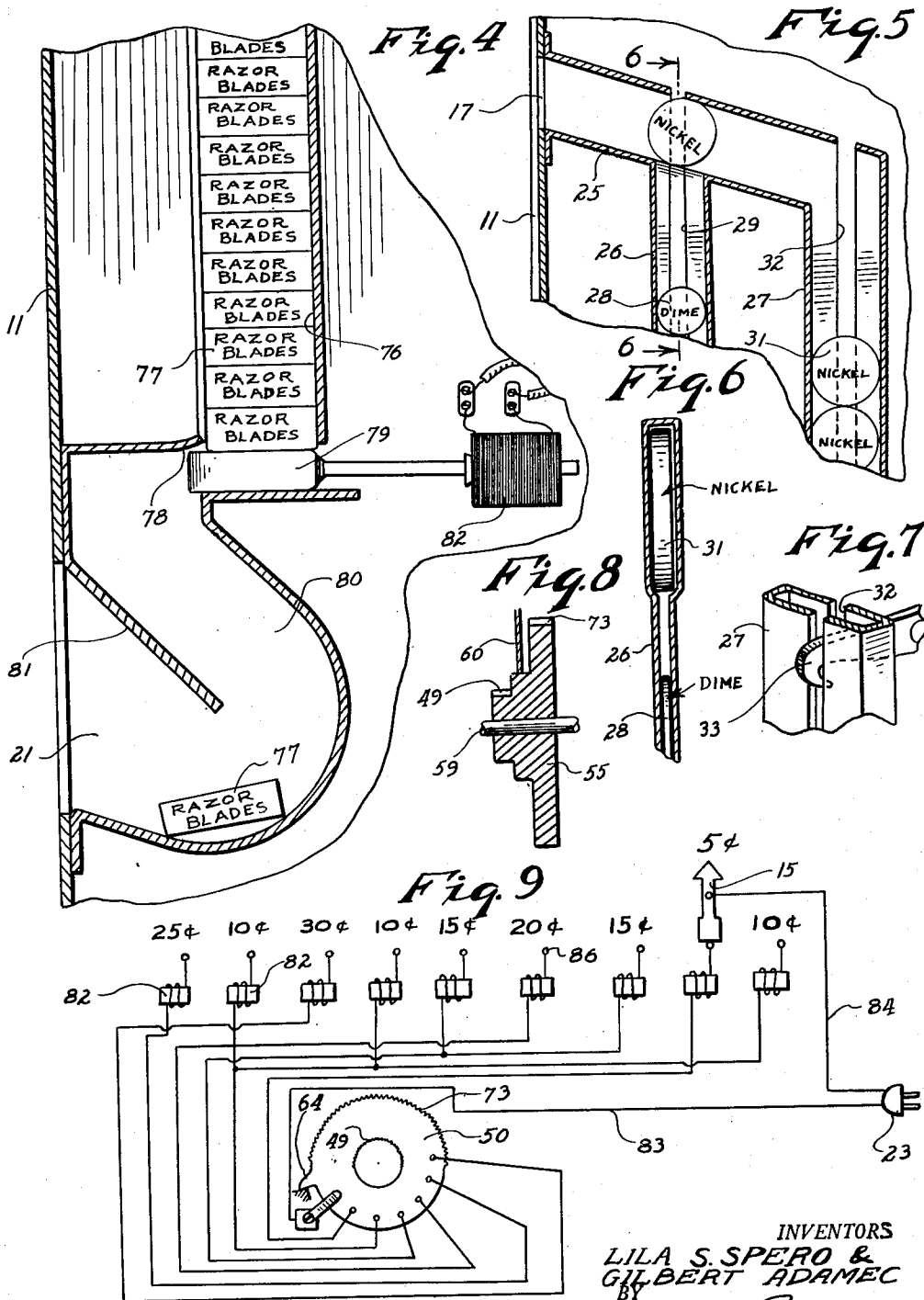
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2,656,029

VENDING MACHINE

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This invention relates to vending machines.

It is an object of the present invention to provide a vending machine wherein there is available in one machine numerous sundry supplies such as may be required by a person who is traveling and in order that there will always be available to them items of absolute necessity when traveling or otherwise.

It is another object of the present invention to provide a vending machine adapted to contain sundry supplies which consumes little space and wherein all of the sundry items will be readily displayed and wherein by the use of but two denominations of coins, these items differently priced, can be dispensed and wherein means is provided, once the coins have been placed in the machine, wherein adjustment of the selecting device is prevented.

Other objects of the present invention are to provide a sundry item vending machine which is of simple construction, inexpensive to manufacture, has a minimum number of parts, compact, of pleasing appearance, easy to operate by the purchaser and efficient in operation.

For other objects and for a better understanding of the invention, reference may be had to the following detailed description taken in connection with the accompanying drawing, in which

Fig. 1 is a perspective view of the sundry item vending machine embodying the features of the present invention.

Fig. 2 is a fragmentary perspective view of the selecting mechanism.

Fig. 3 is a large scale diagrammatic view of the operating parts actionable upon the insertion of coins into the machine.

Fig. 4 is a fragmentary vertical sectional view taken through one of the chambers bearing one item and looking upon the solenoid pusher.

Fig. 5 is a fragmentary sectional view taken through the coin slots.

Fig. 6 is a vertical sectional view taken on line 6-6 of Fig. 5.

Fig. 7 is a fragmentary perspective view showing the manner in which the projections of the operating mechanism sweep the coin slots.

Fig. 8 is a sectional view taken through the controlling disc and on line 8-8 of Fig. 3.

Fig. 9 is a wiring diagram of the operating mechanism.

Referring now to the figures, 10 represents an outer casing having a front face 11. On the front face there is attached a plurality of plates 12 representative of the goods which may be dispensed. Under the plates 12 are other identi-

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fications 13 which lie immediately above a selector window 14. The selector mechanism is operated by a knob 15 and the pointer or indicator 16 is moved to the desired item which is to be dispensed. Coins are placed in a slot 17 at the top of the casing 10. Only nickels and dimes are used in this machine. After the selection of the item has been made, a push handle 18 which operates in a slot 19 is pushed downwardly to dispense the item. An elongated discharge opening 21 is provided in the lower part of the front portion 11 from which the item can be taken. An electric cord 22 with a plug 23 serves to connect the machine to a wall receptacle.

As seen in Fig. 5, a coin chute 24 is connected to the front portion of the casing in alignment with the coin slot 17. This coin chute is adapted to pass nickels and dimes. The coin chute has two depending portions 26 and 27. The depending portion 26 is adapted to catch dimes 28. The sides of the chute are slotted, as indicated at 29, to permit the downward passage of a hook 30 therethrough to sweep the dimes from this portion 26. The portion 27 receives nickels 31 and has a slot 32 through which a nickel hook or sweep 33 may pass. The dime chute portion 26 is not only of less length, but is more narrow than the top portion of the chute so as to prevent even the slightest entry of the nickel 31 in passing down the top portion 25. The nickel will not be held up in moving through the top portion 25 to the down portion 27.

The operating handle 18 is connected to an arm 35 of a plunger 36. This plunger works in a sleeve 37 against the action of a spring 38. Depending from the arm 35 are brackets 39 and 40 to which the sweep hooks 30 and 33 are respectively pivotally connected.

Abutting the lower end of the dime coin portion 26 is a spring stop 41 to temporarily support the dimes 28. This spring stop is secured to a bracket 42 on the machine by a screw 43. The hook sweep 30 will enter the slot 29 of the dime portion 26 and will force the dimes past the spring stop 41 and deposit them in a coin box chute 44. A tension spring 45 acting between the depending portion 36 and the pivoted hook 30 thereon will normally keep the hook in a horizontal position, as indicated by dotted lines 46. Depending from the sweep hook 30 is a rack bar 47 having rack teeth 48 thereon engageable with a rack pinion 49 fixed to a selector wheel 50. This selector wheel 50 has a plurality of contacts 51 adapted to engage with a spring contact ter-

minimal 52 fixed by a screw 53 to a bracket 54. The lower end of the rack bar or rod 47 has a roller 55 which acts in a slot 56 so as to keep the rack bar in engagement with the pinion 49. The slot 56 is provided in a plate 57 carried by the casing in the interior thereof. One dime will cause the movement of the selector wheel 50 over two contacts 51, as indicated by arc 53. The selector wheel is pivoted upon a shaft 59. When the sweep hook 30 has been actuated, the dimes will be dispensed past the spring 41. The strength of the spring 41 is sufficient to permit actuation of the rack and selector wheel the required distance. A flexible strap 60 is connected between the arm portion 35, as indicated at 61, and to the selector wheel at 63 and will be wound upon the selector wheel partially as the actuation of the same is effected. The strap 60 will, as the plunger 36 and push handle is released and under the action of spring 38, cause the selector wheel to be returned to its initial position with its lug 64 against stop 65.

A spring stop 66 is secured by a screw 67 to a bracket 68 and serves to hold the nickels 31 in the nickel portion 27. The hook 33 works through the slot thereof. The hook 33 is held in a horizontal position by springs 68 extended between the hook and the depending bracket 40. A rack rod 69 having rack teeth 70 depends from the hook and has a roller 71 operable in slot 72. The rack teeth 70 engage with teeth 73 on the selector wheel 50. With one nickel 31 in the portion 27, the wheel 50 will be moved through only the angular distance of one contact. A coin box chute 74 will receive the nickels after they have been forced by the spring stop 66. The arrangement of the coin portions 26 and 27 are such that if mixed coins are deposited, the actuation of the dimes will first occur and thereafter the action of the mechanism for the nickels.

Extending across the casing are a series of compartments 76 having packaged items 77 therein. These items are stacked one upon the other and can be dispensed through an opening 78 by a plunger 79 into a chute 80 so that access can be had to the same through the elongated opening 21 in the front of the casing. A baffle 81 is provided to prevent one from reaching upwardly into the chute 80. The plunger 79 is operated by a solenoid 82 that is wired to contacts 51. The solenoid will be wired to the contacts depending upon the amount of the item which is to be dispensed. If the item is twenty five cents, the solenoid will be connected to the fifth contact. If the item is ten cents, the solenoid will be connected to the second contact. The contact terminal 52 is connected directly by wire 83 with plug 23. Wire 84 from the plug is connected to movable contact 85 and is movable therewith to establish contact with any one of contacts 86 respectively associated with the solenoid 82. The placing of the indicator 16 will establish the circuit with a particular solenoid and for a particular item. All that remains is to place the coins in the slot and push downwardly upon a push handle 18.

The selector indicator 16 is connected to a pulley wire 87 that extends over a pulley 88 at one side of the casing and a pulley 89 at the other side of the casing and which is operated by the turn knob 15. In order to prevent the movement of the contact 85 after the coins have been placed in the machine, a long arm 91 is connected to the arm portion 35 and is movable downwardly therewith. This arm extends above 75

the selector mechanism and has depending horizontally spaced portions or stops 92 adapted to be engaged by a projection 93 on the indicator 16 so that movement of the indicator is prohibited to change the item once the push handle is moved downwardly to operate the machine. In this manner, the customer is prevented from obtaining an item different from that which was originally selected and which may be of higher price than the one selected.

It should now be apparent that there has been provided a sundry vending machine which is operable to dispense different items and which will have particular use for travelers, as in wash rooms, subways, pullman trains, hotels, steamships, office buildings, restaurants, night clubs, department stores, factories, colleges, and in other numerous places where these items might be needed. While certain items have been illustrated, it will be apparent that other items can be dispensed from the machine. It will also be apparent that a larger number of such items can be used by this same machine with the addition of the spaces and the necessary added extension of the parts.

While various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claims.

What is claimed is:

1. A sundry item vending machine comprising a casing, a plurality of compartments in the casing having respectively different packaged items, a selecting mechanism having a knob adapted to be turned and an indicator operable by said knob, solenoid operated plungers associated with the respective compartments, said indicator having contact means adapted to connect with any one of the respective plungers, a contact wheel having a plurality of contacts thereon and adapted to engage with a stationary contact secured to the casing, push handle mechanism operable in response to nickels and dimes for moving the contact wheel, said push handle mechanism including a plunger with a push arm thereon, spring means tending to effect the return of the plunger, a coin chute having depending portions for respectively receiving nickels and dimes, said push handle mechanism further including coin engaging elements engageable with the coins in the depending portions, rack rods extending respectively from the coin engaging elements, said contact wheel having teeth therein adapted to receive the respective rack rods of the push handle mechanism to be actuated by the same to measured distances effected by the different number of coins in the depending portions of the coin chutes, and a return strip adapted to be wound upon the contact wheel as the push handle mechanism is operated so that as the push handle arm portion is returned the contact wheel will be returned to its initial position and the contact on the contact wheel corresponding respectively to the solenoid operated plungers of the respective compartments.

2. In a sundry item vending machine, a casing having a front portion, a plurality of item displays on the front portion, a coin chute extending from the front portion and adapted to receive nickels and dimes, said coin chute having a top portion and dime and nickel portions communicating therewith, said dime portion lying inwardly of the nickel portion and opening into the top portion, said dime portion being of a size to reject the

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nickels as they are moved through the top portion, but adapted to receive the dimes, said dime and nickel portions having side slots therein, an actuating mechanism comprising a plunger member having an arm extending laterally, spring means tending to return the plunger, said arm having depending brackets thereon and coin hooks adapted to enter the slots in the dime and nickel portions upon the plunger being depressed, a handle extending through the casing from said arm, releasable stop means on the lower ends of the dime and nickel portions to normally detain the coins, racks connected to the coin hooks and having rack teeth thereon, means on the lower ends of the respective racks for guiding the downward movement of the same, a selector wheel having gear teeth thereon engageable with the respective rack teeth of the rack rods, said wheel having electrical contacts circumferentially spaced thereupon, a stationary terminal adapted to engage with the contacts, the movement of the wheel being in response to the coins disposed in the respective dime and nickel portions, package compartments within the casing, outlet chute means associated with the package compartments for the discharge of the packages, electrical plunger means for ejecting the packages from the compartments, said plungers having solenoids connected respectively thereto, said solenoids connected respectively with the contacts of the contact wheel, a selecting device having an ad-

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justable contact member and means for adjusting the same, said solenoids having contacts engageable by the selector contact and coin box chutes disposed respectively under the releasable stop means of the respective dime and nickel portions, and a return wire means connected between the contact wheel and the plunger arm.

3. A sundry item vending machine as defined in claim 2, and a transversely extending bar connected to the plunger arm to be operated downwardly therewith, said bar having laterally spaced finger members thereon, said selector contact having a projection adapted to engage with the finger members, whereby to prevent the movement of the selector after the plunger has been operated.

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References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
512,959	Hanvey	Jan. 16, 1894
1,731,829	Seidel	Oct. 15, 1929
1,763,045	Hehn	June 10, 1930

FOREIGN PATENTS

Number	Country	Date
354,418	Great Britain	Aug. 13, 1931