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3,342,373

VENDING MACHINE FOR VENDING IN SEQUENCE MERCHANDISE
ARTICLE CONTAINERS FROM TWO VERTICALLY STACKED
ADJACENT COLUMNS THEREOF

Filed March 11, 1966

2 Sheets-Sheet 1

FIG. 1

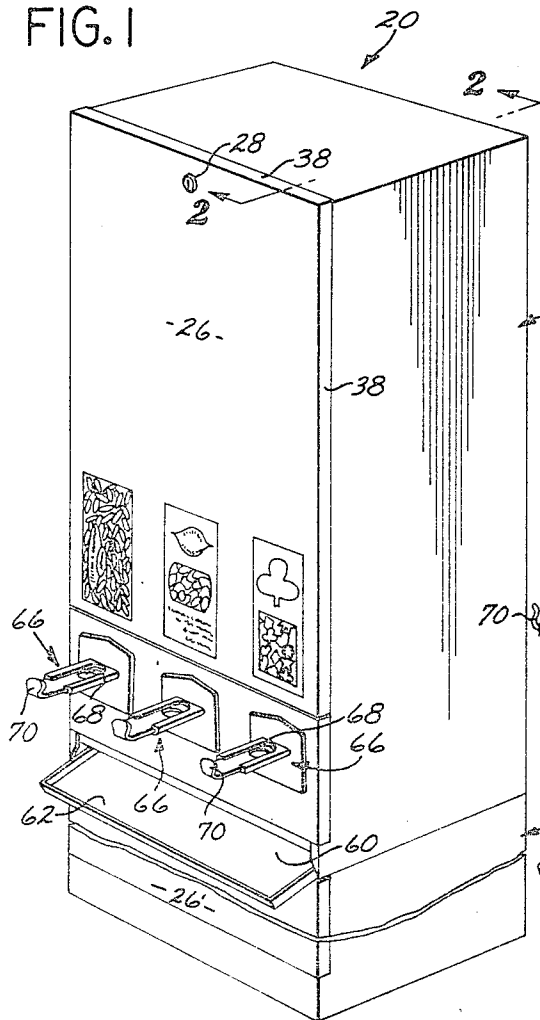


FIG. 2

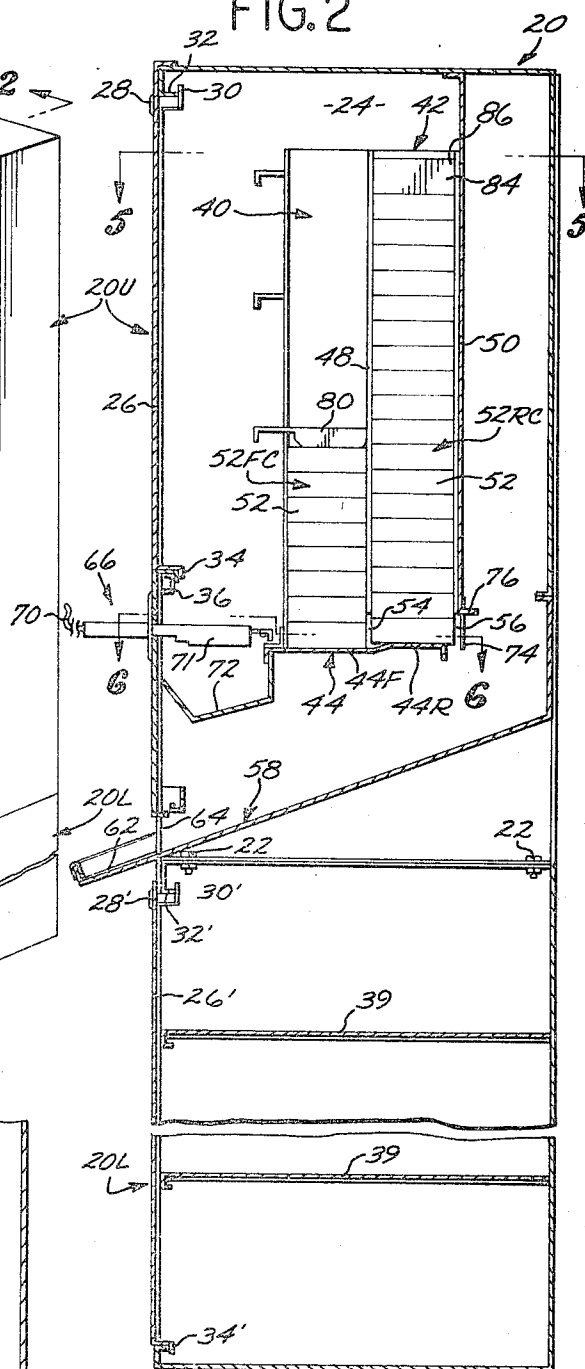
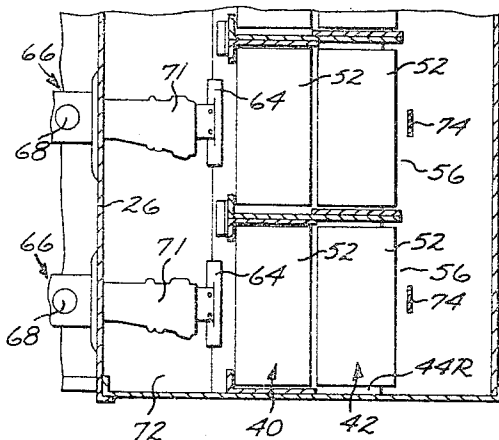


FIG. 6



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2 Sheets-Sheet 2

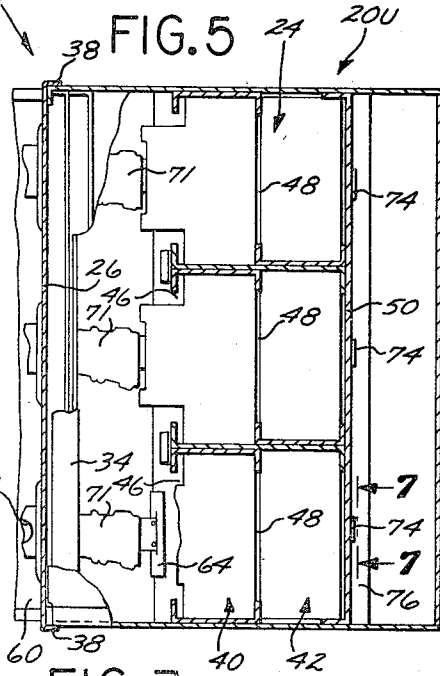
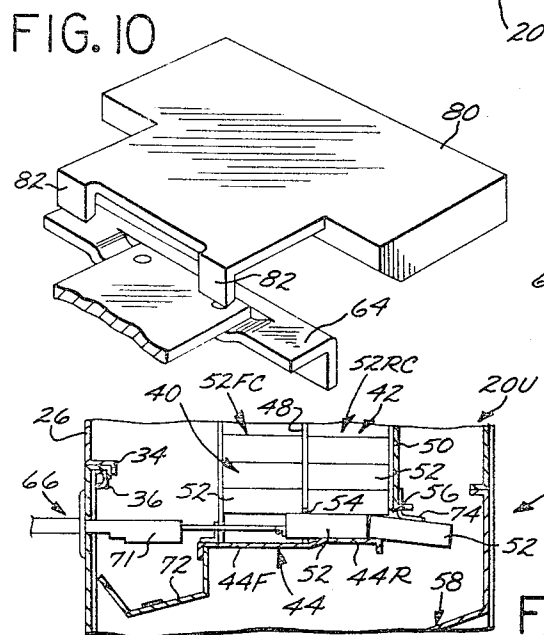
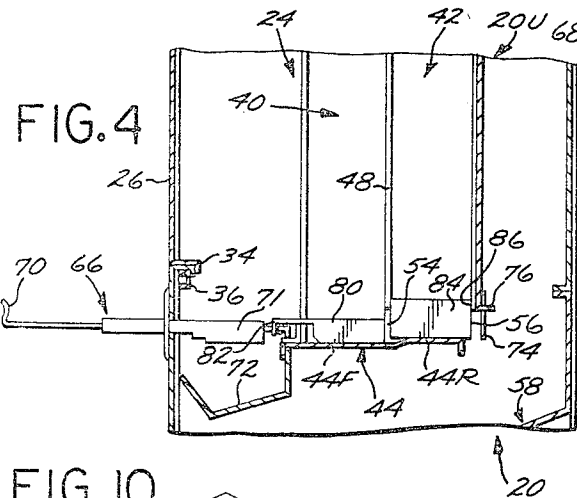
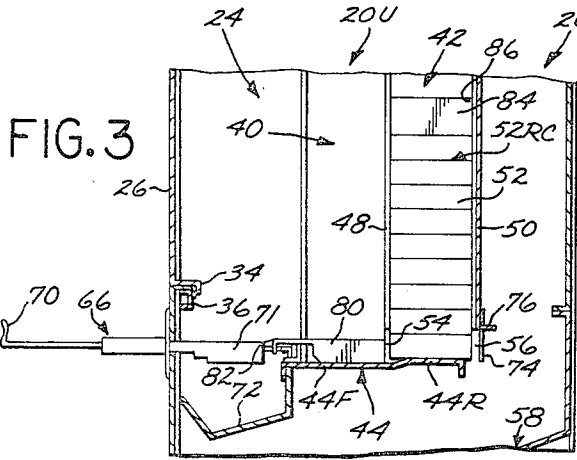


FIG. 7

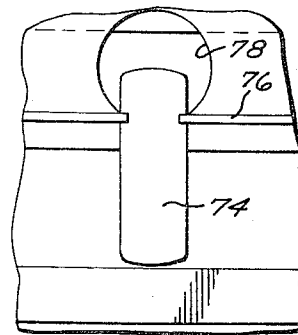


FIG. 8

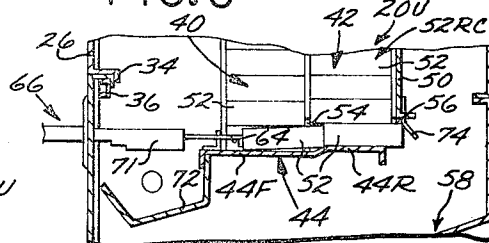


FIG. 9

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VENDING MACHINE FOR VENDING IN SEQUENCE MERCHANDISE ARTICLE CONTAINERS FROM TWO VERTICAL- LY STACKED ADJACENT COLUMNS THEREOF

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1 Claim. (Cl. 221-107)

ABSTRACT OF THE DISCLOSURE

The specification discloses a merchandise vending machine intended primarily to vend, upon each operation, a merchandise article of a substantially rectangular shape, such as a small candy box, cigaret package, or the like, from either of two vertically stacked columns thereof. The apparatus is arranged, upon each succeeding operation to dispense another of the merchandise articles, and this continues in response to each dispensing operation until all of the merchandise articles in both of the two vertically stacked columns thereof have been vended. Thus, the effective merchandise article capacity of the vending machine can be doubled without the necessity of increasing the over-all height of the machine to accommodate a single vertically stacked column of merchandise articles of twice the height, as would normally be required. Also, the apparatus is effectively provided with inactivation means for preventing false operation of the actuating means (usually coin-controlled) when all merchandise articles have already been vended. Thus, a would-be customer will know that all merchandise articles have already been vended, and in the coin-controlled form of the invention, he will be able to remove his coin from the coin-receiving means controlling the operation of the actuating means. Also, in one preferred form of the invention, the front column of stacked rectangular merchandise articles carries on the top thereof a merchandise article-simulating, or a merchandise article container-simulating, weighted follower member which, when it reaches the bottom of said front column of merchandise articles after the last of the front-positioned merchandise articles has been moved into a position under the vertically stacked merchandise articles in the rear column thereof, then functions as a forwardly and rearwardly reciprocable abutment coupling member comprising an effective extension of the actuating means for transferring actuating operation from the front column of stacked merchandise articles to the rear column of stacked merchandise articles whereby to dispense one of same upon each subsequent operation of the actuating means.

Generally speaking, the present invention relates to the merchandise vending machine art and, more particularly, pertains to a vending machine for vending in sequence merchandise articles containers (which are usually of substantially rectangular shape as seen in top plan view when so stacked and which may be said to be of substantially paralleloiped shape, although not specifically so limited in all forms of the invention (from two vertically stacked columns of said merchandise article containers which are positioned adjacent to each other (usually one of said columns being in front of the other of said columns, although not specifically so limited in all forms of the invention).

One exemplary but non-specifically-limiting type of such a merchandise article container as that referred to above as being adapted to be dispensed by the improved vending machine of the present invention is a substantially rectangular box, or similar container, carrying a

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plurality of pieces (or a single piece) of candy, gum, or the like, therein. Another such merchandise article container might be a cigarette package—in fact, a great variety of different types of merchandise article containers of generally paralleloiped form are particularly well adapted to be positioned in flat, vertically stacked, superimposed relationship whereby to comprise two adjacent vertical columns thereof cooperable with the novel vending machine of the present invention for allowing the individual dispensing of one such merchandise article container at a time from the bottom of first one column and then the other column, in sequence, until all such merchandise article containers have been dispensed. Each dispensing operation may be caused by movement of an actuating member in a manner such as to effectively cause the dispensing of a selected bottom-positioned merchandise article container, which will be discharged into a convenient accessible removal tray, or other desired type of discharge means, so that a person who has initiated the dispensing operation of said actuating member may pick up or otherwise receive the desired merchandise article container, thus completing a vending and delivery operation. In certain forms of the invention, the actuating member referred to above may be under the control of a coin-receiving apparatus which initiates the dispensing operation thereof and, in some particular forms, such a coin-receiving apparatus may be of a manually operable conventional slide-type which may be effectively directly coupled with respect to the actuating member previously referred to for bringing about a merchandise container dispensing operation in the general manner referred to above. However, the invention is not limited to any particular type of coin-receiving apparatus or, indeed, to the use of coin-receiving apparatus at all for initiating the operation of the actuating means and, broadly speaking, is intended to include and comprehend any arrangement of the type referred to including means for controllably initiating operation of such actuating means.

Incidentally, it should be noted that the expression "merchandise article container" and the expression "merchandise article containers" are intended to be broadly construed as covering both the package type of item referred to above, which contains one or more objects or merchandise articles therein, and as covering a complete individual merchandise article itself whether in a box, wrapped, covered, or otherwise contained or not. In other words, the words "container" and "containers" are to be very broadly construed and are intended to cover even merchandise articles which do not have any exterior covering but which are of substantially the configuration referred to above.

Additionally, it should be noted that while the merchandise articles referred to above are of generally rectangular shape as seen in top plan view when they are stacked, the invention is not specifically so limited in all forms thereof since it is quite possible to vertically stack substantially flat merchandise articles which have a plan view shape when so stacked other than rectangular and which will cooperate for dispensing of the bottom merchandise article of one or the other of said vertically stacked columns in substantially the same manner as that referred to hereinbefore. Therefore, it should be clearly understood that such slightly modified forms of the invention are intended to be included and comprehended within the broad scope of the present invention and the expression "merchandise article container" and the expression "merchandise article containers" are intended to be construed in the light of the foregoing statement, as is the remainder of the apparatus disclosed and described in detail hereinafter.

I am aware of the fact that certain vending machines have been developed in the past which vertically stack

a plurality of merchandise articles and vend a bottom article in response to selective operation of dispensing means. However, all such prior art vending machines of the type just mentioned known to me are incapable of first vending from one vertically stacked column of such merchandise article containers and then switching over to and vending from a second column of such merchandise article containers in the manner of the present invention, which makes it possible to store twice as many merchandise article containers within a vending machine of any given height as has been possible with such prior art vending machines wherein the vending action only occurs from the bottom of a single vertically stacked column of merchandise articles or merchandise article containers.

Of course, in a preferred form of the present invention, there will usually be a plurality of pairs of adjacent vertically stacked merchandise article containers and a corresponding number of the slide-type coin-receiving means so that a person stepping up to the front of the vending machine may select a particular type of merchandise article and place his coin in the corresponding coin-receiving means and manually operate same for dispensing a selected type of merchandise article container. However, while this is a convenient arrangement in a commercial vending machine, it should be clearly understood that the invention is not specifically so limited and, actually, the invention covers an arrangement comprising just two adjacent vertically stacked columns of merchandise article containers, or any plurality of such pairs thereof, with each being substantially similar to any individual pair thereof. In the multiple pair form of the invention, usually a common discharge chute means is positioned to receive vended or discharged merchandise article containers from any of the plurality of vertically stacked pairs thereof for feeding same under the action of gravity toward a frontally-positioned forwardly and upwardly open and accessible removal tray means to provide for convenient removal of the vended merchandise article container by the person who has operated the coin-receiving means. However, the invention is not limited to such a common discharge chute means but may employ individual discharge chute means in certain forms thereof, if desired.

With the above points in mind, it is an object of the present invention to provide novel apparatus of the character referred to herein having any or all of the advantages referred to herein, generally and/or specifically and individually and/or in combination, and which is of extremely simple, inexpensive construction adapted for ready mass manufacture at relatively low cost and which is of virtually maintenance-free construction such as to be conducive to widespread use thereof.

Further objects are implicit in the detailed description which follows hereinafter (which is to be considered as exemplary of, but not specifically limiting the present invention), and said objects will be apparent to persons skilled in the art after a careful study of the detailed description which follows hereinafter.

For the purpose of clarifying the nature of the present invention, one exemplary embodiment of the invention is illustrated in the hereinbelow-described figures of the accompanying two sheets of drawings and is described in detail hereinafter.

FIG. 1 is a reduced-size, fragmentary, partly-broken-away, exterior, three-dimensional, pictorial view illustrating one typical exemplary form of merchandise vending machine.

FIG. 2 is a fragmentary, partly-broken-away view, partly in section and partly in elevation, taken substantially along the plane indicated by the arrows 2—2 of FIG. 1.

FIG. 3 is a fragmentary, partly-broken-away view similar to the central portion of FIG. 2 but illustrates it after a plurality of merchandise article containers have been sequentially dispensed.

FIG. 4 is a view similar to FIG. 3 but follows same in time and dispensing sequence and shows the apparatus after all of the merchandise article containers shown in the rear column in FIG. 3 have been dispensed.

FIG. 5 is a view taken substantially on the plane indicated by the arrows 5—5 of FIG. 2, although certain front portions of the apparatus are shown in top plan view and partly broken away for the purpose of providing a maximum disclosure in FIG. 5.

FIG. 6 is a fragmentary view generally similar to FIG. 5 but is taken substantially along the much lower plane indicated by the arrows 6—6 of FIG. 2.

FIG. 7 is an enlarged fragmentary elevational view taken substantially in the direction of the arrows 7—7 of FIG. 5 and clearly illustrates an exemplary one of the three resilient forcibly deflectable gate members positioned across the merchandise-article-container-discharging egress opening at the rear of each of the three pairs of vertically stacked merchandise article containers.

FIG. 8 is a fragmentary, partially-broken-away view similar to the corresponding central portion of FIG. 2 but illustrates the apparatus after a coin has been received by the corresponding right coin-receiving means and after the corresponding rearwardly directed actuating member thereof has been partially forcibly rearwardly moved by the application of manual force to the front end of the slide-type coin-receiving means.

FIG. 9 illustrates the next step in the dispensing operation started in FIG. 8 and shows the two bottom merchandise article containers after they have been rearwardly shifted to an even greater extent than their positions as shown in FIG. 8.

FIG. 10 is an enlarged, fragmentary, three-dimensional, pictorial view illustrating the rear end of one of the actuating members of the corresponding one of the slide-type coin-receiving means and shows same immediately prior to when the corresponding weighted follower member normally overlying the front column of vertically stacked merchandise article containers drops into gravity-caused engagement therewith in the manner clearly shown in FIGS. 3 and 4 so that a dispensing operational sequence of the type illustrated in FIGS. 8 and 9 can be performed even though all of the front merchandise article containers have been previously dispensed and only rear merchandise article containers remain.

One exemplary embodiment of the novel vending machine of the present invention comprises an upstanding housing or cabinet means, such as is generally designated by the reference numeral 20, which in the example illustrated, comprises an upper housing or cabinet portion 20U and a lower housing or cabinet portion 20L adapted to be suitably vertically joined together by fastening means, such as the threaded fasteners indicated at 22. In the exemplary arrangement illustrated, each of said upper and lower housing or cabinet portions 20U and 20L is of substantially rectangular or parallelepiped shape and is made of sheet metal, although it may be made of any suitable material and may be made in the form of a single vertical cabinet rather than in the form of the two vertically adjacent cabinet portions 20U and 20L, if desired. In other words, the construction of the housing or cabinet 20 is merely exemplary and may be modified substantially within the broad scope of the present invention.

The exemplary upper cabinet or housing portion 20U has a hollow interior merchandise chamber 24 defined therein and is provided with a controllably openable and closable and controllably lockable front access door 26 which can be opened in order to provide convenient front access into said interior merchandise chamber 24 when desired.

In the exemplary form illustrated, said front access door 26 has a key-operated lock 28 adjacent to the top thereof which operates a rotary locking projection 30 positioned behind the door 26 and which is adapted to be controllably rotated into locking engagement with an inwardly

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projecting retaining or locking lip 32 carried by the remaining rigid part of the upper housing or cabinet portion 20U.

The lower end of the access door 26 is provided with an inwardly and downwardly directed effective pivotal engagement flange 34 which is adapted to be first positioned over and engaged with respect to a laterally directed locking lip 36 comprising a part of the remaining rigid part of the upper housing cabinet portion 20U.

Said access door 26 has rearwardly directed side and top edge flanges 38 which encompass the corresponding edge portions of the rigid or fixed remaining part of the upper housing or cabinet portion 20U in an edge-compressing or covering manner. This provides a convenient access door construction and arrangement to allow easy access into the interior chamber 24 by a vending machine serviceman whenever desired for the purpose of replenishing a depleted supply of merchandise article containers and for the purpose of removing coins, and yet will prevent unauthorized access thereinto by other persons.

The lower cabinet or housing portion 20L may be of similar construction and may have a similar front access door 26' provided with a similar lock 28', locking projection 30', and lower engagement lip portion 34'. In fact, the access door construction of the lower housing portion 20L may be substantially identical to that of the upper housing portion 20U described in detail above and, therefore, corresponding parts thereof are indicated by similar reference numerals, primed, however, and no further and repetitive description thereof is thought necessary or desirable.

The lower cabinet portion 20L may be interiorly provided with a plurality of shelves 39 for storing additional merchandise article containers, repair or replacement parts for the vending machine, or any other desired items. If desired, the lower access door 26' may be positioned at the back or either side of the lower housing portion 20L or may be removed entirely, if desired, to allow front access, side access, or rear access thereinto by the store owner or proprietor of the establishment where the vending machine is located.

The upper housing or cabinet means portion 20U is provided within the hollow interior merchandise chamber 24 thereof with a pair of forwardly and rearwardly adjacent, vertically directed merchandise article container receiving and vertical stacking guide channel means, such as generally designated at 40 and 42 in FIG. 2.

Actually, in the exemplary three-unit form of the invention illustrated, there are three such pairs of forwardly and rearwardly adjacent stacking guide channel means 40 and 42 and the intermediate and left pairs thereof are shown in FIGS. 5 and 6 in addition to the right pair thereof shown in FIGS. 2, 3, 4, 8, and 9 in addition to FIGS. 5 and 6. However, it should be clearly noted that the vending machine may comprise only one such pair of stacking channels 40 and 42, in certain forms thereof, or may comprise any desired number of pairs of stacking guide channel means.

It will be noted that each of said stacking guide channel means 40 and 42 is formed of, or defined by, sheet metal material which, in the exemplary form of the invention illustrated, is made up of a plurality of U-shaped and Z-shaped members suitably joined together by welding, mechanical fasteners, or otherwise, and rigidly vertically mounted in upstanding relationship above a floor panel member 44, which is rigidly positioned within the interior chamber 24 extending across and between opposite side walls of the upper housing or cabinet portion 20U. The structure of each of said three pairs of forwardly and rearwardly adjacent vertical stacking guide channel means 40 and 42 is most clearly shown in FIG. 5 and the mounting thereof on said floor panel is most clearly shown in FIG. 2.

It will be noted that each of said front stacking guide

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channel means 40 has a front opening or vertical slot 46 which extends the complete vertical height thereof and has a similar rear opening or vertical slot 48 which extends the complete vertical height thereof and which communicates directly with the interior of the corresponding rear stacking guide channel means 42 along the complete vertical height thereof. However, the rear face of each of the rear stacking guide channel means 42 is not similarly open, but is closed by a continuous vertical rear wall means 50 which extends between, and is fastened to, opposite side walls of the upper housing or cabinet portion 20U.

Thus, it will be seen, as is best shown in FIG. 5, that each forwardly and rearwardly adjacent pair of stacking guide channel means 40 and 42 is of substantially rectangular configuration as seen in top plan view such as to be adapted to vertically receive and vertically stack therein in a flat relationship, and in corresponding front and rear columns, a plurality of similarly sized and substantially rectangularly shaped merchandise article containers, such as designated by the reference numeral 52. The front column of such vertically stacked merchandise article containers 52 is generally designated by the reference numeral 52FC while the rear column thereof is generally designated by the reference numeral 52RC.

Each of the stacking guide channel means 40 and 42 of each pair thereof has a laterally enlarged merchandise-article-container transfer opening 54 of substantially rectangular configuration as seen in front or rear elevation and which is laterally wider than the corresponding overlying intermediate opening 48, as is most clearly apparent from careful comparison of the showing of FIG. 6 with respect to the showing of FIG. 5. Indeed, said transfer opening is very slightly wider than the longest dimension of any one of the flat stacked merchandise article containers 52, and said transfer opening 54 is slightly higher than the vertical thickness of the merchandise article container 52, thus making it possible for the bottom merchandise article container 52 of the front column 52FC thereof to be rearwardly moved through the transfer opening 54 into the rear stacking guide channel 42 in a manner which will be described hereinafter.

Each rear stacking guide channel means 42 is provided with a rear merchandise-article-container-discharging egress opening 56 which has a shape substantially similar to that of the previously-described transfer opening 54 and thus is of a size sufficient to allow a rear bottom merchandise article container 52 to be rearwardly moved through said rear egress opening 56 whereby to be discharged downwardly, under the action of gravity, onto the downwardly forwardly inclined merchandise article container discharge chute means, generally designated at 58, which extends downwardly and forwardly toward the front of the upper housing portion 20U and extends through a transverse front opening 60 therein and there is provided with, and terminates in, a forwardly and upwardly open and accessible removal tray means 62 from which a dispensed or vended merchandise article 52 can be manually removed by a person who has purchased same by way of coin-initiated operation of the vending machine.

It should be noted that the bottom of the previously-mentioned front opening or vertical slot 46 into each of the front stacking guide channel means 40 effectively comprises what might be called a front actuation opening lying immediately above the level of the bottom floor panel 44 and substantially aligned with the immediately rearwardly positioned transfer opening 54 and completely rearwardly positioned discharging egress opening 56 so that a rearwardly directed actuation member 64 controllably slidably carried by the manually operable coin-receiving means of the slide type, generally designated at 66, may be forcibly rearwardly moved through said front actuation opening 46 when a proper coin has been placed in the corresponding coin-receiving aperture 68 and the

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slide handle 70, which is positioned at the forward end of said actuating member 64, is forcibly rearwardly moved. This will result in two things occurring. First, the coin will be slidably moved through the fixed coin receiver housing 71 and will drop downwardly out of the bottom thereof into a lower coin-receiving tray or trough 72 for later removal by a vending machine serviceman. Second, the rear end of the actuating member 64 will be forcibly moved rearwardly through said front actuation opening 46 at the bottom of the corresponding front stacking guide channel means 40 and will forcibly abut a front bottom merchandise article container 52 and start to move same rearwardly through the corresponding transfer opening 54, as is shown in the act of occurring in FIG. 8. The forcible rearward movement of the bottom front merchandise article container 52 through the transfer opening 54 will result in its forcibly rearwardly displacing the rear bottom merchandise article 52 through the rear discharging egress opening 56 so that it will drop downwardly onto the previously mentioned discharge chute means 58 for gravity-caused movement to the front-positioned merchandise removal tray 62 previously mentioned. This is shown in the act of occurring and in an initial stage thereof in FIG. 8 and is shown in a subsequent stage thereof in FIG. 9 just prior to completion of the vending operation just described.

It will be noted that the egress opening 56 is provided with a resilient forcibly deflectable gate member 74 which merely comprises a flat, resilient, spring-like member of either metal or plastic suitably mounted in a rear lip or flange 76 between spaced opposed portions thereof lying immediately behind an aperture or hole 78. This provides one convenient type of resilient gate member which merely acts to normally maintain the rear bottom merchandise article container 52 in its proper vertically aligned position with respect to the plurality of overlying merchandise article containers until such time as it is forcibly rearwardly displaced in the manner just described above and illustrated in sequence in FIGS. 8 and 9 for the purpose of bringing about the vending or dispensing thereof. However, each of the three gate members 74 may be modified substantially within the broad spirit and scope of the present invention and, in certain forms thereof, may be eliminated entirely.

It should be noted that the transfer opening 54 and the egress opening 56 in each case is of a vertical height greater than the vertical height of one merchandise article container 52 but less than the vertical height of two merchandise article containers 52, thus allowing only one merchandise article container 52 to be dispensed during any given vending or dispensing operation.

It should also be noted that the rear portion 44R of the bottom panel is displaced upwardly slightly above the level of the front portion 44F thereof. This provides an arrangement such that the rear edge of the front merchandise article container 52 strikes or abuts the front edge of the rear merchandise article container 52, as is best shown in FIG. 8, in a slightly downwardly displaced relationship with respect thereto, thus avoiding any possibility of the rear edge of said front merchandise article container 52 inadvertently becoming engaged with the lower front edge of the second-from-the-bottom rear merchandise article container 52, which would have the effect of jamming the apparatus and preventing the completion of a dispensing operation. This is most clearly shown in FIG. 8.

Each front column 52FC of the merchandise article containers 52 normally carries thereon, within the corresponding front stacking guide channel means 40, a weighted follower member 80 which facilitates the gravity-feeding downwardly of the underlying front merchandise article containers 52 and which, after all of said front merchandise article containers 52 have been dispensed, reaches the bottom of the front stacking channel means 40, as is clearly shown in FIG. 3. When this occurs, a

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pair of engagement hook means 82 of said weighted follower member 80 drops over and engages the corresponding front actuation member 64 comprising a part of the corresponding coin-receiving means 66, as is clearly shown in FIG. 3 and in perspective just prior to such gravity-caused engagement in FIG. 10.

When in the engaged position of FIG. 3, said weighted follower member 80 comprises an effective extension of the actuating member 64 and functions as a replacement for a front bottom merchandise article container 52 for the purpose of a dispensing operation in the manner previously described and illustrated in sequence in FIGS. 8 and 9. In other words, under such circumstances, the front portion of said weighted follower member 80 is adapted to be moved rearwardly through the transfer opening 54 and to rearwardly displace the rear bottom merchandise article container 52 through the egress opening 56 whereby to dispense same in a manner similar to that previously described in connection with FIGS. 8 and 9. However, when the slide handle 70 of the coin-receiving means 66 is pulled outwardly again, the weighted follower 80 will return to its former position as shown in FIG. 3 and will be ready for use in the next or subsequent dispensing operation.

A combination weighted follower means and inactivation means 84 is adapted to rest upon a top merchandise article container 52 in any given rear column 52RC thereof and to lie within the corresponding rear stacking guide channel means 42 whereby to gradually descend therein after each dispensing operation of said rear column of merchandise articles 52RC until it reaches the bottom thereof, as is clearly shown in FIG. 4, where it effectively inactivates the previously-mentioned actuating means 64 and the corresponding slide-type coin-receiving means 66 by reason of said weighted follower and inactivation means 84 having a top edge portion 86 which extends upwardly too high to rearwardly pass through the egress opening 56. Thus it completely blocks any further operation of the corresponding coin-receiving means 66 and will not even allow a coin placed in the coin aperture 68 to be moved into the interior of the fixed housing portion 71 thereof within the upper portion 20U of the vending machine. As soon as a prospective purchaser attempts to do this and finds that he cannot do so, he will realize that the particular merchandise article container desired is out of stock and he will retrieve his coin from the coin aperture 68, which is usually provided with a reduced-size bottom aperture to facilitate such a coin retrieval operation.

It should be noted that the invention is not limited to the use of the slide-type coin-receiving means, such as generally designated at 66. Actually, various other types of coin-receiving mechanisms such as types having rotary operating handles, which bring about the dispensing operation after the insertion of a proper coin, may be employed in lieu of the slide-type coin-receiving means generally designated at 66 and various other types of coin-receiving and dispensing operation initiating means may be employed in lieu thereof and may be directly mechanically coupled either rotatively, linearly, or otherwise, or may be electrically coupled with respect to the actuating means. In this latter case, it may only be necessary to have a single coin-receiving mechanism with a selector for choosing any particular pair of double columns from which the merchandise article container will be dispensed. Also, in some forms of the invention, no coin-receiving apparatus at all need be employed and the actuating means may be operated without being initiated by the receipt of a coin and this may be done mechanically, electrically, or otherwise in various different manners generally similar to those referred to above in the coin-operated form of the invention, or in any other controllably operable way.

It should be understood that the figures and the specific description thereof set forth in this application are for

the purpose of illustrating the present invention and are not to be construed as limiting the present invention to the precise and detailed specific structure shown in the figures and specifically described hereinbefore. Rather, the real invention is intended to include substantially equivalent constructions embodying the basic teachings and inventive concept of the present invention.

I claim:

A vending machine for sequentially vending bottom-positioned merchandise article containers from two vertically stacked adjacent columns thereof, comprising: a housing and cabinet means having a hollow interior merchandise chamber therein, said housing and cabinet means being provided at a location within said merchandise chamber with a pair of forwardly and rearwardly adjacent vertically directed merchandise article receiving and vertical stacking guide channel means adapted to vertically receive and vertically stack therein in corresponding front and rear columns a plurality of merchandise article containers, each of said stacking guide channel means of said pair thereof being provided with a floor panel at the bottom thereof and an intermediate merchandise transfer opening communicating the rear of the front one of said pair of stacking guide channel means with the front of the rear one of said pair of stacking guide channel means, said rear stacking guide channel means being provided with a rear merchandise discharging egress opening immediately above the level of said floor panel and transversely substantially aligned with said merchandise transfer opening, the front one of said pair of stacking guide channel means being provided with a front actuation opening immediately above the level of said floor panel and substantially transversely aligned with the immediately positioned merchandise transfer opening and the rearwardly positioned merchandise discharging egress opening; and a controllably operable rearwardly directed actuating means horizontally transversely aligned with said front actuation opening for forcible rearward movement therethrough into abutting contact with a bottom merchandise article container adapted to be positioned at the bottom of a front column thereof and for consequent forcible rearward movement of said bottom merchandise article container rearwardly through said merchandise transfer opening and into forcible abutment with a similar merchandise article container adapted to be positioned at the bottom of a rear column of merchandise article containers for forcible discharging thereof through said rear merchandise discharging egress opening; said bottom floor panel being completely closed and having a completely closed front portion underlying the front one of said pair of stacking guide channel means and having a completely closed rear portion underlying the rear one of said pair of stacking guide channel means, said rear portion of said bottom floor panel being displaced upwardly slightly above the level of said front portion of said bottom floor panel and providing an arrangement such that a second from the bottom merchandise article container adapted to be positioned at the bottom of a rear column thereof will be substantially above the level of a bottom merchandise article container adapted to be positioned at the bottom of a front column thereof whereby forcible rearward movement of a front bottom merchandise article container rearwardly through said merchandise transfer opening and into forcible abutment with a similar merchandise article container adapted to be positioned at the bottom of a rear column of merchandise article containers will positively pass below and not abut a second from the bottom rear-

positioned merchandise article container; a merchandise article container-simulating weighted follower member adapted to be positioned in gravity-caused top engagement with a top merchandise article container adapted to be stacked in a front column thereof in said front stacking guide channel means and provided with gravity-operated engagement means for engagement with said actuating member when the last merchandise article container in the front column thereof has been transferred through said merchandise transfer opening to the bottom of the rear column of merchandise article containers and thereafter being operable as a forwardly and rearwardly reciprocable abutment coupling member and effective extension for said actuating member for sequentially rearwardly abutting the bottom merchandise article container of said rear column thereof for forcibly discharging same through said rear merchandise discharging egress opening in response to each rearward actuation of said actuating member; said gravity-operated engagement means comprising an upwardly recessed, partially cut-away, outwardly projecting engagement plate portion, integrally carried by the outer end of said merchandise article container-simulating follower member being provided with a pair of downwardly directed, laterally spaced engagement hook means shaped and sized for gravity-operated, downward slip-over engagement with respect to said actuating means weighted follower means and inactivation means adapted to rest upon a top merchandise article container in said rear column thereof and to gradually descend said rear stacking guide channel means after each dispensing operation of said rear column of vertically stacked merchandise article containers until it reaches the bottom of said rear stacking guide channel means where it effectively inactivates the actuating means by reason of its being provided with a top edge portion extending upwardly too high to rearwardly pass through said rear merchandise discharging egress opening; said merchandise transfer opening is of a vertical height greater than the vertical height of one vertically stacked merchandise article container but less than the vertical height of two vertically stacked merchandise article containers, said merchandise discharging egress opening being of a vertical height greater than the vertical height of one vertically stacked merchandise article container but less than the vertical height of two vertically stacked merchandise article containers; and being provided with a resilient forcibly outwardly deflectable gate member positioned across said merchandise discharging egress opening.

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