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[54] **NEWSPAPER VENDING MACHINE**

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[52] **U.S. Cl.** **221/298**, 221/279

[51] **Int. Cl.** **G07f 11/28**

[58] **Field of Search** 221/239, 246, 249, 221/255, 259, 279, 298, 299, 60

[56] **References Cited**

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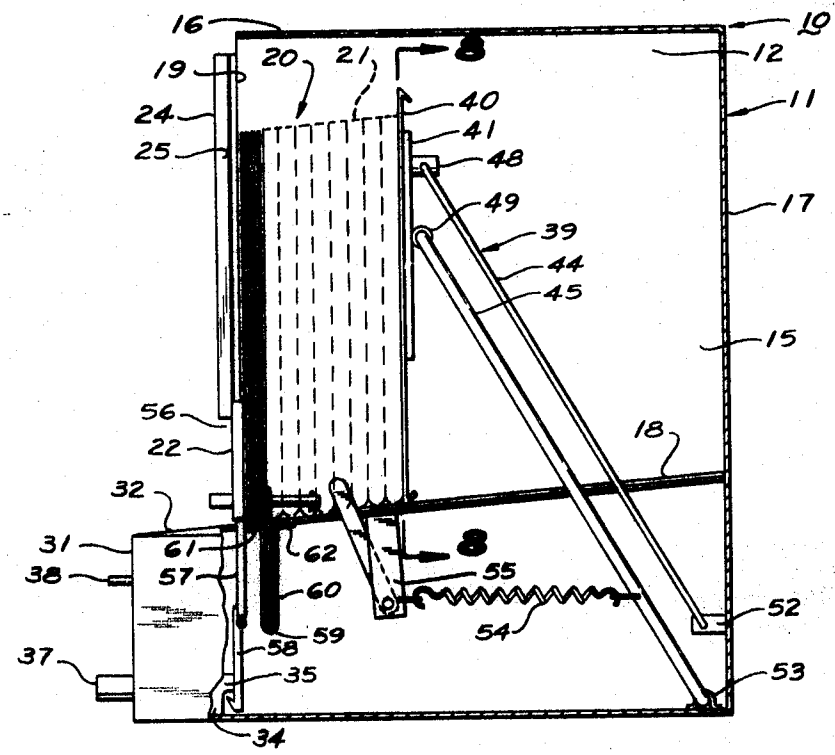
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Assistant Examiner—Thomas E. Kocovsky
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[57] **ABSTRACT**

A vending machine for articles such as newspapers and the like. The machine includes a chamber defining a storage magazine in which newspapers are arranged in a stack supported in a generally vertical orientation with their folded edges seated upon the inclined bottom wall of the chamber. A pusher plate assembly urges the stack of newspapers forwardly toward an opening that is normally closed by a dispensing door. The door is locked in its closed position by coin-operated latch mechanism which releases the door when coil totaling the cost of a newspaper is deposited in the machine, thereby permitting the door to uncover the opening and enable the forwardmost newspaper in the stack thereof to be withdrawn. A separator connected with the door so as to move therewith is adjustably positionable in accordance with the thickness of the copies of any particular edition of the newspaper to enable it to be inserted between the forwardmost and next successive newspaper in the stack thereof whenever the dispensing door is opened. The separator forms a barrier guarding the opening to prevent all except the forwardmost paper to be withdrawn therethrough.

6 Claims, 9 Drawing Figures



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FIG. 1

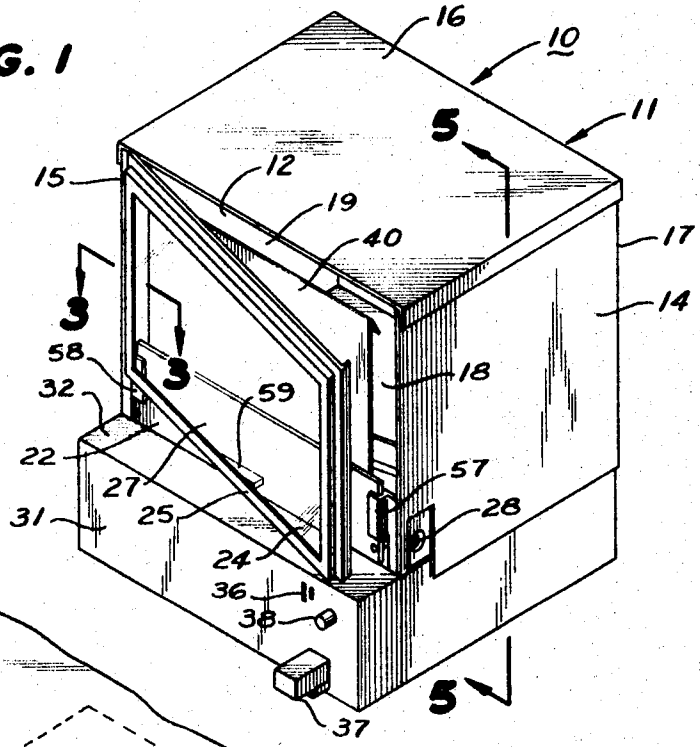
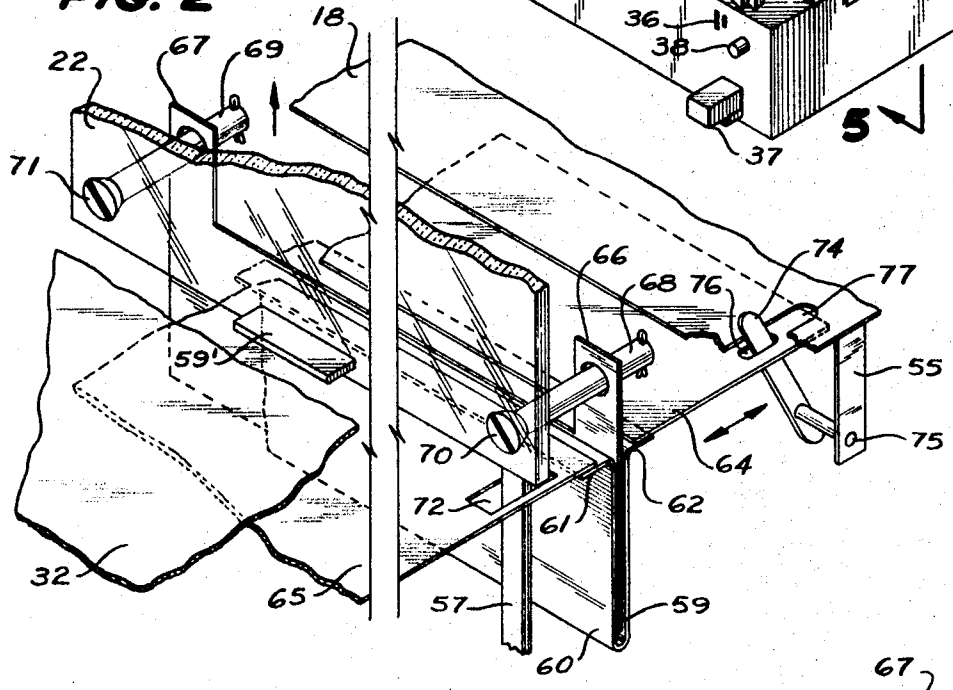


FIG. 2



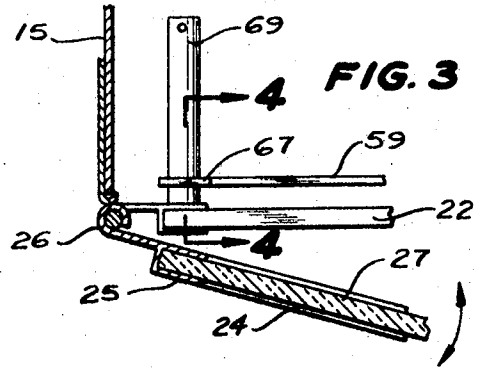


FIG. 3

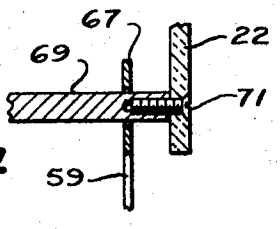
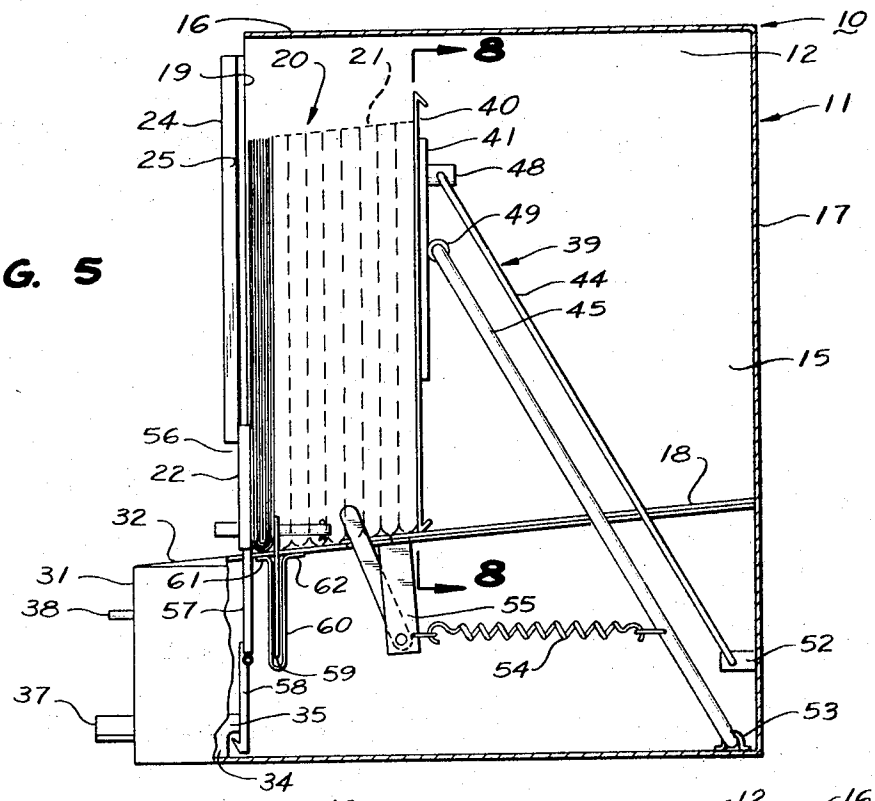


FIG. 4

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FIG. 5



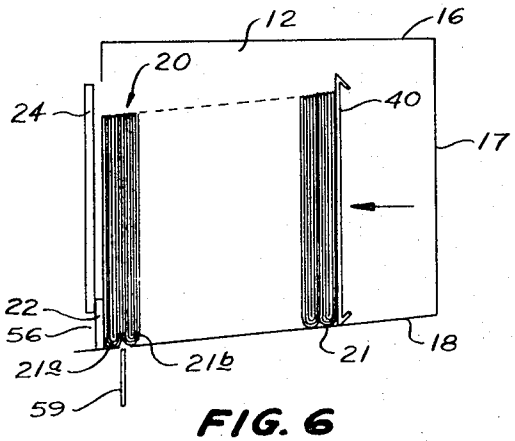


FIG. 6

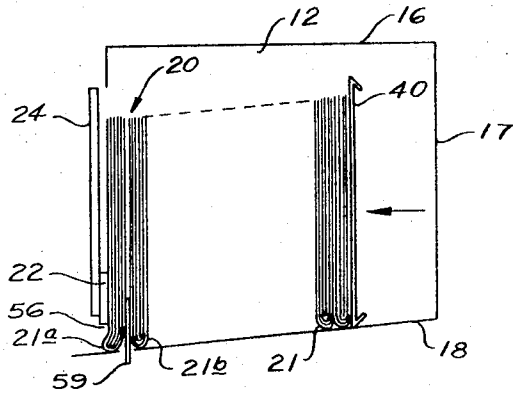


FIG. 7

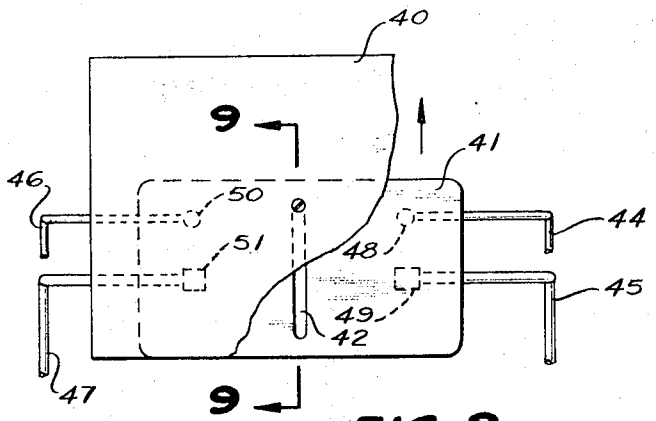


FIG. 8

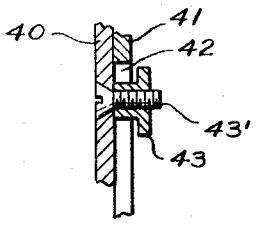


FIG. 9

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NEWSPAPER VENDING MACHINE

This invention relates to dispensing or vending machines and, more particularly, to a vending machine for newspapers and the like operative to permit removal of one copy of the newspaper whenever a coin or coins equivalent to the cost thereof are deposited in the machine.

Newspaper vending machines are now in very extensive use and take a variety of specific forms but in general, have a large magazine or chamber within which newspapers are stored and permit access to the newspapers therein through a door that is latched in the closed position thereof and is released only upon deposit in the machine of coin totaling the cost of a single copy of the newspaper. One of the difficulties with the presently used machines is that access to all of the newspapers stored therein is available once the machine is opened by deposit of the cost of a single copy of a newspaper. As a consequence, one or more newspapers may be withdrawn whenever the machine is opened which is a tremendous disadvantage that lends itself to considerably pilfering not only by customers or users of the machine but also by those servicing the same who may place less than the stated number of copies in the machine and assert that the shortage is due to users of the machine who have not paid for all of the copies taken therefrom.

An object, among others, of the present invention is to provide an improved vending machine for newspapers and the like which permits only one copy of a newspaper to be withdrawn from the machine by a customer who has deposited the cost of such copy therein.

Another object of the invention is in the provision of an improved dispensing machine of the type described which has a separator component movable between the forwardmost newspaper in a stack thereof stored within the machine and the next successive newspaper in such stack to provide a positive structural barrier restricting removal from the machine of all but the forwardmost newspaper whenever coin totaling the cost thereof is deposited in the machine.

Still another object is that of providing an improved machine of the type set forth in which the separator component is adjustable so that it can be accurately positioned in accordance with the thickness of any particular edition of the newspaper to enable insertion of the separator intermediate the forwardmost and next successive newspaper in such stack thereof.

A further object is to provide a vending machine as set forth in which newspapers are supported in a stack upon their folded edges in a generally vertical or upright orientation, and in which pusher plate mechanism is included in the machine and continuously biases such stack forwardly toward a dispensing opening which is normally closed by a dispensing door selectively movable between open and closed position upon deposit in the machine of the cost of a single copy of the newspaper.

Additional objects and advantages of the invention, especially as concerns particular features and characteristics thereof, will become apparent as the specification continues.

An embodiment of the invention is illustrated in the accompanying drawings, in which:

FIG. 1 is a perspective view of a vending machine embodying the present invention;

FIG. 2 is an enlarged, broken perspective view illustrating the interrelationships of certain of the components comprised in the vending machine shown in FIG. 1;

FIG. 3 is an enlarged, broken transverse sectional view taken along the line 3—3 of FIG. 1;

FIG. 4 is a broken longitudinally sectional view taken generally along the line 4—4 of FIG. 3;

FIG. 5 is a vertical sectional view taken generally along the line 5—5 of FIG. 1;

FIGS. 6 and 7 are diagrammatic views, somewhat similar to the sectional illustration of FIG. 5, respectively depicting different conditions of the machine in which the dispensing opening is closed to prevent removal of articles from the machine and is open to permit the initial or forwardmost article in any stack thereof to be removed from the machine; and

FIG. 8 is a broken vertical sectional view taken generally along the line 8—8 of FIG. 5.

The vending machine illustrated in the drawings is intended for use as a newspaper vending or dispensing machine operative to permit a newspaper to be withdrawn from the machine after the appropriate coin or coins have been deposited therein. In terms of its overall function or end result, the vending machine comprising the present invention is generally similar to those now in use in the sense that it provides a compartment adapted to receive a stack of newspapers therein and to which access is gained either by releasing a key-controlled lock used by one servicing the machine to stock it with newspapers or by depositing coin equivalent to the cost of a single copy of the newspaper so as to permit a copy to be withdrawn therefrom. As explained hereinbefore, however, the present machine differs from the presently used commercial machines in several respects one of which is in providing a positive barrier across the dispensing opening of the machine that permits only a single copy of the newspaper to be withdrawn after coin equaling the cost thereof has been deposited in the machine.

The dispensing or vending machine illustrated in the drawings is designated in its entirety with a numeral **10**, and it includes casing structure **11** providing a chamber **12** therein defining a storage magazine. The chamber **12** is closed by side walls **14** and **15**, a top wall or cover **16**, a rear wall **17**, and a bottom wall **18**. All of the wall components **14** through **18** comprise a part of the casing structure **11** which is provided with a large opening **19** along the front of the machine which affords access to the chamber **12** enabling a stack **20** of newspaper articles **21** to be placed within the chamber and supported upon the bottom wall **18** thereof.

The opening **19** extends substantially from the top wall **16** to the bottom wall **18**, and while provided along the front of the casing **11**, it could be located elsewhere as, for example, in the top wall **16**. As respects, its function as an access opening permitting a stack **20** of newspapers to be loaded into the chamber **12** and to permit unsold copies of a particular edition of the newspaper to be removed therefrom, the opening **19** essentially terminates a spaced distance above the bottom wall **18** and, more particularly, along the upper edge of a dispensing door **22**, the function of which will be described in detail hereinafter. The access opening **19** is covered by a closure door **24** formed, as shown best in FIGS. **1** and **3**, of a perimetric frame **25** hingedly secured to the casing structure **11** along one side thereof,

as shown at 26 in FIG. 3, and of a panel 27 that in the form shown is transparent so that the interior of the compartment 12 can be observed to enable a prospective purchaser of a newspaper from the machine 10 to determine before depositing coin therein whether it has been emptied of its articles.

It will be appreciated that the door 24 can be swung between the completely closed position thereof shown in FIG. 5 and an open position affording a relatively free access into the interior of the chamber 12, and the pivotal interconnection of the casing structure 11 and the door 24 as defined by the hinge mechanism 26 permits such movement of the door. Evidently, means are included in the machine 10 to prevent the closure door 24 from being opened except by authorized personnel, and such means usually takes the form of a key-controlled lock. As respects the machine 10, such lock (or other means) may be completely conventional and forms no part of the present invention. Accordingly, a typical lock device illustrated generally in FIG. 1 and is denoted with numeral 28.

As indicated in both FIGS. 1 and 5, the casing structure 11 is provided below the bottom wall 18 with a mechanism chamber or space 29 defined in part by the aforementioned side walls 14 and 15 and rear wall 17. Forming the lower closure for the mechanism compartment 29 is a base wall 30 disposed in substantially parallel relation with the aforementioned top wall 16. A front wall 31 which terminates at its upper edge in a ledge 32 located along the outer side of the dispensing door 22 effectively forms a continuation or part of the bottom wall 18 of the magazine chamber 12. A coin-operated latch mechanism 34 is located within the chamber 29 adjacent the front wall 31 thereof, and it functions in a conventional manner to accept a coin or coins totaling the cost of a single newspaper and to release a stop or abutment 35 forming part of the coin mechanism to permit a newspaper to be withdrawn from the machine 10 in a manner hereinafter explained. For purposes of this invention, the coin mechanism 34 may be completely conventional, and in addition to the stop 35 it includes the usual coin slots 36 located along the front wall 31 of the machine, a coin return receptacle 37 which may be disposed on the front wall 31, and a reciprocable plunger 38 operative to cause coins deposited in the slots 36 to be directed into the return receptacle 37. It will be observed in FIGS. 5 through 7 that the bottom wall 18 of the magazine chamber 12 is angularly disposed and is inclined downwardly and forwardly from the rear wall 17 of the casing structure to the front wall 31 thereof. The stack 20 of newspapers 21 is supported upon the bottom wall 18 such that the individual newspapers have a generally vertical orientation, as shown in FIG. 5, with the folded edge of each newspaper being in engagement with the bottom wall 18. The angular inclination of the bottom wall 18 is especially useful in two respects: first, because it imposes a gravitational force upon the stack 20 tending to move it forwardly within the chamber 12 toward the dispensing door 22; and second, because it tends to maintain the newspapers in the desired vertical orientation. The stack 20 is further urged forwardly toward the dispensing door 22 by a pusher or feeder plate assembly 39 which in part is located within the magazine chamber 12 and in part within the mechanism chamber 29 therebelow.

More particularly, the pusher plate assembly 39 includes a presser plate 40 that is disposed in a generally vertical orientation and may have the upper and lower edges thereof bent rearwardly and inwardly to provide finished edge portions therealong. The plate 40 is a flat planar component, and in contiguous juxtaposition therewith along the rear surface thereof is a flat force applicator plate or member 41 that is vertically reciprocable with respect to the plate 40, as indicated best in FIGS. 8 and 9. In this respect, the force applicator plate 41 has an elongated slot 42 formed therein along a vertical center line therethrough, and the slot 42 slidably receives a bearing 43 therein. The bearing 43 is internally threaded and forms a nut for a bolt 43' extending through an opening provided therefor in the presser plate 40 in alignment with the slot 42. Accordingly, the screw 43' fixedly attaches the bearing nut 43 to the presser 40 with the bearing nut extending through the slot 42, thereby making the force applicator plate 41 freely reciprocable in vertical directions relative to the presser plate 40. It will be evident, as shown best in FIG. 9, that the bearing nut 43' is equipped with a laterally extending annular flange overlying the marginal edge portions of the force applicator plate 41 along the edges of the slot 42 therein so as to prevent separation of the two plates 40 and 41.

The force applicator 41 is movably supported by linkage members defining a parallelogram configuration so that the two plates 40 and 41 are maintained in a generally vertical orientation as they move between the extreme rearward and forward positions thereof respectively adjacent the rear wall 17 and dispensing door 22 in urging a stack 20 forwardly within the magazine chamber 12 and in following such stack as it moves toward the door 22. The particular linkage structure shown includes upper and lower elongated links or rods 44 and 45 on one side of the chamber 12 and identical rods 46 and 47 on the opposite side thereof. The links 44 and 45 adjacent their upper ends are turned inwardly, as shown in FIG. 8, and extend through and are rotatably journaled in bearing supports 48 and 49 secured to the force applicator plate 41 and extending rearwardly therefrom. Similarly, the links 46 and 47 at the opposite sides of the compartment 12 are turned inwardly and are journaled in bearings 50 and 51 carried by the force applicator plate 41. At their lower ends, all of the links 44 through 47 are turned inwardly and are rotatably supported in respectively associated bearing structures located within the mechanism compartment 29 and adjacent the rear wall 17 of the casing structure, as shown in FIG. 5 illustrating the inwardly turned lower portions of the links 44 and 45 in association with bearings or journals 52 and 53 respectively secured to the rear wall 17 and base wall 30 of the casing structure 11.

It will be appreciated that all of the links 44 through 47 are located along the terminal edges of the bottom wall 18 so as to be freely movable in clockwise and counterclockwise directions, as viewed in FIG. 5, about the axes respectively defined by the bearings 52 and 53. Such swinging or pivotal displacements of the links cause the force applicator plate 41 to change its proximity with the bottom wall 18, being considerably more remote therefrom when the links are angularly displaced in a clockwise direction to bring the plate 41 into adjacency with the casing wall 17 than when the links are displaced in a counterclockwise direction to

bring the plates 40 and 41 into closer proximity with closure door 24 and dispensing door 22.

The aforementioned interconnection of the plates 40 and 41 defined by the slot 42 in the latter plate, bearing nut 44, and bolt 45 permits such vertical displacements of the force applicator 41 relative to the presser plate 40 as the links traverse the arcuate paths described about the respective axes defined by the bearings 52 and 53. The linkage system together with the plates 40 and 41 is resiliently biased in the direction of the doors 22 and 24 by helical tension springs located within the lower mechanism chamber 29, and one such spring 54 being shown which is secured at one end to the lower link 45 and at its opposite end to a depending bracket 55 attached to the bottom wall 18 and projecting downwardly therefrom into the chamber 29. Accordingly, the pusher plate assembly 39 is biased toward the left, as viewed in FIG. 5, to continuously urge the stack 20 of newspapers toward the dispensing door 22 so that the leading or initial newspaper 21 in the stack thereof is in substantially contiguous engagement with the dispensing door 22 along the inner surface thereof.

Although, as stated hereinbefore, the front end of the casing structure 11 is open substantially from the top wall 16 to the bottom wall 18, the access opening 19 is somewhat smaller in effective height and constitutes that portion of the opening lying behind the closure door 24. Accordingly, an additional opening is defined between the lower edge of the closure door 24 and bottom wall 18, and for purposes of identification such additional opening is denominated a "dispensing opening" and is designed with the numeral 56. The dispensing opening 56 is adapted to have each successive initial or forwardmost newspaper 21 at the leading end of the stack 20 withdrawn therefrom whenever the dispensing door 22 is opened, as shown in FIG. 7. In this respect, the dispensing door 22 is supported for reciprocable displacements along a vertical path by guide structures 57 and 58 defining a generally U-shaped channel seating the associated edge portion of the door 22 therein and through which the door is freely slidable between the open and closed positions thereof respectively shown in FIGS. 7 and 6.

The dispensing door 22 illustrated is a flat planar component extending essentially from side to side of the casing structure and equipped with a handle 59' to facilitate manual manipulation thereof in being moved between its open and closed positions. Advantageously, the dispensing door 22 is automatically returned to its closed position after being opened, and the weight of the door in combination with the weights of the components carried thereby, as explained hereinafter, having been found adequate to enforce return movement of the door into its closed position. However, should more positive closure means be desired they may be incorporated, as for example by securing tension springs either directly or indirectly to the dispensing door so as to bias the same downwardly toward its closed position. The door 22 may be formed of any suitable material, metal or otherwise, and in the form shown it is a transparent component so that articles 21 therebehind can be observed.

The dispensing door 22 is operatively associated with the coin-operated latch mechanism 34 so that the door can be opened only after the proper coin total has been deposited through the slot 36. In the particular machine 10 being considered, the interconnection of the door 22 with the latch mechanism 34 is accomplished by equipping the door with a depending strap or hanger 57 having pivotally attached to the lower end thereof a hook-shaped latch 58 releasably engageable with the stop or abutment 35 of the mechanism 34. In the position illustrated in FIG. 5, the cooperative stop and latch components 35 and 58 are engaged so that the dispensing door 2 is positively constrained against upward displacement into its open position.

However, when the appropriate coin total is deposited through the slots 36 into the coin-controlled latch mechanism 34, the abutment 35 will be conditioned to permit the latch component 58 to be displaced upwardly therepast, thereby permitting the door 22 to be opened. Upon return movement downwardly into the position shown in FIG. 5, the pivotal interconnection of hanger 57 and latch component 58 enables the latter to swing or rotate slightly in a counterclockwise direction, as viewed in this figure, so as to permit it to move downwardly past the cooperative abutment 35. Usually, a torsion spring associated with the pivotal interconnection of the hanger 57 and latch component 58 biases the latter in a clockwise direction so as to enforce thereon the latching position shown in FIG. 5.

The vending machine 10 further includes a separator 59 connected with the dispensing door 22 so as to move therewith in mechanically enforced synchronism between the retracted and extended positions respectively shown in FIG. 6 and 7 corresponding to the closed and opened positions of the dispensing door. In its extended position, the separator 59 is disposed intermediate any initial or leading article in the stack 20 and the next successive article so as to separate the two and at the same time provide a barrier across the dispensing opening 26 to permit only the leading article to be withdrawn therethrough. In its retracted position, the separator plate 59 is below the upper surface of the bottom wall 18 so as not to interfere with the stack 20 and permit the next successive article 21 to be advanced by the feeder assembly 39 into substantial engagement with the dispensing door 22 so as to become the next leading article in the stack 20.

The separator 59 is transversely extending flat, planar member supported for reciprocable displacements with the dispensing door 22 in a substantially vertical plane by a generally U-shaped guide structure 60 the upper edge portions of which are turned laterally, as shown at 61 and 62, and welded or otherwise attached to wall components 64 and 65 respectively underlying, in part, the aforementioned bottom wall components 18 and 32. The separator 59 is adjustable in longitudinal directions, as the arrow shown in FIG. 2, to enable the position of the separator to be tailored to the thickness of the particular articles 21 intended to be dispensed from the machine 10. That is to say, in the case of newspapers, they vary in thickness from edition to edition and from day to day depending, among other things, on the quantity of the advertisements carried in the newspaper on any particular day and on the number of inserts or sections comprising the newspaper on any day. Evidently, then, the separator plate 59, guide 60, and wall sections 64 and 65 must all be movable relative to the dispensing door 22.

In this reference, the separator 59 is equipped at the opposite ends thereof with upwardly extending ears 66 and 67 provided with relatively large apertures therein respectively passing support posts 68 and 69 there-

through. The openings in the ears **66** and **67** are slightly larger than the outer diameters of the support posts **68** and **69** so that free relative movement therebetween is afforded in longitudinal directions. The posts **68** and **69** are fixedly secured to the dispensing door **22** so as to move therewith and therefore, the separator **59** is forced to move with the dispensing door because of its interconnection therewith via the posts **68,69,** and ears **66, 67.** Respecting such connection of the support posts with the dispensing door, it may be observed in FIG. **4** that each post has a threaded bore extending thereinto at its outer end, and a screw extending through the dispensing door **22** thrededly engages such bore so as to clamp the post tightly against the inner surface of the door. The heads of the screws are advantageously countersunk into the door **22,** as shown in FIGS. **2** and **4,** and for purposes of identification such screws are respectively denoted with the numerals **70** and **71.** It will be evident that movement of the separator **59** in the longitudinal direction toward the dispensing door **22** is limited by abutment of the ears **66** and **67** with such door, and movement of the separator in the opposite direction may be limited by provided stops along the support posts **68** and **69** adjacent the inner ends thereof as, for example, by passing cotter pins therethrough, as shown in FIG. **2.**

The wall sections **64** and **65** are slidably supported in underlying relation with the respectively associated wall components **18** and **32** so that they are displaceable with the separator **59** and guide structure **60** whenever the separator is adjusted. For this purpose, the wall section **65** is provided with an elongated slot **72** therein through which the hanger **57** projects and which affords the requisite amount of relative movement between the wall section **65** and hanger **57.** For purposes of facilitating manual adjustment of the separator **59** to determine the position thereof, adjustment mechanism is provided, and it may take the form illustrated in FIG. **2** (duplicate adjustment mechanisms are provided along each side of the casing structure **11** and side walls **14** and **15** thereof, but only one such mechanism is illustrated).

The adjustment mechanism in the form shown comprises a lever **74** supported at its lower end on a pivot pin **75** secured to the aforementioned bracket **55** and extending inwardly therefrom. The lever **74** extends upwardly through a slot **76** provided for this purpose in the wall section **64,** and the slot is slightly longer in the longitudinal direction than the corresponding dimension of the lever **74** so as to accommodate change in the relative angular disposition thereof. The lever **74** also extends upwardly through a longitudinally elongated slot **77** in the bottom wall **18** which is sufficiently long to permit the complete range of adjustment desired for the separator **59.** It will be apparent that when the lever **74** is swung in opposite angular directions about the axis of the pin **75,** the wall section **64** will be slidably displaced relative to the bottom wall **18** and will carry with it the guide **60,** separator **59,** and wall section **65.**

Use of the machine **10** will be readily apparent from the forgoing description, but for convenience will be briefly summarized. Assuming the condition of the machine as it is shown in FIG. **1,** the closure door **24** is opened to provide access to the storage compartment **12** through the opening **19.** Accordingly, the door **24** may be swung completely open to permit a stack of newspapers to be pushed into the chamber **12** against the biasing force of the presser plate **40.** As heretofore explained, the newspapers are stacked in a generally vertical orientation upon the bottom wall of the chamber **12** with the folded edge portion of the newspapers seated thereupon. The presser plate **40** slides rearwardly to the extent necessary to accommodate the number of newspapers inserted into the chamber, and since the biasing force is of relative small magnitude, no significant resistance is experienced upon insertion of the stack of papers. The levers **74** are adjusted to accommodate the thickness of the particular edition of the newspapers being stacked within the chamber **12** so that the separator plate **59** is spaced from the dispensing door **22** by a distance approximately the thickness of any one newspaper. The door **24** is then closed to prevent access to the newspapers within the chamber except by authorized personnel able to release the lock **28,** or by one depositing into the slots **36** coin equal to the cost of a newspaper.

Ordinarily, the dispensing door **22** is latched in the closed position illustrated in FIG. **5** by cooperation of the interlocking stop and latch components **35** and **58.** However, when the appropriate number of coins are deposited into the coin mechanism **34,** the stop component **35** permits the latch element **58,** hanger **57** and door **22** to be displaced upwardly from the closed position diagrammatically illustrated in FIG. **7.** With the dispensing door **22** in its open position, the forwardmost or leading newspaper **21***a* in the stack **20** thereof can be withdrawn through the dispensing opening **56,** as depicted in FIG. **71.** For purposes of facilitating such withdrawal of each successive forwardmost newspaper, the ledge **32** is provided with a slight depression (not shown) at the center thereof to facilitate placement of the fingers beneath the newspaper so as to grip and withdraw the same through the opening **56.**

As the dispensing door **22** is displaced upwardly into its open position, the separator **59** moves therewith in mechanically enforced synchronism, and it is inserted between the forwardmost newspaper **21***a* and the next successive newspaper **21***d* in the stack thereof. The separator rises to an elevation such that it completely covers the opening **56** and provides a positive structural barrier preventing access to any newspaper except the leading newspaper **21***a.* Consequently, only a single newspaper copy can be withdrawn from the machine **10** during any one transaction in which coin of sufficient value is deposited in the slots **36** to release the latch mechanism **34.** After the forwardmost newspaper **21**a has been withdrawn, the door **22** is returned to the closed position thereof to ready the machine **10** for the next cycle of operation.

It will be observed that when the door **22** is closed, the separator **59** is forced downwardly therewith to a position below the bottom wall **18,** and the presser plate **40** under the biasing force of the springs **54** then causes the stack **20** to be advanced toward the dispensing door **22,** whereupon the newspaper **21***b* becomes the next successive leading or forwardmost newspaper in contiguous engagement with the door **22** forwardly of the separator **59.** The dispensing door **22** is necessarily closed before the machine can be readied for another cycle of operation, wherefore relience could be placed upon users of the machine to manually close the door. However, the weight of the door **22** separator **59,** and associated mechanism is generally adequate to return the door to the closed position thereof, but the

gravitational force can be assisted by springs, as heretofore explained, should this be desired.

While in the forgoing specification an embodiment of the invention has been described in considerable detail for purposes of making a complete disclosure thereof, it will be apparent to those skilled in the art that numerous changes can be made in such details without departing from the spirit and principles of the invention.

What is claimed is:

1. A vending machine for newspapers and like articles, comprising: casing structure providing a chamber therein having a bottom wall and defining a storage magazine adapted to receive a stack of such articles and support the same in a generally upright orientation with their folded edges in engagement with said bottom wall; said casing structure being provided with a large loading opening affording access to said chamber and being equipped with a closure door selectively movable between open and closed positions to enable such articles to be stacked within said chamber; said casing structure having a dispensing opening at the front thereof adjacent said bottom wall and through which each successive leading article at an end of such stack can be withdrawn one-by-one therefrom; a dispensing door supported by said casing structure for reciprocable displacements along a generally upright axis between open and closed positions to selectively uncover and cover said dispensing opening; and a separator of greater dimension along such axis than said dispensing opening and being connected with said dispensing door so as to move therewith into an extended position intermediate any such leading article and next successive article thereto when said dispensing door is opened to provide a barrier across said dispensing opening completely covering the same in axial extent and thereby permitting only the leading article in such stack to be withdrawn therethrough and also to protect said separator from manual manipulation and into a retracted position when said dispensing door is closed to permit any such next successive article to advance and become the leading article in such stack so that it can be withdrawn therefrom in the following cycle of operation.

2. The vending machine of claim **1** and further comprising a plurality of posts fixedly secured to said dispensing door and extending therefrom in the direction of the length of such stack, said separator being slidably mounted upon said posts, and adjustment structure connected with said separator for adjustable displacing the same along the length of said posts and such stack to enable the separator to be adjusted to the thickness of the articles forming such stack thereof.

3. The vending machine of claim **1** in which said bottom wall is angularly disposed and inclines downwardly and forwardly from adjacent the rear of said chamber toward the front thereof and said dispensing opening located thereat so as to impart a gravitational force component to such stack of articles urging the same forwardly toward said dispensing opening.

4. The vending machine of claim **3** and further comprising a pusher plate assembly continuously urging such stack of articles toward said dispensing opening in combination with the aforesaid gravitational force component provided by said inclined bottom wall, said pusher plate assembly including a pressure plate engageable with such articles, a force applicator plate connected with said pressure plate and being slidably related thereto, lever arms pivotally connected adjacent the opposite ends thereof to said force applicator plate and to said casing, and spring means operative between said pusher plate assembly and casing to resiliently bias the former toward said dispensing opening.

5. The vending machine of claim **1** in which said loading opening is generally disposed above said dispensing opening and dispensing door, said dispensing door being reciprocable between open upper and closed lower positions and said separator being reciprocable with said dispensing door so as to be in an upper extended position when said dispensing door is in its open upper position and in a lower retracted position when said dispensing door is in its lower closed position.

6. The vending machine of claim **5** in which said bottom wall is angularly disposed and inclines downwardly and forwardly from adjacent the rear of said chamber toward the front thereof and said dispensing opening located thereat so as to impart a gravitational force component to such stack of articles urging the same forwardly toward said dispensing opening.

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