Aug. 26, 1969 W. E. URAL 3,463,355

CAN AND BOTTLE VENDER

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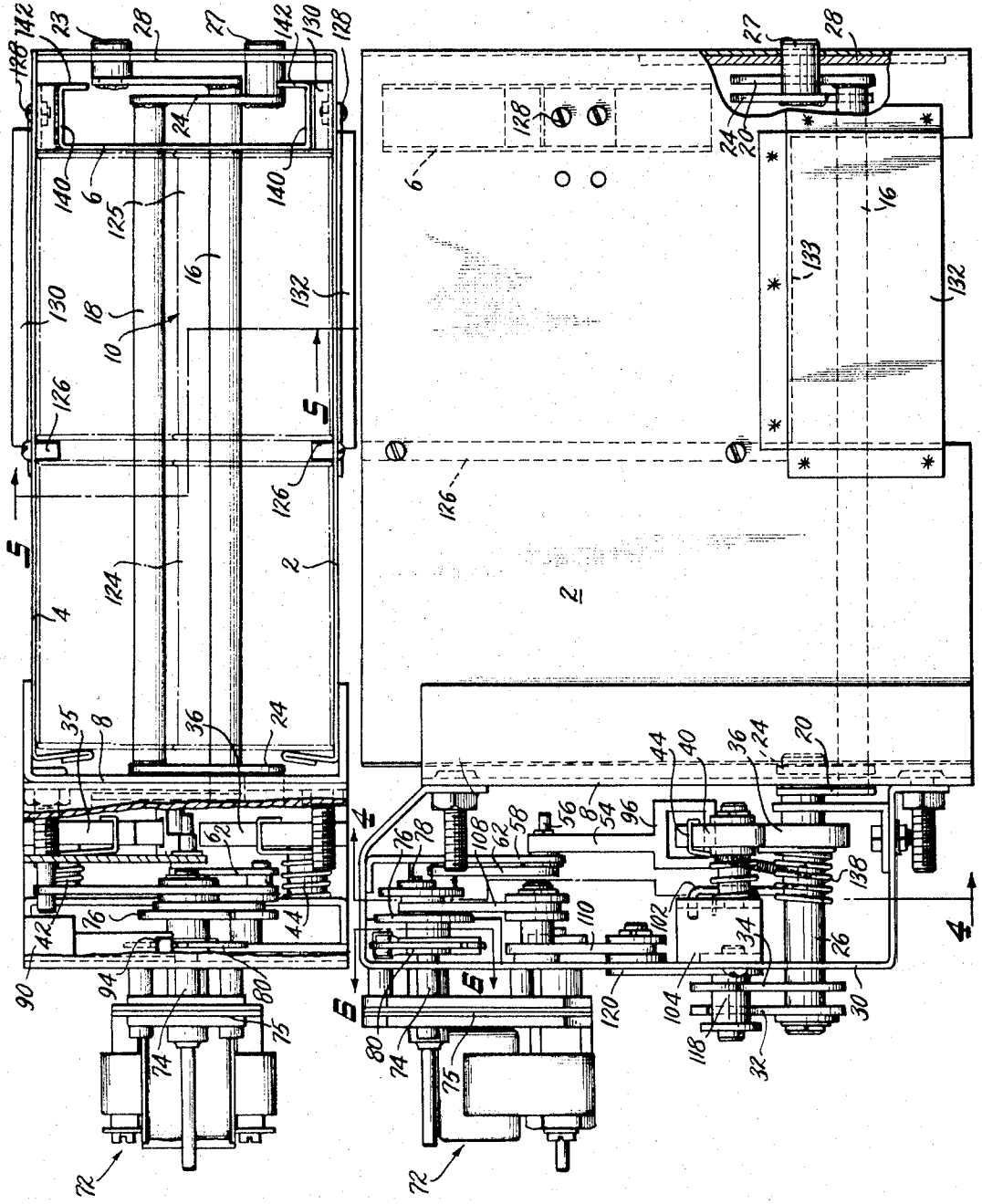


FIG. 1.

FIG. 2.

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Fig. 3.

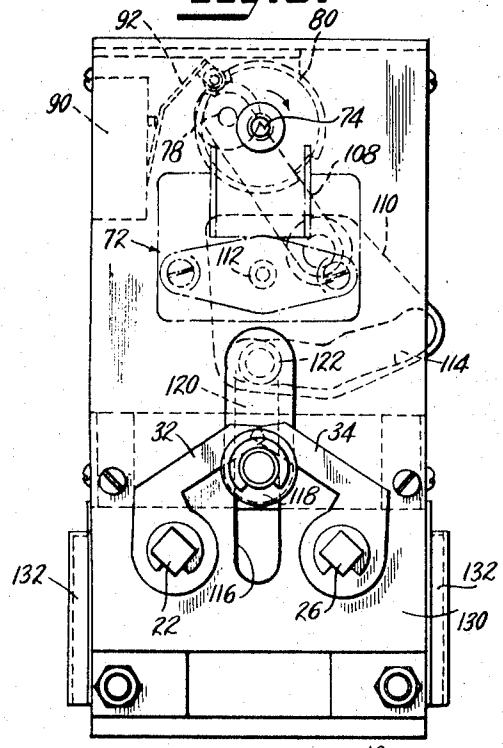
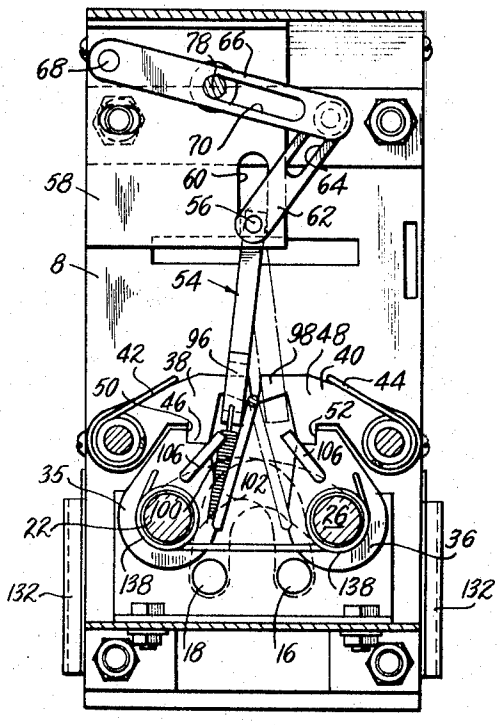


Fig. 4.



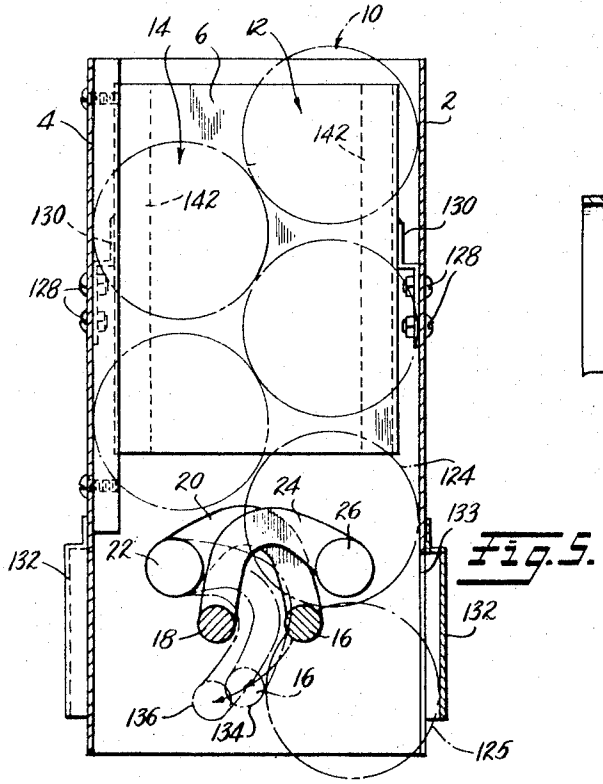


Fig. 5.

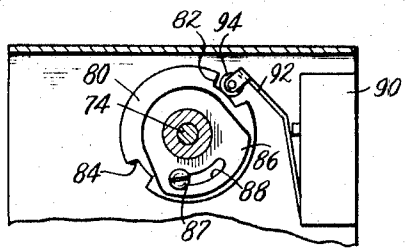


Fig. 6.

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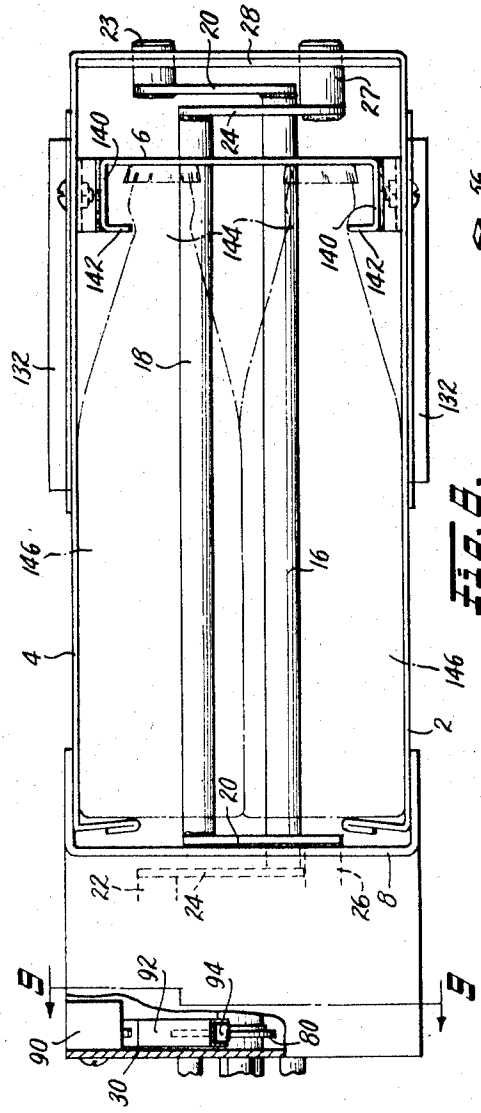


Fig. 2.

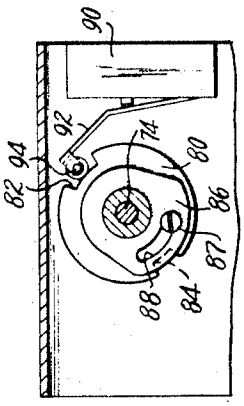


Fig. 3.

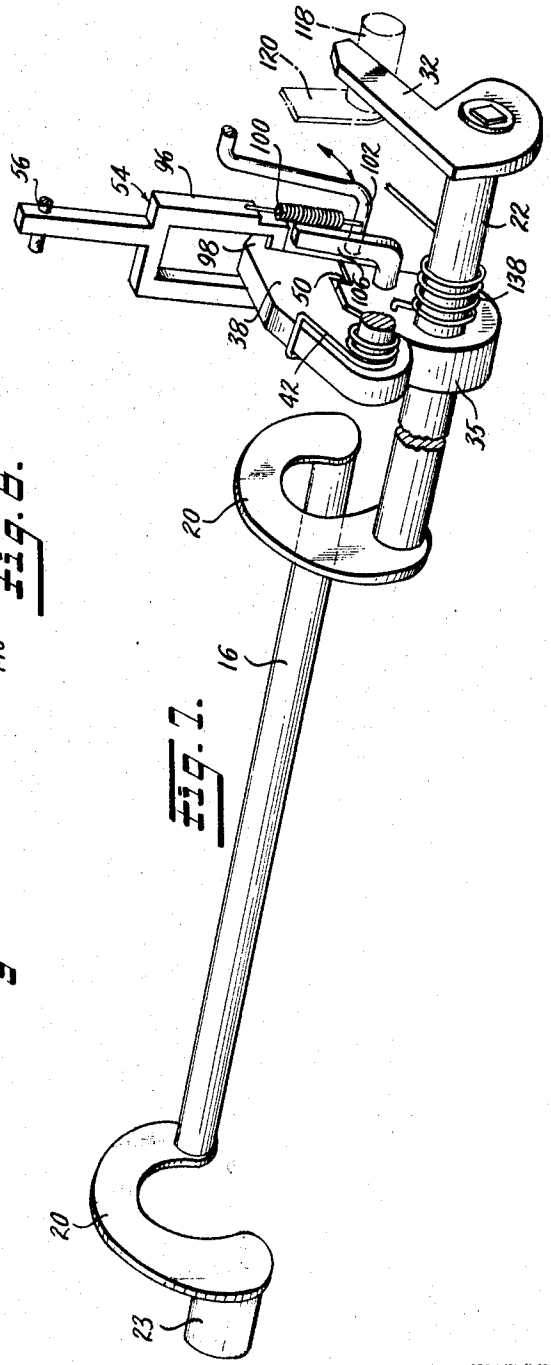


Fig. 1.

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CAN AND BOTTLE VENDER

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Int. Cl. G07f *11/08;* B65h *3/50;* B65g *60/50*

U.S. Cl. 221—67 16 Claims

ABSTRACT OF THE DISCLOSURE

A vending machine selectively adjustable to vend either cans or bottles. When cans are vended they are arranged in two columns, both supported by a single swinging bail. When the bail is swung only part way the lower can of one column can pass the bail by entering a pocket in a side wall of the compartment while the lower can of the other column is retained by the bail, for subsequent release upon further bail movement. The compartment confines at least two vertically staggered columns of articles with a swingable bail below each column. Each bail is separately latched in its upper position and the bails are further held in that position by a common control member. When a vending cycle starts one latch is released and the control member is then moved, at a controlled rate, to permit only one bail to swing. When the next vending cycle starts the other latch is released to alternate release of articles from the columns.

Background of the invention

This invention is in the field of vending machines and particularly machines for vending cans or bottles of beverages by dispesing a single container in response to the deposit of a coin or in response to some other initiating action.

In recent years it has become customary to package beverages in metal cans, which are usually considerably shorter than conventional glass bottles, for dispensing equal volumes of the beverage. It is also desirable to be able to vend the cans in vending machines of the general type heretofore used for bottles only. However, it has previously been necessary to build separately designed machines for bottles or for cans and this involved considerable cost and did not permit the selective use of a single vending machine for either bottles or cans. Also, the problem of theft from vending machines has always been a serious problem and much time and money has been spent in seeking to design a vending mechanism to prevent such unauthorized removal of containers from the machine.

Summary of the invention

The present invention discloses a vending machine which by simple adjustment of uncomplicated parts will adapt the machine to vend either cans or bottles. In general, the machine is provided with an upstanding compartment to confine and guide the containers and a swinging bail at the bottom of the column of articles to release the bottom article upon deposit of a proper coin or coins in a control mechanism. The rear wall of the compartment is adjustable so as to regulate the front to rear depth to accommodate either single bottles or a pair of cans in end-to-end relation. Removable ribs are provided for mounting on the side walls to axially separate and guide the cans when cans are dispensed but which can be removed to adapt the machine for bottles.

The arrangement is such that when bottles are being dispensed a motor driven actuating means operates through a complete cycle to permit swinging of a supporting bail out of the way, by the weight of the articles thereon, and then back up to a column-supporting position at each cycle of operation. When cans are being dispensed the actuator mechanism is adjustable to permit swinging of the bail through only a portion of a cycle of operation and a side wall of the compartment is formed with an opening near its lower end so that lowering the two columns of cans will permit the can from one column to enter the opening and drop past the bail while the latter retains the cans of the other column thereabove. Upon deposit of a subsequent coin, the bail is caused to swing through the remainder of its cycle and thus dispense the can from the other column and return to an upper position to retain all of the cans following cyclic operation of an adjacent bail. The invention contemplates a compartment adapted to support at least two vertical columns of articles in staggered relation, so that support of the bottom article of one column will support all the articles of both columns thereabove, which is a conventional arrangement.

Brief description of the drawings

FIG. 1 is a top plan view of a mechanism embodying the present invention;

FIG. 2 is a side elevational view partly in section of the mechanism shown in FIG. 1;

FIG. 3 is an end elevational view as viewed from the left of FIG. 1, the drive motor being shown in phantom lines for purposes of clarity;

FIG. 4 is a staggered vertical sectional view taken on the line 4—4 of FIG. 2;

FIG. 5 is a staggered vertical sectional view taken on the line 5—5 of FIG. 1;

FIG. 6 is a fragmentary vertical sectional view taken on the line 6—6 of FIG. 2 showing the configuration of the motor control cam;

FIG. 7 is a fragmentary perspective view of one of the bails and its associated mechanism;

FIG. 8 is a fragmentary top plan view partly in section similar to FIG. 1 showing a modification of the magazine when adapted for releasing bottles; and

FIG. 9 is a fragmentary vertical sectional view similar to FIG. 6 taken on the line 9—9 of FIG. 8 showing the motor control cam readjusted for releasing bottles.

Description of a preferred embodiment

As shown in the drawings, a unit of the mechanism of the present invention comprises sheet metal means defining an article compartment having side walls **2** and **4**, an adjustable rear wall **6**, and a stationary or fixed front wall **8**. As shown in FIG. 5, the walls are so dimensioned and arranged as to confine stacks of generally cylindrical articles **10** in laterally spaced columns **12** and **14**, with the articles of one column vertically staggered relative to those in the other and bearing against their respective side walls. As shown in FIGS. 1 to 5, the articles **10** are metal cans of beverages or the like and the invention will first be described with reference to an arrangement for sequentially dispensing such cans. As also shown in FIG. 5, a pair of longitudinally extending rod or bails **16** and **18** are arranged in the compartment so that, when in the positions shown, there is one bail beneath each of the columns **12** and **14**. Since the articles of the respective columns are staggered, only the lowermost articles of one of the columns will be in position to rest on one of the bails, and it will be supported thereby, which in turn supports all of the articles of both columns thereabove, as clearly shown in FIG. 5 in full lines and which in itself is conventional in the art. The bail **16** is supported by curved arms **20** for swinging movement about the axis of

front stub shaft 22 and rear stub shaft 23 whereas bail 18 is supported by curved arms 24 fixed to front and rear stub shafts 26 and 27, respectively, defining an axis about which bail 18 can swing. The rearmost stub shafts 23 and 27 are pivotally mounted in a stationary rear wall structure 28 (see FIG. 2) and the forward stub shafts 22 and 26 are journalled in the front wall 8 of the compartment and extend forwardly therefrom through an auxiliary front wall 30. As is apparent from FIG. 5, the curved shape of the arms 20 and 24 permits either bail to swing downwardly and inwardly without interfering with the other bail.

Referring now particularly to FIGS. 2 and 7, the stub shafts 22 and 26 extend forwardly out of the compartment previously described and are provided at their outermost ends with restraining arms 32 and 34 (see FIG. 3). Only one of the bails and its associated mechanism is shown in FIG. 7 for clarity of illustration, it being understood that the other is identical thereto but reversed as to hand. Also fixed to each stub shaft 22 and 26 are latch collars 35 and 36 (see also FIG. 4). Pivotally supported on brackets 104 secured to the auxiliary wall 30 is a pair of latch elements 38 and 40, each latch element being spring-biased, by springs 42 and 44, to project its latching shoulder 46 or 48 into a latching notch 50 or 52 on the corresponding latch collars previously described. Thus, with the bails 16 and 18 in their upper positions, as shown in FIGS. 4 and 5, their respective latches secure those bails in such upper position and since the latches cannot be reached by any person inserting his hand or arm into the dispensing opening of the machine, the latches serve as a security feature preventing unauthorized release of the bails. A latch release member 54 is swingably mounted on a pivot 56 extending through a bracket 58 (see FIGS. 1 and 4) secured to the front wall 8 and auxiliary wall 30. The pivot 56 is substantially midway between the latches 38 and 40 but somewhat thereabove. The pivot 56 extends through and is guided by a vertical slot 60 (FIG. 4) in bracket 58 and is secured at its forward end to a link 62 having a longitudinal slot 64 at its upper end. A further lever 66 is pivotally supported on bracket 58 by pivot pin 68 and is provided with a longitudinal slot 70 intermediate its ends. A suitable electric motor 72 (FIGS. 1 and 2) is mounted on the front face of auxiliary wall 30 and is provided with an output shaft 74 on which a disc 76 is fixed and which carries an eccentric crank pin 78 which extends through the slot 70 in lever 66. The output shaft 74 is driven by motor 72 through a reducing gear box 75 to produce relatively high torque at fairly low speed. Also fixed to the output shaft 74 is a cam disc 80 (see also FIGS. 6 and 9) having a pair of peripheral notches 82 and 84 therein. An adjustment or masking element 86 is positioned against one face of the cam disc 80 to be selectively rotated about the shaft 74 and which can be held in adjusted position by a suitable screw 87 threaded into the cam disc 80 through a slot 88 in the adjustment element.

When the apparatus is adjusted and set up for dispensing cans, which will be described first, the element 86 is fixed in the position shown in FIG. 6 wherein both notches 82 and 84 are exposed. A suitable switch 90 is mounted in fixed position adjacent the cam disc 80 and is provided with an actuating lever 92 having a cam follower roller 94 in position to ride on the periphery of the cam disc 80. While no electrical circuits are shown herein, it is contemplated that control circuits be provided so that upon deposit of a proper coin or coins in a conventional slot, a switch will be closed by the coin to energize motor 72. A suitable holding circuit is provided for holding the motor energizing circuit closed even after the coin operated switch is opened and the switch 90, previously referred to, is in that holding circuit and will hold the motor circuit closed until the roller 94 enters one of the notches 82 or 84. It is to be understood that, upon deposit of a proper coin, the motor 72 will be started and will immediately rotate the cam disc 80 sufficiently to cause roller 94 to ride out of notch 82 and thus close the switch 90 to continue the motor in operation until the roller 94 again drops into a notch. Referring again to FIG. 7, the latch release member 54 is shown as having a loop or yoke portion 96 at its lower end embracing a nose 98 on the latch element 38. A tension spring 100 (see also FIG. 4) holds the latch release member 54 in the described position. The lower end of the spring 100 is secured to a pivoted arm 102 which is pivoted at its upper end to the bracket 104 (see FIG. 2) mounted on the auxiliary wall 30. The arm 102 is freely swingable in a lateral direction, but it is apparent that with the parts in the position shown in full lines in FIG. 4, they will stay in the illustrated position until moved therefrom. Also fixed to latch collar 35 is a generally radial finger 106 arranged to engage the arm 102 when stub shaft 22 swings clockwise from the position shown in FIG. 4.

Referring now to FIG. 3, the crank pin 78, previously described, pivotally supports one end of a further link 108, which is pivotally joined at its lower end to a swingable cam plate 110. The plate 110 is pivotally supported on the auxiliary wall 30, at 112 and is provided with a cam slot 114 extending along but inwardly of its lower edge. The auxiliary wall 30 is provided with a vertical central guide slot 116 (see FIG. 3) along which control member 118 is slidably guided. The control member 118 is in the form of a pin or cylinder extending forwardly below the restraining arms 32 and 34, previously referred to. The control member 118 is carried by a link 120 extending upwardly therefrom and which is provided with a cam follower 122 extending inwardly through slot 116 into the cam track or groove 114 in cam plate 110.

Referring to FIGS. 1 and 2, the apparatus is shown as set up for vending cans 10 as previously described, and it will be noted that each side of the compartment defined by the side walls confines two columns of cans, the two columns comprising forward or front cans 124 and rear cans 125 axially aligned with the corresponding front cans and at the same level in the compartment. The cans 124 and 125 are axially separated by removable ribs 126 removably secured to the side walls 2 and 4, respectively. The ribs 126 are substantially midway between the front wall and rear wall 6 when the latter is adjusted to the position shown in FIGS. 1 and 2 so that the cans 124 and 125 are confined to substantially vertical columns but free to slide vertically therein. A similar pair of columns of cans bear against the opposite side wall 4, in the conventional manner, and as indicated in FIG. 5.

The rear wall 6 is removably supported between side walls 2 and 4 by screws 128 and brackets 130 (FIGS. 1 and 5) so that its forward face will bear against the rear ends of the cans 125.

Still referring to FIGS. 1, 2 and also FIG. 5, the side walls 2 and 4 are provided adjacent their bottom portions and opposite the rear column of cans 125, with outwardly offset wall portions 132 defining pockets or wide regions in the compartment and which cover openings 133 in the side walls 2 and 4. By referring to FIG. 5 and the full line showing therein, it will be seen that bails 16 and 18 are both in their upper or locked positions with bail 16 extending beneath both right hand columns of cans 124 and 125 and bail 16 supports both those columns. Since the columns on opposite sides of the compartment are laterally overlapped as shown, the bail 16 supports the entire stack of cans in the compartment and no cans or weight bear on the bail 18 at this time. When a purchaser deposits a proper coin in the usual coin control mechanism (not shown) it will be effective to close a circuit through motor 72 and start the same in operation. As soon as the motor starts to turn, it also turns cam disc 80 sufficiently to cause roller 94 to rise out of groove 82 and thus close the holding circuit which includes switch 90. As shown in FIG. 3, wherein the parts are illustrated in their stopped position between complete cycles, the crank pin 78 is somewhat below its

uppermost position, that is it is somewhat to the left of motor output shaft **74** and rotation of the motor causes the shaft **74** to rotate clockwise, as seen in FIG. 3, and as indicated by the arrow thereon. The initial portion of rotation of the shaft **74** causes crank pin **78** to also rotate clockwise and during this initial movement the crank pin **78** moves upwardly from the positions of FIGS. 3 and 4. This initial upward movement of crank pin **78** acts through link **108** to swing cam plate **110** slightly counterclockwise, but due to the shape of the cam groove **114**, the control member **118** rises only slightly and securely holds both restraining arms **32** and **34** against downward swinging movement. Also, during initial upward movement of crank pin **78** (FIG. 4) that crank pin causes link **66** to swing upwardly or counterclockwise and this pulls upwardly on link **62** and latch release member **54**. The loop or yoke **96** of release member **54** is shown as positioned under the nose portion of latch means **38** and so the described upward movement of the latch release member lifts the shoulder **46** and latch **38** out of engagement with notch **50** of collar **35** and thus releases shaft **22** for clockwise rotation. It is to be noted that shaft **22** has supporting bail **16** fixed relative thereto. However, even though latch **38** has been released, shaft **22** cannot yet swing clockwise because of the restraining effect of control member **118** on restraining arms **32** and **34**. Continued rotation of shaft **34** causes crank pin **78** to reach the uppermost point in its circle of travel, after which it begins to move downwardly and starts to lower the latch release member **54** and latch **38**. However, at the same time link **108** and cam plate **110** also swing to move the cam plate clockwise and due to the shape of the cam groove **114**, the control member slide **120** and control member **118** start to move downwardly and thus remove restraint from restraining arm **32** whereupon the weight of the cans on bail **16** causes that bail to swing downwardly and inwardly and to rotate shaft **22** clockwise. The shaft **22** rotates clockwise sufficiently to remove notch **50** in collar **35** from beneath the shoulder **46** of latch means **38** so that when the latter comes down with latch release member **54**, it can no longer engage the notch **50** but hits the collar behind that notch without interfering with continued clockwise rotation of shaft **22**. The motor **72** continues to rotate at a controlled rate and causes control member **118** to move downwardly at a rate which controls the rate of swinging movement of the bail **16**.

When dispensing cans arranged as described, the control cam is set or adjusted in the manner shown in FIG. 6 wherein both notches **82** and **84** are open. Thus, the cam plate **80** will rotate as the bail **16** is being lowered until roller **94** enters notch **84**, at which time the motor is stopped and bail **16** is held in its partially lowered position. This partially lowered position is shown by dotted lines at **134** in FIG. 5 and is so chosen that the spacing between the bail **16** when at position **134** and the inner face of the outwardly offset wall portion **132** (the pocket) is slightly greater than the diameter of the cans **10**. Thus, since the pocket **132** is offset only opposite the rear column of cans, the rear can **125** can drop past the bail **16** by moving outwardly through opening **133** and into the pocket **132** and drop to a delivery station. When the bail **16** is in the position at **134**, the forward can **124** cannot drop therepast since the bail **16** is not far enough from the side wall **2** and thus the front can is retained in the compartment and supports all the cans in both front columns. When the rear can drops past bail **16** both rear columns of cans move downwardly until the lowermost can of the left hand rear column (as viewed in FIG. 5) rests on bail **18** and all of the cans of the rear columns are then supported and retained. Thus, only a part of a complete cycle of operation of the shaft **74** has been dispensed and all parts are brought to rest. Even though the control member **118** is in a lower position, it restrains the shaft **122** and holds the bail **16** in its position at **134**. The stub shaft **26** and bail **18** cannot swing downwardly because latch **40** locks them in the upper position shown in FIGS. 3 and 4. Upon deposit of the next proper coin in the mechanism referred to, the motor **72** is again started to continue and complete a cycle of operation. During the completion of this cycle the control member is lowered farther by the cam groove **114** and permits bail **16** to swing from its position at **134** to a terminal position shown at **136**. In this terminal position the forward can **124** can drop past the bail to the delivery station since that bail is now sufficiently far from side wall **2**. During this release of the forward can **124**, all of the cans in front columns will be lowered until they, too, rest on the bail **18**. The crank pin **78** then continues from its lowermost position up to the final position shown in FIGS. 3 and 4, at which time roller **94** again enters notch **82** and the motor is stopped, having completed one full cycle of operation. During upward movement of the crank pin **78**, the control member **118** is pulled upwardly and forcibly swings restraining arm **32** counterclockwise until the motor is stopped if there is any attempt to hold bail **16** down. However, a return spring **138** is provided and normally causes shaft **22** to rotate counterclockwise to return bail **16** to its upper and latched position as soon as the weight of the cans is removed therefrom.

During the previously described downward swinging movement of bail **16**, the latch collar **35** and finger **106** secured thereon also swing clockwise. At some point during that swinging movement the finger **106** engages the toggle member **102** and forces it to swing from the full line position of FIG. 4 to the dotted line position shown. The toggle member **102**, spring **100** and latch release member **54** define a toggle linkage and it is clear that when **102** is in the dotted line position, its lower end is "off-center" and spring **100** then forcibly swings the yoke **96** of latch release member **54** to the dotted line position wherein it is under the nose **98** of the right hand latch **40** controlling shaft **26** and bail **18**. It is immaterial whether the latch release member **54** is swung to the right during the first portion of the previously described cycle of operation or during the second portion. However, it is swung over to this new position by the time bail **16** reaches its terminal position at **136**. After return of the bail **16** to its upper position, as already described, both shafts **22** and **26** are locked by their respective latches and are both subject to restraint by control member **118** and when another or third coin is placed in the machine, and motor **72** is again started, the latch release member **54** is again raised before the control member **18** is lowered but this time it will lift latch **40** and release bail **18** for lowering and dispensing movements in exactly the same manner as already described for bail **16**. During this cycle of operation the rearmost can on the other side of the compartment is first released by entering pocket **132** on the left hand side of the apparatus, as seen in the figures, after which the front can of that other side is released.

As stated previously, the present invention is adapted to selectively vend either cans or bottles. The arrangement and adjustments for dispensing cans has been described. When it is desired to dispense bottles from the machine, the ribs **126** are removed from both side walls **2** and **4** and rear wall **6** is readjusted and reversed to the position shown in FIG. 8 wherein flanged edges **140** thereof and return-bent flanges **142** extend into the compartment in position to engage and guide neck portion **144** of bottles **146**. The bottles **146** are likewise arranged in two adjacent columns that are vertically staggered and laterally overlapping as is more or less conventional in the art. Means are preferably provided on the side walls **2** and **4** for supporting the rear wall **6** in a plurality of different positions spaced differently from the front wall **8** to accommodate bottles of any desired length. When bottles are dispensed, the motor control cam is adjusted to appear as shown in FIG. 9, wherein masking plate **86** is swung to a position to cover notch **84** and provide a continuous edge thereover. Thus, when the motor **72** is started the cam plate **80** will turn through a complete revolution before

the motor is stopped. This causes the mechanism previously described to swing continuously so that bail **16**, for example, will move continuously through its intermediate position **134**, to its terminal position **136** and then will move back to its upper position. Obviously, each bail must move through a complete cycle of operation since only a single bottle is dispensed from each side of the compartment for each complete cycle of operation.

It is to be noted from FIG. 8 that the outwardly offset pockets **132** are completely ineffective when bottles are being dispensed since the downward movement of the bottle is controlled by the main portions of the side walls **2** and **4**.

It is not necessary that the so-called pockets **132** have a laterally displaced side wall portion as shown. The pocket structure **132** may be omitted, leaving only the opening **133** in side wall **2** and when the bail **16** lowers the bottom can to a point where its contact with wall **2** passes the upper edge of opening **133**, that can may then fall out through the opening **133** onto any suitable receiving device.

As an alternative arrangement, the openings **133** and pockets **132** can be omitted leaving side walls **2** and **4** planar throughout their areas. The bails **16** and **18** would be so shaped and configured that when the bail swings to an intermediate position one portion thereof is spaced from the side wall a greater distance than the other portion.

While a single specific embodiment of the invention has been shown and described in detail herein, it is to be understood that the same is merely illustrative of the principles involved.

What is claimed is:

1. In a vending apparatus having opposed longitudinal side walls, a rear wall, and a front wall defining a compartment for holding separate columns of generally cylindrical articles with at least one column against each side wall and with the articles of the respective columns being vertically staggered and horizontally overlapping so that supporting one article of one column will support all articles of all columns thereabove, and a movable bail below each column mounted for downward and inward gravitating swinging movement, the improvement comprising: a restraining arm fixed relative to each bail; a single control means engaging both said restraining arms to hold said bails against swinging movement by the weight of articles thereon; separate latch means locking each bail against such swinging movement; cyclically operable actuating means arranged to release one of said latch means, at the start of a cycle of operation, then to move said control means away from said restraining arms to permit article releasing movement of the one bail associated with said release latch.

2. Apparatus as defined in claim **1** wherein said actuating means moves said control means at a predetermined rate to limit the rate of swinging of said one bail.

3. Apparatus as defined in claim **1** wherein said actuating means includes a latch release member; and means responsive to a predetermined article releasing movement of each bail to move said latch release member into operative relation to the latch means associated with the other bail.

4. Apparatus as defined in claim **3** including a resilient toggle device for holding said latch release member in operative relation to that latch means to which it is moved.

5. Apparatus as defined in claim **1** wherein said bails are mounted for swinging movement on laterally spaced shafts, said restraining arms being fixed to said shafts and converging upwardly, said control means being vertically movable below said arms; said actuating means including a cam device for moving said control means.

6. Apparatus as defined in claim **1** wherein said cyclically operable actuating means comprises a rotary crank pin; driving means connecting said crank pin to means for releasing said one latch means; and further driving means connecting said crank pin to said control means.

7. Apparatus as defined in claim **6** wherein said control means comprises a swingable member actuated by said further driving means; a cam slot in said member; and a slidably mounted restraining-arm-engaging member having a cam follower portion in said cam slot.

8. Apparatus as defined in claim **1** wherein said actuating means comprises a rotary drive member; a motor for driving said rotary drive member; and means responsive to completion of one revolution of said rotary drive member for stopping said motor.

9. Apparatus as defined in claim **8** wherein said rotary drive member is provided with selectively adjustable means whereby said rotary drive member may be caused to stop said motor after completion of only a predetermined portion of one revolution.

10. In a vending apparatus having opposed longitudinal side walls, a rear wall and a front wall defining a compartment for containing and confining at least two columns of generally cylindrical articles with articles of one column axially displaced from articles of the other column, in a front to rear direction, and a longitudinally extending bail extending below both columns in supporting relation thereto and being mounted for lateral movement from a first position supporting said columns to a terminal position sufficiently spaced from one side wall to permit downward passage of an article therebetween, the improvement comprising; a lower portion of said one side wall, opposite only one of said columns and adjacent said bail, being provided with an opening large enough to receive one of said articles, whereby to permit outward passage of an article from only said one column, outwardly said bail, when said bail is in an intermediate position between said first and terminal positions.

11. Apparatus as defined in claim **10** including cyclically operable means for causing and controlling movement of said bail from said first position to said terminal position and back to said first position; said cyclically operable means including means for stopping the same when said bail is in said intermediate position.

12. Apparatus as defined in claim **10** wherein said bail is mounted for swinging movement downwardly from said first position and laterally away from said one side wall by the weight of articles thereon, said cyclically operable means including means for limiting the rate of swinging movement of said bail.

13. Apparatus as defined in claim **10** wherein the articles of one column are axially aligned with corresponding articles of the other column and wherein said opening in said one side wall is in only a lower portion thereof below the region of contact of said one side wall with the lowermost article of said one column when said bail is in said first position.

14. In a vending apparatus having opposed longitudinal side walls, a rear wall, and a front wall defining a compartment for holding at least one column of generally cylindrical articles stacked therein against one of said side walls, and cyclically operable release means supporting said column and being movable to release the lowermost article therefrom, the improvement comprising: means releasably supporting said rear wall for selective mounting thereof at different distances from said front wall; and removable upstanding rib means mounted on one of said side walls between said front and rear walls serving to separate and guide separate front and rear columns of articles whereby said apparatus may be selectively modified, by removing said rib means and selectively positioning said rear wall, to accommodate a single column of articles of greater length than the articles of said front and rear columns.

15. Apparatus as defined in claim **14** wherein the lower portion of said one side wall, between said rib means and one of said front and rear walls is cut away to permit passage of an article therethrough.

16. In a vending apparatus having opposed longitudinal side walls, a rear wall and a front wall defining a compartment for containing and confining at least two columns of generally cylindrical articles with articles of one column axially displaced from articles of the other column, in a front to rear direction, and a longitudinally extending bail extending below both columns in supporting relation thereto and being mounted for lateral movement from a first position supporting said columns to a terminal position wherein all portions thereof are sufficiently spaced from one side wall to permit downward passage of said articles therebetween, the improvement comprising: a portion of said one side wall and a portion of said bail opposite said side wall portion and opposite only one of said columns, being so relatively shaped that the space therebetween is greater than the space between the remainder of said bail and said side wall when said bail moves from said first position toward said terminal position to thereby release an artcle from said one column while retaining the articles of the other column.

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