

[54] **BULK VENDING MACHINE WITH SOUND
PLAYBACK APPARATUS**

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[52] U.S. Cl. **194/15, 221/3, 221/265**

[51] Int. Cl. **G07f 9/02**

[58] Field of Search **194/15; 221/3, 265**

[56]

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Sandler & Stotland

[57]

ABSTRACT

The machine comprises a base and a merchandise storage member, the base having a removable cash box and an outlet for merchandise. A sound producing mechanism is mounted on the merchandise storage member and is actuated in response to operation of a coin actuated merchandise dispensing apparatus.

18 Claims, 13 Drawing Figures

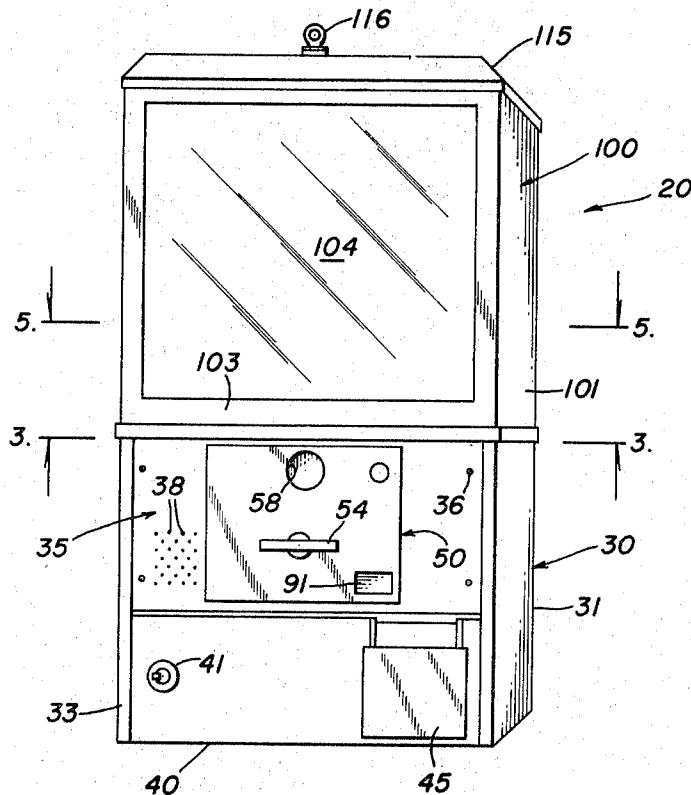


FIG. 1

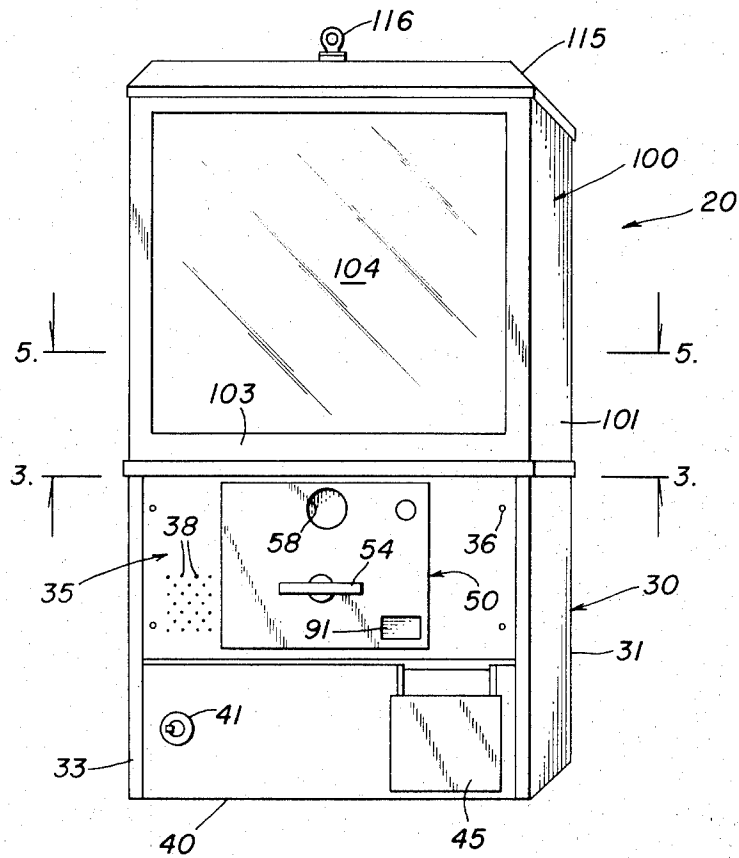


FIG. 2

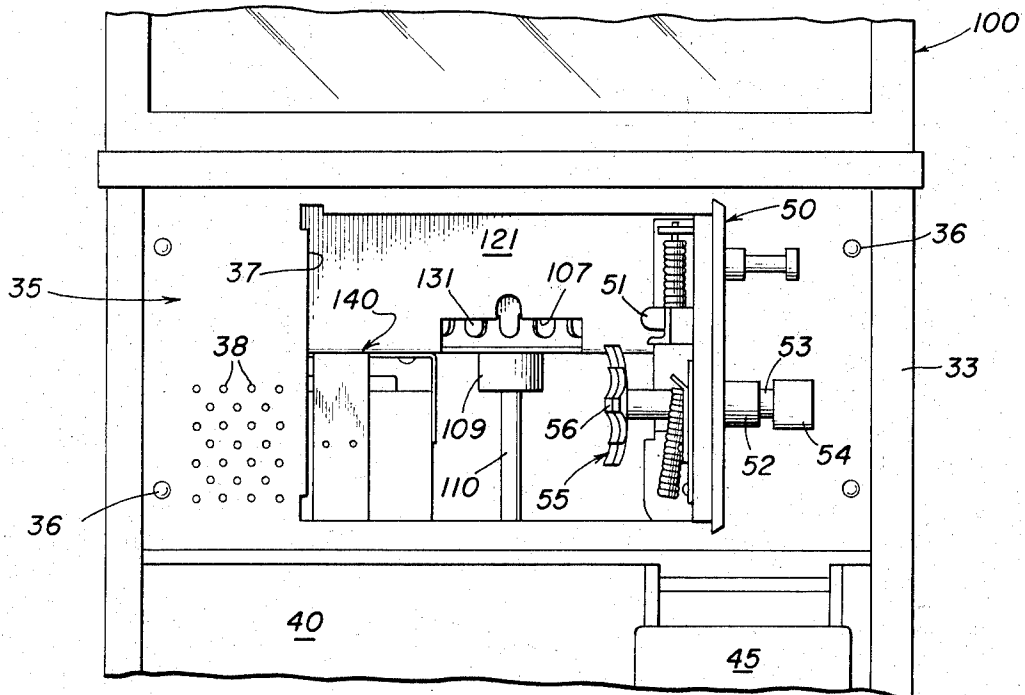


FIG. 3

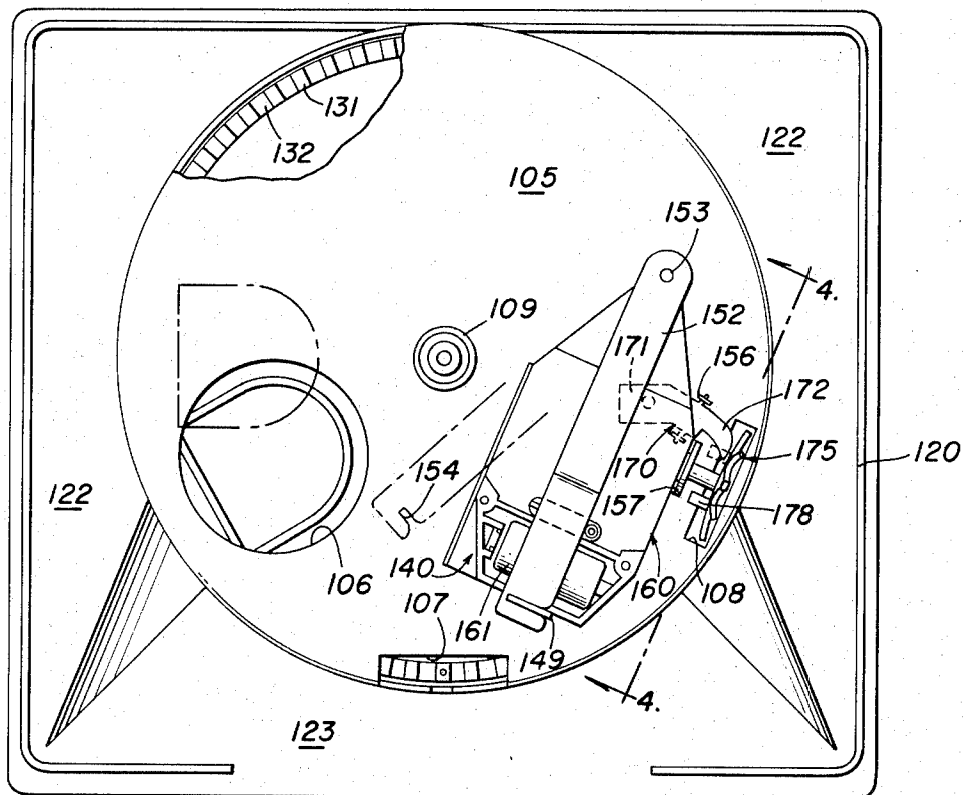


FIG. 4

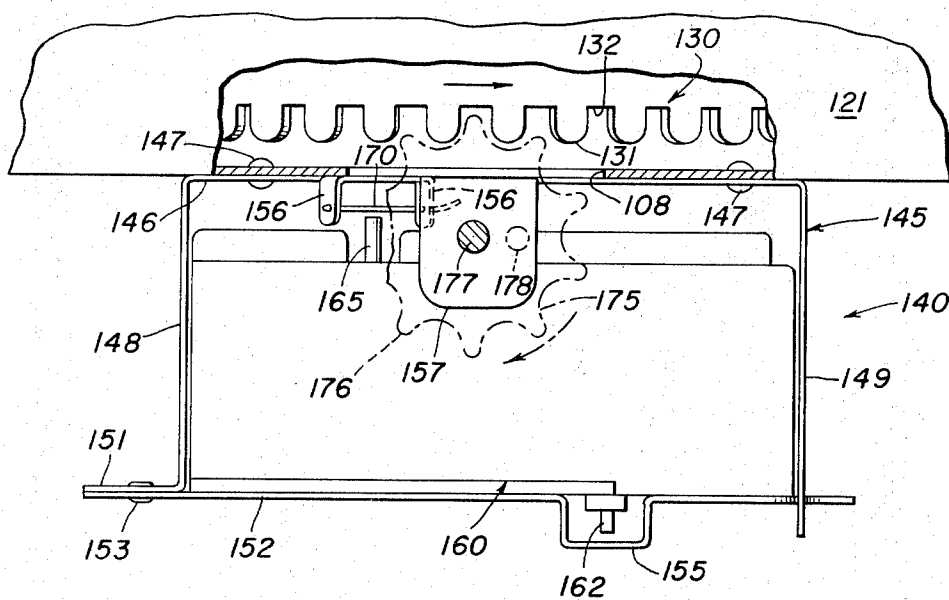


FIG. 5

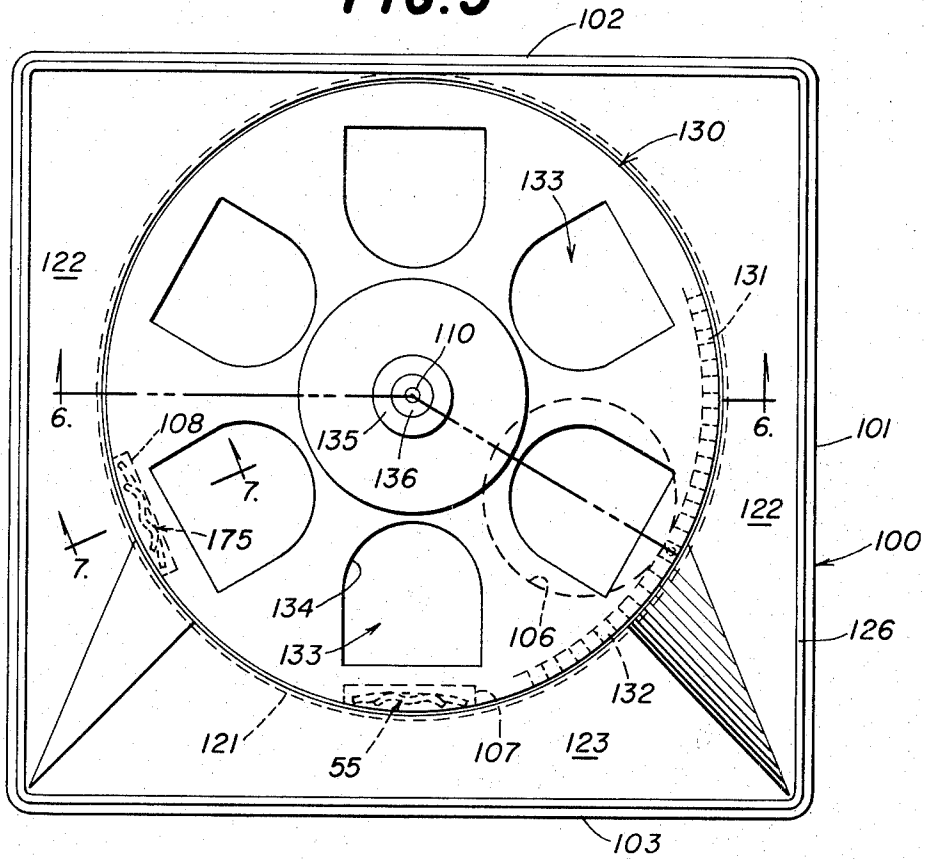


FIG. 6

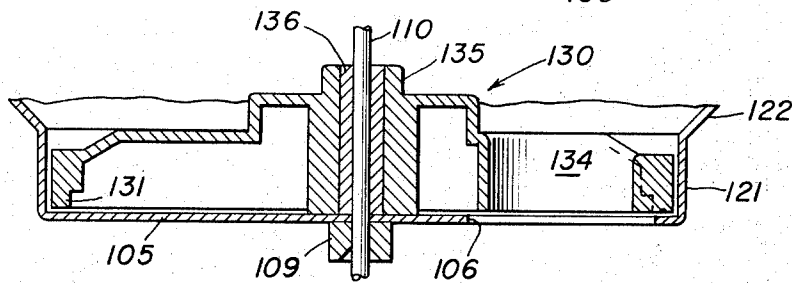


FIG. 7

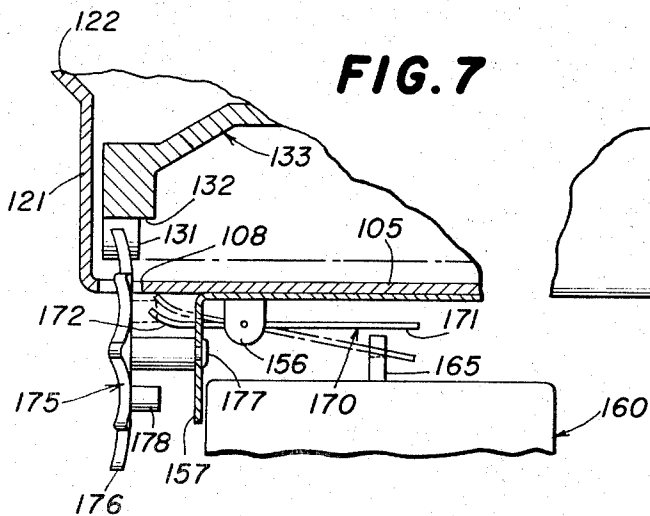


FIG. 8

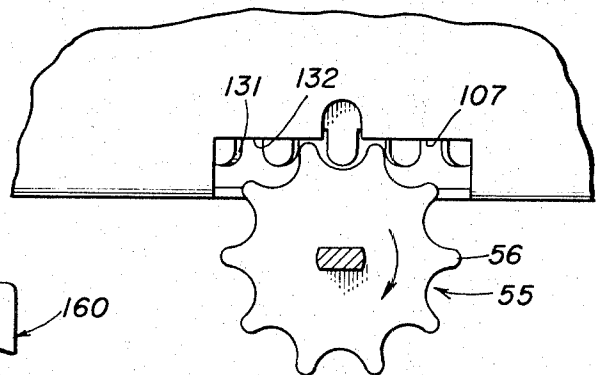


FIG. 9

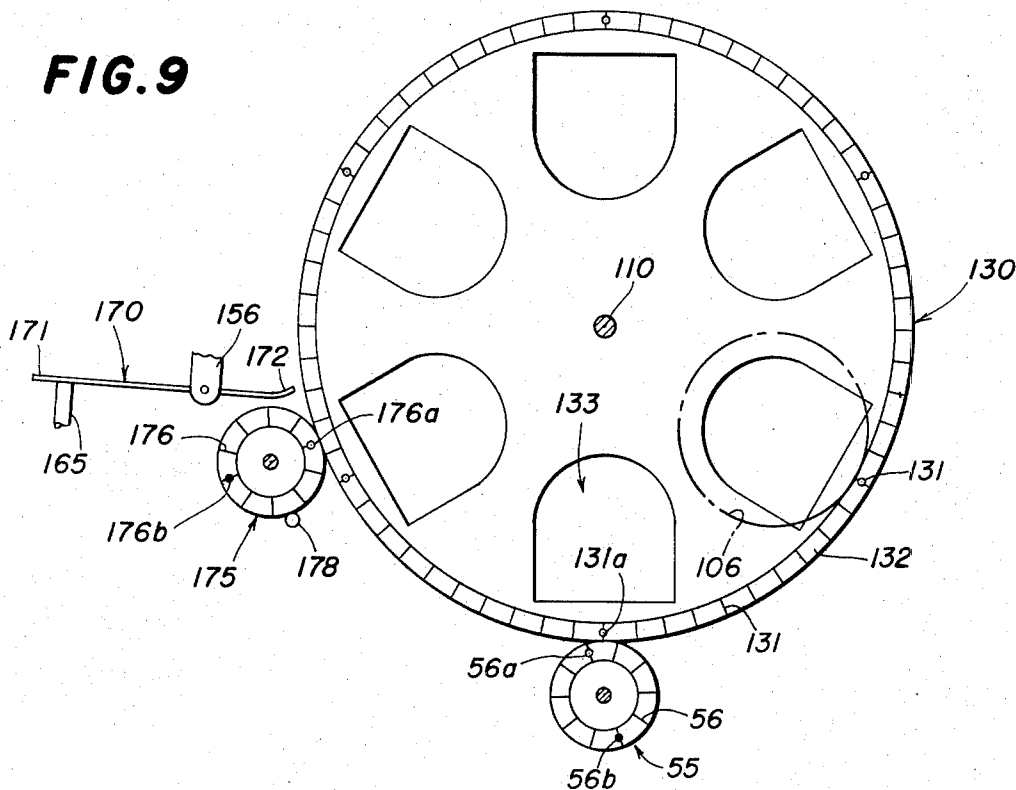


FIG. 10

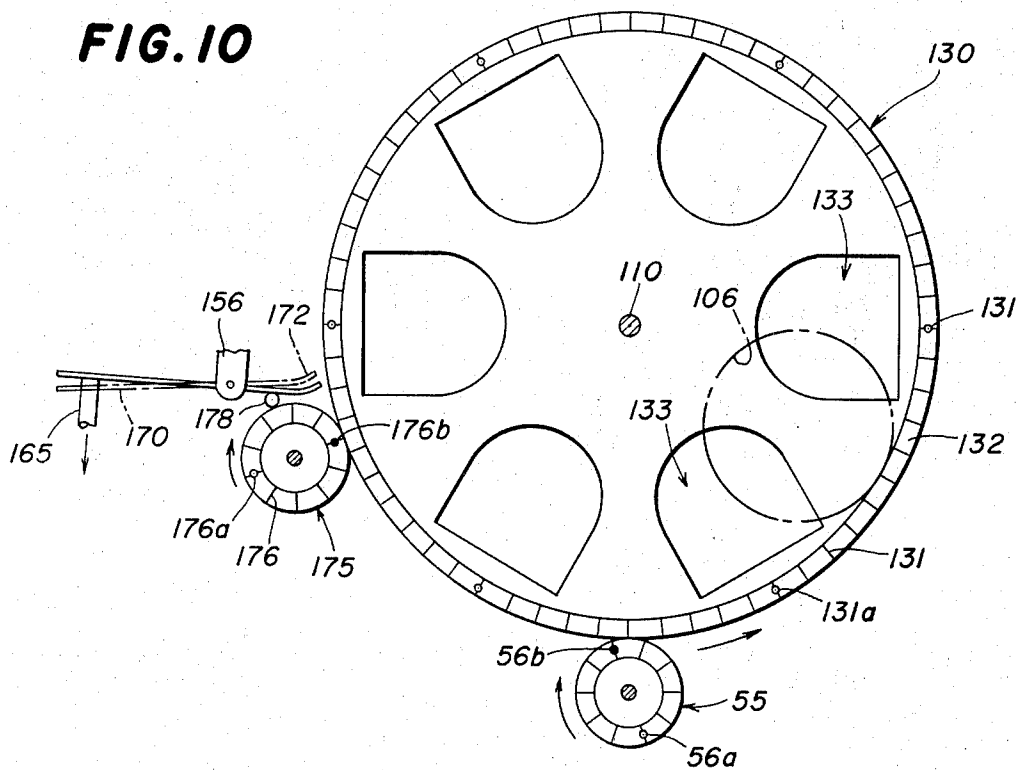


FIG. 11

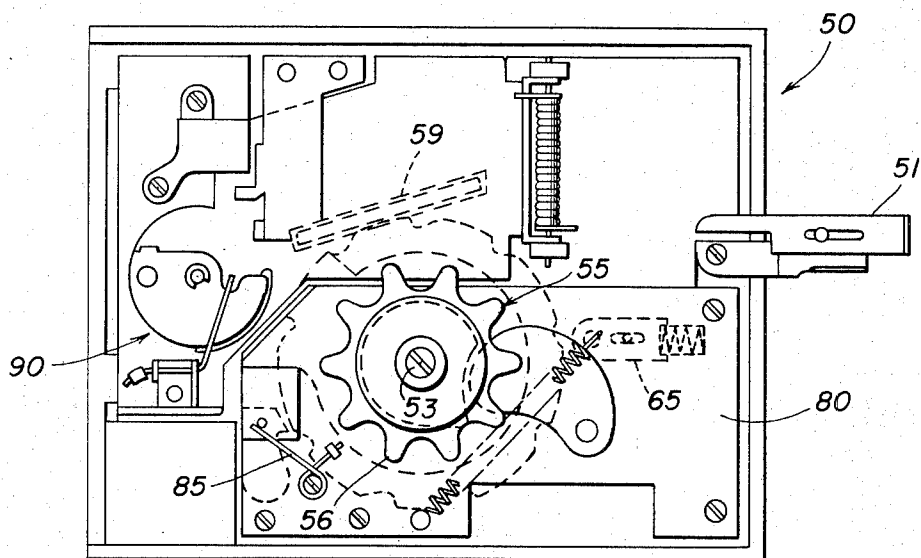


FIG. 12

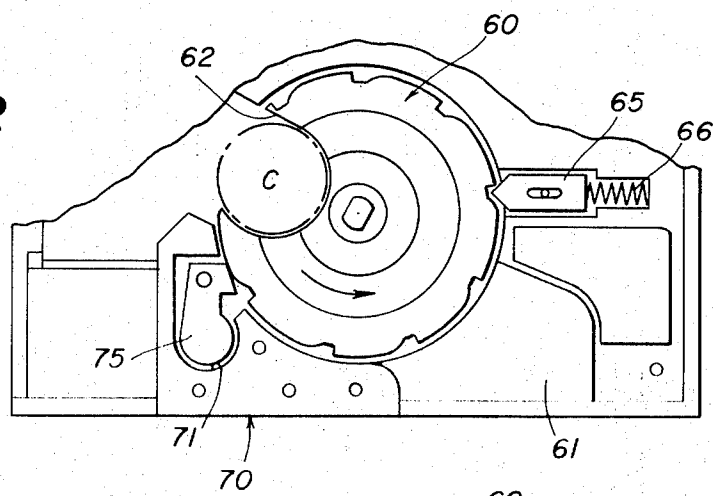
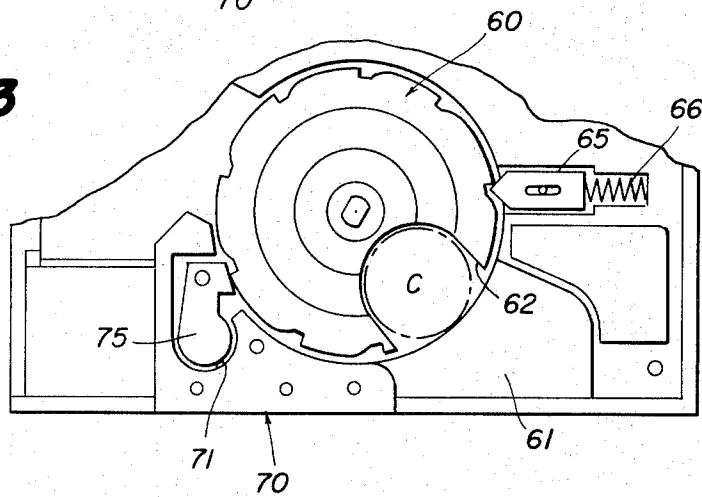


FIG. 13



BULK VENDING MACHINE WITH SOUND PLAYBACK APPARATUS

BACKGROUND OF THE INVENTION

Bulk merchandise vending machines have a housing which supports a merchandise storage member. A wheel is situated in the bottom of the storage member and receives items of merchandise stored in the storage member. A coin actuated mechanism mounted on the housing is operated to rotate the wheel and cause an item or items of merchandise to be dispensed to the purchaser by way of a merchandise chute. Such a bulk merchandise vending machine is disclosed in my U.S. Pat. No. 3,604,547, for Merchandise-Vending Machine, issued to me Sept. 14, 1971, the disclosure of which is incorporated herein by reference.

It is desirable from a merchandising point of view to incorporate a sound producing device or mechanism in a bulk merchandise vending machine. There are several devices available, most of which are battery operated. One such device is the one disclosed in the U.S. Pat. No. 3,467,393, issued Sept. 16, 1969, to Shigeru Kuwayama for Simple Sound Reproducing Device, the disclosure of which is also incorporated herein by reference. Problems inherent in incorporating sound producing devices in a bulk vending machine include preventing the device from operating if the machine does not cycle correctly thereby running down the battery as well as insuring that the sound producing device operates during the merchandise dispensing cycle and thereafter automatically shuts off.

SUMMARY OF THE INVENTION

It is, therefore, an important object of the present invention to provide a bulk merchandise vending machine having a sound producing device incorporated therein.

Another object of the present invention is to provide a bulk merchandise vending machine wherein the sound reproducing apparatus is actuated in response to operation of the merchandise dispensing apparatus.

Yet another object of the present invention is to provide a bulk merchandise vending machine wherein a single control mechanism which operates the merchandise dispensing apparatus is also operative to actuate the sound producing apparatus.

A further object of the present invention is to provide a bulk merchandise vending machine wherein the merchandise dispensing apparatus and the control mechanism for the sound producing apparatus are operatively connected by a gear and sprocket mechanism.

In summary, there is provided a bulk merchandise vending machine comprising a housing having a merchandise dispensing outlet therein, a merchandise storage member having an opening from the interior thereof and having bottom wall structures seatable on the housing, merchandise dispensing apparatus for positioning merchandise stored in the merchandise storage member in the access opening, the merchandise dispensing apparatus being movable between a merchandise dispensing position thereof wherein merchandise is positioned in the opening in communication with the merchandise dispensing outlet to permit merchandise to be dispensed from the merchandise storage member through the opening and the outlet and a merchandise retaining position thereof wherein merchan-

dise is maintained away from the opening, sound producing apparatus for producing a predetermined sound, and control mechanism for the sound producing apparatus for actuating the sound producing apparatus in response to movement of the merchandise dispensing apparatus between the merchandise retaining position thereof and the merchandise dispensing position thereof, thereby to produce sound for a predetermined time.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel steps and certain features of construction, and a combination of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportion, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

For the purpose of facilitating an understanding of the invention, there are illustrated in the accompanying drawings a preferred embodiment thereof, from an inspection of which, when considered in connection with the following description, the invention, its mode of construction, assembly and operation, and many of its advantages should be readily understood and appreciated.

FIG. 1 is an elevational view of a bulk merchandise vending machine incorporating therein the features of the present invention;

FIG. 2 is a fragmentary view on an enlarged scale of the mechanism plate pivoted outwardly to expose the interior of the base that supports the merchandise storage member;

FIG. 3 is a bottom elevational view of the merchandise storage member illustrated in FIG. 1 as seen along lines 3—3 thereof and particularly showing the mechanism for mounting the sound producing device thereon;

FIG. 4 is an enlarged elevational view partly in section of the control mechanism for the sound producing device illustrated in FIG. 3 as seen along lines 4—4 thereof;

FIG. 5 is a plan view of the bottom of the merchandise storage member illustrated in FIG. 1 as seen along lines 5—5 thereof;

FIG. 6 is a view in section of the merchandise wheel rotatably mounted in the bottom of the merchandise storage chamber illustrated in FIG. 5 taken along lines 6—6 thereof;

FIG. 7 is an enlarged view in section of the control mechanism for the sound producing device mounted on the storage chamber illustrated in FIG. 5 taken along lines 7—7 thereof;

FIG. 8 is an enlarged elevational view of the sprocket mounted on the mechanism plate and the merchandise wheel particularly showing the geared relationship therebetween;

FIG. 9 is a diagrammatic view of the merchandise wheel, the control mechanism therefor and the control mechanism for the sound producing apparatus illustrated in FIG. 5;

FIG. 10 is a diagrammatic view like that in FIG. 9 showing the relationship of the parts midway through a cycle;

FIG. 11 is a rear elevational view of the mechanism plate particularly showing the coin receiving apparatus;

FIG. 12 is an elevational view illustrating the coin wheel mounted on the mechanism plate in position to receive a coin; and

FIG. 13 is an elevational view of the coin wheel shown in FIG. 12 with the coin in position to drop into the coin chute.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Turning now to the drawings, and more particularly to FIGS. 1 to 5 and 11 to 13 thereof, there is illustrated a bulk merchandise vending machine 20 which incorporates the features of the present invention; The vending machine 20 includes a base 30 which has two opposed side walls 31 interconnected by a rear wall (not shown), each of the side walls having inturned flanges 33 which extend the vertical length of the side wall. The side walls 31, the back wall and the inturned flanges 33 may be made from a single piece of sheet metal. Also provided, if a front wall 35 fixedly mounted to the inturned flanges 33 as by rivets 36, the front wall being provided with an enlarged rectangular-shaped aperture 37. A plurality of small apertures 38 are disposed to the left of the large central aperture 37 as viewed in FIG. 1, the small apertures facilitating the passage of sound through the front wall 35. A removable door 40 is positioned in front of a cash box (not shown) and below the front plate 35 and rests on the bottom wall (not shown) of the base 30, the door being provided with a key lock 41. Intermediate the door 40 and the right-hand wall 31 of the machine 20 shown in FIG. 1, there is provided a lid 45 which is pivotable to expose a merchandise chute (not shown) through which merchandise is discharged from the machine 20.

A coin actuated mechanism includes a plate 50 pivotably mounted on the front wall 35 and carries a fastener 51 thereon which holds a swingable finger that serves to lock the mechanism plate in place. A boss 52 protrudes from the outer surface of the mechanism plate 50 and is provided with a central aperture therethrough in which is journaled a shaft 53. To the outer end of the shaft 53 an actuating handle is affixed and to the inner end of the shaft is affixed a sprocket 55 having 10 teeth 56 equiangularly spaced therearound. A coin-receiving slot 58 is disposed in the mechanism plate 50 with a coin strip 59 extending inwardly therefrom, the strip being inclined so that a coin dropped into the slot 58 rolls down the strip 59 toward a slug-rejector mechanism 90. As seen particularly in FIGS. 11 to 13, a coin wheel 60 is mounted on the shaft 53 and has a coin sprocket 62 therein which upon rotation of the coin wheel 60 will transport a coin to the coin chute 61 in communication with the cash box 40. It is seen, therefore, that a coin deposited in the coin slot 58, if of the proper denomination, will be transported to the cash box. A pawl 65 is slidably positioned in a recess in the plate 50 and is urged by a spring 66 toward the coin wheel 60. Since the coin wheel 60 is provided with a plurality of grooves and camming surfaces cut in the periphery thereof, the pawl 65 prevents rotation of the coin wheel in a clockwise direction as viewed in FIG. 12, or in a counter-clockwise direction as viewed in FIG. 1.

To accommodate dispensing of merchandise only when a coin (or coins) of the proper denomination is inserted into the coin operated mechanism, the mechanism further includes a latching mechanism 70 is mounted on the plate 50 and includes an arcuate bearing surface 71 with a pawl 75 pivotably mounted therein. The function and operation of the latching mechanism 70 is more completely set forth in my previously mentioned U.S. Pat. No. 3,604,547. Additionally, a cover plate 80 is provided and a spring 85 urges the pawl 75 to rotate clockwise and out of the compartment 71, all as set forth in my previously mentioned patent, whereby rotation of the coin wheel 60 is prevented if no coin or a coin of incorrect denomination is deposited in the coin slot 58. Finally, a slug rejector 90 having a slug chute 91 associated therewith completed the coin operated mechanism mounted on the plate 50.

The bulk merchandise vending machine 20 further includes a merchandise storage member 100 having opposed side walls 101 interconnected by a back wall 102 and a front wall 103, the front wall 103 having a rectangularly shaped window 104 centrally disposed thereof. A central circular bottom wall 105 is provided with an enlarged circular aperture or opening 106 on one side thereof of a size sufficient to accommodate the passage of merchandise therethrough. The circular opening 106 is positioned behind the merchandise chute and lid 45 therefor and is in communication therewith. The bottom wall 105 further includes a rectangular aperture 107 parallel with the front wall 103 and another rectangular aperture 108 angularly positioned in the bottom wall as shown in FIG. 5. Finally, the bottom wall 105 has a cylindrical boss 109 protruding from the underside thereof in which is journaled a shaft 110 extending vertically upwards through the merchandise storage member 100. A removable top 115 sealably fits over the merchandise storage member 100 and has a key lock 116 thereon which cooperates with the shaft 110 thereby securely to lock the top onto the merchandise storage member.

The circular bottom wall 105 is interconnected to the side walls 101, the back wall 102 and the front wall 103 by means of a cylindrical wall 121 extending upwardly from the bottom wall to diverging walls 122 and to diverging front wall 123. The diverging walls 122 and 123 serve to interconnect the cylindrical wall 121 with a mounting flange 126 (see FIG. 5) which is square in horizontal cross section and supports the side walls, the rear wall and the front wall. Finally, a seating flange 120 (see FIG. 3) extends from the diverging side walls 122 and the diverging front wall 123 to provide seating structure for the merchandise storage member 100.

The merchandise dispensing wheel 130 includes a plurality of spaced apart teeth 131 on the rim thereof, there being 60 teeth equally spaced apart and defining slots 132 alternating with the teeth. The wheel 130 has six pockets or apertures 133 formed therein, each of the pockets having a peripheral wall 134 shaped to provide a passageway sufficiently large to accommodate the passage of merchandise therethrough. The wheel 120 has a center bore 135 with a bearing 136 positioned therein which is journaled for rotation about the shaft 110.

Referring now particularly to FIGS. 3, 4 and 7, there is shown a sound producing mechanism 140 mounted

to the bottom wall 105 of the merchandise storage member 100 and disposed in use within the base 30. More particularly, a holder 145 includes a plate 146 mounted to the bottom wall 105 as by rivets 147, the plate having downwardly depending arms 148 and 149 at each end thereof. The arm 148 is provided with a horizontally disposed and outwardly extending flange 151 to which is pivotally mounted a latch 152 by a fastener 153. A slot 154 is provided in the end of the latch 152 away from the pivot point thereof, an offset portion 155 being disposed between the slot and the pivot point, for a purpose hereinafter set forth. Finally, the plate 146 of the holder 145 has two spaced apart mounting tabs 156 and a downwardly depending mounting flange 157.

A sound box 160 with a battery 161 therefor has an open-close latch 162 and is held against the plate 146 by the latch 152, the offset 155 fitting around the open-close latch 162 of the sound box. The sound box 160 is of the type set forth in the previously mentioned Kuwayama U.S. Pat. No. 3,467,393, wherein the sound box and particularly the battery 161 is energized by depressing an actuator 165 which is spring biased to the up position thereof. A record (not shown) is contacted by a pick-up (not shown) subsequent to the actuator 165 returning to its fully extended position. After the record has played for a predetermined time, the sound box 160 is automatically de-energized and no further drain on the battery 161 occurs until the actuator 165 is again depressed. It is seen, therefore, that sound is not emitted until after the actuator 165 returns to the up position automatically to de-energize the battery 161 after the recording is finished.

Mounted between the tabs 156 is control mechanism 170 having an arm with a contact portion 171 and a camming portion 172, the camming portion being bent at an obtuse angle with respect to the contact portion. Finally, a sprocket 175 having ten teeth 176 equiangularly spaced around the periphery thereof is mounted on a shaft 177 journaled for rotation in the mounting flange 157, the sprocket 175 having a pin 178 extending inwardly thereof toward the flange 157. The sprocket 175 is arranged so that the teeth 176 thereof mesh with the teeth 131 of the merchandise dispensing wheel 130, and similarly, the teeth 56 of the sprocket 55 also mesh with the teeth 131 of the merchandise dispensing wheel 130 when the mechanism plate 50 is closed and the fastener 51 securely locks the plate in place.

The operation of the bulk merchandise vending machine 20 will hereinafter be set forth. The bulk merchandise vending machine 20 is in condition for operation when the door 40 is locked in place via the lock 41, the coin operated mechanism on the plate 50 is locked in place via the fastener 51, and the top 115 is firmly locked on the shaft 110 via the lock 116 and is seated with the merchandise storage member 100. Merchandise is visible through the window 104 and the handle 54 of the coin operated mechanism is in the position shown in FIG. 1, with the mechanism dispensing wheel 130 in the position shown in FIG. 5. The coin wheel 60 is in the position shown in FIG. 12 ready to receive a coin of the proper denomination in the pocket 62. Upon insertion of a coin of the proper denomination in the pocket 62, the coin wheel 60 may be turned by rotation of the handle 54 in a clockwise direction. As previously set forth herein, the handle 54 is operatively

connected to the sprocket 55 which has 10 teeth 56 thereon with the tooth 56a being positioned as shown in FIG. 9 when the handle 54 is in the position shown in FIG. 1.

Since there are ten teeth 56 on the sprocket 55 an incremental turn of the sprocket rotates the sprocket through an arc of 36°, the same being true for the sprocket 175. Since the merchandise wheel 130 has 60 teeth thereon intermeshing with the teeth 56 on the sprocket 55 and the teeth 176 on the sprocket 175, the merchandise wheel rotates through an arc of 6° for each incremental turning of the sprocket 55. As there are six pockets 133 in the merchandise wheel 130, rotation of the wheel through an arc of 60° will position a pocket in registry with the aperture 106 in the bottom wall 105 of the merchandise storage member 100, thereby providing communication between the pocket 133 so positioned and the merchandise chute leading to the lid 45 which opens at the front of the machine 20 adjacent the coin box 40. Since each incremental turn of the handle 54 advances the sprockets 55 and 175 through an arc of 36° and the merchandise wheel 130 through an arc of 6°, it is clear that a complete 360° revolution of the handle 54 and thereby the sprockets 55 and 175 will advance the merchandise wheel 130 through an arc of 60° thereby to position a successive one of the pockets 133 in registry with the aperture 106. The merchandise dispensing wheel 130 is operable between two positions, one being the merchandise retaining position thereof wherein the wheel is positioned to retain the merchandise in the storage member 100 and the other being the merchandise dispensing position thereof wherein a pocket 133 carrying merchandise is aligned with the aperture 106 thereby permitting merchandise to pass through the chute and the lid 45 to the purchaser.

As the handle 54 is rotated from the position shown in FIGS. 1 and 5 through an arc of 180°, the sprockets 55 and 175 and the merchandise wheel 130 advance therewith from the position shown in FIG. 9 to the position shown in FIG. 10 wherein the teeth 56b and 176b assume the position of teeth 56a and 176a, respectively. The coin drops into the coin chute 16 between the fourth and fifth increment of rotation of the handle 54 that is between 144° and 180° of rotation. Subsequently, during the fifth and sixth increment of rotation, the pin 178 on the sprocket 175 contacts the camming portion 172 of the control mechanism 170 whereby pivoting the arm and initiating contact between the contact portion 171 of the arm and the actuator 165 of the sound box 160. It is during the fifth and sixth increment or between 180° and 216° of rotation that the sound box 160 is energized or more particularly the battery 161 is energized by movement of the actuator 165 from the spring biased position shown in FIG. 9 to a depressed position, as shown by the arrow in FIG. 10. Subsequent rotation past the sixth increment or after 216° results in activation of the sound producing mechanism 140 to produce a predetermined sound for a predetermined length of time.

After the predetermined length of time has lapsed, the sound producing mechanism 140 de-energizes automatically. Continued rotation of the handle 54 beyond the sixth increment to the tenth increment positions the merchandise-containing pocket 133 in registry with the aperture 106 to permit merchandise present in the pocket 133 to be dispensed through the aper-

ture 106 and the chute to the lid 45. Merchandise naturally gravitates to the pockets 133 so that as long as merchandise is present in the storage member 100, the pockets 133 will be filled allowing for dispensing of the merchandise as hereinbefore set forth. After merchandise has been dispensed, the machine 20 is in condition to be cycled again, all of the mechanisms being again in the position shown in FIGS. 1, 5 and 9. It is seen that merchandise is not dispensed until after the sound producing mechanism 140 is in condition automatically to de-energize after producing sound for a predetermined time, thereby providing an incentive to the user not to abandon the machine in mid-cycle and allow the battery 161 to wear down.

Means are provided to prevent merchandise present in the storage member 100 from falling through the pocket 133 aligned with the aperture 136 so that only the desired quantum of merchandise will be dispensed per cycle. The above-referred to means may be in the form of a plate or a plurality of springs positioned above the merchandise wheel 130 in registry with the aperture 106 thereby permitting merchandise to be moved by the wheel 130 yet preventing merchandise not in the pockets 133 from being in position to be transmitted through the aperture 106 into the chute.

An important advantage of the present invention is the particular arrangement of the sprocket 175, the sprocket 55 and the merchandise wheel 130 along with the sound producing mechanism 140 which reduces the chance of battery depletion to a minimum. In the preferred embodiment of the present invention, the battery 161 is energized between the fifth and sixth increment of the handle 54, and it is only during the time that the sprocket 175 is in the position shown in FIG. 10 and for one increment thereafter that the battery 161 is energized and may be depleted if the cycle is not continued. Subsequent to 216° of handle rotation, the operation of the sound producing mechanism 140 is automatic and will result in a deenergization of the battery 161 after the production of sound for a predetermined time. This timing arrangement is particularly advantageous when it is considered that jamming of the coin wheel 60 due to an improper coin or slug will occur prior to energization of the battery 161 since a coin of the proper denomination will complete its cycle and drop into the cash box 40 between the fourth and fifth increment or between 144° and 180° of handle rotation, whereas the battery 161 is not energized until the fifth or sixth increments have been reached or between 180° and 216° of handle rotation. This feature drastically reduces the need for continuing maintenance or repair of the bulk vending machine 20 of the present invention and provides a more reliable machine.

Another important feature of the present invention relating to that set forth above is that the merchandise is dispensed from the machine 20 subsequent to 216° of rotation and more nearly to 360° of rotating of the handle 54 thereby providing incentive to the user not to abandon the machine between 180° and 216° of handle rotation when the battery 161 is energized. It is only during the above increment of handle rotation that the battery 161 is in the energized position and will not be automatically deenergized after a predetermined sound recording. It is, therefore, important to minimize the chance of a user leaving the machine in this intermediate or mid-cycle position and to provide an incentive to

complete the cycle to obtain the merchandise. The machine 20 of the present invention is constructed and arranged so that the coin drops into the coin box prior to energization of the battery 161 and the merchandise is dispensed subsequent to the automatic cycle has been activated for de-energizing the battery.

It is believed that the invention, its mode of construction and assembly, and many of its advantages should be readily understood from the foregoing without further description, and it should also be manifest that, while a preferred embodiment of the invention has been shown and described for illustrative purposes, the structural details are, nevertheless, capable of wide variation within the purview of the invention as defined in the appended claims.

What is claimed is:

1. A bulk merchandise vending machine comprising means defining a merchandise dispensing outlet, a toothed wheel having at least one opening there-through and being mounted for rotation from a merchandise dispensing position to a merchandise retaining position, said one opening communicating with said outlet in the merchandise dispensing position of said wheel to permit merchandise to be dispensed from said housing through said one opening to said outlet, said one opening not communicating with said outlet in the merchandise retaining position of said wheel to prevent merchandise from being dispensed from said housing to said outlet, means for retaining a sound producing apparatus which produces a predetermined sound, a first sprocket operatively engaged by said toothed wheel and being mounted for rotation by said toothed wheel during rotation thereof, said first sprocket including means for operating the sound producing apparatus to produce the predetermined sound upon rotation of said toothed wheel to a predetermined position between said merchandise retaining position and said merchandise dispensing position, and a manually operated coin-actuated second sprocket operatively engaging said toothed wheel and being mounted for rotation to rotate said toothed wheel from said merchandise retaining position to said merchandise dispensing position upon receipt of a coin of a predetermined denomination.

2. A bulk merchandise vending machine comprising a base having a merchandise dispensing outlet, a merchandise storage member having bottom wall structure seatable on said base, said bottom wall structure having an opening therein communicating with said merchandise dispensing outlet, a toothed wheel having at least one pocket with a hole therethrough and being disposed on said bottom wall structure for rotation from a merchandise dispensing position to a merchandise retaining position, said one pocket communicating with said opening in the merchandise dispensing position of said wheel to permit merchandise to be dispensed from said intermediate storage member through said pocket and said opening to said outlet, said one pocket not communicating with said opening in the merchandise retaining position of said wheel to prevent merchandise from being dispensed from said merchandise storage member to said outlet, means on the underside of said bottom wall structure for retaining a sound producing apparatus which produces a predetermined sound, a first sprocket operatively engaged by said toothed wheel and being mounted for rotation by said toothed wheel during rotation thereof, said first sprocket including means for operating the sound producing appa-

ratus to produce the predetermined sound upon rotation of said toothed wheel to a predetermined position between said merchandise retaining position and said merchandise dispensing position, and a manually operated coin-actuated second sprocket operatively engaging said toothed wheel and being mounted for rotation to rotate said toothed wheel from said merchandise retaining position to said merchandise dispensing position upon receipt of a coin of a predetermined denomination.

3. A bulk merchandise vending machine comprising means defining a merchandise dispensing outlet, a toothed wheel having at least one opening therethrough and being mounted for rotation from a merchandise dispensing position to a merchandise retaining position, said one opening communicating with said outlet in the merchandise dispensing position of said wheel to permit merchandise to be dispensed from said housing through said one opening to said outlet, said one opening not communicating with said outlet in the merchandise retaining position of said wheel to prevent merchandise from being dispensed from said housing to said outlet, a battery operated sound producing apparatus having an actuator movable between first and second positions, said sound producing apparatus being energized when said actuator is moved from said first position to said second position and said second producing apparatus producing the predetermined sound when the actuator is then returned to said first position, a first sprocket operable engaged by said toothed wheel and being mounted for rotation by said toothed wheel during rotation thereof, said first sprocket including means for moving the actuator from said first position to said second position and thereafter removing said actuator back to said first position to cause the sound producing apparatus to produce the predetermined sound, said actuator moving means being located to cause said actuator to move from said first position to said second position and back to said first position when said toothed wheel is at a predetermined position between said merchandise retaining position and said merchandise dispensing position, manually operated coin-actuated second sprocket operatively engaging said toothed wheel and being mounted for rotation to rotate said toothed wheel from said merchandise retaining position to said intermediate dispensing position upon receipt of a coin of a predetermined denomination.

4. The bulk merchandise vending machine set forth in claim 3, wherein said actuator is spring biased to the first position thereof.

5. The bulk merchandise vending machine set forth in claim 3, wherein said sound producing apparatus is automatically de-energized after the predetermined sound has been produced.

6. A bulk merchandise vending machine comprising a base having a merchandise dispensing outlet therein, a merchandise storage member having an opening from the interior thereof and having bottom wall structure seatable on said base, a toothed wheel mounted in said merchandise storage member for rotation with respect to said opening and having a plurality of pockets therein, said wheel being rotatable between a merchandise dispensing position thereof wherein merchandise in one of said pockets is positioned in registry with said opening and in communication with said merchandise dispensing outlet to permit merchandise to be dis-

pensed from said merchandise storage member through said opening and said outlet and a merchandise retaining position thereof wherein merchandise is maintained away from said opening, sound producing apparatus for producing a predetermined sound and having an actuating member a first sprocket mounted for engagement with said toothed wheel and being operative to actuate said actuating member, and a manually operated coin actuated second sprocket operatively connected to said toothed wheel for rotation thereof when a coin of a predetermined denomination is deposited and said second sprocket is manually rotated, thereby sequentially to release a coin into a receptacle therefor and thereafter actuate said actuating member to initiate sound production from said sound producing apparatus during rotation of said toothed wheel between the merchandise retaining position thereof and the merchandise dispensing position thereof.

7. The bulk merchandise vending machine set forth in claim 6, wherein said toothed wheel has six pockets extending therethrough.

8. The bulk merchandise vending machine set forth in claim 6, wherein said toothed wheel has 60 teeth equiangularly spaced around the periphery thereof.

9. The bulk merchandise vending machine set forth in claim 6, wherein said first sprocket has 10 teeth equiangularly positioned around the periphery thereof.

10. The bulk merchandise vending machine set forth in claim 6, wherein said first sprocket has a pin mounted thereon for engagement with said sound producing apparatus actuating member.

11. The bulk merchandise vending machine set forth in claim 6, wherein said second sprocket has 10 equiangularly spaced around the periphery thereof.

12. The bulk merchandise vending machine set forth in claim 6, wherein a coin of predetermined denomination is released into said receptacle during movement of said second sprocket through an arc of between about 144° and 180° during rotation of said second sprocket through 360°.

13. The bulk merchandise vending machine set forth in claim 6, wherein sound is produced from said sound producing apparatus during rotation of said second sprocket through an arc of between about 216° and 360° during rotation of said second sprocket through 360°.

14. A bulk merchandise vending machine comprising a base having a merchandise dispensing outlet therein, a merchandise storage member having an opening from the interior thereof and having a bottom wall structure seatable on said base, a toothed wheel mounted in said merchandise storage member for rotation with respect to said opening and having a plurality of pockets therein, said wheel being rotatable between a merchandise dispensing position thereof wherein merchandise in one of said pockets is positioned in registry with said opening in communication with said merchandise dispensing outlet and to permit merchandise to be dispensed from said merchandise storage member through said opening and said outlet and a merchandise retaining position thereof wherein merchandise is maintained away from said opening, a battery operated sound producing apparatus positioned in use in said housing for producing a predetermined sound and having an actuator for energizing said sound producing apparatus, a first sprocket mounted for engagement with said toothed wheel and being operative to actuate said actu-

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ator, and a manually operated coin actuated second sprocket operatively connected to said toothed wheel for rotation thereof when a coin of a predetermined denomination is deposited and said second sprocket is manually rotated thereby sequentially to release the coin into a receptacle therefor and thereafter actuate said actuator to energize said battery and thereafter to release said actuating member to initiate the production of sound from said sound producing apparatus for a predetermined time during rotation of said toothed wheel between the merchandise retaining position thereof and the merchandise dispensing position thereof.

15. The bulk merchandise vending machine set forth in claim 14, wherein said battery operated sound producing apparatus automatically is de-energized subsequent to the production of the predetermined sound thereby.

16. A bulk merchandise vending machine comprising a base having a merchandise dispensing outlet therein, a merchandise storage member having an opening from the interior thereof and having bottom wall structure seatable on said base, merchandise dispensing apparatus for positioning merchandise stored in said merchandise storage member in said opening, said merchandise dispensing apparatus being movable between a merchandise dispensing position thereof wherein merchandise is positioned in said opening in communication with said merchandise dispensing outlet to permit merchandise to be dispensed from said merchandise storage member through said opening and said outlet and a merchandise retaining position thereof wherein merchandise is maintained away from said opening, battery operated sound producing apparatus for producing a sound for a predetermined time and including an actuator movable between a first position wherein said battery is energized without production of sound and a second position wherein sound is produced

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for a predetermined time followed by automatic de-energization of said battery, control mechanism for operating said actuator between the first and the second positions thereof, a manually operated coin actuated mechanism operatively connected to said control mechanism and to said merchandise dispensing apparatus for operating said control mechanism and said dispensing merchandise from said merchandise storage member after a coin of a predetermined denomination is deposited therein and said coin actuated mechanism is manually operated sequentially to release the coin into a receptacle therefor and thereafter to operate said control mechanism and move said actuator to the first position thereof and thereafter to move said actuator to the second position thereof and thereafter to dispense merchandise when said actuator is in the second position thereof with said battery being de-energized after sound is produced for a predetermined length of time.

17. The bulk merchandise vending machine set forth in claim 16, wherein said control mechanism is operatively connected to said merchandise dispensing apparatus movement of which operates said actuator between the first position thereof and the second position thereof.

18. The bulk merchandise vending machine set forth in claim 16, wherein said merchandising dispensing apparatus includes a geared wheel and said control mechanism includes a sprocket and said coin actuated mechanism includes a sprocket, said geared wheel and said sprockets being intermeshed so that operation of said coin actuated mechanism by rotation thereof rotates said merchandise dispensing apparatus between the merchandise retaining position thereof and the merchandise dispensing position thereof and operates said actuator between the first position thereof and the second position thereof.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,822,004 Dated July 2, 1974

Inventor(s) Waldo E. Bolen, Jr.

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 3, line 18, "inconnected" should be --interconnected--;

Column 4, line 63, "120" should be --130--;

Column 5, line 30, "see" should be --seen--;

Column 6, line 44, "16" should be --61--;

Column 9, line 27, "second" second occurrence should be --sound--;

9, line 47, change "intermediate" to --merchandise--; and

Column 10, line 33, after "10" insert --teeth--.

Signed and sealed this 29th day of October 1974.

(SEAL)
Attest:

McCOY M. GIBSON JR.
Attesting Officer

C. MARSHALL DANN
Commissioner of Patents