April 11, 1939. G. R. STARNES ET AL 2,154,388

VENDING APPARATUS

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Fig. 1.

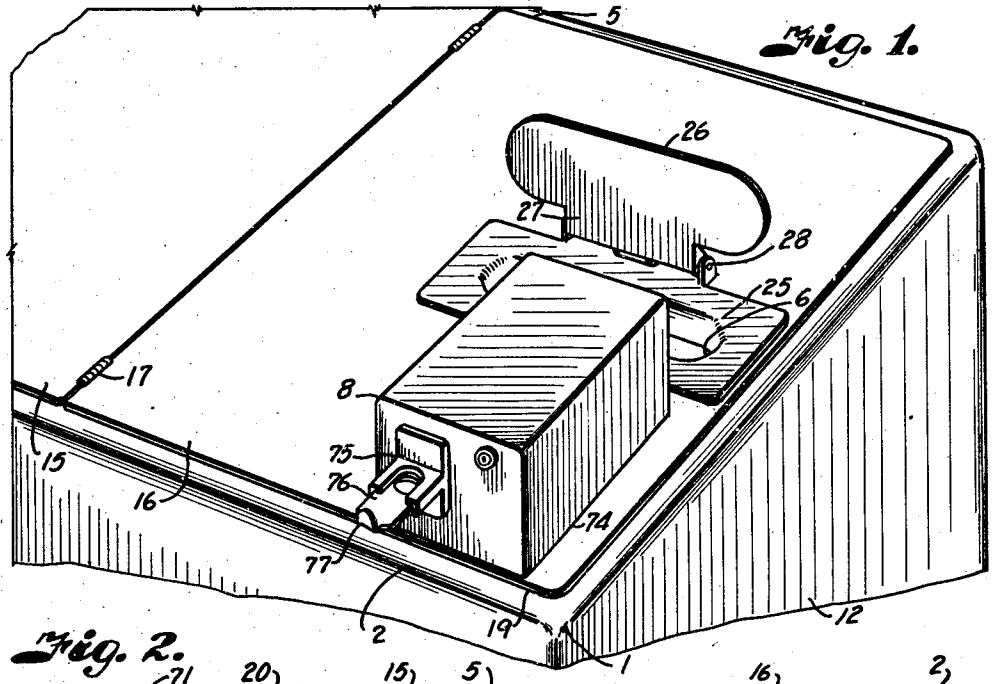
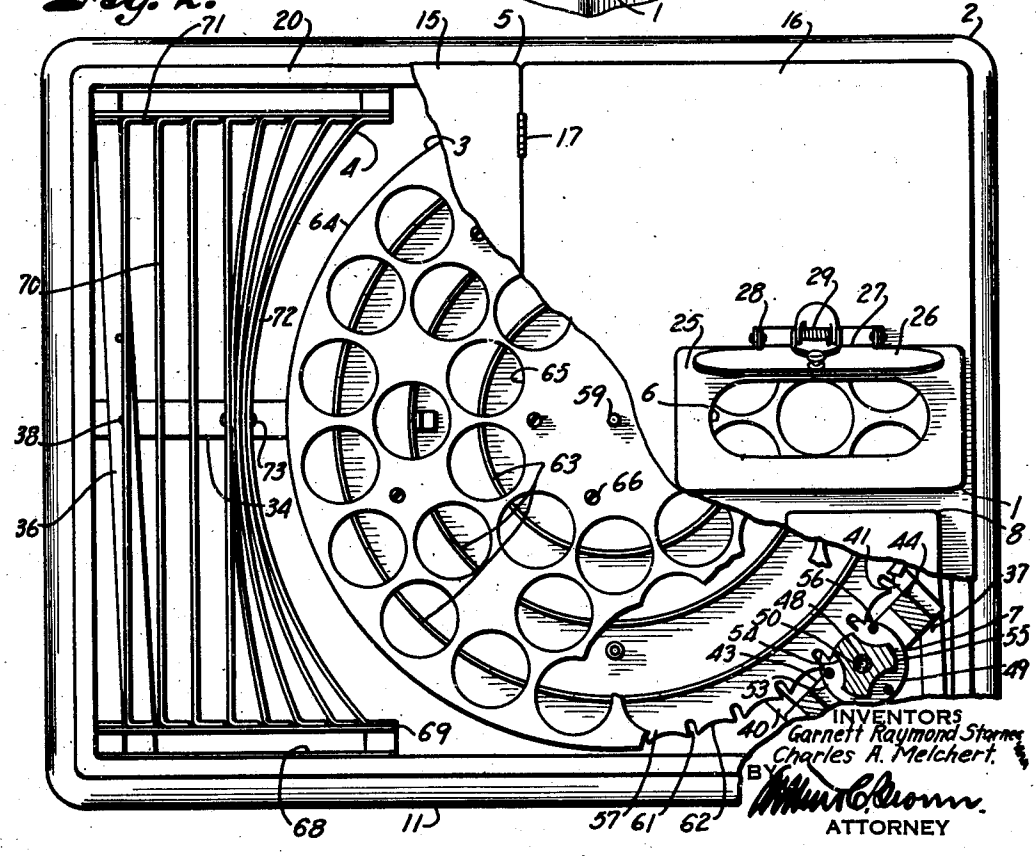


Fig. 2.



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Fig. 3.

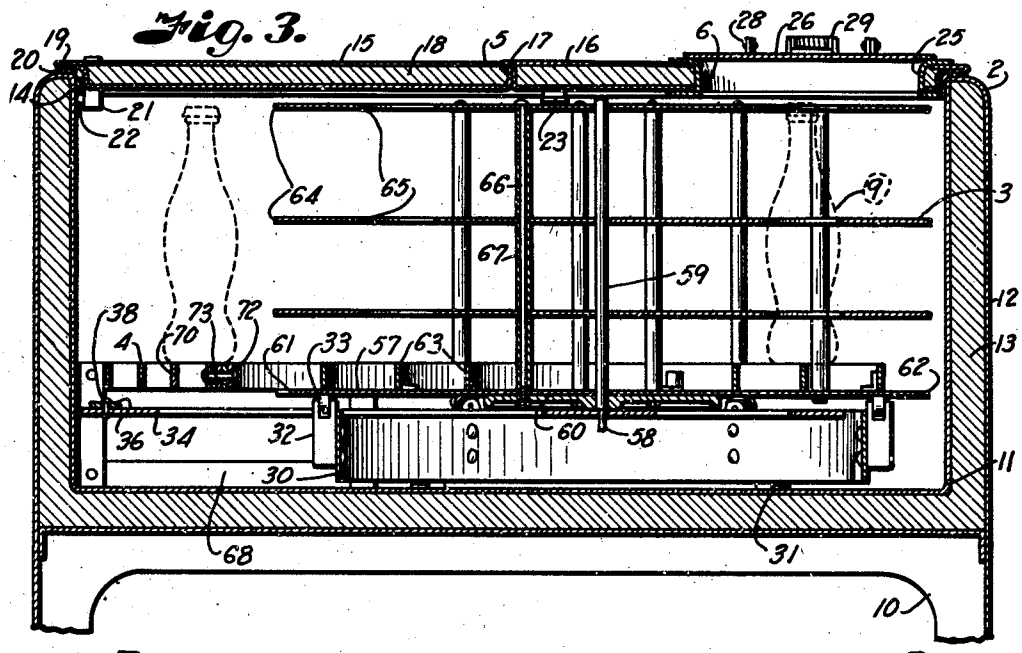


Fig. 4.

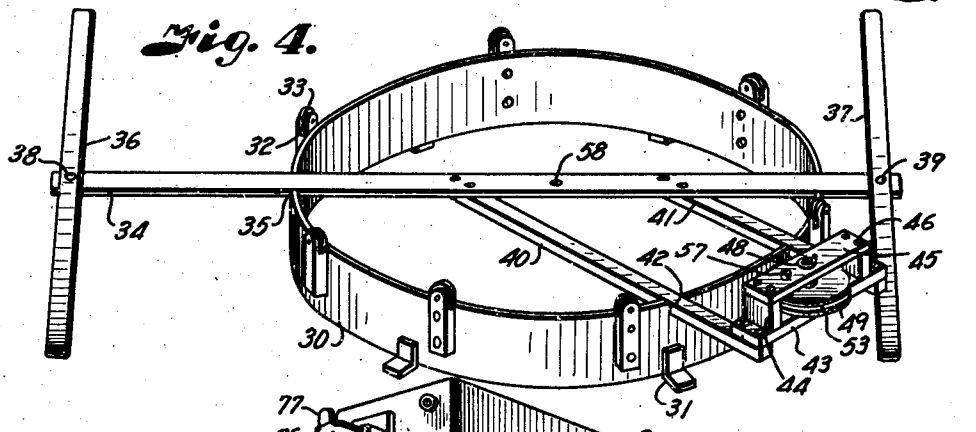
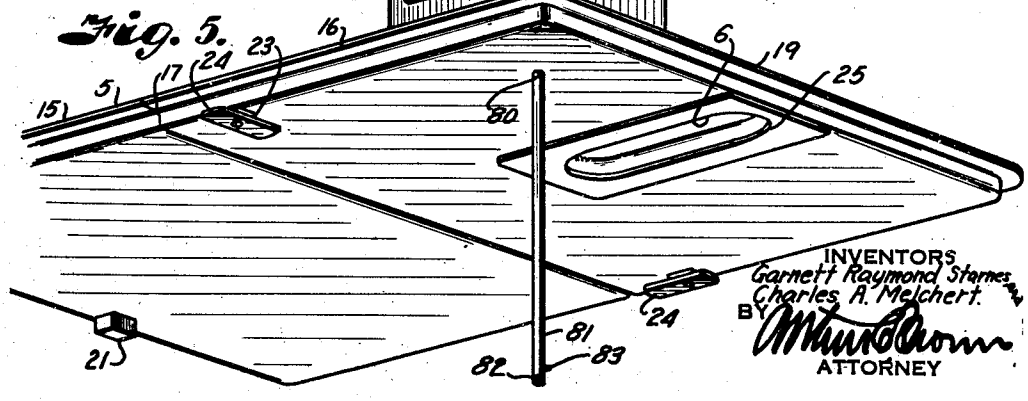


Fig. 5.



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Fig. 6.

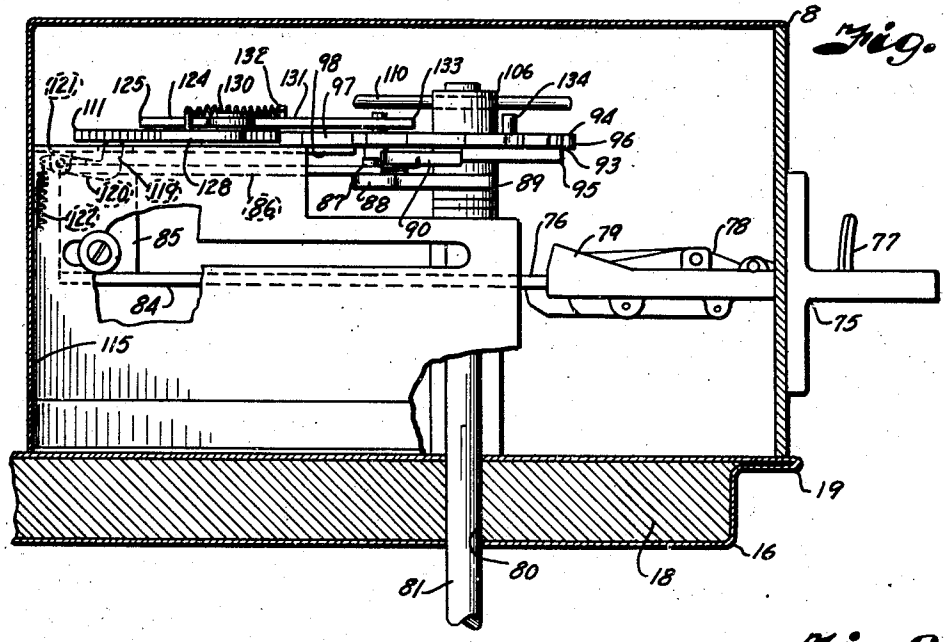


Fig. 7.

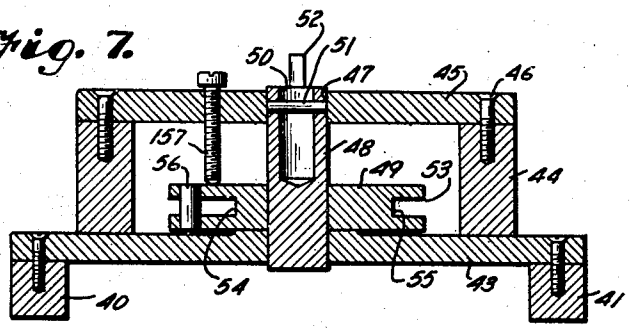


Fig. 8.

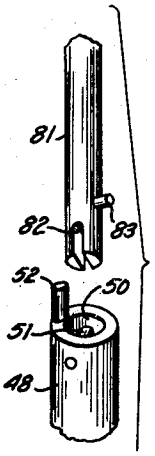
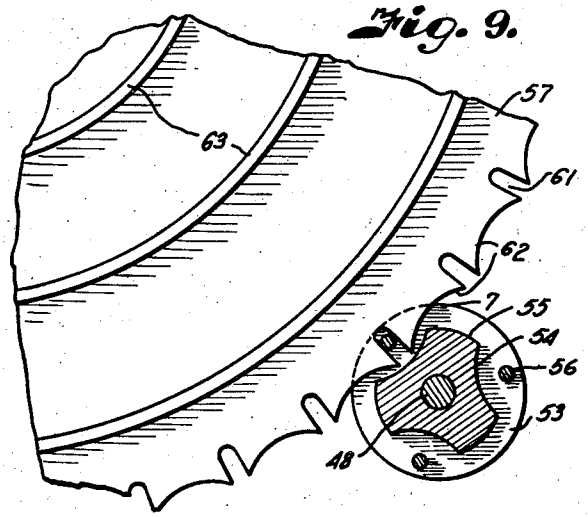


Fig. 9.



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VENDING APPARATUS

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Fig. 10.

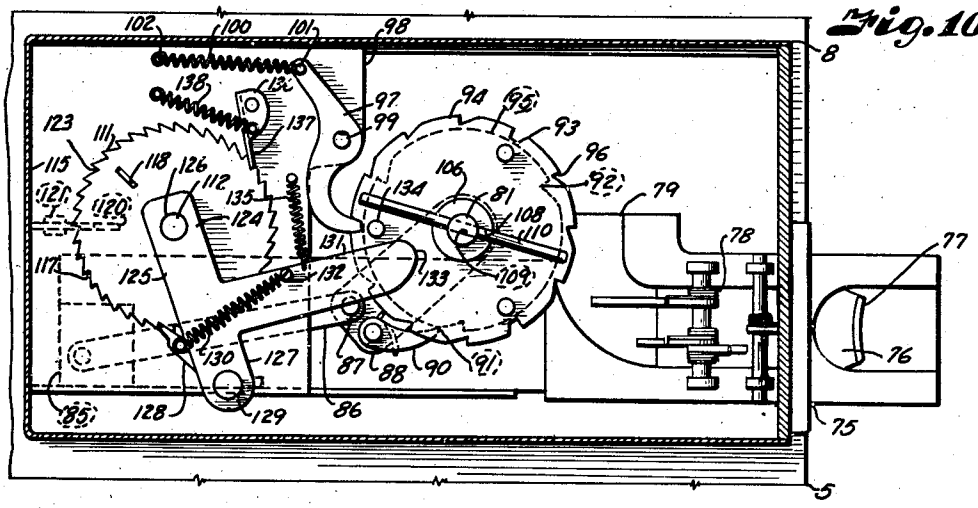


Fig. 11.

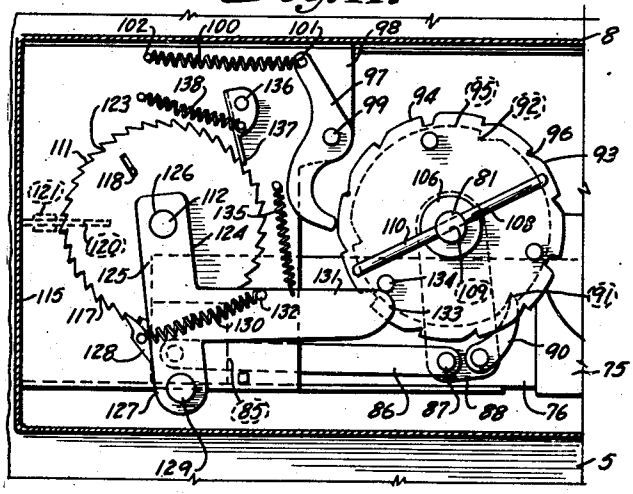


Fig. 12.

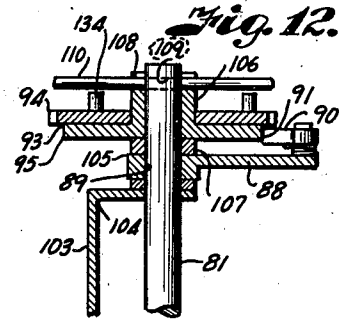


Fig. 13.

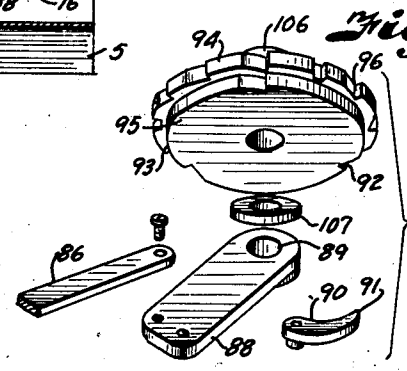
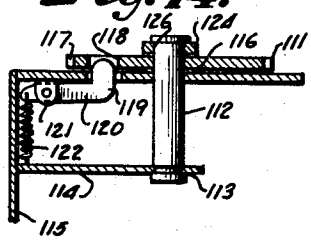


Fig. 14.



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Patented Apr. 11, 1939 2,154,388

UNITED STATES PATENT OFFICE

2,154,388

VENDING APPARATUS

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Application October 2, 1937, Serial No. 166,926

4 Claims. (Cl. 312—183)

This invention relates to vending apparatuses, and more particularly to an apparatus for vending bottled goods, for example, soda waters in bottles.

The principal object of the present invention is to provide an apparatus for vending bottled goods, wherein the apparatus may be controlled by a coin operated mechanism and wherein a single bottle may be dispensed from the apparatus upon a single actuation of the coin operated mechanism.

Other important objects of the present invention are to provide a vending apparatus having a relatively large capacity for bottled goods; to movably mount the bottled goods in a tank adapted to contain a refrigerant; to maintain the bottled goods in upright condition; to provide an opening in the tank with which the bottles are aligned individually, whereby other bottles adjacent the opening may not be removed; to so arrange the opening that a plurality of groups of bottles may be respectively aligned therewith for extraction of the bottles individually from the tank; to adjustably lock the bottle support in the tank; to provide for successive rotation of the bottle support; to provide storage space in the tank for a surplus of bottles over those contained in the support; to provide a coin actuated mechanism for imparting movement to the bottle support; to provide the coin actuated mechanism with locking members for adapting the apparatus to a predetermined number of successive movements of the bottles; and to provide for indicating when the bottle support or tank has been emptied of the bottled goods.

In accomplishing these and other objects of the present invention, we have provided improved details of structure, the preferred form of which is illustrated in the accompanying drawings, wherein:

Fig. 1 is a fragmentary perspective view of a vending apparatus embodying the features of the present invention and showing the coin actuated mechanism and the discharge opening from the tank.

Fig. 2 is a plan view of the vending apparatus, parts of the cover being broken away to illustrate the relation of the bottle support to the storage compartment and the gearing for rotating the support.

Fig. 3 is a vertical cross-sectional view through the vending apparatus illustrating the mounting of the bottle support and the relation of the discharge opening to bottles mounted in the support.

Fig. 4 is a detail perspective view of the bottle support mounting and the wedging members for positioning the same within the tank.

Fig. 5 is a detail bottom perspective view of the vending apparatus cover showing the shaft for rotating the bottle support in response to actuation of the coin actuated mechanism.

Fig. 6 is a detail elevational view of the coin actuated mechanism.

Fig. 7 is a detail vertical cross-section through a portion of the Geneva gearing for rotating the bottle support.

Fig. 8 is a detail perspective view of the lower end of the actuating shaft and the upper end of its gear socket, the same being shown in disassembled spaced relation.

Fig. 9 is a detail plan view partly in horizontal cross-section of the Geneva gearing employed for rotating the bottle support.

Fig. 10 is a plan view of the coin and plunger actuated mechanisms for operating the apparatus, the housing therefor being shown in cross-section.

Fig. 11 is a detail plan view of the ratchet and locking mechanisms shown in the condition of being moved to rotate the bottle support.

Fig. 12 is a detail vertical cross-section through the plunger actuated ratchet mechanism, particularly illustrating the provision for manually operating the actuating main shaft.

Fig. 13 is a detail perspective view of the ratchet mechanism, the parts thereof being shown in disassembled spaced relation.

Fig. 14 is a detail vertical cross-section through the locking mechanism for controlling rotation of the ratchet mechanism.

Referring more in detail to the drawings:

1, Fig. 1, generally designates a vending apparatus embodying the features of the present invention, which preferably includes a container such as a tank 2, a rotatable bottle support 3, Fig. 3, mounted in the tank, a storage section 4 in the tank, a hinged cover 5 having a delivery opening 6, a Geneva gearing mechanism 7, Figs. 2 and 9, and a coin actuated mechanism 8 for operating the Geneva gearing to individually align bottles 9 in the bottle support with the opening 6 for permitting individual extraction of the bottles from the tank upon a single operation of the coin actuating mechanism.

More particularly, the tank 2 includes conventional standards 10, Fig. 3, for supporting a tank element or receptacle 11 preferably consisting of spaced sheet metal inner and outer walls 12, having suitable insulating material 13 interposed therebetween and having an open upper end, the upper inner periphery of which is bounded by a peripheral flange 14.

The cover 5 is of substantially the same shape as the open upper end of the tank and is preferably provided with a pair of sections 15 and 16, which are hinged as at 17, the respective sections preferably being provided with a sheet metal casing and suitable insulating material 18

mounted in the casing. The edges of the cover are provided with a preferably integral peripheral flange 19 adapted to seat on a gasket or the like 20, which may be suitably fixed to either the upper edge of the tank opening or the lower face of the cover flange. A locking member 21 is provided in the section 15 of the cover, which has an element 22 engageable under the flange 14 of the tank for locking that section of the cover relative to the tank.

The section 16 of the cover is provided, adjacent the hinged portion thereof, with pivotal locking members 23 having laterally extending arms 24, respectively engageable under the flange 14 at a position relative to the flange adjacent the position of the locking members on the cover.

The delivery opening 6 of the tank cover preferably consists of an elongated opening extending in a longitudinal direction relative to the tank and which is bounded by a cast channel-shaped member 25 for providing a smoothly surfaced opening. The opening 6 is of a length substantially equal to a plurality of bottles 9 contained in the tank and is shown as being equal to the sum of the largest diameter of a total of three bottles. Mounted on the cover section 16 adjacent the bottle delivery opening thereof is an auxiliary cover member consisting of a plate 26 of a size adapting it for covering the delivery opening, the plate having a laterally extending flange 27 for hinging the auxiliary cover to the section, as shown at 28, a spring 29 being provided for engagement by its respective ends with the auxiliary cover and tank cover respectively for normally maintaining the bottle delivery opening in closed condition.

In order to support bottled goods within the tank and individually present them for extraction through the bottle delivery opening of the cover, we provide a ring 30, which is particularly shown in Fig. 4, and which has angle-shaped brackets 31 mounted on the lower periphery of the ring in spaced relation thereto for providing supporting foot members for the ring on the bottom of the tank. Spaced brackets 32 are also provided on the ring 30, which have yoked upper ends extending above the upper periphery of the ring for receiving rollers 33 therein.

The ring 30 is positioned within the tank by a locking member 34, which preferably consists of a bar seating in aligned notches 35 in the upper periphery of the ring, the bar 34 having cross-bars 36 and 37 pivotally mounted, as at 38 and 39, substantially adjacent the opposite ends of the bar 34. The cross-bars 36 and 37 are of greater length than the width of the tank to the end that, the ring having been positioned in desired location, the cross-bars may be manually engaged with the sides of the tank, whereby movement of the ring tends to wedge the cross-bars into engagement with the side walls of the tank for tightening and locking the ring in position.

Mounted on the bar 34 are spaced angularly extending bars 40 and 41, respectively engaged in spaced notches 42 in the upper periphery of the ring 30, and having their outer ends connected by a cross-member 43, as particularly shown in Fig. 7. Spaced upright members 44 are mounted on the cross-piece adjacent the ends thereof, which, in turn, are interconnected by an upwardly spaced horizontal cross-member 45, as by fastening devices 46. The cross-members 43 and 45 are provided with aligned openings 47, Fig. 7, for receiving the ends of a preferably cylindrical socket member 48 having a Geneva gear wheel 49 mounted on its lower end and in spaced relation to such end between the cross-members 43 and 45, the upper end of the socket member being provided with a bore 50 extending a substantial distance into the socket member. A stop pin 51 is mounted in the bore 50 in crossed relation thereto, and a vertically extending stop pin 52 is mounted on the upper bored end of the socket member 48. The Geneva gear wheel 49 is provided with an annular groove 53, the inner extremity of which is indented, as at 54, Fig. 9, to provide a series of preferably three recesses and an alternate series of the same number of convexly or arcuately shaped cam members 55 bounding the inner periphery of the groove. Spaced pins 56 are also provided in the gear wheel 49 substantially midway between each of the cam members 55 and on a circumference approximately defined by a continuation of the circular plane of the cam members. A friction pin 57, which is mounted in the upper cross-bar 45 is engageable with the upper surface of the Geneva gear 49 for frictionally retarding movement of said gear and preventing dislodgment of the gear and socket 48 from their relative positions in the gear and socket mounting.

A counterpart of the Geneva gear wheel 49 consists of a wheel 57, Figs. 2, 3 and 9, of a diameter greater than the ring 30, the lower face of which wheel is mounted on the rollers of such ring 30 and the central portion of which wheel is provided with an aperture alignable with an aperture 58 in the bar 34 of the ring locking device to the end that a centering bar 59, which extends through an aligned opening in a bearing plate 60 fixed to the underface of the wheel, is adapted to be engaged in the aperture 58 for maintaining the wheel 57 in rotatable position relative to the rollers of the ring 30. The wheel 57 is provided on its periphery with spaced slots 61 and adjacent concaved arcuately shaped indentations 62, the indentations 62 being of a size and shape adapting them for frictional engagement with the oppositely disposed convexed arcuately shaped cam members 55 forming a part of the gear wheel 49. The wheels 49 and 57 are arranged in such a manner relative to each other that as the gear wheel 49 is rotated, engagement is first had by one of the pins 56 in one of the slots 61, and upon continued rotation of the gear 49, the wheel 57 is turned in such a manner that the concavo-convex arcuate surfaces of the gear end wheel then interengage with each other or vice versa. It is further pointed out that the contact between said arcuate surfaces of the gear and wheel forms a lock for preventing unintended rotation of the wheel 57 apart from rotation of the Geneva gear 49.

The upper surface of the wheel 57 is provided with a series of spaced concentric rings 63, which are of progressively less diameter, and which are adapted to support the bottles for seating engagement on certain of the rings for adapting the wheel 57 to move the bottles in an arcuate path in response to movement of the wheel by the Geneva gear 49.

Bottles having been disposed on the upper face of the wheel 57, it is desirable to maintain them in upright condition, which desideratum is accomplished by providing a plurality of spaced plate members 64, Fig. 3, preferably of circular conformation and having a series of spaced aligned openings or holes 65 therein. Bolts 66

are provided, having their lower ends fixed to the wheel 57 and their upper ends fixed to the top plate member 64, sections of pipe or the like 67 being provided intermediate the plates 64 for spacing the plates a desired distance from each other.

As above stated, the plates 64 are provided with series of aligned holes 65. A definite arrangement is desirable for the holes in the plates in order to not only provide for accommodating the apparatus to dispense a maximum number of bottled goods for its size, but also to provide for aligning individual bottles of such goods with the delivery opening 6 in the cover of the tank. It has been stated that the delivery opening 6 is of a length substantially equal to the diameter of three bottles intended to be stored in the apparatus and we have found that by staggering the openings in annular series on each of the plates, as shown in Figs. 2 and 3, forty groups of openings, that is to say, forty openings in each of the plates 64, can be arranged, by stamping or the like, in each of the plates in such a manner that one full opening only, or series of vertically aligned openings, may be aligned with the cover opening at a single position of the wheel 57. Such number, of course, can be varied, and the number forty has merely been found a convenient number for bottled goods in the present container. If forty series of aligned openings are provided in the plates 64, as shown, forty notches and forty arcuate recesses are provided in the wheel 57 in such a manner that, when the Geneva gear wheel 49 is rotated a one-third turn, the wheel 57 is rotated one-fortieth of a complete rotation and one of forty series of vertically aligned openings is presented below the opening in the cover of the tank.

As a matter of convenience, we provide an additional feature to the tank, which is deemed an advantage, in the storage space 4. As is well-known, bottled goods often are shipped in cases of twenty-four and, when the dispensing apparatus proper provides for forty bottles, as shown, a surplus of eight is left from two cases, for example. The storage space 4 provides for such surplus and, of course, can be arranged so as to accommodate more bottles. In the present instance, this storage space, which is particularly shown in Figs. 2 and 3, preferably consists of brackets 68 adapted to rest on the bottom of the tank at the end thereof opposite the bottle supporting elements, and a pair of longitudinal bars 69 have their ends mounted on upright posts received by the brackets 68. Cross-bars 70, having laterally turned flanges 71 are mounted on the cross-bars 69, as by welding or the like, in spaced relation to form a grill for supporting surplus bottles in upright condition.

It is necessary to provide sufficient clearance between the rotatable bottle supporting mechanism and the storage space, and we, therefore, continue with the placement of cross bars 70 by securing the ends thereof to the cross-pieces 69, but by bending the body portions 72 of the grill members 70 outwardly or away from the rotatable bottle support, and secure such body portions together, as at 73, to provide a progressively less arcuately shaped surface for the body portions of adjacent grill members relative to the rotatable bottle support.

Means is provided for the actuation or rotation of the bottle supporting elements, which consists of the coin actuated mechanism 8 generally illustrated in Fig. 1.

The coin actuated mechanism consists of the housing 8, the lower edges of which are suitably fixed to the top face of the delivery section of the tank cover, as shown at 74, and a plunger guide 75 is mounted on one end of the housing for receiving a plunger member 76 extending into the housing and having a finger piece 77 at its outer end exteriorly of the housing for actuating the plunger. Such coin actuated mechanism is provided with conventional coin receiving means indicated at 78 and an inclined chute 79 within the housing for disposing of coins placed in the plunger member for actuating the vending apparatus.

The housing 8 is mounted on the cover of the tank in such a manner that it covers a portion of the cover aligned with the Geneva gear wheel 49 and the socket member 48 thereof. A suitable opening is provided in the cover, as shown at 80, in Fig. 6, for the extension therethrough of an actuating shaft 81, which actuating shaft extends downwardly into the tank and is provided at its lower end with a yoke member 82 engageable over the pin 51 of the Geneva gear socket 48, and the shaft 81 is further provided with a laterally extending pin 83 for engagement with the pin 52 of such socket member, to the end that engagement may be had between the shaft 81 and the socket 48 in only one position.

It has already been stated that it is desirable to turn the Geneva gear one-third of a complete revolution on each actuation of the coin actuated mechanism, and this is accomplished by providing the inner end 84 of the plunger 76 with a lug 85, Fig. 10, and by pivotally attaching a link 86 thereto, which is also pivotally engaged as at 87, with an arm 88, which has its end opposite the pivot point 87 rotatably mounted on the upper end of the shaft 81, as shown at 89, Fig. 6. Mounted on the link 86 adjacent the pivot point 87 is a spring pressed pawl member 90 having the working end 91 thereof engageable in each of a series of three notches 92 in a ratchet mechanism 93. It is apparent that extension of the plunger member 76 inwardly relative to the housing 8 of the coin actuated mechanism forces the link 86 to the left, as in Fig. 10, or away from the operator and consequently pivots the arm 88 in the same direction, thereby drawing the pawl member in a clockwise direction over the outer surface of the ratchet member 93 for engagement in one of the notches 92. It is further apparent that retraction of the plunger or movement, as to the right in Fig. 10 or toward the operator, forces the link 86 to the right, the arm 88 in the same direction, and the pawl, due to its spring mounting on the arm 88, engages in a notch 92 and moves the ratchet mechanism in an anti-clockwise direction. The length of stroke of the plunger is adjusted in such a manner that a complete operation thereof turns the ratchet mechanism one-third of a complete rotation and, since the shaft 81 is fixed to the Geneva gear 49, the Geneva gear 49 is rotated a one-third turn, but moves the wheel 57 one-fortieth of a turn due to the interengagement of the gear pins of the gear 49 with the slotted portions of the wheel 57.

In order to provide one complete actuation of the vending apparatus with each coin inserted in the coin mechanism, we provide the ratchet mechanism 93 with an upper notched wheel 94, which is preferably fixed to the notched wheel 95 of the ratchet mechanism, and both of which are fixed in a suitable manner to the upper end

of the shaft 81. The ratchet wheel 94 is preferably provided with a greater number of notches 96 on its periphery for engagement by the end of a pawl 97, which is pivoted to a horizontal supporting partition member 98 suitably mounted in the cam mechanism housing, as at 99 in Fig. 10, the opposite end of the pawl being fixed to a spring 100, as shown at 101, the opposite end of the spring being fixed to the plate 98, as at 102, in such a manner that the working end of the pawl is urged into engagement with the face of the wheel 94 for consequent engagement in the notches thereof. Thus, once actuation of the plunger has turned the wheel 95 of the ratchet mechanism more than the distance between adjacent notches on the upper wheel 94, the operation of the vending device must be completed before another operation thereof may be commenced.

In order to support the ratchet mechanism at the upper end of the shaft 81, we provide a bracket member 103, which has its lower ends suitably fixed to the cover of the tank and which has its upper end bent laterally, as at 104, which end is provided with an opening for extension therethrough of the upper end of the shaft 81, the shaft 81 in turn being extended through the hub 105 of the arm 88 and through central openings in the hub of the ratchet mechanism, as shown in Fig. 12. Suitable bearing members or washers 107 are interposed between the bracket, arm and ratchet mechanisms for enhancing movement thereof relative to each other.

In some instances, it may be necessary for the person in charge of the vending apparatus to align different series of holes in the bottle support with the discharge opening and in permitting such an operation, we provide the hub 106 of the ratchet mechanism with aligned notches 108 and the upper end of the shaft 81 with a passageway 109 for the extension of a pin 110 substantially the central portion of which rests in the notches 108 in such a manner that the ratchet, shaft, gear, and bottle support may be manually turned to desired position relative to the discharge opening of the tank.

It is a convenience to know when it is required to refill the vending apparatus and in providing for such an indication, we provide a ratchet mechanism in the nature of an auxiliary locking mechanism, which is shown in detail in Figs. 6, 10 and 14.

The auxiliary locking mechanism consists of a notched wheel 111 which is mounted on the upper end of a shaft 112, having its lower end seated, as shown at 113, in a bracket 114 extending outwardly from the end wall 115 of the coin actuated mechanism housing. The wheel 111 is mounted immediately above the horizontal partition 98 in spaced relation to the ratchet mechanism 93 and is preferably provided with suitable bearings, such as the washers 116. In the present instance, the wheel 111 is provided with forty notches 117, and a recess 118 is provided in the body of the wheel for receiving the upturned end 119 of a latch member 120, which has its end opposite the upturned end pivoted on a bracket 121 fixed to the underface of the horizontal partition 98. The extreme outer or non-working end of the latch 120 is provided with a spring 122, which has its lower end fixed to the bracket 114 in such a manner that the latch is always urged upwardly, and when in engagement in the hole 118 of the wheel 111 locks the wheel against rotation. The initial operation of the vending apparatus is started when the latch 120 is in a position immediately adjacent the hole 118, for example, when the notch 123 of the wheel 111 is substantially immediately above the latch member, as viewed in Fig. 11 of the drawings, or to the left of the operator.

In order to correlate rotation of the locking wheel 111 with actuation of the rotatable bottle support, the upper end of the wheel shaft 112 is provided with a link 124 of substantially T-shape, the arm 125 of the T being pivoted to the shaft 112, as shown at 126, and the opposite arm 127 of the T being provided with a pawl member 128, which is pivoted to such arm as shown at 129, the pawl 128 being adapted to engage in each of the notches 117 of the wheel 111 and the pawl being urged into engagement with the peripheral face of such wheel by a spring 130 fixed thereto and having its opposite end fixed to the body 131 of the link 124, as shown at 132. The body 131 of the link has a rounded end 133 adapted to be engaged by spaced pins 134, which are preferably three in number and equidistantly spaced on the upper surface of the ratchet mechanism wheel 94. Thus, as the ratchet wheel 94 is turned, one of pins 134 engages the body of the link, moving it in a clockwise direction relative to its pivotal engagement 126, and consequently moving the notched wheel 111 in a clockwise direction a distance of one of the notches. The pin 134 rides off the end of the link in such a manner that a spring 135 having its ends respectively fixed to the partition 98 and body of the link, returns the link to normal position and presents the pawl to the succeeding notch in the wheel. A pawl 136 is pivotally mounted on the partition 98 and has a working end 137 engageable in successive notches 117 of the wheel 111 for preventing accidental anti-clockwise movement of the notched wheel 111, the pawl being urged against the surface of the notched wheel by a spring 138 having its ends respectively fixed to the pawl and to the partition 98.

The operation of the vending apparatus constructed as described is as follows:

Assuming the tank and bottle support to be supplied with bottled goods; and, referring first to Fig. 1, a coin, such as a nickel or the like, is deposited in the space therefor in the plunger 76 exteriorly of the coin mechanism housing. The finger piece 77 is then pressed inwardly relative to the housing, as shown at Fig. 6, which carries the coin through the conventional coin operated mechanism 78, Fig. 10, for permitting completion of the instroke of the plunger 76, the coin being by-passed down the chute 79 in the usual manner. As the plunger is pressed inwardly, the link 86 on the rear end thereof draws the arm 88 on the ratchet mechanism 93 in a clockwise direction, and the spring pressed pawl engages one of the three notches 92 in the wheel 95 of the ratchet mechanism.

The finger piece is then drawn outwardly relative to the mechanism housing and such movement forces the arm 88 in an anticlockwise direction and consequently the ratchet mechanism, by reason of engagement of the pawl 90 in one of the notches thereof. The pawl 97 engaging in the notches 96 of the upper wheel 93 prevents discontinuation of the particular operation of the mechanism until a complete operation is had, by reason of its engagement in one of the more numerous notches on the upper wheel.

As the ratchet mechanism is rotated in response to rotation of the plunger, one of the pins

134 engages the body of the T-shaped link, which, through the pawl 128, moves the locking wheel one notch away from the hole 118 to indicate the vending of one bottle from the vending apparatus.

As the ratchet mechanism is rotated, the shaft 81, which is fixed thereto, is also rotated, the movement of which is transferred by its pin and socket connection with the shaft 48 of the Geneva gear wheel 49 to such gear wheel, and, the notches of the working wheel of the ratchet mechanism being three in number, the shaft 81 is given a one-third turn upon each actuation of the plunger. The Geneva gear wheel is therefore given a one-third turn, which, as shown in Fig. 9, moves one of the pins 56 from its engagement in the slot 61 in the wheel 57 out of the wheel and effects engagement of the concavo-convex arcuate surfaces of the wheel and gear with each other and subsequently effects engagement of a succeeding pin 56 in the next succeeding slot 61 of the wheel 57 upon the next operation of the plunger.

While the arcuate surfaces 55 and 62 of the gear and wheel are in engagement, it is apparent that such engagement effects a lock on the rotatable bottle support so that a complete retraction of the plunger is necessary to turn the wheel one unit. The wheel is locked in such position, that is, with the arcuate surfaces in interengagement, in such a manner that one series of vertically aligned holes in the plates 64 is aligned with the discharge opening of the cover, as shown in Fig. 2.

Rotation of the bottle support is permitted due to its roller mounting on the ring 30 and the ring 30 is held in desired position by moving the cross-bars 36 and 37 into engagement with the side walls of the tank.

Succeeding operations of the plunger each present an individual bottle below the discharge opening of the tank, the bottles being manually withdrawn from the tank and disposed of as desired.

When it is desired to refill the vending apparatus, the lock 21 on the cover is actuated to permit hinging of the section 15 of the cover, whereupon the locking members 23 of the discharge section may be moved to permit complete removal of the hinged cover. The series of aligned openings in the rotatable bottle support may then be provided with bottles, which in the present instance, accommodates forty bottles and surplus bottles may be placed on the grill members 70 at the end of the tank. Refrigerant, such as ice water or the like is then placed in the tank to a desired height and the cover is replaced, the discharge section thereof being positioned to overlie the major portion of the rotatable body support. The locks 23 are then moved for engagement with the flange at the top of the tank and the lock section of the cover may be merely snapped shut in conventional fashion.

The vending apparatus is then in condition for a series of operations of forty in number for dispensing or vending forty bottles of soda water or the like.

The disposition of the series of aligned holes in the rotatable bottle support, being such that a single series of vertically aligned openings is aligned below the discharge opening of the tank, as shown in Fig. 2, precludes extraction of more bottles from the tank than have been paid for, as indicated by actuation of the coin mechanism.

While the actuating shaft 81 is mounted on the coin actuated mechanism and thus on the cover, its removal and application to the tank incident to manipulation of the cover in no way adversely affects the vending apparatus by reason of the yoke, pin and slot connections thereof with the Geneva gearing, which facilitate interconnection therebetween.

The principal advantages in an apparatus embodying the features of the present invention are that a vending apparatus is provided having a maximum capacity for a given size. The vending of bottled goods therefrom is positive and accurate, and a convenience is provided in indicating when the apparatus needs to be refilled.

What we claim and desire to secure by Letters Patent is:

1. In an apparatus of the character described comprising a container; a ring mounted on the bottom of the container having rollers thereon extending upwardly therefrom, means on the ring for wedgingly locking the same in desired position within the container, a support rotatably mounted on the rollers of the ring, means on the support engaged with the wedging means for maintaining the support in rotatable position thereon, means mounted on the ring engaged with the support for locking the same against rotation, and means for actuating the locking means.

2. In an apparatus of the character described comprising a container; a support rotatably mounted in said container comprising a plate having a series of alternately spaced indentations and slots on its periphery, a member having portions engagable in the slots and indentations of the plate respectively, a shaft connected with said member extending exteriorly of the container adapted to be turned for effecting engagement between said plate and said portions to alternately rotate said plate and lock the same against rotation, and means on the shaft and member whereby they are adapted for interengagement in operative condition only.

3. In an apparatus of the character described comprising a container; a ring mounted in said container having rollers mounted thereon, wedge means mounted on the ring for locking the ring in position in the container, a support rotatably mounted on said wedge means and seating on said rollers of the ring comprising a plate having a series of alternately spaced indentations and slots on its periphery, a member having portions engagable in the slots and indentations of the plate respectively, and a shaft connected with said member extending exteriorly relative to the container adapted to be turned for effecting engagement between said plate and said portions to alternately rotate said plate and lock the same against rotation.

4. In an apparatus of the character described comprising a container, a support rotatably mounted in the container, means engaged with the support alternately rotating and locking the support in response to actuation of said means, an extension on said means extending exteriorly of the container, and interengagable means on the extension and the first-named means allowing interengagement therebetween in operative condition only.

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