Jan. 14, 1930. J. E. HENDERSON 1,743.917

DISPENSING DEVICE

Filed Feb. 16, 1928 3 Sheets-Sheet 1

Fig. 1.

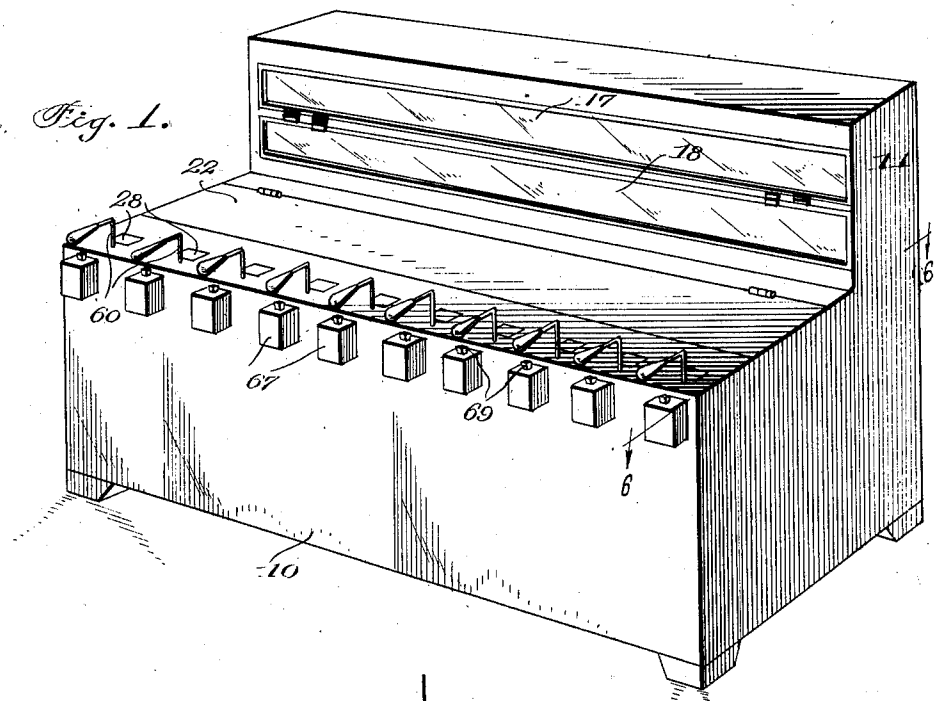


Fig. 2.

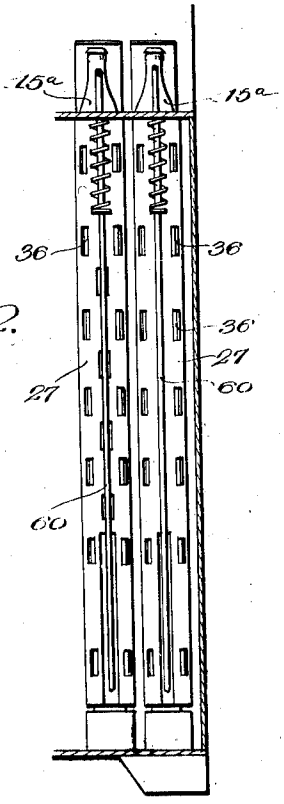
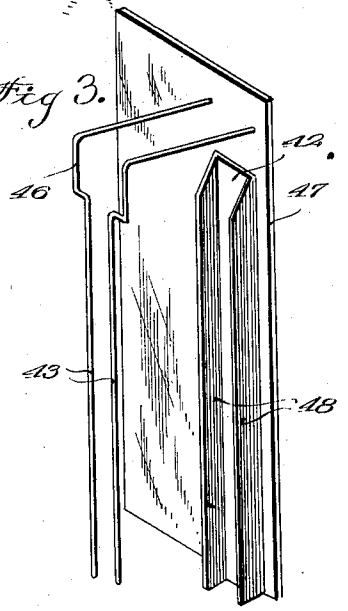


Fig 3.



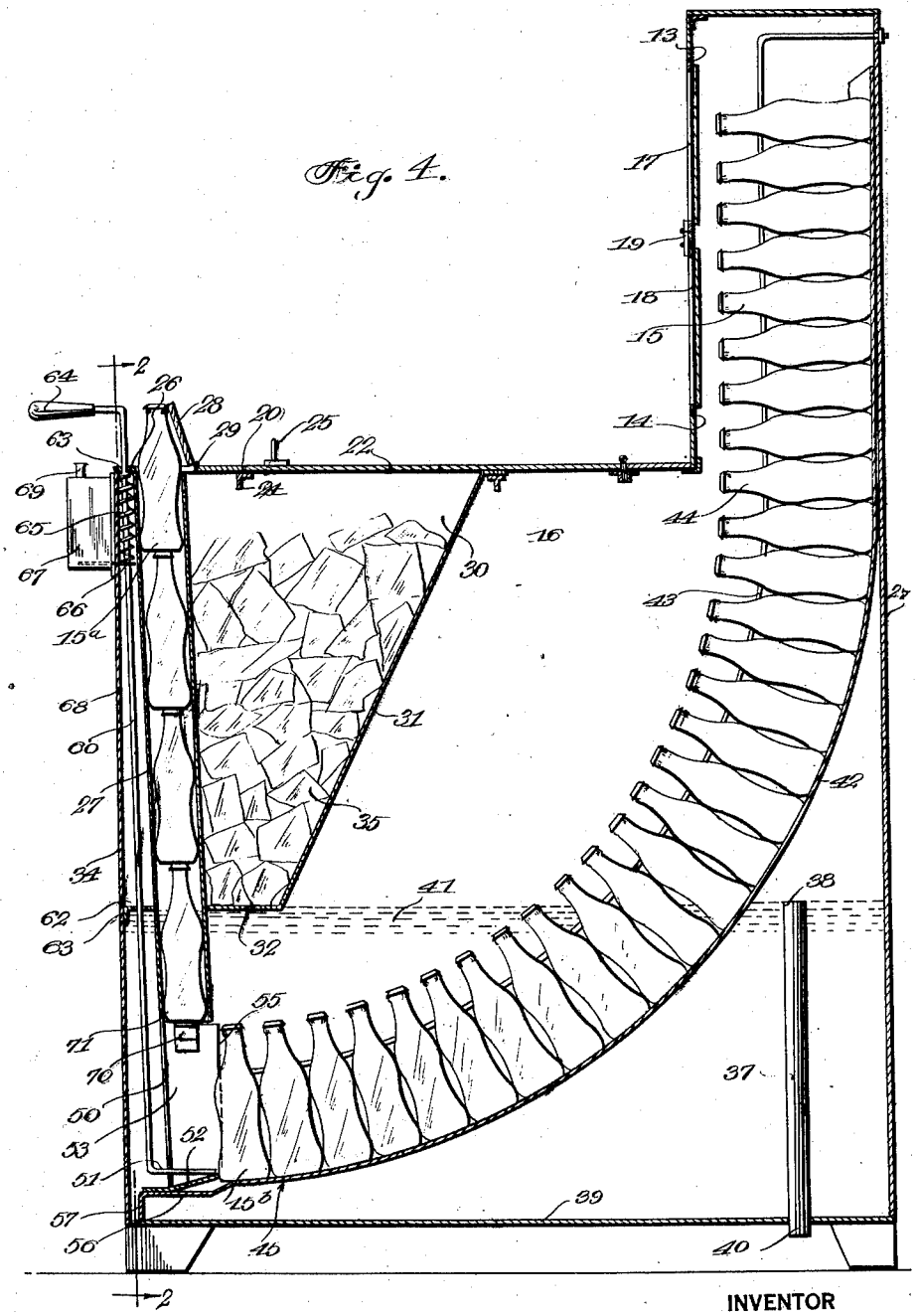
INVENTOR
J.E. HENDERSON
BY Munn & Co.
ATTORNEY

Jan. 14, 1930. J. E. HENDERSON 1,743,917

DISPENSING DEVICE

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Fig. 4.



INVENTOR
J. E. HENDERSON
BY Munn & Co.
ATTORNEY

Jan. 14, 1930. J. E. HENDERSON 1,743,917

DISPENSING DEVICE

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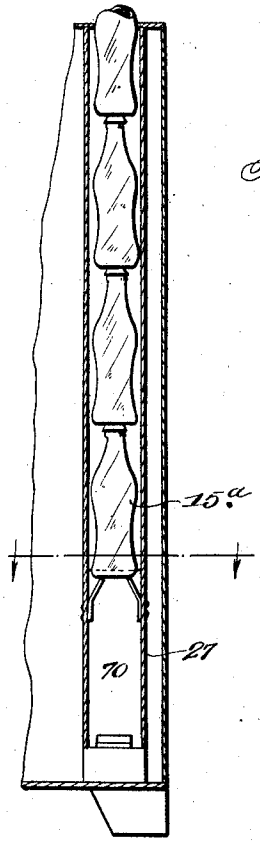


Fig. 5.

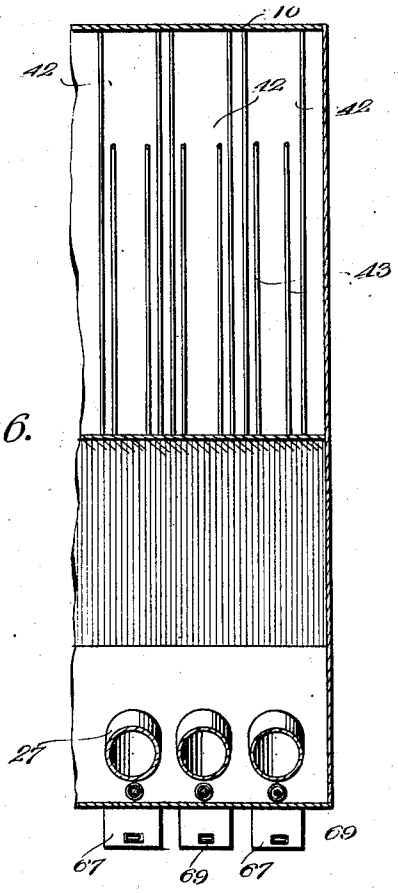


Fig. 6.

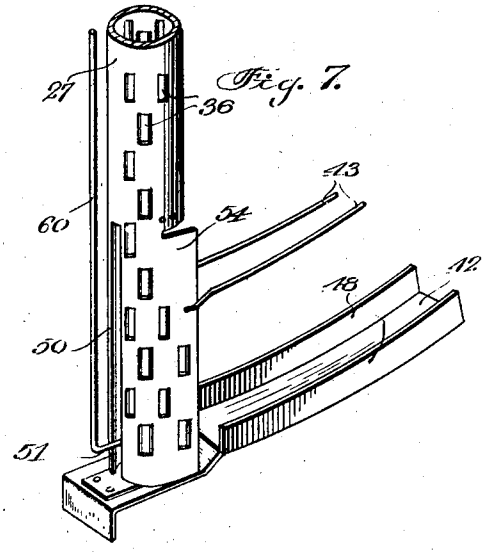


Fig. 7.

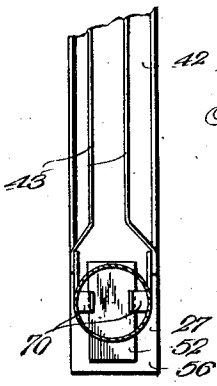


Fig. 8.

INVENTOR
J. E. HENDERSON
BY Munn & Co
ATTORNEY

Patented Jan. 14, 1930 1,743,917

UNITED STATES PATENT OFFICE

JOHN E. HENDERSON, OF FORT MYERS, FLORIDA

DISPENSING DEVICE

Application filed February 16, 1928. Serial No. 254,790.

This invention relates to a dispensing device for bottled liquids.

An object of the invention is the provision of a device for cooling bottled liquids and from which the bottles may be progressively removed through the manipulation of a coin-controlled bottle elevating rod.

Another object of the invention is the provision of a device for compactly storing a series of bottled drinks in a cooling chamber and from which the bottles may be ejected by means of a coin-controlled rod, said rod being adapted to control the movement of the bottles from an arcuately shaped path to a vertical path where the bottles are removed individually by the rod.

A further object of the invention is the provision of a device for compactly storing bottled liquid in a cooling chamber equipped with a refrigerating compartment through which the bottles are forced in a vertical path by a coin-controlled rod, a spring being employed for retaining the bottle at the inner end of a curved path from entering the vertical path, said spring being actuated as the rod arrives at the inner end of the path and after said rod has been positioned for elevating the bottle.

This invention will be best understood from a consideration of the following detailed description in connection with the accompanying drawings; nevertheless, it is to be understood that the invention is not confined to the disclosure being susceptible of such changes and modifications as shall define no material departure from the salient features of the invention as defined in the appended claim.

In the drawings:—

Figure 1 is a view in perspective of a dispensing device constructed in accordance with the principles of my invention,

Figure 2 is a vertical section taken along the line 2—2 of Fig. 4,

Figure 3 is a fragmentary view in perspective of a part of the feeding track for the dispensing device,

Figure 4 is a transverse vertical section of the dispensing device showing one of the cooling compartments,

Figure 5 is a fragmentary vertical section through the discharging passage of one of the sections of the dispensing device,

Figure 6 is a fragmentary horizontal section taken along the line 6—6 of Fig. 1,

Figure 7 is a fragmentary view in perspective showing the relationship between the feeding track and the discharging track,

Figure 8 is a horizontal section taken along the line 8—8 of Fig. 5.

Referring more particularly to the drawings 10 designates a housing forming the main body of the cooling and dispensing apparatus which has an extension 11 provided with openings 13 and 14 through which the bottles 15 are inserted when filling the cooling chamber 16 with the bottled liquids. These openings are respectively closed by doors 17 and 18 hinged at 19. It will be noted, that these doors open towards each other and are adapted to be locked in any approved manner to prevent unauthorized removal of any of the bottled liquids from the cooling chamber.

The housing is provided with an opening 20 in the top 21 which is normally closed by a door 22 hinged at 23. The free edge of the door is adapted to rest, when closed, upon an angle iron 24 secured to the inner face of the top 21. A hand grip 25 is secured to the outer face of the door aiding in raising same. Suitable locks may be employed for preventing unauthorized access to the interior of the housing.

The top 21 is also provided with a discharge opening 26 for the bottles 15^a which have been located in the discharge passage or track 27. A gravity actuated door 28 hinged at 29 is adapted to normally maintain the opening closed.

A refrigerating compartment 30 is formed at the forward end of the cooling chamber 16 and has an inclined rear wall 31 and a horizontally disposed bottom 32 which is connected at 33 to the front wall 34. The door or closure 22 forms the top of the refrigerating compartment 30 so that when the door is open crushed ice 35, or any suitable refrigerant, may be deposited in the refrigerating compartment 30. It will be noted that the

track or discharge passage 27 extends through the refrigerating compartment and terminates at its upper end in the opening 26. By this construction the refrigerant 35 is located in closer association with the track 27.

The discharge passage or track 27 is provided with a plurality of openings 36 whereby the cold water from the melting ice 35, will pass through the openings and enter the passage 27 whence it will be discharged from the lower end of the passage into the bottom of the cooling chamber 16. A pipe 37 has its free end 38 open to the cooling chamber 16 at a predetermined height from the bottom 39 of said chamber. The lower end of the pipe 37, as shown at 40, terminates exteriorly of the housing so that water 41 which has been drained from the refrigerating compartment 30 will pass from the cooling chamber to the exterior, while being maintained at a predetermined level in said cooling chamber.

An arcuately shaped track is disposed within the cooling chamber 16 and has its upper end located adjacent the doors 17 and 18. This track consists of a curved base member 42 with which the bottoms of the bottles coact, while a pair of spaced wire members 43 are disposed in curved concentric relation with the base member 42 and are spaced sufficiently apart to receive the necks 44 of the bottles. The restricted space between the guides 43 provides for the engagement of said guides with the shoulders on the bottles located inwardly of the necks to prevent said bottles from being accidentally discharged from the tracks, while said bottles are moving by gravity from the upper end of the track to the lowermost end, as indicated by the numeral 45 and where the track terminates at the inner end, which is adjacent to the lower end or entrance to the vertically disposed track or passage 27. The upper ends of the guides 43 are spaced at a greater distance, as shown at 46, in order to permit the ready insertion of the bottles. The upper ends of said guides are connected to the rear wall 47 of the housing. The curved track 42 is provided with a pair of spaced parallel flanges 48 which engage the sides of the bottles at diametrically opposite points.

The track 27 is formed of metal which will not be readily attacked by the salt water in the refrigerating compartment 30 and has its lower end slotted at 50 to receive a bottle support 51 which normally rests upon a spring retaining member 52 which is adapted to prevent the innermost bottle 15^b from being forced into the chamber 53 when a bottle which has been previously in the chamber has been elevated to a height which is equal to the length of the bottle. The portion of the track 27 which faces the inner end of the guide 42 has been cut and forced apart to provide outer receiving flanges 54 and an entrance 55 for the bottles supported by the curved track. The bottom of the chambers 53 is formed by an extension 56 of the guide 42 which has a flange 57 bent downwardly and resting upon the bottom 39 of the housing.

A rod 60 is secured to or formed integrally with the support 51 and extends upwardly through a passage 62 in the bottom 32 of the refrigerating compartment 30 and also through an opening 63 in the top 21 of the housing. The rod 60 where it projects beyond the top 21 of the housing is provided with a handle 64 which may be grasped for elevating the rod when ejecting the bottles from the passage 27. A spring 65 embraces the upper end of the rod 60 and has one end in engagement with the inner face of the top 21 of the housing and the other end in engagement with an arm 66 secured to the rod at a point adjacent a coin till 67. This arm projects through a slot in the front wall 68 of the housing and into the till 67 where it is normally locked against movement by mechanism, not shown, and is only released when a coin is placed in the chute 69. Since the mechanism for locking the arm 66 against movement forms no part of this invention, it is deemed not necessary to describe or disclose the same. A pair of spring members 70 are secured at diametrically opposite points to the inner wall of the vertical track 27 and through which the bottles 15^a must be forced in their upward movement through the track 27. As each bottle is released through the opening 26, the lowermost bottle of the vertically disposed series will rest upon the free ends of the spring members 70 and be maintained against descent, as will be presently explained.

The operation of my device is as follows:

The compartment 30 is supplied with the proper refrigerant, such as crushed ice, and the bottles 15 are inserted through the opening 14 until it is impossible to place any more bottles through said opening. The door 17 is then opened and the curved track is completely filled by inserting the bottles through the opening 13 after which the doors 17 and 18 are locked against unauthorized manipulation. As the bottles are inserted through the doors and placed in the guides 42 and 43, the bottles will move downwardly by gravity, with the innermost bottle 15^b located in engagement with the spring member 52 which will prevent the bottles from entering the chamber 53 of the vertically disposed passage 27. The rod 60 is moved downwardly forcing the spring retaining member 52 downwardly, whence the innermost bottle will be forced into the chamber 53. The rod is then elevated, whence the bottle will be moved upwardly until it is supported upon the spring members 70. The rod 60 is continuously operated until a sufficient number of

bottles have filled the discharge passage 27. The device is now ready for dispensing the bottled liquids, and the coin-controlled mechanism in the till 67 is set so that the rod 60 can not be operated until a coin is deposited in the chute 69 for temporarily releasing the coin-controlled mechanism to release the arm 66. The rod 60 is then forced downwardly to permit the bottle 15^b to be forced into the chamber 53, and when the rod is elevated it will force said bottle, together with a column of bottles, to such a position that the uppermost bottle 15^a will be forced through the opening 26 where it may be readily grasped by the purchaser. When the rod is returned with sufficient force, the support 51 will engage the spring member 52 and release the same to permit the innermost bottle to be moved into the chamber 53. Upon the insertion of a coin in the chute 69, the rod 60 will again be released to permit the purchaser to raise said rod and eject another bottle from the opening. It will be appreciated that it will be impossible for a purchaser to remove more than one bottle at a time without the insertion of another coin, since the support 51 will engage the upper end 71 of the slot 50 and limit the upward movement of the rod so that only one bottle may be ejected at a time.

I claim:—

A dispensing device comprising a housing, a vertically disposed stationary guide in which bottles are adapted to be disposed in contact with the guide, a curved track for guiding bottles in the lower end of the stationary guide, said stationary guide having an opening adjacent the lower end of the track through which the bottles are moved, a rod slidably mounted exteriorly of the guide and having a bottle support at the inner end thereof, the stationary guide being provided with a slot through which the support is movable when the guide is elevated for raising a bottle a predetermined height within the stationary guide, a spring member located at the bottle of the stationary guide and having a free end projecting through an opening in the guide for engaging the bottle at the bottom of the track for preventing said bottle from entering the opening in the guide, the free end of the spring member being adapted to be depressed to release the bottle to permit the same to enter the stationary guide after the column of bottles in the guide has been raised.

Signed at Ft. Myers, in the county of Lee and State of Florida, this 13 day of February, A. D. 1928.

JOHN E. HENDERSON.