

Aug. 19 , 1924.

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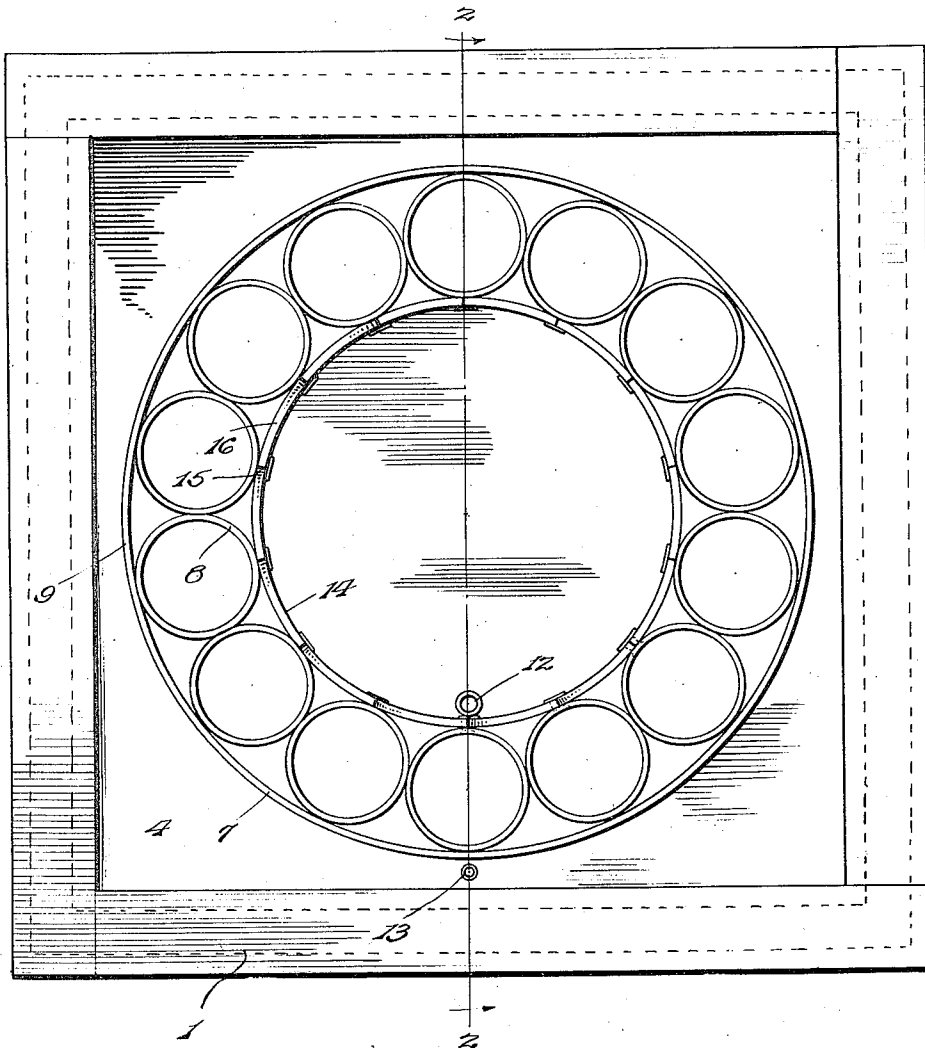
W. McE. SMITH

BOTTLE COOLER AND VENDING APPARATUS

Filed Oct. 17, 1922

2 Sheets-Sheet 1

Fig. 1.



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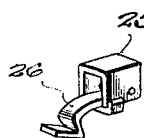
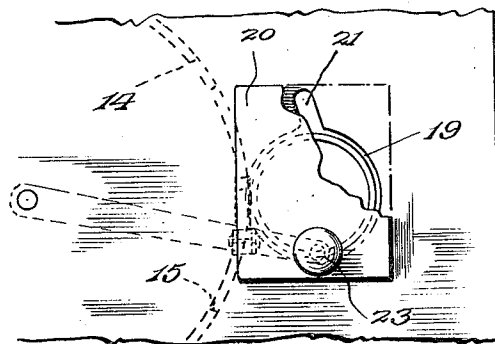
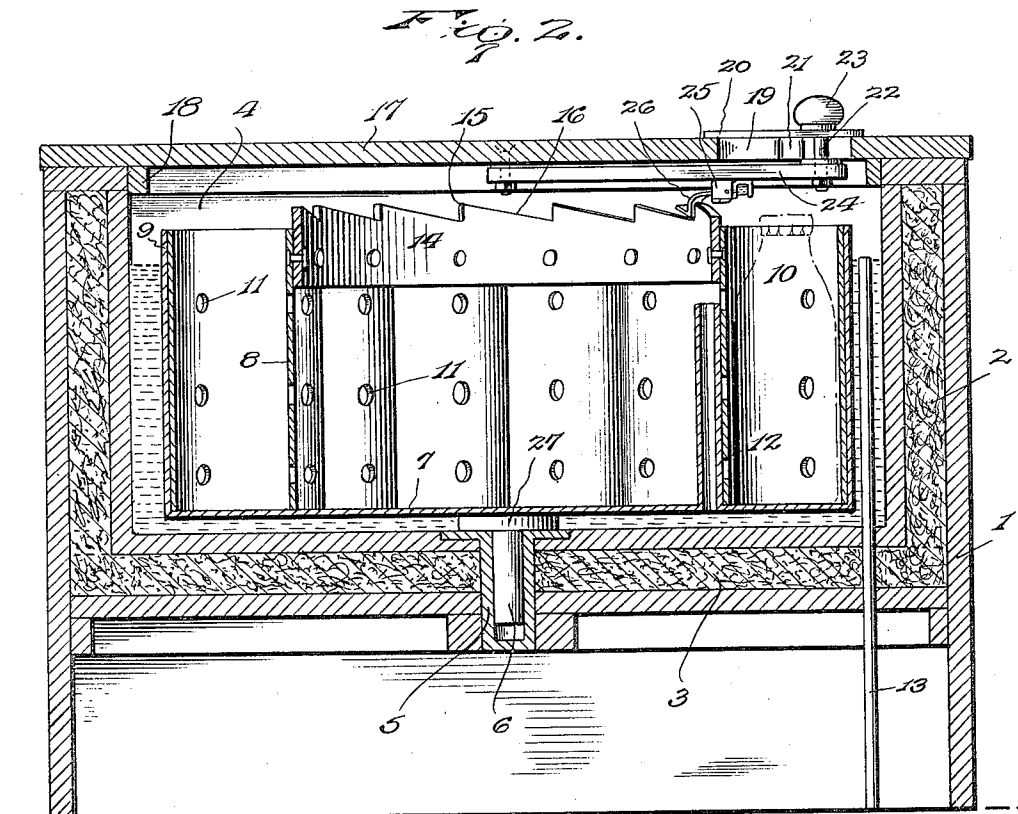
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2 Sheets-Sheet 2



Inventor

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UNITED STATES PATENT OFFICE.

WALTER McE. SMITH, OF JACKSON, TENNESSEE.

BOTTLE COOLER AND VENDING APPARATUS.

Application filed October 17, 1922. Serial No. 595,211.

To all whom it may concern:

Be it known that I, WALTER McE. SMITH, a citizen of the United States, residing at Jackson, in the county of Madison and State of Tennessee, have invented certain new and useful Improvements in Bottle Coolers and Vending Apparatus, of which the following is a specification.

The object of this invention is to provide a simple and inexpensive article of furniture, by the use of which bottled beverages may be maintained at a low temperature and be readily withdrawn separately when desired for use. The invention seeks to provide means whereby the bottles last placed within the device will be the last to be withdrawn so that the bottle withdrawn will always be one which has been lowered in temperature and the beverage in which, therefore, will be in a palatable and refreshing state. The invention also seeks to provide means whereby, when a fresh bottle has been placed within the container and the cover returned to normal position, the container or carrier for the bottles will be shifted so that a cold bottle will be brought to the point of withdrawal. Other objects of the invention will appear incidentally in the course of the following description, and the invention resides in certain novel features which will be particularly pointed out in the appended claims.

In the drawings—

Figure 1 is a plan view of my improved apparatus with the top of the same removed; Fig. 2 is a transverse vertical section on the line 2—2 of Fig. 1;

Fig. 3 is a detail plan view of the cover controlling the withdrawal port, and

Fig. 4 is a detail perspective view of the dog connected with said cover and adapted to effect travel of the bottle container or carrier.

In carrying out my invention, I employ a cabinet 1 which may be of any preferred or convenient form and dimensions and is constructed with a heat-resisting wall 2 and a similar bottom 3 whereby the interior of the cabinet will be protected against the influence of the outside heated air. The cabinet may be constructed with a single

compartment 4 or a plurality of such compartments, as may be preferred, and in the bottom of the said compartment is provided a socket bearing 5 which receives a pivot pin 6 secured centrally to and depending from the bottom of the container or carrier 7. The carrier 7 is preferably constructed of sheet metal and is circular in plan view, as shown in Fig. 1. Disposed adjacent the vertical wall 9 of the carrier and extending around the same concentric therewith are cells or containers 8 which are preferably cylindrical so as to each receive and support one bottle, as indicated at 10, and through the walls of the said cells or containers are formed openings 11 to facilitate circulation of a refrigerant. An overflow pipe 12 rises from the bottom of the carrier 7 so that the water resulting from melting of the ice or other cooling agent which may be placed within the container may overflow into the chamber 4 of the cabinet and rise around the carrier so that the contents of the cabinet will be effectually cooled. A waste overflow pipe 13 extends through the bottom of the cabinet and may lead to a sewer or any other convenient point of discharge, the upper end of this waste pipe being near but below the level of the top of the carrier so that the cold water must rise to such a point that it will approximately enclose the entire carrier but at the same time may readily escape without submerging the bottles containing the beverages.

Secured to the several cells or cylinders at the upper ends thereof and the inner sides of the same is a ring 14, the upper edge of which is formed with teeth or shoulders having inclined upper surfaces 16, as clearly shown. The top 17 of the cabinet is intended to fit closely upon the same and is provided with a depending flange 18 to snugly engage the inner surface of each wall of the compartment 4 so that a practically air-tight joint will be effected. A port or opening 19 is formed through the top 17 at such a point that it will be directly over one of the cells 8 when the carrier is at rest, and a cover 20 is provided to normally extend over the said opening so as to prevent the access of outside warm air to the compartment 4 and

also to protect the beverage-containing bottles from contamination. In the wall of the opening 19 is a notch 21 which is adapted to accommodate the spindle 22 when the cover is moved to open position. This spindle 22 extends through the cover and is equipped at its upper end with a knob or other convenient form of handle 23, while to the lower end of the spindle is detachably attached the outer end of a lever 24. The inner end of the lever 24 is pivotally supported upon the under side of the top 17 concentric with the ring 14 and at a proper point on the under side of the lever is secured a bracket 25 in which is pivotally mounted the dog or pawl 26 which is adapted to ride upon the several shoulders 15, as will be readily understood upon reference to Fig. 2.

The construction and arrangement of the several parts of my apparatus being thus made known, it is thought the manner of using the same will be readily understood. The bottles which may contain milk or beverages in the class customarily known as "soft drinks" are placed in the several cells 8 while the top 17 of the cabinet is removed, and ice or brine or other refrigerating material is placed within the container so as to fill the entire center of the same. The top is then placed on the cabinet and a reasonable period is permitted to lapse before any of the bottles are withdrawn. After the cabinet has been initially filled, however, a fresh bottle is always placed within the cell from which a bottle is withdrawn so that the process of cooling the beverages will be carried on continuously and uninterruptedly, it being only necessary to replenish the refrigerating medium from time to time. When a bottle is to be withdrawn, the cover 20 is swung from the position shown in full lines in Fig. 3 to the position shown in dotted lines, thereby exposing the entire area of the withdrawal port 19, the spindle 22 resting within the notch 21 so as to be out of the way. This lateral movement of the cover will obviously swing the lever 24 about its pivotal connection with the top 17 and the dog 22 will ride upon the teeth of the ring 14 so as to drop into engagement with the shoulder next to the shoulder with which it was previously engaged. The bottle below the opening 19 is withdrawn through said opening and a fresh bottle is then inserted through the opening into the cell from which a bottle has just been withdrawn, after which the cover is slid back to its normal position. The return movement of the cover will, of course, carry the lever 24 with it and the dog 26 which is bearing against a shoulder 15 of the ring 14 will impart the movement to the said ring and the entire carrier so that the bottle which has just been inserted will be moved out of alinement with the opening 19 into position under the top 17 where it can

not be reached. Simultaneously, of course, a cold bottle will be brought into position below the opening 19 where it will be ready to serve the next customer.

My apparatus is very simple and inexpensive and will insure a supply of fresh cold liquids to all customers. A plurality of cabinets may be provided, each containing one particular kind of beverage or a single cabinet may be provided with a plurality of compartments, each compartment containing a single kind of beverage. If the volume of normal business does not warrant the use of a number of cabinets or of a single large cabinet, it is, of course, possible to place different beverages within the different cells of a single compartment, but such use of the apparatus will necessitate continuous rotation of the carrier until the desired beverage is brought below the withdrawal port. This, however, will not be very objectionable in those establishments which handle only a small stock and have a very small retail trade. The openings through the several cells permit a thorough circulation of the refrigerating medium around all the bottles so that the desired temperature will be readily reached and maintained. The refrigerating material may be readily placed within the container inasmuch as the entire central portion of the same is open, and if cleaning of the container becomes necessary, it may be lifted out through the top of the cabinet inasmuch as the pivot 6 rests loosely within the socket 5 so that it may be readily withdrawn, and it is to be noted that the said pivot is constructed with a circular head 27 which extends over the upper end of the socket 5 and thereby supports the bottom of the carrier out of contact with the bottom of the cabinet. This arrangement reduces the frictional wear between the opposite parts while at the same time firmly supporting the carrier and also permits a circulation of the cooling medium under and around the carrier.

Having thus described the invention, what is claimed as new is:

1. An apparatus for the purpose set forth comprising a heat-resisting cabinet, a carrier rotatably mounted in the cabinet and spaced from the bottom and the walls of the same, means for maintaining bottles placed within the carrier adjacent the walls of the same, a top for the cabinet having an opening therethrough to permit withdrawal of bottles from the carrier, a cover for said opening, and interengaging means on the cover and the carrier whereby when the cover is moved to closed position the carrier will be rotated one step.

2. An apparatus for the purpose set forth comprising a cabinet, a carrier rotatably mounted within the cabinet and adapted to contain a refrigerant, means for retaining

bottles in an upright position in the carrier, a top for the cabinet provided with an opening through which the bottles may be withdrawn singly, a lever pivotally mounted upon the top, a cover carried by said lever to extend over the opening through the top, a ring secured concentrically within the carrier, and a dog mounted on the said lever and adapted to engage said ring whereby movement of the cover will actuate the carrier to bring the successive bottles into position below the opening through the top. 10

In testimony whereof I affix my signature.

WALTER McE. SMITH. [L. s.]