No. 646,860. Patented Apr. 3, 1900.

A. B. MOYES.

ATTACHMENT FOR ICE BOXES.

(No Model.) (Application filed June 22, 1899.)

2 Sheets—Sheet 1.

Fig 1

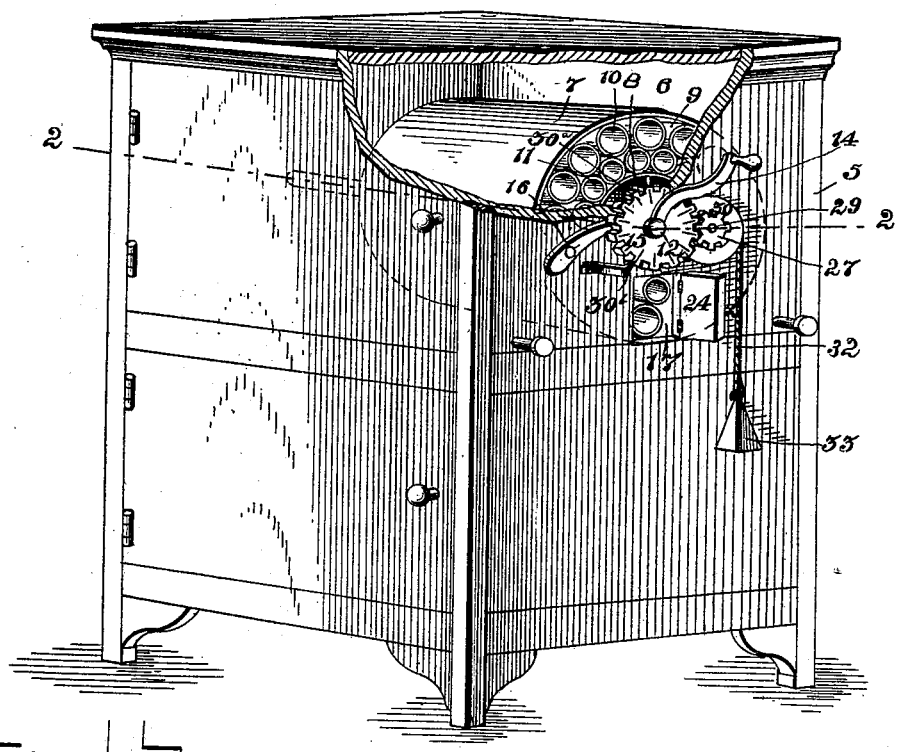
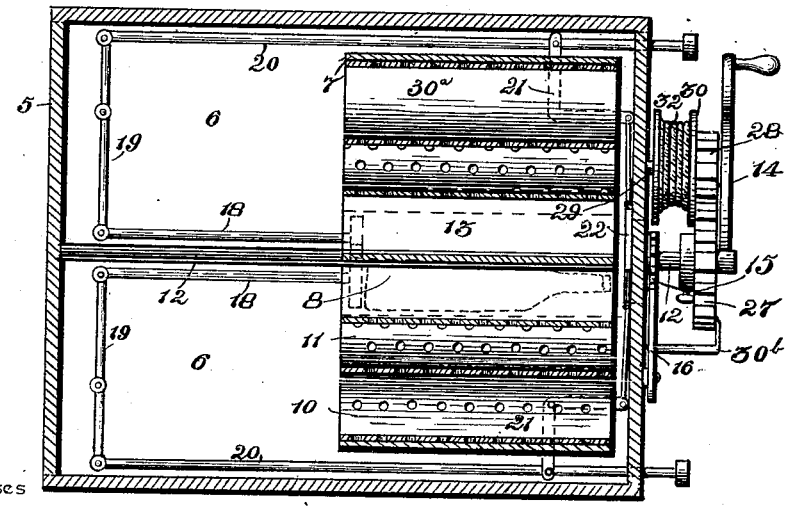


Fig 2



Witnesses

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Fig. 3

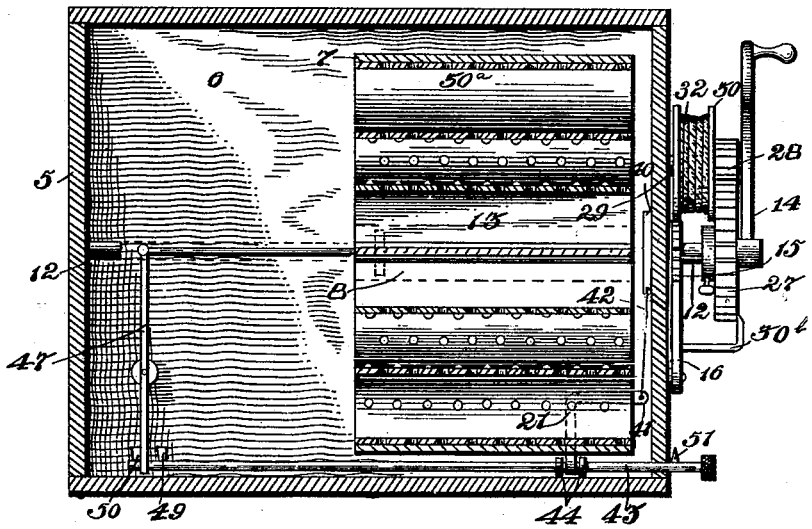
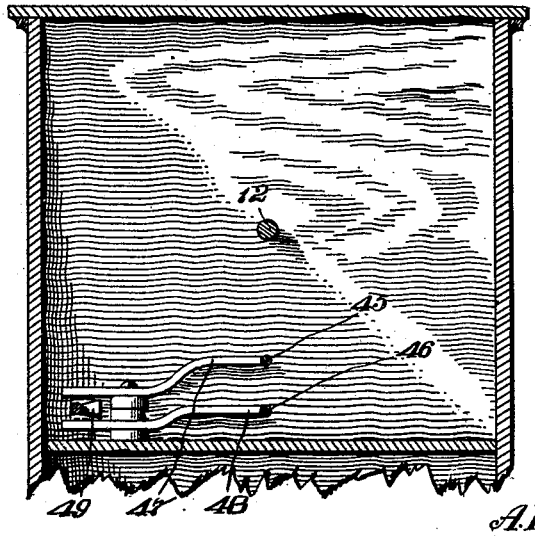


Fig. 4



Witnesses
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UNITED STATES PATENT OFFICE.

ACEPH B. MOYES, OF VELASCO, TEXAS.

ATTACHMENT FOR ICE-BOXES.

SPECIFICATION forming part of Letters Patent No. 646,860, dated April 3, 1900.

Application filed June 22, 1899. Serial No. 721,461. (No model.)

To all whom it may concern:

Be it known that I, ACEPH B. MOYES, a citizen of the United States, residing at Velasco, in the county of Brazoria and State of Texas, have invented a new and useful Attachment for Ice-Boxes, of which the following is a specification.

This invention relates to ice-boxes or refrigerators; and it has for its object to provide in connection with a device of this nature a vessel for the reception of ice and having a surrounding series of compartments for the reception of the matter to be refrigerated. This vessel or receptacle is rotatably mounted within the box or refrigerator and has an operating-shaft extending exteriorly of the casing and provided with a crank for rotating it. The compartments for the material to be refrigerated are formed in two concentric series, and in the side of the casing is an opening provided with a door through the medium of which access may be had to a compartment of each series simultaneously. Means are provided for discharging the contents of the compartments.

In the drawings forming a portion of this specification, and in which similar numerals of reference designate corresponding parts in the several views, Figure 1 is a perspective view of a refrigerator having the casing partly broken away to show the location and arrangement of my attachment. Fig. 2 is a section on line 2 2 of Fig. 1. Fig. 3 is a view similar to Fig. 2, showing the modification. Fig. 4 is a section of the upper portion of the refrigerator on line 4 4 of Fig. 3.

Referring now to the drawings, 5 represents the casing of a refrigerator comprising an upper compartment 6, in which is horizontally arranged a cylindrical casing 7, having a concentric cylindrical ice-chamber 8, arranged therein and separated therefrom by an interspace 9. Within the interspace 9 is arranged two concentric series of cylindrical compartments 10 and 11, of which compartments 10 are exterior to the compartments 11, said compartments completely filling the interspace, and the centers of the minor compartments lying in lines connecting the center of the casing 7 with the points of engagement of the peripheries of the compartments 10.

The walls of the compartments 10 and 11 are perforated, as shown in Fig. 2 of the drawings, as is also the wall of the ice-chamber 8, whereby the water from the ice-chamber may be distributed evenly through the various compartments 10 and 11 as the casing 7 is rotated.

The casing 7 is mounted upon a concentric shaft 12 through the medium of the spider 13 within the ice-chamber 8, one end of said shaft being journaled in each end of the refrigerator-casing, one end of said shaft projecting outwardly of the casing and having an operating-crank 14.

Upon the shaft 12 and intermediate the crank 14 and the casing of the refrigerator is a ratchet-wheel 15, adapted for engagement by a pawl 16, pivoted to the casing and adapted to permit rotation of the shaft 12 in one direction only. This ratchet, moreover, tends to hold the cylinder with a degree of steadiness at different points in its rotation in order that the adjacent compartments 10 and 11 may be retained in alinement with an opening 17 in the casing of the refrigerator for the insertion and removal of articles. In order to remove an article from the compartments when in front of the opening 17, I provide reciprocatory rods 18, which are adapted to enter the rear ends of their respective large and small compartments and move the articles therein forwardly and into position to be grasped through the opening 17. Connected with each of the rods 18 is a lever 19, having a push-rod 20, which projects outwardly of the front of the casing. Thus by pushing the rods 20 inwardly the discharge-rods 18 will be thrust into the rear ends of the compartments and will force the articles therein outwardly thereof and into a position to be grasped through the opening 17. By withdrawing the rods 20 outwardly the discharge-rods 18 will be withdrawn from their respective compartments. In order to open and close the opening 17 through the medium of the rods 20, I arrange angular levers 21, one end of each of which is pivoted to the adjacent rod 20 and the other end of which has a link connection with an adjacent sliding door 22, which is adapted to move over and close the opening 17 from the inside. The position and arrangement of these elements are such that the sliding doors 22 will close the

opening 17 when the plungers are withdrawn from the package-compartments 10 and 11 and will open them when the plungers are passed inwardly. The door 24, which swings outwardly, forms an additional means for closing the opening 17.

In order to rotate the cylindrical casing 17 automatically, I arrange upon the shaft 12, exteriorly of the casing of the refrigerator and the ratchet 15, a gear-wheel 27, which is held upon the shaft 12 through the medium of a set-screw and collar in the ordinary manner. The gear 27 meshes with a pinion 28 upon a short shaft 29, carrying a drum 30, which shaft is adapted to be rotated through the medium of said pinion to wind a rope 32 upon the drum, said rope having at its free end a weight 33. Thus if the pawl 16 be disengaged from its ratchet and the rope 32 be wound upon the drum the gravity action upon the weight 23 will cause the drum and its pinion to rotate and rotate the shaft 12 with the cylinder 17 and its contents. Thus it will be seen that upon a body placed in one of the compartments 10 and 11 there will be a continuous drip of water from the ice-chamber through the perforations in said chamber and the package-compartments, lowering the temperature of all matter carried by said compartments to a low degree. If it be desired to place matter in the compartments in such a manner that they will not be affected by this dripping, a supplemental casing (shown at 30^a in Fig. 2) may be placed within any one of the compartments 10 and 11, and this supplemental casing 30^a being imperforate will keep its contents dry. By the operation of the discharging mechanism this imperforate casing, with its contents, will be discharged.

This invention refers particularly to such cases where the frequent opening and closing of an ice-box occur, and with the employment of this device one or more bottles or other packages may be inserted in their respective compartments and may be withdrawn without materially affecting the other bodies and without materially affecting the temperature of the box.

When it is desired to rotate the casing 17 by hand, the gear-wheel 27, which is held in place by a set-screw and collar in the usual manner, is loosened from the shaft 12.

It will be readily understood that I may make this attachment of any desired size to secure a length or time of operation as desired.

In order to enable the operator to tell when a compartment is in alinement with the opening 17, the gear or wheel 27 is provided on its outer face with a dial, as shown, which is adapted to operate in connection with an index 30^b, secured to the casing of the refrigerator and projecting adjacent the face of said gear. Thus by bringing a mark of the dial in line with the index an inner and an outer compartment of the cylinder corresponding thereto will be in alinement with the discharging-plunger and with the opening 17.

In Fig. 3 of the drawings I have shown a single sliding door 40, which is connected with a bell-crank lever 41 through the medium of a connecting-rod 42, the opposite end of said lever having passed through a perforation therein, a push-rod 43 having at either side of the lever a collar 44, whereby the lever may be moved as the rod is reciprocated.

Plungers 45 and 46, corresponding to the plungers 18, are employed and are adapted to operate in their respective compartments 10 and 11 to expel the packages therefrom. These plungers are pivoted at their rear ends to levers 47 and 48 upon a common fulcrum and beyond which fulcrum they project. The projecting ends of said levers are adapted to be alternately engaged by a radial projection 49 upon the rod 43, and which projection is moved into operative relation with one lever or the other by oscillation of the rod 43, the engagement of the projection 49 moving the plungers to expel the packages. An additional projection 50 at the end of the rod 43 is adapted to engage the opposite faces of the levers 47 and 48 to move them in an opposite direction, although, if desired, a suitable spring-return may be employed.

A finger 51, mounted upon the rod 43, is adapted to indicate the operative position of the rod with relation to either lever 47 and 48, as will be understood.

Having thus described the invention, what is claimed is—

1. The combination with a refrigerator having a shaft journaled therein, of a casing arranged upon the shaft, a plurality of series of compartments within the casing adapted to successively aline with an opening in the refrigerator, means for causing successive alinement of said compartments with the opening, a plunger for each series of compartments adapted to discharge the contents thereof through said opening, and a common means for operating the plungers alternately.

2. The combination with a refrigerator, of a shaft journaled therein, a casing arranged upon said shaft, a plurality of compartments within the casing adapted to successively aline with an opening in the refrigerator, means for causing successive alinement of said opening and the compartments, means for discharging the contents of such compartments and means for indicating the alinement of each compartment with the opening.

3. The combination with a refrigerator, of a shaft journaled therein, a casing arranged upon said shaft, a plurality of compartments within the casing adapted to successively aline with an opening in the refrigerator, means for causing successive alinement of said compartments with the opening, and plungers adapted to enter the compartments and discharge the contents thereof through said opening.

4. The combination with a refrigerator, of

a shaft journaled therein, a casing arranged upon said shaft, a plurality of compartments within the casing adapted to successively aline with an opening in the refrigerator, means for causing successive alinement of the compartments with the opening, plungers adapted to enter the compartments and discharge the contents thereof through said opening, and means connected with said plungers for opening and closing said refrigerator-opening.

5. The combination with a refrigerator, of a shaft journaled therein, a casing upon said shaft, a plurality of compartments within the casing, an opening within the refrigerator with which said compartments are adapted to successively aline, a pawl and ratchet connected with said casing and adapted to yieldably hold the compartments in said successive alinement, means for rotating the casing, a plunger adapted to enter the compartments and discharge the contents thereof, and an ice-chamber within the casing and concentric therewith.

6. The combination with a refrigerator having an opening therein, of a shaft journaled in the refrigerator, a casing arranged upon said shaft, a plurality of compartments within the casing adapted to successively aline with the opening in the refrigerator, a gear carried by said shaft, a pinion meshing with said gear and having a shaft, a drum upon the pinion-shaft, a cord upon the drum, a weight connected with the cord and adapted to rotate the drum when released, and plungers adapted to enter the compartments and discharge the contents thereof through the opening in the refrigerator.

7. The combination with a refrigerator, of a shaft journaled therein, a casing arranged upon said shaft, a plurality of compartments within the casing, an opening in the refrigerator with which said compartments are adapted to successively aline, means for causing successive alinement of the compartments with the opening, plungers adapted to enter the compartments and discharge the contents thereof through said opening, and a rod adapted for alternate operative relation to the plungers to operate them alternately.

8. The combination with a refrigerator having a shaft journaled therein, of a casing arranged upon the shaft, a plurality of compartments within the casing having foraminous walls and adapted to successively aline with an opening in the refrigerator, means for causing successive alinement of said compartments with the opening, plungers adapted to enter the compartments and discharge the contents thereof through said opening, and an ice-chamber within the casing and centrally of the compartments, said chamber having foraminous walls whereby the melted ice may circulate through the compartments.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of witnesses.

ACEPH B. MOYES.

Witnesses:
P. F. COMBS,
JOHN M. THOMPSON,
HUGH C. BAKER.