J. FRITSCHE.

CONTAINER FOR RETAINING ARTICLES IN A CHILLED OR FROZEN CONDITION.

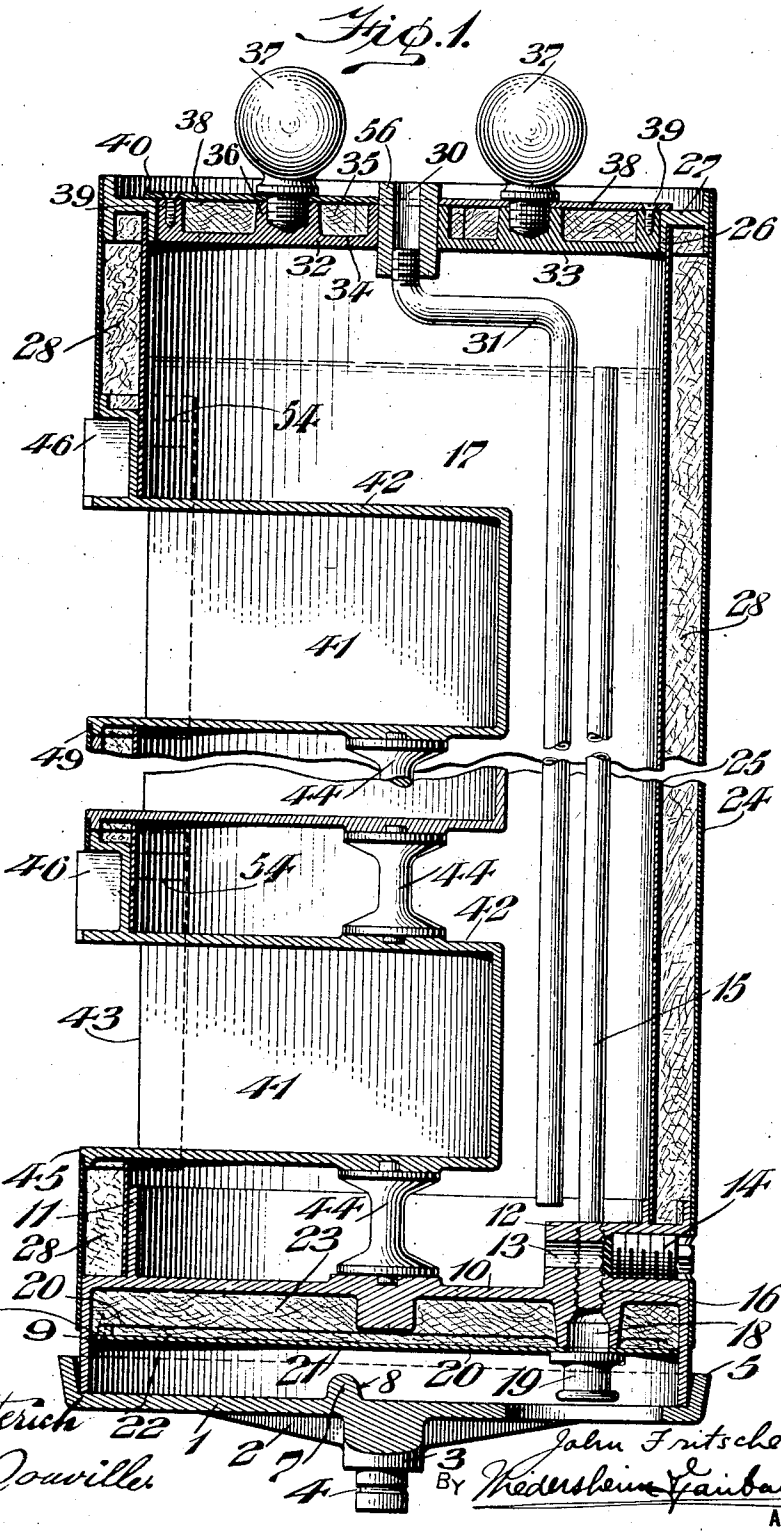
APPLICATION FILED DEC. 20, 1911.

1,039,506.

Patented Sept. 24, 1912.

3 SHEETS—SHEET 1.

Fig. 1.



WITNESSES

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3 SHEETS—SHEET 2.

Fig. 2.

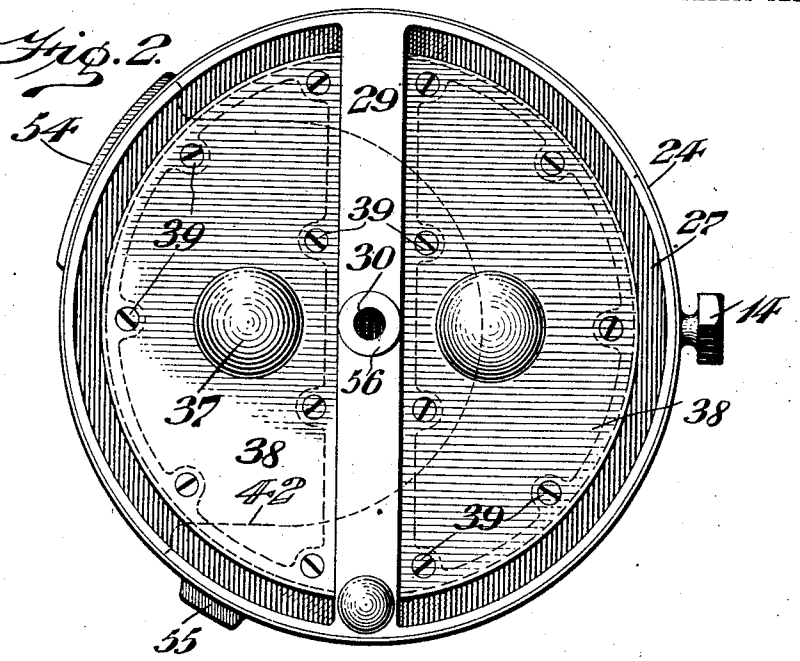
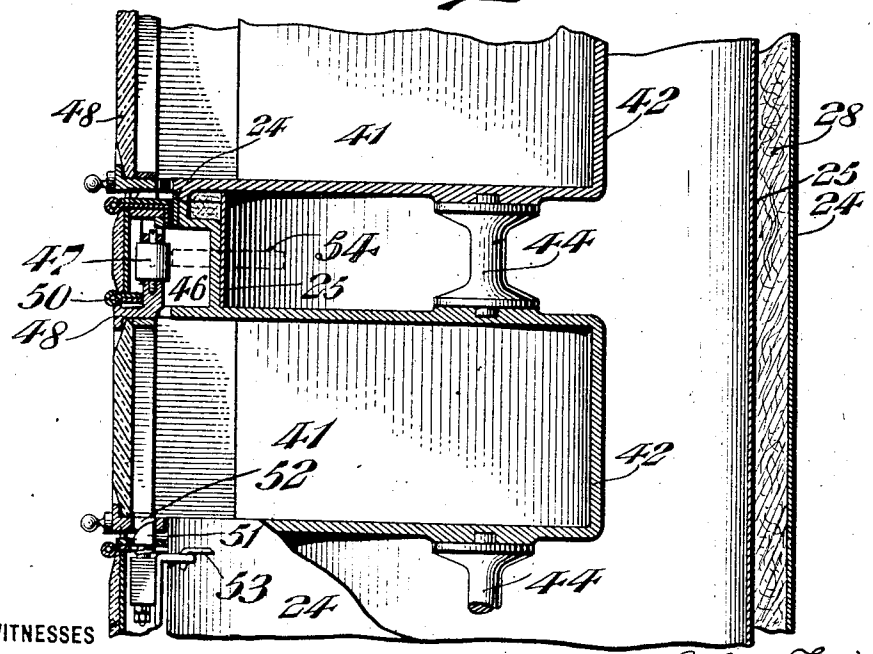


Fig. 3.



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3 SHEETS—SHEET 3.

Fig. 4.

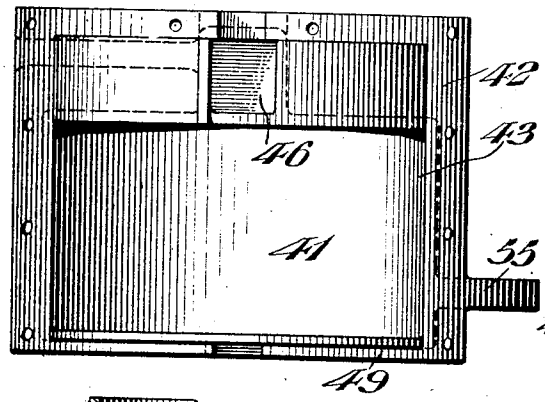


Fig. 5.

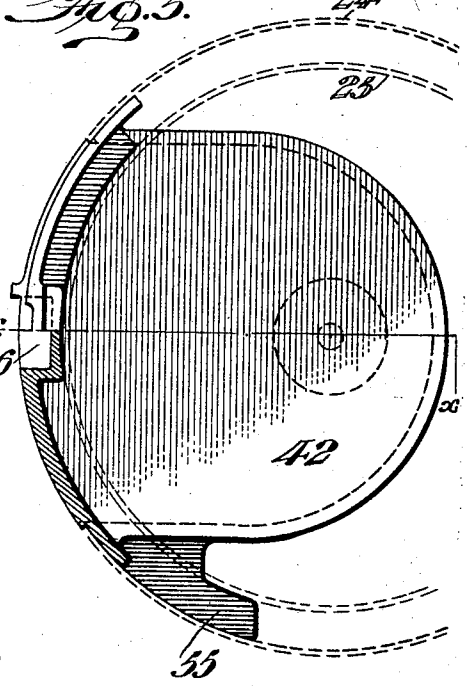


Fig. 6.

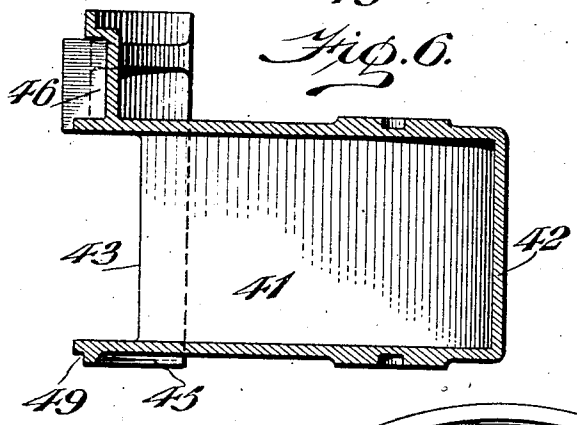
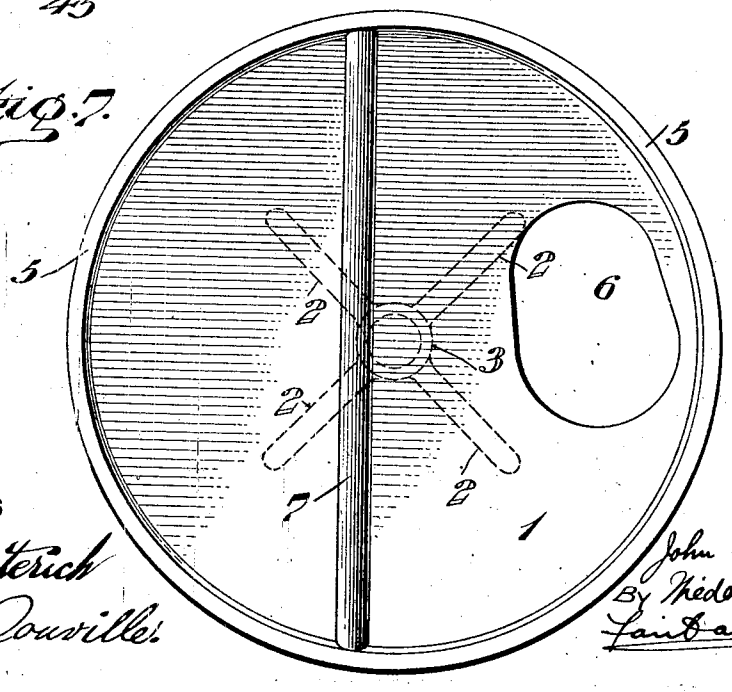


Fig. 7.



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UNITED STATES PATENT OFFICE.

JOHN FRITSCHE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-THIRD TO JOSEPH V. HORN AND ONE-THIRD TO FRANK HARDART, BOTH OF PHILADELPHIA, PENNSYLVANIA.

CONTAINER FOR RETAINING ARTICLES IN A CHILLED OR FROZEN CONDITION.

1,039,506. Specification of Letters Patent. Patented Sept. 24, 1912.

Application filed December 20, 1911. Serial No. 666,918.

To all whom it may concern.

Be it known that I, JOHN FRITSCHE, a citizen of the United States, residing at 1719 Mount Vernon street, in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Container for Retaining Articles in a Chilled or Frozen Condition, of which the following is a specification.

My invention relates to containers which are especially adapted to be used in conjunction with machines for containing or vending articles which are to be kept in a chilled or frozen condition for a considerable period of time, and is especially designed to be used in conjunction with a vending machine such as is described and broadly claimed in my co-pending application for a vending machine, filed by me on the 20th day of December 1911, Serial No. 666,920 although it is of course to be understood that the same is not limited to use in conjunction with such an apparatus but may be employed to advantage in conjunction with any desired type of a vending or other machine.

With the above in view, my invention consists of a novel construction of a container, and novel means for maintaining at a predetermined temperature the compartments which are adapted to receive the food or other articles to be vended.

It further consists of a novel construction of a container which is rotatably mounted and provided with means for locking the door of the vending machine when the container is in operative position.

It further consists of a novel construction of a container in which the different article receiving compartments are spaced in a novel manner, and in which provision is made for circulating a cooling medium around the article receiving compartments.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

For the purpose of illustrating my invention, I have shown in the accompanying drawings one form thereof which is at present preferred by me, since the same has been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of these instrumentalities as herein shown and described.

Figure 1 represents a sectional elevation of a container embodying my invention, the same being shown in detached position. Fig. 2 represents a top plan view of Fig. 1. Fig. 3 represents a sectional elevation of a portion of a vending machine structure showing one manner in which the container may cooperate with the door of the vending machine structure. Fig. 4 represents a front elevation of one of the compartments. Fig. 5 represents a sectional plan view of a portion of Fig. 1. Fig. 6 represents a section on line x—x Fig. 5. Fig. 7 represents a plan view of the bottom casting of the container.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings:—1 designates the bottom plate or casting which is provided with reinforcing ribs 2, and a boss 3, the lower end of which is of reduced diameter and provided with a groove 4 in order that it may be secured in its bearing in the usual manner. The upper edge of the bottom 1 is upwardly deflected as indicated at 5, and the member 1 is provided with an aperture 6 therethrough.

7 designates a transverse rib which extends across the upper face of the bottom 1 and interlocks with apertures 8 in the downwardly extending flange 9 of a supporting member 10 to prevent relative rotation of such parts. The member 10 is provided with an upwardly extending flange 11 located a desired distance from the upper periphery of the supporting member 10.

12 designates a boss or enlargement of the supporting member 10 having a laterally extending opening 13, one end of which is closed by a plug 14, preferably in threaded engagement therewith.

15 designates a conduit extending into the enlargement 12 and having threaded or other engagement therewith, as is indicated at 16, in order that it may be removed if desired, the upper end of said conduit being open and communicating with the ice or brine containing chamber 17 of the container. The conduit 15 communicates with a recess 18 which leads to a connection 19 to which latter is adapted to be secured a

hose or other conduit. The flange 9 is provided with a rib 20 to which is secured a plate 21 by means of fastening devices 22, and between the plate and the supporting member 10 is inserted insulation 23 of any suitable character.

24 designates the outer shell which is secured to the member 10 in any desired manner.

25 designates an inner shell which is adapted to closely engage the outer periphery of the flange 11 and also the flange 26 carried by the annulus 27, and between the outer shell 24 and the inner shell 25 is placed suitable heat insulating material 28.

The annulus 27 is provided with a cross bar 29 having an aperture 30 therethrough, with which has threaded or other engagement a conduit 31 which discharges near the lower end of the chamber 17 of the container.

32 and 33 designate removable covers for the upper end of the casing, and since each of these are constructed in a similar manner, I have deemed it unnecessary to describe in detail, in the present instance, but one of these covers. Each of the removable covers are recessed or chambered, as indicated at 34, in order to receive the heat insulating material 35, and provide a boss 36 to receive a grasping handle 37.

38 designates a top plate which is secured to the member 32 by means of fastening devices 39, it being noted that the top plate 38 is adapted to extend outwardly, as indicated at 40, in order that the same may seat on the laterally extending flange of the annulus 27, it being understood that the plate 38 when in position is in close proximity to the cross bar 29.

41 designates the article receiving compartments which are constructed in a novel manner, each of which consists of a casing 42 having one side thereof open, as indicated at 43. The casing 42 which forms the food or article receiving compartment 41 is preferably made of an integral piece of material which is supported on a spacing spool 44, and is provided with a rib 45 adapted to seat on the outer casing member 24. The upper end of the casing 42 is provided with an upwardly extending flange which forms a chamber 46 adapted to receive a roller 47 carried by a door 48 of the vending machine, which is preferably transparent, in order that the article within the compartment may be seen by the intending purchaser. The top of the upwardly extending flange is adapted to have seated thereon the bottom of the casing 42 thereabove.

The number of compartments 41 employed in practice vary in accordance with the conditions and requirements met with in practice, and it is to be understood that it is within the scope of my invention to employ any number of compartments. The lower portion of the casing 42 in proximity to the open end 43 is recessed, as indicated at 49, in order that the outer casing member 24 may seat therein. The door 48 is pivotally supported at 50 and adapted to cover the open end 43 of a compartment 41, said door being automatically locked in position by means of a spring pressed plunger 51 engaging an aperture 52 in the door, said spring pressed plunger 51 being operated by means of a connection 53 in any desired manner, and preferably as disclosed in my co-pending application to which I have hereinbefore referred, and wherein I have shown one type of a container for articles to be vended, it being understood that my present invention as defined herein refers especially to a container which is adapted to be employed for the vending of frozen articles, such as ice cream, custards, and the like.

The outer shell 24 of the container has secured thereto a cam 54 which coöperates with the roller 47 to lock the door when the container is rotated, which occurs when the compartments 41 are to be re-filled. The outer shell 24 has secured thereto a cam 55 which coöperates with suitable mechanism to actuate the connection 53, and thereby the spring pressed plunger 51 to unlock the transparent door 48 and permit the same to open.

In the operation of my novel container, either the cover 32 or 33 may be removed by means of a handle 37, whereupon the chamber 17 may be filled with cracked ice and salt or other suitable freezing material which will serve to maintain the food contained within the compartments 41 at the proper temperature. The overflow of the water passes out the conduit 15 to a desired point of discharge. If it is desired to remove the melted ice, the plug 14 may be removed and the liquid withdrawn through the aperture 13. In many cases arising in practice it is preferable to force brine or a freezing solution through the chamber 17, and this is done in cases wherein a large number of vending machine units are employed, in which case brine or other freezing solution is pumped by means of any suitable apparatus so that the same passes through the aperture 30 and through the conduit 31 and discharges into the chamber 17 near the lower end thereof. The brine or freezing solution then circulates around the casings 42 of the compartments 41 until it reaches the top of the chamber 17 from which it passes through the conduit 15, and through the connection 19 to the pump.

In the operation of the container, the same is rotatably mounted on the boss 56 and the boss 3 so that the open end 43 of the com-

partments 41 will register with the doors 48 of the vending machine. The container is then rotated to bring the open end 43 of the compartments 41 out of register with the doors 48, whereupon the cams 54 coöperate with the rollers 47 to maintain the doors closed so that the machine cannot be operated, and at the same time the cam 55 cooperates with suitable mechanism to control the spring pressed plunger 51 and the insertion of a coin into a vending machine as will be understood by reference to my co-pending application to which I have hereinbefore referred. After the compartments have been filled, the container is then rotated so as to bring the openings 43 of the compartments 41 into register with the doors 48, whereupon the cam 54 will pass into such position that the door 48 may be opened upon the proper actuation of the spring pressed plunger 51. Since the construction and operation of the mechanism controlled by the cams 54 and 55 is described and broadly claimed in my co-pending application to which I have hereinbefore referred, and forms no part *per se* of the present invention, I have deemed it unnecessary at this time to illustrate and describe such construction in detail, since my present invention relates to the novel construction of a container as an article of manufacture and the novel manner of maintaining the compartments at a desired temperature.

My novel construction of container gives marked and advantageous results in practice and frozen articles can be kept therein without melting for a period of several hours.

It will now be apparent that I have devised a novel and useful construction of a container for retaining articles in a chilled or frozen condition which embodies the features of advantage enumerated as desirable in the statement of the invention and the above description, and while I have, in the present instance, shown and described a preferred embodiment thereof which has been found in practice to give satisfactory and reliable results, it is to be understood that the same is susceptible of modification in various particulars without departing from the spirit or scope of the invention or sacrificing any of its advantages.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a device of the character stated, a bottom member adapted to be rotatably mounted, an insulated plate carried by said member, inner and outer shells carried by said plate, a top member secured to said shells and adapted to be rotatably mounted, insulation between said shells, an insulated removable closure carried by said top member, a plurality of superimposed article receiving compartments extending into the chamber formed by the inner shell and having an open side extending through said shells, spacing means supporting the inner ends of said compartments, and means for removing liquid from the compartment formed by said inner shell.

2. In a device of the character stated, a bottom member having a shaft on which it is adapted to be mounted, an insulated plate carried by said member, inner and outer shells carried by said plate, a top member secured to said shells and having an opening therein adapted to receive a journal, a conduit communicating with said opening and discharging into the chamber formed by the inner shell, a discharge conduit communicating with said chamber near its upper end, a plurality of superimposed article receiving compartments extending into the chamber formed by the inner shell and having an open side extending through said shells, spacing means supporting the inner ends of said compartments, and means for circulating a cooling medium through said opening.

3. In a device of the character stated, a bottom member having a shaft on which it is adapted to be mounted, an upwardly extending flange at its outer periphery and having a rib on its upper face, an insulated bottom plate contained within said flange and interlocking with said rib, inner and outer insulated shells carried by said bottom plate, a top member carried by said shells, a closure carried by said top member, and means for removing liquid from the chamber formed by said inner shell.

4. In a device of the character stated, a bottom member having a shaft on which it is adapted to be rotatably mounted and having on its upper face a rib, a bottom plate interlocked with said rib, insulation between said plate and said bottom member, inner and outer shells carried by said plate, insulation therebetween, a top member secured to said shells, a removable insulated closure carried by said top member, a plurality of superimposed compartments within the chamber formed by the inner shell and having an open side extending through said shells, spacing means between said compartments, and means for removing liquid from said chamber.

5. In a device of the character stated, a bottom member having a shaft on which it is adapted to be mounted, an insulated plate secured to said member, inner and outer shells carried by said plate, a top member secured to said shells, insulation between said shells, an insulated removable closure carried by said top member, a plurality of article receiving compartments extending into the chamber formed by said inner shell and having an open side extending through said shells and secured thereto, spacing

means supporting the inner ends of said compartments, and means for circulating a cooling medium through said chamber.

6. In a device of the character stated, a bottom member having a shaft on which it is adapted to be mounted, an insulated plate interlocked with said member, inner and outer shells carried by said plate, a top member secured to said shells, insulation between said shells, an insulated removable closure carried by said top member, a plurality of article receiving compartments extending into the chamber formed by said inner shell and having an open side extending through said shells and secured thereto, spacing means supporting the inner ends of said compartments, a conduit extending into said chamber and discharging at the lower end thereof, a conduit communicating with the upper end of said chamber, and means for circulating a cooling medium through said conduits and said chamber.

7. In a device of the character stated, a bottom member having a shaft adapted to be rotatably mounted and having at its outer periphery an upwardly extending flange and provided on its top face with a laterally extending rib terminating in proximity to said flange, a plate having depending sides contained within said flange and having recesses interlocking with said rib, insulation carried by said plate, inner and outer shells carried by said plate, insulation therebetween, a top member secured to said shells, an insulating removable closure carried by said top member, a plurality of superimposed and spaced compartments within the chamber formed by the inner shell and having an open side extending through said shells, a spacing member carried by said plate and engaging the bottom of the compartment thereabove, a spacing member between each compartment and the compartment thereabove, and a valve controlled port communicating with the bottom of said chamber.

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Witnesses:
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C. D. MCVAY.