No. 865,952. PATENTED SEPT. 10, 1907.

H. J. SHANNEN.

REFRIGERATOR.

APPLICATION FILED OCT. 28, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

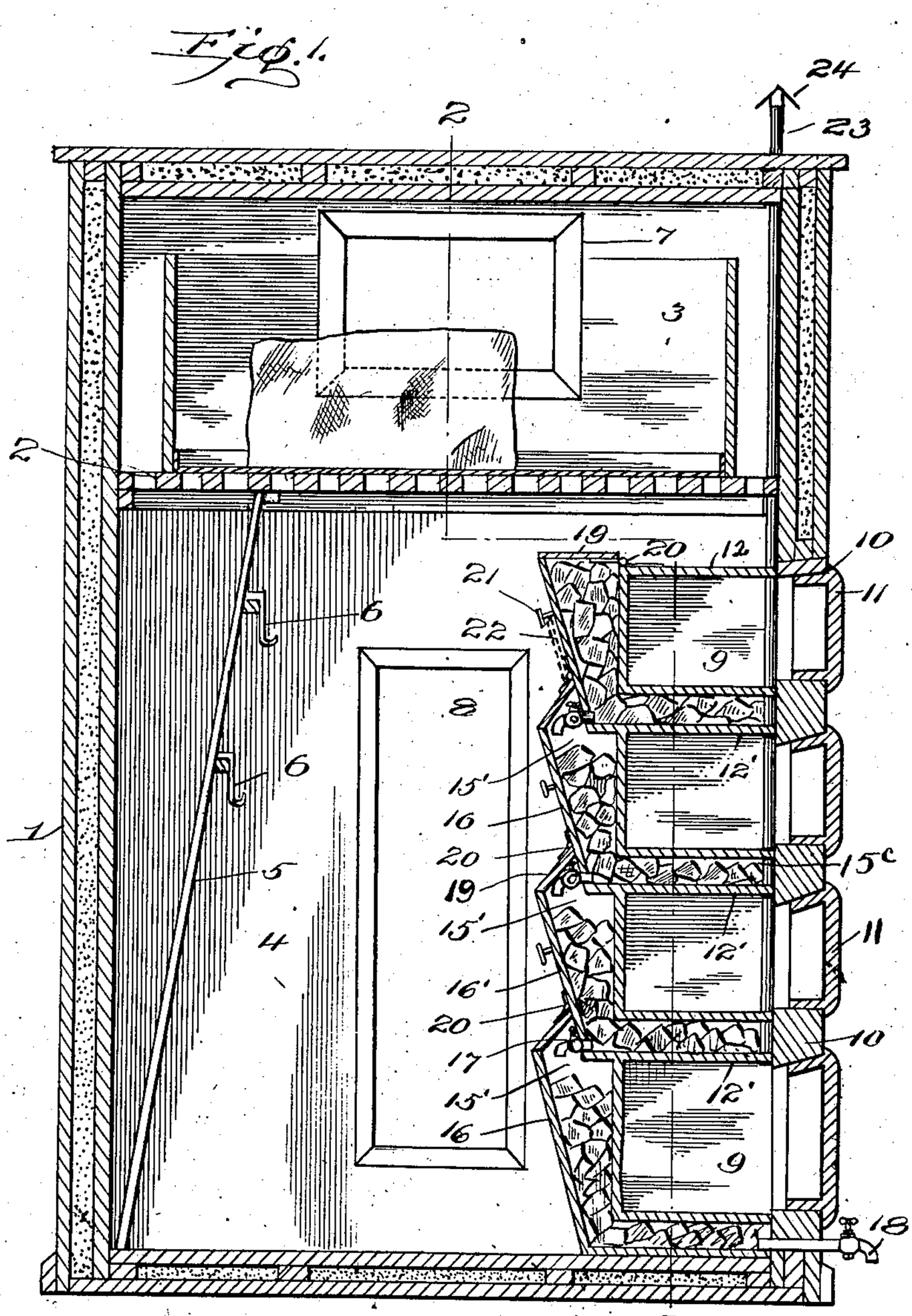
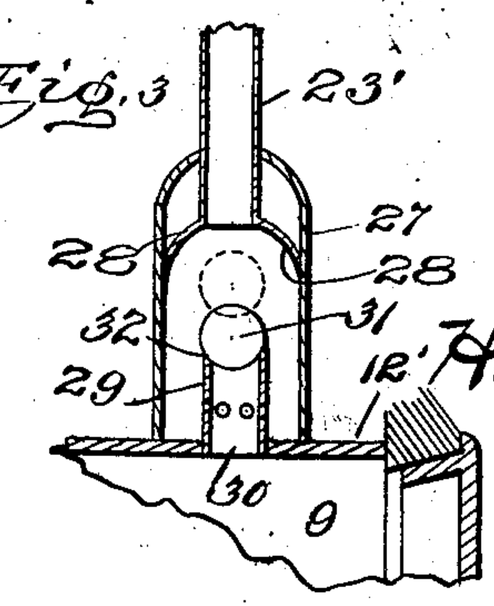


Fig. 3



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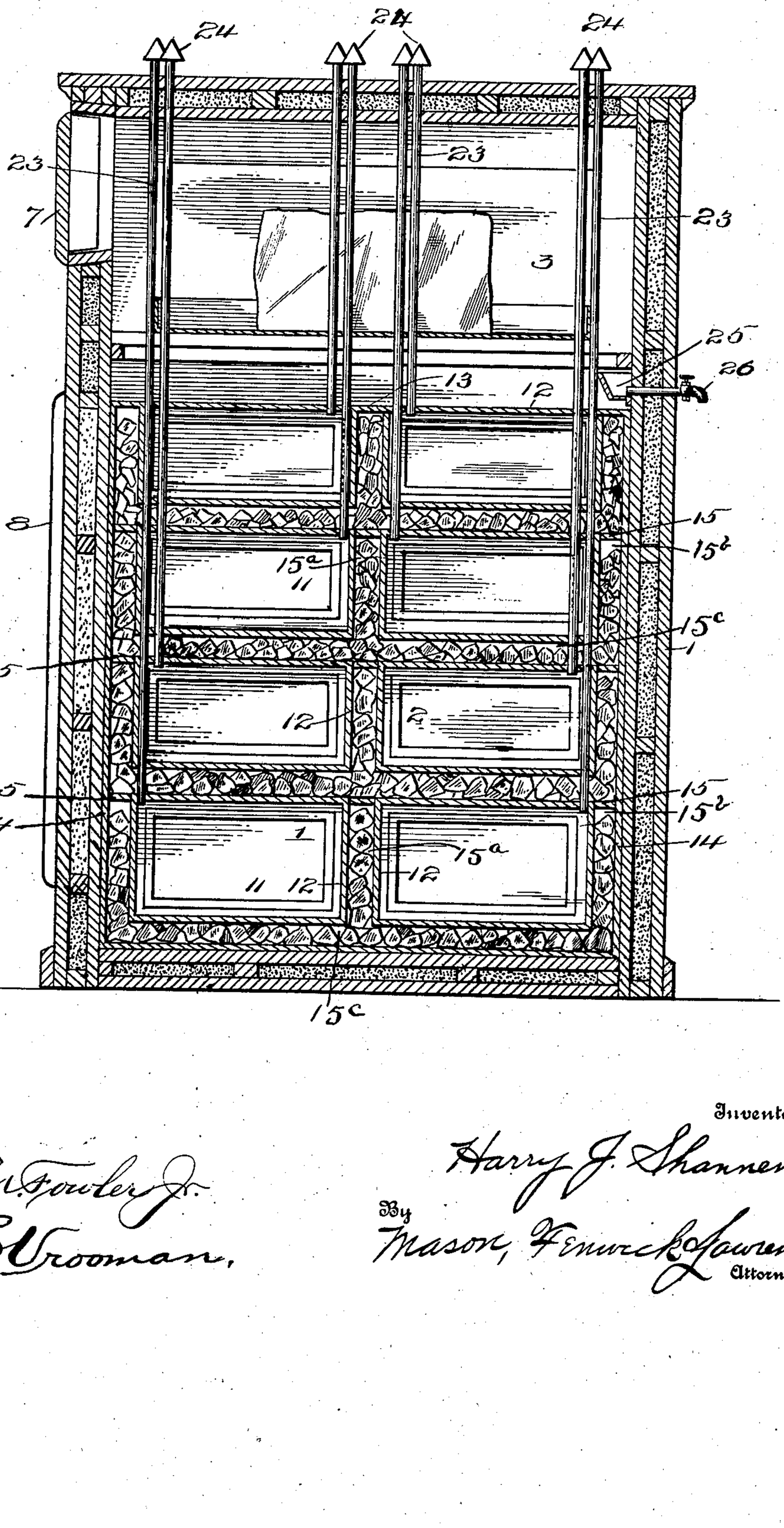
2 SHEETS—SHEET 2.

Fig. 2



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UNITED STATES PATENT OFFICE.

HARRY J. SHANNEN, OF ATLANTA, GEORGIA.

REFRIGERATOR.

No. 865,952. Specification of Letters Patent. Patented Sept. 10, 1907.

Application filed October 28, 1905. Serial No. 284,863.

To all whom it may concern:

Be it known that I, HARRY J. SHANNEN, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Refrigerators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in refrigerators, and particularly to the formation of receptacles therein.

The object of the invention is the construction of a refrigerator, which is provided with peculiarly constructed air-tight receptacles entirely independent from the other receptacles of said refrigerator.

With this and other objects in view, the invention consists of certain other novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described, illustrated in the accompanying drawings, and more particularly pointed out in the claims hereto appended.

In the drawings: Figure 1 is a vertical, transverse, sectional view of a refrigerator constructed in accordance with the present invention. Fig. 2 is a vertical, sectional view taken on line 2, 2, Fig. 1. Fig. 3 is a fragmentary, sectional view of one of the receptacles and vent pipes, showing a valve casing and a valve interposed therebetween.

Referring to the drawings by numerals, 1 designates the body of a refrigerator, within the upper portion of which a horizontal partition 2 is positioned. The partition 2 is preferably provided with apertures, or it may be formed of slats of the ordinary structure known to the prior art. An ice receptacle or compartment 3 is formed in the refrigerator above the partition 2. Within the lower space 4 of the refrigerator, there is preferably a substantially vertical support 5 carrying hooks 6, 6. Upon one side of the body 1 of the refrigerator, there are upper and lower doors 7 and 8, respectively. The upper door 7 closes an opening leading into the ice receptacle 3, while the lower door 8 closes the opening of the body, which leads into the lower part or space 4 of the refrigerator.

In the accompanying drawing, I have illustrated the preferred structure of my invention, showing a plurality of odor or air-tight receptacles 9, preferably formed in the lower part of the refrigerator and partially filling the space 4. Each of the receptacles 9 is provided with an open front 10, which is closed by a door 11. The receptacles 9 are preferably made in pairs and are connected by means of a horizontal partition 13. Each of the receptacles 9 are connected at its upper, outer end with the metallic primary casing 14 by means of a horizontal partition 15. It is to be noted that a space 15^a is left between each two of the receptacles 9, and that said space 15^a is closed at its upper end, while it is open at its lower end. This is also true of the structure of the space 15^b at the outer end of each of the receptacles 9. It will, therefore be obvious that the space 15^c immediately below each set of alined receptacles 9 is in communication with the spaces 15^a and 15^b. The upper portions 12′ of some of the alined receptacles 9 and the alined partitions 13 and 15 constitute bottoms of primary receptacles or vats 15′, which are formed by said casings, 12, the side 14 of the primary casing, and the inner, slanting sides 16, Fig. 1, which are integral with said portions 12′ of the receptacles 9 and partitions 13 and 15. The upper portion of the receptacles 9 and the partitions are of greater width than the bottom of the same, thereby projecting beyond the rear wall thereof, Fig. 1. Each receptacle or vat 15′, which completely surrounds three sides of each receptacle 9, is independent from the upper or lower contiguous receptacle or vat, but if it is desired, one or all of the receptacles or vats 15′ may be separately or synchronously emptied of the cooling liquid contained therein, by means of faucets or cocks 17 and 18. The faucets 17 are carried upon the lower portion of some of the slanting sides 16, while the faucet 18 is secured upon that side of the body of the refrigerator, which is provided with the doors 11. The faucet 18 communicates with the lowest receptacle or vat 15′. The upper, as well as the intermediate receptacles or vats 15′ may be emptied into the lowest receptacle or vat, which is provided with the faucet 18. The receptacles or vats 15′ are closed by means of doors 19, which are preferably hinged, as at 20, to some of the inclined sides 16, while the door closing the top receptacle or vat is hinged to the portions—12—of the top receptacle 9. Catch devices 21 are carried by some of the sides 16 and are employed for holding some of the doors or lids 19 open, as indicated in broken lines at 22. The door 19 closing the upper receptacle or vat normally lies in a horizontal plane and may be folded over in engagement with and parallel to the upper portions —12— of the top casings 12.

Vertical vent pipes 23 are carried by the body of the refrigerator. Each of the vent pipes 23 communicates with a single receptacle 9 and extends preferably through the top of the refrigerator and is provided with a hood or cap 24. By means of these parallel, vertical vent pipes 23, foul odors in the receptacles 9 may pass therefrom into the outer atmosphere. The vent pipes are preferably positioned contiguous to one side of the body of the refrigerator. A receptacle 25, Fig. 2, is positioned within the body of the refrigerator. The waste liquid from the ice chamber 3 may be drained into this receptacle, or, if desired, the receptacle 25 may contain

the drinking liquid. The liquid may be discharged from the receptacle 25 by means of the faucet 26, which is in communication therewith.

It is a fact that often different vegetables, fruits, or meats are placed in a refrigerator, and if it is possible to place each article in a separate receptacle, the odor rising from some of the articles would not contaminate the other articles. Therefore, it is very desirable to have odor or air-tight, independent receptacles, as disclosed in the present application, each receptacle being capable of being surrounded by cooling means, if the ice contained in receptacle 3 is not sufficient to cool said independent receptacles.

Access to each receptacle 9 is independent from the other receptacle. It is also to be noted that I have provided a space as 4 in a refrigerator, which is entirely independent from the receptacles; the body 1 being provided with means for containing or supporting primary and auxiliary cooling means for said space and said receptacles.

Referring particularly to Fig. 3, 23′ designates a vent pipe, which is supported at one end by means of an enlarged portion 27, constituting a valve casing. The lower end of the vent pipe 23′ is preferably connected to the inner sides of the valve casing 27 by means of braces 28. A perforated collar 29 is supported upon the upper portion 12′ of the receptacle 9, directly above opening 30. A ball valve 31 is positioned within valve casing 27 and normally rests upon the upper end of the perforated or apertured sleeve 29. The upper end of the sleeve 29 may be beveled, as at 32, to form a valve-seat. It is to be noted that the sleeve 29 and the vent pipe 23′ is of the same diameter. The ball valve 31 is raised by the pressure of air in receptacle 9 caused by closing the door 11. The apertured or perforated collar 29 permits all foul air or odors in the receptacle 9 to escape when the door is closed; the ball valve 31 normally rests upon the upper end of the apertured collar 29 and is intended only to instantly relieve the pressure of air, that is caused by closing the door 11.

What I claim is:

1. A refrigerator, comprising a body, a casing positioned within the lower part of said body, an ice receiving receptacle positioned within said body above said casing, and a plurality of receptacles partly surrounded by said casing, said casing and said receptacles being spaced apart for permitting ice to be packed therebetween for forming auxiliary cooling means.

2. A refrigerator comprising a body provided with a series of alined receptacles, partitions interposed between said receptacles, means for supporting a cooling agent against all sides of said receptacles and against the rear wall thereof, vent pipes carried by said body and communicating with said receptacle, means for preventing a sudden influx of air into said receptacles through said pipes, and an ice receptacle formed within said body.

3. A refrigerator, comprising a body provided with parallel arranged receptacles, vertical vent pipes carried by said body and communicating with each of said receptacles, means for supporting a cooling agent contiguous to said receptacles, valved means carried by said agent supporting means, movable doors supported upon said cooling agent supporting means, and an ice receptacle formed in said body.

4. A refrigerator, comprising a body provided with a lower produce space, an upper ice receptacle, a casing formed in said body below said ice receptacle, a plurality of open-ended receptacles positioned within said casing and closing one end thereof, and means for closing the opening of said receptacles.

5. A refrigerator, comprising a body provided with a plurality of alined open-ended receptacles, means for closing the openings of said receptacles, vent means extending to the atmosphere carried by said body for each of said receptacles, a second set of receptacles formed within said body and partially surrounding said first-mentioned receptacles, and discharge means carried by said second set of receptacles.

6. A refrigerator, comprising a body, a plurality of alined receptacles formed in said body, means for supporting a cooling agent against the sides and one end of said receptacles, and vent pipes communicating directly with the atmosphere carried by said body and communicating with each of said receptacles.

7. A refrigerator comprising a body, receptacles secured contiguous to one of the sides of said body, means for supporting a cooling agent contiguous to and partially surrounding said receptacles, vent pipes carried by said body and communicating with each of said receptacles, a valve for preventing a sudden influx of air through said pipes, provided with means for permitting pressure in said receptacle to exhaust through said pipes, and an ice receptacle formed in the upper portion of said body.

8. A refrigerator, comprising a body, an open-ended receptacle positioned within said body, means for closing the open end of said receptacle, a casing surrounding said receptacle for retaining the cooling agent against said receptacle, and partitions contacting with said open ended receptacle, said partitions and said open ended receptacle dividing said casing into compartments.

9. A refrigerator, comprising a body provided with a plurality of alined open-ended receptacles, means for closing the open ends of said receptacles, a second set of receptacles formed in said body and inclosing some of said first-named receptacles, valved means carried by one of said second-named receptacles, and capable of permitting liquid to be discharged from one of said second-named receptacles into another of the second-named receptacles, and means for closing said second-named receptacles.

10. In a refrigerator, the combination with a receptacle, a valve casing carried by said receptacle, a vent pipe secured to said valve casing, an apertured sleeve positioned within said valve casing for pressure to exhaust therethrough, and means positioned upon the end of said sleeve for permitting a sudden heavy pressure to pass therethrough.

11. A refrigerator, comprising a body provided with an ice receptacle, and a space for produce, an open-ended receptacle positioned within said body, means for closing the open end of said open-ended receptacle, a vent pipe carried by said body and communicating with the interior of said open-ended receptacle, a receptacle formed within said body and partially surrounding said open-ended receptacle, means within said body for closing said surrounding receptacle, and valved discharge means carried by said last-mentioned receptacle.

12. A refrigerator, comprising a body, a series of alined receptacles secured to one side of said body, a horizontal partition interposed between said alined receptacles and the sides of said body, vertical sides positioned contiguous to the inner ends of said receptacles and integral with the upper portion of some of said receptacles, the horizontal partitions, the said upper portion, vertical sides and the body constituting cooling agent receiving means.

13. A refrigerator, comprising a body provided with a lower produce space and an ice receptacle formed in its upper portion, doors carried by said body and closing openings communicating with said produce receptacle and ice receptacle, a plurality of alined receptacles open at one end and secured to one side of said body, means for closing the open ends of said receptacles, horizontal partitions interposed between the alined receptacles and the sides of said body, side portions secured contiguous to the inner ends of said receptacles, a second set of receptacles formed between said alined receptacles and the side portions, faucets carried by said second set of receptacles, doors carried by some of side portions and closing the second set of receptacles, a catch carried by some of said side portions and being capable of securing said doors in an opened position, and vent pipes carried by said body

and communicating with the interior of said alined receptacles.

14. In a refrigerator, the combination with a body, of an open-ended receptacle positioned within said receptacle, a valve casing carried by said receptacle, a vent pipe connected to said valve casing, an apertured sleeve provided with a beveled end secured to said open-ended receptacle within said valve casing, bracing means connecting the inner sides of said valve casing and the lower end of said vent pipe, and a ball valve positioned within said valve casing between said sleeve and vent pipe.

In testimony whereof I affix my signature in presence of two witnesses.

HARRY J. SHANNEN.

Witnesses:
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W. M. CAMPBELL.