No. 759,028. PATENTED MAY 3, 1904.

C. SHAMBOO.

REFRIGERATOR.

APPLICATION FILED JAN. 31, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

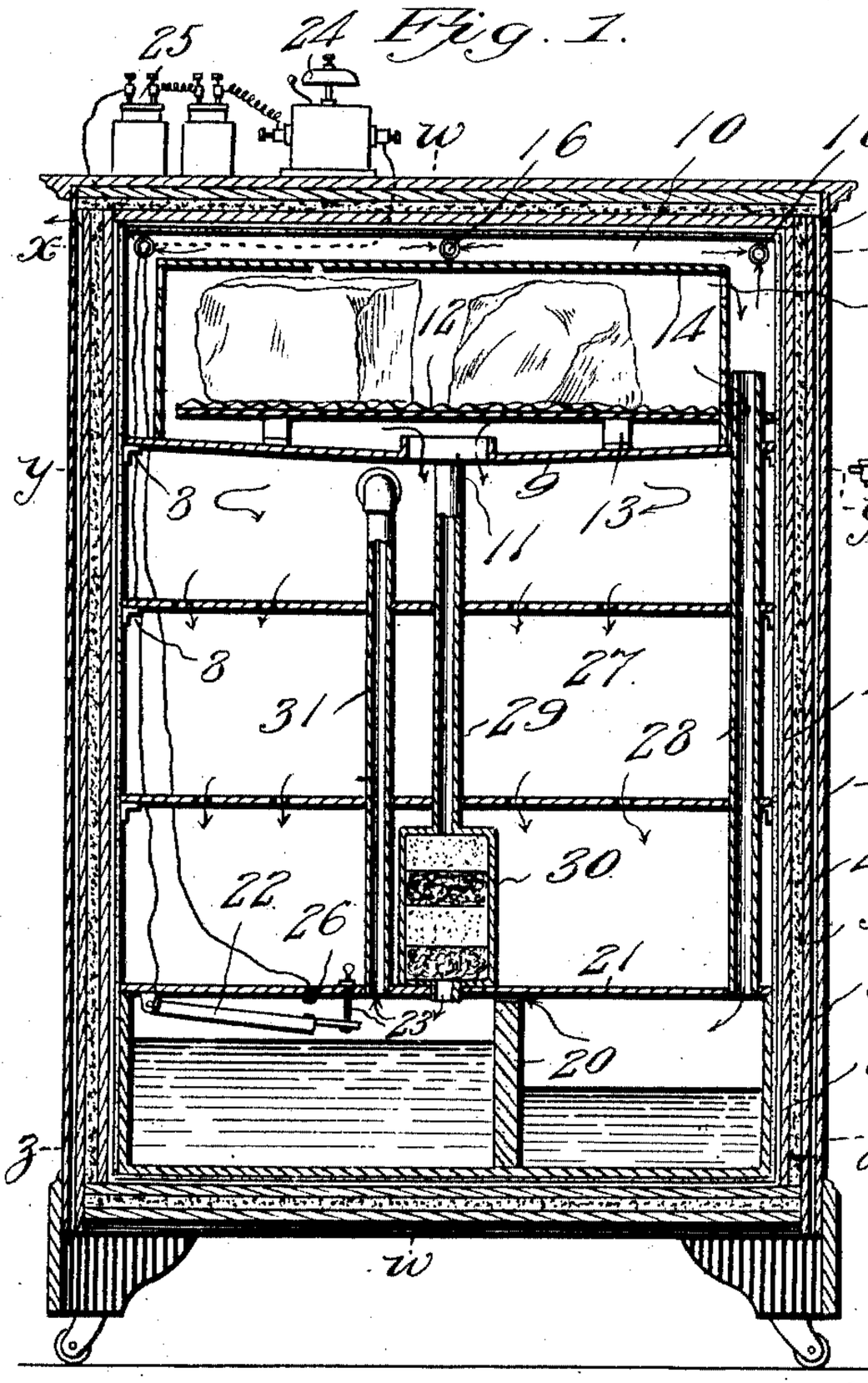
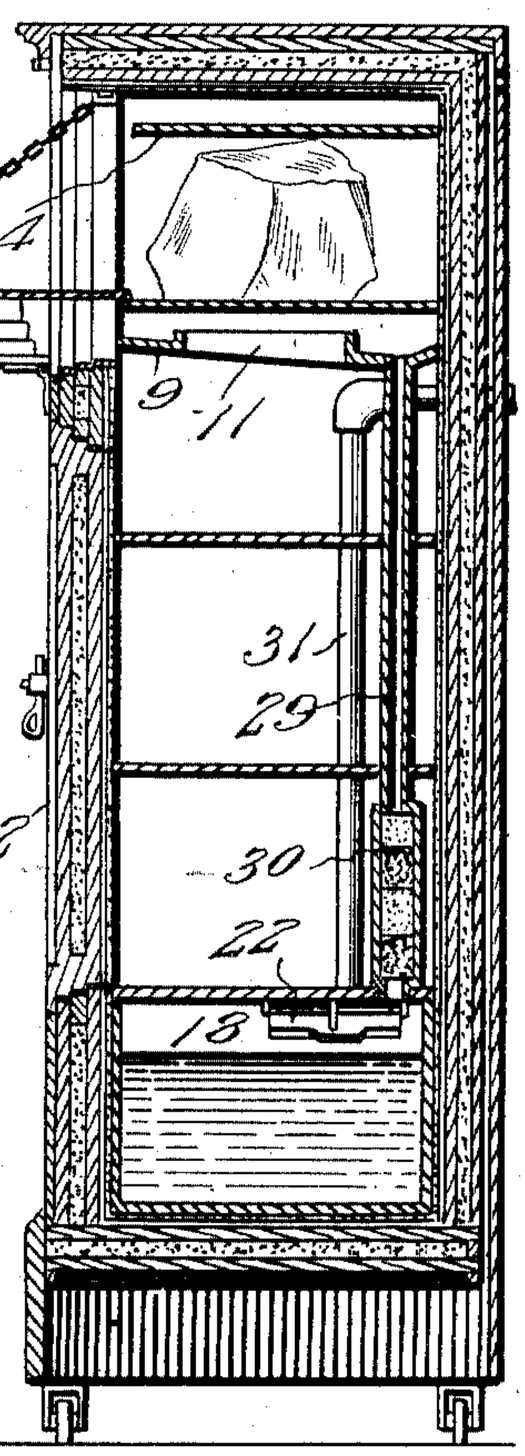


Fig. 2.



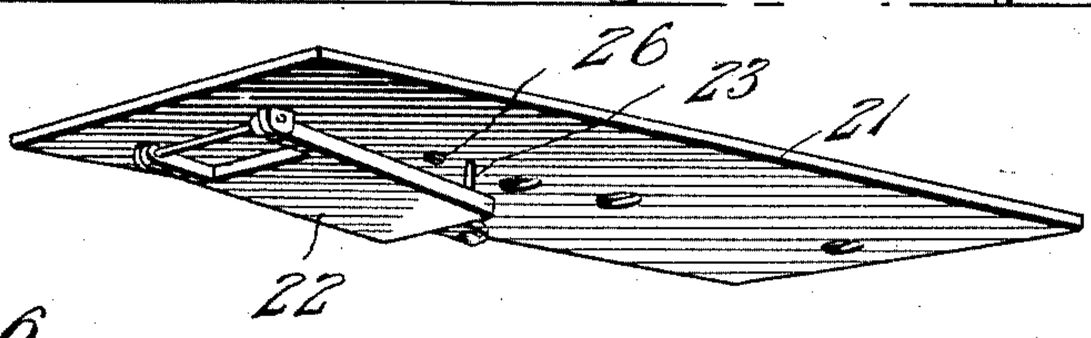
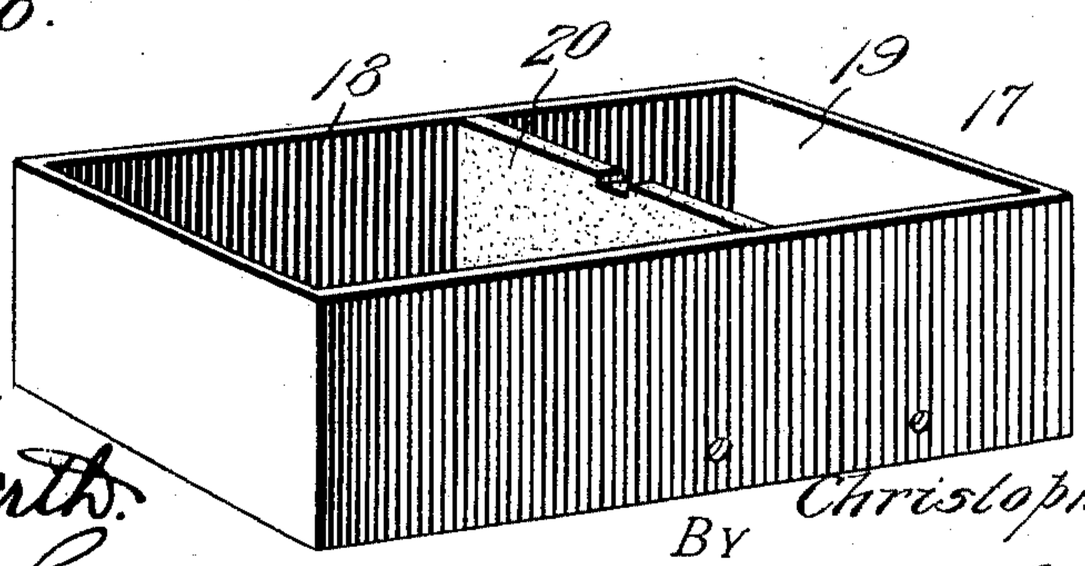


Fig. 6.



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No. 759,028. PATENTED MAY 3, 1904.

C. SHAMBOO.

REFRIGERATOR.

APPLICATION FILED JAN. 31, 1903.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3.

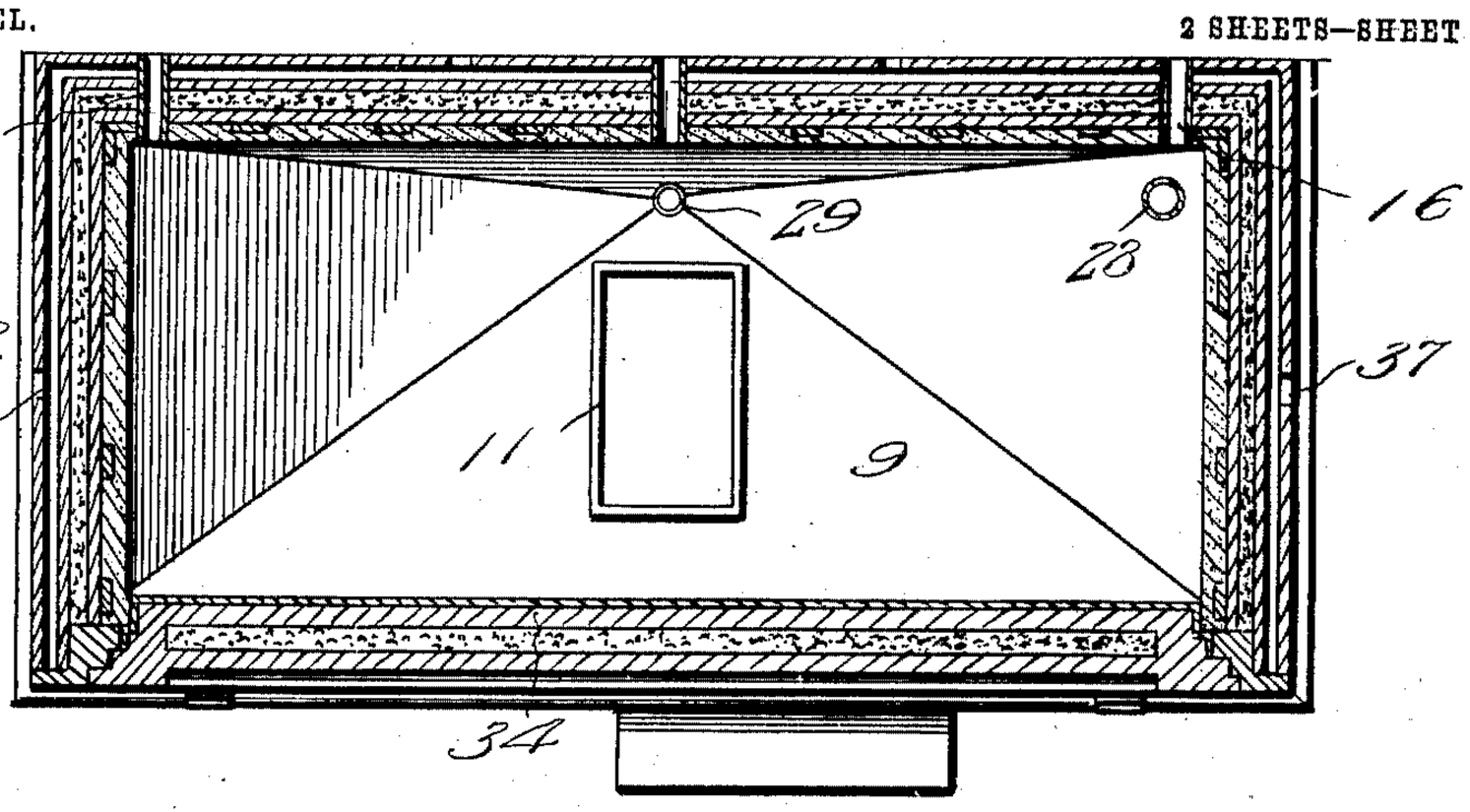


Fig. 4.

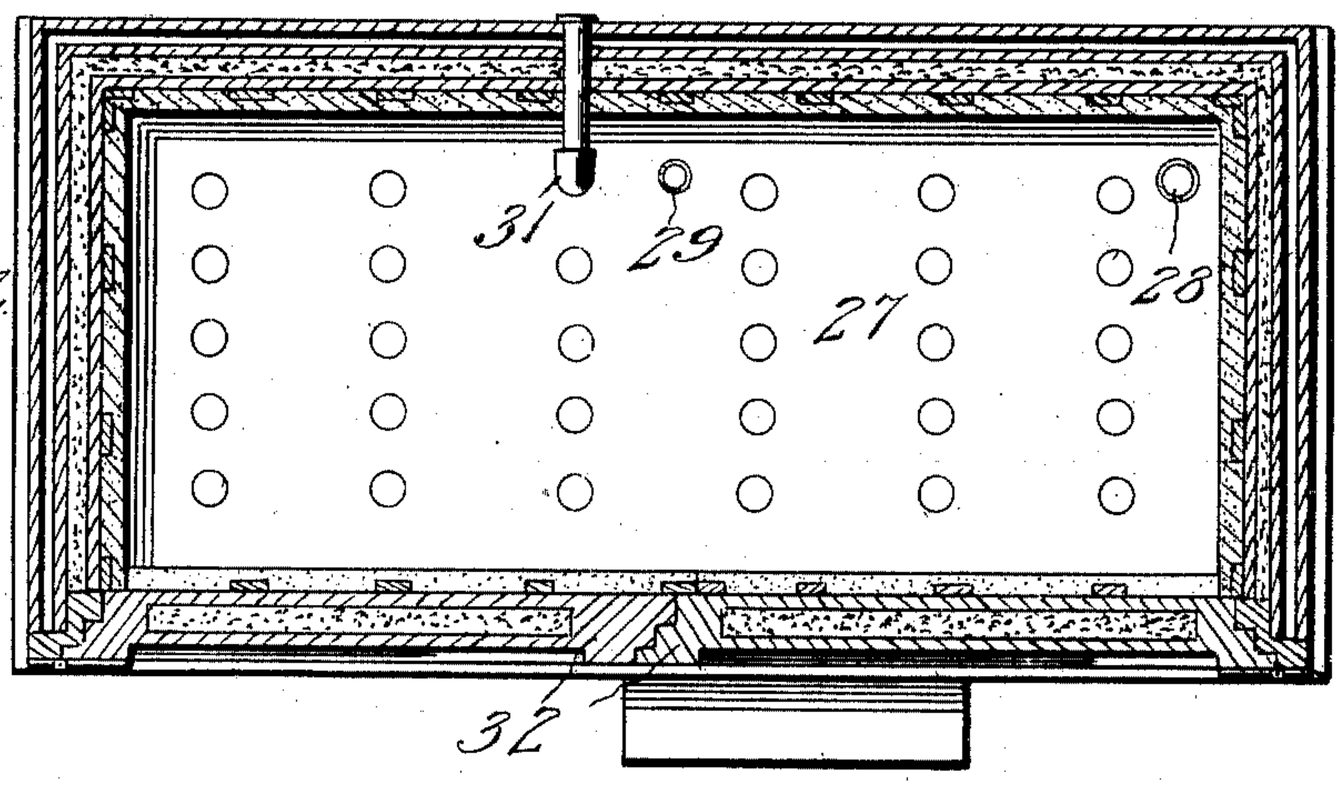
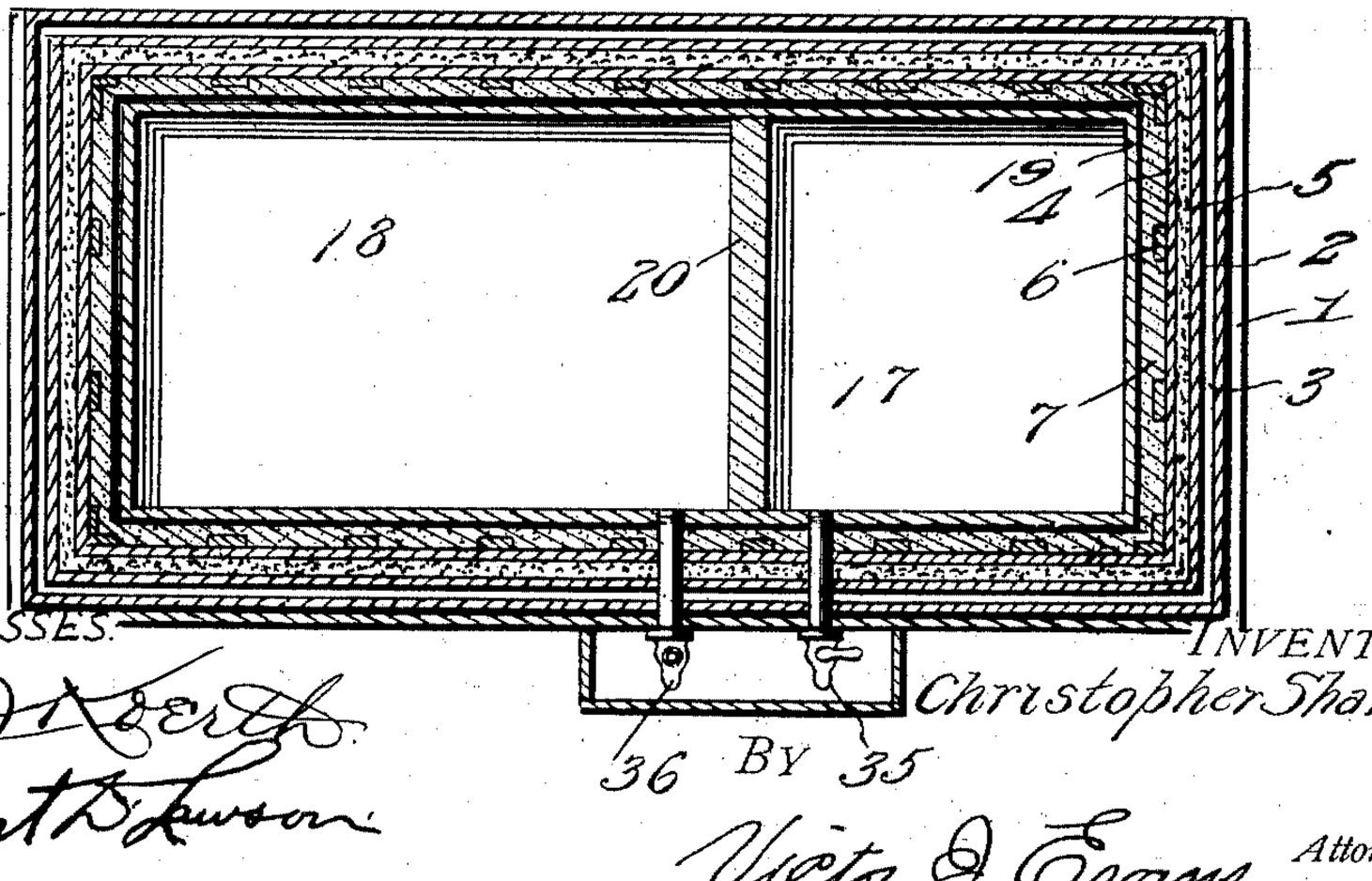


Fig. 5.



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No. 759,028. Patented May 3, 1904.

UNITED STATES PATENT OFFICE.

CHRISTOPHER SHAMBOO, OF CHICAGO, ILLINOIS.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 759,028, dated May 3, 1904.

Application filed January 31, 1903. Serial No. 141,382. (No model.)

To all whom it may concern:

Be it known that I, CHRISTOPHER SHAMBOO, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Refrigerators, of which the following is a specification.

This invention relates to new and useful improvements in refrigerators; and its object is to provide a device of this character having walls of novel construction and provided with a tank for the reception of ice-water, which is adapted to be conveyed thereto after passing through filters suitably arranged within the refrigerator.

Another object is to employ means whereby warm air may be conducted from the tank and from the ice-chamber to the outer atmosphere.

A further object is to employ an alarm adapted to be sounded when the water within the tank reaches a predetermined level.

With the above and other objects in view the invention consists in the novel construction and combination of parts hereinafter more fully described and claimed, and illustrated in the accompanying drawings, showing the preferred form of my invention, and in which—

Figure 1 is a central vertical section through the refrigerator. Fig. 2 is a section on line *w w*, Fig. 1. Fig. 3 is a section on line *x x*, Fig. 1. Fig. 4 is a section on line *y y*, Fig. 1. Fig. 5 is a section on line *z z*, Fig. 1; and Fig. 6 is a detail view of the water-tank and its covering removed.

Referring to the figures, it will be seen that the back and each of the sides are formed of parallel walls 1 and 2, respectively, separated by a narrow air-passage 3. An inner wall 4, preferably constructed of wood, is secured to wall 2 in any suitable manner, and charcoal or other suitable insulating material 5 is interposed between these two walls 2 and 4. Laths 6 are arranged upon the inner face of each wall 4 and serve to anchor thereto the inner wall 7 of the refrigerator, said wall being preferably formed of cement. Cleats 8 are located at desired intervals upon this inner wall 7, and the upper pair thereof serve to support the bottom 9 of the upper or ice chamber 10. An aperture 11 is arranged at the center of the bottom 9, and extending thereover is a tray 12, mounted on suitable standards 13. A rectangular hood 14 extends over this tray and is provided at points adjacent to the top and bottom with apertures 15, whereby air may freely pass therefrom into the other compartments of the refrigerator. Apertures 16 are located within the rear walls of the refrigerator at points adjacent to the top of the compartment 10 and of hood 14. These apertures are provided to permit warm air to escape from the refrigerator.

Arranged upon the bottom of the refrigerator is a rectangular tank 17, preferably formed of cement or other similar material and divided into two compartments 18 and 19, respectively, by means of a slab 20 of filtering-stone. A cover 21 is arranged upon this tank, and to the under surface thereof is hinged a float 22, adapted to be suspended within the compartment 18 in said tank. Any suitable means, as a headed rod 23, may be employed for supporting the movable end of this float. A suitable electrically-operated alarm 24 is preferably located upon the refrigerator and is electrically connected to a battery 25, to the float 22, and to a contact 26, arranged upon the cover 21 at a point in the path of said float. It will thus be seen that when the float swings upward upon its hinge it will be brought against the contact 26 and complete the electric circuit and sound alarm 24.

A suitable number of shelves 27 are arranged upon the cleats 8 at points below the bottom 9 of the ice-chamber, and a tube 28 extends therethrough and opens at opposite ends into the ice-chamber and the compartment 19 of tank 17, respectively. A tube 29 also connects the bottom 9 of compartment 10 with the top of a rectangular casing 30, mounted upon cover 21 and opening at the bottom thereof into the compartment 18 in tank 17. This casing 30 is provided with alternate layers of gravel and sponge, and it is obvious that the ice-water passing through the pipe 29 will be filtered within casing 30 prior to its discharge into the compartment 18. A third tube 31 extends from the cover 21 of tank 17 and

through the rear walls of the refrigerator, and this tube serves to conduct from the refrigerator warm air that may accumulate within the water-tank 17.

Suitably-packed doors 32 may be provided in the front walls of the refrigerator. The upper one of these doors, which opens into the ice-chamber, is adapted to be supported in open position by a chain 33, and an inner door 34 is hinged to the front edge of the tray 12, and when said upper door is opened the door 34 will fall outward thereupon and assume the position shown in Fig. 2. It will be seen that by this construction when it is desired to place ice upon the tray 12 it is merely necessary to put it upon the outer door 32 and slide it upon the door 34 and thence to the tray 12.

When the ice upon tray 12 melts, the water will flow upon the inclined bottom 9 to tube 29 and will pass from said tube into the filtering-receptacle 30, from which it will be discharged into compartment 18 of tank 17. If the water accumulates too rapidly within this tank, the float 22 will be raised thereby and the alarm 24 sounded, as before described. The water within compartment 18 of the tank will slowly filter through the slab 20 into compartment 19, from which it may be drawn through a faucet 35, located adjacent to the bottom thereof. A drain 36 may be arranged at the bottom of compartment 18 to permit the water therein to be drawn off as desired. The air within the ice-chamber 10 upon becoming chilled by the ice within said chamber will pass downward through the central aperture 11 in the bottom of said chamber to the various parts of the refrigerator located thereunder and above the tank 17. A portion of this air will also pass out through the apertures 15 and into the tube 28, which will conduct it down to compartment 19 in tank 17. This cool air will displace any warm air which may have accumulated within the tank, and said warm air will pass across the filtering-slab 20 and out of the refrigerator by way of the tube 31. Warm air accumulated within the ice-chamber 10 will escape from the refrigerator through the ports 16 before referred to. The passages 2, formed within the walls of the refrigerator, are open at their lower ends and are provided adjacent to the top of the refrigerator with outlets 37. A circulation of air is thus established at all times within these walls.

In the foregoing description I have shown the preferred form of my invention; but I do not limit myself thereto, as I am aware that modifications may be made therein without departing from the spirit or sacrificing any of the advantages thereof, and I therefore reserve the right to make such changes as fairly fall within the scope of my invention.

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

The combination with a refrigerator, of an ice-receptacle arranged therein, a water-tank, a partition in the water-tank and formed of filtering material and dividing the tank into compartments, a cover placed over the water-tank, a tube connecting the ice-receptacle and water-tank to convey water to one of the compartments therein, a tube having connection with the ice-receptacle and the other compartment of the water-tank to convey cool air to the latter, a tube connecting the first-mentioned compartment with the outer atmosphere to permit of the displacement of warm air in the water-tank, and a filter arranged in the first-mentioned tube.

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

his
CHRISTOPHER × SHAMBOO.
mark

Witnesses:
WILLIE BEAUPRE,
CHARLES CREEGER.