

No. 785,814.

PATENTED MAR. 28, 1905.

J. W. MALLETT.

REFRIGERATOR.

APPLICATION FILED APR. 27, 1904.

Fig. 1.

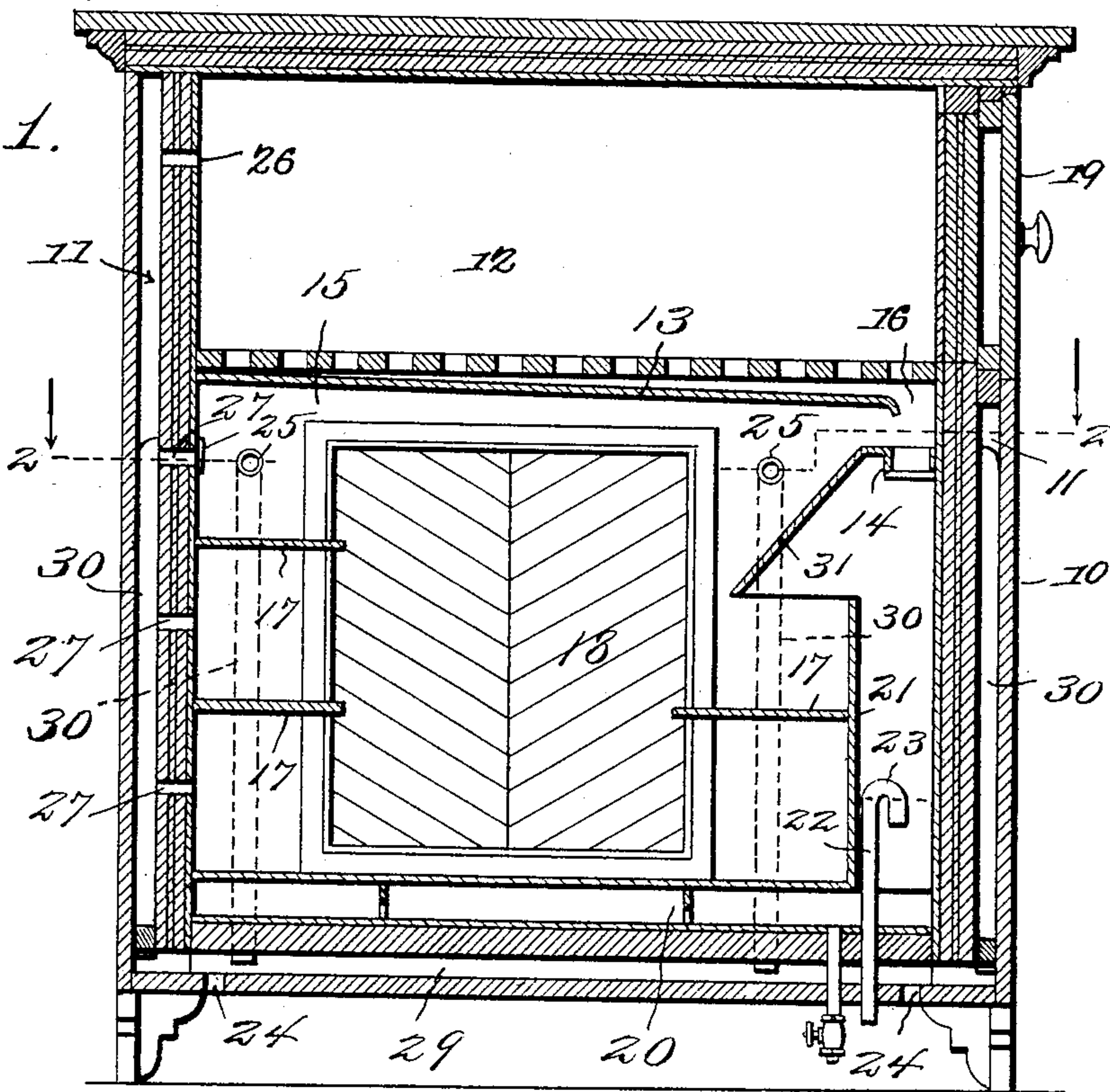
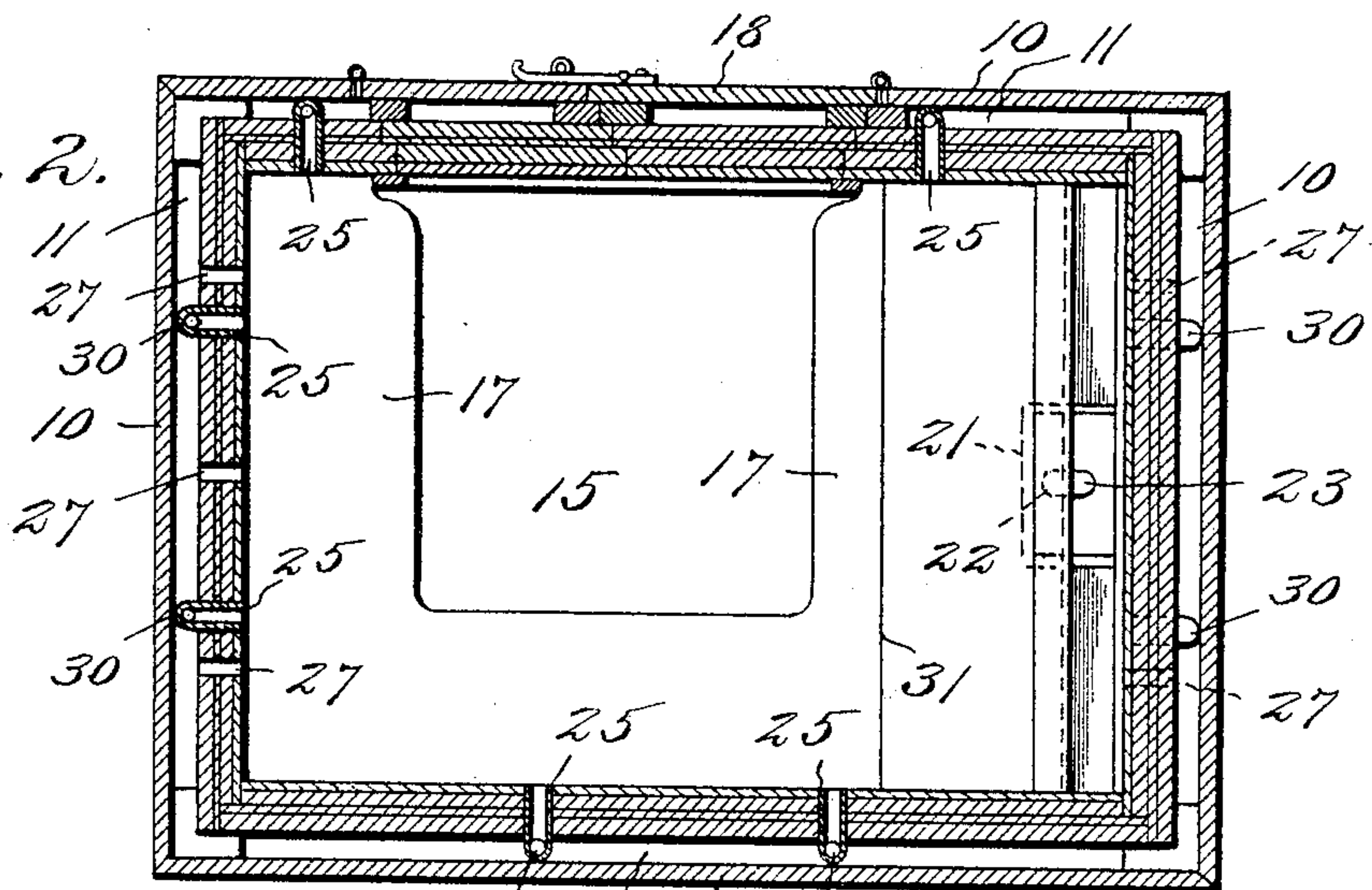


Fig. 2.



Witnesses

E. J. Stewart
C. H. Woodward

by

Joseph W. Mallett
Inventor
C. A. Snow & Co
Attorneys

UNITED STATES PATENT OFFICE.

JOSEPH W. MALLETT, OF TERRE HAUTE, INDIANA.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 785,814, dated March 28, 1905.

Application filed April 27, 1904. Serial No. 205,216.

To all whom it may concern:

Be it known that I, JOSEPH W. MALLETT, a citizen of the United States, residing at Terre Haute, in the county of Vigo and State of Indiana, have invented a new and useful Refrigerator, of which the following is a specification.

This invention relates to refrigerators, and has for its object to improve the construction and produce a device of this character wherein a circulation of air is produced in the cooling-chamber and ice-chamber and wherein means are provided for conveying odors and gases from the provision or cooling chamber.

Another object of the invention is to produce a device of this character having an inclosed compartment for receiving the water from the melting ice and having means whereby the same is maintained at a uniform level and utilized for increasing the refrigeration.

With these and other objects in view, which will appear as the nature of the invention is better understood, the same consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of the embodiment of the invention capable of carrying the same into practical operation, it being understood that the invention is not necessarily limited thereto, as various changes in the shape, proportions, and general assemblage of the parts may be resorted to without departing from the principle of the invention or sacrificing any of its advantages, and the right is therefore reserved of making all the changes and modifications which fairly fall within the scope of the invention and the claims made therefor.

In the drawings thus employed, Figure 1 is a longitudinal sectional elevation. Fig. 2 is a transverse section on the line 2 2 of Fig. 1.

The walls of the refrigerator may be of any approved construction, with paper or other non-conducting linings or fillings and with air-chambers in all the side walls.

The refrigerator may be manufactured in all the different sizes and employed for any and

all of the various purposes for which such devices are generally used, as the invention is adaptable to all sizes and forms of such devices and to cold-storage establishments of various kinds.

For the purpose of illustration an ordinary domestic refrigerator is shown wherein the walls 10 are of the usual form and with air-spaces 11 in all the vertical side walls and also in the bottom, as at 29, but with the bottom air-space shut off from the side-wall air-spaces. The ice-chamber 12 is located in the upper part of the device and provided with a drainage-pan 13, inclined to one side and terminating above a drip-trough 14. At one end the ice-chamber communicates with the cooling or provision chamber 15, as at 16, the latter being supplied with shelves or racks 17 for supporting the material or products to be refrigerated. The door 18 of the cooling-room is placed in one of the side walls, and the door 19, through which the ice is introduced into the ice-chamber, is also preferably placed in one of the side walls.

Beneath the provision-chamber 15 a water-tank 20 is disposed, having a vertical extension 21, in which an overflow-pipe 22 rises and terminates in a downwardly-bent end 23, forming a sealing-bend to control the amount of water in the tank and preventing it from rising above a certain predetermined level. The water resulting from the melting ice runs into the tank 20 through the drip-trough 14 and vertical portion 21 of the water-tank, as will be obvious, and wherein it is maintained at a uniform level by the automatic overflow 22 23.

A vent-aperture 26 is provided between the ice-chamber 12 near the top and the air-space 11 within the side walls, and a plurality of similar apertures 27 are also provided between the cooling-chamber 15 and the air-space 11 at different levels.

A plurality of apertures 24 in the bottom of the refrigerator afford communication between the outside air beneath the same and the air-chamber 29, and extending through the inner portions of the side walls are a plurality of vents 25, connected to the air-chamber 29,

as by conductors 30, leading through the side-wall air-chambers 11, by which means the foul air and odors will be drawn from the cooling-chamber.

5 An inclined plate 31 is disposed in the cooling-chamber adjacent to the aperture 16 to receive the cooler air passing downward thereto and deflected to the center of the cooling-chamber, and thus facilitate and equalize the circulation therein.

10 Any required number of the apertures 24 and vents 25, with their conductor means 30, may be employed and of any suitable size and may be varied to correspond with the size or capacity of the refrigerator, and the same is true of the apertures 26 27.

With a refrigerator thus constructed it is obvious that the rising warmer air will cause a continuous circulation through the vents 26 27 and aperture 16, while the foul air and odors will pass off through the vents 25 and conductors 30 and apertures 24, at the same time a certain amount of fresh air passing to the cooling-chamber through the same conduits.

25 The presence of the constant mass of cold water in the tank beneath the cooling-chamber and in free communication therewith through the open vertical portion 21 of the tank is an important feature of the invention, as the heat from the air is rapidly absorbed by the cooler water and reduces the temperature, thus very materially aiding in the refrigeration and also materially reducing the amount of ice necessary to produce a given result.

35 By this means the cooling-chamber is freed from all noxious gases and odors and constantly supplied with fresh pure air from the outside. The ice is also used with increased

economy by the influence of the large body of cold water in the tank 21, as before described. 40

Having thus described the invention, what is claimed is—

In a refrigerator, a casing having walls provided with air-spaces and a bottom provided with an air-space separated from the air-spaces 45 in the walls, an ice-chamber and a cooling-chamber within said casing, apertures in the walls connecting the ice-chamber and the cooling-chamber with the wall air-spaces, ducts extending through the wall air-spaces and connecting the upper end of the cooling-chamber with the air-space in the bottom, apertures in the bottom connecting the bottom air-space with the outer atmosphere, an inclosed water-receptacle disposed in the bottom of the cooling-chamber and having an upward extension 55 adjacent to one of the side walls, a drippings-trough disposed above said upward extension to convey the drippings from the ice-chamber into said upward extension of the water-receptacle, a drainage-pan below the ice-chamber and discharging into the drippings-trough, a deflector extending from said drippings-trough downwardly into the cooling-chamber, and an overflow-pipe extending through the 65 bottom and through the air-chamber in said bottom into the upward extension of the water-receptacle and terminating in a bent portion forming a seal.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses. 70

JOSEPH W. MALLETT.

Witnesses:

GEORGE W. DE CAMP,
JOHN W. FOX.