

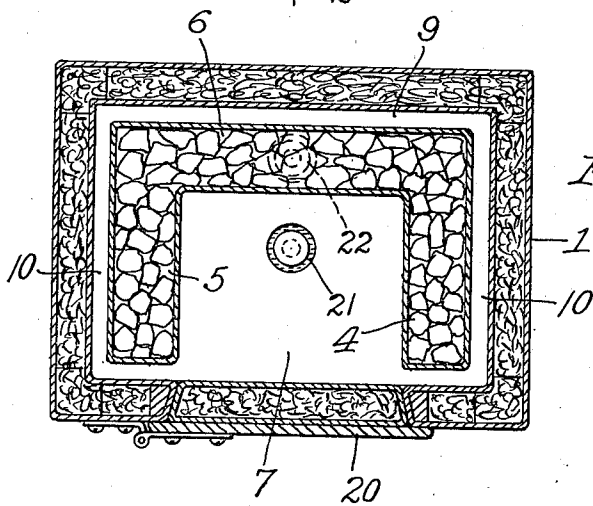
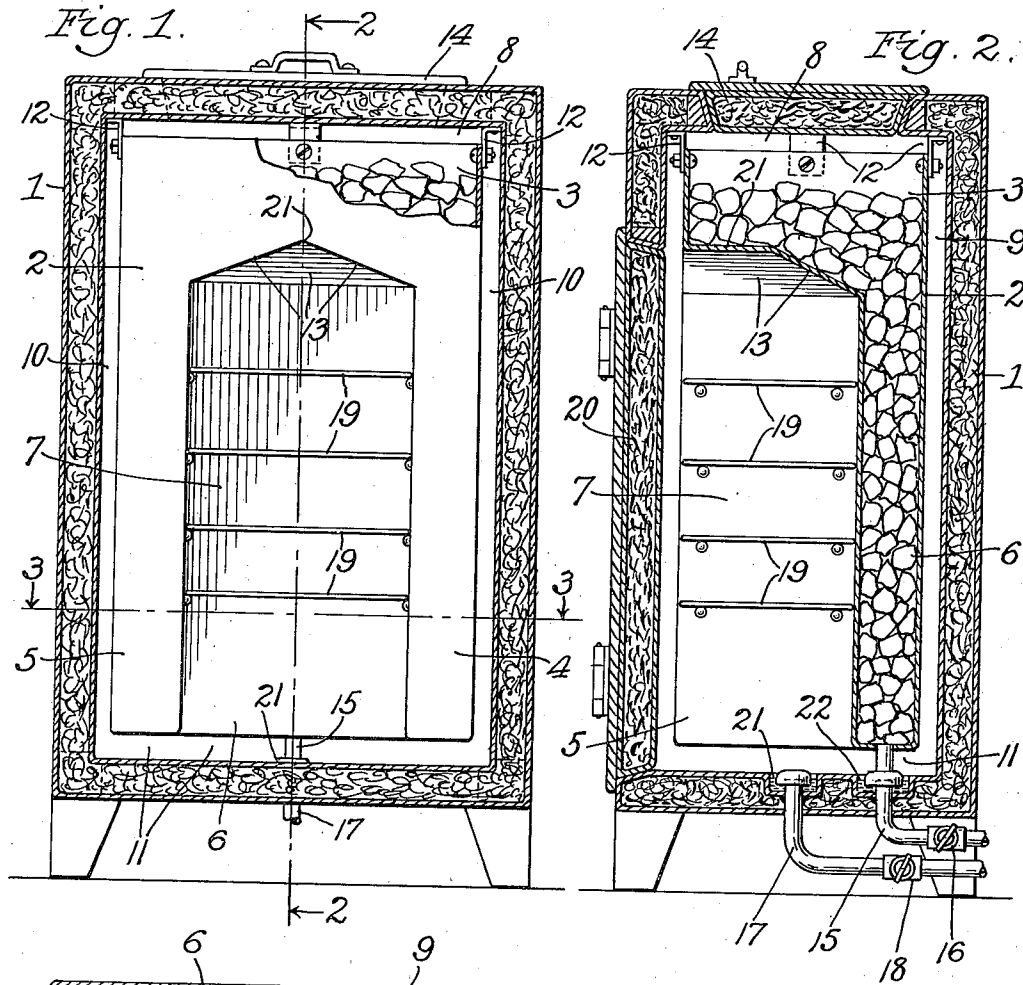
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2,069,902

REFRIGERATOR

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2,069,902

REFRIGERATOR

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1 Claim. (Cl. 62—68)

This invention relates to refrigerators and has for its object to provide a new and improved device of this description. The invention has as a further object to provide a refrigerator with an ice chamber surrounding the food chamber, the ice chamber being separated from the insulating walls by an air space which communicates with the food chamber so that the cooling effect from all the sides of the ice chamber is secured in the food chamber, thereby increasing the efficiency of the refrigerator. The invention has other objects which are more particularly pointed out in the accompanying description.

Referring now to the drawing, Fig. 1 is a view of a refrigerator embodying the invention, with the front removed;

Fig. 2 is a sectional view taken on line 2—2 of Fig. 1;

Fig. 3 is a sectional view taken on line 3—3 of Fig. 1.

Like numerals refer to like parts throughout the several figures.

Referring now to the drawing, I have shown a refrigerator which consists of an outer heat insulating compartment 1. Within this compartment is an ice chamber 2. This chamber has a top portion 3 which preferably extends across a larger portion of the space in the insulating receptacle. Connected with the portion 3 are the downwardly projecting side portions 4 and 5 and the rear portion 6, these portions surrounding the cooling or food chamber 7. There is an air space all around the ice chamber, the air space 8 at the top, 9 at the back, 10 at the sides and 11 at the bottom. The ice chamber is preferably suspended so that it does not touch the bottom, being suspended by the straps 12. The bottom wall of the upper portion 3 of the ice chamber which forms the top of the food chamber is preferably bent up at its middle so as to have inclined walls. The construction may be that of a cone or any other suitable construction that will give the inclined walls. By this construction, any moisture which deposits on this wall from the food chamber, instead of dropping down on the food, will run down the inclined faces of the wall and then run down the sides of the ice chamber, and the dropping of water on the food is thus avoided. This construction also facilitates the movement of the ice from the upper chamber down into the lower chamber.

The ice chamber is provided with a drain 15 provided with a shut off valve 16, and the bottom of the insulating receptacle is provided with a drain 17 having a shut off valve 18. The food chamber is provided with the shelves 19 and is made accessible by means of the usual door 20 in the insulating receptacle. The inner face of

the insulating receptacle and the outer face of the ice chamber may be enameled or otherwise treated as desired.

In the use of the refrigerator the ice is broken up into the proper size and placed in the ice chamber through the door 14 and fills the ice chamber. As the ice melts, the water produced thereby runs down into the lower part of the ice chamber and the inclined faces 13 cause ice from the upper chamber to automatically slide down into the lower chamber. The water is therefore kept at a low temperature, and with the large body of ice the ice box needs filling only occasionally.

It will be noticed that not only the surface of the ice chamber surrounding the food chamber is utilized, but that the entire outer surface, sides, top and bottom is utilized to cool the air in the food compartment, the food compartment communicating with this air space extending all around the ice chamber. I have found that with this construction a comparatively low temperature can be secured and maintained with the use of very little ice. I have found, for example, that it has been easy to maintain a temperature of 35° to 45° F.

The drains 15 and 17 I have illustrated as being provided with water seals 19 and 20 which prevent the air from the outside from entering. I have shown the upwardly bent portion of the top of the food chamber as having two inclined faces which meet at the top ridge point 21, there being another inclined face inclining downwardly from the ridge portion 21 toward the rear, as clearly shown in Fig. 2. These inclined faces are of the proper angle to cause any condensed vapor to run along the surface instead of dropping off. When the door is opened and warm air enters the food chamber, a circulation of the air is produced, the warm air rising and passing over or around the upper part of the ice chamber and then descending and being cooled before it again enters the food chamber.

I claim:

A refrigerator comprising an insulating receptacle, an ice chamber therein having a top portion and other portions which extend downwardly therefrom and are arranged to form the walls of a food chamber, a part of the ice chamber forming the top of the food chamber, the top portion of the food chamber being made up of three inclined sections having plane faces, two of the sections inclining downwardly in opposite directions toward the sides of the food chamber, and a third section inclining downwardly toward the rear of the food chamber, said faces being arranged to direct the condensed moisture to the walls of the food chamber so that it will not drip upon the stored food.

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