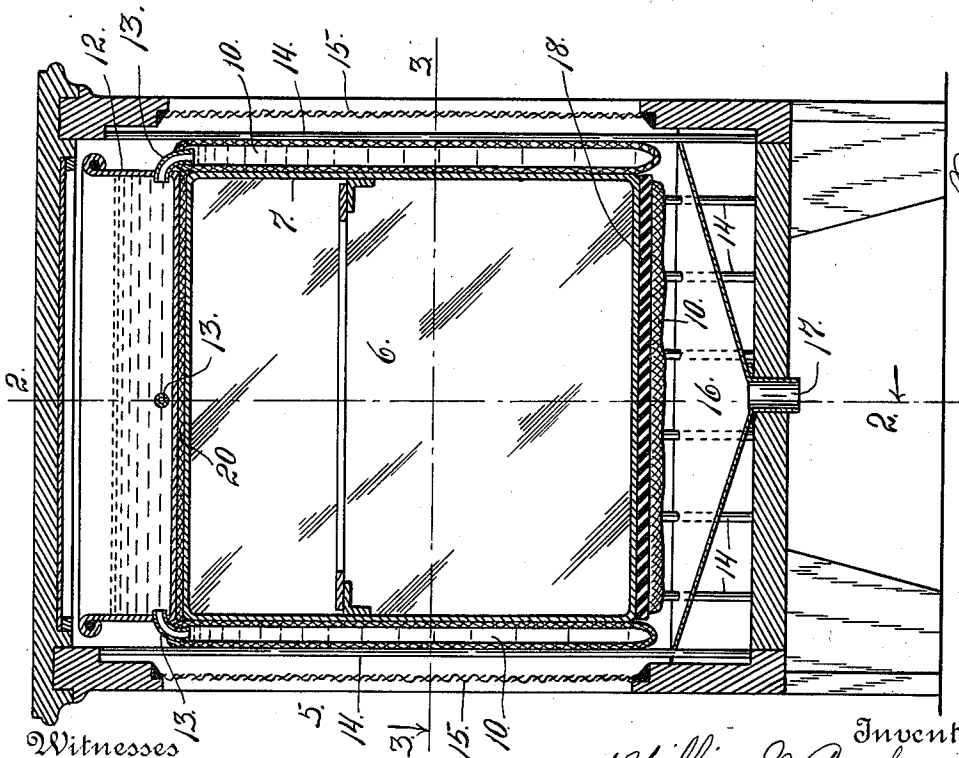
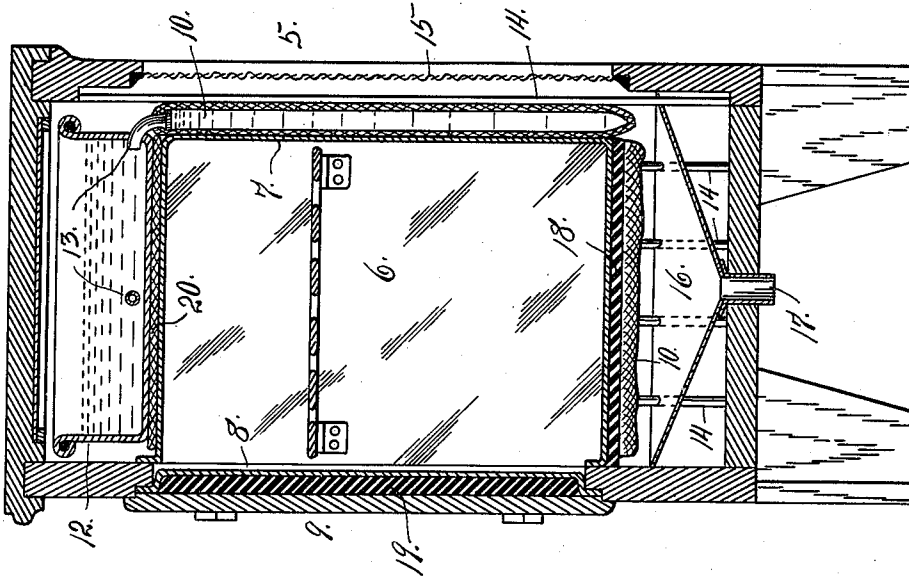


W. N. AMSBARY.
REFRIGERATOR.
APPLICATION FILED DEC. 10, 1910.

1,013,468.

Patented Jan. 2, 1912.

2 SHEETS—SHEET 1.



Witnesses

Otto E. Heddick.
C. H. Rosner.

Inventor
By William N. Ambary.
J. O'Brien.
Attorney

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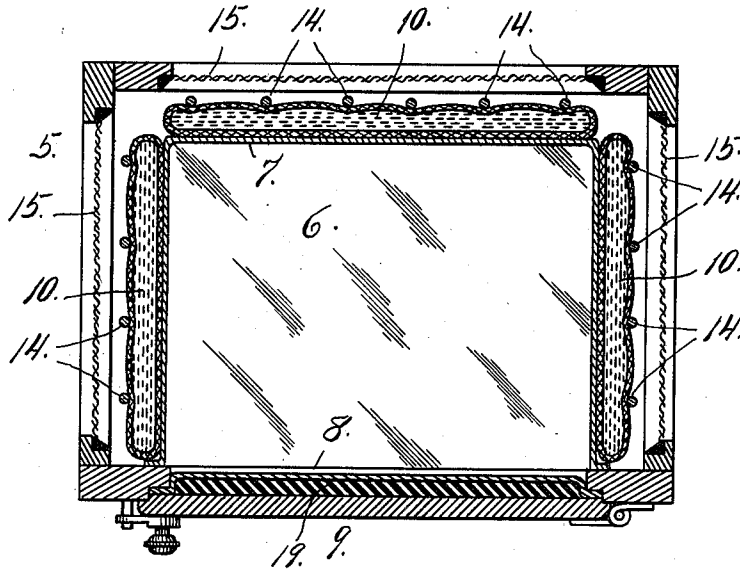


Fig. 3.

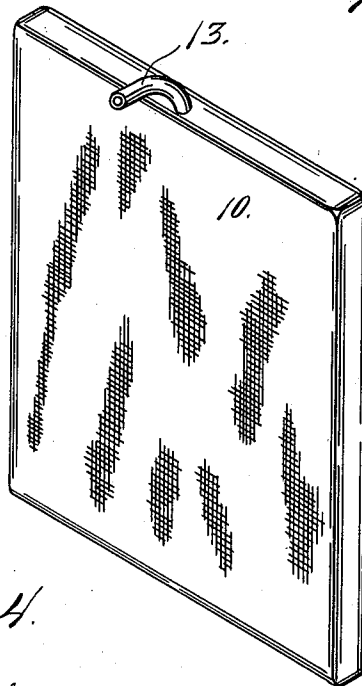


Fig. 4.

Witnesses
Otto E. Hoddick.
C. H. Rossmore.

Inventor
By William N. Ambary.
J. O'Brien.
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM N. AMSBARY, OF LOS ANGELES, CALIFORNIA.

REFRIGERATOR.

1,013,468.

Specification of Letters Patent.

Patented Jan. 2, 1912.

Application filed December 10, 1910. Serial No. 596,703.

To all whom it may concern:

Be it known that I, WILLIAM N. AMSBARY, a citizen of the United States, residing at the city of Los Angeles, county of Los Angeles, and State of California, have invented certain new and useful Improvements in Refrigerators; and I do 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, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in refrigerators in which the temperature is lowered or kept sufficiently cool by the evaporation of water applied to the outer walls of the provision chamber.

In my present invention I apply water bags to the opposite side walls and to the rear wall of the provision chamber, these bags being composed of such material that the water will seep slowly therethrough and be removed from the outer surface of the bags by evaporation, thus lowering the temperature of the water and maintaining a corresponding temperature in the provision chamber. The bags are relatively thin whereby the provision chamber is virtually inclosed on three sides by a sheet of water approximately an inch thick. Mounted above the top of the provision chamber is a water receptacle with which short inlet tubes applied to the upper extremities of the several bags are connected, whereby the bags are automatically kept full, the amount of supply lost by evaporation being in this manner replenished. The bags are held in place against the walls of the provision chamber by means of vertically disposed rods. Outside of these rods is placed a screen of suitable mesh, the latter being exposed to the atmosphere. It will thus be seen that the outer surfaces of the bags are practically entirely exposed to the external air, whereby evaporation is greatly facilitated. By the use of these bags a relatively large area of evaporation surface is obtained.

Having briefly outlined my improved construction, I will proceed to describe the same in detail, reference being made to the accompanying drawing in which is illustrated an embodiment thereof.

In this drawing: Figure 1 is a vertical section taken through a refrigerator equipped with my improvements, the apparatus being cut on a plane parallel with the front and rear walls thereof. Fig. 2 is a central vertical section taken on the line 2—2, Fig. 1. Fig. 3 is a horizontal section taken on the line 3—3, Fig. 1, looking downwardly. Fig. 4 is a perspective view of one of the water bags employed.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate the outer framework of the refrigerator and 6 the provision chamber inclosed at the top, bottom and on two opposite sides by a metal or other suitable casing 7. This casing of the provision chamber is suitably secured to the framework, its front being open as shown at 8 to permit access thereto when the door 9 is opened. Applied to the rear wall and the opposite side walls of the provision chamber on the outside are water bags 10, the same being relatively thin and kept filled with water from a receptacle 12 located above the top of the provision chamber. The upper extremities of the water bags 10 are equipped with relatively short curved tubes 13 which are open-ended and connected with the water chamber 12 to allow the latter to pass freely therethrough into the bags for the purpose of replenishing the loss by evaporation. The tubes 13 also serve to support the water bags. These bags are maintained in close contact with the outer walls of the provision chamber by means of vertically disposed rods 14 whose upper and lower extremities are embedded or otherwise suitably secured to the top and bottom framework of the structure. For a height corresponding with that of the provision chamber, the sides and rear of the refrigerator are devoid of covering outside of the rods, except that screens 15 are employed, the same being of suitable mesh to allow the air to circulate freely in contact with the outer surfaces of the water bags, to facilitate evaporation.

The lower part of the refrigerator below the provision chamber is provided with a hopper-shaped receptacle 16 having an outlet tube 17 for the escape of any water that is not carried away by evaporation. The bottom of the provision chamber is insulated by a heavy layer 18 of any suitable material. This is also true of the door 9, which is

equipped with an insulating layer 19. This insulating substance should be a good non-conductor of heat in order to prevent the warmth of the surrounding atmosphere from effecting the temperature of the provision chamber.

From the foregoing description the use of my improved refrigerator will be readily understood and need not be further explained in detail.

Attention is called to the fact that there is a piece of cloth or a layer of suitable porous material 20 interposed between the top of the provision chamber 6 and the water receptacle 12. The side and rear edges of this cloth member 20 are in engagement with the water bags 10 at the sides and rear of the provision chamber. Hence the part 20 absorbs the water from the bags, the moisture traveling through the part 20 by capillary attraction. The water in the bags is cooled by evaporation from their exposed surfaces, and this cold water saturates the part 20 and thus virtually maintains a layer of cold water on top of the provision chamber as well as at the rear and sides.

Having thus described my invention, what I claim is:

1. A refrigerator whose provision casing is equipped on the outside with a number of removable water bags, the said bags being exposed to the atmosphere, the outer framework adjacent the bags being open for the purpose, and a water-containing receptacle mounted on top of the provision casing and with which each of the bags separately communicates, the bags being supported in suitable proximity to the walls of the provision chamber, substantially as described.

2. A refrigerator whose provision casing is equipped on the outside with water bags, the outer framework being open adjacent the bags to bring the atmosphere in contact with the latter to facilitate evaporation, rods whose extremities are secured to the frame-

work of the structure, the said rods being located outside of the bags and in engagement therewith, whereby they are maintained in proper relation with the walls of the provision chamber, the open space in the outer framework where the bags are located being equipped with a screen of suitable mesh, substantially as described.

3. A refrigerator whose provision casing is equipped on the outside with water bags exposed to the atmosphere to facilitate evaporation for cooling purposes, the top of the provision casing being provided with a layer of absorbent material whose edges engage the adjacent upper extremities of the water bags, a water receptacle mounted on top of the provision casing, and the bags being equipped with tubes extending into the receptacle, the said tubes forming a support for the said bags, substantially as described.

4. A refrigerator whose provision casing is equipped on the outside with a number of removable water bags, said bags being exposed to the atmosphere, the outer framework adjacent the bags being open for the purpose, and a water-containing receptacle with which each of the bags is separately connected, the bags being supported against the walls of the provision casing.

5. A refrigerator whose provision casing is equipped on the outside with water bags exposed to the atmosphere to facilitate evaporation for cooling purposes, a water receptacle mounted on top of the provision casing, and the bags being provided with tubes extending into the receptacle for supplying the bags with water, the said tubes being constructed to also form a support for the bags, substantially as described.

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

WILLIAM N. AMSBARY.

Witnesses:

CHARLES L. HALLOCK,
LOUIS M. PRITCHARD.