Jan. 30, 1923. 1,443,438.

A. D. SOHMER.

REFRIGERATOR.

FILED JAN. 26, 1921.

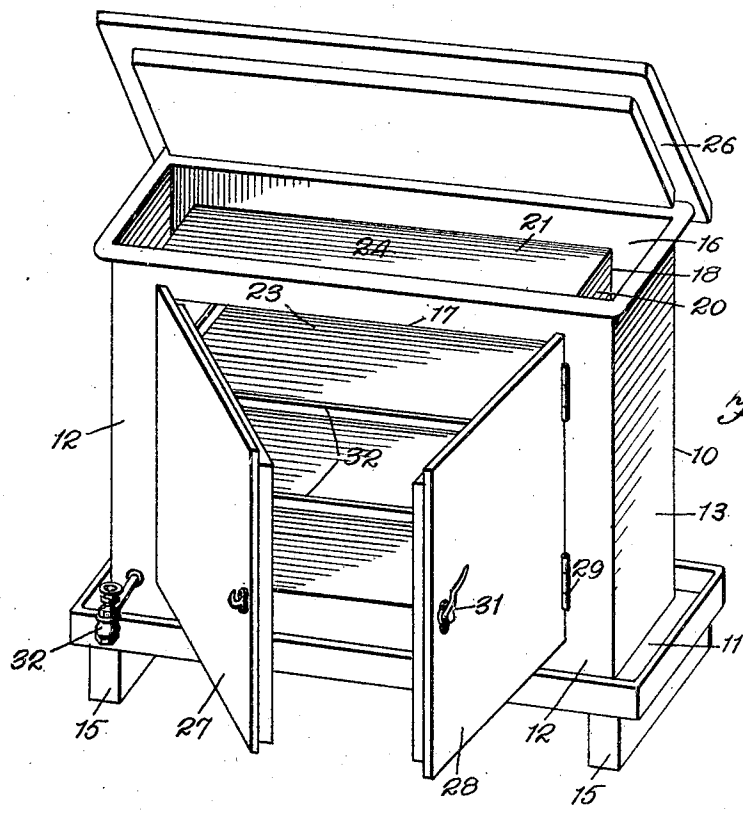


Fig. 1

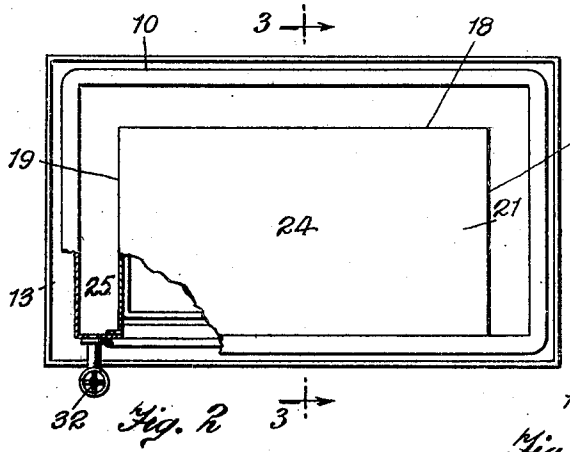


Fig. 2

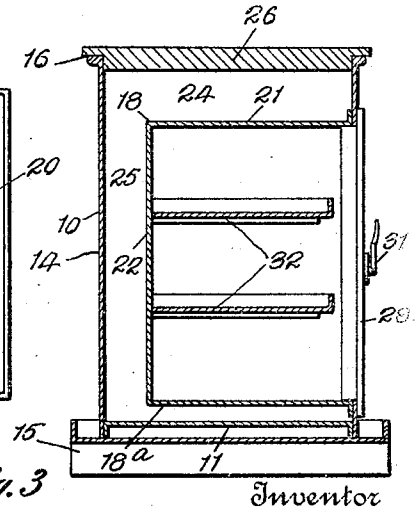


Fig. 3

Inventor

Albert D. Sohmer

By his Attorney

M. T. Criswell

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UNITED STATES PATENT OFFICE.

ALBERT D. SOHMER, OF NEW YORK, N. Y.

REFRIGERATOR.

Application filed January 26, 1921. Serial No. 440,018.

To all whom it may concern:

Be it known that I, ALBERT D. SOHMER, a citizen of the Republic of France, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in a Refrigerator, of which the following is a full, clear, and exact specification.

This invention relates more particularly to a class of refrigerating apparatus.

My invention has for its object primarily to provide a refrigerator designed to be employed for keeping in a cool temperature perishable food products and the like, in order to prevent spoilage and contamination which would likely occur if the products were subjected to normal or heated temperature, and which is of a form adapted to be cooled by ice in a manner whereby the cool air together with the ice and the water from the melted ice will be effectually used for refrigerating the products, the invention also providing for permitting the water of the melted ice to be used if desired. These advantages are accomplished mainly by providing a water chamber between an outer casing having a lid closed open top and an inner casing which is spaced from the outer casing. Interiorly of the upper part of the outer casing above the inner casing is an ice chamber in communication with the water chamber so that the cooled air of the ice chamber will circulate in the water chamber, and the water of the melted ice will flow into the water chamber, thereby providing a cooling jacket surrounding the side walls and rear wall of the inner chamber to accomplish an effectual refrigerating process interiorly of the inner chamber. The open top of the outer chamber leads into the ice chamber to admit ice, and the inner casing has a door closed entrance leading through the wall of the outer casing so that food products may be readily placed in the inner casing.

A further object of the invention is to provide a refrigerator of a simple, efficient and durable construction of a form whereby its parts may be readily cleaned to maintain proper sanitary conditions and which may be made of any suitable material in various sizes and shapes.

With these and other objects in view, the invention will be hereinafter more fully described with reference to the accompanying drawing forming a part of this specification in which similar characters of reference indicate corresponding parts in all the views, and will then be pointed out in the claims at the end of the description.

In the drawing, Figure 1 is a perspective of one form of refrigerator embodying my invention.

Fig. 2 is a top plan, partly broken away, of the refrigerator with its lid removed from the ice chamber, and

Fig. 3 is a section taken on the line 3—3 of Fig. 2, showing the lid when closed on the outer chamber of the refrigerator.

The refrigerator has an outer casing or chamber 10 which is preferably substantially rectangular to provide a bottom 11, front wall 12, side walls 13, and a rear wall 14, and this outer chamber may be supported on a number of feet, as 15, or otherwise if desired. The top of the outer chamber is open, as at 16, to provide an inlet for admitting ice, and in the lower part of the front wall 12 of the chamber may be a large rectangular opening, as 17.

With the outer chamber 10 is an inner casing or chamber 18 which is also preferably approximately rectangular to provide a bottom 18^a, side falls 19, 20, an upper wall 21 and a rear wall 22. The bottom, side walls and upper wall of the inner chamber correspond to the lengths of the lower edge, side edges and upper edge of the rectangular opening 17 of the front wall 12 of the outer chamber 10, and the bottom, side walls and upper wall of the inner chamber extend interiorly of the outer chamber from the side edges and upper edge of the opening 17 so that an entrance 23 to the inner chamber is provided through the opening 17. The bottom, side walls and upper wall of the inner chamber 18 are also of widths so that the rear wall 22 of the inner chamber is spaced from the rear wall 14 of the outer chamber and so that the bottom 18^a is spaced above the bottom 11 of the outer chamber. The inner chamber 18 is of less height than the outer chamber 10 to provide an ice chamber 24 above the inner chamber and the open top 16 of the outer chamber serves as an entrance to admit ice into the chamber 24, while the space between the bottom, side walls and rear walls of the outer and inner chambers serve as a water and ice chamber 25 so that the water from the melted ice in the ice chamber 18 will flow into the water and ice chamber, the upper wall 21 of the

inner chamber serving as a bottom to the ice chamber.

The open top or entrance 16 of the ice chamber 18 is opened and closed by a suitable lid, as 26, which removably fits upon the walls of the outer chamber or the lid may be hinged if desired to one of the walls of the outer chamber.

The entrance 23 of the inner chamber 18 may be opened and closed by one or two doors, as 27 and 28, which are hinged, at 29 and 30, respectively, to the front wall 12 of the outer chamber, and these doors may be releasably locked together by an appropriate catch, as 31, provided on the doors. Interiorly of the inner chamber 18 may be a number of spaced shelves, as 32, for supporting food products when arranged within the inner chamber 18 for being preserved from spoilage by refrigeration, and in the lower part of the front wall 12 of the outer chamber may be provided an outlet in the form of a valve or spigot 32 which is adapted to be operated for drawing water from the water chamber 25 at desired periods. By providing the water and ice chamber 25 and ice chamber 18 in the manner illustrated the cooled air from the ice will circulate in the water and ice chamber and the refrigerating temperature of the water will also be used for keeping the temperature of the interior of the inner chamber at a degree whereby the products in the inner chamber will be subjected to effectual refrigeration.

To obtain the best results cracked ice or preferably ice and salt should be packed in the chambers between the inner and outer casings. Inasmuch as these chambers practically surround the meat storage chamber, the same is kept at a low temperature which prevents the deterioration of the meat or other articles stored therein. Such an arrangement also tends to chill the air on the outside of the outer casing, but inasmuch as the outside air is intended to be at a fairly low temperature the transmission of heat through the outer walls of the device is not excessive and hence expensive heat insulation on the outer walls thereof is dispensed with.

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

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

A refrigerator having a non-insulated sheet metal outer casing and a sheet metal inner casing spaced from the outer casing forming a top compartment and communicating side compartments adapted to receive ice to chill both the contents of the inner compartment and the air on the outside of the outer compartment.

This specification signed and witnessed this 25″ day of January A. D. 1921.

ALBERT D. SOHMER.

Witnesses:
B. SWIRSKY,
J. FREDERICK CRYER.