

No. 676,830.

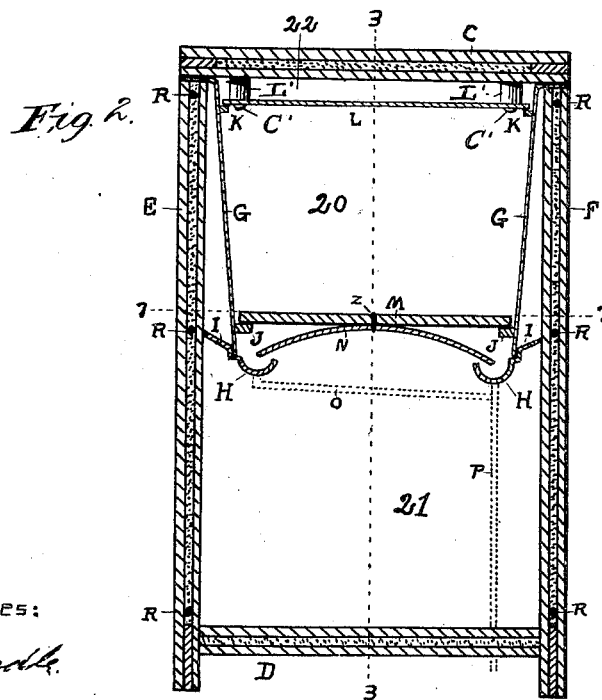
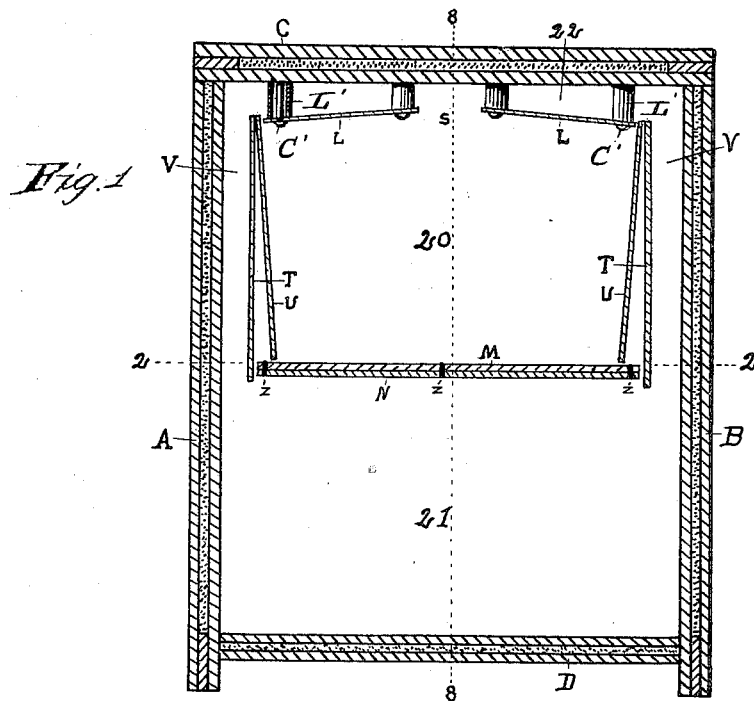
Patented June 18, 1901.

G. L. WYMAN.  
REFRIGERATOR.

(Application filed Nov. 12, 1900.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:

*M. E. Randle.*

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Inventor

*George L. Wyman,*

By his Attorney

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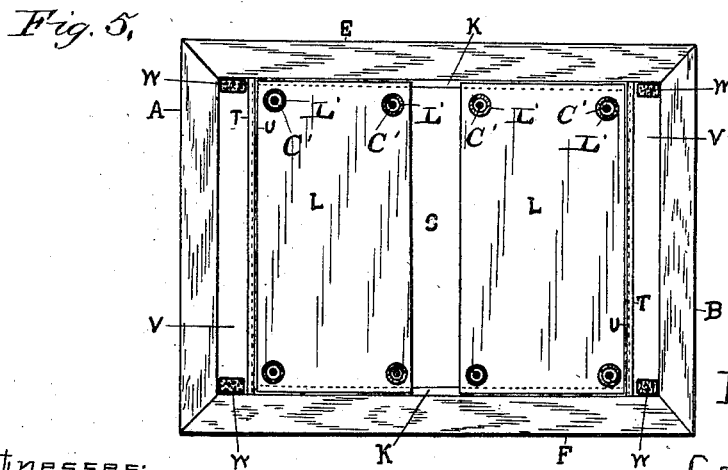
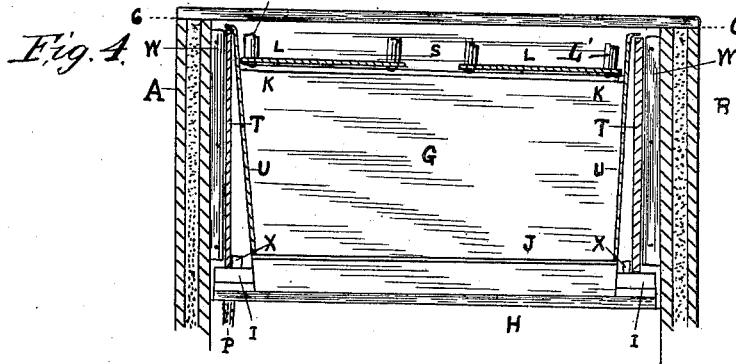
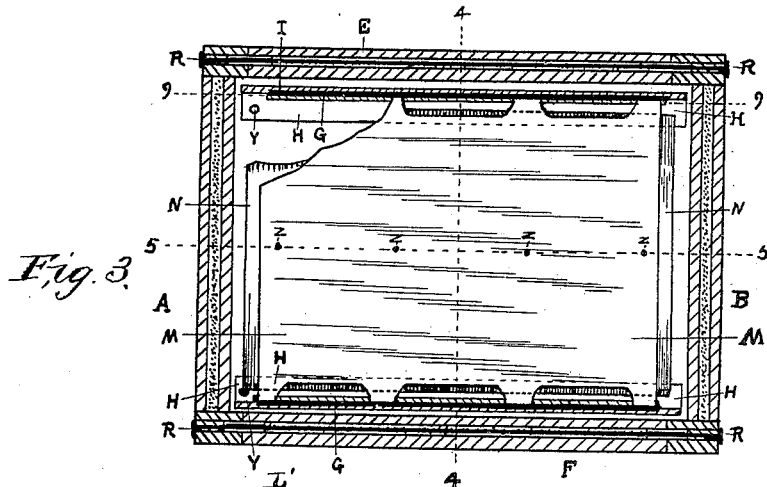
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Inventor

Witnesses:

R E Randle

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# UNITED STATES PATENT OFFICE.

GEORGE L. WYMAN, OF RICHMOND, INDIANA, ASSIGNOR OF ONE-HALF TO  
JOHN R. POLAND, OF SAME PLACE.

## REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 676,830, dated June 18, 1901.

Application filed November 12, 1900. Serial No. 36,170. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE L. WYMAN, a citizen of the United States, residing at Richmond, in the county of Wayne and State of Indiana, have invented new and useful Improvements in Refrigerators, of which the following is a specification.

My invention relates to refrigerators of a new and useful construction for the preservation and cooling of provisions and the like.

The objects of my invention are, first, to provide a refrigerator in which provisions and the like can be preserved and kept at a low degree of temperature with a minimum amount of ice; second, to provide a refrigerator so arranged that the cold air from the ice-chamber is delivered into the provision-chamber and the warmer air from the provision-chamber is carried up and delivered on top of the ice in the ice-chamber; third, to provide a refrigerator the internal arrangements of which are such that the condensation and other moisture will be carried off by means of troughs and pipes and in which the wooden parts will not become damp and soured; fourth, to provide a refrigerator that can be made and shipped knockdown or in sections, so as to occupy a small amount of space, and which can be easily put together when desired, and, fifth, to provide a new article of manufacture in a refrigerator of novel construction which can be made and sold at a very low price. I attain these and other minor objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a central vertical longitudinal sectional view of my improved refrigerator, taken on the line 5 5 of Fig. 3 and on line 3 3 of Fig. 2. Fig. 2 is a transverse central sectional view of same, taken on the line 8 8 of Fig. 1 and on line 4 4 of Fig. 3. Fig. 3 is a plan view of the bottom of my ice-chamber and also a cross-sectional view of my refrigerator, taken on the line 2 2 of Fig. 1 and on line 7 7 of Fig. 2. Fig. 4 is a view of the inside of the front or back walls, partly taken in section and taken on the line 9 9 of Fig. 3. Fig. 5 is a plan view of the top of the inner parts, taken on the line 6 6 of Fig. 4.

Similar letters and figures refer to similar parts throughout the several views.

My refrigerator is of the class in which the ice-chamber 20 is located above the provision-chamber 21, so that the cold air from the ice-chamber may pass downwardly into the provision-chamber, the warmer air passing upwardly through openings or flues at the sides and delivered near the center above and on top of the ice, which will more fully hereinafter appear.

My refrigerator is preferably of rectangular shape, with front, rear, side walls, top, and bottom, the walls being double and the intermediate space being packed with any well-known non-conductor of heat and cold. I unite the various parts by means of tongues and grooves, so as to make practically air-tight joints, and substantially hold the parts in place by means of metal rods R, extended longitudinally through the front and rear walls, as shown in Fig. 3, allowing said rods to project through the edges of the side wall, the ends of said rods being threaded and supplied with nuts, so that the side wall may be tightly drawn into contact with the front and rear walls. I prefer to use six of said rods, located, approximately, at the points shown in Fig. 2.

My refrigerator is supplied with a door leading into the provision-chamber and a door leading into the ice-chamber, or in place of the latter the top of the refrigerator may be hinged at the rear, so that access may be obtained from the top, if preferred, in which case the parts L L may be attached to the under side of the lid by spacing-tubes L' and fasteners C', so that they will be lifted up out of the way when the lid is raised and again assume their place, as shown in the drawings, when the lid is closed.

Referring now to the internal construction: Secured along the top edge of the front and back walls E and F and extending downward and slightly inward are metal walls G G. Secured to the lower extremity of each are troughs H H, facing inward toward the center of the refrigerator, flanges I I extending back from each to form smaller troughs, as shown in Fig. 2. The troughs H H and I I incline slightly toward one of the sides of the refrigerator, where they are connected to pipes O and P, leading to the exit, as shown.

A short distance above the troughs above referred to are projections J J, which act as supports for the bottom of the ice-chamber M and are secured to the inner sides of the walls G G in any manner desired. Secured longitudinally to the center and along the under side of the bottom of the ice-chamber M and extending slightly beyond in length at either end is a dome-shaped part N, which is for the purpose of conducting the moisture and condensation which may collect thereon or which may fall thereon from the ice-chamber into the troughs H H. The condensation which may be collected on the walls G G is also conducted into the troughs H H and into the troughs I I, and thus be conducted to the exit, as above stated. By the above it will be seen that no condensation or other moisture from the ice-chamber can fall into the provision-chamber.

At each end of the refrigerator are air-flues V V, which lead from the provision-chamber 21 to the space above the ice-chamber 22. It can now be seen that the cold air formed by the ice in the ice-chamber will pass down through the bottom of the ice-chamber into the provision-chamber. The warmer air from the provision-chamber will rise through the flues V V into the space 22 above the ice-chamber and be somewhat cooled by contact with the parts L L. The air will then pass to near the center of the space 22 to the opening S and will then pass down into the ice-chamber, and thus complete the circuit.

The projections K K are provided for supports for the plates L L, which plates partly cover the top of the ice-chamber, a space S being left in the center between said plates for the purpose above referred to.

The partitions T T are loosely placed in grooves and extend across the ends of the refrigerator, forming the inner wall at the ends of the refrigerator for the air-flues V V. They are prevented from being pushed outward by the cleats W, secured in each corner of the refrigerator, and at the bottom they are prevented from being pressed inward by the lugs X X.

Walls U U, substantially corresponding in size and shape with the walls T T, extend across the ends of the refrigerator and are adapted to come in contact at the top with the walls T T, being suspended therefrom, and extend slightly inward at the bottom, as shown, the lower edges resting on the ice-tray M. The front and rear edges of the bottom M of the ice-chamber should be scalloped, as shown in Fig. 3, for the purpose of providing spaces for the passage of cold air from the ice-chamber to the provision-chamber.

Z represents rivets or bolts which secure the parts M and N in contact through their centers, as shown.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. In a refrigerator, the combination with an outer casing or box, of an inner ice-box in the upper portion of said outer casing and located above the provision-chamber of the refrigerator, a movable cover for the outer casing, a movable cover for the inner ice-box, and a connection between the said covers whereby they both remain closed and the inner cover is adapted to open with the outer cover.

2. In a refrigerator, the combination with an outer casing or box, of an inner ice-box in the upper portion of said outer casing and located above the provision-chamber of the refrigerator, a pair of independent movable covers for the inner ice-box which are separated at their inner ends, a movable cover for the outer casing, and connections between said outer cover and the inner covers whereby all remain closed and the inner covers are adapted to open with the outer cover.

3. In a refrigerator, an outer box or receptacle having a provision-chamber in its lower part, in combination with an ice-box in its upper part, said ice-box being composed of imperforate side and end walls separated throughout their length by an air-space from the walls of the outer box and having its top covered with the exception of an air-inlet and separated from the top of the outer box by an air-space, air-flues being formed by the sides of the ice-box throughout their entire length for conveying the air from the provision-chamber to the space above the top of the ice-box, drain-troughs secured directly to and suspended from the extreme lower ends of said walls of the ice-box to catch condensation therefrom and extending across the air-space and touching the walls of the outer box for the same purpose, cleats on the walls of the ice-box above their lower ends, a bottom having drain and air openings and resting on said cleats, and a dome-shaped or arched plate secured to the said bottom with its edges freely overhanging the troughs which is adapted to catch the condensation from the ice-box and direct it to the troughs.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE L. WYMAN.

Witnesses:

CHARLES R. WYMAN,  
R. E. RANDLE.