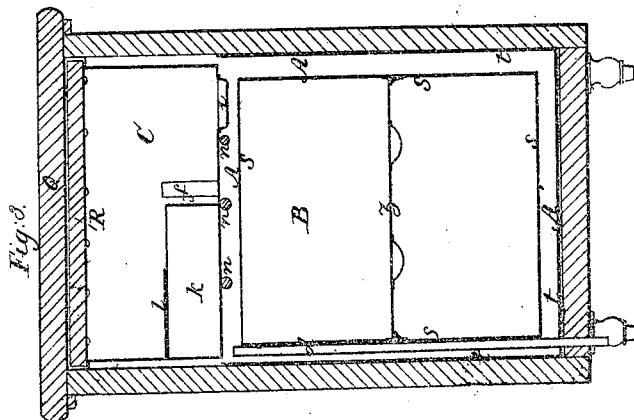
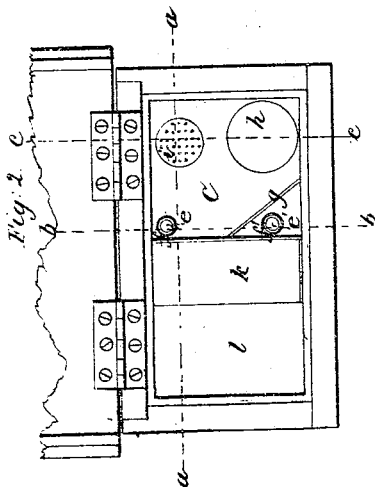
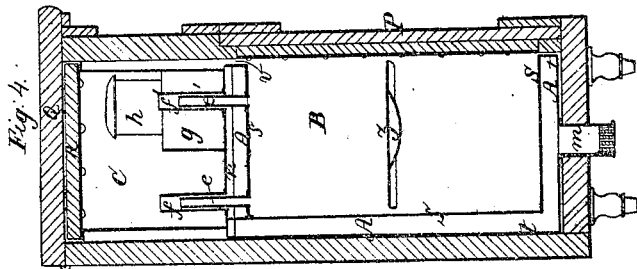
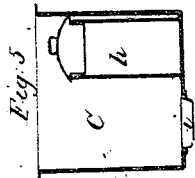
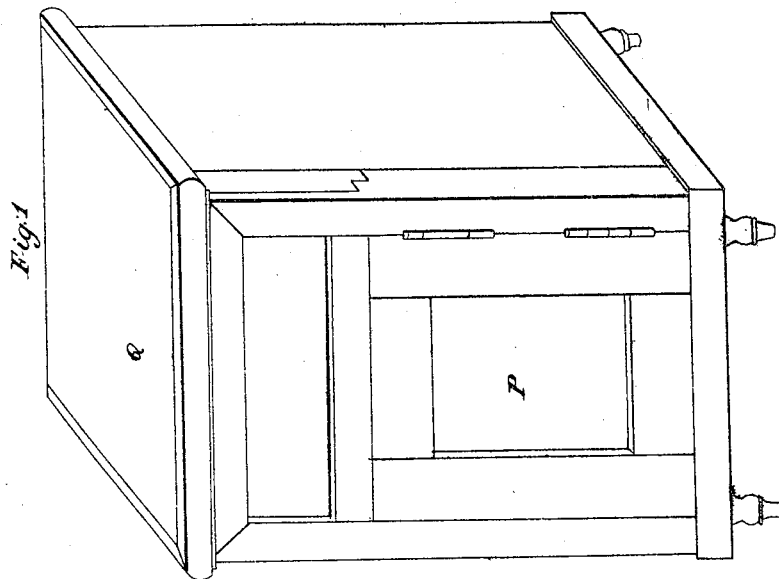


E. Larrabee.

Refrigerator.

No 7121.

Patented Feb 26. 1850.



UNITED STATES PATENT OFFICE.

EPHRAIM LARRABEE, OF BALTIMORE, MARYLAND.

REFRIGERATOR.

Specification of Letters Patent No. 7,121, dated February 26, 1850.

To all whom it may concern:

Be it known that I, EPHRAIM LARRABEE, of the city of Baltimore, in the State of Maryland, have invented a new and Improved Refrigerator; and I do hereby declare the following to be a full, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1, is a perspective view; Fig. 2, a top view with the cover thrown open; Fig. 3, a vertical section in the line *a, a*, of Fig. 2; Fig. 4, a vertical section in the line *b, b*, of Fig. 2, and Fig. 5, a vertical section through a portion of the refrigerator, in the line *c, c*, of Fig. 2.

Similar letters indicate like parts in all the figures.

The nature of my invention consists in the arrangement and combination with each other of the water space A, between the double metallic linings of the preserving chamber B, the ice box C, placed above the preserving chamber, the tube D, for carrying off the surplus water from the space A, and admitting fresh and cold air to the ice box, and the ventilating tubes *e, e'*, for causing a circulation of air between the preserving chamber and the ice box, substantially in the manner hereinafter represented and described; by means of which, the preserving chamber B, will be kept at a sufficiently low temperature, and the air contained therein be kept pure.

The preserving chamber B, and the ice box C, are placed in a suitable wooden casing, as represented in the drawings. The preserving chamber B, is surrounded on all sides, save the front, by the metallic lining S; and this metallic lining S, is inclosed within the outer metallic casing *t*, which is open at the top, and so combined at its edges with the inner casing (*s*), as to form the water tight space A, at the rear, the right and left sides, and below the bottom of the preserving chamber B.

The top of the metallic casing *t* rises above the top of the casing *s*, about the same distance that its sides are distant from the sides of the casing *s*. A ledge *v*, rises from the front edge of the top of the inner metallic casing *s*, which is connected to the outer casing *t*, and thereby forms a space for water above the preserving chamber, being a continuation of the water space A, at its sides and bottom. The front of the pre-

serving chamber B, is closed by the metallic lined door P.

The ice box C, I generally construct of sheet metal, and of the form represented in the drawings. The ice box rests upon the rods *n, n*, secured to the ledge *v*, and to the upper extremity of the back side of the outer casing *t*, as shown in Figs. 3 and 4.

f, f', are tubes rising from the bottom of the ice box, into which the tubes *e, e'*, rising from the top of the casing *s*, and communicating with the preserving chamber, are inserted.

k, is a compartment within the ice box, partially covered by the shelf *z*.

g is a diagonal partition extending from the side of the compartment *k*, to the front side of the ice box, for the purpose of inclosing the tube *f'*, in the angle between the two, and preventing the ice placed in the ice box, from coming in contact therewith.

i is a strainer in the bottom of the ice box, through which the water drips into the water space A, from the melting of the ice placed in the ice box.

h is a water can placed in the ice box.

d is a tube descending in, and passing through the bottom of the water space A, (at the side of the preserving chamber) with its upper end rising nearly to the bottom of the ice box.

The operation of my improved refrigerator is as follows: The space A, is filled with iced water, and ice is placed in that compartment of the ice box in which the tube *f*, the water can *h*, and the strainer *i*, are situated. As the ice melts in the ice box, the water produced thereby will drip through the strainer *i*, into the space A, and by reason of its extreme coldness and greater gravity, will descend to the bottom, and the warmest portion of the water in A, will rise to the top and flow into the tube *d*, and be discharged into a vessel placed below its lower end. By this means the top, bottom, back, and sides of the preserving chamber B, will be inclosed by a space filled with water of an extremely low temperature.

Air will rise in the tube *d*, into the space below the ice box C, and thence will pass through the strainer *i*, into the ice box at a low temperature. The air will be kept pure in the preserving chamber, (B), in consequence of the constant circulation that will be kept up between the air contained therein and the air in the ice box, caused by the de-

scent of the extremely cold air in the ice box through the tube *e*, surrounded by ice, into the preserving chamber, which cold air will descend by its gravity on the back side of the preserving chamber to the bottom thereof, thereby causing the warmest portion of the air contained therein, to rise on the front side of the chamber to the top and pass through the tube *e'*, (which is protected from contact with ice) into the ice box. Spaces are left between the back and front edges of the shelf (or shelves) *z*, and the sides of the preserving chamber, to allow of the free circulation of air therein, above referred to.

By the joint action of the cold water surrounding the preserving chamber, and the constant circulation of the air between the preserving chamber and the ice box, it will readily be perceived that the preserving chamber will be kept at an extremely low temperature at a very small consumption of ice. And by means of the fresh air admitted to the ice box through the tube *d*, and the circulation of air that will be caused between the ice box and the preserving

chamber, in consequence of the particular arrangement of the ventilating tubes *e*, *e'*, above described, the air in the preserving chamber will be prevented from becoming flavored by the articles placed therein.

R, is the metal lined cover of the ice box, and *Q*, is the door closing the top of the wooden casing of the refrigerator, above the ice box.

The space *A*, is emptied of its contents by removing the screw plug from the mouth of the tube *m*, (Fig. 4).

Having thus fully described the construction and operation of my improved refrigerator, what I claim therein as my invention and desire to secure by Letters Patent, is—

The inclosing water space *A*, for cooling the preserving chamber *B*, in combination with the pipe *d*, for discharging the waste water, substantially in the manner herein represented and described.

EPHM. LARRABEE.

Witnesses:

Z. C. ROBBINS,
R. W. WILCOX.