

W. M. BAKER.
Refrigerators.

No. 134,191.

Patented Dec. 24, 1872.

Fig. 1.

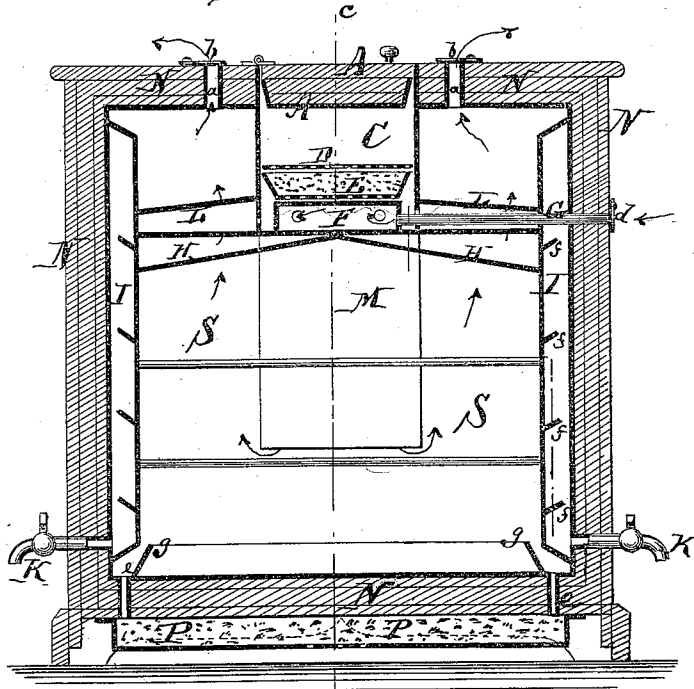
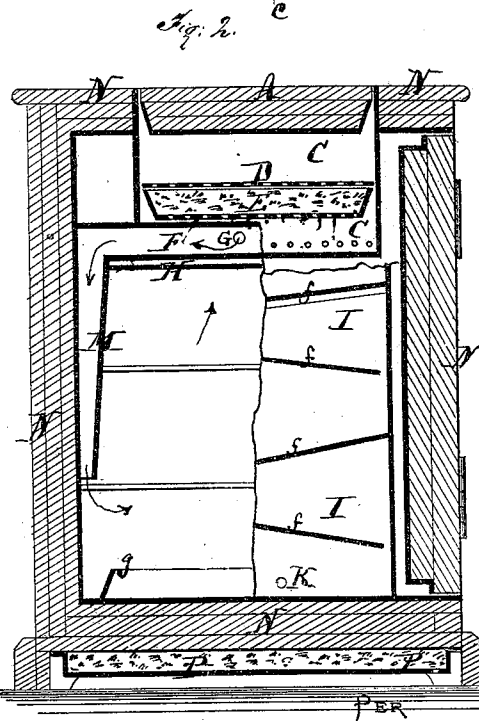


Fig. 2.



Witnesses:

Chas. Nida.
C. Sedgwick

Inventor:

W. M. Baker

Attorneys.

UNITED STATES PATENT OFFICE

WILLIAM M. BAKER, OF FORTVILLE, INDIANA.

IMPROVEMENT IN REFRIGERATORS.

Specification forming part of Letters Patent No. 134,191, dated December 24, 1872.

To all whom it may concern:

Be it known that I, WILLIAM M. BAKER, of Fortville, in the county of Hancock and State of Indiana, have invented a new and Improved Refrigerator, of which the following is a specification:

Figure 1 is a vertical longitudinal section of my improved refrigerator. Fig. 2 is a vertical transverse section of the same taken on the plane of the line *c c*, Fig. 1.

Similar letters of reference indicate corresponding parts.

This invention relates to a new construction of refrigerator or ice-box, with the object of utilizing the coldness of the ice-water in the preservation of the contents and in obtaining a draft of cooled air. The invention consists in a novel arrangement of air and water passages, which cause the air that enters the refrigerator to become cooled and remain dry, and the water to cool the air-passages and sides of the refrigerator.

In the accompanying drawing, the letter A represents the lid to the ice-chamber C, which chamber is suspended from the upper part of the refrigerator-box N. The walls of this box are constructed in the usual or suitable manner. *a a* are apertures through the top of the refrigerator provided with movable slides *b*. They are passages for the escape of the warm air from the refrigerator. Under the ice-chamber C is arranged an air and water tight cold-air chamber, F, over which a filter, E, covered with a perforated plate, D, is placed. The water flowing from the melting ice passes through the plate D, is filtered in E, and thence conducted in horizontal or inclined chutes or channels L L to the cold-air and water chambers I I that line the sides of the refrigerator, as shown in Fig. 1. G is an air-pipe from and through the side of the refrigerator, and through one of the ice-water chutes L, into the cold-air chamber F. The outer end of this pipe G can be more or less closed by a slide, *d*. H is a double inclined plate for covering the preserving-chamber S of the refrigerator, and placed beneath the chamber F and conduits L. It serves as a conductor to lead the moisture condensing on the cold surfaces L L and

C to the sides of the refrigerator, whence such condensed moisture flows to the bottom of the refrigerator, and out through apertures *e e* into a packed receptacle, P, that is placed under the bottom of the refrigerator. The cold-air chamber F has openings at the back, which open into a vertical conducting-chute, M, that leads the cold air to the bottom of the refrigerator. The cold-air and water chambers I I contain metal strips *f f*, placed zigzag fashion across them, to retard the fall of the water, and thus get the full effect of its cooling properties. The arrangement of plates *f f* is partly shown in Fig. 2. K K are stop-cocks fitted into the sides of the refrigerator at the lower ends of the chambers I. Through these stop-cocks the ice-water can be drawn off for use or allowed to escape. A projection or vertical flange, *g*, extends around the refrigerator, on the bottom thereof, to lead the drippings and moisture to the exits *e e*. The ice-water flows from the chamber C, through D, E, and L, into the side chambers I I, and thence off at K K. The arrows show the course of the ventilating air from its entrance at G to its exit at *a a*.

The working of the refrigerator is as follows: Ice having been placed in the ice-chamber C, the drips from the ice pass through filter E, circulate around the ventilating cold-air chamber F, pass out through chutes L L into the cold air and water chambers I I, where they pass along the projections *f f* and collect at the bottom of said chamber. The air for ventilating enters the pipe G, passes through the ice-water chute L, and into the cold-air chamber F. Here it deposits any moisture it may contain, and passes out and down through the chamber M to the lower part of the chamber S; then up through the refrigerator, carrying off all impurities, and up along the sides of M, through openings there left in H, and out at the openings *a a*. The refrigerator is so constructed that all moisture deposited on the cold surfaces is conducted to the sides and out at the bottom without admitting outside air through the bottom.

The interior of the chamber S can be provided with shelves, hooks, or other devices for holding the articles to be preserved.

The advantages of my new refrigerator are obvious. It utilizes the full effect of the ice not only upon the air, but also upon the products of evaporation, and provides for a free circulation of dry air.

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

1. The ice-chamber C provided with the perforated plate D and filter E, substantially as and for the purposes herein shown and described.

2. The inclined plates *ff* arranged within the chambers I I for the purpose of detaining the water, as set forth.

3. The combination of the chutes L L with the side chambers I I and ice-chamber C, as set forth.

4. The air-pipe G fitted through the cold-water pipe L into the cold-air chamber F, as set forth.

5. The flange *g* arranged upon the bottom of the refrigerator, substantially as and for the purpose herein shown and described.

WILLIAM M. BAKER.

Witnesses:

JOSEPHUS BILLS,
GEORGE PAXTON.

1,200