(No Model.)

J. P. E. WÜLLFFHAGEN.

REFRIGERATOR.

No. 306,043. Patented Sept. 30, 1884.

Fig. 1.

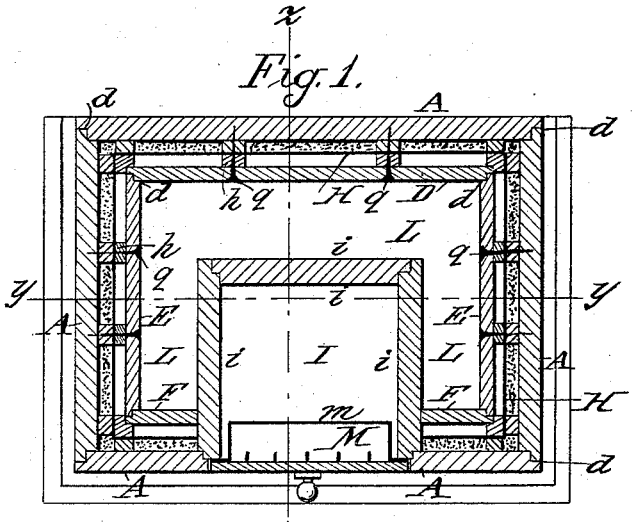


Fig. 5.

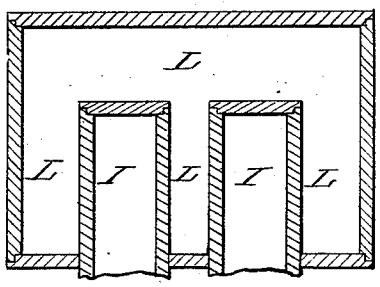


Fig. 2.

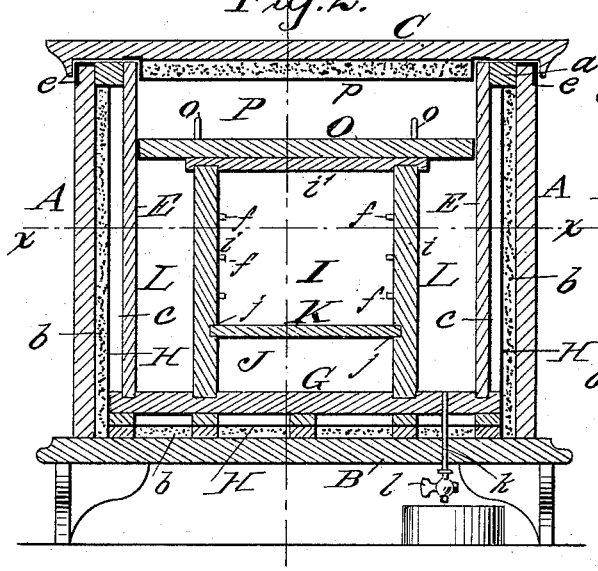


Fig. 3.

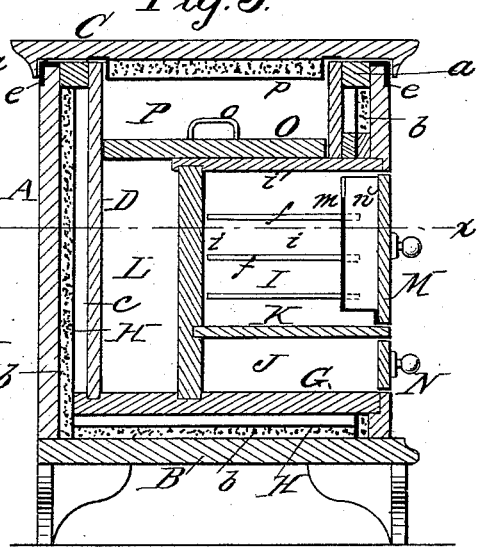
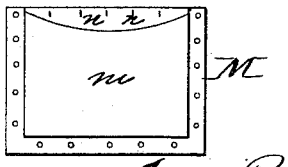


Fig. 4.



Witnesses:
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Robt. F. Fichtenert.

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by A. W. Almqvist
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UNITED STATES PATENT OFFICE.

JORGES P. E. WÜLLFFHAGEN, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF TO CARL PETERSON, OF SAME PLACE.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 306,043, dated September 30, 1884.

Application filed October 6, 1883. (No model.)

To all whom it may concern:

Be it known that I, JORGES P. E. WÜLLFFHAGEN, a citizen of Sweden, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Refrigerators, of which the following is a specification.

The object of my invention is to provide an improved construction of refrigerators and ice-boxes, whereby the zinc lining hitherto in use, and subject to the objections of emitting (particularly when old) obnoxious odor, and of being easily indented and of little durability, will be dispensed with and replaced by stronger and cleaner material, the walls will be rendered more non-conductive, and better accommodations will be secured for keeping separate such articles of diet in which the flavor of one is imparted to and impairs the quality of the other in cases where they are kept together.

My invention comprises, in a refrigerator or ice-box having interior lining and compartments made of tablets of marble or other stony material, the construction of non-conducting walls and arrangement of interior compartments, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 represents a horizontal section of my improved refrigerator, taken on the line *x x* of Figs. 2 and 3. Fig. 2 is a vertical section of the same, taken on the line *y y* of Fig. 1. Fig. 3 is a vertical cross-section of the same, taken on the line *z z* of Figs. 1 and 2. Fig. 4 is a view of the inner side of the main door. Fig. 5 is a horizontal section showing a modification of the main preserving-chamber, the said chamber being divided in the middle by a branch of the ice-chamber.

A A are the outer walls, B the outer or lower bottom, and C the main cover. These are all made of wood.

D E F are the inner walls, and G the inner bottom or floor, which also constitute the walls and floor of the ice-compartment. These are all made of tablets of marble, slate, or other like stony material. Between the inner and outer walls are spaces divided centrally by oiled water-tight sheets of pasteboard or other suitable material, which partitions, H, are kept in their proper position by strips of wood, *h*, interposed in proper places at intervals between the said partitions and the adjacent aforesaid outer and inner walls, as shown in the drawings. The vertical walls D E F are supported with their lower edges in grooves *g*, cut in the bottom of the floor-plate G, as shown in Fig. 2, and their upper ends reach up to and are even with the outer walls, A, a filling or bars of wood, *a*, of the same width as the space between the inner and outer walls, being inserted between them all around at the the top, thus closing tightly the upper end of the entire said space between the walls. The spaces *b*, between the pasteboard partitions H and the outer wall and bottom, A B, are filled with charcoal or other suitable non-conducting material; but the spaces *c*, between the said partitions and the marble walls and bottom, are empty, or containing only air. The adjoining edges of the outer as well as the inner walls are fitted together by double angles, as shown at *d* in Fig. 1, and the marble walls are cemented in the joint, so as to be entirely water-tight. The outer walls of the refrigerator are held firmly together by an angular metallic band, *e*, whose horizontal and vertical flanges are secured, respectively, upon the top and on the outside of the said walls, as shown in Fig. 2.

I is the ordinary preserving-chamber. This is formed of marble walls *i*, supported in grooves *g'* in the plate G, as shown in Fig. 2, and the roof or cover of the chamber I is formed of another marble tablet, *i'*, which is grooved to receive the upper edges of the walls *i*. The walls *i* are provided with suitable knobs, cleats, or projections, *f*, on which shelves may be placed, and in the lower portion of the preserving-chamber I is formed another and smaller chamber, J, by inserting in grooves *j* in the walls *i* a partition formed of another marble tablet, K. The upper compartment in the preserving-chamber is intended for substances in general, and the lower compartment, J, for lobsters, fish, and similar articles, the smell of which, when raw, is disagreeable and apt to affect other substances placed near to them. It will be seen that by this construction an ice-chamber, L, is formed around three sides of the preserving-chamber,

the fourth side consisting of ordinary wooden doors, M N—one for each compartment—the said doors being provided on the inside with tinned copper lining, leaving about a four-inch space between the metal plate *m* and the wooden door M for the suspension on hooks *n* of small birds or other articles. The upper edge of the plate *m* is cut away, as shown in Fig. 4, to facilitate access. The water from the ice-chamber L is drawn off by a pipe, *k*, having a stop-cock, *l*, as shown in Fig. 2. The chamber L, being filled to the height of the preserving-chamber with ice, is then covered with a removable marble tablet or plate, O, which is simply left resting on the tablet *i'*, and is of size to conveniently fill the space between the walls D E F. This plate O is provided with handles *o*, to facilitate its removal. The space P, above the said plate O and the main cover C, is intended for receiving the ordinary daily supply of ice, the ice-chamber L not requiring to be filled up, except as above indicated. The main cover C is provided with an inner tinned copper lining, *p*, leaving a space between, which is filled by non-conducting material in the usual manner. The inner marble walls are secured to the outer wooden walls, A, by screws *q*, passing from the inside through the marble wall, the wooden strips *h*, and into the outer walls.

I am aware that the use of stony material as lining in a refrigerator is old, and described, for instance, in Patents Nos. 3,506, 60,665, 175,934, and 242,969.

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

1. A refrigerator-wall consisting of a wooden exterior, an interior wall of marble, slate, or other stony material, and a partition, H, in the space between the said exterior and interior walls, the space between said partition and the exterior wall being filled with non-conducting material, and the space between the said partition and the interior wall being empty, substantially as hereinbefore set forth.

2. In a refrigerator, the preserving-chamber I, built within the ice-chamber L and divided by a partition, K, into two compartments, as shown, and the removable plate O, placed upon the roof *i'* of the said preserving-chamber, the said preserving-chamber, ice-chamber, partition, and plate being made of stony material, and all constructed substantially as and for the purpose hereinbefore set forth.

3. In combination with the door M of the preserving-chamber I, the plate *m*, secured to the two upright and lower edges of the said door, and left open at the top for the purpose of forming a receptacle, means, *n*, being provided for the suspension of articles in the said receptacle.

4. In combination with the refrigerator-walls having double-angled joints, the angular metallic band *e*, for securing the said walls together, as hereinbefore set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 29th day of September, 1883.

JORGES P. E. WÜLLFFHAGEN.

Witnesses:

ROBT. W. MATTHEWS,

ROBT. W. STREHLENERT.