J. F. EBERT.

Refrigerator.

No. 168,833. Patented Oct. 19, 1875.

Fig. 1.

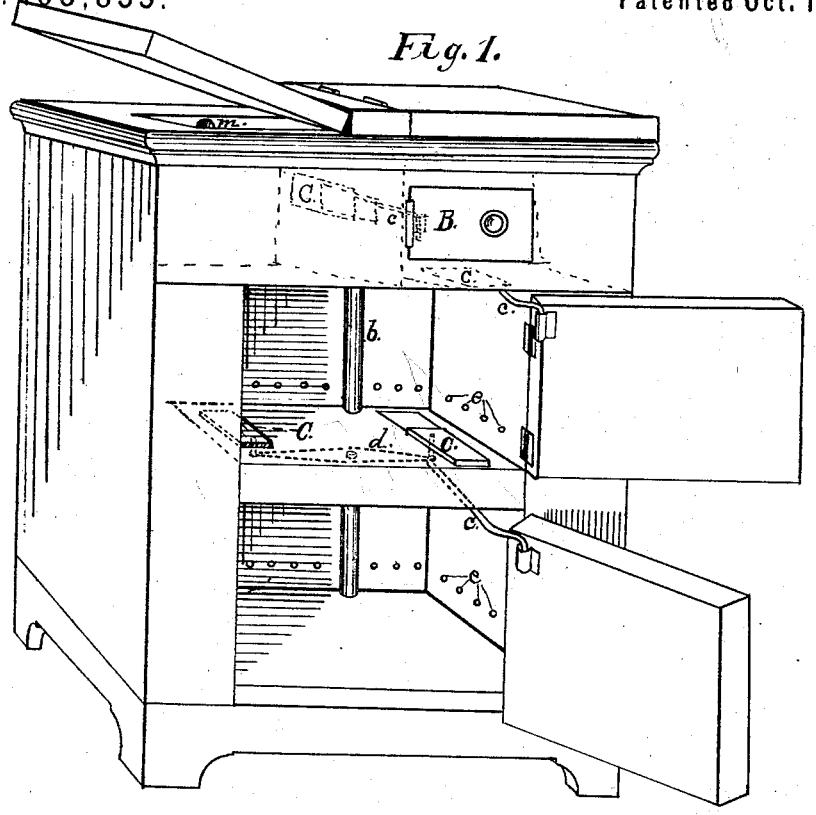


Fig. 2.

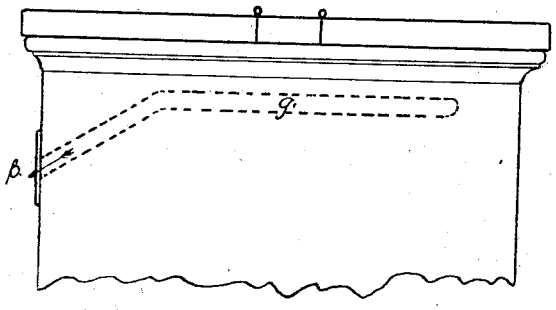
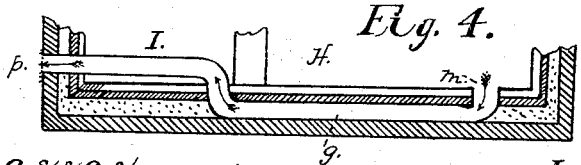


Fig. 3.

Fig. 4.



Witnesses:
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W. S. Pence

Inventor:
Jacob F. Ebert
by his atty.
Chas. M. Keck

2 Sheets--Sheet 2.

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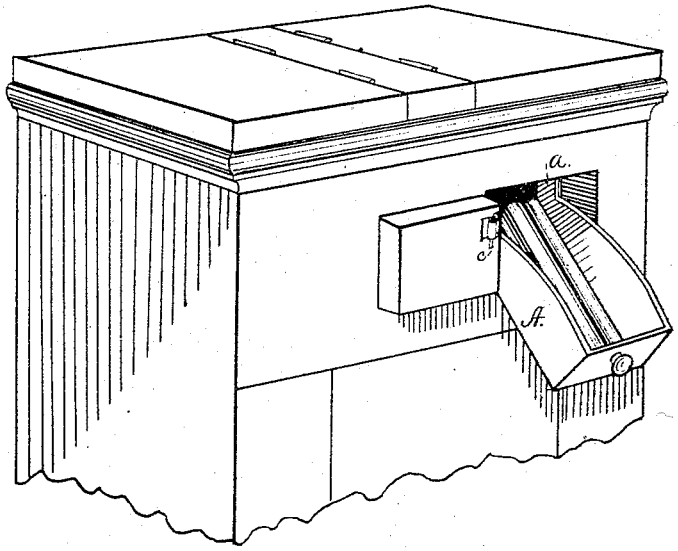
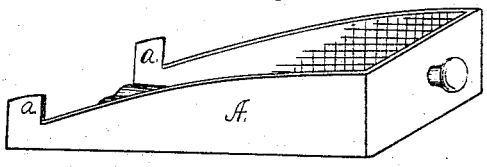


Fig. 2.



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UNITED STATES PATENT OFFICE.

JACOB F. EBERT, OF DAYTON, OHIO.

IMPROVEMENT IN REFRIGERATORS.

Specification forming part of Letters Patent No. **168,833**, dated October 19, 1875; application filed January 23, 1875.

To all whom it may concern:

Be it known that I, JACOB F. EBERT, of Dayton, State of Ohio, have invented new and useful Improvements in Refrigerators; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to that class of refrigerators generally used in families, and consisting of an upright box or chest with thick non-conducting walls, and divided into several compartments for the reception of the various articles to be preserved.

Sheet 1, Figure 1 is a perspective view of a refrigerator with open doors, to show parts of my invention. Fig. 2 represents a sectional view of one of the walls of the refrigerator. Fig. 3 is an obverse view of the top of the refrigerator. Fig. 4 is a sectional plan view of Fig. 3.

Sheet 2, Fig. 1 represents the ice-drawer tilted to receive the ice. Fig. 2 is a perspective view of the drawer withdrawn.

The object of my invention is threefold. The first part has reference to the construction of the sliding tilting ice-drawer, for convenience in handling the ice, and as a means of ready access to it. The second provides against the loss of cold air in opening the refrigerator, and consists of valves in the sides or bottom of the various compartments, which valves are connected by means of levers with the doors, and are automatically worked, as will be hereafter described. The third has in view the construction of the walls of the refrigerator, and the introduction between them of a non-conducting purifying substance.

In the accompanying drawings, (Sheet 2, Fig. 1,) A is an ice-drawer, with a corrugated bottom and sides, of the shape shown in Fig. 2, to allow it, when drawn out, to fall and be held by the shoulders *a a* in the position represented. This drawer fills the bottom space in the ice-chamber, and the corrugations serve as troughs for conveying the ice-water to the outlet-pipe *b*. This arrangement and construction of the drawer renders it easy of access to a short person. When the ice has been placed in it the drawer is raised and pushed back into place, and the outer door B closed, as seen in Fig. 1, Sheet 1.

I would call attention to the fact that when the drawer A is let down to its full extent, it completely closes the entrance to the ice-chamber.

It is a well-known law of nature that cold air is heavy and will seek the lowest level. In the construction of refrigerators divided into compartments one above the other, openings are made between them for the free circulation of cold air. It can readily be understood that upon opening a lower compartment for any purpose, a large part if not all of the cold air in the compartments above will, owing to its gravity, leak or fall out, and its place be supplied by warm air, which will act immediately upon the ice and melt it more or less. At the same time, it is desirable that there should be openings on each side of a compartment, through its bottom, to allow as free circulation of the air within the refrigerator as possible.

Valves C C are employed in connection with the openings referred to, and are connected to the doors of the refrigerator by means of rods *c c*, hinged thereto. Each pair of valves is united by an arm, *d*, (seen in dotted lines, Fig. 1, Sheet 1,) pivoted centrally to the bottom of each compartment, so that upon opening the door of a compartment, both of the openings between it and the compartment above are uniformly closed. This action is direct, and does not depend upon the use of springs employed for a similar purpose, but which are liable to rust from the dampness and become inefficient.

The part of my invention which relates to the construction of the walls of the refrigerator is shown in Fig. 2, Sheet 1. D is the ordinary outer wooden wall. E is thin partition, made of some light porous wood. F is the zinc lining, with a space between it and the partition E, and punctured with holes, as seen at *e* in Fig. 1, Sheet 1. The space between the outer wall D and the partition E is to be filled with salt, which will impregnate the partition to a greater or less extent. The space between the zinc and the partition is divided just as the compartments are, so that

each compartment has its own space behind the zinc, with which it communicates through the holes *e*. The air in each compartment is thus brought into contact with the partition E, and becomes purified.

I claim and desire to secure by Letters Patent—

1. In the sliding tilting ice-drawer A, the catches *a*, arranged and constructed as described, and for the purpose specified.

2. The combination and arrangement of the valves C, connecting-lever *d*, and rod *c*, hinged to the door of a refrigeratar near its pivotal axis, in the manner and for the purpose specified.

3. The combination of the outer wall D, partition E, salt filling, and inmost perforated zinc lining F, for the purpose of purifying the air within a refrigerator, substantially as described.

Witness my hand this 18th day of January, A. D. 1875.

JACOB F. EBERT.

Witnesses:

JACOB O. DOUP,

E. THOMPSON.