J. C. JEWETT.

Refrigerator.

No. 69,812. Patented Oct. 15, 1867.

FIG. 2.

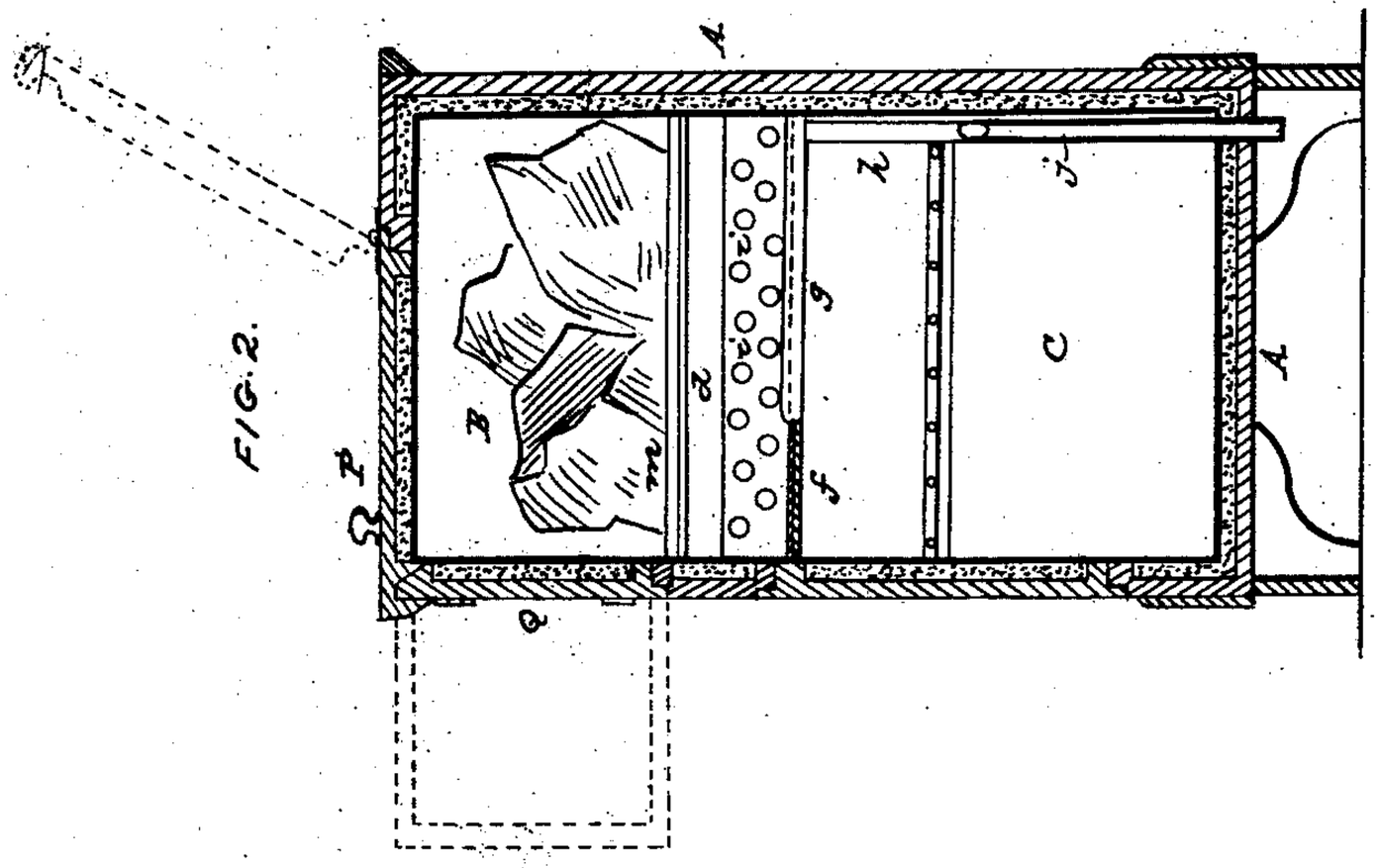
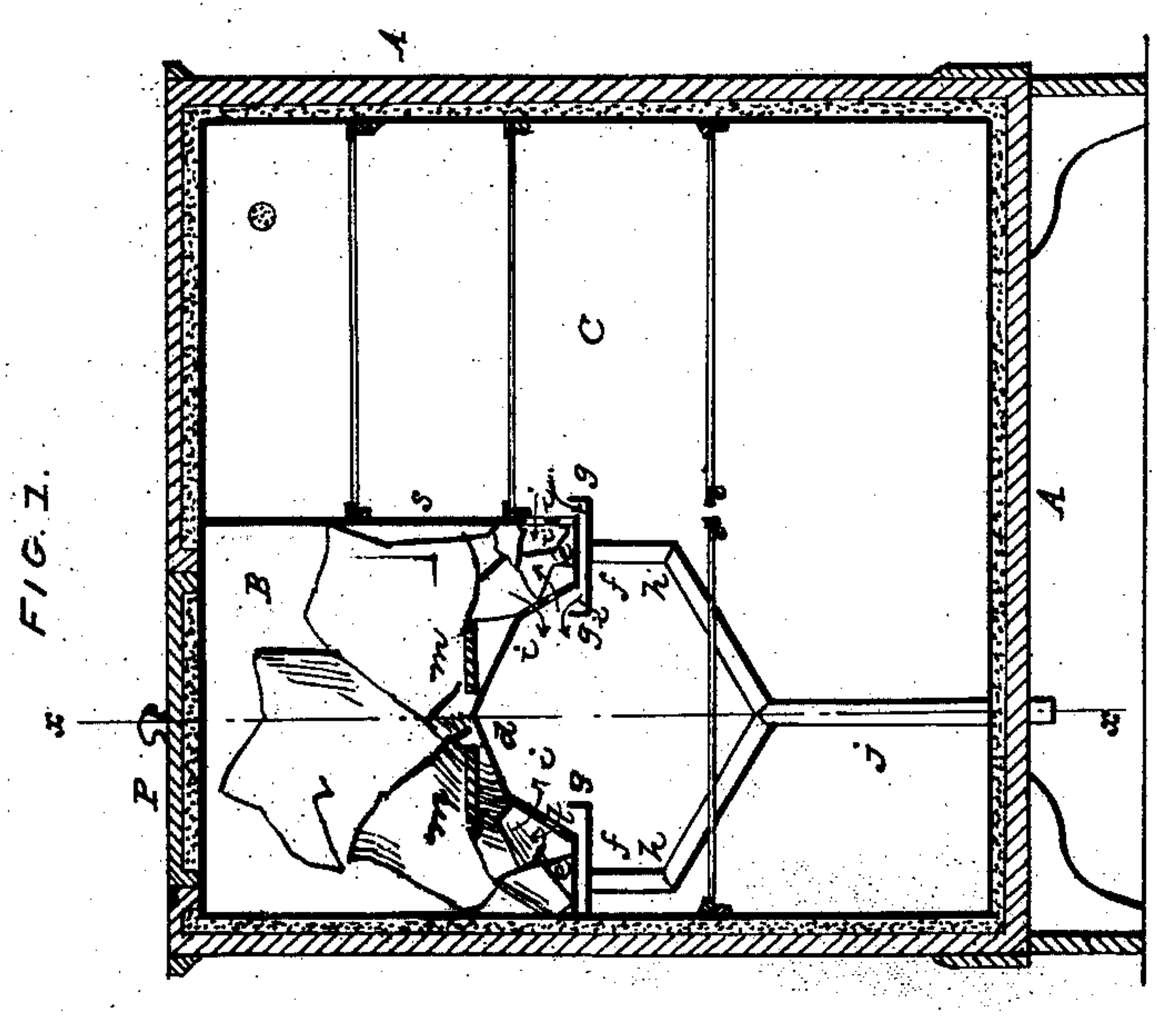


FIG. 1.



WITNESSES:

Jay Ryan

C. L. Brake

INVENTOR.

John C. Jewett

by Brake & Co

attys

UNITED STATES PATENT OFFICE.

JOHN C. JEWETT, OF BUFFALO, NEW YORK.

IMPROVED REFRIGERATOR.

Specification forming part of Letters Patent No. **69,812**, dated October 15, 1867.

To all whom it may concern:

Be it known that I, JOHN C. JEWETT, of the city of Buffalo, in the county of Erie and State of New York, have invented a certain Improvement in Refrigerators; and I do hereby declare that the following is full and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section of a refrigerator provided with my improvement; Fig. 2, a vertical transverse section in plane of line *x x*, Fig. 1.

Like letters designate like parts in both figures.

My invention consists in the construction and arrangement of the ice-box with an arched bottom and perforated legs or depressions, in connection with shallow pans for the reception of the drippings, whereby a large refrigerating-surface is exposed to the air contained in the preserving-chamber, and the temperature thereof kept reduced by contact with the drippings, small fragments, and large conducting-surface of the ice-receptacle, without circulating around the larger masses of ice; and, also, in the combination and arrangement of a vertical door with a lid or cover for more convenient access to the interior of the ice-chamber.

In the drawings, A A represent the double walls of a refrigerator, packed between with charcoal or other non-conducting substance; B, the ice-box, arranged in the upper portion at one end; and C, the food-compartment. The bottom of the ice-box is constructed substantially as shown, with an arched or elevated portion, *d*, at the center, leaving depressed spaces *e e'* at each side. Shallow pans or troughs *f f* are provided immediately below these depressions, of sufficient width to receive the drippings from the ice through the holes *i i*. These troughs connect at their rear ends with branches *h h* of the drip-pipe *j*, by which the water is conducted away. Above or on each side of the top of the arch two or more rack-bars, *m m*, are provided, which support the larger masses of the ice.

For the purpose of introducing the ice in the box with greater facility, and for easier access to it thereafter, I employ two doors in combination, arranged in the following manner: P being a lid or cover in the top, hinged at the back; and Q, a door in front of the ice-box, hung at the side, so as to swing horizontally. The latter is closed first when the lid shuts over it, forming a tight joint, and securing it against being opened by means of the groove and lip *r*, Fig. 2. In putting ice into the box both doors are opened, as represented in red lines, which leaves the front side and adjacent portion of the top of the box entirely unobstructed, through which the larger blocks of ice can be introduced with the greatest facility, as they need not for that purpose be elevated much if any above the rack on which they are to rest.

Another important advantage results from the combination of the two doors arranged as above stated. After the ice has been introduced into the box, access is frequently required therein from time to time to obtain portions of the ice, and to place in and remove therefrom articles that are required to be suddenly cooled or to be kept at a very low temperature. In accomplishing this it is desirable to prevent as much as possible the escape of the cold air, which is best avoided by opening a small aperture, and that in the top. By my arrangement the comparatively small lid P in the top is alone opened for the foregoing purposes. If a single door only were employed, occupying the place of both of mine, the opening of a space of that size and in that situation would permit the escape of a great portion of the cold air each time, involving a corresponding loss of ice by melting, and a consequent elevation of temperature in the food-compartment, all of which is in a great measure avoided by the use of this feature of my improvement. I am thus enabled to enjoy the advantages of a door in the side, and also retain the special advantages of an opening in the top. The overlapping flange of the lid P keeps the door Q securely closed, and thereby dispenses with the necessity of a catch for the purpose.

The large blocks of ice rest on the slats *m*, while the smaller fragments fall into the depressions *e e'*. These are provided with perforations on the sides *i i*, which serve the double purpose of allowing the air to circulate through and the water which melts from the ice to escape. By constructing the ice-box

with the arched bottom *d* and depressions *e e'*, I secure the several advantages of increasing the cooling-surface in contact with the air of the preserving-apartment, (a portion of that surface being duplicated by the shallow troughs *f f*, kept at the temperature of melting ice by the drippings,) of enabling the air contained in the refrigerator to circulate through the small fragments and drippings of the ice freely in every direction, as is shown by the arrows in Fig. 1, without rising to or circulating around the larger pieces lying upon the rack above, which is, in consequence, longer preserved from melting, and in the circulation of the air over the surface of the drip-pans, the contents of which are very little below the temperature of the ice itself, whereby, as experience has shown, the temperature is maintained several degrees lower than in any other refrigerator with which I am acquainted. The air, by circulating chiefly at the bottom of the ice-box and over the drippings before they escape, is refrigerated thereby, thus utilizing the waste-water, while the ice in the main body of the box, by being comparatively free from its influence, melts much slower than it otherwise would, which effects a considerable saving in the amount of ice required. As no air from without is to be admitted into the ice-box, the joints of the door P Q should be constructed as tight as it is practicable to make them. The refrigerative surface of the walls of the ice-box is so large that all moisture contained in the atmosphere of the chamber is condensed and falls into the pans *f f*, producing and maintaining a state of dryness most conducive to the preservation of food.

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

1. Constructing the ice-box of refrigerators with the arched bottom *d*, in combination with the legs or depressions *e e*, provided with perforations *i i*, and the shallow pans *j j*, arranged and operating as and for the purposes set forth.

2. I also claim the combination of the door G and lid P with the ice-box B, when constructed, arranged, and operating substantially in the manner and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JNO. C. JEWETT.

Witnesses:

SAMUEL LAKE,

J. R. DRAKE.