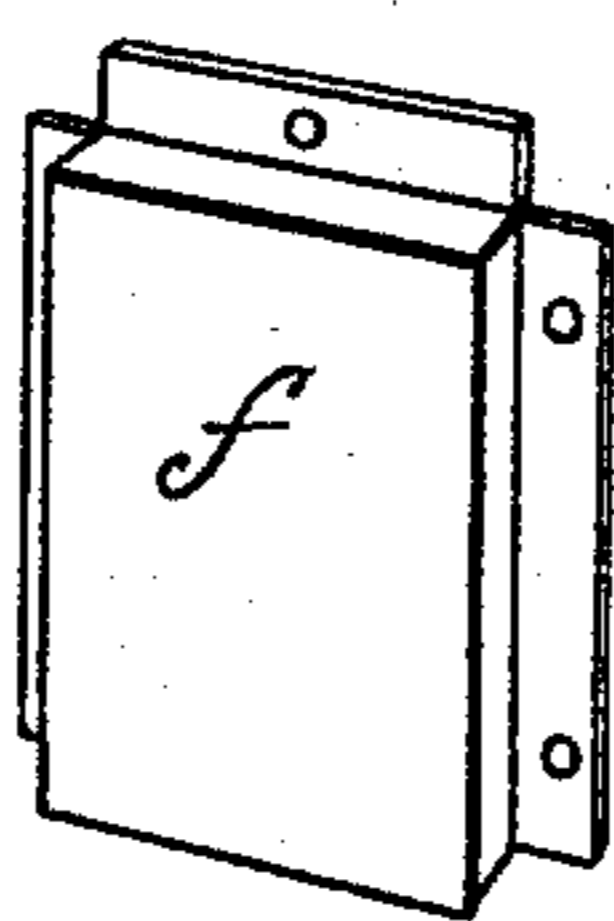
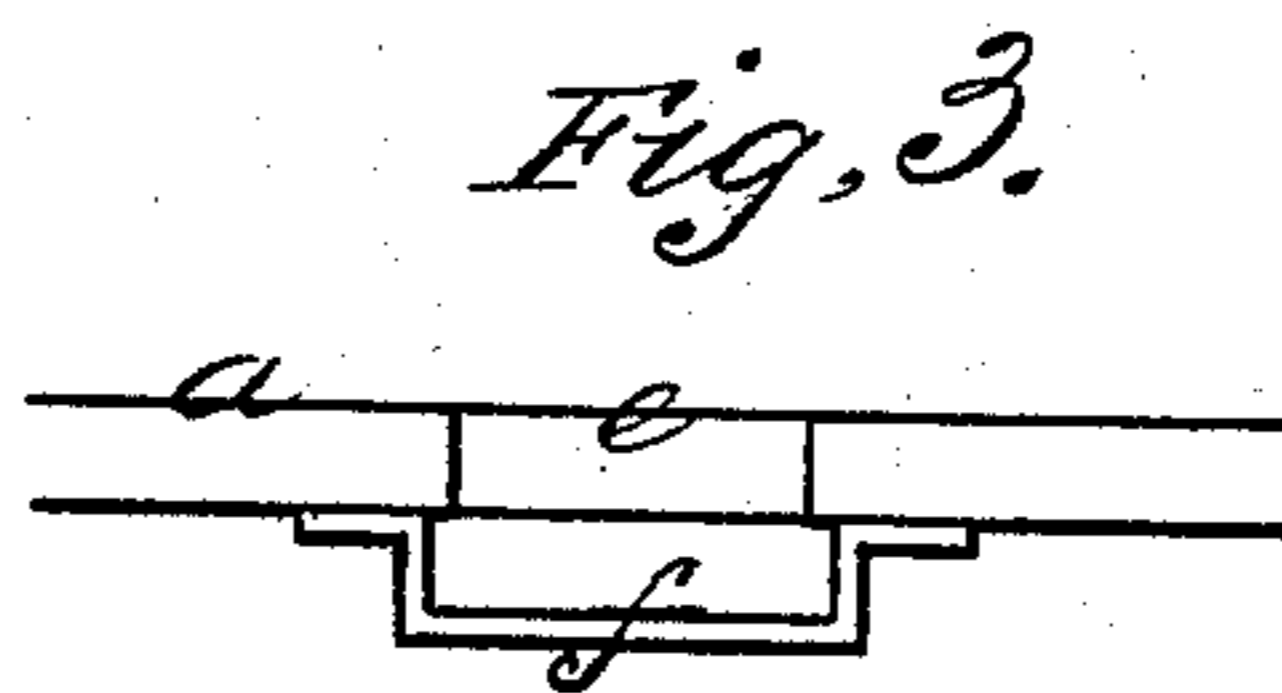
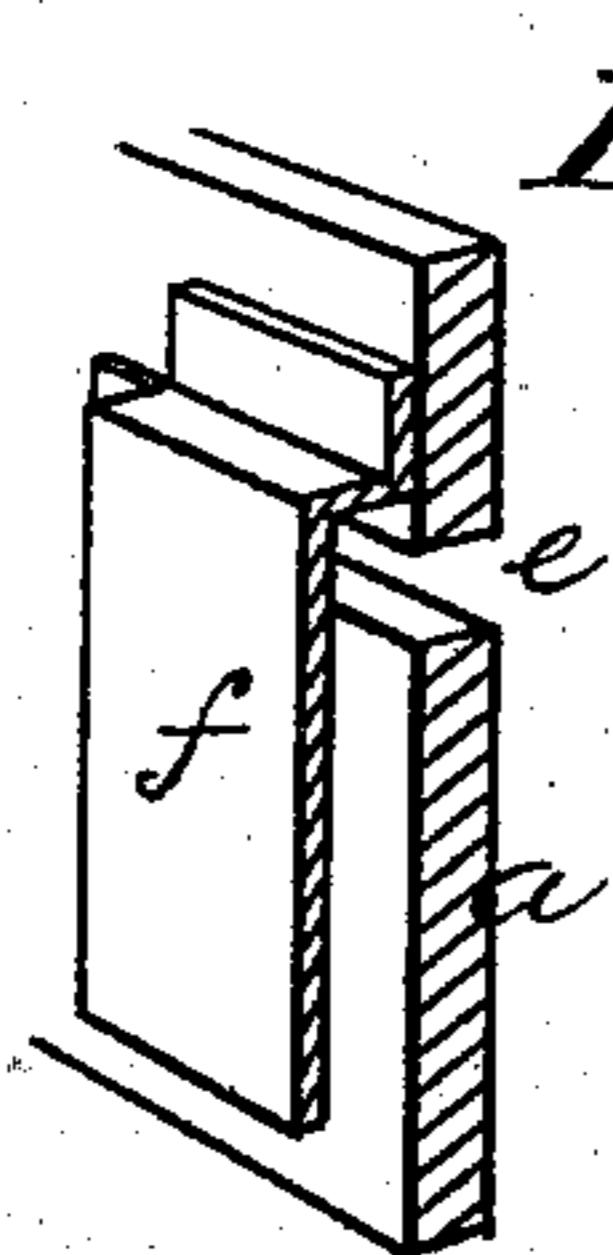
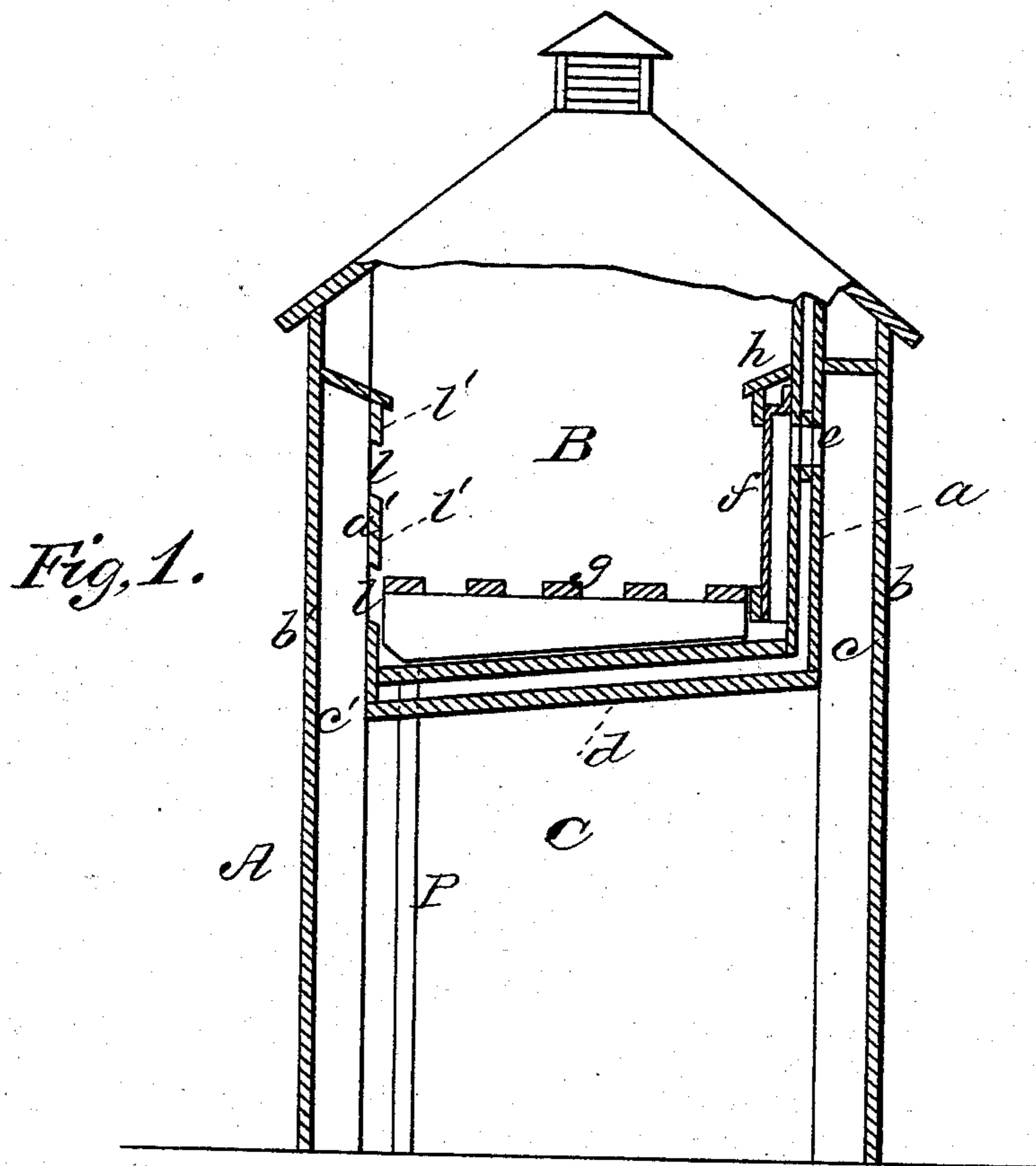


J. M. SLOSSON.  
Refrigerator.

No. 219,535.

Patented Sept. 9, 1879.



WITNESSES  
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ATTORNEY

# UNITED STATES PATENT OFFICE.

JOHN M. SLOSSON, OF MINNEAPOLIS, MINNESOTA.

## IMPROVEMENT IN REFRIGERATORS.

Specification forming part of Letters Patent No. **219,535**, dated September 9, 1879; application filed December 21, 1878.

*To all whom it may concern:*

Be it known that I, JOHN M. SLOSSON, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and valuable Improvement in Refrigerating Structures; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a vertical transverse section of my improved refrigerator, and Figs. 2, 3, and 4 are details.

This invention has relation to improvements in refrigerating-houses for preserving meats and other perishable articles of food; and the nature of the invention consists in the combination, with a flue, of an overhanging ledge protecting said flue, as hereinafter shown and described.

In the annexed drawings, the letter A designates an ordinary close structure having at its upper part an ice-box, B, formed by the longitudinal walls *a a'*, arranged at suitable distances from the contiguous walls *b b'* of the structure, and forming therewith the ascending and descending passages, lettered *c c'*, respectively, and of an inclined bottom, *d*. The side wall, *a*, and bottom *d* are double, a dead-air space being thus formed, the object of which will hereinafter appear.

In the double side wall, *a*, near the upper part of the ice-chamber, are formed a number of perforations, *e*, each of which communicates with an independent metallic flue, *f*, extending down nearly to the floor and below a grating, *g*, upon which the ice is placed. These flues are closed everywhere except at bottom, and are protected from injury by an overhanging ledge, *h*, that prevents them from being battered at their upper portions by falling blocks of ice.

The wall *a'* of chamber B is provided with a number of horizontal openings, *l*, formed between the slats *l'*, and leading into the descending flue *c'*. Below chamber B is the pre-

serving-chamber C, in which the meats or other articles are placed.

The operation is as follows: The ice being placed in the chamber B, the air therein is reduced to a low temperature and passes through openings *l* down the descending flue into the chamber C, where its temperature rises, being protected from the direct action of the ice by means of the double bottom *d*. It then passes up the ascending flue *c*, and, being protected from the direct action of the ice in the ice-box by its double side wall, *a*, reaches the openings *e* without loss of temperature, and passes into the descending flues *f*. Here the currents of air are for the first time under the refrigerating influence, and they rapidly descend and issue therefrom under the grating at a low temperature. Upon issuing from the flues *f*, which, being metallic, are very cold, the temperature of the air-currents is so lowered that they exercise but little influence in melting the ice, and thus a great saving of ice is made.

Such water as may result from the wasting away of the ice is carried off by a drain-pipe, P, out of the structure.

It is clear that the double side wall and the dead-air space between its parts are very beneficial. It prevents the refrigerating action of the ice from reaching the ascending air-passage *c*, and, by lowering the temperature of the upward currents, checking their ascent. The effect of this is to cause the currents to move rapidly from the chamber C to the chamber B in a circuit.

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

In combination with the flues *f*, the overhanging ledge *h*, for protecting said flues, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN M. SLOSSON.

Witnesses:

ALBERT A. KEITH,  
THEODORE M. SLOSSON.