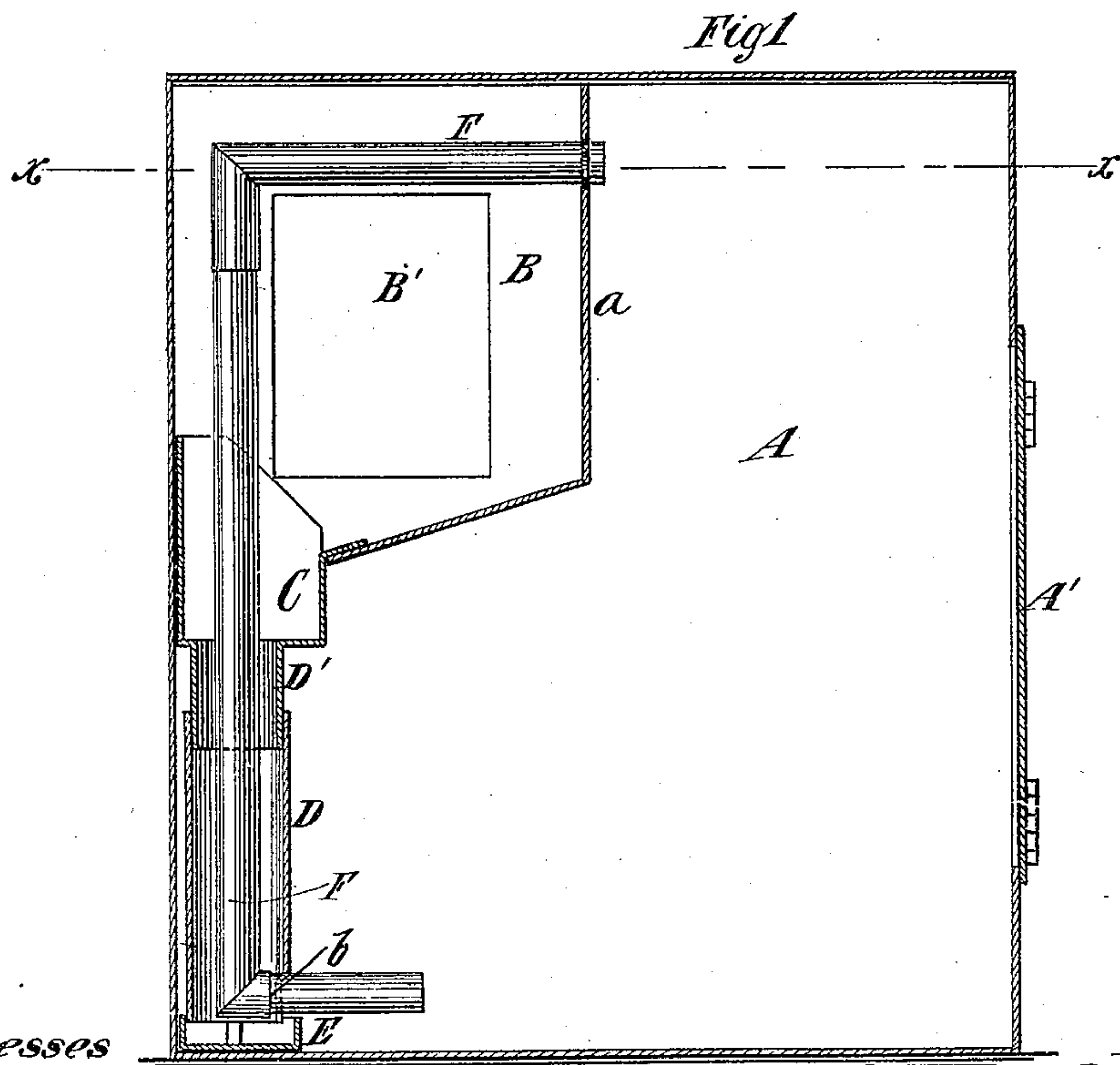
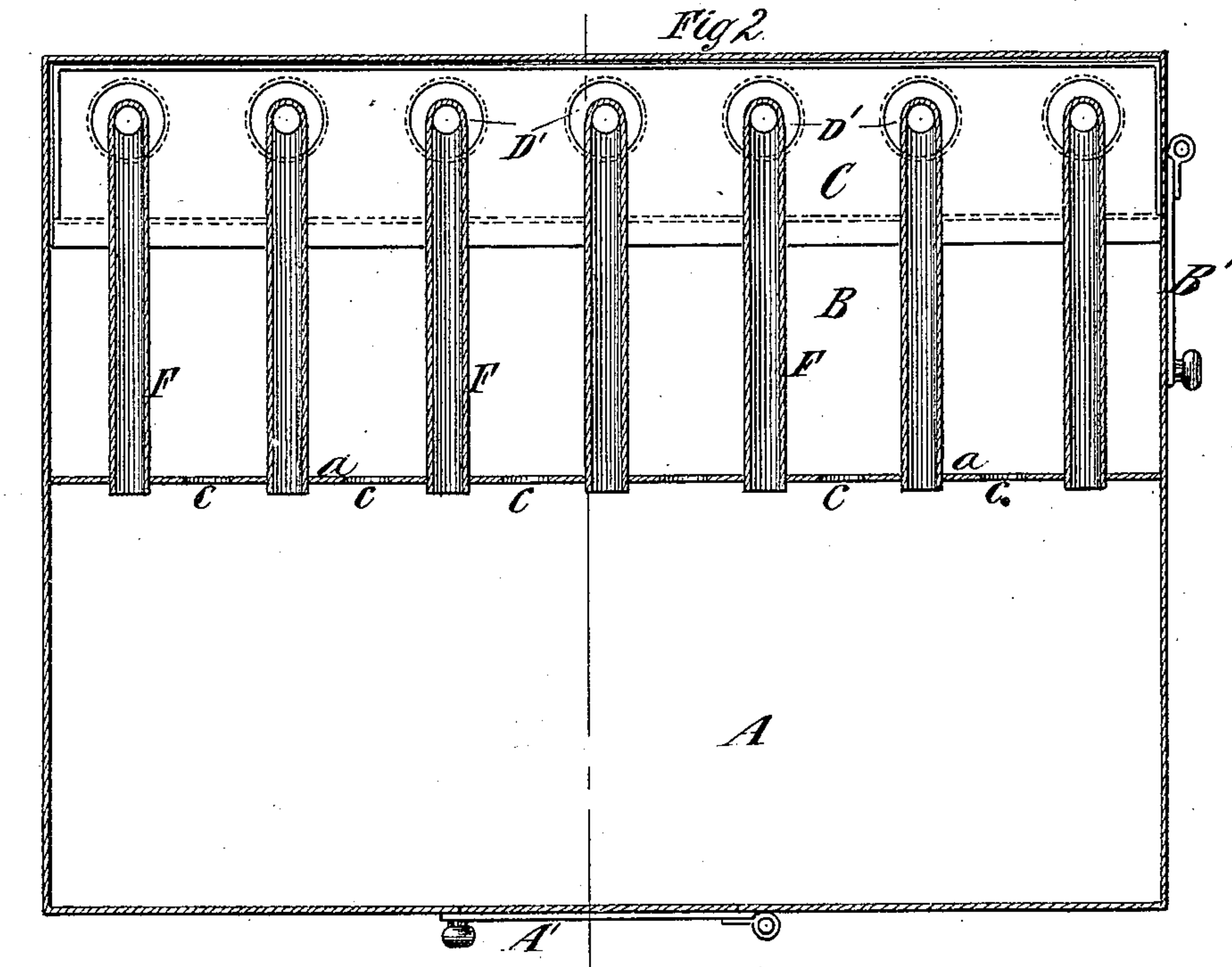


(No Model.)

G. R. WIGHT.  
REFRIGERATOR.

No. 249,714.

Patented Nov. 15, 1881.



Witnesses

James R. Bowen.  
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Inventor

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# UNITED STATES PATENT OFFICE.

GEORGE R. WIGHT, OF NEW YORK, N. Y.

## REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 249,714, dated November 15, 1881.

Application filed August 8, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE R. WIGHT, of the city, county, and State of New York, have invented certain new and useful Improvements in Refrigerators, of which the following is a specification.

My invention relates to refrigerators in which the ice-chamber communicates directly with the provision-chamber, and also indirectly by means of a number of tubes which extend from the ice-chamber downward and are filled with ice.

The object of my invention is to increase the cold-radiating surface in such a refrigerator, and thus obtain better effects.

The invention consists in the combination, in a refrigerator, with the ice-chamber, the provision-chamber communicating directly with said ice-chamber, and tubes leading downward from the ice-chamber, of air-tubes arranged within the tubes first mentioned, leaving annular spaces between said tubes which may be filled with ice, and annular openings between said tubes at their lower ends, whereby provision is afforded for the passage of air from the ice-chamber downward through the inner tubes and between the inner and outer tubes. The inner tubes are preferably bent or continued horizontally outward at their upper ends, and communicate directly with the upper part of the provision-chamber, so as to take air direct therefrom.

In the accompanying drawings, Figure 1 represents a vertical section of my improved refrigerator, and Fig. 2 represents a horizontal section on the dotted line *xx*, Fig. 1.

A designates the provision-chamber of the refrigerator, and B designates the ice-chamber, which is in the upper part and at one side of the refrigerator. The refrigerator is formed of sheet metal in the ordinary way, but the wooden box or case by which the metal case is surrounded is here omitted. The air-chamber B is separated from the provision-chamber by a partition, *a*, in which are holes *c*, which place the two chambers in direct communication, and the two chambers are provided with doors A' B', through which the ice and provisions are introduced. In the lower part of the ice-chamber B is a removable ice-bunker, C, into which all the water drains, and which

can be readily removed for cleaning. So far as the present invention is concerned, however, the ice-bunker need be regarded only as a part of the ice-chamber.

Extending from the bottom of the ice bunker or chamber are a number of tubes or pipes, D, open at both ends, and below said tubes or pipes is placed a drip-pan, E, which receives the water formed by the melting ice. Each of the tubes or pipes D is slipped over a nozzle or rigid section, D', upon the ice-chamber, and is provided at the lower end with feet which rest in the drip-pan E. Whenever it is desired to remove the pan all the tubes or pipes D may be slipped up upon their nozzles or rigid sections D', thus raising their lower ends out of the drip-pan.

F designates air pipes or tubes, which are smaller in diameter than the pipes or tubes D, and are arranged inside the latter. The pipes or tubes F extend upward through the ice-chamber B, nearly to the top thereof, and are bent or continued horizontally toward the partition *a*, through which they pass, and in which they are secured. The lower ends of the inner pipes or tubes, F, are also represented as bent or continued horizontally toward the middle of the provision-chamber, so that the cooled air will be directed in that direction. The pipes or tubes F are made of sheet metal, and may each have one or more slip-joints, *b*, to enable them to be readily inserted in place and removed.

It will be observed that annular spaces are formed between the outer and inner tubes, D and F, and also annular openings between said tubes at their lower ends.

The pipes or tubes F might be perforated for a part or the whole of their length, if desired.

In the operation of my refrigerator the annular spaces between the inner tubes, F, and the outer tubes, D, are filled with broken ice, and the exterior surfaces of the outer tubes and the interior surfaces of the inner tubes form radiating surfaces for cooling air, while air which enters the ice-chamber through holes *c* is cooled by direct contact with the ice in passing downward between the outer and inner tubes, and passes out at the annular openings between the tubes at their lower ends.

It will be seen that the cold-radiating sur-



face is greatly increased by the inner air-tubes, and that therefore a cooler atmosphere can be maintained in the provision-chamber.

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

1. The combination, in a refrigerator, with the ice-chamber, the provision-chamber communicating directly with said ice-chamber, and tubes leading downward from said ice-chamber, of air-tubes arranged within the tubes first mentioned, leaving annular spaces between said tubes which may be filled with ice, and annular openings between said tubes at their lower ends, whereby provision is afforded for the passage of air from the ice-chamber downward through the inner tubes and between the inner and the outer tubes, substantially as and for the purpose specified.

2. The combination, in a refrigerator, with the ice-chamber B, the provision-chamber A, communicating directly with said ice-chamber, and the tubes D, leading downward from said ice chamber, of air-tubes F, arranged within the tubes D, and continued horizontally at their upper ends to the provision-chamber, leaving annular spaces between the tubes D and F, which may be filled with ice, and annular openings between said tubes at their lower ends, whereby provision is afforded for the passage of air downward through the tubes F, and between the tubes D and F, substantially as and for the purpose specified.

GEO. R. WIGHT.

Witnesses:

EDWIN H. BROWN,  
T. J. KEANE.