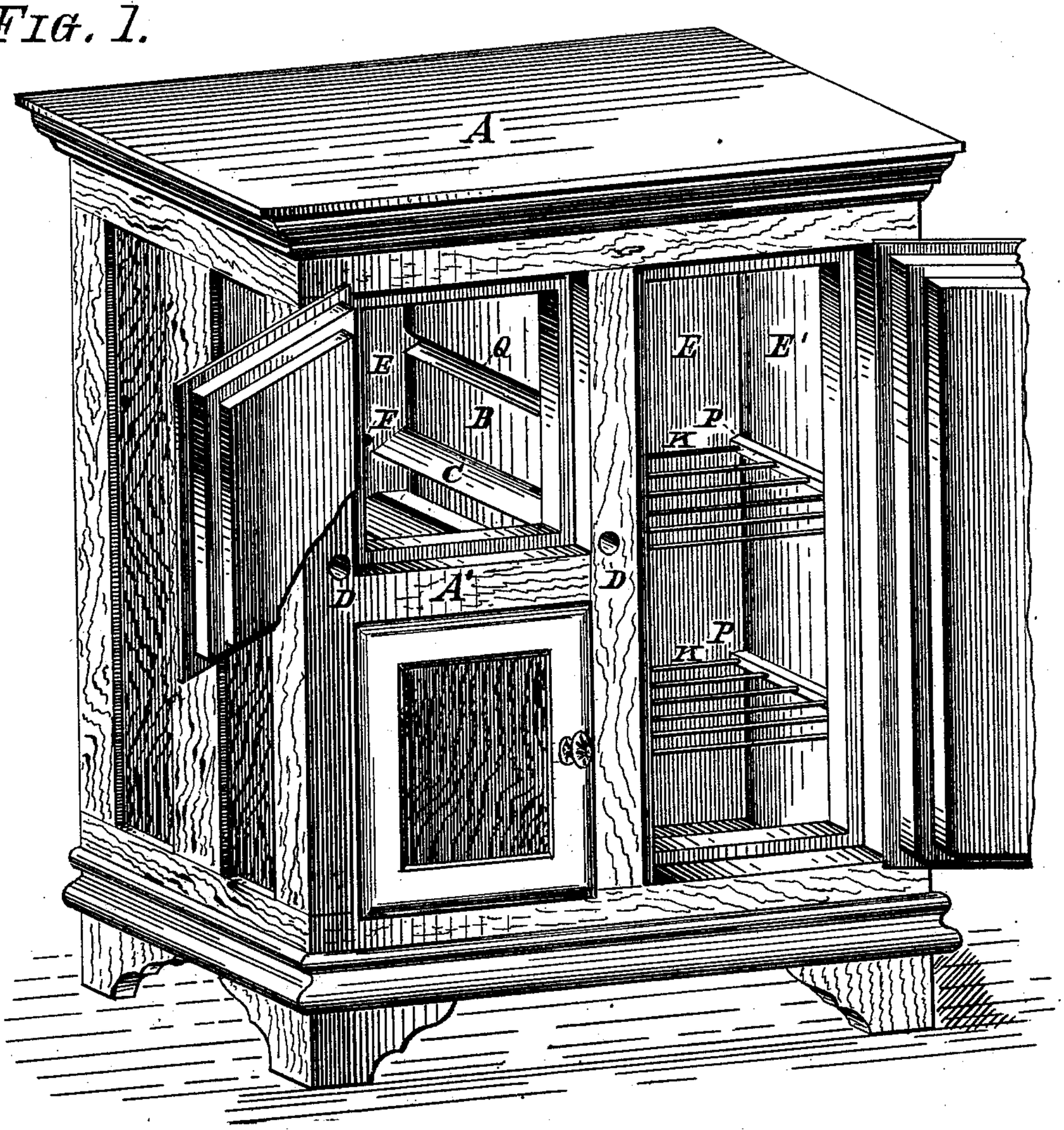
2 Sheets—Sheet 1.

A. HEINZ.

Refrigerator.

No. 213,751. Patented April 1, 1879.

FIG. 1.



Witnesses:

Michael J. Stark

Geo. Stark

Inventor:

Adam Heinz.

by Michael J. Stark
atty.

2 Sheets—Sheet 2.

A. HEINZ.

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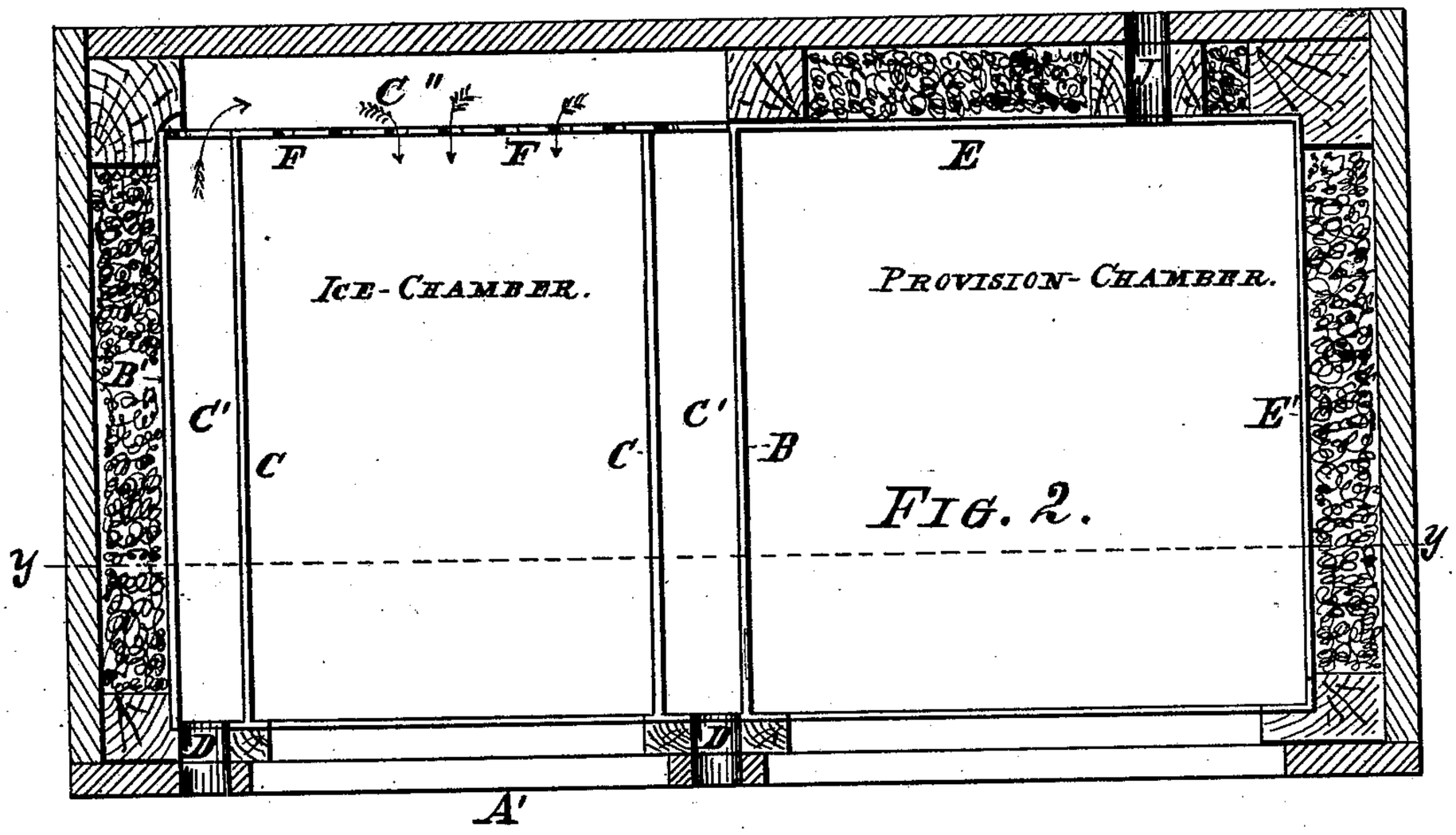

FIG. 2.

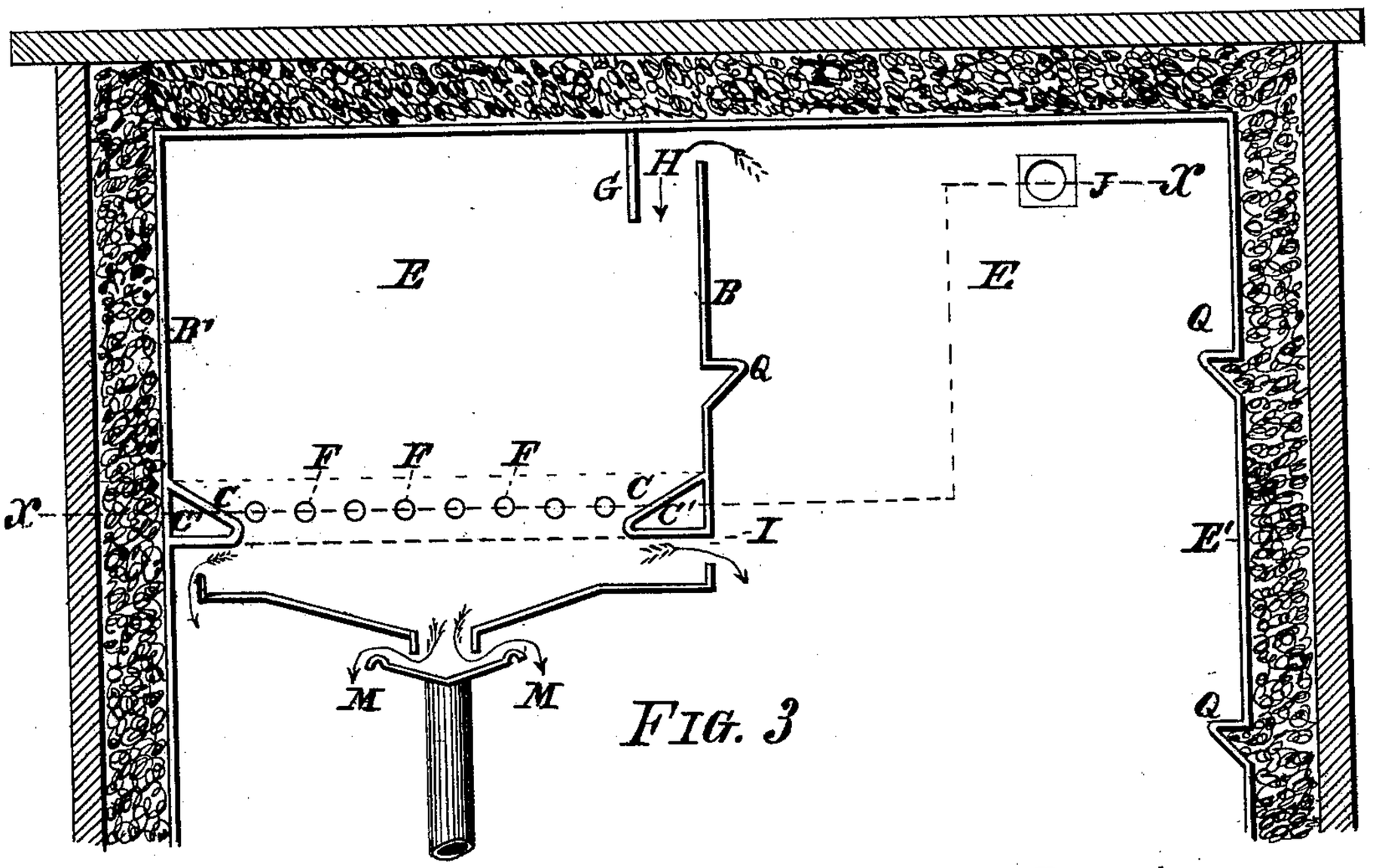

FIG. 3

Witnesses:

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UNITED STATES PATENT OFFICE.

ADAM HEINZ, OF BUFFALO, NEW YORK.

IMPROVEMENT IN REFRIGERATORS.

Specification forming part of Letters Patent No. **213,751**, dated April 1, 1879; application filed October 9, 1878.

To all whom it may concern:

Be it known that I, ADAM HEINZ, of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements on a Refrigerator; and I do hereby declare that the following description of my said invention, taken in connection with the accompanying sheets of drawings, forms a full, clear, and exact specification, which will enable others skilled in the art to which it appertains to make and use the same.

My present invention refers in general to refrigerators; and it consists in the peculiar arrangement and combination, with the ice-chamber having in its lining protuberances forming guards, of passages in the front wall of the refrigerator communicating with the interior of said protuberances, whereby the latter are converted into ducts and cooling-chambers for the air entering through said passages in the front wall, said passages in the protuberances being connected with each other by a duct in the rear wall having discharge-apertures into the ice-chamber, all as hereinafter first fully set forth and described, and then pointed out in the claim.

In the drawings heretofore referred to, which serve to illustrate my invention more fully, Figure 1 is an elevation, in perspective, of my improved refrigerator. Fig. 2 is a horizontal sectional plan in line *x x* of Fig. 3. Fig. 3 is a longitudinal sectional elevation in line *y y* of Fig. 2.

Like parts are designated by corresponding letters of reference in all the figures.

A is a refrigerator-casing constructed in the main in the usual manner. It has its interior partition-wall B and ice-chamber side wall, B′, provided with V-shaped protuberances C, one on each side, serving as guides for the ice and as protectors for the said walls. These protuberances I propose to further utilize by making them conductors or ducts to lead air from the external atmosphere into the interior of the ice-chamber through passages D D in the front wall, A′, which communicate with the interior space C′ of said protuberances C, and afford a passage of said air to a rear passage, C″, leading along the back wall, E, and connecting the two ducts C′ C′. The passage C″ has outlets in the shape of apertures F in the back wall, E, through which the air escapes into the ice-chamber.

The partition-wall B is not carried upward to the top of the ice-chamber, but stops short of the same, so as to produce a channel, H, in conjunction with a pendent wall, G, through which channel the warm air from the provision-chamber enters the ice-chamber in a downward direction. This wall B is furthermore not carried downward to the bottom of the ice-chamber, but stops short of that also, so as to provide for an exit, I, for the cold air into the said provision-chamber, a further exit being provided at M in the double-inclined bottom of said ice-chamber.

It will be readily understood that a perfect circulation and ventilation are produced in my improved refrigerator in substantially the following manner: The air enters the ducts C′ C′ C″ through the openings D in the front wall, A′. This air coming in contact with the cold walls of the ice-chamber protuberances C is at once reduced in temperature, so that when it enters the ice-chamber through the apertures F in the back wall, E, it immediately settles downward and escapes through the passages I and M into the provision-chamber. Here the air is elevated in temperature, and thus rarefied it rises and passes off, partially through a passage, J, in the back wall, E, into the external atmosphere, and partially through the passage H into the ice-chamber, where it is again reduced in temperature and commingles with the air entering through the apertures F to again enter upon its circuitous route. In this manner a perfect circulation and ventilation is obtained in the interior of the refrigerator, and a constant small but sufficient supply of fresh air caused to pass into the refrigerator to take the place of the contaminated air escaping through the passage J into the external atmosphere.

In the partition-wall B, as well as the side wall, E′, are formed smaller V-shaped projections Q, serving as supports for the racks K.

I do not claim, broadly, the ventilating-pipes and separate compartment for the ice, with the flues; but,

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

In a refrigerator, the combination of the wall E, having ventilating-openings F, the drop-wall G, metallic partition B, (not closed at top, and leaving an air-passage, H,) the partition B, having passages C′ communicating with the outer air through pipes D D and with the ventilating-openings through the space C″, and the provision-apartment having an upper outlet-pipe, J, substantially as and for the purpose described.

In testimony that I claim the foregoing as my invention I have hereunto set my hand and affixed my seal in the presence of two subscribing witnesses.

ADAM HEINZ. [L. S.]

Attest:

MICHAEL J. STARK,

JNO. STARK.