

(No Model.)

G. FISCHER.
REFRIGERATOR.

No. 274,750.

Patented Mar. 27, 1883.

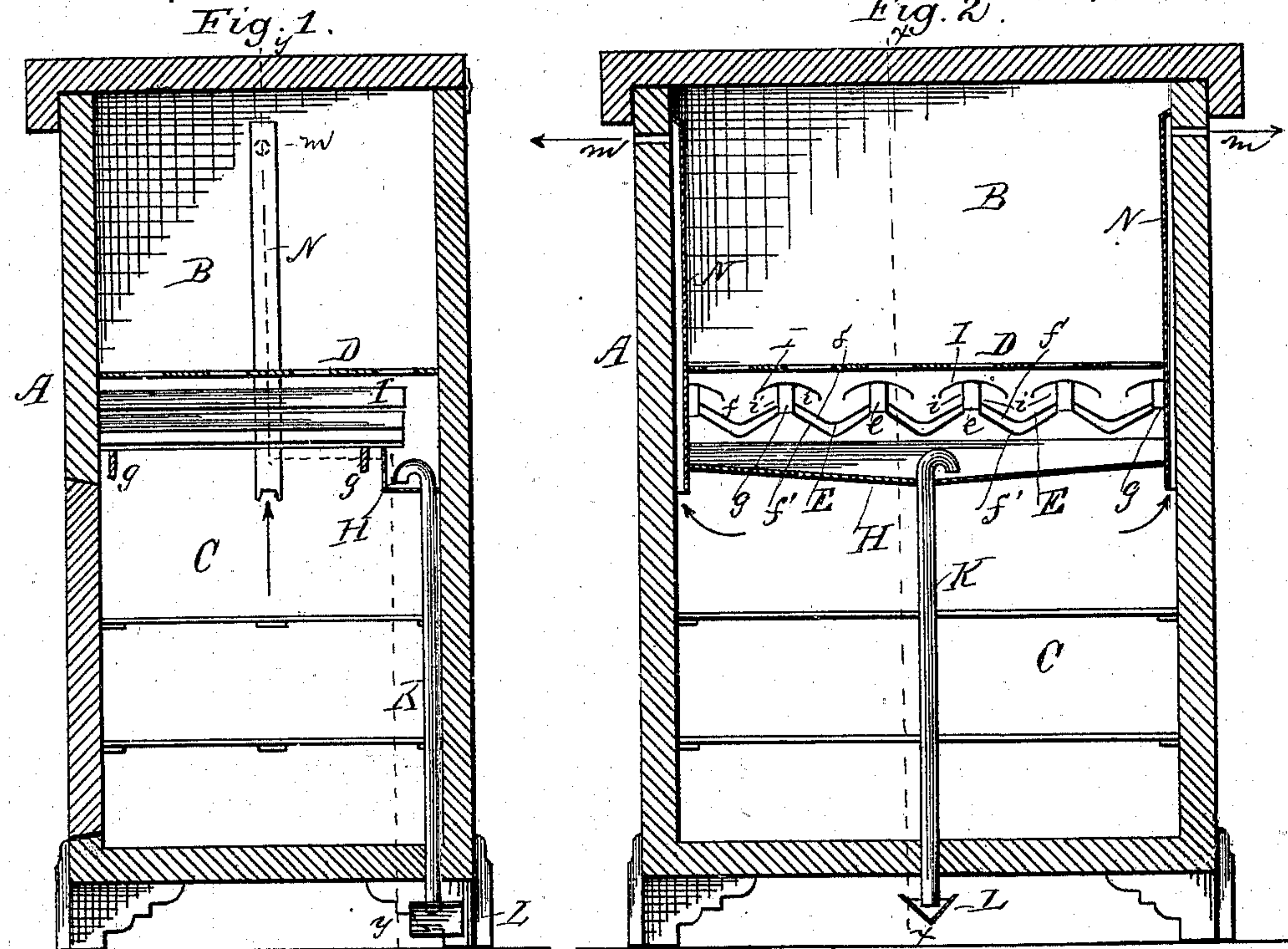
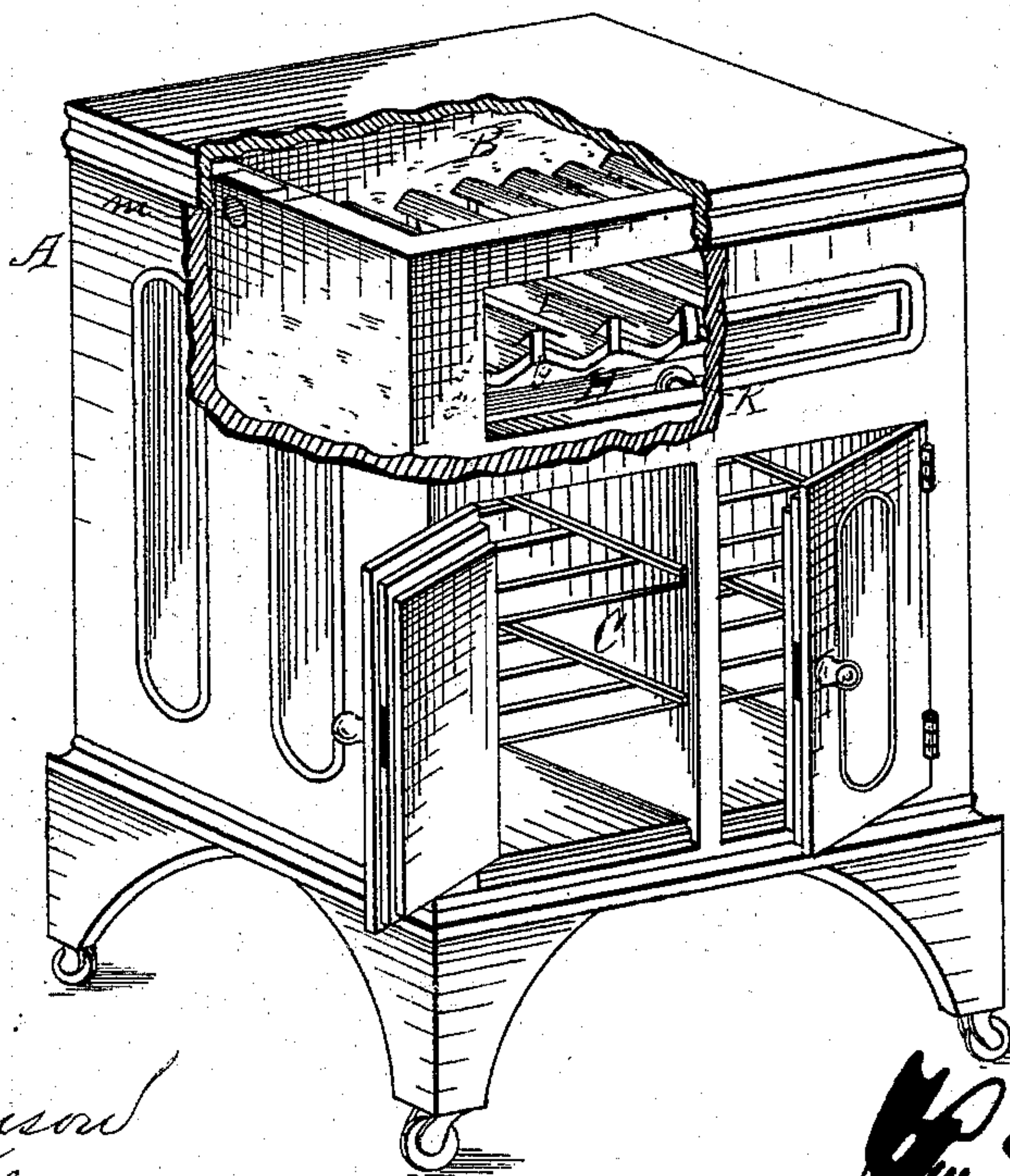


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

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REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 274,750, dated March 27, 1883.

Application filed January 4, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE FISCHER, a citizen of the United States of America, residing at Quincy, in the county of Adams and State of Illinois, have invented certain new and useful Improvements in Refrigerators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates, generally, to that class of chest or box refrigerators in which an ice-chamber at the top is separated from a lower provision-chamber by an open-work or reticulated ice-supporting platform, below which are arranged gutters for carrying the ice drippings to a suitable waste-water receptacle; and it has for its objects to provide means for preventing what are ordinarily termed the "sweat-drippings"—a water which condenses upon the under surface of gutters—from falling into the provision-chamber, to secure a proper ventilator of the provision-chamber, and to utilize the low temperature of accumulated drippings to assist in the refrigeration.

With these objects in view my invention consists in certain novel constructions and combinations of devices, which will be hereinafter fully described, and pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a vertical section of my improved refrigerator on the line *x x* of Fig. 2. Fig. 2 is a vertical section on the line *y y* of Fig. 1. Fig. 3 is a perspective view of the refrigerator, with a portion of the outer casing and top broken away to reveal the interior parts.

The letter A designates the chest or box, of which a particular description is unnecessary, as my invention has no reference thereto.

B is the ice-chamber, and C the provision-chamber, the latter being provided with the usual shelves for supporting articles to be cooled. The ice-chamber is separated from the provision-chamber by a horizontal open-work partition or platform, D, which supports the ice. Under the platform D are a series of double drip-gutters, E, arranged transversely, and

separated from each other and from the chest-walls by intervening spaces, *e*. Each of these double gutters is composed of an upper trough-like strip of metal, *f*, and a lower metal strip, *f'*, of precisely similar shape, arranged directly under the same and separated therefrom by an intervening air-space, the two strips being connected at their edges only. These double gutters are supported by metallic cross-bars *g*, notched to receive the convex under surfaces of the lower strips, and all the gutters are slightly inclined to the rear and terminate over a drip-pan, H, secured to the rear wall of the chest.

Above the series of double gutters E are a series of drip-sheds, I, formed of metallic strips bent to incline downward both ways from a longitudinal central line, and these drip-sheds are of suitable width and properly arranged to bridge the spaces between the gutters and shed water into the upper troughs. The sheds at the ends of the series have one edge in close contact with the chest-walls and incline only inwardly. All the sheds are supported by short narrow metallic standards *i*, attached thereto and to the bars *g*, which support the double gutters.

The bottom of the drip-pan H preferably inclines downward both ways to its middle, and is provided with siphon overflow-pipe K, which extends down through the bottom of the chest and terminates in a water-seal pan, L, extending therein such a distance that the accumulation of water in said pan will close the lower end of the pipe against the entrance of air. The upper and bent end of the pipe is so arranged that the drip-pan H will get nearly full of water before the overflow commences, so that the accumulating drip-water will remain for a while in the pan and contribute by its coldness to the refrigeration of the provision-chamber.

In providing for the ventilation of the provision-chamber I form two openings, *m m*, in the end walls of the chest, at the upper part of the ice-chamber, and from these openings flat pipes N lead down through the ice-chamber and terminate at their lower ends in the provision-chamber, at some distance below the gutters. By this means I to a great extent carry off the foul warm air from the provision-

chamber before it can rise and come in contact with the ice, the melting of which would be hastened thereby. Again, when a counter-current of air flows in toward the provision-chamber through either or both of these pipes 5 this air is cooled by its contact with the pipes, while at the same time it is prevented from coming in direct contact with the ice and melting it. When the ice drippings falling through 10 the open-work platform D are directed by the sheds I into the upper troughs of the double gutters E the under surfaces of the metal strips which form these troughs are rendered very cold, so that the moisture of the warm air issuing from the provision-chamber is condensed 15 upon these under surfaces and would fall, in the form of water, into the provision-chamber and render it damp and foul, were not some means provided for intercepting this water and 20 carrying it off. This office is performed by the lower troughs, *f'*, which themselves do not get sufficiently cool for moisture to condense upon their under surfaces.

In practice I find that the provision-chamber 25 in a refrigerator of my hereinbefore-described construction is exceedingly cold, and so dry that even such articles as friction-matches may be kept therein without any deterioration.

Having now described my invention, I claim— 30

1. The combination, with the gutters, of the drip-pan provided with the siphon overflow-pipe arranged to allow the drip-pan to accumulate a quantity of water and then automatically draw off the said water, substantially as 35 described.

2. The combination, with the drip-pan and siphon-pipe extending below the bottom of the chest, of the water-seal pan L, substantially as and for the purpose set forth. 40

3. In a refrigerator, the combination, with the provision-chamber, ice-chamber, and gutters, as described, of the ventilation-pipes N N, having their lower ends terminating in the provision-chamber, below the gutters, and their 45 upper ends connected with the openings in the chest-walls at the upper part of the ice-chamber, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE FISCHER.

Witnesses:

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