

W. M. BAKER.

Refrigerator.

No. 39,610.

Patented Aug. 18. 1863.

Fig. 2.

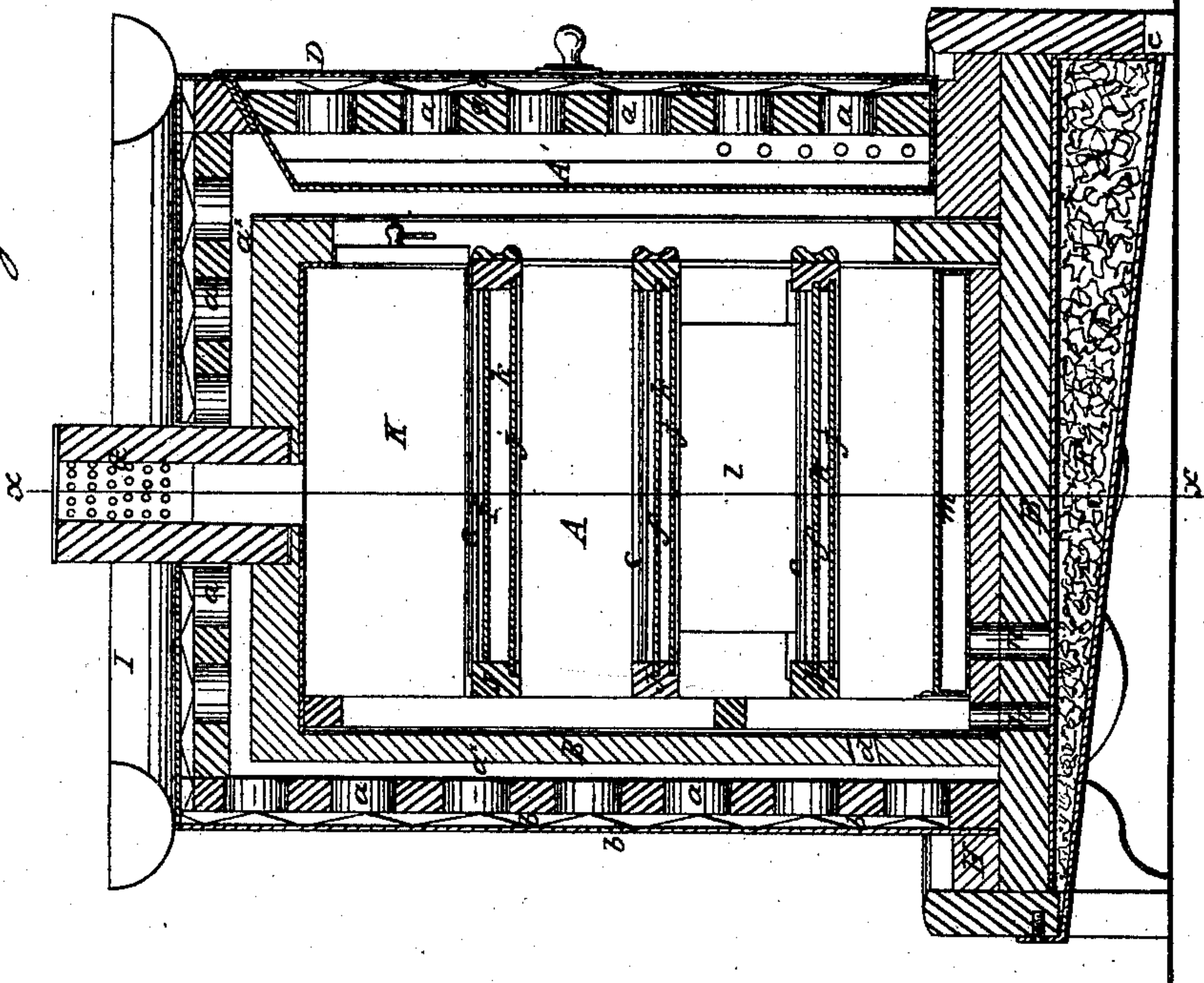
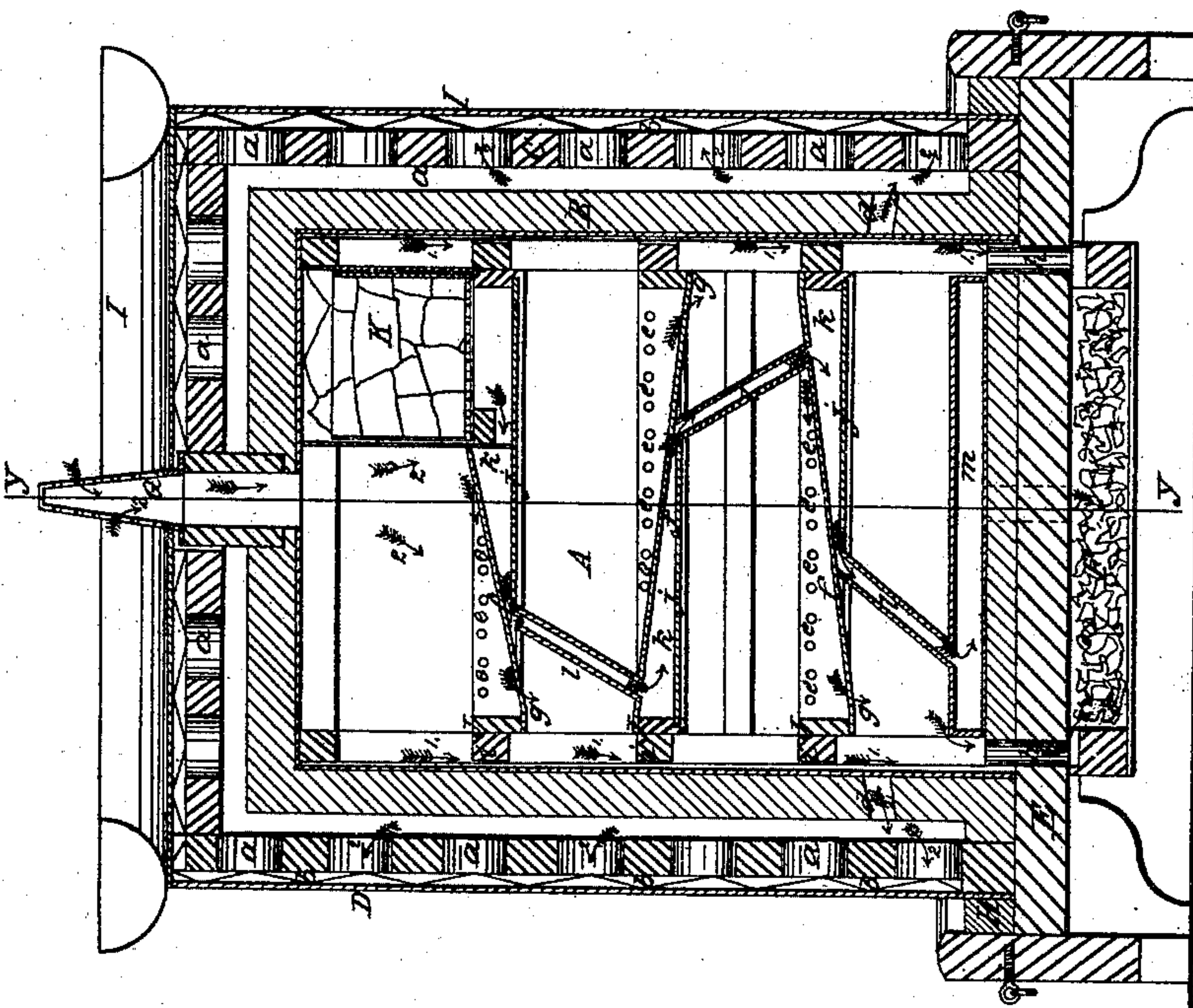


Fig. 1.



Witnesses:

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Inventor:

W. M. Baker  
By Munn & Co.  
Attys



# UNITED STATES PATENT OFFICE.

W. M. BAKER, OF WALPOLE, INDIANA, ASSIGNOR TO HIMSELF AND  
W. R. HEATH, OF SAME PLACE.

## IMPROVED REFRIGERATOR.

Specification forming part of Letters Patent No. 39,610, dated August 18, 1863.

*To all whom it may concern:*

Be it known that I, W. M. BAKER, of Walpole, in the county of Hancock and State of Indiana, have invented a new and Improved Refrigerator; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical section of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a vertical section of the same, taken in the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

This invention relates to certain improvements on a refrigerator for which Letters Patent were granted to me bearing date April 3, 1860.

The object of the within-described invention is to render the refrigerator above named applicable either as an evaporating-refrigerator or one in which a low temperature may be obtained by means of ice, and at the same time render the waste ice-water available for refrigerating purposes and due provision made for keeping the interior of the refrigerator free from moisture, a dry as well as a low temperature being essential for the perfect preservation of meats and vegetables.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the body of the refrigerator, the walls B of which are constructed of any suitable non-conducting material, either entire or with their hollow walls with the space filled in with the non-conducting material. These walls B are encompassed by a case, C, of wood, which is perforated both at its sides and top with holes *a*, as shown in both figures, and is of such dimensions as to leave a space, *a*, between the walls B and the inner surface of C. The exterior of the case C is grooved both horizontally and vertically between the holes *a*, so as to form projecting points *b*, over which a covering, D, is drawn or fitted snugly. This covering may be of canvas, or any suitable fibrous material which will absorb water, and the covering D, when fitted upon or drawn over the case C, will bear or rest upon the points *b* of the latter only, so as to leave both

sides of the covering exposed to the atmosphere. The walls B and case C rest upon a suitable base, E, underneath which a filter, F, is placed, having an inclined bottom and discharge-apertures *c* at one end. (See Fig. 2.)

G represents a ventilator, which is simply a small chamber fitted in the top of the case C and communicating with the interior of the refrigerator, said chamber having perforated sides, as shown in both figures. The base E is sufficiently large to project beyond the case C and form a water-receptacle, H, and on the top of the case C there is placed a reservoir, I, which extends all around the case and is perforated directly over the fibrous covering D. In the lower parts of the walls B there are made openings *d*, which form a communication between the interior of the refrigerator and the open space *a*<sup>x</sup> between the walls B and the case C, as shown clearly in Fig. 1. Within the refrigerator there are placed a series of provision-shelves, which are composed of parallel rods *e*, fitted in horizontal frames J, and underneath each of these shelves there is an inclined plate, *f*, the lower or depressed end of which is perforated, as shown at *g*. These plates *f*, it will be seen by referring to Fig. 1, are inclined alternately in reverse directions, so that all moisture which may collect or fall upon them will pass down from one plate to the other, and finally be discharged into the filter F through openings *h*, as indicated by the red arrows in Fig. 1. Any moisture which may collect on the inner sides of the walls B will drop down the sides and pass through grooves *i* at the edges of the frames J and pass through the openings *h* into the filter, as indicated by the black arrows 1 in Fig. 1. Directly underneath the inclined plates *f* there are placed plates J', which are fitted in the frames J and form, in connection with the inclined plates *f*, close chambers *k*, which communicate one with the other by means of chutes *l*, the lower one of which communicates with a chamber, *m*, at the bottom of the refrigerator, said chamber communicating by means of a passage, *n*, with the filter F, as shown in Fig. 2. The uppermost chamber, *k*, is underneath an ice-box, K, and the drip or waste ice-water descends from said box into the upper chamber and passes from the latter through the several chutes *l* and



chambers *m* into the filter *F*, as indicated by the blue arrows. By this arrangement the waste water from the ice-box is not allowed to be in contact with the atmosphere in the refrigerator, and consequently the air in the refrigerator cannot become surcharged with moisture from that cause, while a large area of cooling-surface is presented to the air within the refrigerator. The door *A* of the refrigerator is constructed in the same way as the sides, as will be seen by referring to Fig. 2.

Whenever desired, the reservoir *I* may be supplied with water, which will pass through the perforations in its bottom and saturate the covering *D*, which, on account of being exposed to the air on both sides, will cause the moisture in the covering to evaporate rapidly, and thereby reduce the temperature of the air within the refrigerator. This evaporating apparatus may be used either with or without the ice-box *K*. If the latter be used alone, the ventilator *G* may be removed and the hole in the top of the case *A* closed, as well as the openings *d* in the lower part of the walls *B*, which admit a current of air upward at the inner side of the covering *D*, as indicated by the black arrows 2 in Fig. 1.

The filtered water which escapes from the filter *F* is suitable for use, culinary purposes, &c.

I do not claim, broadly, the canvas or fibrous covering in connection with the reservoir and water-receptacle in the base of the refrigera-

tor, for these parts have been previously used, and may be seen in the refrigerator formerly patented by me and previously alluded to; but,

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

1. The provision-shelves formed of the rods *e*, in combination with the inclined plates *f* and filter or water-receptacle *F* and the grooves *i* in the sides of the frames *J*, for the purpose of affording an escape for the moisture within the refrigerator, as set forth.

2. The close chambers *k*, in connection with the chutes *l*, ice-box *K*, and filter or water-receptacle *F*, all arranged as and for the purpose specified.

3. The fibrous covering *D* and reservoir *I*, in combination with the ventilator *G* and the openings *d* in the walls *B*, to operate as and either with or without the ice-box *K*, for the purpose set forth.

4. The combination of the provision-shelves *e*, inclined plates *f*, chambers *k*, chutes *l*, ice-box *K*, fibrous covering *D*, ventilator *G*, and openings *d*, all arranged to form a new and improved refrigerator, substantially as set forth.

W. M. BAKER.

Witnesses:

THOS. R. NOEL,  
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