FORBES & MACBETH.

Refrigerator.

No. 51,035. Patented Nov. 21, 1865.

Fig. 1.

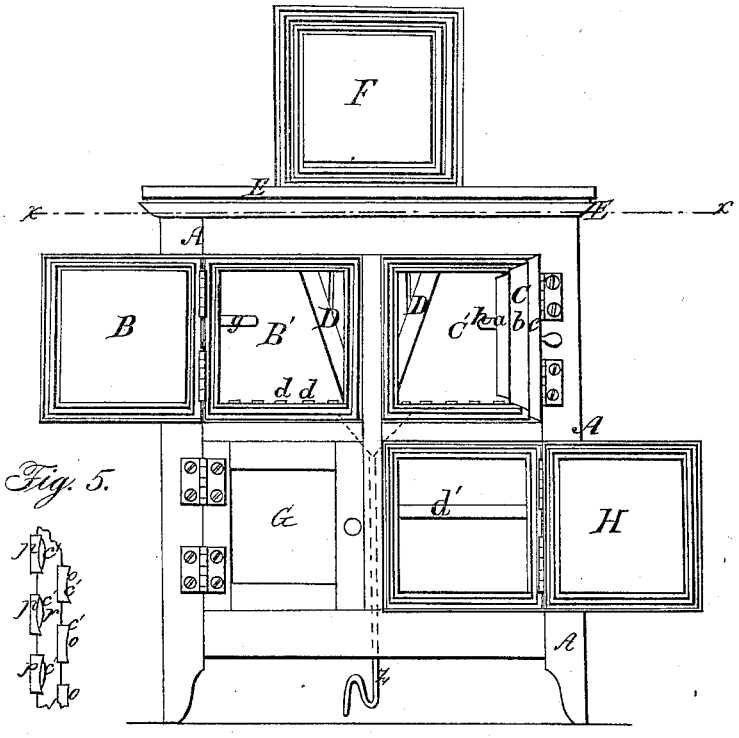


Fig. 5.

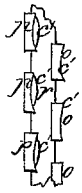


Fig. 3.

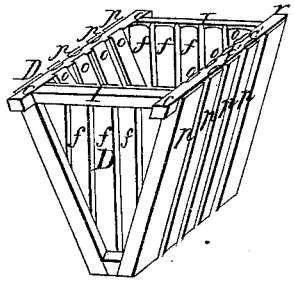


Fig. 2.

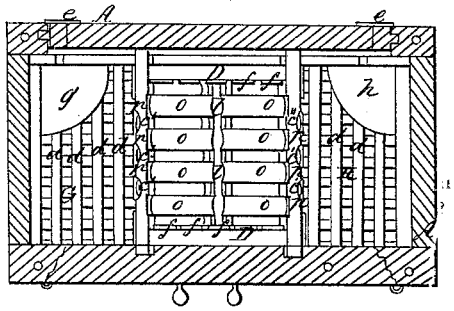
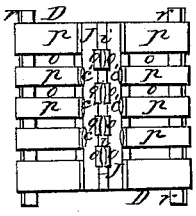


Fig. 4.



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UNITED STATES PATENT OFFICE.

ALEXANDER FORBES AND JOHN MACBETH, OF CLEVELAND, OHIO.

IMPROVED REFRIGERATOR.

Specification forming part of Letters Patent No. **51,035**, dated November 21, 1865.

To all whom it may concern:

Be it known that we, ALEXANDER FORBES and JOHN MACBETH, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Refrigerators; and we do hereby declare that the following is a full and complete description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a front elevation. Fig. 2 is a transverse section in the direction of the line *x x* in Fig. 1. Figs. 3, 4, and 5 are sectional views, that will be referred to in the description.

Like letters of reference refer to like parts in the different views.

My improvement relates to refrig rators, as hereinafter described.

A represents the refrigerator, which can be built in any desirable form, and can be divided into any number of chambers or compartments. There are four doors, B C G H, opening into the front o' this refrigerator, two above and two below, as represented. These doors are rendered very close by being cut out and beveled off, as at *a b c* in Fig. 1, that fit into corresponding depressions and bevels in the openings. The walls of the refrigerator and doors are thick or sufficiently deep through to be hollow, so as to contain some poor conductor. The inside is divided off into chambers by slats being put across, as shown at *d'* in Figs. 1 and 2, dividing it through the middle, and there can be shelves made in the same manner, as at *d'*. There are slats also in the bottom or floor.

g and *h* are shelves in the corners of the upper chambers, B' and C'.

D is an ice-chamber, represented detached in Figs. 3 and 4, Fig. 3 being a perspective view and Fig. 4 a view of the under side. The chamber or ice-box is made of slats. Those at the end, or slats *f*, are vertical, and secured to pieces I at the top. There are two rows of slats, *o* and *p*, on the sides, that are secured on the outside and inside of cross-pieces *r* at the top. The side slats are inclined toward each other from the top downward, and are secured at the lower end to the outside and inside of pieces J, as shown in Fig. 4, leaving a space, *i*, between. The slats *p*, on the outside are placed opposite the spaces between the slats *o*, on the inside, and they are curved out on the inside, as at *c'*. (Shown clearly in Fig. 5, which is an enlarged view of the top of the slats, showing their form and their position in relation to each other.) One object of having the side slats thus inclined and curved is that the water, as it melts from the ice, will drop and run down on them into a metallic trough arranged underneath the chamber, as indicated by the dotted lines in Fig. 1. But it is found in practice that the ice rests in such a manner upon the slats, coming in contact only with the corner edges, that as it melts, which is very slowly, the water runs down around the ice into the trough and does not drop much upon the slats. The side-slats are so arranged in double rows, the outer slats being opposite the spaces between the inner ones, as before stated, that should the water or small pieces of ice drop through between the inner slats it will lodge or run down on the outer ones. In this way water and dampness are effectually prevented from entering the chambers of the refrigerator; and the ice-chamber, being narrow across the lower end, as represented, leaves so much space on each side in the refrigerator; besides, the chamber, being of this form, is well adapted for containing the ice.

The slats *f* at the ends of the ice-box can be double, like the side slats, if desired.

The water is conveyed from the trough underneath the ice-chamber through a pipe, *z*, connected to the front end of the trough and extending down on the inside, as noted by the dotted lines in Fig. 1. The pipe is bent or curved up and down, the object of which is that as the water runs down in the pipe there will always be some water in the lower curve, that will prevent the hot air from the outside from entering the ice chamber or chambers of the refrigerator.

In the middle of the top there is a lid, F. (Seen in Fig. 1.) It is thick through, like the other walls, and the edges are cut and bevelled off in a similar manner to the front doors, fitting down close in the opening.

There are ventilators in the back of the refrigerator, near the top, as indicated by the dotted lines in Fig. 2. They are circular open-

ings covered with gauze, and they can be entirely closed by covers *e*, pivoted to the outside, that can be turned on or off the openings.

What we claim as our improvement, and desire to secure by Letters Patent, is—

1. The ice-chamber D, constructed and arranged with curved double slats, in combination with the trough, as and for the purpose set forth.

2. The tapering ice-chamber D, in combination with the refrigerator, when constructed and arranged in the manner and for the purpose set forth.

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