

S. GASPER.
REFRIGERATOR.

No. 190,846.

Patented May 15, 1877.

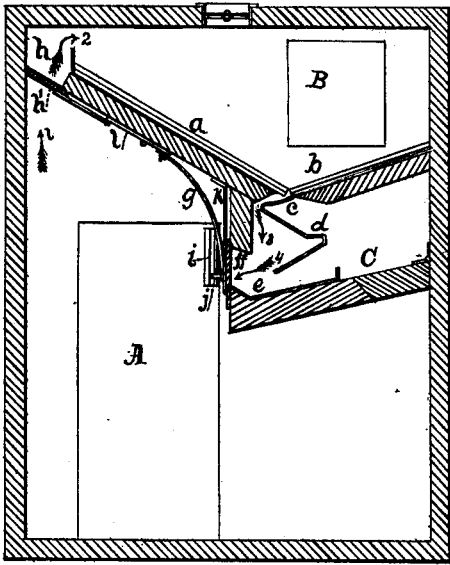


FIG. 1.

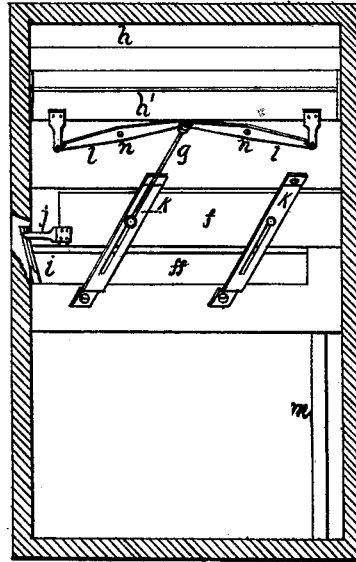


FIG. 2.

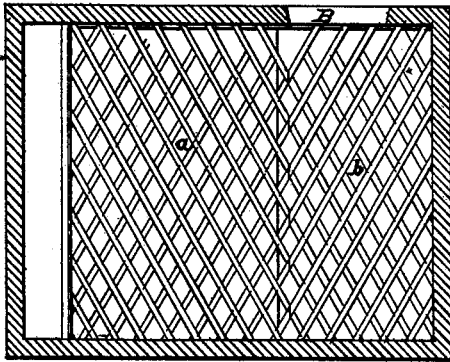
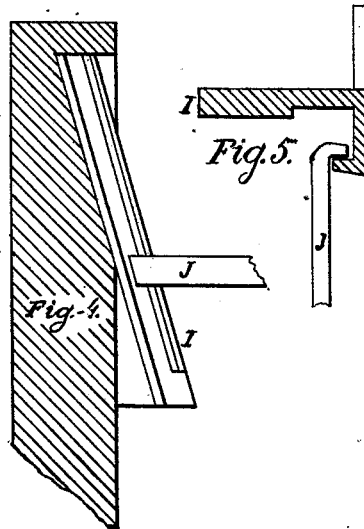


FIG. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

SIMON GASPER, OF INDIANAPOLIS, INDIANA.

IMPROVEMENT IN REFRIGERATORS.

Specification forming part of Letters Patent No. **190,846**, dated May 15, 1877; application filed October 4, 1876.

To all whom it may concern:

Be it known that I, SIMON GASPER, of Indianapolis, Marion county, Indiana, have invented a new and useful Improvement in Refrigerators, which improvement is fully set forth in the following specification, reference being had to the drawings accompanying, in which—

Figure 1 is a vertical section through the refrigerator, showing ice-shelves, &c. Fig. 2 is a vertical section at right angles to Fig. 1, showing levers, slides, &c. Fig. 3 is a horizontal section, showing ice-shelves with top of refrigerator removed. Fig. 4 is an enlarged side view of attachment on door operating the slides. Fig. 5 is a section of Fig. 4 enlarged.

A is the entrance-door to main chamber. B is the aperture through which the ice is introduced. C is the bottom of the cold-air chamber, part of which is hinged to wall of refrigerator. D is a ventilator on top of refrigerator, arranged with valve to allow the air in the main chamber to escape upon being compressed by the closing of the door, and, at the same time, exclude the external air.

The objects of my invention are to preserve the ice from rapidly melting, to retain the air free from excessive humidity, and to protect the ice from the effects of currents of warm air entering the main chamber upon the door communicating therewith being opened.

These objects I accomplish in the following manner: The ice-shelves are formed of two inclined planes, covered with zinc or other sheet metal, as shown at *a* and *b*, Figs. 1 and 3; and on top of these shelves is laid a lattice-work of wood or metal strips, upon which the ice is laid, and by means of which the drip-water from the dissolving ice is drained off, escaping through the perforations at *c* and *d*, and conducted to the point *e*, whence it is conveyed out of the refrigerator by the pipe *m*, (see Figs. 1 and 2,) thus securing the ice from contact with the water, which, being of a higher temperature, would cause more rapid dissolution if allowed to surround the ice, and, at the same time, retain the air in

the refrigerator from excessive humidity, which would be inevitable if the accumulating drip-water was allowed to remain in the refrigerator.

The ice is preserved from the effects of warm-air currents from the main chamber by the slides *f* and *h'*, which, upon the door communicating with the main chamber being opened, close the apertures having access to the ice-shelves, thus excluding warm currents of air.

These slides are operated by the protruding lever *j* attached to the slide *f* coming in contact with the slide-strike *i* attached to the upper end of the door *A*, and, upon the door being closed, moves the slide *f* along the guides *k k*, opening the aperture *f f*, and, at the same time, operates the slide *h'*, by means of the connecting-rod *g*, which operates the two levers *l l*, which swing on the pivots *n n*, drawing downward the slide *h'*, and opening the aperture *h*. By the opening of the door *A*, a contrary movement takes place, and, while open, all the apertures having access to the ice-shelves are closed.

The operation of the slides may be effected by any equivalent mechanical movement; and the attachment may be applied to more than one door, if more were necessary in any case.

While the doors communicating with the exterior are closed, a constant circulation of air takes place within the refrigerator. The more rarefied portions, ascending in the direction indicated by the arrows 1 and 2, and coming in contact with the ice, are condensed, and descend into the cold-air chamber and storage-chamber in the direction indicated by the arrows 3 and 4.

The exterior walls of the refrigerator are built in the usual manner, but metal fittings and frames may be used on and around all doors to fit air-tight, and obviate the effects of contraction and expansion incident to wooden doors.

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

A refrigerator provided with double in-

clined shelves for holding the ice-supply, immediately beneath which is a cold air chamber into which the cold air and drip-water flow from the shelf, the inlet openings to the ice-chamber and outlets from the cold-air chamber being opened and closed from communication with the main chamber by means

of suitable slides co-operating through, connecting-levers, with the entrance-doors, substantially as shown and described.

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Witnesses:

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