(No Model.) 3 Sheets—Sheet 1.

C. J. LANG.

REFRIGERATOR.

No. 457,087. Patented Aug. 4, 1891.

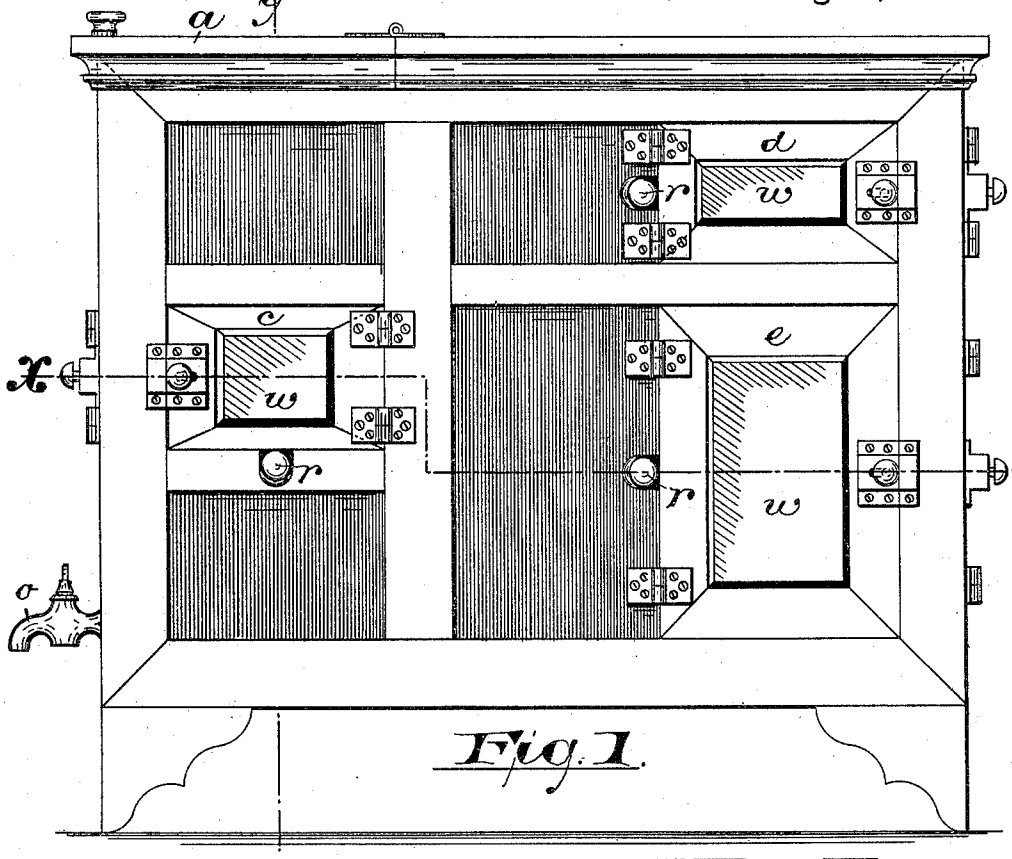


Fig. 1.

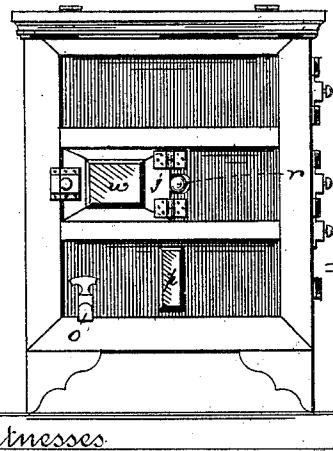


Fig. 2.

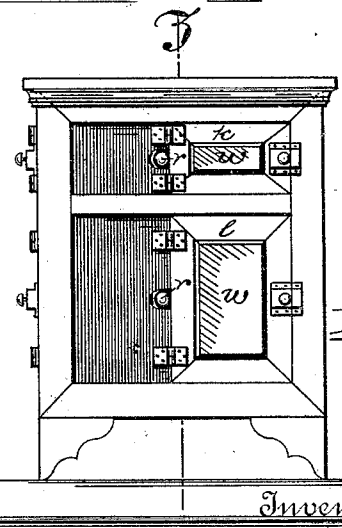


Fig. 3.

Witnesses

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 3 Sheets—Sheet 2.

C. J. LANG.

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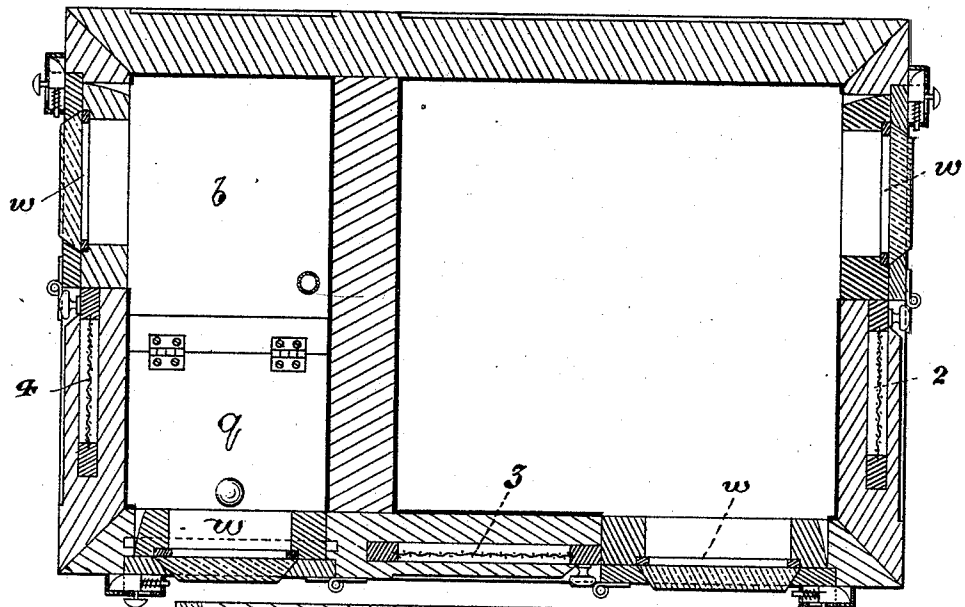


Fig. 4.

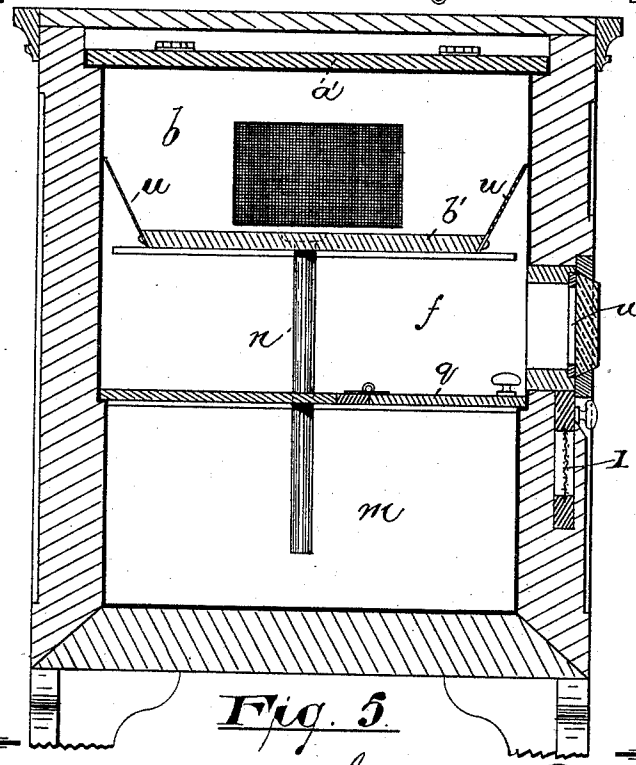


Fig. 5.

Witnesses

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(No Model.) 3 Sheets—Sheet 3.

C. J. LANG.

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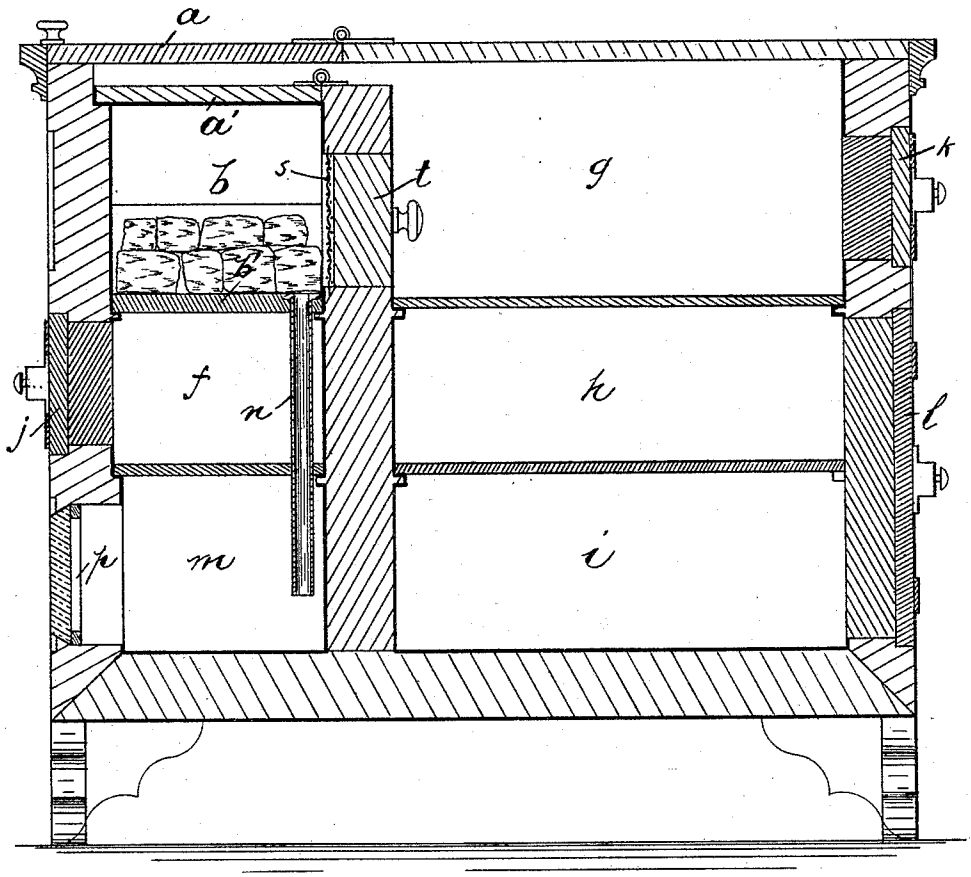


Fig. 6.

Witnesses

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UNITED STATES PATENT OFFICE.

CHARLES J. LANG, OF SOUTH ORANGE, NEW JERSEY.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 457,087, dated August 4, 1891.

Application filed November 22, 1890. Serial No. 372,312. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. LANG, a citizen of the United States, residing at South Orange, in the county of Essex and State of New Jersey, 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 of reference marked thereon, which form a part of this specification.

The object of this invention is to effect a saving in the consumption of ice; to secure greater convenience of access to the several parts or compartments of the refrigerator; to facilitate the introduction and removal of articles to and from said compartments, and to secure other advantages, which will be hereinafter more particularly referred to.

The invention consists in the improved refrigerator and in the arrangement and combination of the several parts thereof, as herein set forth, and finally pointed out in the claims.

Referring to the accompanying drawings, in which similar characters or letters of reference indicate corresponding parts in each of the several figures where they occur, Figure 1 represents in front elevation a refrigerator embodying my improvements; and Figs. 2 and 3 represent in elevation opposite ends or sides of the same, showing certain doors therein whereby access may be had to the several compartments of the refrigerator other than by the doors in the front thereof. Fig. 4 represents a horizontal transverse section taken through lines *x*, and Fig. 5 a vertical section taken through line *y* of Fig. 1. Fig. 6 represents a vertical longitudinal section taken through line *z* of Fig. 3, enlarged.

In said drawings, *a* indicates a door hinged upon the top of the refrigerator and opening into the ice-chamber *b*, Figs. 1, 4, 5, and 6, and *c*, *d*, and *e*, Fig. 1, indicate doors by which access may be had to the several compartments *f*, *g*, *h*, and *i*, Figs. 5 and 6, from the front of the refrigerator.

j, *k*, and *l*, Figs. 2, 3, and 6, indicate doors by which access may be had from the sides of the refrigerator to the said compartments, whereby food or other articles may be deposited in and removed from the rear and central portions thereof without necessitating the removal or disturbance of such articles as may be deposited in the front portions of said compartments, thereby avoiding the inconveniences and annoyances which are experienced when front doors only are used, as will be understood.

The chamber or compartment *m*, Figs. 5 and 6, is intended to receive the drippings from the ice-chamber, which pass through a conduit *n*, and retain them for refrigerating purposes as long as may be desired. When no longer needed, the water may be discharged through a faucet *o*. The quantity of water which may be in said chamber *m* can be ascertained at any time by means of a glass panel *p*, Fig. 2, which is provided for the purpose. Said water-chamber will be found convenient and reliable for cooling bottled food or liquids, which, being tightly corked, may be deposited therein for the purpose through a door *q*, Figs. 4 and 5, by means of which access is had to said chamber, as will be understood.

Inside of the several doors are screens 1, 2, 3, 4, Figs. 4 and 5, which may be utilized for the purpose of preventing the ingress of flies or other insects when the doors are opened for the purpose of ventilating or airing the compartments, or when the doors are not needed to be closed, as in winter or cold weather. Said screens are arranged to slide into suitable recesses or pockets formed in the walls of the refrigerator to receive them when not in use, as indicated in said Figs. 4 and 5. Each screen is provided with a suitable knob *r*, by means of which it may be adjusted when the doors are opened, as will be understood.

Between the ice-chamber *b* and the compartment *g* is arranged a screen *s* and a door *t*, through which cold air may pass directly to said compartment when the said door is open, or be shut off therefrom when not needed and diverted to other compartments by shutting the door aforesaid, thereby diminishing the area to be cooled at pleasure. The shelves, except that at the bottom of said compartment *g*, are preferably grated or perforated to facilitate the passage or circulation of the

cold air through the several compartments, as will be understood.

The shelf or floor b', Figs. 5 and 6, on which the ice is supported, is narrower than the ice-chamber, and is provided at the open sides with grated or perforated side boards or plates u, Fig. 5, through which the cold air may freely pass to the compartments beneath.

All the doors which open upon the outside of the refrigerator, except the door a, are provided with a glass panel w, whereby the location of all the contents of the several compartments can be seen without opening any of the doors, thereby enabling a person to determine precisely which door and compartment to open when wishing to remove anything from or deposit anything in the refrigerator, thus effecting a material saving in the consumption of ice, as will be manifest.

Instead of single doors, as d and e, in the front of the refrigerator, double doors may be substituted therefor, capable when open of exposing the compartments g, h, and i to their full extent, should it be desirable at any time to do so.

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

1. A refrigerator consisting of a casing or housing divided into two chambers, the three compartments in one of the chambers, the three compartments in the other chamber, the upper forming the ice-chamber, the doors for this compartment, the door for closing the opening between the ice-chamber and upper compartment, and the screen in said opening, substantially as described.

2. A refrigerator consisting of a divided casing, openings communicating with said casing from the side and ends, doors for closing said openings, the ice-chamber having the bottom provided at the ends with the perforated plates, the compartments below the ice-chamber, the conduit leading from the ice-chamber to the lower compartment, the compartment at one side of the ice-chamber communicating with the ice-chamber, the screen between the chamber and compartment, and the compartments below said last-named compartment, all substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 17th day of November, 1890.

CHARLES J. LANG.

Witnesses:
OLIVER DRAKE,
OSCAR A. MICHEL.