

(No Model.)

J. A. WATTS.
REFRIGERATOR.

No. 492,909.

Patented Mar. 7, 1893.

Fig: 1.

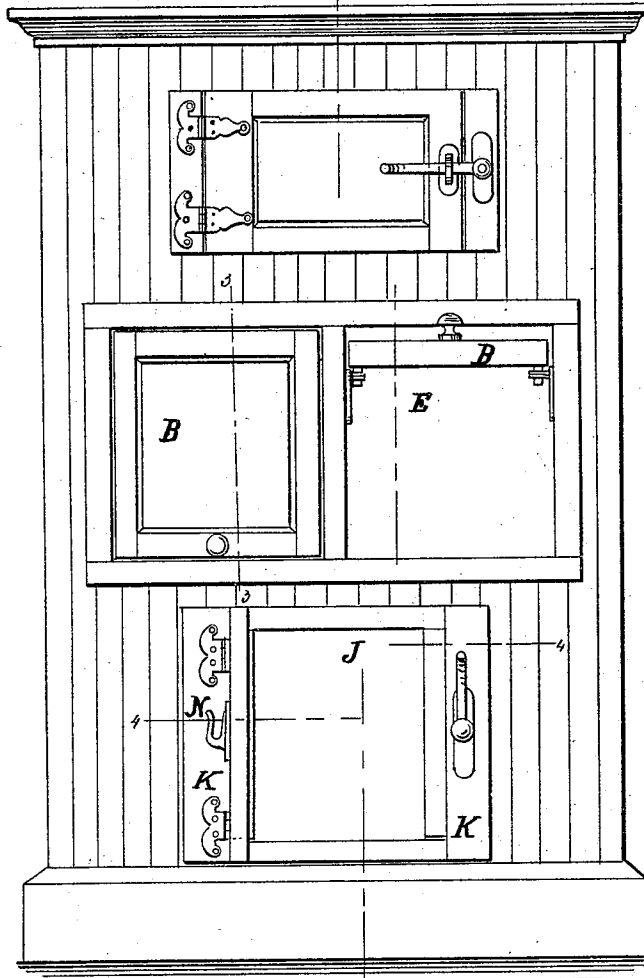


Fig: 2.

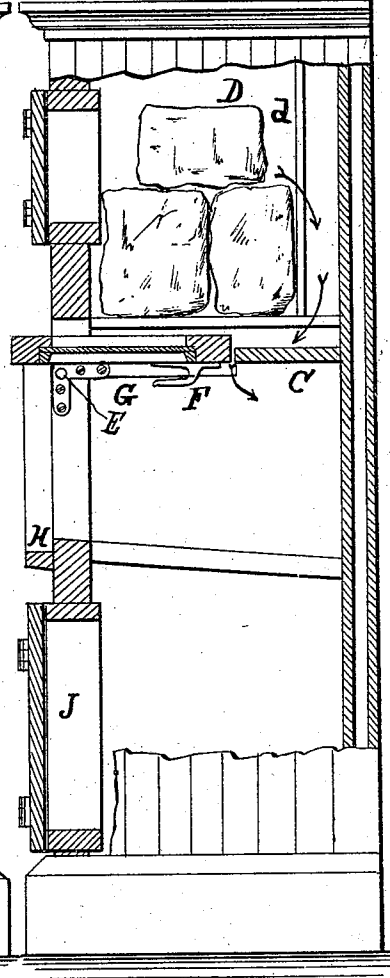
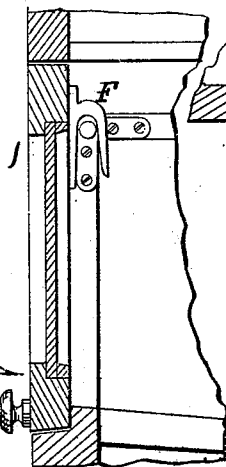


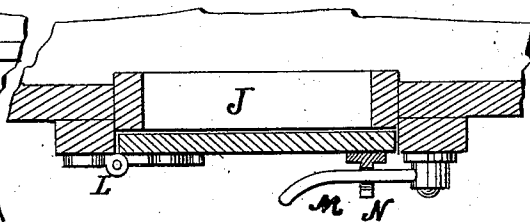
Fig: 3.



WITNESSES:

Harold P. May
May 4. Ridley

Fig: 4.



INVENTOR

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JOHN A. WATTS, OF NEW YORK, N. Y.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 492,909, dated March 7, 1893.

Application filed May 25, 1892, Serial No. 434,311. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. WATTS, of New York city, New York, have invented certain new and useful Improvements in Refrigerators, of which the following is a description, reference being taken to the accompanying drawings, which form part of this specification.

The object of my invention is to produce a refrigerator in which I may simultaneously open the upper part of the provision chamber and cut off the supply of cold air flowing from the ice chamber to the provision chamber: and at the same time and in conjunction with such an arrangement to provide a door for the lower portion of the provision chamber which may be securely and hermetically closed and which will not be liable to leak in consequence of warping, swelling, and other distorting actions.

With these objects in view, my invention is embodied in the refrigerator and its several features, constructed, arranged, combined, and used, substantially in the manner, and for the purposes, hereinafter described, illustrated, and claimed.

In the drawings, Figure 1 is a face view of my refrigerator. Fig. 2 is a sectional view on the line 2—2 of Fig. 1. Fig. 3 is a section of my sliding door as closed, the section being taken on the line 3—3 in Fig. 1. Fig. 4 is a horizontal section on the line 4—4 of Fig. 1, but shows the lower door closed instead of open as in Fig. 1.

In these views like letters of reference indicate like parts.

In order to insure the closure of the air passage between the ice chamber and the provision chamber of my refrigerator, I provide a hinged door B which may be opened to a horizontal position and then pushed back into the refrigerator till it strikes against a shelf or stop C beneath the ice chamber. In this position it forms with the stop C a continuous horizontal partition between the ice and provision chamber, as shown in Fig. 2.

At the rear of the ice chamber D, a grating *d* permits the passage of cold air from the ice downward and onto the shelf or stop C. When the doors B are closed the air is free to flow forward and downward in front of the shelf and spread over the provisions or other articles in the refrigerator. When, however,

the door is opened and pushed back, this supply of cold air is completely cut off and waste thereby prevented. The combined swinging and sliding motion for this door is effected by means of stationary studs or pivots E, inside the frame of the door, and hooks F carried upon the rear face of the door at or near its upper edge. Between the vertical and horizontal positions, the hooks F and pins or studs E form horizontal hinges; but when the door is in its horizontal position it may be pushed back upon suitable guide cleats G, the hooks disengaging the studs E. In its vertical position the weight of the door rests upon the projecting sill H, instead of upon the hooks, as in Fig. 3, and in this way a tight closure to the door is effected.

For the proper operation of my refrigerator it is necessary, in addition to the combination door last described, to provide an absolutely tight door for the lower portion of the provision chamber. Great trouble has been encountered in making these doors tight, on account of the shrinking, and swelling, of the door and door frame. I have now however, produced a door which may swell or shrink half an inch or more without in any way disturbing its tight closure. Warping is entirely prevented by the firm pressure of the door against the plane face of the door jamb, the pressure being applied at three approximately equidistant points.

The door jamb is indicated at J. It consists of a rectangular frame, as shown, which projects about a quarter of an inch from the face of the refrigerator. At either side of the jamb I place cleats K which project beyond the jamb, as shown in Fig. 4, a distance equal to the thickness of the door. The door fits in between these cleats and against the face of the jamb, the face of the door when closed being flush with the front face of the cleats. The door is secured to one of these cleats by strong and durable hinges L. Upon the other cleat is carried the swinging latch lever M which is constructed to bear against the inclined surface of a hook N upon the door, and thereby force the door firmly shut against the face of the jamb. When the parts are being first set in place, the rectangular door jamb is knocked out from the inside of the refrigerator until it exactly adapts itself to the inner

face of the closed door. After this the jamb is permanently secured into position. By this means the irregularities and variations in the manufacture of the door are properly allowed for, and leaky ill-fitting doors prevented. As the plane rear face of the door rests against the plane formed by the edge of the jamb, shrinkage and swelling merely cause these two parallel planes to slide upon each other without in any way interfering with the tight closure of the door.

I have now set forth one form of my invention, with its purposes and manner of use, and therefore, without limiting myself to the precise details shown, and desiring to secure by these Letters Patent the many immaterial modifications which may be made in the construction of parts, or which may very readily suggest themselves to the skilled mechanic,

I claim as my own the following:

1. In combination with a refrigerator, a door therefor, hooks F secured to the rear face of the said door, studs or pivots E secured to the said refrigerator and arranged to engage

the said hooks when the door is being opened and closed and to be disengaged therefrom when the door is open and pushed back, and a shelf C within the said refrigerator, against which the said door may be pushed, substantially as, and for the purposes, set forth.

2. In combination with a refrigerator a door for the provision chamber and like uses, consisting of an adjustable door jamb projecting from the face of the structure, a pair of cleats upon either side of the jamb projecting beyond the face thereof, a door constructed to be closed against the face of the said jamb and between the said cleats, hinges for the said door, and a latch for pressing the door against the face of the said jamb, substantially as, and for the purposes, set forth.

In testimony whereof I have hereunto set my hand this 14th day of May, 1892.

JOHN A. WATTS.

Witnesses:

HAROLD BURNEY,
MAY G. RIDLEY.