

J. R. PERSHALL.
REFRIGERATOR.

No. 345,171.

Patented July 6, 1886.

Fig. 2.

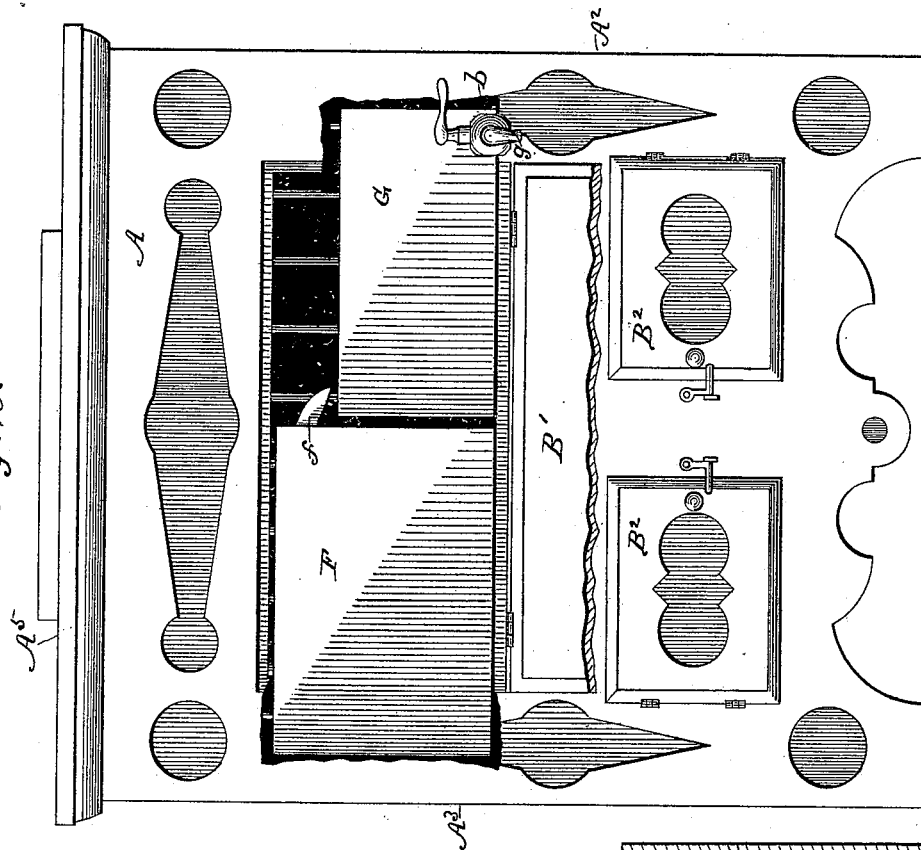
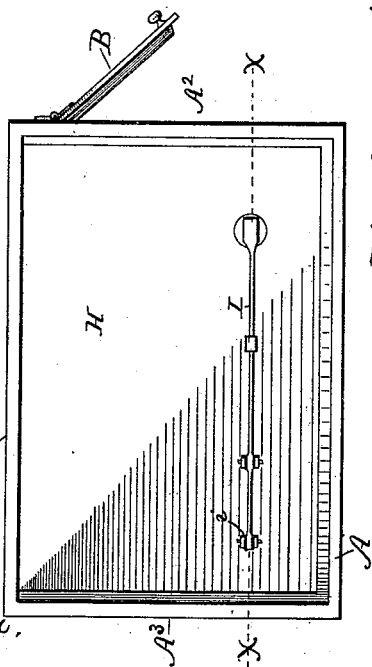
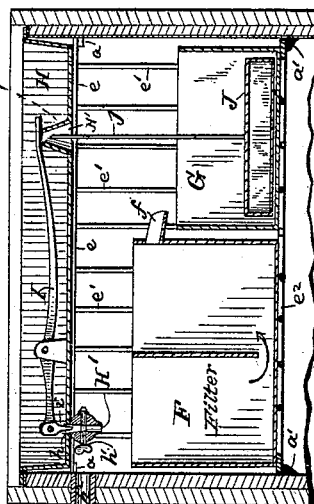


Fig. 1.



WITNESSES:
Thos. Houghton.
R. B. Turpin.

Fig. 3.



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Fig. 5.

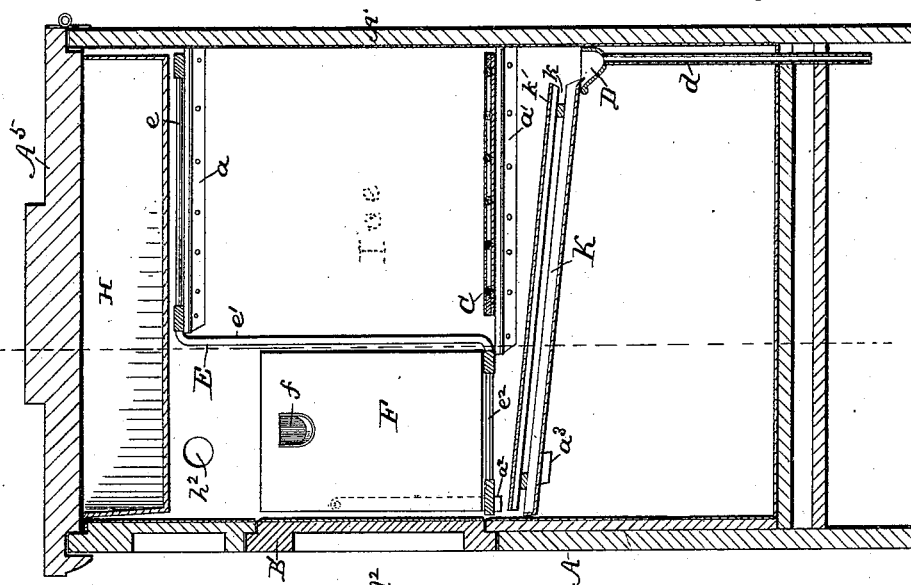
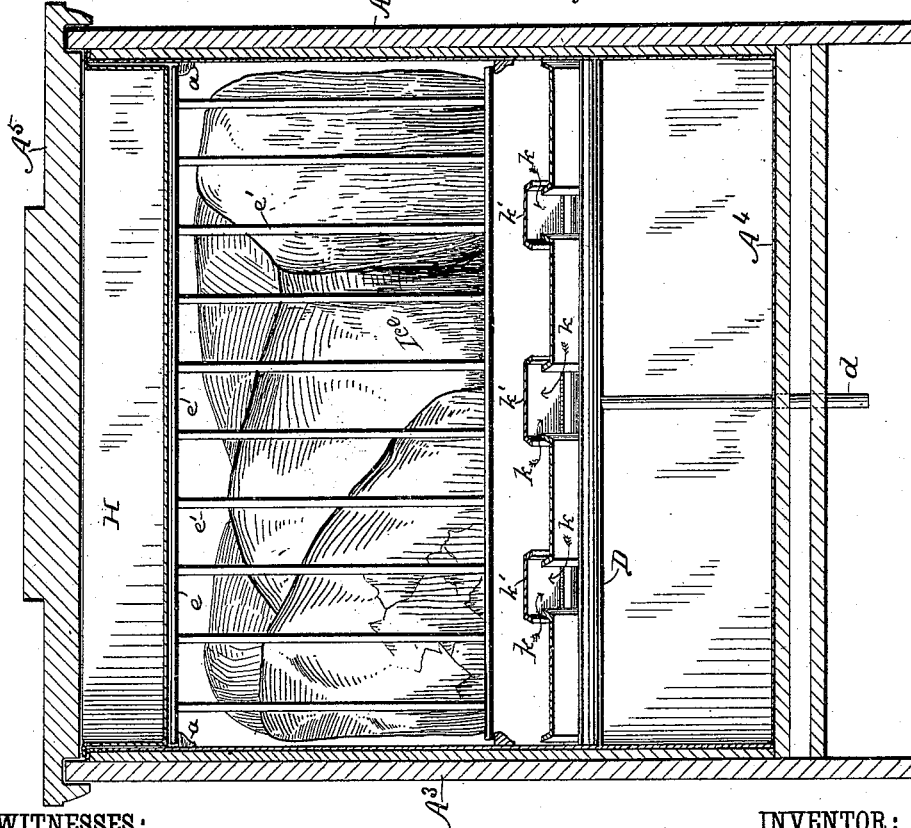


Fig. 4.



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UNITED STATES PATENT OFFICE.

JAMES R. PERSHALL, OF LAWRENCE, KANSAS.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 345,171, dated July 6, 1886.

Application filed July 6, 1885. Serial No. 170,783. (No model.)

To all whom it may concern:

Be it known that I, JAMES R. PERSHALL, a citizen of the United States, residing at Lawrence, in the county of Douglas and State of Kansas, have invented certain new and useful Improvements in Refrigerators, of which the following is a description.

This invention is an improvement in refrigerators; and it consists in certain novel constructions, combinations, and arrangements of parts, as will be hereinafter first fully described, and then pointed out in the claims.

In the drawings, Figure 1 is a plan view of the refrigerator with the top removed. Fig. 2 is a front view with parts broken away to show the filter and water-receiver. Fig. 3 is a detached vertical section on line *x x*, Fig. 1, showing the tank, valves, filter, and water-receiver with the valve-operating mechanism, and Figs. 4 and 5 are respectively longitudinal and transverse vertical sections of my improvement, all of which will be described.

The casing comprises the front, rear, and side walls, *A A' A² A³*, the bottom *A⁴*, and the top *A⁵*. Each of the side walls is provided with cleats or ribs *a a'*, the former to receive and support the top wing of the three-winged grating and the latter to receive the ice-support. They also have lugs or projections *a² a³* near their forward edges. On the projection *a²*, I rest the lower wing of the three-winged grating, while the lug *a³* serves as a support for the upper end of the drip-pan.

The side wall, *A²*, is provided with a door, *B*, communicating with the ice-chamber, and doors *B' B² B³* are provided in the front of the casing, as shown. The door *B'* permits access to the filter and the water-receiver, and in the edge of the doorway of such door is formed a slot or offset, *b*, for the discharge-pipe of the water-receiver. The lower doors, *B² B³*, communicate with the provision space.

The ice support or grating *C* is rested on the ribs *a'*, and may be removed at will in order to cleanse or air the refrigerator. The ice may be supplied to this support through the door *B*. On the rear wall of the casing, adjacent and below the ice-support, is arranged a trough, *D*, which catches the water of condensation, and has an independent discharge-pipe, *d*. This trough serves as a support for the lower rear end of the drip-pan, and re-

ceives the water from such pan, as well as the water condensed on the back wall of the refrigerator.

The three-winged grating *E* has a top wing, *e*, rested on the ribs *a a'*, a depending approximately-vertical wing, *e'*, and a lower or base wing, *e²*, which rests on the projections *a²*. On this base-wing is mounted the filter *F* and the water-receiver *G*. The filter may be of any approved pattern, and has a discharge, *f*, into the water-receiver. This latter has a spout, *g*, which projects through the casing and is preferably fitted into the offset *b*. The filter and water-receiver may both be removed from the casing, when so desired.

The tank *H* is shallow and flat and is rested on the top wing of the frame *E*. This pan is provided with a discharge, *H'*, provided near its upper end with a seat, *h*, and it also has a cock or valve, *h'*, which is under the control of the user and may be manipulated by a suitable wrench or nippers inserted through an opening, *h²*, in the side of the case. A lever, *I*, is pivoted between its ends and is provided at one end with a valve, *i*, fitted to the seat *h*. The end of the lever opposite the valve is the heavier and is arranged in position to be engaged and actuated by a rod, *j*, projected from a float, *J*, placed and operating within the water-receiver. This rod is preferably passed up through an opening, *H'*, in the bottom of the pan, which opening is surrounded by tube *h'*, projected up in the pan, as such tube serves the double purpose of a guide for the rod *j* and a stop to limit the downward movement of the heavy end of lever *I*. It will be understood that this tube should project above the level of water in the tank, and when it is desired to fill the tank such tube should project above the top thereof, or else be provided with a suitable stuffing-box for the passage of rod *j'*. By this construction it will be seen when the water is drawn from the receiver the float descends and the automatic valve *i* is raised from its seat and water flows from the tank into the filter. The valve *h'* will serve to regulate the force with which the water flows into the filter. When the receiver has again filled, its float-rod will actuate the lever *I*, and valve *i* will close the discharge from the tank. Below the ice-support I arrange the drip-pan *K*, the forward upper end

of which rests on the lugs or supports a^3 , and its other end rests on the trough D. This pan is formed with openings k , the edge walls of which incline upward in order to prevent water from flowing thereoff into the provision-compartment below, and above such openings k are arranged sheds or cover-plates k' , the edges of which project laterally beyond the sides of the openings k , as shown. By this construction the refrigerated air can pass freely to the provisions below, and the drippings from the ice are effectually prevented from falling thereon.

It will be noticed that the tank, filter, and receiver are in contact with the ice-chamber and the water is being constantly cooled without the impurities of the ice being taken up in solution. It will also be noticed that each and every part of the internal construction may be quickly and conveniently removed for any desired purpose.

The arrangement of tank, filter, and receiver is such that the maximum exposure and subjection to the refrigerant is obtained, and by the automatic-valve constructions all overflow of the purified water is prevented.

Having thus described my invention, what I claim as new is--

1. The combination of a water-receiver, a tank located above said receiver and having a discharge, a pivoted lever, a valve supported on one end of the lever and adapted to control the discharge of the tank, a float in the water-receiver, and a rod supported by said float and arranged to engage the opposite end of the lever from the valve, substantially as set forth.

2. The combination of a water-receiver, a tank located above said receiver and having a discharge-opening, and a second opening surrounded by an upwardly-projected tubular guide, a valve whereby to control the discharge, a lever supporting said valve, and a float arranged in the water-receiver and having a rod extended through the tubular guide and engaged with the valve-supporting lever, substantially as set forth.

3. In a refrigerator, a water tank or reservoir provided with a discharge-pipe having an automatic valve, and a second valve under the control of the operator, combined with a filter, a water-receiver, and connections between the latter and the automatic valve of the tank, substantially as set forth.

4. A refrigerator comprising a casing and a three-winged grating or frame therein, whereby to support the filter, receiver, and water-tank, substantially as set forth.

5. In a refrigerator, the combination of the casing, the three-winged supporting grate or frame having a base, a vertical and a top wing, the filter and water-receiver supported on the base-wing, the water-tank supported on the top wing, and an ice-supporting grate arranged in rear of the filter and receiver and below the water-tank, substantially as set forth.

6. The combination of a water-tank having a discharge-opening, and a second opening surrounded by an upwardly-projected tubular guide, a valve whereby to control the discharge, a float in the water-receiver, and a rod supported by said float and extended thence through the tubular guide and connected with the valve, substantially as set forth.

7. The improved refrigerator, substantially as herein described and shown, consisting of the casing, the ice-support, the three-winged supporting-grate, the filter and water-receiver supported on the base-wing thereof, the tank arranged on the upper wing of the grating, a trough arranged on the side of the casing adjacent the ice-chamber and having an independent discharge, and the drip-pan having openings, and provided with sheds or covers above said openings, substantially as set forth.

JAMES R. PERSHALL.

Witnesses:

L. L. DAVIS,
S. M. ALLEN.