

(No Model.)

G. A. BOWEN.
REFRIGERATOR.

No. 515,647.

Patented Feb. 27, 1894.

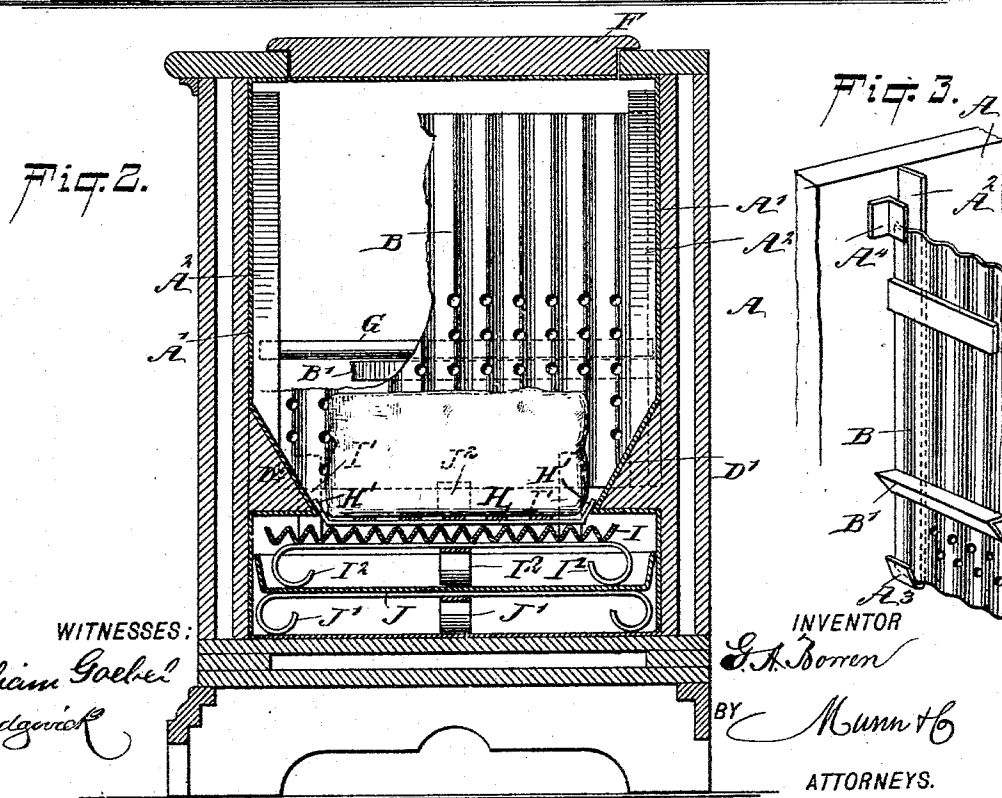
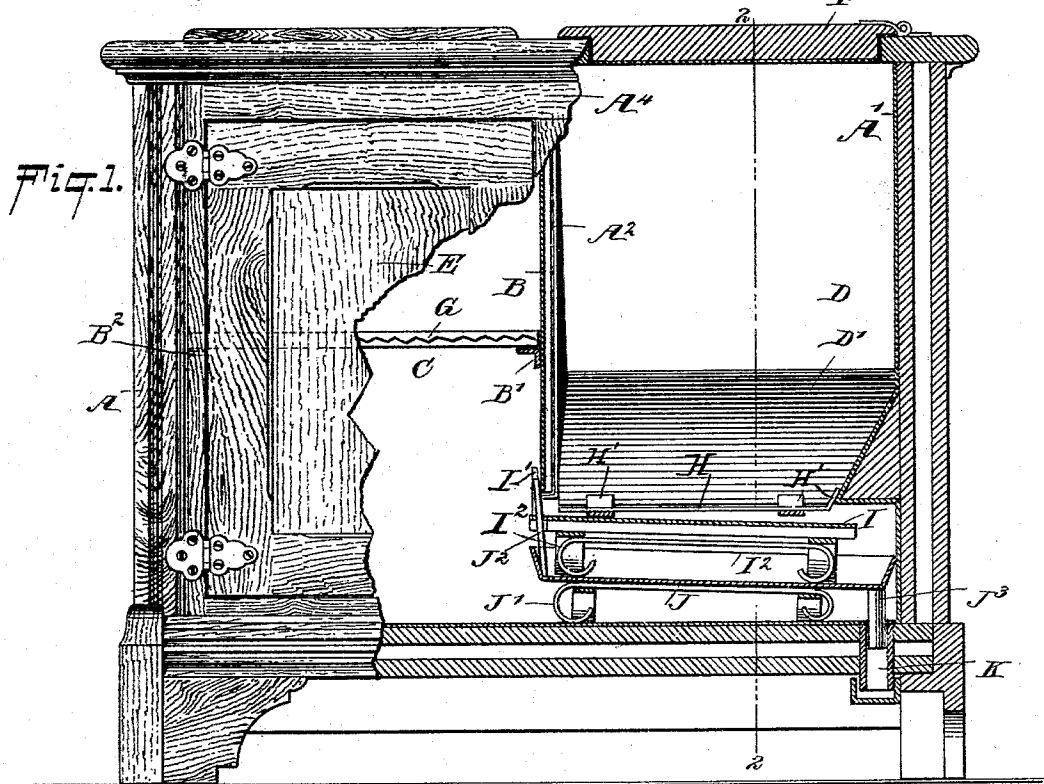
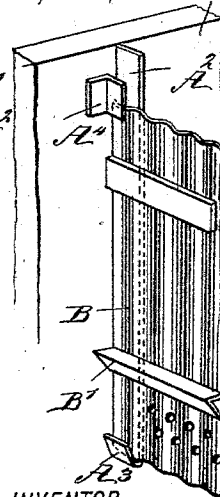


Fig. 3.



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GEORGE A. BOWEN, OF FOND DU LAC, WISCONSIN.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 515,647, dated February 27, 1894.

Application filed August 5, 1893. Serial No. 482,420. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. BOWEN, of Fond du Lac, in the county of Fond du Lac and State of Wisconsin, have invented a new and Improved Refrigerator, of which the following is a full, clear, and exact description.

The invention relates to refrigerators, such as shown and described in the Letters Patent of the United States No. 496,378, granted to me on the date of April 25, 1893.

The object of the present invention is to provide an improved refrigerator which is more especially designed for household use, and completely separates the provision chamber from the ice compartment, to prevent all moisture emanating from the ice, from passing into the provision chamber.

The invention consists of certain parts and details, and combinations of the same, as will be hereinafter described, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement with parts broken away and in section. Fig. 2 is a transverse section of the same on the line 2—2 of Fig. 1, with parts broken away; and Fig. 3 is a detail perspective view of the guideway for the partition.

The improved refrigerator is provided with a suitable box or casing A, having on its interior surface a sheet metal lining A', supporting at the front and rear vertically-disposed strips A², curved upward at their lower ends to form hooks A³ for supporting the lower ends of a transverse partition B, likewise made of sheet metal and corrugated and with the lower part perforated, as plainly indicated in Fig. 2. Near the upper ends of the strips A² are arranged lugs A⁴ (see Fig. 3) parallel to the strips and forming guideways with the latter for the upper end of the partition B. This partition B extends from near the top of the box A, so that when the partition is moved upward, its lower ends disengage the hooks A³ to permit of slightly tilting the partition and pulling it downward outside the hooks A³, to finally disengage the upper end of the guideway lugs A⁴, to permit of entirely removing the partition from

the box. The lower end of the partition terminates a suitable distance above the bottom of the box A and the partition divides the box A into the provision chamber C and the ice compartment D, located one alongside the other, the said provision chamber being provided with a door E, formed in the front of the casing or box A, while the ice compartment D is provided with a cover or lid F, hinged to the top of the said box. Thus, ready access is had to the provision chamber C and the lower end of the ice compartment, from the front of the box A, and access is had to the ice compartment from the top of the box through the cover or lid F, for introducing the necessary amount of ice.

On the side of the partition B next to the provision chamber C is arranged a transversely-extending angle iron B', forming part of a support for one end of a shelf G, likewise made of corrugated sheet metal, and supported at its other end on a like angle iron B², attached to the end wall of the lining A', as illustrated in dotted lines in Fig. 1.

The lower end of the ice compartment D is somewhat contracted by having one end and the two opposite sides D', inclined inwardly and downwardly, as plainly shown in Figs. 1 and 2. On the inclined end and sides D' rest the angular lugs H' of the ice grate H adapted to support the ice, and below the said grate is arranged the rack I, made of corrugated sheet metal and provided with upwardly-extending arms I', abutting against the partition B, so as to hold the said rack in place, as will be readily understood by reference to Fig. 1.

The rack I is provided on its under side with longitudinally and transversely-extending bands I², curved at their ends so as to form legs to rest the rack on the bottom of the drip pan J, likewise provided on its under side with transversely and longitudinally-extending bands J', bent at their ends to form legs resting on the bottom of the box A, directly below the ice compartment D.

On the forward end of the drip pan J is secured an arm J², adapted to abut against the lower end of the transverse partition B, so as to hold the drip pan in proper position below the ice compartment D. The bottom of the drip pan J is inclined toward the end of the

box A and the lower part of the drip pan is provided with an outlet pipe J³, leading to a pipe K, arranged in the bottom of the lining A' and connected with a discharge pipe leading to the outside of the refrigerator.

It is understood that the contracted end of the ice chamber D is a suitable distance above the drip pan and rack, the under side of the said contracted end being about in alignment with the lower end of the partition B as will be readily understood by reference to Fig. 1. Now, when the several parts are in the position as shown, and ice is placed on the grate H, to extend up in the ice compartment D, then the cold air descending in the said ice compartment, passes into the provision chamber C at the lower end of the partition B and rises in the said provision chamber to displace the warm air therein, the said warm air rising and passing over the upper end of the partition B into the ice compartment D to be cooled therein and descend, so as to establish a continuous circulation of air in the two compartments C and D.

As the drip pan J and rack I, are located below the mouth of the ice compartment D, the said several parts can be readily removed from the box A through the door E, for cleaning or other purposes. It is understood that the said parts J and I, can only be removed at the time when no ice is placed on top of the grate H. The latter can only be removed through the cover F.

The object of the grate H is to keep the ice from touching the corrugated rack I, so as to lessen the chances of dampness and allow the water to flow more readily from the said corrugated rack into the drip pan J and from the latter through the pipe J³ to the outlet K. As the drip pan J is inclined downward in an opposite direction from where the provision chamber is located, there is no danger whatever of moisture passing into the provision chamber.

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

1. A refrigerator, comprising a box or casing provided with a transverse partition extending within a short distance of the bottom

and top of the said casing, the said partition dividing the box into an ice compartment and a provision chamber, a drip pan supported in the bottom of the said box below the said ice compartment, an ice rack sustained within the said drip pan below the lower contracted end of the said ice compartment, and a grate supported on the contracted end of the ice compartment and resting on the said ice rack, substantially as shown and described.

2. A refrigerator, comprising a box or casing, a transverse corrugated and perforated partition extending with its upper and lower ends within a short distance of the top and bottom of the said box, the said partition forming an ice compartment and a provision chamber within the box, a drip pan having an inclined bottom and supported on legs resting on the bottom of the said box, the said drip pan being provided with an outlet pipe, an ice rack formed with a corrugated sheet metal bottom, and provided with legs resting in the drip pan, and a grate held on the contracted end of the ice compartment and resting on the top of the corrugated bottom of the said ice rack, the latter as well as the drip pan being arranged below the contracted end of the said ice compartment, substantially as shown and described.

3. In a refrigerator, the combination with a casing, of vertically disposed strips on the inside of the casing and having hooked lower ends, lugs on the inside of the casing at the upper ends of the strips and spaced therefrom, and a partition resting in the hooks of the strips and between the said strips and lugs, substantially as described.

4. In a refrigerator, the combination with a casing provided with an ice compartment having its lower end inclined inwardly and downwardly, of an ice grate provided with lugs resting on the inclined sides of the ice compartment, a drip pan provided with legs resting on the bottom of the casing, and a rack below the grate and provided with legs resting in the drip pan, substantially as described.

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Witnesses:

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