

(No Model.)

J. J. WRIGHT.
REFRIGERATOR.

No. 455,556.

Patented July 7, 1891.

Fig. 1.

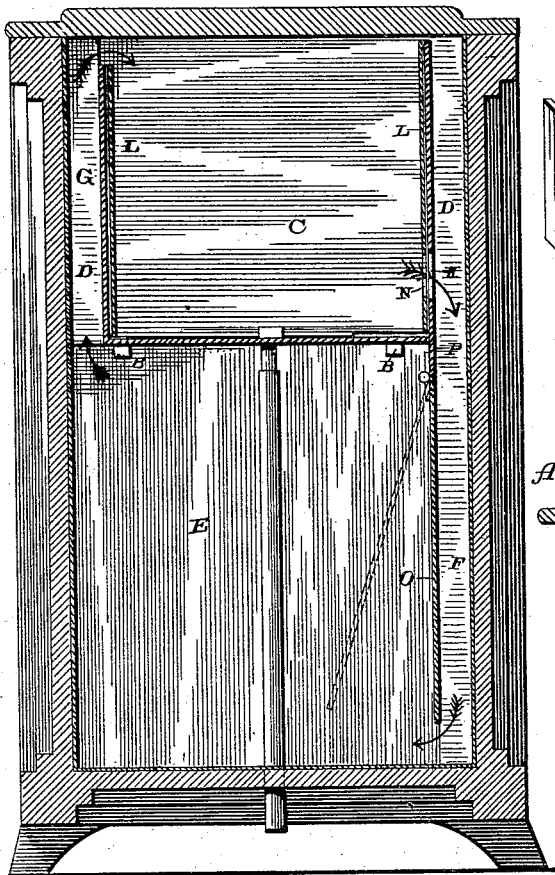


Fig. 2.

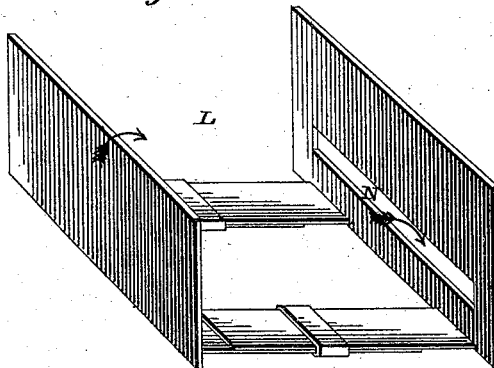


Fig. 4.

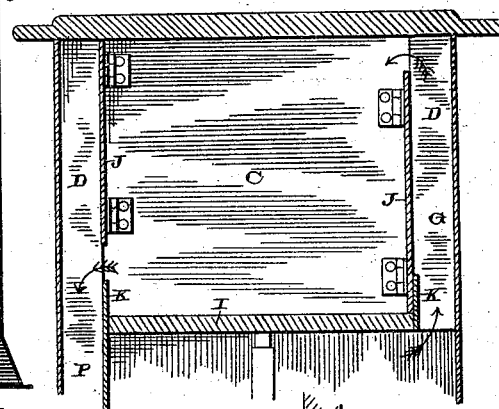


Fig. 3.

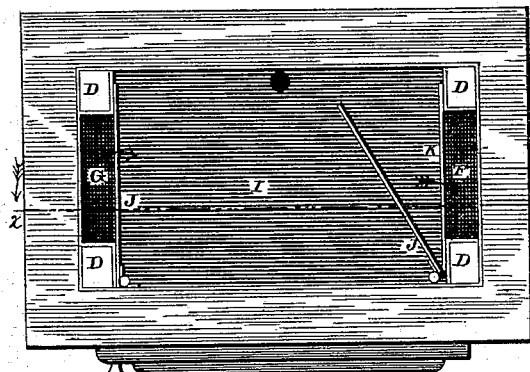
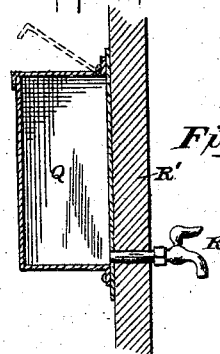


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN J. WRIGHT, OF BURLINGTON, VERMONT.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 455,556, dated July 7, 1891.

Application filed October 25, 1890. Serial No. 369,329. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. WRIGHT, a citizen of the United States, residing at Burlington, in the county of Chittenden and State of Vermont, 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.

My invention relates to an improvement in refrigerators; and it consists in the arrangement and combination of parts which will be more fully described hereinafter.

The objects of my invention are to so construct and arrange the parts that a constant circulation of air is kept up through the provision-chamber and to make the different parts removable, so as to give access to all parts of the refrigerator for cleaning purposes.

Figure 1 is a vertical section taken lengthwise through a refrigerator embodying my invention. Fig. 2 is a perspective of an adjustable ice-rack. Fig. 3 is a plan view of a modification of the ice-box. Fig. 4 is a vertical section on the dotted line *xx* of Fig. 3, the exterior casing being removed. Fig. 5 is a vertical section of the provision-chamber door, showing a water-tank connected thereto.

A represents the frame of the refrigerator, which will be of any desired shape, size, or construction. Inside of this refrigerator, at any suitable distance from its top, are placed suitable supporting blocks or devices B, upon which the removable ice-box C is placed. This box, while it is made, preferably, removable, may be made stationary, if so preferred. Instead of being supported upon cleats or blocks, it may be suspended in position by hooks or any other suitable devices from the tops or sides of the refrigerator.

Inside of the frame A, at its four corners, are placed the strips D, two of which extend down only to the top of the provision-chamber, while the other two at the opposite end of the frame extend all of the way, or nearly so, to the bottom of the provision-chamber E. The ice-box fits in between these four strips, which serve to form beyond the ends of the ice-box the two vertical flues F G, through which a circulation of air is kept up through the cooling-chamber E.

In order to allow the free escape of the air which has become cooled in the ice-box into the flue F, there is formed through the end of the ice-box, near its bottom, an opening H, which connects directly with the flue F, and through which flue the cold air descends into the provision-chamber.

Should it be desired to make the ice-box stationary instead of removable, a horizontal partition I will be formed in the frame, and upon this partition the ice will rest. In this case two doors J will be used, and which when closed extend across from strip to strip, so as to form the upper portions of the flues. The upper edge of one of these doors extends just flush with the upper ends of its two strips D, the same as the upper edge of one end of the ice-box C, while the lower edge of this door does not extend down to the narrow strip K, which extends across between the two cleats just above the partition I. The opening between the lower edge of the door and the top edge of the strip serves to allow the cold air to escape directly into the flue F. These strips K form the ends of the ice-box and prevent any drip from the ice from flowing down into the provision-chamber. The upper edge of the opposite door J, which forms the upper end of the flue G, does not extend as high as the upper ends of its two strips D, but has its lower edge to extend down to the partition I or below the top edge of its strip K. The space between the top edge of the frame and the top edge of the door permits the lighter air from the provision-chamber, and which has been displaced by the cold air, to enter the top of the ice box or chamber.

Should it be desired, an adjustable and removable rack L may be used, and which will be placed directly upon the top of the partition I. The ends of this rack L may be made adjustable in relation to each other, as shown, or they may be hinged or made in one solid piece with the rack, as may be desired. Through that end of the rack which is adjacent to the flue F is made an opening N, through which the cold air from the ice-box escapes into the flue; and the upper edge of this end comes flush with the top of its two cleats. The opposite end, which is adjacent to the flue G, does not extend up as high as the top edge of the frame, and thus leaves an

opening at the top end of the flue G, through which the lighter air is forced back into the ice-box.

The object of making the ice-rack adjustable is to adapt a single rack to be applied to refrigerators which vary in size and to make the rack more easily removed therefrom for any purpose by sliding the two walls thereof toward each other.

In order to conduct the cold air as it passes from the ice box or rack directly to the bottom of the provision-chamber E, a door, slide, or cover O is used, and which is hinged at its upper edge to a hanger P, extending downward from one end of the ice-box, or which may be hinged to the under side of the partition I. If the door O is fastened to a hanger connected to the ice-box, when the box is removed the door O will be removed with it, thus giving free access to the flue F from end to end for the purpose of cleaning it. In case it should not be desired to hinge the door it may be supported upon small blocks at its lower edge or hooked at the top and then be held in place by means of buttons or any other suitable devices. By using the doors J, which are adapted to be turned out of the way, access is given to both of the flues F G for the purpose of cleaning them. The flue G, as is shown, is quite short and has its lower end to begin directly at the top of the provision-chamber, so that the lighter air rises directly into it as fast as it is displaced; but the other flue is made long enough to conduct the cold air down to the bottom of the provision-chamber, and hence the door or cover O is necessary, and this is made movable for the purpose of allowing the lower portion of the flue to be thoroughly cleaned.

A metal tank Q may be rigidly or detachably secured to the inner side of the door R', which closes the provision-chamber, and the faucet R for drawing off the water extends through the front of the door. This tank will project into the provision-chamber, and the water contained therein will be cooled by the cold air. On opening the door of the chamber the top or cover of the tank can be removed for cleaning or filling. If desired, this

water-tank may be placed on the door of the ice-chamber, which will be made so as to accommodate the tank. If desired, the tank may be made as a part of the ice-box, or separately made and placed inside thereof in such a way as to allow of its removal, if so desired. A pipe for carrying off the waste water from the ice extends down through the provision-chamber. If the partition I is used, the upper end of this pipe will make connection therewith; but if an ice-box is used then this box will be provided with a short pipe, which will extend into the top end of the waste-water pipe.

Having thus described my invention, I claim—

1. In a refrigerator, the combination, with a casing, of a removable ice-box placed in its upper end, which is shorter than the width of the casing to form a flue at each end thereof and having one side shorter than the other, the longer side having an opening near its bottom, and a vertical wall secured to the box at its longer side and extending to near the bottom of the said casing, the box being shorter than the width of the casing to form a flue at each end thereof, substantially as described.

2. An ice-rack for a refrigerator, substantially as herein described, consisting of two side walls, one shorter in height than the other, and an opening in the higher wall at or near its lower end, the two walls being capable of adjustment toward or away from each other, substantially as shown.

3. The combination, in a refrigerator, of the casing and an ice-box placed in the upper end thereof, consisting of a bottom having upwardly-extending flanges and two side walls, which are hinged at their ends, one of the side walls extending from the said bottom to near the top of the said casing and the other wall extending from near one of the flanges to form an opening and to the top of the casing, substantially as specified.

In testimony whereof I hereby affix my signature in presence of two witnesses.

JOHN J. WRIGHT.

Witnesses.

HENRY O. WHEELER,
CHARLES E. ALLEN.