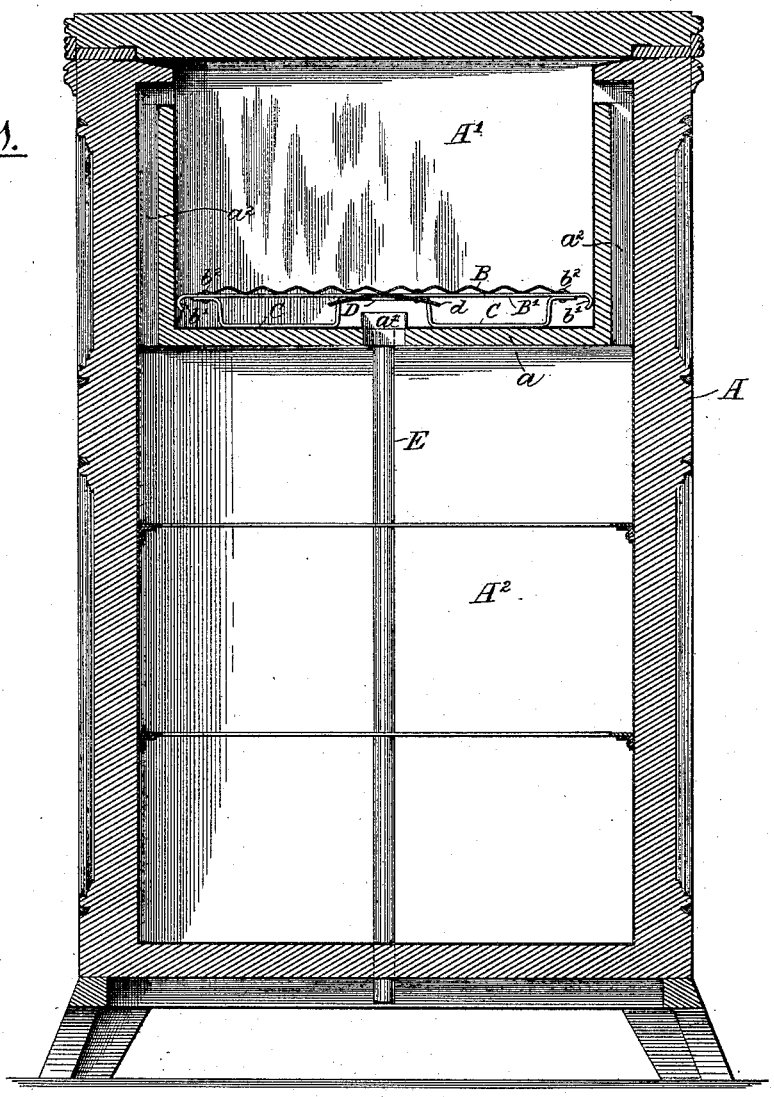
(No Model.) 2 Sheets—Sheet 1.

F. E. RANNEY.

REFRIGERATOR.

No. 418,060. Patented Dec. 24, 1889.

Fig 1.



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(No Model.) 2 Sheets—Sheet 2.

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Fig 2.

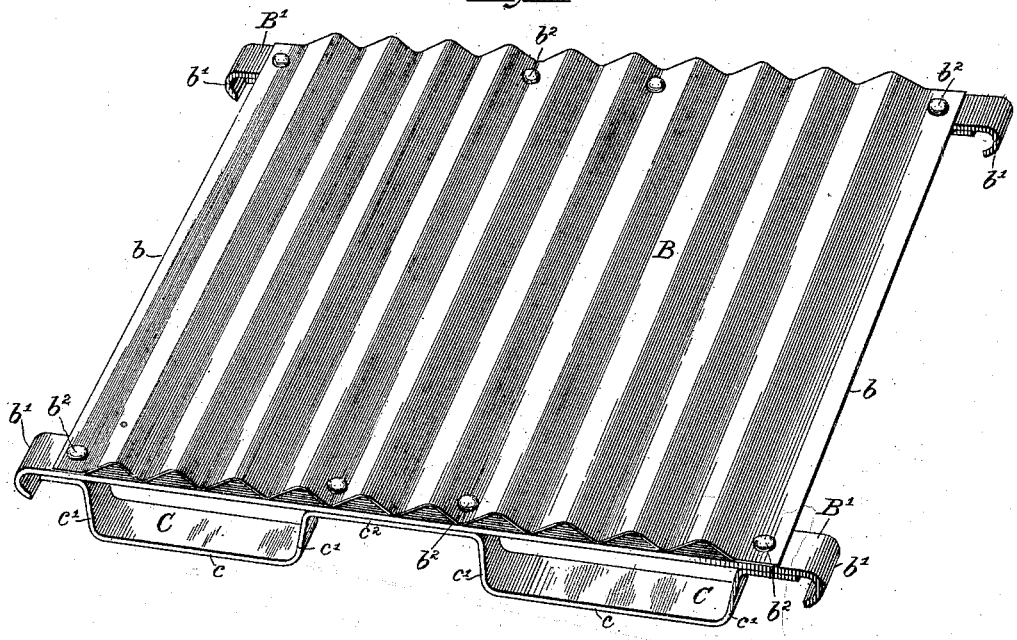


Fig 3.

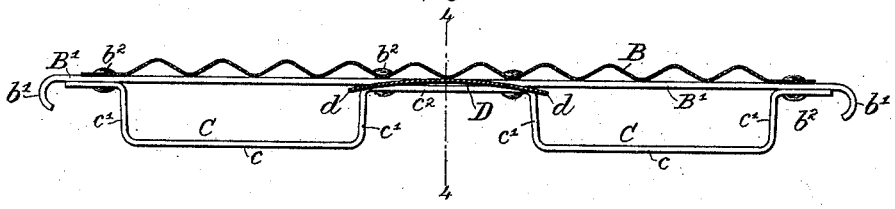
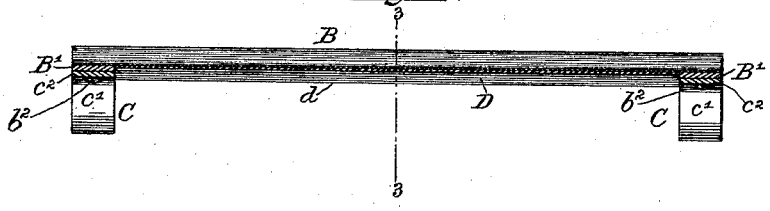


Fig 4.



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UNITED STATES PATENT OFFICE.

FRED. E. RANNEY, OF BELDING, MICHIGAN, ASSIGNOR TO THE BELDING MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 418,060, dated December 24, 1889.

Application filed June 5, 1888. Serial No. 276,092. (No model.)

To all whom it may concern:

Be it known that I, FRED. E. RANNEY, of Belding, in the county of Ionia and State of Michigan, have invented certain new and useful Improvements in Refrigerators; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain improvements in shelves or supports for the interior compartments of refrigerators, consisting in the novel details of construction herein illustrated, described, and more clearly pointed out in the appended claims.

It has been common heretofore to place the ice upon a raised shelf within the ice-compartment, which shelf was raised up from the floor of said compartment by means of legs or supports of wood placed beneath either end of the shelf. These wooden legs have usually been cut away a small portion of their length for the purpose of permitting drippings from the ice to pass from the bottom or floor of the ice-compartment into a drainage tube or pipe. It has been found, however, that in the use of such wooden legs or supports (which are usually laid flat upon the bottom of ice-compartments almost the entire length of said compartment) the sawdust, dirt, and other accumulations gather beneath the edges of these wooden legs, form a dam thereby, and thus prevent to a large extent the free outflow of water through the drainage-tube. It has also been found that wooden legs will absorb cold air and become damp and moist; also that, after awhile, the wood becomes quite thoroughly water-soaked, and consequently rots and requires replenishing. It has also been found that the moistened wooden leg absorbs the impurities and bad odors from the contents of the ice-box, which it is impossible to eliminate.

The invention consists in the matters hereinafter described, and pointed out in the appended claims.

In the drawings, Figure 1 is a central vertical sectional view of a refrigerator provided with my improvement. Fig. 2 is a perspective view of the shelf for the ice-compartment. Fig. 3 is a central vertical sectional view of the same taken on line 3 3 of Fig. 4. Fig. 4 is a transverse central sectional view of the same taken on line 4 4 of Fig. 3.

In the drawings, A represents a refrigerator provided with an ice-compartment A′ and a cold-air compartment A^2. In the floor a of the ice-compartment A′, and preferably in the center thereof, is a passage-way or cold-air duct a'. On either side of the ice-compartment A′ are two return warm-air passages a^2, which permit the warm air to pass from the chamber A^2 to or near the top of the ice-compartment A′, as shown.

B is a corrugated-metal shelf, provided at either end with a metal stiffening-piece B′, preferably of galvanized iron. The stiffening-pieces B′ extend beyond the edges b of the shelf B, and are preferably curved, as shown at b'. Secured beneath the stiffening-piece B′ are the metal legs C, comprising two flat portions c, (which rest upon the bottom a of the ice-compartment A′,) vertical portions c', and an intermediate connection or rib c^2.

The legs C, the stiffening-strip B′, and the corrugated shelf B may be secured together by rivets b^2, as shown, or by any convenient means.

D is a curved metal deflecting-plate, soldered or otherwise secured beneath the shelf B, with its concave side downward, in such position as to be over and above the passage-way or opening a' in the bottom a when the shelf B is placed in position in the ice-compartment A′. The plate D is wider in cross-section than said passage-way a', as clearly illustrated in Fig. 1, and extends longitudinally with said passage-way a'. The passage-way a' does not extend transversely across the entire width of the ice-compartment A′, and the plate D is made usually longer than the length of such passage a', as will be readily understood.

In practice the ice is placed upon the shelf B in the compartment A′. The cooled air in said compartment A′ seeks outlet between the edges of the shelf B and the sides of the compartment A′, and passes under and be-

neath said shelf B and the deflecting-plate D to and through the passage a' and into the compartment A^2. The warm air rises in the compartment A^2 and passes up on either side through the return-air passages a^2 and into the compartment A′ over the top of the ice. Any drippings or water of condensation which may gather upon the deflecting-plate D will, by reason of the curved shape of said plate, freely flow to its lowermost edges *d*, and dripping therefrom to the bottom *a* of the ice-compartment A′ will pass unobstructed to the drain-tube E. It will thus be readily understood that nothing but pure cold air can pass through the ice-compartment A′ to the compartment A^2. It will also be observed that, by reason of the thin and relatively-narrow metal legs C, the air will freely circulate around the same.

I claim as my invention—

1. A refrigerator-shelf consisting of a corrugated metal plate provided at each end with a stiffening-bar secured to the under surface of the plate transverse to the corrugations, and provided also at each end with a metal bar bent to form legs or supports for the shelf, substantially as specified.

2. In a refrigerator, a corrugated metal shelf provided with a flat metal stiffening-bar at each end running transverse to the corrugations, the ends of said stiffening-bars being bent into curved form and projecting beyond the edge of the metal shelf, substantially as and for the purpose specified.

3. In a refrigerator having an aperture in the bottom of the ice-compartment communicating with the provision-compartments below, a corrugated metal ice-supporting shelf located in said ice-compartment and provided with a flat metal stiffening-bar at each end of said shelf, the ends thereof being bent into curved form and projecting beyond the edge of the metal shelf, and a curved metal plate secured beneath said metal shelf above said aperture, with the concave side of said curved plate toward the aperture and the edges of said plate extending beyond the sides of said aperture, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

FRED. E. RANNEY.

Witnesses:
M. J. TANNER,
E. S. MOULTON.