No. 829,011. PATENTED AUG. 21, 1906.

W. H. HORNER.

ICE BOX.

APPLICATION FILED AUG. 29, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

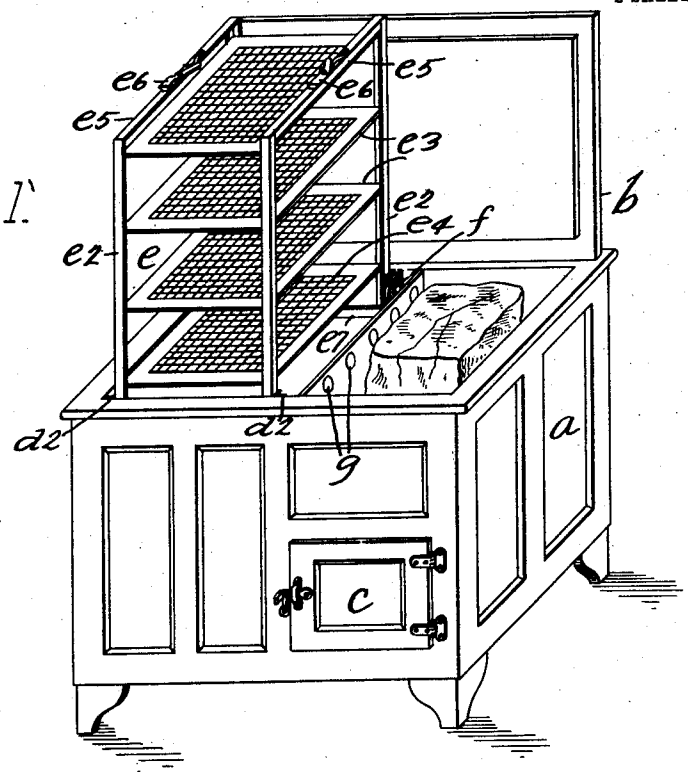
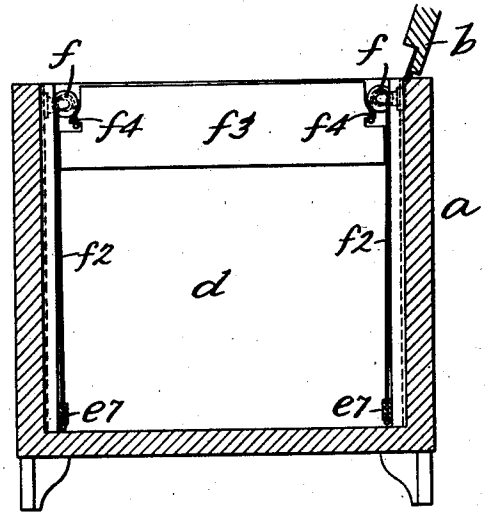


Fig. 2.



WITNESSES

J. C. Larsen

F. A. Stewart

INVENTOR

William H. Horner

BY

Edgar Tate & Co.

ATTORNEYS.

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2 SHEETS—SHEET 2.

Fig. 3.

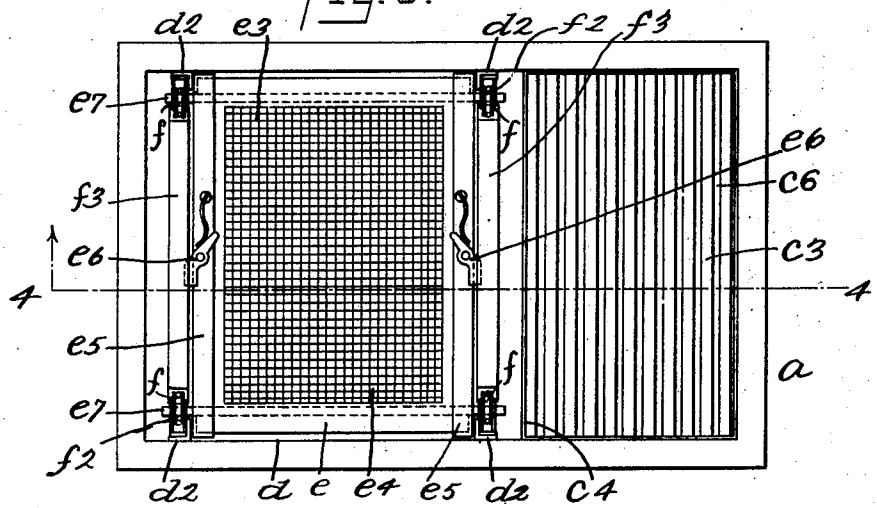
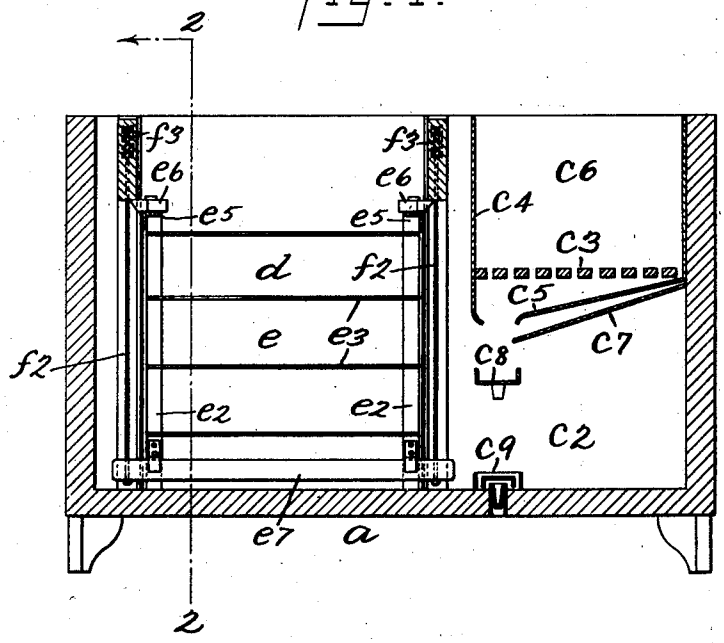


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM H. HORNER, OF MOUNT VERNON, NEW YORK.

ICE-BOX.

No. 829,011. Specification of Letters Patent. Patented Aug. 21, 1906.

Application filed August 29, 1905. Serial No. 276,188.

To all whom it may concern:

Be it known that I, WILLIAM H. HORNER, a citizen of the United States, residing at Mount Vernon, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Ice-Boxes, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide an improved ice-box or refrigerator by means of which access to any of the contents stored therein is readily gained, a further object being to provide an ice-box of this class which permits of greater storage capacity in proportion to its size than ice-boxes as heretofore constructed and a still further object being to provide an ice-box by means of which a continual circulation of cold air through and among the articles stored therein is assured; and with these and other objects in view the invention consists of an ice-box as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a perspective view of an ice-box constructed according to my invention; Fig. 2, a vertical section thereof taken on the line 2 2 of Fig. 4; Fig. 3, a plan view thereof with the cover removed, and Fig. 4 a section thereof on the line 4 4 of Fig. 3.

In the drawings forming part of this specification I have shown an ice-box a, provided with the usual hinged cover b and with a door c in the front thereof, which opens into a compartment c^2, arranged beneath a grating c^3, upon which ice is adapted to be placed, the grating c^3 being arranged in a metallic casing comprising the sides of the box and a metal sheet c^4, and beneath the grating c^3 is the bottom c^5 of the chamber c^6, and beneath the bottom c^5 is a false bottom c^7, and the melted ice drips from the bottom c^5 to a trough c^8 and thence into a catch-basin and outlet c^9, and in this dripping the cold water acts upon the air in the chamber c^2 on its passage to the trough c^8 therethrough and to the catch-basin c^9, and the air therein is cooled, as will be readily seen.

The compartments or chambers c^2 and c^6 take up but a portion of the box a, leaving a compartment d on the other side thereof, and in this compartment d are four vertically-arranged angle-iron guides d^2, which serve to guide a vertically-movable frame e, composed of vertical corner members e^2 and horizontal partition-plates e^3, and in practice the partition-plates e^3 are preferably provided with an open-work interior e^4, as clearly shown, and connecting the tops of the corner members e^2 are backwardly and forwardly arranged brace members e^5, upon each of which is pivotally mounted a spring-operated catch e^6, and the bottoms of the corner-strips e^2 are connected by longitudinally-arranged brace members e^7.

Mounted in the front and rear of the compartments d and at the top thereof are a plurality of pulleys f, over which pass cables f^2, which are secured at their lower ends to the brace members e^7 and at their other ends to corresponding weights f^3, arranged at the opposite sides of the compartment d, and these weights are sufficiently heavy to raise the frame e vertically when the partition-plates thereof are filled with articles stored in the said box.

In Fig. 2 of the drawings I have shown the preferred form of the weights f^3, said weights being curved and raised on their ends to provide lugs f^4 for the reception of the ends of the cables f^2, and the bottoms of the said weights are square, as shown, and the cables are made of a length to permit the frame e when in its lowermost position to be beneath the bottom of the weights f^3, as clearly shown in Fig. 4, at which time the spring-catches e^6 are forced beneath the said weights and serve to hold the frame e down and the weights f^3 up; but when the said spring-catches e^6 are operated to release the weights f^3 the frame e or elevator-car is moved upwardly into the position shown in Fig. 1, at which time access is gained to all four sides of the elevator, and any article may be removed therefrom without the necessity of removing several articles in order to reach the one desired.

As shown in Fig. 1 of the drawings, the partition-plate c^4 is provided with a plurality of openings g therethrough, and as the tendency of cold air is to go down and war mair to go up the air passes through the partition-plate c^4, downwardly through and around the elevator-car e when in its lowermost position and through the compartment c^3, and thence up to the top of the box again, and this circulation of air continues, and when the lid of the box is open the warm air is permitted to

escape first, and in practice perishable commodities are preferably placed on the lower partitions or shelves e^3, while those less perishable are placed on the upper shelves, and by means of my construction any of the contents of my box may be reached without the necessity of bending one's back in order to remove the same or to locate the same, and as light is admitted to all sides of my elevator-car no trouble whatever is experienced in locating any desired article.

It will be seen from this construction that the compartment e^2 is adapted for larger articles—such as bottles of water, watermelons, and the like—or very heavy articles, whereas the elevator-car is adapted for such articles as butter, milk, fruit, and the like, and in practice I make the spring-catches e^6 automatic in their operation by simply beveling the edges thereof which come in contact with the weights, so that the said spring-catches are forced backwardly in the operation of forcing my car downwardly, and when the lowermost position thereof has been reached the said spring-catches, as previously stated, are forced beneath the weights, and in practice I prefer to have the top shelf of the elevator-car e at some distance from the lid b in order to provide room for articles such as glasses, pitchers, and the like.

Although I have shown my elevator-car provided with four shelves, it will be obvious that any number of shelves may be employed and various modifications in the construction of the said car may be made, as well as changes in and modifications of the construction of the box itself; and with this reservation.

What I claim as new, and desire to secure by Letters Patent, is—

1 An ice-box provided with a compartment having pulleys in the opposite side corners, a vertically-movable frame mounted in said compartment, cords passed over said pulleys and connected with the bottom of said frame, weights also connected with the opposite side pulleys and the distance between which is greater than the transverse width of said frame, and spring-catches connected with the top side portions of said frame and adapted to engage said weights when the said frame is in its lowest position, substantially as shown and described.

2. An ice-box provided with a compartment having pulleys in the opposite side corners, a vertically-movable frame mounted in said compartment, cords passed over said pulleys and connected with the bottom of said frame, weights also connected with the opposite side pulleys and the distance between which is greater than the transverse width of said frame, and spring-catches connected with the top side portions of said frame and adapted to engage said weights when the said frame is in its lowest position, said box being also provided with an ice-receptacle, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 26th day of August, 1905.

WILLIAM H. HORNER.

Witnesses:
F. A. STEWART,
C. J. KLEIN.