

(No Model.)

2 Sheets—Sheet 2.

I. S. HART.
REFRIGERATOR.

No. 585,313.

Patented June 29, 1897.

Fig. 2.

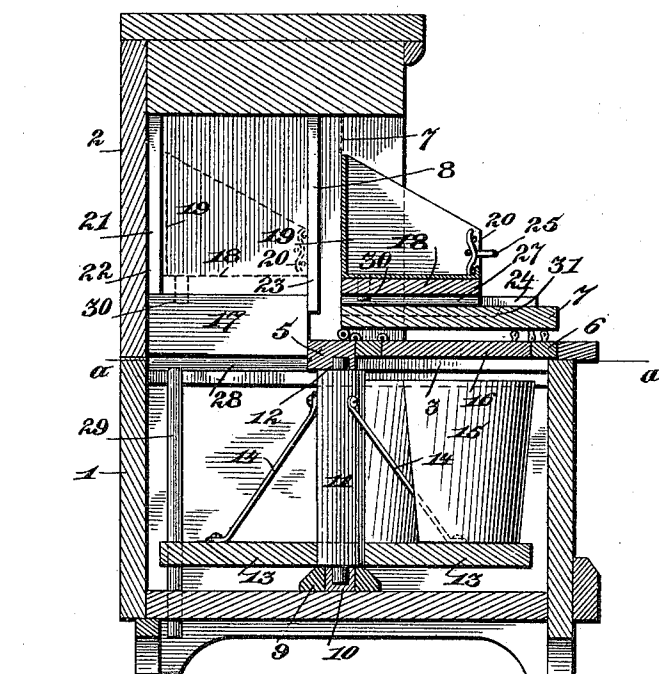
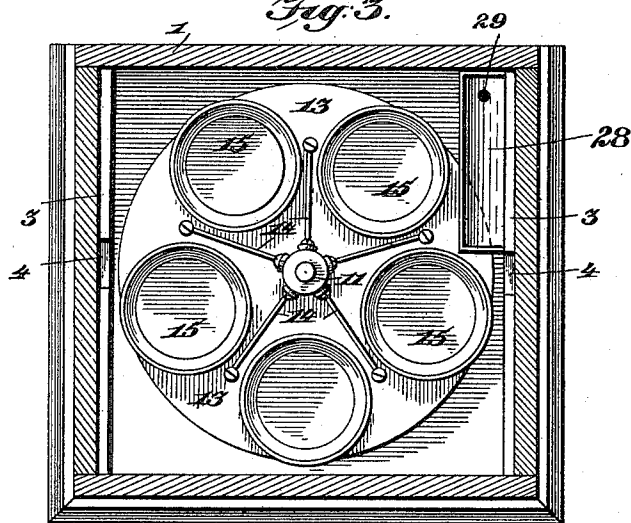


Fig. 3.



Inventor

Witnesses
H. S. Dieterich

Irving S. Hart
By his Attorneys,

J. H. Sappington

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

IRVING S. HART, OF WAVERLY, NEW YORK.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 585,313, dated June 29, 1897.

Application filed February 19, 1897. Serial No. 624,164. (No model.)

To all whom it may concern:

Be it known that I, IRVING S. HART, a citizen of the United States, residing at Waverly, in the county of Tioga and State of New York, have invented a new and useful Refrigerator, of which the following is a specification.

This invention relates to certain improvements in refrigerators, and has for its object to provide a refrigerator of a simple and inexpensive nature, which shall be especially adapted for use by grocers, butchers, and others, being provided with a storage-chamber to hold goods for storage in convenient position for removal.

The invention consists in a refrigerator comprising a body having an ice-chamber and a storage-chamber, an ice-pan in the ice-chamber, a removable cross-piece extending across the upper part of the storage-chamber, a revolvable shaft mounted vertically in the storage-chamber, and a shelf carried by said shaft in said storage-chamber, said shaft having its upper end journaled in said cross-piece so that when the cross-piece is removed the shaft and shelf may be removed likewise.

The invention also contemplates certain novel features of the construction, combination, and arrangement of the various parts of the improved refrigerator, whereby certain important advantages are attained and the device is made simpler, cheaper, and otherwise better adapted and more convenient for use, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

In order that my improvements may be the better understood, I have shown in the accompanying drawings a refrigerator constructed according to my invention, in which drawings—

Figure 1 is a perspective view of the refrigerator, showing the door of the ice-chamber opened and the ice-pan partly drawn out. Fig. 2 is a vertical section taken through the refrigerator in a plane extending transversely to the ice-pan. Fig. 3 is a horizontal section taken through the refrigerator in the plane indicated by the line *a a* in Fig. 2. Fig. 4 is a detached detail view showing the cross-piece, which extends across the upper part of the storage-chamber, together with the doors of the ice-chamber and storage-chamber car-

ried thereby. Fig. 5 is a fragmentary perspective view showing the drip-pan and the channel in the ice-chamber door connecting therewith.

In the views, 1 indicates the lower part of the refrigerator, which constitutes the storage-chamber, this part 1 having double walls in the usual way and being of rectangular form, and 2 represents the upper part of the refrigerator, constituting the ice-chamber, also constructed with double walls, these parts 1 and 2 being formed separately and being adapted to be set one upon the other.

The part 2 is of less width than the part 1 and is set upon the rear portion of the part 1. The bottom of the ice-chamber being open affords direct communication with the storage-chamber. At opposite sides of the storage-chamber are arranged cleats 3, which are provided at or near the center of each side with recesses 4 to receive the opposite ends of the removable cross-piece 5, extending across the upper part of the storage-chamber, and having, hinged to its front side or edge, a door 6, arranged to close the upper side of the storage-chamber in front of the ice-chamber, said door fitting down flush with the edges of the part 1, as shown in Fig. 1.

To the rear edge of the cross-piece 5 is also hinged a door 7, similar to the door 6, but arranged to close the front of the part 2 or ice-chamber, which is also provided with vertical cleats 8 at opposite sides, against which cleats said door 7 fits. The door 7 of the ice-chamber is arranged when opened to lie down flat upon the projecting front portion of the storage-chamber, as shown in Figs. 1 and 5.

At the center of the bottom of the storage-chamber 1 is arranged a metal plate or bearing 9, having an opening or recess to receive a wooden block 10, wherein is stepped the lower end of a revolvable shaft or post 11, extending vertically in the storage-chamber and having its upper end journaled in a bearing at the center of the cross-piece 5, as shown at 12 in Fig. 2. The shaft or post 11 carries at its lower part a circular horizontal shelf or table 13, standing near the floor of the storage-chamber and braced by means of rods 14, or other devices, connecting its outer part with the upper part of the shaft or post 11. In this way it will be seen that the shelf or

table 13 forms a convenient support for goods, such as butter, &c., the packages of which may be arranged, as shown at 15, between said rods 14, and when the shelf or table 13 turns such goods will be brought in position under the door 6, through which door said goods may be removed and replaced.

In order to avoid the necessity of opening the door 6 and exposing the whole of the interior of the storage-chamber to the external temperature when it is desired to remove but a small quantity of goods from the storage-chamber, I provide said door 6 with a central door-opening, closed by a door 16. (Seen in the detail view, Fig. 4.)

At opposite sides of the lower part of the ice-chamber 2 are arranged cleats 17, which form tracks whereon runs the tray 18, carrying the ice-pan, which, as shown in Fig. 1, is made with a back wall 19 of considerably greater height than its front wall 20, and when said tray 18 is pushed back into the ice-chamber in the position shown in dotted lines in Fig. 2 its rear edge will engage cleats 21, which are arranged at the back of the ice-chamber and which form stops which hold the tray and ice-pan away from the back wall of the ice-chamber, so as to form a flue 22, in which the warm air from the storage-chamber ascends and passes over the high back wall 19 of the ice-pan. A space or flue 23 is also provided at the front of the ice-pan and tray, in which flue the cold air from the lower front wall 20 of the ice-pan descends into the storage-chamber, so as to refrigerate the goods stored therein.

The inner face of the door 7 of the ice-chamber, or the upper face thereof, as seen in Fig. 1, is provided at opposite sides with transverse track-sections 24, aligned with the tracks formed of the cleats 17 in the ice-chamber, and the ice-pan is preferably connected fixedly with the tray 18, so as to move therewith, and is provided with a central handle 25, so that it may be pulled forward out of the ice-chamber, as shown in Fig. 1.

The tray 18 may, if desired, be provided with rollers which engage and roll on the tracks and with projections 27, which engage between the track-sections 24 and cleats 17, so as to guide the ice-pan and tray and prevent lateral displacement thereof.

Along one side of the storage-chamber, beneath the cleat 17 at the side of the ice-chamber, is arranged a drip-pan 28, connecting with a waste-pipe 29, leading outside the storage-chamber and adapted to receive water from a waste-outlet 30 in the ice-pan when said pan is in the position shown in Fig. 2. When the ice-pan and tray 18 are drawn out, as shown in Fig. 1, the waste-outlet 30 discharges into a gutter or channel 31, formed in the inside of the door 7 and arranged to discharge into the drip-pan, as shown in Fig. 5.

By this construction it will be seen that when the door 7 is opened the tray 18 and the pan carried thereon may be conveniently

withdrawn to permit the pan to be filled with ice, and at the same time the water resulting from the melting of the ice will be collected and returned to the drip-pan and led away in the same manner as when the ice-pan is in the ice-chamber and the door 7 closed.

From the above description of my improvements it will be seen that the invention is of an extremely simple and inexpensive nature and is especially well adapted for the purposes for which it is designed, and it will also be evident from the above description that the invention is susceptible of considerable modification without material departure from its principles and spirit, and for this reason I do not wish to be understood as limiting myself to the precise form and arrangement of the parts herein set forth.

Having described my invention, what I claim is—

1. A refrigerator comprising a body having its upper part of less width than its lower part, the front wall of the upper part being open and the top wall of the lower part being also open, a removable cross-bar extending across the top of the lower part at the base of the upper part of the body, and doors hinged to said cross-bar and arranged to close the openings in the front wall of the upper part and in the top of the lower part of the body, substantially as specified.

2. A refrigerator comprising a body having its upper part of less width than its lower part, the top wall of the lower part being provided with an opening, a cross-bar removably arranged across the top of the lower part of the body, a door to close the opening in the top of said lower part of the body, a vertical shaft mounted to turn in the lower part of the body and having its upper end held to turn at the center of said removable cross-bar, and a circular shelf carried on said shaft and adapted to support goods, said goods being carried, when the shaft turns, beneath the opening in the top of the lower part of the body, substantially as specified.

3. A refrigerator comprising a body having a storage-chamber at its lower part and an ice-chamber in its upper part, a door leading into the ice-chamber, tracks at opposite sides of the door, an ice-pan movable along the tracks, and having its front and back walls of different heights, said ice-pan being of less width than the ice-chamber, and stops to limit the movement of the ice-pan, said stops operating to hold the ice-pan with its front and back walls separated from the front and back walls of the ice-chamber by spaces forming flues leading down into the storage-chamber, substantially as specified.

4. A refrigerator comprising a body having a storage-chamber and an ice-chamber, said ice-chamber having an opening in its wall, a door to close said opening, said door being arranged to stand in horizontal position when opened, tracks in the ice-chamber on opposite sides of the door-opening, an ice-pan movable

along the tracks, and track-sections on the inner face of the door adapted, when the door is opened, to aline with the tracks inside the ice-chamber, substantially as specified.

5 5. A refrigerator comprising a body having a storage-chamber and an ice-chamber, said ice-chamber having an opening in its wall, a door to close said opening, said door being arranged to stand in horizontal position when
10 opened, tracks in the ice-chamber on opposite sides of the door-opening, a drip-pan alined with the tracks, an ice-pan movable along the tracks and provided with a waste-outlet arranged to discharge into said drip-pan, and

track-sections on the inner face of the door 15 adapted, when the door is open, to aline with the tracks inside the ice-chamber, and support the ice-pan when drawn outside said chamber, said door having a channel alined and communicating with the drip-pan in the 20 ice-chamber, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

IRVING S. HART.

Witnesses:

BENJ. RUMSEY,
W. K. HART.