G. J. GRUENDLER.

REFRIGERATOR.

APPLICATION FILED NOV. 9, 1921.

1,427,207.

Patented Aug. 29, 1922.

2 SHEETS—SHEET 1.

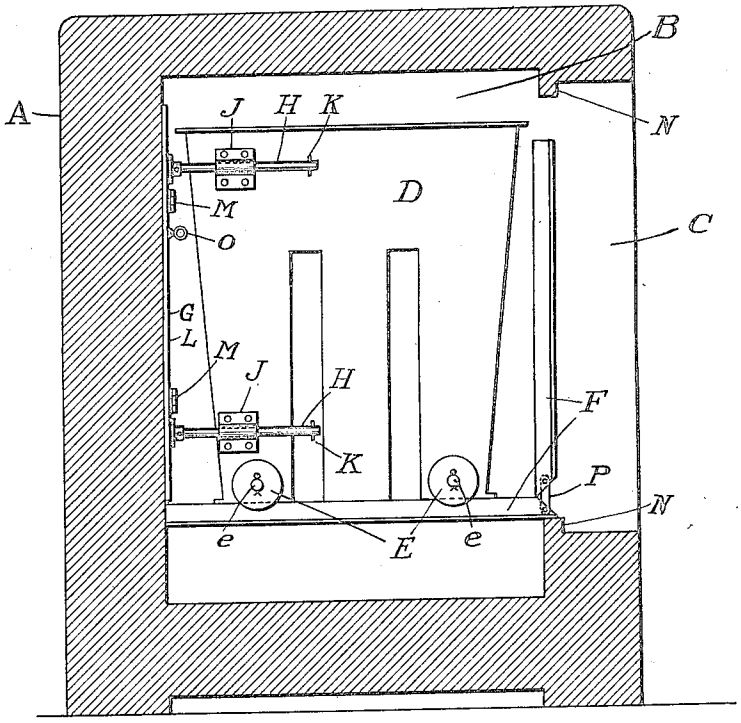


Fig. 1

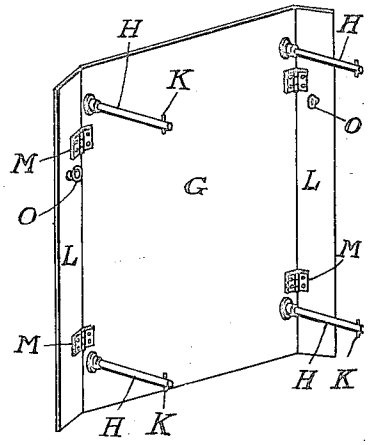


Fig. 3

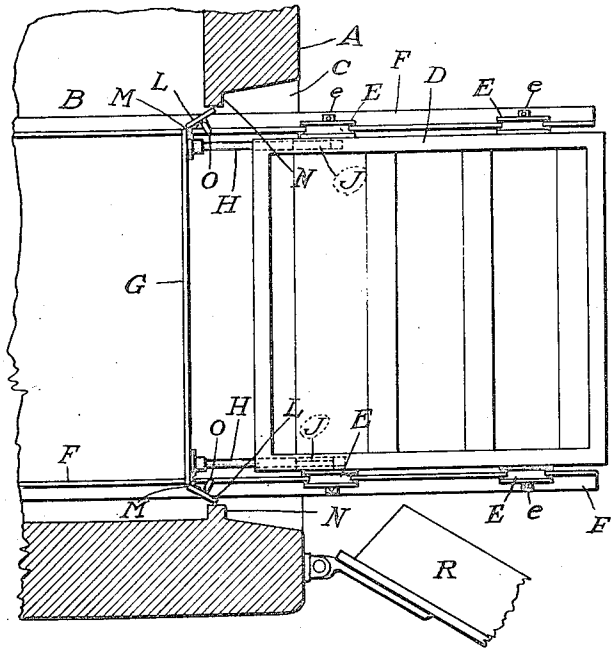


Fig. 2

INVENTOR:

Gustav J. Gruendler

By John A. Kincaly.

ATTORNEY.

G. J. GRUENDLER.

REFRIGERATOR.

APPLICATION FILED NOV. 9, 1921.

1,427,207.

Patented Aug. 29, 1922.

2 SHEETS—SHEET 2.

Fig. 4

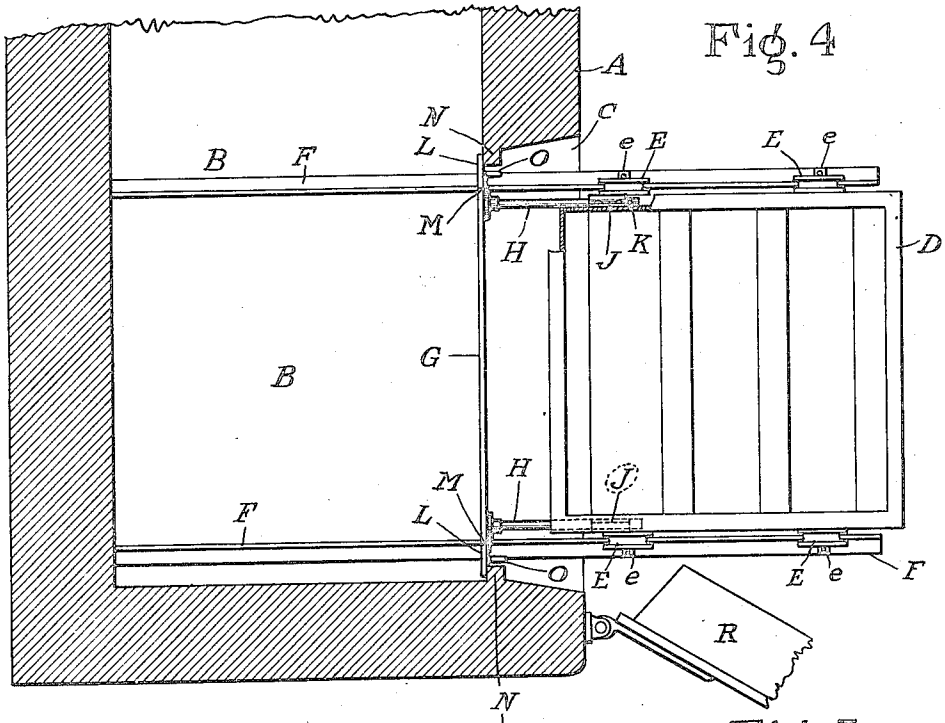
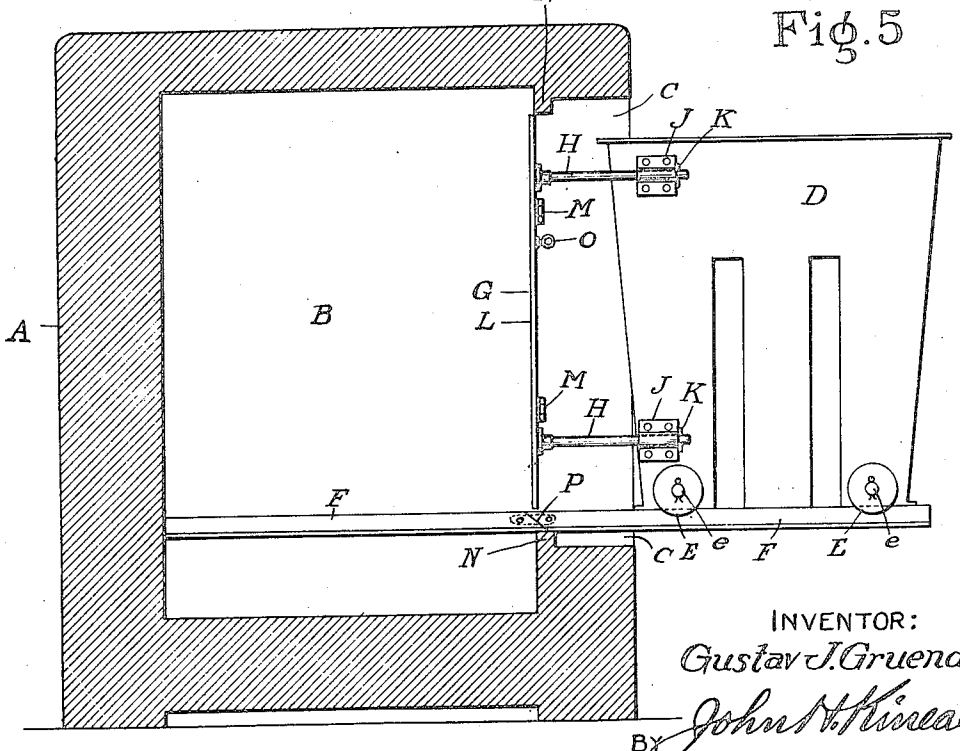


Fig. 5



INVENTOR:

Gustav J. Gruendler

By John N. Kinealy.

ATTORNEY.

UNITED STATES PATENT OFFICE.

GUSTAV J. GRUENDLER, OF CLAYTON, MISSOURI.

REFRIGERATOR.

1,427,207. Specification of Letters Patent. Patented Aug. 29, 1922.

Application filed November 9, 1921. Serial No. 514,005.

To all whom it may concern:

Be it known that I, GUSTAV J. GRUENDLER, a citizen of the United States, residing in Clayton, county of St. Louis, and the State of Missouri, have invented a new and useful Improvement in Refrigerators, of which the following is a full, clear, and exact specification, reference being had to the accompanying drawings, which form a part thereof.

My invention relates to refrigerators and more particularly to refrigerators having an ice container arranged to be partially removed from the ice chamber of the refrigerator when it is to be charged with ice.

Heretofore, when the ice container of a refrigerator was to be charged and was partially removed therefrom, as will be hereinafter described, the warm outside air would be admitted to the ice chamber of the refrigerator thereby causing the temperature therein to be raised; and after the ice container had been placed in the ice chamber again there was a resultant waste of ice before the air of the refrigerator was brought to its initial coldness.

The objects of my invention are to provide in a refrigerator having an ice container arranged to be partially removed therefrom when it is to be charged, a shield which will effectually prevent the inflow of warm air or the outflow of cool air into or out of the refrigerator; to provide in a refrigerator a shield arranged to be controlled by the movement of the ice container as it is partially removed from the refrigerator to be charged; to provide a shield adapted to close the opening in a refrigerator through which the ice container thereof has been partially removed; and to provide in a refrigerator a shield which may be quickly and easily removed with the ice container by which it is carried when they are to be cleaned or repaired.

My invention is fully shown in the accompanying drawings wherein similar letters are used to designate similar parts. Fig. 1 is a side view of a refrigerator partly in section showing the ice container in place in the ice chamber; Fig. 2 is a plan view partly in section showing how the ice container and the shield may be removed; Fig. 3 is a perspective of the shield; Fig. 4 is a plan view partly in section showing the shield in place to close the opening in the ice chamber when the ice container has been partially removed from the ice chamber; Fig. 5 is a side view partly in section showing the shield in place as in Fig. 4.

Referring to the figures, the refrigerator A has the ice chamber B with the opening C in the front wall thereof. The ice container D, adapted to be placed in the ice chamber B, has on the lower portion of its sides the wheels E mounted on the shafts *e* and arranged to roll on the tracks F which, as will be hereinafter described, are normally in place inside the ice chamber B, as shown in Fig. 1, but which may be partly extended therefrom, as shown in Fig. 4. The shield G, which is preferably made of metal but which may be made of any rigid materal, is arranged to be carried by the ice container D on the arms H which project from the shield G and extend through the spaces between the plates J and the side walls of the ice container, as shown in Fig. 1, and which are prevented from being withdrawn from the spaces by the pins K passing through the ends of the arms H opposite the ends attached to the shield G. The wings L are swingably attached, by the hinges M or any other suitable means, to the shield G so as to form a part thereof, and are provided with eye-bolts O thereon. The tracks F may be arranged with pivotal joints P so that the portions of the tracks F which are adapted to extend beyond the opening C, when the ice container D is partially removed from the ice chamber to be charged, may be moved into a position inside the opening, as shown in Fig. 1. When the ice container D is in the ice chamber and the tracks F are in place therein, the door R, which is shown only in part, closes the opening C.

When the ice container is to be charged with ice, the door R is opened and the outer ends of the tracks F are swung downwardly to extend from the refrigerator so that they will be in alignment with that part of the track which is fixed in the ice chamber B. The ice container D is then pulled outwardly, the wheels E rolling along the track F. The shield G carried by the ice container D, as described, is moved therewith from the rear of the ice chamber, where it normally is when the ice container D is in the ice chamber, toward the opening C. As the ice container D is moved outwardly along the tracks F and the shield G is brought to the opening C the wings L thereof come into

contact with the flanges N on the walls of the opening C as shown in Fig. 4, and the opening C is closed so that warm air is prevented from entering the ice chamber B and cold air is prevented from passing out therefrom. This prevents the temperature in the refrigerator being raised by the inflow of the warm outside air and thereby avoids the wasteful use of ice which would be required to regain the initial temperature in the refrigerator if the opening C were allowed to remain open while the ice container was being charged.

If it be desired to remove the ice container and the shield G so that they may be repaired or cleaned, the wings L are swung inwardly, as shown in Fig. 2, by means of eye-bolts O which are adapted to be grasped by the hand. When the ice container D is charged and is pushed back into the ice chamber B, the shield G will strike the rear wall of the ice chamber and the arms H will slide in the spaces back of the plates J until the ice container has been rolled entirely into the ice chamber. When the ice container D is to be charged and is again rolled outwardly along the tracks F, the wings L engage the flanges N, as described, the shield G is stopped, and the arms H will slide in the spaces back of the plates J until the pins K are brought into contact with the plates J, as shown in Figs. 4 and 5. If it is desired to remove the shield G from the ice container D, the pins K are withdrawn and the arms H are drawn out. The arms H are made long enough so that the ice container D may be rolled outwardly far enough to provide a space between the container and the sides of the opening C large enough to allow an operator to insert his arm therethrough and pull the eye-bolts O and the wings L inwardly when the container and the shield G are to be removed from the refrigerator.

It is obviously not my intention to limit my invention to the specific details of construction shown in the drawings, since it may be varied within wide limits without deviating from the spirit of my invention.

What I claim as new and desire to secure by Letter Patent, is:

1. In a refrigerator having an ice chamber therein with an opening in the wall thereof, an ice container adapted to be moved into or out of said chamber through said opening, a shield adapted to be carried by said container, means slidably mounted on said container for carrying said shield whereby the distance separating said shield and said container may be increased or decreased, and said shield arranged to engage the sides of said opening whereby said opening is closed when said container is moved out of said chamber.

2. In a refrigerator having an ice chamber therein with an opening in the wall thereof, an ice container adapted to be moved into or out of said chamber through said opening, a shield carried by a plurality of arms extending therefrom and slidably mounted on said container, and said shield arranged to close said opening when said container is moved out of said chamber.

3. In a refrigerator having an ice chamber therein with an opening in the wall thereof, an ice container adapted to be moved into or out of said chamber through said opening, means controlled by the movement of said container and carried by means slidably mounted thereon whereby said opening is closed when said container is moved out of said chamber.

4. In a refrigerator having an ice chamber therein with an opening in the wall thereof, an ice container adapted to be moved into or out of said chamber through said opening, means mounted on said container so that the distance separating said means and said container may be increased or decreased whereby said opening is closed when said container is moved out of said chamber.

5. In a refrigerator having an ice chamber therein with an opening in the wall thereof, tracks adapted to be extended from said chamber through said opening, an ice container having wheels adapted to roll along said tracks, and a shield controlled by the movement of said container and carried by means slidably mounted thereon and adapted to engage the sides of said opening whereby said opening is closed when said container is moved out of said chamber.

6. In a refrigerator having an ice chamber therein with an opening in the wall thereof, an ice container adapted to be moved into or out of said chamber through said opening, and a shield carried by said container whereby said opening may be closed when said container is moved out of said chamber, said shield having wings pivotally attached to the sides thereof and adapted to engage the sides of said opening.

7. In a refrigerator having an ice chamber therein with an opening in the wall thereof, tracks adapted to be made to extend from said chamber through said opening, an ice container having wheels mounted on the lower marginal edges thereof and adapted to roll along said tracks, and a shield carried by said container whereby said opening may be closed when said container is moved out of said chamber, said shield having wings pivotally attached to the sides thereof and adapted to engage the sides of said opening.

In witness whereof I have signed my name to this specification.

GUSTAV J. GRUENDLER.