

(No Model.)

2 Sheets—Sheet 1.

C. SANDER.  
DOOR FOR REFRIGERATORS.

No. 537,722.

Patented Apr. 16, 1895.

Fig. 2.

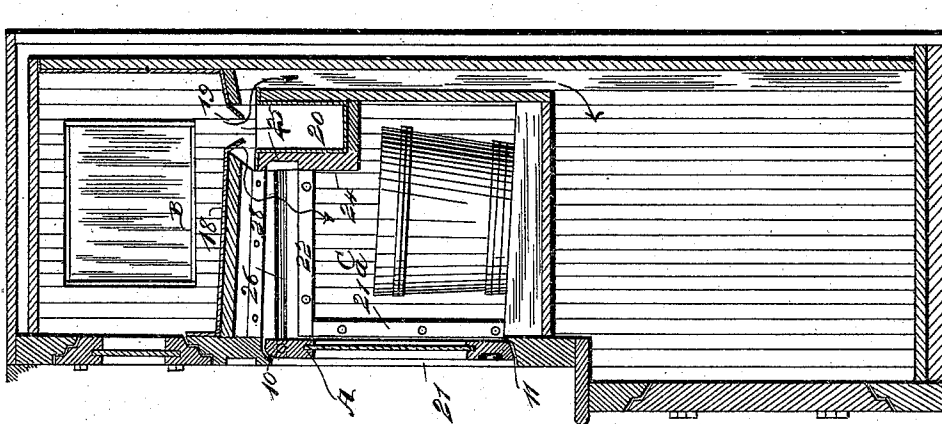
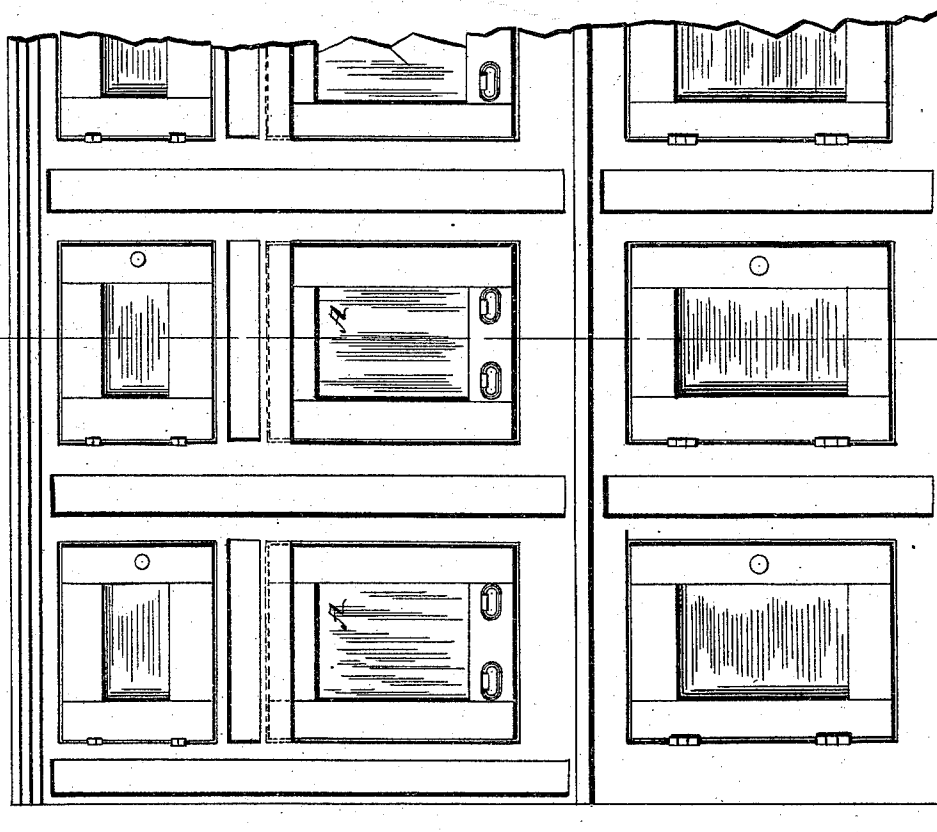


Fig. 1.



WITNESSES:

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ATTORNEYS.

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Fig. 5

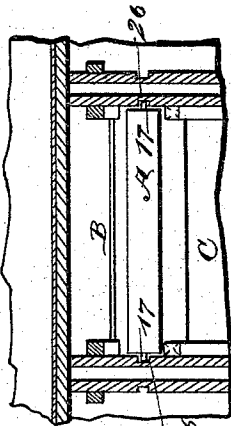


Fig. 4

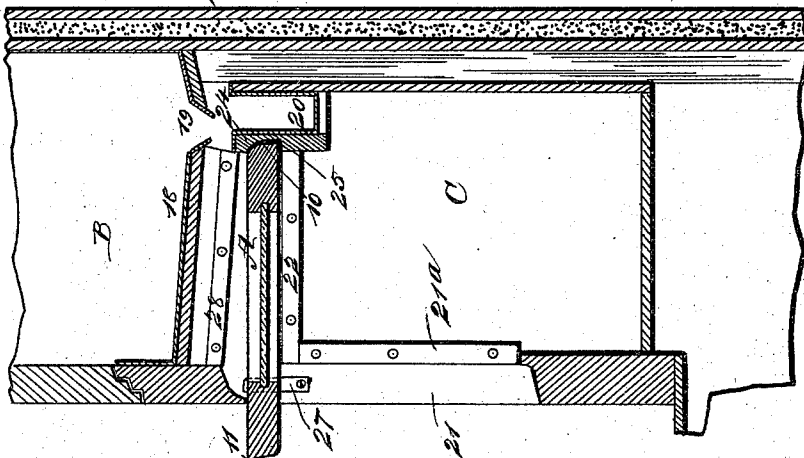
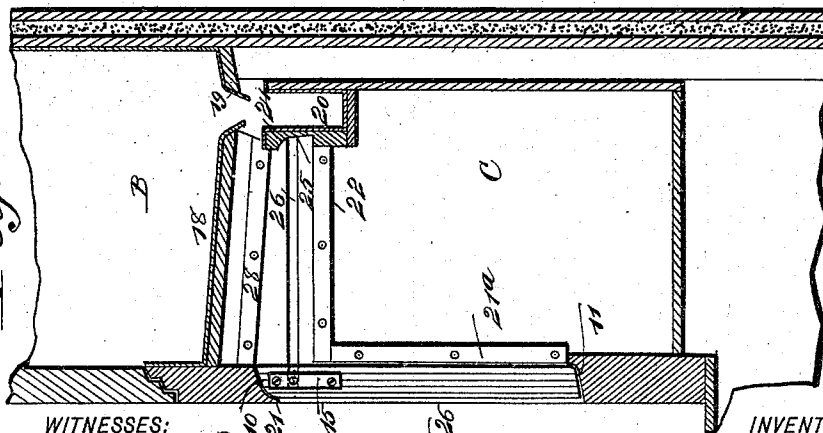


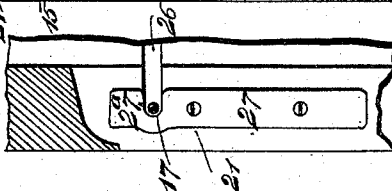
Fig. 3



WITNESSES:

*J. M. Antle.*  
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Fig. 2



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# UNITED STATES PATENT OFFICE.

CARL SANDER, OF BROOKLYN, NEW YORK.

## DOOR FOR REFRIGERATORS.

SPECIFICATION forming part of Letters Patent No. 537,722, dated April 16, 1895.

Application filed May 26, 1894. Serial No. 512,568. (No model.)

*To all whom it may concern:*

Be it known that I, CARL SANDER, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Refrigerators, of which the following is a full, clear, and exact description.

My invention relates to an improvement in refrigerators, and it has for its object to provide a means whereby the door of the refrigerating compartment when opened may be carried to a horizontal position and slid within the said compartment, and whereby when the door is thus slid inward it will effectually prevent the escape of cold air from the ice compartment out through the opening disclosed by the door, thus reserving all of the cold air above the door for service in the refrigerating compartment when the door is closed again.

Another object of the invention is to provide a means whereby when the door is closed it will automatically adjust itself to form an air-tight connection with the wall of the opening it is adapted to cover, and whereby also the door while being a sliding one may at any time be conveniently and expeditiously removed from the body of the refrigerator, for purposes of cleansing, repairs, &c.

A further object of the invention is to construct a sliding door of the character above described in an exceedingly simple, durable and economic manner.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a front elevation of a portion of the improved refrigerator. Fig. 2 is a vertical section taken essentially on the line 2—2 of Fig. 1, the door of the refrigerating compartment being closed. Fig. 3 is an enlarged vertical section of the refrigerating compartment of the refrigerator, the door being in closed position. Fig. 4 is a view similar to Fig. 3, illustrating the door open to disclose the refrigerating compartment and in position to prevent the escape of cold air from the ice com-

partment. Fig. 5 is a vertical section taken through the refrigerating compartment, at right angles to the section shown in Figs. 3 and 4. Fig. 6 is a detail sectional view of the door, the said section being taken practically on the line 6—6 of Fig. 7. Fig. 7 is a transverse section through the door and one of the jambs, the said section being taken essentially on the line 7—7 of Fig. 6. Fig. 8 is a side elevation of the door; and Fig. 9 is an outer face view of the door jamb, illustrating the outer termination of the slide-way for the door.

The refrigerator door A, is provided with a tapering or inclined upper edge 10, and a rearwardly tapered or inclined lower edge 11, as shown in Fig. 8. In each side edge of the door near its top, a longitudinal recess 12, is made, the said recess being substantially wedge shaped and widest at its top, as shown in Fig. 6. A screw 13, is located in the upper portion of this recess, the head of the screw being substantially flush with the outer face of the side edge of the door; and a second and correspondingly located screw 14, is located in the lower portion of the recess.

A plate 15, is pivoted upon the lower screw 14, that screw being usually provided with a flange 14<sup>a</sup> against which the plate may rest, and the screw 13 is passed loosely through the upper edge of the plate, the plate being provided with countersinks to receive the heads of the screws. The plate 15, is held normally flush with the outer face of the said side edge of the door through the medium of a spring 16; and ordinarily immediately opposite this spring a stud 17 is formed upon the outer face of the plate, which stud may be carried within the recess 12 by pressing the plate in an inwardly direction. It will be understood that a plate of this description is located at each upper side edge of the door.

With reference to the body of the refrigerator, it is illustrated as being provided with an ice compartment B in the upper portion thereof, and a refrigerating compartment C below the ice compartment. The bottom of the ice compartment is provided with a drip opening 19, which conducts the water melted from the ice into a gutter 20, located at the back of the refrigerating compartment at or near the top. The refrigerating compartment

is provided with an opening 21, adapted to be closed by the door A, and the upper and lower edges of this opening are inclined correspondingly to the upper and lower edges of the door.

5 A vertical batten or contact strip 21<sup>a</sup>, is usually secured to the side walls of the refrigerating compartment at the door opening, and the said battens while extending to a point  
10 near the bottom of the said opening terminate short of the top, as illustrated in Fig. 4, and meet horizontal battens 22, adapted as supports for the door when it is in its inner open position, and at the ends of these horizontal  
15 battens a wall 24, is vertically formed, usually making a portion of, or a support for the gutter 20, and in this wall a longitudinal recess 25, is formed, shaped correspondingly to the upper edge of the door.

Above each horizontal batten 22, or rest for  
20 the door, a horizontal groove 26, is produced, and the said grooves terminate at the wall 24, and commence at a point near the outer edge of the side walls of the door opening 21, and at the inner termination of each of the grooves  
25 a wear plate 27, is recessed or countersunk in the side walls of the door opening, as shown in Fig. 9, said wear plate being provided with a recess 27<sup>a</sup> in its side, corresponding to and registering with the groove 26 at the end of  
30 which it is located.

An upper or guide batten 28 is located above the lower or supporting batten 22 at each side of the refrigerating chamber, and the upper battens are inclined, the space being greater between them and the lower battens at the front than at the rear, as is clearly shown in Figs. 3 and 4.

In hanging the door, the plates 15 are pushed inward until the studs 17 are within the recesses 12. The upper edge of the door is then introduced into the door opening until the studs are opposite the grooves 26, whereupon the plates are relieved from pressure, and the springs 16 will force the said studs into the  
45 said grooves 26, and by carrying the door outward until the studs enter the recesses 27<sup>a</sup> in the wear plates 27, the door may be permitted to drop to a perpendicular position over the door opening and will completely close the  
50 same, and by reason of the opposite inclination of opposite ends of the door, and the corresponding inclination of the ends of the opening with which the ends of the door are to contact, the door will have a wedge action in

closing, and will automatically tighten itself in position.

When the door is opened to gain access to the refrigerating compartment C, it is carried to an upper horizontal position and pushed rearward, or within the compartment C, the studs traveling in the grooves 26 and the door resting upon the upper battens 22; and when the door has been pushed into the compartment as far as possible, its upper beveled or inclined edge will enter and fit snugly in the correspondingly shaped recess 25 in the said rear wall 24 of the compartment; and the cold air from the ice chamber or compartment will be effectually prevented from entering the refrigerating compartment and escaping therefrom through the open door-way, since the trough 20 and the door will completely close communication between the ice compartment and the refrigerator, communication being again established the moment that the door A is restored to its normal or closed position in the front of the refrigerator.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a refrigerator, the combination of a casing having an opening in its front wall and horizontal guide ways extending rearward from the upper part of said opening at opposite sides thereof, battens extending along under said guide ways and parallel thereto, and a door having at the upper parts of its opposite sides pivoted plates provided with projecting lugs engaging the said guide ways, and springs arranged under said plates and adapted to normally hold the same in position for the lugs to engage said guide ways, substantially as set forth.

2. The combination of a casing having a slotted guide way, a door having a recess in its edge opposite the guide-way, screws at opposite ends of the recess, a plate perforated at opposite ends to receive the screws and provided with a lug to engage the guide way in the casing, and a spring arranged in the recess beneath said plate and adapted to hold the same normally pressed out, substantially as set forth.

CARL SANDER.

Witnesses:

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