Oct. 23, 1928. 1,688,870

C. H. LEONARD

REAR ICING DOOR FOR REFRIGERATORS

Filed Sept. 21, 1925

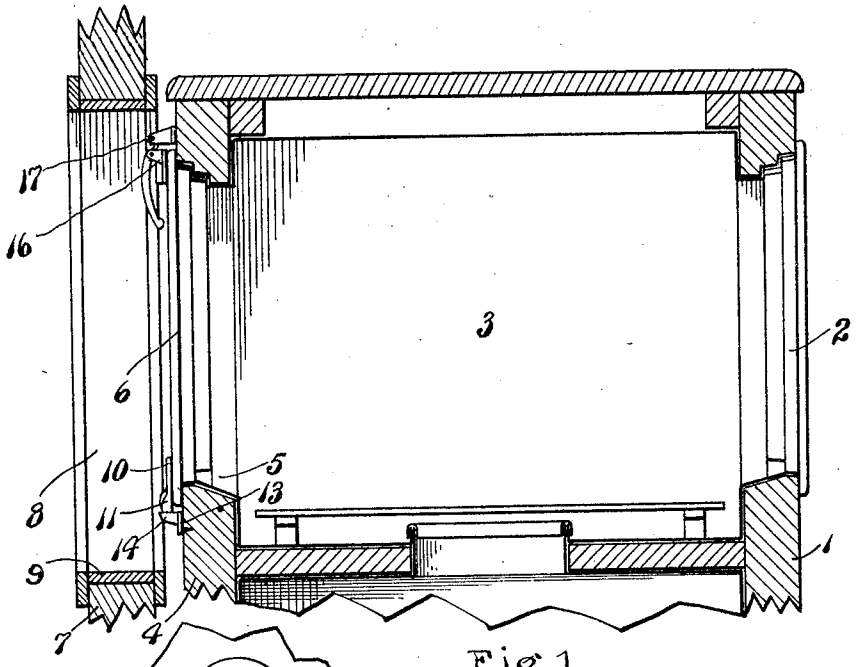


Fig. 1.

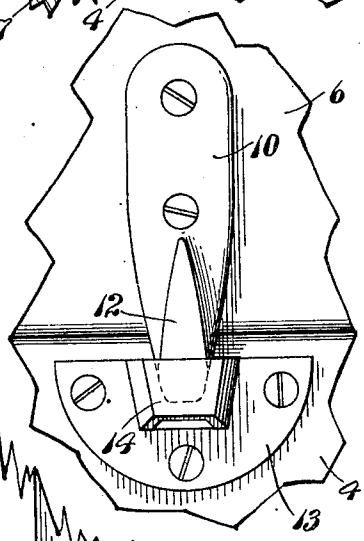


Fig. 3.

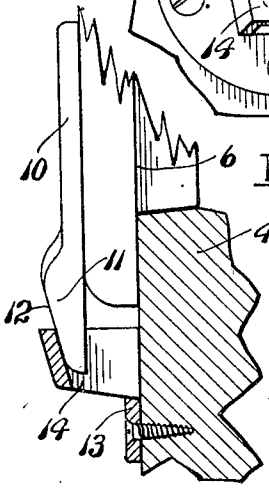


Fig. 4.

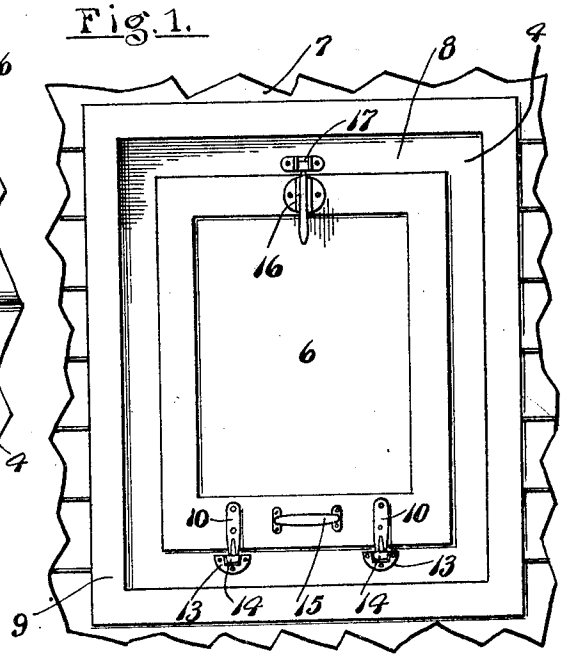


Fig. 2.

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UNITED STATES PATENT OFFICE.

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REAR ICING DOOR FOR REFRIGERATORS.

Application filed September 21, 1925. Serial No. 57,531.

This invention relates to a rear icing door construction for refrigerators. It is desirable many times in supplying a refrigerator with ice that the same be supplied without the necessity of the ice man coming into the house or apartment and the annoyance that follows from such entrance, and with an elimination of water dripping from the ice in the house which takes place when the refrigerator is iced in the ordinary manner by placing the ice in the ice compartment from the front of said refrigerator. This is particularly true in apartments where space is restricted and entrance to the refrigerator room is hard to obtain, many times requiring a passage through other rooms before reaching the room in which the refrigerator is placed.

The present invention is directed to constructing a refrigerator in such a manner that it may be supplied with ice through an opening in the rear or side of the ice chamber, which opening is located in conjunction with an opening through a wall of the house or apartment, said opening in the refrigerator being normally closed tightly by a door which is connected in such manner that it may be very easily removed and replaced; and when in closing position a very secure and tight closure is made which prevents the escape of cold air from the refrigerator. A further object of the invention is to construct a novel means for said closure to the additional opening to the refrigerator ice compartment whereby the same may be quickly removed or replaced and which acts automatically when replaced to wedge the door tightly to closing position.

For an understanding of the invention whereby these ends are attained as well as others not at this time stated, reference may be had to the following description taken in connection with the accompanying drawing, in which,

Fig. 1 is a fragmentary vertical section through the ice compartment of a refrigerator showing the front and additional closures therefor and location of the additional closure in direct conjunction with an entrance opening through a building or apartment wall.

Fig. 2 is a fragmentary rear elevation of said house or apartment wall with the opening therethrough, the refrigerator ice chamber additional closure showing through said opening in elevation.

Fig. 3 is a fragmentary enlarged elevation of one of the wedging members attached at the lower edge of the additional ice chamber closure, and

Fig. 4 is a fragmentary vertical section showing said wedging member as it appears in connection with the socket with which it is used for automatically wedging the additional ice chamber closure in closed position.

Like reference characters refer to like parts in the different figures of the drawing.

The refrigerator 1, which may be of any conventional construction, has a front door 2 closing the front opening to the ice chamber 3 of the refrigerator. In the back 4 of the refrigerator a second opening 5 is made in substantial horizontal alignment with the front closure to the ice chamber and this rear opening 5 is designed to be closed by a removable door 6. The refrigerator is located with its back closely adjacent to the wall 7 of the refrigerator room or apartment in which the refrigerator is used. This wall has an opening 8 therethrough somewhat larger than the outer dimensions of the door 6. If desired the opening 8 may be finished or lined with a frame 9, though this is in no sense essential to the invention. It is to be understood that while the drawing shows the opening 8 in the rear of the refrigerator, the invention contemplates that such opening may be made in the side also if circumstances require it.

The closure door 6 to the ice chamber at its lower edge is equipped with two spaced apart downwardly extending wedge members 10, each at its lower end terminating in a head 11, the rear side of which inclines downwardly and inwardly making an inclined cam surface 12 as shown. The heads 11 extend below the rear edge of the door 6. On the back 4 of the refrigerator below the opening 5 therein plates 13 are permanently secured by means of screws or other suitable fastenings, each at its upper part being formed with an outwardly extending socket 14, the outer side of which is inclined so as to correspond substantially with the inclination of the cam outer side 12 of the head 11. It is evident that on placing the door 6 in position with the heads 11 entering into the sockets 14 there is an automatic wedging

action set up which forces the door to tightly closed position. A handle 15 positioned horizontally is located between the members 10 on the door 6 and at the upper edge of the door a latch 16 of any desired and suitable construction is mounted, being adapted to detachably connect with a keeper 17 permanently secured to the back 4 of the refrigerator above the opening 5.

To supply the compartment 3 with ice it is necessary merely for the ice man to reach through the opening 8 in the wall 7, disconnect the latch 16 from its keeper and, with one hand engaging the latch handle and the other hand with the handle 15, to lift the door 6 out through the opening 8. This makes it possible for the ice man to place the ice in the compartment 3 through said opening 8 in the wall and the opening 5 in the back of the refrigerator. After the refrigerator has been supplied with ice the door is returned to position, the heads 11 seating and wedging in the sockets 14 and the latch 16 engaging with the keeper 17.

The invention is one of great practical merit. The ice man does not have to enter the house or apartment at all. This is a very desirable result which follows from the invention. The closure is air tight and the entrance of warm air past it into the refrigerator is completely stopped. The structure has proved very useful in practice. The invention is defined in the appended claims and is to be considered as comprehensive of all forms of structure coming within their scope.

I claim:

1. A refrigerator including an ice chamber having a front door opening and also an opening at the back of the ice chamber, a door for closing the front opening, socket members attached at spaced apart distances from each other to the back of the refrigerator below the back opening, said socket members including portions set at an angle to the vertical, wedging members, one for each socket member attached to and extending downwardly from a back door and adapted to enter said socket members and engage with said portions of the socket members, said wedging members being formed with cam portions or surfaces to engage against the socket members and force the door tightly to closed position, and means to detachably connect the door at its upper edge portion to said back of the refrigerator.

2. In a refrigerator having an ice chamber and an entrance opening through the back of the refrigerator to said chamber, spaced apart sockets attached to the back of the refrigerator below the lower side of the opening, each of said sockets having a downwardly and inwardly inclined side, a door for closing said opening, members attached to the outer side of the door and extending below the lower edge thereof, each of said members at its lower end having a head with the outer side thereof likewise inclined downwardly and inwardly, there being one of said members for each socket, and releasable latch means for detachably connecting the door at its upper portion to the back of the refrigerator.

In testimony whereof I affix my signature.

CHARLES H. LEONARD.