April 15, 1924. 1,490,694

F. BRABSON

REFRIGERATOR DOOR LATCH

Filed July 16, 1923 2 Sheets-Sheet 1

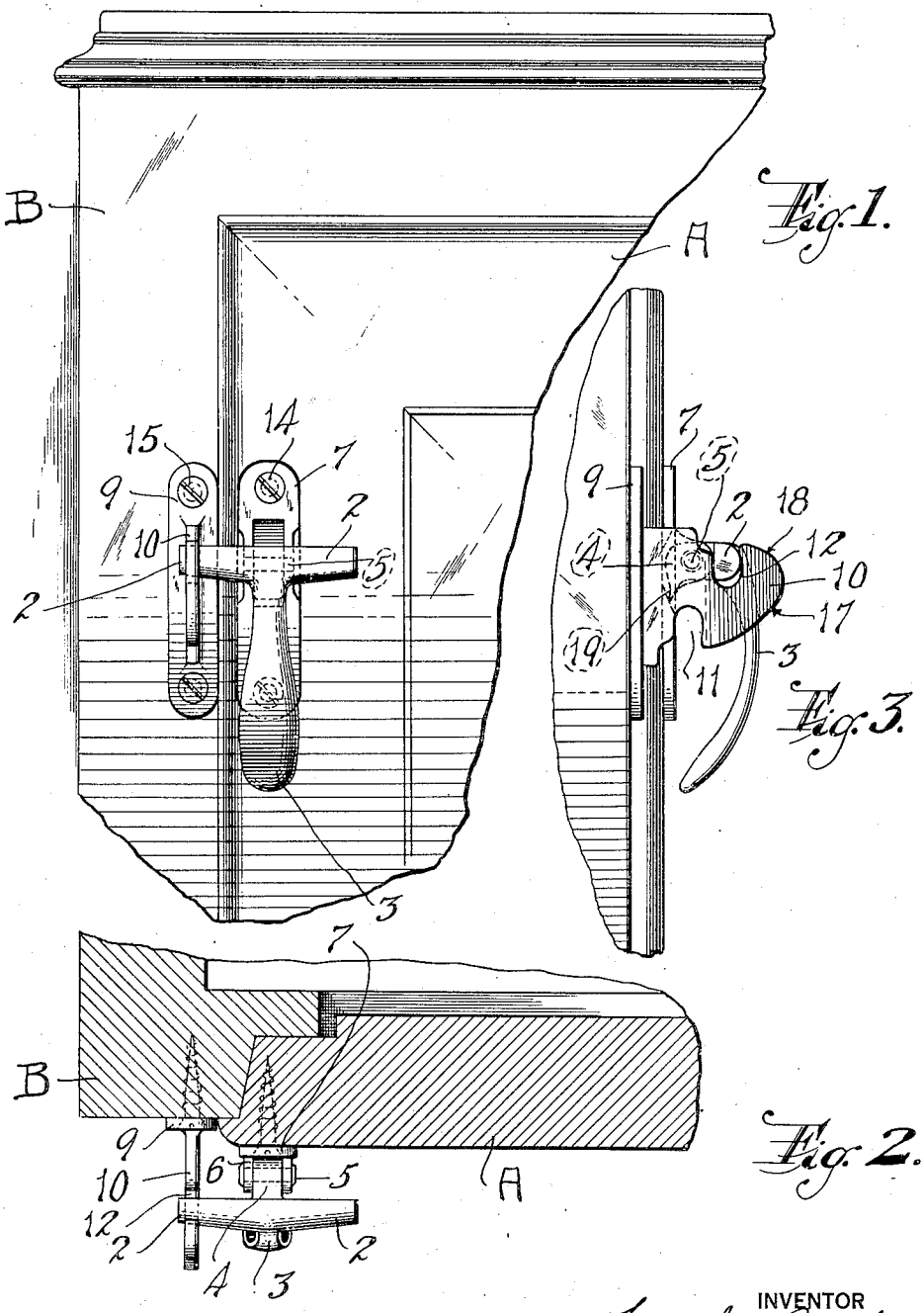


Fig. 1.

Fig. 3.

Fig. 2.

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Fig. 7.

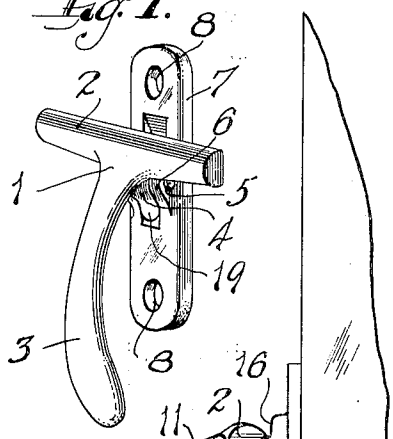


Fig. 6.

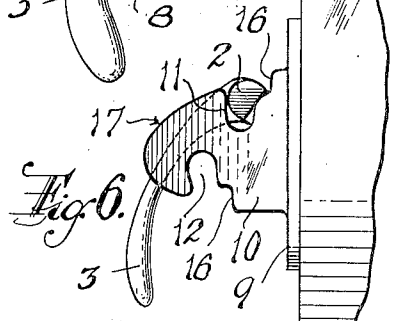


Fig. 8.

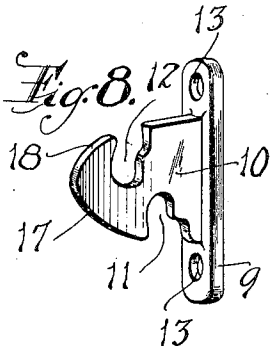


Fig. 4.

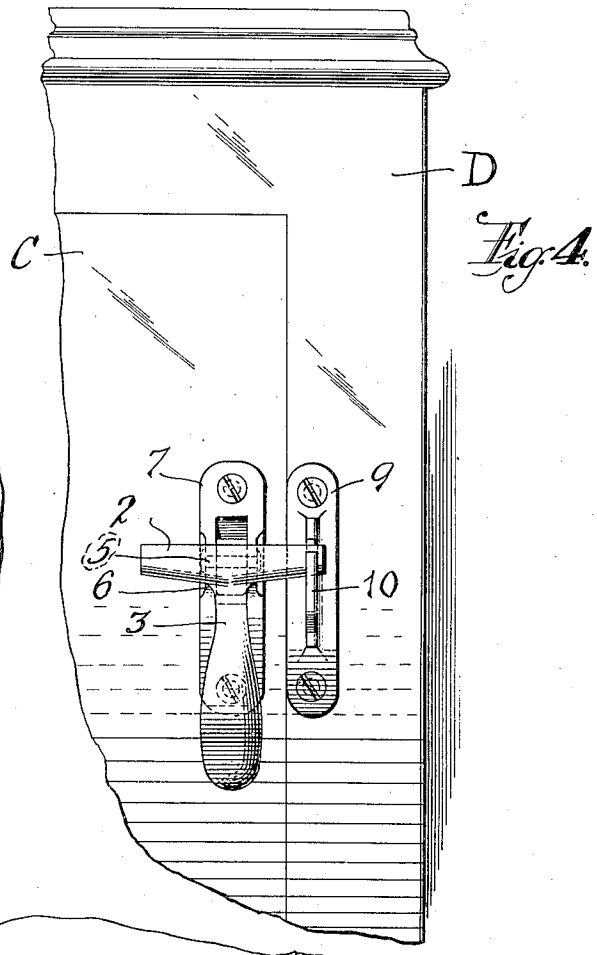
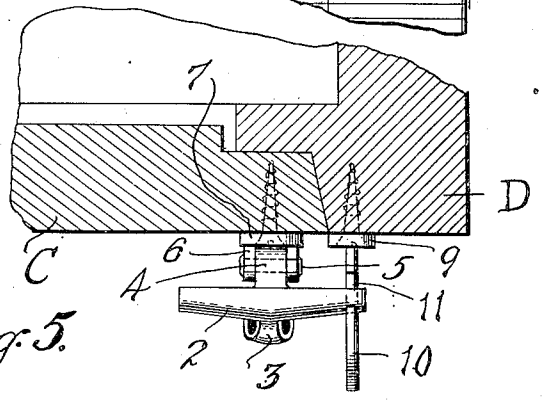


Fig. 5.



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UNITED STATES PATENT OFFICE.

FRANK BRABSON, OF NEWARK, NEW JERSEY, ASSIGNOR TO GREENE, TWEED & CO., A CORPORATION OF NEW YORK.

REFRIGERATOR-DOOR LATCH.

Application filed July 16, 1923. Serial No. 651,773.

To all whom it may concern:

Be it known that I, FRANK BRABSON, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Refrigerator-Door Latches, of which the following is a specification.

This invention relates in general to door latches and more particularly to a latch for refrigerator doors.

Some refrigerators as now manufactured are provided with left-hand doors, that is, doors hinged at the left side, other refrigerators are made with right-hand doors or doors hinged at the right side and others have both right-hand and left-hand doors. also, some refrigerators are made with what are known as "offset" doors, that is, doors the front of which project beyond the front of the refrigerator, while other refrigerators are formed with "flush" doors or doors the front of which are flush, even with or in the same plane as the front of the refrigerator. Thus, it has been the practice for hardware manufacturers who supply latches for refrigerators to make two types of latch levers, one for a right-hand door and one for a left-hand door, and two types of latch keepers, one for a "flush" door and one for an "offset" door. This practice is objectionable because neither type of latch can be used for the other type of door, orders for one type frequently were inadvertently filled with latches of the other type, and often the refrigerator manufacturer does not specify the type desired.

The primary object of my invention is to overcome the above-mentioned difficulties and reduce the cost of manufacture of such latches by providing a latch adapted for use with any of said types of doors.

Another object is to provide a latch including a latch lever adapted for use with either a right-hand or a left-hand door and a keeper adapted for use with either a "flush" or an "offset" door, and without modification of the refrigerator body or the door.

Further objects are to provide a latch of the character described which can be used with either of said types of doors by mere reversal of either the latch lever, or the keeper, or both; to provide such a latch which is simple and inexpensive in construction and operation, and to obtain other results and advantages as may be brought out by the following description.

Referring to the accompanying drawings, in which the same reference characters designate corresponding and like parts,

Figure 1 is a front elevation of a latch embodying my invention applied to a refrigerator having an "offset" right-hand door;

Figure 2 is a horizontal sectional view through the door, showing the latch in top plan view;

Figure 3 is a fragmentary side elevation of the refrigerator with the latch applied as shown in Figure 1;

Figure 4 is a view similar to Figure 1 with the latch applied to a "flush" left-hand door;

Figure 5 is a view similar to Figure 2 showing the construction illustrated in Figure 4;

Figure 6 is a fragmentary side elevation of the refrigerator and the latch as shown in Figure 4, the latch lever being in partially open position;

Figure 7 is a detached perspective view of the latch lever, and

Figure 8 is a similar view of the latch keeper.

In the specific embodiment of the invention shown on the drawings, the latch lever is shown as comprising a substantially T-shaped member 1 having the head 2 projecting substantially equidistantly from opposite sides of the stem 3 which forms the handle of the lever, one side of the member 1 being formed with an integral pivot lug 4 arranged substantially centrally of the head 2 and pivotally connected at 5 between spaced pivot ears 6 projecting from a base 7 which is formed with openings 8 to receive screws for securing the latch lever to a refrigerator door.

The keeper for the latch includes a base 9 from which projects a keeper head 10 formed in opposite sides with the respective notches 11 and 12 to cooperate with the head 2 of the latch lever, said base being provided with openings 13 to receive screws for securing the keeper to the body of a refrigerator. The notches 11 and 12 are disposed at different distances from the base 9, the difference in the distance being substantially equal to the projection of the front of an "offset" door from the plane of the front of a refrigerator.

In applying the latch to a right-hand door, the base 7 of the latch lever is fastened to the left-hand edge of the door by means of screws 14 with one end of the head 2 extending beyond the side edge of the door, as clearly shown in Figure 1. Where the door is an offset door, as indicated at A in Figure 1, the latch keeper 9 is secured to the body B of the refrigerator or the door frame adjacent the swinging edge of the door by means of screws 15, the keeper being so positioned that the notch farthest from the base, in the present instance the notch 12, is uppermost and so that the notch is adapted to receive the projecting end of the head 2 of the lever. With the latch thus applied, the projecting end of the head 2 of the lever is positioned within the notch 12 when the door is closed so as to positively hold the door against opening. When it is desired to open the door the handle 3 of the lever is raised upwardly which swings the head of the lever out of the notch so that the door may be swung outwardly into open position. Preferably each of the notches 11 and 12 is formed at its inner side with a shoulder 16 to be engaged by the head of the lever to initially pull the door toward an open position. Where the latch is to be applied to a left-hand door, the latch lever is secured to the right-hand edge of the door C, as shown in Figure 4, with the other end of the head 2 of the lever projecting beyond the edge of the door to engage the notch of the keeper. Where the latch is to be applied to a "flush" door, the latch lever is secured in position on the swinging edge of the door, as above described. The keeper is secured to the body D of the refrigerator adjacent the edge of the door opening in a position reverse to that above described and shown in Figures 1 to 3, inclusive. Thus, the notch nearest the base 9, in the present instance the notch 11, is positioned uppermost and is adapted to receive the projecting end of the head 2 of the lever to hold the door in closed position. The projecting head 10 of the latch keeper is provided at its opposite edges with inclined surfaces 17 and 18 to automatically guide the head 2 of the lever into the corresponding notches 11 and 12 as the door is swung into a closed position, the head 2 falling by action of gravity on the lever into the uppermost notch when the door is fully closed. To limit the swinging of the lever toward a closed position the lug 4 may be provided with a projection 19 to engage the base 7, as more clearly shown in Figures 1 and 3.

It will thus be seen that a latch constructed in accordance with my invention may be interchangeably applied to either a left-hand offset door, a left-hand flush door, a right-hand offset door or a right-hand flush door by mere reversal of the lever, or the keeper, or both. It will also be observed that neither the latch nor the keeper interfere with each other or the appearance or use of the refrigerator when applied to any of said types of doors. That is, the formation of the latch keeper with two notches does not produce a keeper having any objection as to size or shape, and the provision of the T-shaped lever does not add any objectionable size or shape thereto. With my invention it is not necessary to manufacture two types of latch levers and two types of latch keepers, so that the cost of production of a latch embodying my invention is less than that necessary for the production of the known latches.

While I have shown the latch keeper adapted for use with either an offset or a flush door, it will be understood that it is within the scope of the invention to form the lever so as to be adapted for use in connection with an ordinary keeper on either a flush or an offset door. Also, while I have shown the latch comprising certain detail constructions of latch levers and keepers, it will be understood that many modifications and changes may be made in the construction of the latch without departing from the spirit or scope of the invention. Furthermore, while I have described the latch in connection with refrigerator doors the invention is equally well adapted for use in latches for other types of doors. Therefore, I do not desire to be understood as limiting myself except as required by the following claims when construed in the light of the prior art.

Having thus described the invention, what I claim is:

1. An interchangeable latch for doors, including a latch lever adapted to be secured to the swinging edge of a door, and a latch keeper adapted to be secured to the door frame and formed with a plurality of keeper notches to cooperate with said lever when the latter is applied to either a flush or an offset door.

2. An interchangeable latch for doors, including a latch lever adapted to be secured to the swinging edge of a door, and a latch keeper adapted to be secured to the door frame and formed with a plurality of keeper notches disposed at different distances from said door frame to cooperate with said lever when the latter is applied to doors whose fronts are disposed at different distances from the front of said door frame.

3. An interchangeable latch for doors, including a latch lever adapted to be secured to the swinging edge of a door, and a latch keeper adapted to be secured to the door frame in different positions and formed with a plurality of keeper notches to cooperate with said keeper is in said different positions with said lever when the latter is ap-

plied to doors whose fronts are disposed at different distances from the front of said door frame.

4. An interchangeable latch for doors, including a latch lever adapted to be secured to the swinging edge of a door, and a latch keeper adapted to be secured to the door frame with either of a plurality of sides uppermost and formed with a plurality of notches one in each of said sides to cooperate with said lever when the latter is applied to doors whose fronts are disposed at different distances from the front of said door frame.

5. An interchangeable latch for doors, including a latch lever adapted to be secured to the swinging edge of a door, and a latch keeper having a base adapted to be secured to the door frame and a projecting portion formed in each of opposite sides with a keeper notch, said notches being disposed at different distances from said base to cooperate with said lever when the latter is applied to doors whose fronts are different distances from the front of said door frame.

6. An interchangeable latch for doors, including a keeper adapted to be secured to a door frame and formed with a plurality of keeper notches at different distances from said frame, and a latch lever formed with oppositely projecting portions and adapted to be secured to the swinging edge of a door, one or the other of said oppositely projecting portions being adapted to cooperate with one of said notches when the latch is applied to either a right-hand or a left-hand flush door, and with the other of said notches when the latch is applied to either a left-hand or a right-hand offset door.

7. An interchangeable latch for doors, including a keeper adapted to be secured to a door frame with different sides uppermost and formed at opposite sides with keeper notches disposed at different distances from said door frame, and a T-shaped latch lever adapted to be pivotally secured to the swinging edge of a door, the ends of the head of said lever being adapted to cooperate with said notches to adapt the latch to be used with either a right-hand or a left-hand or a flush or an offset door.

FRANK BRABSON.