F. L. ELLSWORTH.

REFRIGERATOR LATCH.

APPLICATION FILED JULY 7, 1909.

968,334.

Patented Aug. 23, 1910.

Fig. 1.

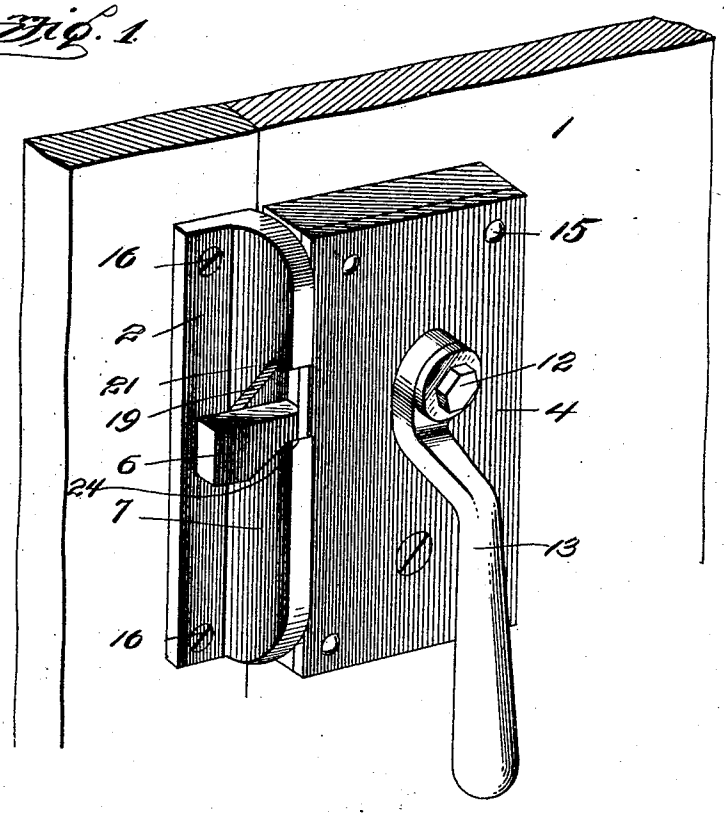


Fig. 2.

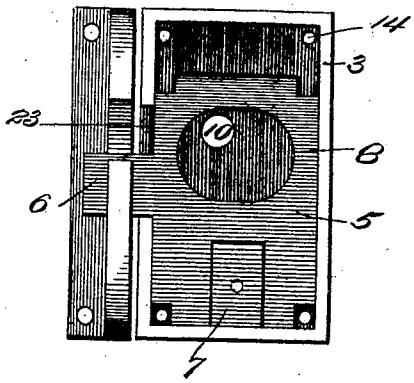


Fig. 3.

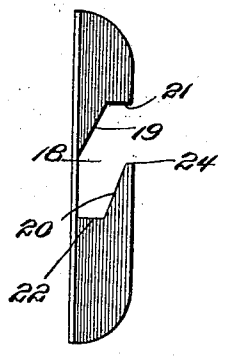
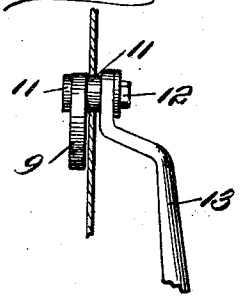


Fig. 4.



Witnesses

G. F. Golson.

W. J. Forth.

Inventor

Frank L. Ellsworth.

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

FRANK L. ELLSWORTH, OF WILKES-BARRE, PENNSYLVANIA.

REFRIGERATOR-LATCH.

968,334. Specification of Letters Patent. Patented Aug. 23, 1910.

Application filed July 7, 1909. Serial No. 506,359.

To all whom it may concern:

Be it known that I, FRANK L. ELLSWORTH, a citizen of the United States, residing at Wilkes-Barre, in the county of Luzerne and State of Pennsylvania, have invented new and useful Improvements in Refrigerator-Latches, of which the following is a specification.

This invention relates to latches and is primarily directed to that class of latches employed upon refrigerator doors but the device may be successfully employed on other constructions when it is desired that the door fit firmly to exclude air etc.

The object of the invention is to provide a device of this character, which is extremely simple in construction which may be easily and quickly attached to any door and which is operated through the medium of a suitable cam whereby the bolt will be raised into engagement within the mouth of a keeper member provided with inclined cut away portions adapted to draw the lock inwardly to tightly compress the door when the same is operated.

Another object of the invention is to provide a latch of this character which, not only effectively and securely retains the door in its closed position, but which at the same time provides means whereby the door may be readily and easily opened when desired.

With the above and other objects in view, the invention resides in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawing, Figure 1 is a perspective view of the device illustrating the same in applied position. Fig. 2 is an elevation of the device with the latch keeper plate and the operating cam removed. Fig. 3 is a side elevation of the keeper. Fig. 4 is a detail sectional view, illustrating the cam and handle therefor.

In the accompanying drawing the numeral 1 designates the latch or lock member and the numeral 2 designates the keeper member. The latch or lock member comprises a casing 3 having one of its faces opened and normally closed through the medium of a plate 4. This case 3 is preferably of a rectangular formation and is adapted for the reception of a sliding bolt member 5. The bolt member comprises a sliding plate to which the bolt proper, designated by the numeral 6, is integrally formed. The plate 5 has its lower central portion cut away to form a pair of bifurcated extensions between which is positioned a vertically extending substantially rectangular finger 7, which is integrally formed with or otherwise connected to the casing 3. The upper portion of the plate 5 has an elliptical opening 8 and this opening is adapted for the reception of a cam 9. Both the rear face of the casing 3 and the plate 4 are provided with alining reduced openings 10 and these openings are adapted for the reception of the trunnions 11 carried by the cam 9. One of these trunnions is provided with a centrally threaded opening, which is adapted for the reception of securing element 12 whereby an offset operating handle 13 is secured to the device. By reference to Figs. 1 and 2 of the drawings it will be noted that each of the four corners of the casing 3 and the plate 4 are provided with alining openings 14 and these openings are adapted to receive removable securing screws 15, whereby the device is securely attached to the door of the refrigerator or the like.

By reference to Fig. 2 it will be further noted that the corners of the substantially rectangular plate 5 are cut away to allow for securing elements 15, when the device is operated in either direction. The keeper 2 comprises an elongated L-shaped member. This member 2 has one of its faces provided with suitable openings adapted for the reception of threaded retaining elements 16 whereby the said keeper may be securely attached to the door post. The right angular offset portion 17 has a cut away portion 18. This cut away portion 18 provides a pair of inclined walls 19 and 20 and the wall 19 terminates in a horizontal portion 21 a distance substantially equaling that of the bolt 6. The wall 20 ends in a substantial point and projects upwardly from the horizontal wall 22 which is also of a width substantially equaling that of the thickness of the bolt 6. By this arrangement it will be noted that when the handle is raised, it will cause the sliding bolt plate 5 to become elevated, thereby raising the bolt 6 within the rectangular cut away portion 23 provided upon one edge of the casing 3. The bolt opening 23 has its side walls vertical, so that the said bolt is raised or lowered in a perfectly straight or vertical plane. When in this position the door is closed allowing the bolt 6 to enter the opening 18 between the horizontal portion of the inclined wall 21 and the upper

portion 24 provided by the inclined wall 20. Upon rotating the handle 13 it will be noted that the bolt 6 is caused to slide downwardly upon the inclined wall 20, thus effectively and securely locking the door upon its post to prevent the entrance of outside air and to keep the interior of the refrigerator cool.

It will be noted that by removing the securing element 12 from the trunnion 11 of the cam 9 and positioning the trunnions in a directly opposite manner to that described, the handle can be secured to the device upon the opposite side of the casing, thus easily and quickly reversing the lock.

It will be further noted, from the above description, that, when it is desired to open the door, the handle 13 is raised causing the bolt 6 to move outwardly upon the inclined walls, thus easily and quickly opening the said door with the least amount of physical exertion.

While I have illustrated and described the preferred embodiment of the improvement as it now appears to me, it is to be understood that minor details of construction within the scope of the following claim may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus fully described the invention what is claimed as new is:

In a device for the purpose set forth, a substantially rectangular casing, a plate within the casing and adapted for vertical movement, the said plate having its lower portion bifurcated, the casing being provided with a guide extension adapted to engage the walls of this bifurcation, the plate being provided with an offset bolt member extending through the opening in the side of the casing, the upper portion of the said plate being provided with an elliptical opening, a cam member engaging the opening, a base plate for the casing, a handle connected with the cam member, a keeper member, said keeper member being of a cross sectional L-shape contour, one of the offsets of the said keeper member being provided with a cutaway portion having downwardly extending walls, the upper wall of the inclined portion being provided with a horizontal portion to correspond with the bolt, and the lower wall of the opposite inclined portion being also provided with a horizontal wall of a width to correspond to the width of the bolt substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK L. ELLSWORTH.

Witnesses:
BEN P. THOMAS,
PETER L. CAMPBELL.