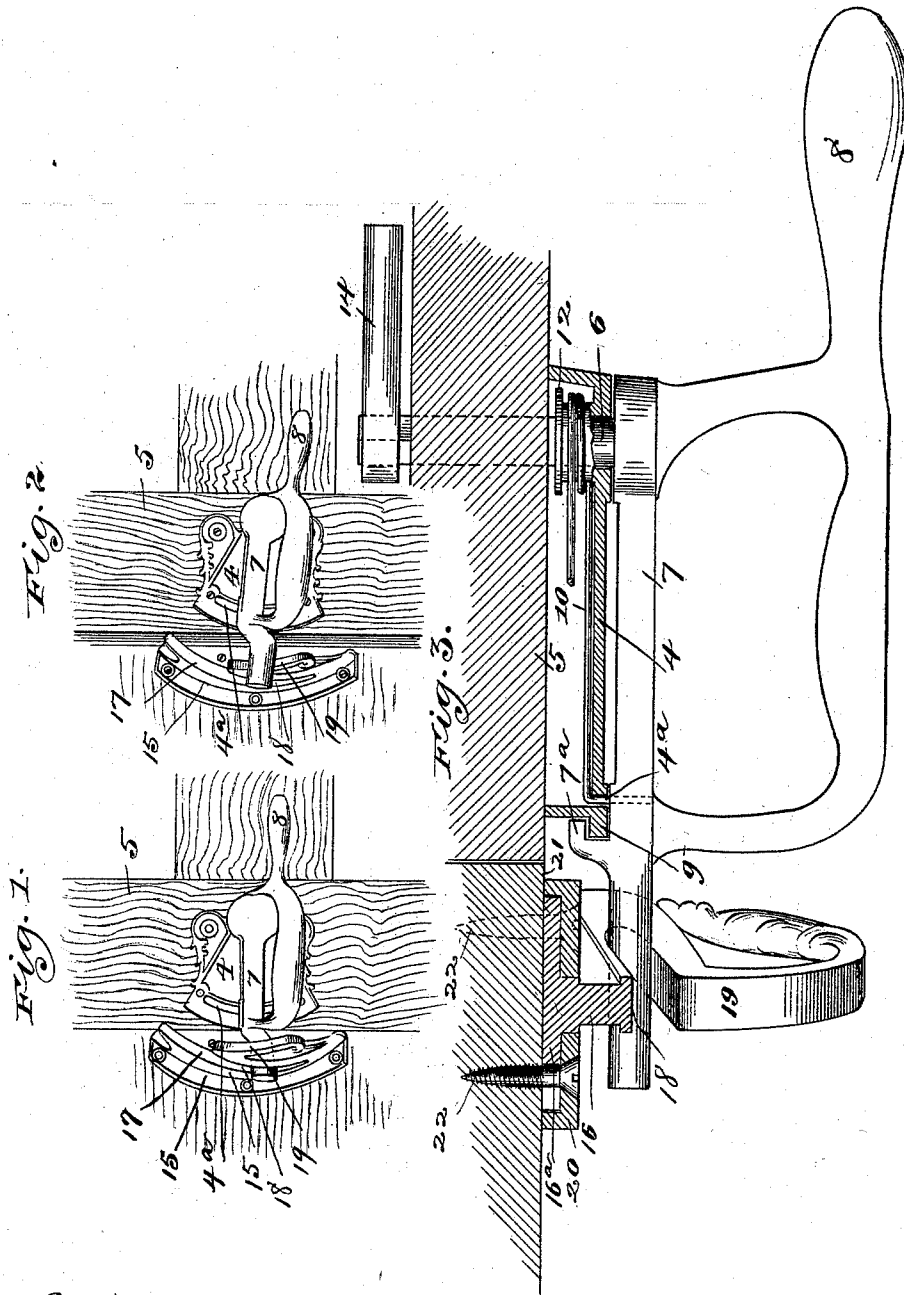


(No Model.)

F. KALLSEN.
LATCH.

No. 526,811.

Patented Oct. 2, 1894



Witnesses,
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UNITED STATES PATENT OFFICE.

FREDERICK KALLSEN, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE WOLF, SAYER & HELLER, OF SAME PLACE.

LATCH.

SPECIFICATION forming part of Letters Patent No. 526,811, dated October 2, 1894.

Application filed October 9, 1893. Serial No. 487,677. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK KALLSEN, of Chicago, Illinois, have invented certain new and useful Improvements in Latches, of which the following is a specification.

The invention relates to a door latch and more particularly to a latch designed to be used with refrigerator doors. These doors are sometimes very heavy and are always made so as to fit tight to provide a practically air tight joint. This renders them difficult to open and close and requires a strong latch.

My invention is designed to provide a latch which will fulfill these requirements and which will be simple in construction and easy of operation.

In the accompanying drawings, Figure 1 is a perspective view of the latch closed showing its members applied to a door and door jamb, the latter broken away. Fig. 2 is a similar view showing the latch open; and Fig. 3 is a sectional plan view showing the latch in the closed position, and showing also a modified construction.

In the drawings, 4 represents the latch base which may be substantially triangular in form and hollowed out on its interior to provide an actuating spring chamber. This latch base is secured to the door 5 and is provided toward its front edge with a curved slot 4^a and at its rear end is perforated to receive the pivot 6 of the latch 7. The latter, when viewed in plan as seen in Fig. 3, has a rectangular open body furnishing a hand hold with the latch bolt projecting from its forward end and with the operating handle or lever 8 at its rear end. The latch bolt has on its lower side a lug 7^a which engages beneath a flange 9 of the base so as to permit the latch to swing freely in the arc of a circle while preventing any undue strain upon the pivot of the latch.

A spring rod 10 has one or more coils around the pivot 6, and one of its free ends engages the base and its other end extends toward the front of the base and is up-turned to engage the latch bolt, as seen at 11. The spring is so arranged as to normally depress the latch bolt when in use.

The pivot of the latch bolt may have the washer 12 to hold the spring in place, and said pivot may be extended through to the inside of the door, as seen in Fig. 3, and provided with an operating handle 14 so that the door may be opened from the inside as well as the outside. This is important in the construction of refrigerators as it frequently happens that the door is accidentally closed while a person is on the inside.

15 represents a catch, which is preferably of curved form as shown, and consists of the body 16 which has a flat perforated base 16^a, the cam face 17, the inclined slot 18 and the inclined striking plate 19. The cam 17 extends to the top of the catch above the apex of the striking plate. An escutcheon 20 having a curved slot therein is fitted over the body of the catch and secured to the door jamb 21 by the screws 22. The closed position is shown in Fig. 1 and one position in closing is shown in Fig. 2. In the latter figure the latch bolt is seen as if riding up the inclined face of the striking plate.

The operation of closing the door will cause the latch bolt to ride up until it reaches the top of the inclined striking plate when the spring will cause it to enter the inclined notch. Said notch is inclined rearwardly from top to bottom, and force applied to the latch in closing the door will cause the latch bolt to travel down in forcing contact with the inclined front wall of the slot, thus forcing the door tightly into place. In opening, the moving of the latch by means of the operating handle will cause said latch to rise riding upon the rear wall 17 of the slot and forcing the door open so that by the time the latch has cleared the slot the door may be opened by an outward pull; but the cam face 17 is extended above the apex so as to assist in forcing the door open. The operation of the latch upon these cam surfaces is one of the chief advantages of my construction and the cams render the opening and closing of the door easy.

The escutcheon may be dispensed with, the catch may be straight instead of curved, and other structural details varied.

I claim—

1. The combination with a pivoted latch, of a catch or keeper therefor having an oblique upwardly opening slot whose walls form inclined bearing surfaces against which respectively the latch acts when turned on its pivot in opening and closing the door, substantially as described.

2. The combination with a pivoted latch, of a catch or keeper therefor having an upwardly opening oblique slot to receive the latch, the walls of said slot forming inclined bearing surfaces for the latch when turned on its pivot in opening and closing the door respectively, the front edge of the catch being inclined to provide a striking plate and the rear wall of the slot being extended above

the apex of the striking plate, substantially as described.

3. The combination with a catch, of a base plate adapted to be secured to a door and provided with a spring chamber and with a curved slot toward its front edge, a latch bolt pivoted to the rear of said plate, an actuating spring coiled about the pivot of the bolt and having one of its ends engaged with the base and the other projected through the slot therein and engaged with the latch bolt, substantially as described.

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Witnesses:

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