No. 667,023. Patented Jan. 29, 1901.

A. LARSEN.

LATCH.

(Application filed June 19, 1900.)

(No Model.)

Fig. 1.

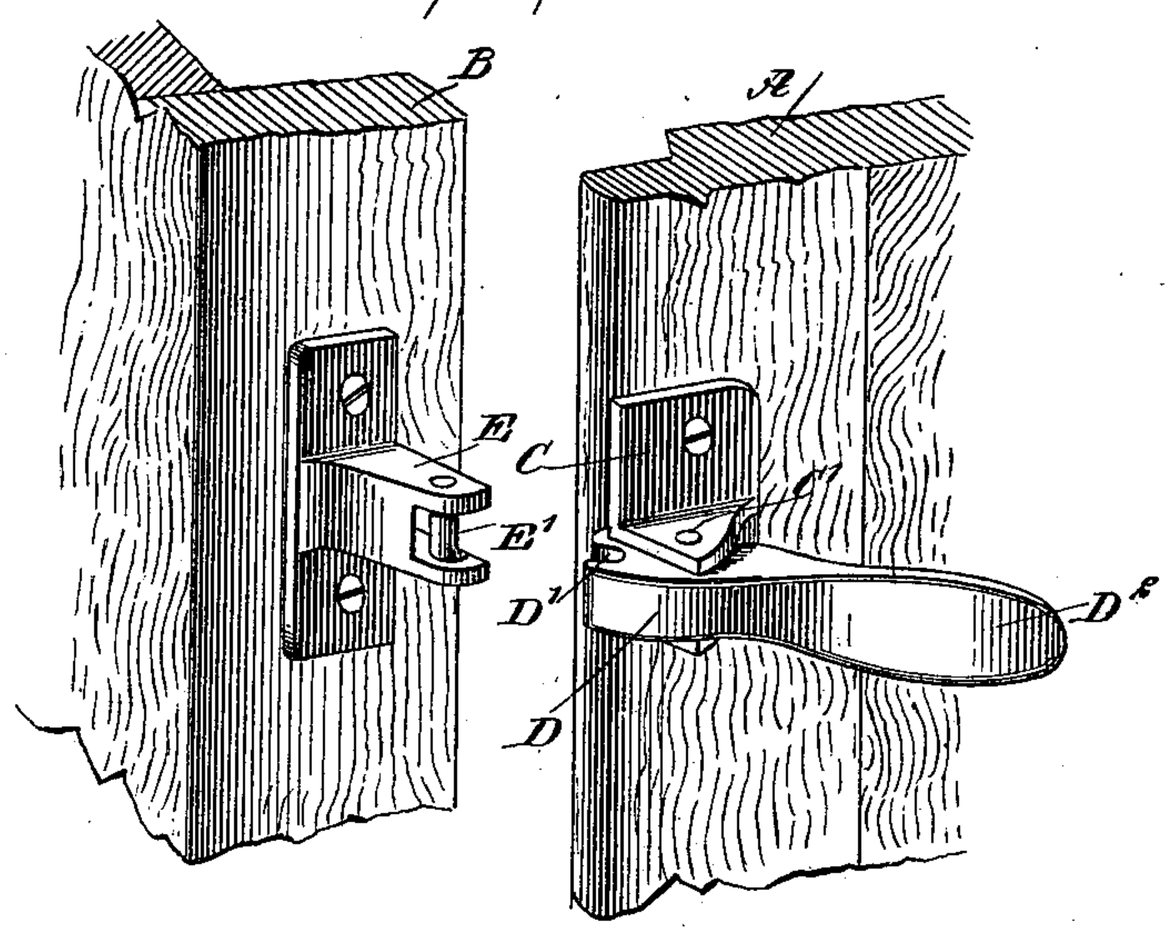


Fig. 2.

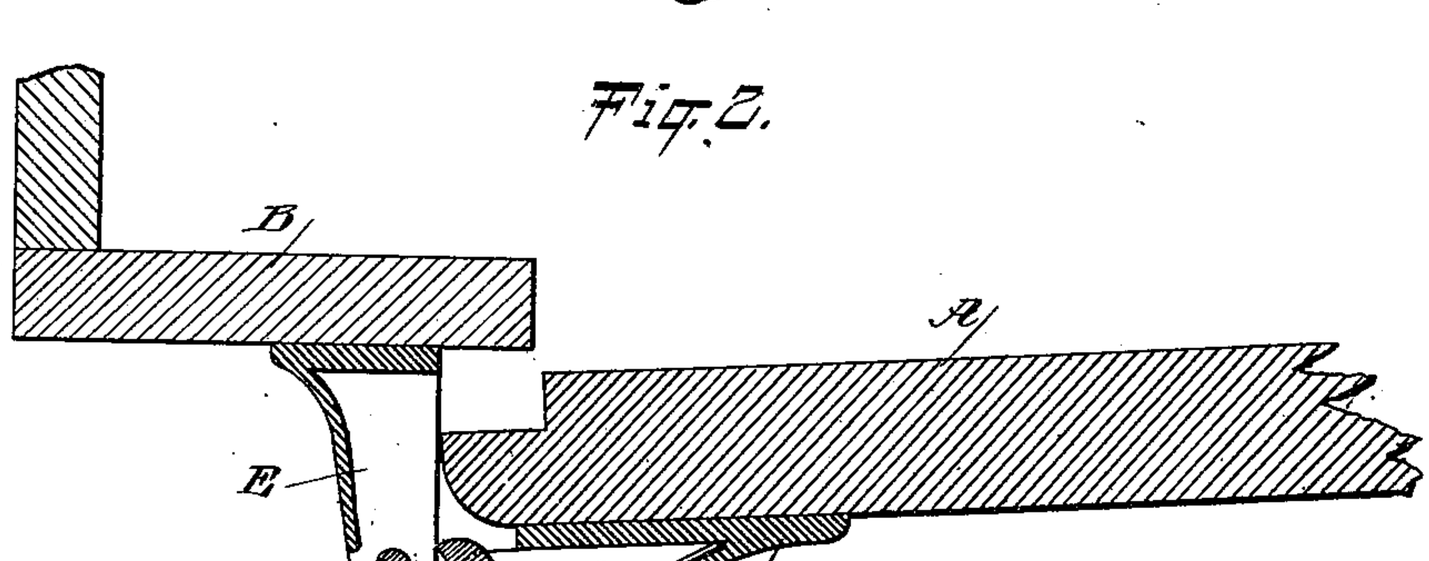
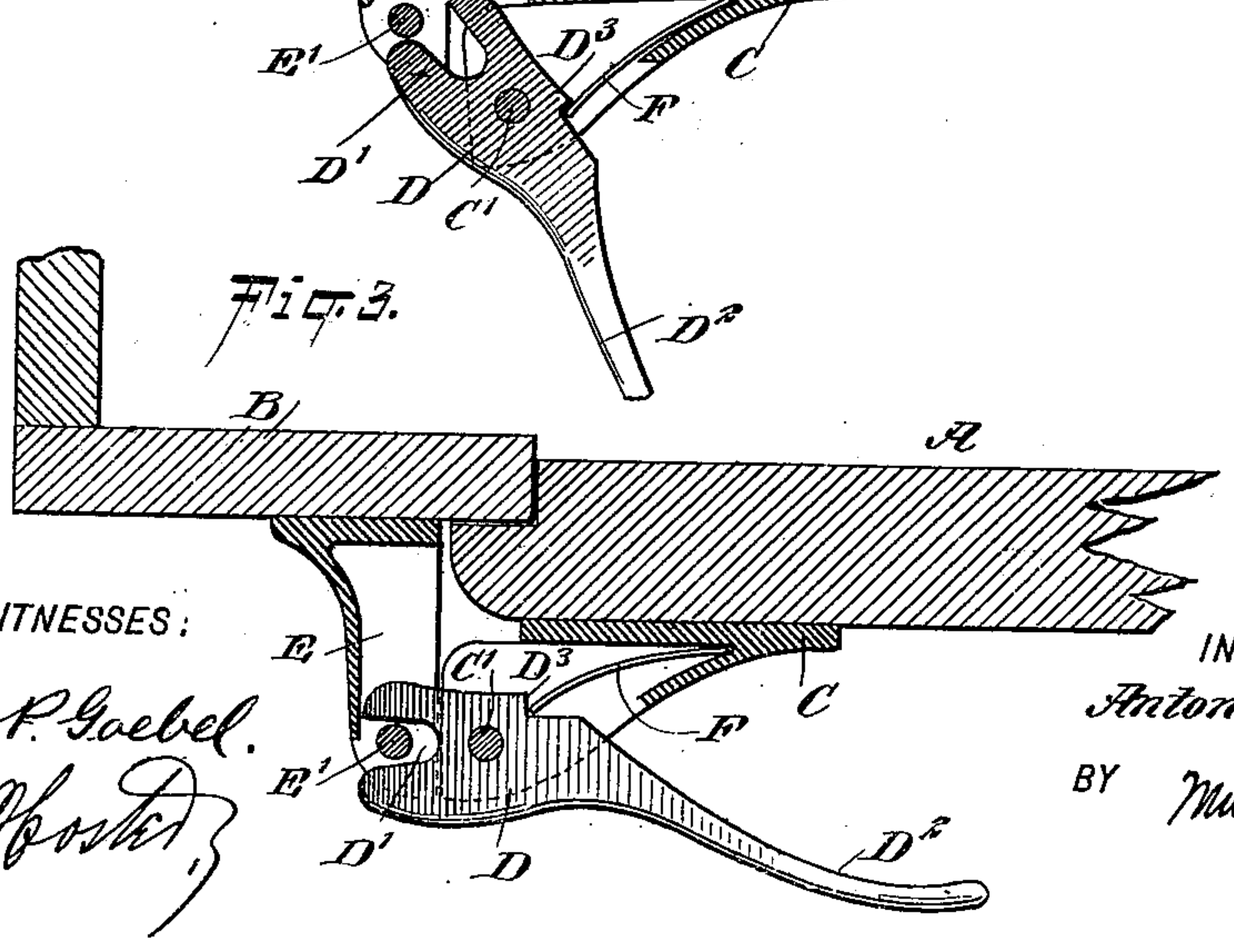


Fig. 3.



WITNESSES:

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LATCH.

SPECIFICATION forming part of Letters Patent No. 667,023, dated January 29, 1901.

Application filed June 19, 1900. Serial No. 20,793. (No model.)

To all whom it may concern:

Be it known that I, ANTON LARSEN, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Door-Lock, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved door-lock which is simple and durable in construction, designed for use on refrigerators and other doors, and arranged to insure an easy closing of the door and a proper hermetic sealing when in a closed position without effort on the part of the operator.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the improvement as applied and with the door in an open position. Fig. 2 is a sectional plan view of the same, and Fig. 3 is a like view of the same with the door in a closed position.

A door A, adapted to be seated on a door jamb or casing B, is provided with a bearing C, having a vertically-disposed pivot C′, on which is fulcrumed a lever D, formed at one end with a slot D′ and at the other end with a handle D^2, adapted to be taken hold of by the operator when opening or closing the door. The slot D′ is adapted to engage a pin E′, arranged vertically in a keeper E, secured to the door jamb or casing B.

On the inner side of the lever D, between the fulcrum-point and the handle D^2, is arranged a shoulder D^3, engaged by the free end of a spring F, held in the bearing C, as is plainly shown in the drawings. The spring F is so arranged relatively to the shoulder D^3 that it holds the lever D in an open position, as shown in Figs. 1 and 2, and the slot D′ in such a position that when the door is closed the slotted portion of the lever D passes upon the keeper-pin E′, so that a further closing of the door will cause the lever D to turn on its pivot-pin, owing to the engagement of the pin E′ with the slot D′. When the lever D receives a swinging motion during the closing of the door, the spring F is compressed, and when the door has moved nearly into a final closing position then the spring F presses on the lever in such a manner as to cause a final closing of the door by the tension of the spring and without the aid of the operator. Thus the spring has two distinct functions—first, to hold the lever D in such open position that the slot D′ is in alinement with the pin E′ and engages the said pin when the door is moved into a closed position, and, second, to force the door finally to its seat without the aid of the operator and insure a perfect hermetic seating of the door on the door-casing.

When it is desired to open the door, the operator takes hold of the handle D^2 and swings the same outward, so as to again compress the spring F until the lever has passed a central position, it being understood that during this swinging given to the lever D the door is partly drawn open by the lever bearing against the keeper-pin E′. On a further outward pull on the handle D^2 the door finally swings open, the slot D′ easily leaving the keeper-pin E′ and said lever remaining in this position by the action of the spring F.

In order to close the door, it is not absolutely necessary for the operator to take hold of the handle D^2, as a push may be given to the door to swing the same in an inward direction, so that the lever D finally engages the keeper-pin E′, when a swinging motion is given to the lever D to swing the same beyond a central position for the spring F to finally move the door into a closed position.

The door-lock described is composed of but few parts, and is hence not liable to get out of order, and owing to its simple construction can be cheaply manufactured and readily applied to any door.

By the arrangement described it will be seen that when the operator moves the handle D^2 outward the lever D, in conjunction with the pin E′, pries the door A open, so that the door can be opened without much exertion on the part of the operator.

Having thus fully described my invention,

I claim as new and desire to secure by Letters Patent—

1. A door-lock having a locking-lever pivoted on a door and adapted to engage a keeper on the door-jamb, and a spring pressing said lever and arranged to hold the lever in an open position for engagement with the keeper when the door is moved into a closing position, and to finally close the door after engagement of the lever with the keeper, as set forth.

2. A door-lock, comprising a keeper having a keeper-pin, a pivoted lever having a forked or slotted end for engagement with said keeper-pin, and a spring pressing said lever and arranged to hold the lever in an open position for engagement with the keeper when the door is moved into a closing position, and to move the door finally shut by the tension of the spring after engagement of the lever with the keeper-pin, as set forth.

3. A door-lock, comprising a keeper having a pin and adapted to be secured to a door-casing, a bearing adapted to be secured to the door, a lever pivoted in said bearing and having one end formed with a handle and the other end formed with a slot for engagement with the keeper-pin, and a spring held in said bearing and engaging with its free end a shoulder on said lever, to hold the lever in an open position for engagement with the keeper when the door is moved into a closing position, and to move the door finally shut after engagement of the lever with the keeper-pin, as set forth.

4. A door-lock, consisting of a keeper, adapted to be secured to a door-casing, a bearing adapted to be secured to a door, a handle-lever having a forked end adapted to engage the keeper, said lever being pivoted between its forked end and handle portion and provided on its inner face between its fulcrum and handle portion with a shoulder, and a plate-spring having one end secured to the bearing and its free end engaging the shoulder of the lever, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ANTON LARSEN.

Witnesses:

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JNO. M. RITTER.