

F. KEIL.
LATCH.

APPLICATION FILED FEB. 27, 1906. RENEWED SEPT. 11, 1908.

920,961.

Patented May 11, 1909.

2 SHEETS—SHEET 1.

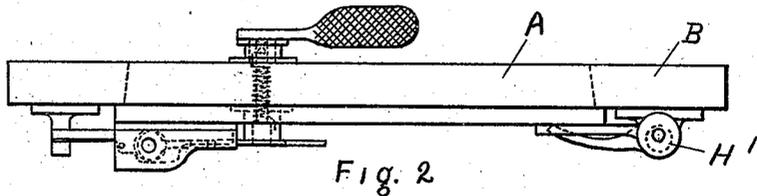


Fig. 2

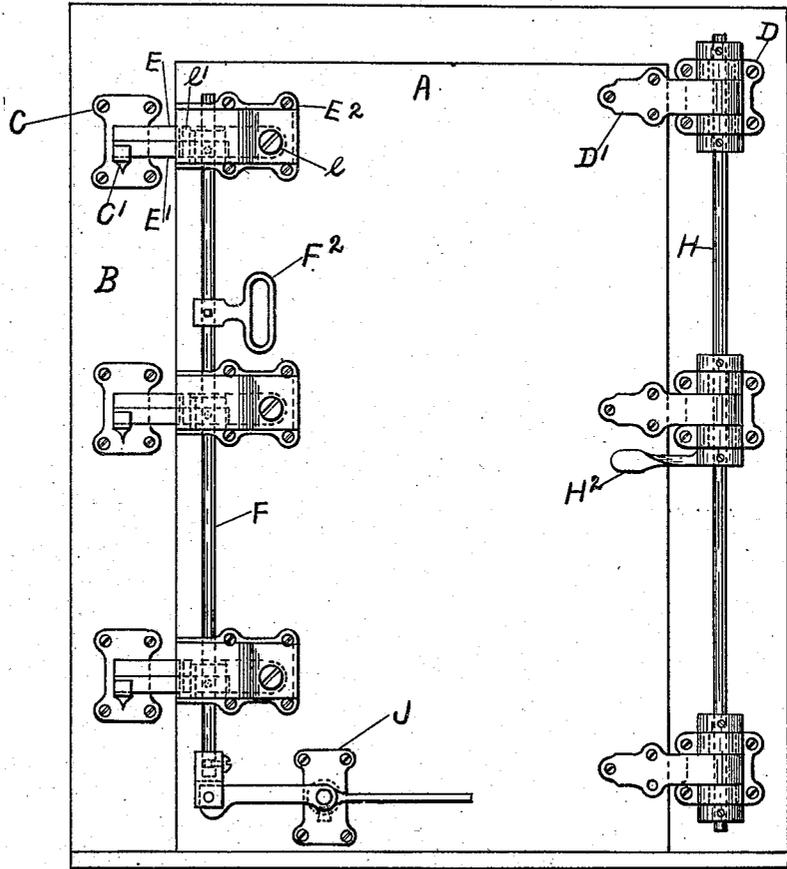


Fig. 1

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Rob. Schwarz

INVENTOR

Francis Keil
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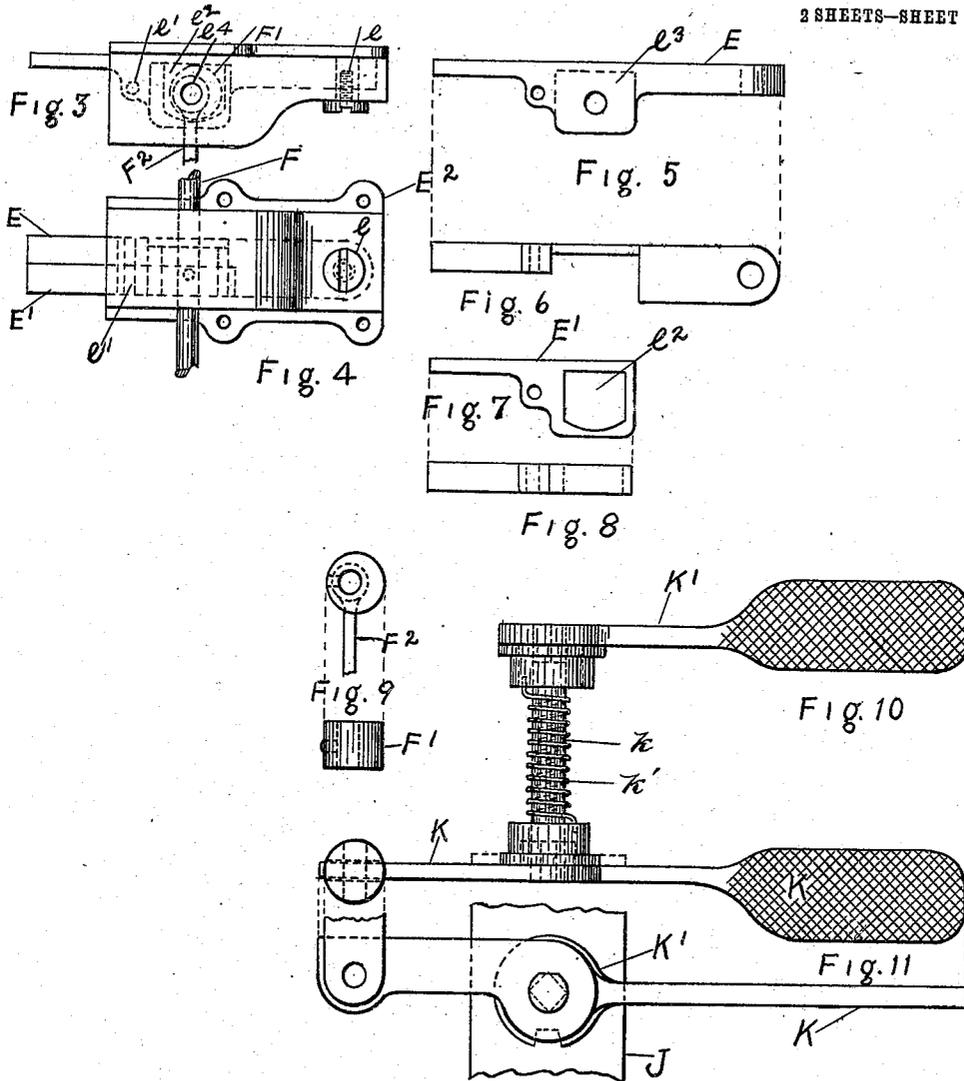
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UNITED STATES PATENT OFFICE.

FRANCIS KEIL, OF NEW YORK, N. Y., ASSIGNOR TO FRANCIS KEIL & SON, OF NEW YORK, N. Y.,
A FIRM.

LATCH.

No. 920,961.

Specification of Letters Patent.

Patented May 11, 1909.

Application filed February 27, 1905, Serial No. 247,588. Renewed September 11, 1908. Serial No. 452,662.

To all whom it may concern:

Be it known that I, FRANCIS KEIL, a citizen of the United States of America, and a resident of New York, in the county of New York and State of New York, certify that I have invented a certain new and useful Latch, of which the following is a specification, the same being a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to appliances designed for purposes of fastening movable articles, as swinging doors and the like, and in particular to latches for fastening and unfastening the doors of refrigerators, ice boxes and other structures where air-tight doors are required, and it has for its object to provide a latch simple and inexpensive in construction, readily applied and operated, and also efficient in practical use.

With this object in view the invention consists in certain novel features of construction and combination and arrangement of parts, all of which will be hereinafter described and specifically pointed out in the drawings which accompany and form a part of this specification, and in which—

Figure 1 represents an elevation of a door equipped with this invention; Fig. 2 is a plan view of the same; Fig. 3 represents a plan view of the latching device proper; Fig. 4 is a front elevation thereof; Fig. 5 is a plan view and Fig. 6 a front elevation of the upper member of the latch; Fig. 7 is a plan view and Fig. 8 a front elevation of the lower member of the latch; Fig. 9 are views in detail of the eccentric; and Figs. 10 and 11 are respectively a plan view and an elevation of the auxiliary latch operated device.

Like letters of reference indicate like parts in all the views.

Referring particularly to the drawings A, in the present embodiment of the invention, denotes a door, and B the jamb thereof. To the jamb B is ordinarily secured the keeper C—having a nosing C¹—and also one member or leaf D of a hinge, which may be of any suitable construction, the other member, strap or leaf D¹ of which is attached to the door A. To the said door is also secured the latch consisting of a casing E², and upper member E, pivoted to the same at e so as to work in a vertical direction, and a

lower member E¹ hinged to the member E at e¹. The said pivot or joint e¹ lies in a vertical plane in order that the member E¹ may swing in a horizontal direction, which member E¹ is formed with an opening or orifice e².

A rod F carrying an eccentric F¹ works within the opening or orifice e² of the member E¹, the said eccentric also being contained within the casing E² and in a recess e³ of the upper member E; and the said rod projects or extends through the orifice e⁴ of the casing E² and is provided with a controlling manually actuated device, as a handle F². The rod F may be used in connection with one or more of the latches constructed according to this invention,—three being shown in the present embodiment. A rod H provided with a controlling manually actuated device, as a handle H², serves as the pintle of the hinges D, D¹. To the door A is also fastened a plate J which serves to support a duplex lever mechanism consisting of two arms K, K¹, connected by a spindle k, the arm K working in front of the door and forming a socket for the lower end of the rod F, and the arm K¹ working behind the door. Each of these arms is preferably constructed and arranged to be used as a treadle in order to raise the rod F. A spring k¹ coiled around the spindle k serves to hold the said two levers K, K¹ in their normal horizontal positions, thereby retaining the rod F in its low or depressed position.

In operation, when the door A is closed, the preferably gravity latches E, E¹ will fall in or behind the nosings C¹ of the keepers C. In order now to force the outer edge of the door into the jamb, the handle F² of the rod F is ordinarily pushed around to one side, as shown in Figs. 1 and 2, whereupon the eccentrics F¹ will force the inner ends of the members E¹ in an inward direction, whereupon the said members will swing on their pivots or joints e¹ and the outer end of the said members will be pressed forward against the nosings C¹, thereby forcing the outer edge of the door A backward into the jamb B. In order to open the door from the inside it is only necessary to press upon the treadle formed by the pivoted arm K¹, whereupon the rod F will be raised and the latches lifted out of the keepers. The treadle formed by the

pivoted arm K may also be used to raise the rod F, if desired, in order to render the operation of opening the door from the outside an easier one.

5 I do not claim in this application the specific construction of the hinge herein shown and described, as the same is claimed in a divisional application Serial No. 290,825, filed December 7th, 1905.

10 As it is evident that many changes in the construction, form, proportion and relative arrangement of parts might be resorted to without departing from the spirit and scope of my invention, I would have it understood that I do not restrict myself to the
15 particular construction and arrangement of parts shown and described, but that such changes and equivalents may be substituted therefor, and that—

20 What I claim as my invention is:

1. In a latching device, a latch consisting of a plurality of members, one being pivoted so as to move in a vertical direction, and the other being sustained by the first
25 member in a pivoted relation by a vertical joint so as to swing in a horizontal direction, in combination with an eccentric to actuate the said horizontally moving member.

2. In a latching device, a latch consisting
30 of a plurality of members, one being pivoted so as to move in a vertical direction, and the other being sustained by the first member in a pivoted relation by a vertical
35 joint so as to swing in a horizontal direction, in combination with an eccentric to actuate the horizontally moving member, and with a manually actuated device to control the same.

3. In a latching device, a plurality of
40 keepers, in combination with a plurality of

latches, each consisting of a plurality of members pivoted so as to respectively move vertically and horizontally, and a common manually actuated device to control the latter, and means to cause the said
45 latches to move vertically and also with an advance and retrograde movement as regards said keepers.

4. In a latching device, a keeper, in combination with a latch consisting of a plurality
50 of members pivoted so as to respectively move vertically and horizontally, and a manually actuated device to control the same, and means to cause the said latch to move vertically and also with an advance
55 and retrograde movement as regards the said keeper, and also in combination with auxiliary latch controlling means to cause the latch to move in a vertical direction.

5. In a latching device, a plurality of
60 keepers, in combination with a plurality of latches, each consisting of a plurality of members pivoted so as to respectively move vertically and horizontally, and a common manually actuated device to control
65 the latter, and means to cause the said latches to move vertically and also with an advance and retrograde movement as regards said keepers, and also in combination with auxiliary latch controlling means to
70 cause the latches to move in a vertical direction.

In testimony of the foregoing specification I do hereby sign the same in the city of New York, county and State of New York,
75 this 14th day of February 1905.

FRANCIS KEIL.

Witnesses:

F. A. WURZBACH,
H. BAMMANN.