(No Model.)

J. K. CLARK.

DOOR LATCH.

No. 344,722. Patented June 29, 1886.

Fig. 1.

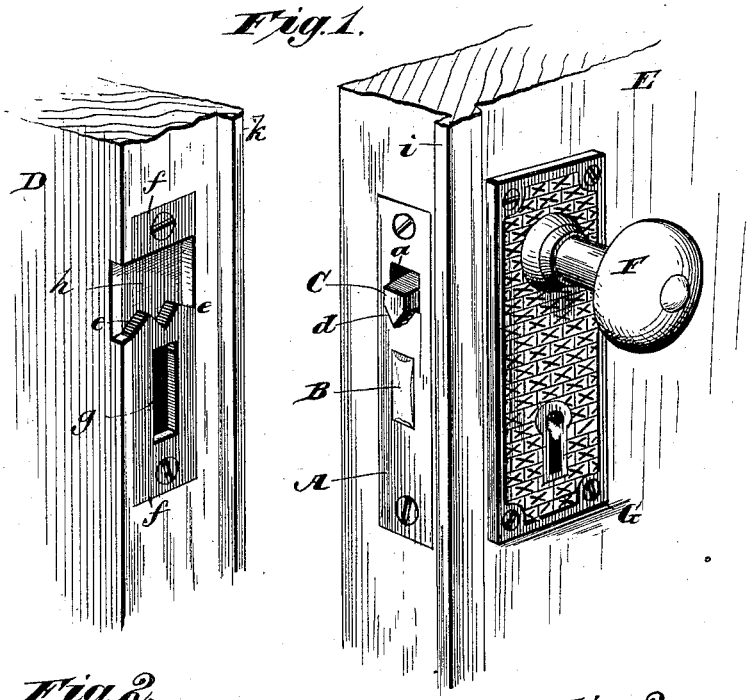


Fig. 2.

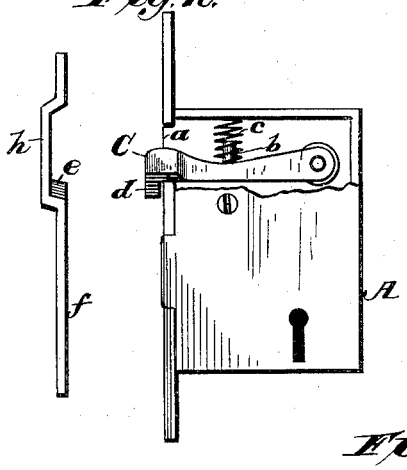


Fig. 3.

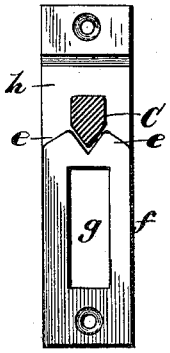
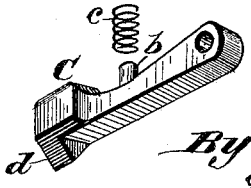


Fig. 4.



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UNITED STATES PATENT OFFICE.

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DOOR-LATCH.

SPECIFICATION forming part of Letters Patent No. 344,722, dated June 29, 1886.

Application filed November 27, 1885. Serial No. 184,033. (No model.)

To all whom it may concern:

Be it known that I, JOHN K. CLARK, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Door-Latches, of which the following is a specification.

This invention relates to a door fastening or latch adapted to hold a door in its closed position, and capable of yielding upon the application of a slight pull on the door in opening it without requiring the turning of a knob or the employment of any lever or other device for acting on the latch.

The invention consists of a vertically movable or oscillating spring-latch, which is pivoted at one end within any ordinary lock-case, and has a beveled end projecting therefrom and adapted to engage a beveled catch or striker on door-frame, the door being arranged to open under a slight pull on a rigid or immovable knob or handle that is independent of the locking and latching mechanism.

In the annexed drawings, illustrating the invention, Figure 1 is a perspective view showing a portion of a door and its frame with my improved fastening applied and ready for use. Fig. 2 represents an edge view of the striker or keeper-plate and a side view of the lock-case, partly broken away to show the pivoted vertically-oscillating spring-latch. Fig. 3 is a front view of the keeper-plate and striker. Fig. 4 is a perspective view of the spring-latch.

Referring to the drawings, A represents a lock-case, which is preferably mortised into a door, as usual. This lock has a key-bolt, B, and may be of any ordinary or well-known construction.

In the lock-case A is pivoted a vertically-movable latch or dog, C, the free end of which projects through an opening, *a*, in the edge of said case. On the upper side of this latch or dog C is a guide-pin, *b*, for a spiral spring, *c*, by which the latch is seated. The projecting end of the latch C is somewhat enlarged, as shown in Fig. 4, and is formed with a beveled lug, *d*, for engaging a double-inclined striker, *e*, on the face of the bolt and latch-keeper *f*, which is mortised into the door-frame D, as usual. This keeper is slotted at *g*, for passage of the key-bolt. It is also countersunk at *h* in rear of and above the double-inclined striker *e*, to accommodate the beveled end of the vertically-movable spring-latch.

To the side of the door E, and independent of the lock, is fixed a rigid knob or pull, F, which does not turn, and has no connection with the lock mechanism or latch. There is also fixed to the door a key-plate or escutcheon, G, which may or may not be connected with the immovable door pull or knob.

When the door is pushed to or closed, one of the beveled or inclined faces of the latch C will come in forcible contact with and ride up and over the adjacent bevel of the striker or catch *e* until it becomes engaged with said double-inclined striker under the action of the spring *c*. By pulling on the knob F to open the door the latch C will have one of its beveled or inclined faces drawn against and over the corresponding beveled surface of the striker or catch, the spring *c* being compressed until the striker and latch are disengaged.

While the door remains closed the beveled lower edge of the vertically-movable latch C will be seated in the center of the double-inclined striker or catch *e*, as shown in Fig. 3, and will thus secure the door from accidental opening. By exerting slight traction, however, on the knob or pull F the door can be readily opened when not locked by the key-bolt.

In Fig. 1 the lock and latch are shown as applied to a door and door-frame, which are respectively rabbeted at *i* and *k*, to form a close joint. This construction is of advantage in refrigerators and like situations where a tightly-closing door is desirable; but the rabbeting of the door and frame is not essential, and the lock and latch can be applied with equal advantage to the doors of houses and apartments, and in many other situations requiring a spring-fastening.

It is obvious that by means of the double-inclined striker or catch *e* and the vertically-movable latch C, having a double bevel on lower edge, the same lock can be readily used on either a right or left hand door without the trouble of reversing the latch, as is usually required. For this reason, also, the lock can be used on doors that are hung to swing in both directions. It is apparent that the relative positions of the spring *c*, beveled latch C, and

double-inclined catch *e* may be varied, though I prefer to arrange these parts as shown in Fig. 2, by which the latch engages its catch with a downward thrust.

By reason of the knob or pull F being immovable and entirely disconnected from the locking and latching mechanism the construction of the lock is greatly simplified, its cost is largely reduced, and the usual liability of disarrangement of parts is avoided, there being no possibility of the very common injury to the lock or latch incident to jerky rotation of the knob-spindle. A fastening device of this description is also more cheaply and quickly applied than an ordinary lock, as the lock-case can be made smaller than usual, thus doing away with much of the labor of mortising the door and boring an opening for the knob-spindle. By arranging the spring-latch to have a vertically-oscillating movement it is enabled to work smoothly with but little friction, and is therefore not liable to get out of order.

Having thus described my invention, what I claim is—

The combination of a lock-casing, provided with a pivoted vertically-swinging latch having a beveled or inclined nose, with a rigid knob having no connection with the latch, a striker-plate having a beveled or inclined seat in which the nose of the latch seats when the door is closed, and from which seat the nose is withdrawn by pulling the knob, and a spring acting on the latch between its pivoted end and its beveled nose, substantially as described.

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

JOHN K. CLARK.

Witnesses:

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WM. WAITE.