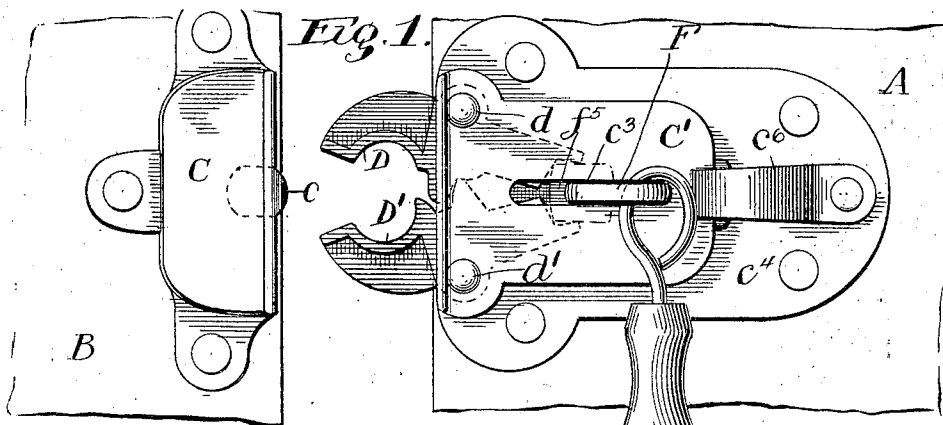
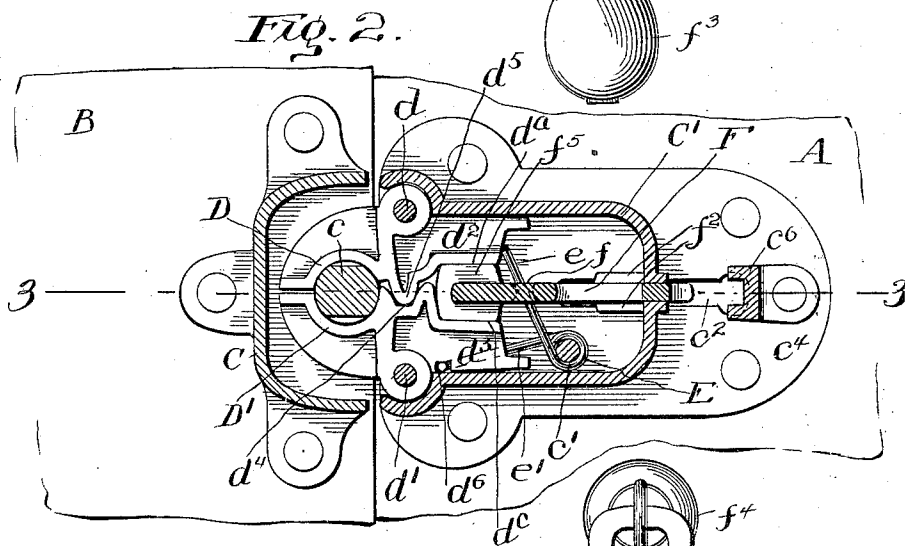
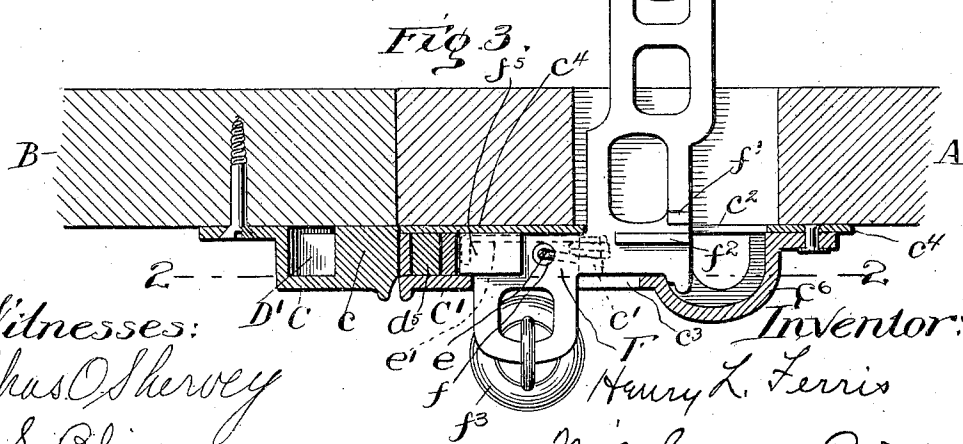


H. L. FERRIS.
SLIDING DOOR LATCH.
(Application filed July 22, 1901.)

(No Model.)



Witnesses:
Chas O. Shervey
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Inventor:
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UNITED STATES PATENT OFFICE.

HENRY L. FERRIS, OF HARVARD, ILLINOIS, ASSIGNOR TO HUNT, HELM, FERRIS & COMPANY, A FIRM COMPOSED OF CHARLES E. HUNT, NATHAN B. HELM, HENRY L. FERRIS, AND ELZO B. HUNT, OF HARVARD, ILLINOIS.

SLIDING-DOOR LATCH.

SPECIFICATION forming part of Letters Patent No. 689,074, dated December 17, 1901.

Application filed July 22, 1901. Serial No. 69,181. (No model.)

To all whom it may concern:

Be it known that I, HENRY L. FERRIS, a citizen of the United States of America, residing at Harvard, in the county of McHenry and State of Illinois, have invented certain new and useful Improvements in Latches for Laterally-Sliding Doors, of which the following is a specification.

My invention relates to certain improvements in latches for laterally-sliding doors, the purpose of which is to provide a latch adapted to lock said doors against lateral movement, said latch to be operated by a handle, which is also adapted to move the door toward the open or closed position, as the case may be, the movement of the handle in releasing the latch being in substantially the same direction as that required to open the door, and also, preferably, the movement of the handle in locking the latch being the same as that required to close the door.

Certain other minor improvements are contemplated, all of which will appear from the complete description, and the essential features of which will be pointed out in the claims.

In the drawings, Figure 1 shows a side elevation of the latch upon the meeting portions of the door and casing, the latch being open. Fig. 2 is a vertical section in line 2 2 of Fig. 3, showing the door closed and the latch locked; and Fig. 3 is a horizontal section in line 3 3 of Fig. 2.

Referring to the figures, A represents the door, and B the casing or adjacent door, as the case may be.

C is a keeper provided with a central lug *c*, with which the latch engages in the locked position.

C' is a suitable frame, preferably a casing, in which are pivoted two opposing hooks DD', the pivot-points being *d d'*, said hooks being adapted to engage the stud *c* of the keeper and extending within the casing upon the opposite sides of the pivots in the form of portions *d² d³*. A notch *d⁴* in the jaw D' receives a projection *d⁵* upon the other jaw, causing the two jaws to move simultaneously and in opposite directions, so that when one opens

the other necessarily opens, and vice versa. A stud *c'* accommodates the spring-coil E under tension to bring the two ends *e e'* together, the end *e'* engaging the jaw D' at *d⁶*, thereby tending to throw the jaws open, and the end *e* engaging a longitudinally-moving slide F at *f* and tending to throw said slide toward the jaws. This slide is guided in slots *c³ c³* in the case and at its rear end by means of lugs *f' f²*, embracing the bottom plate *c⁴* of the case. It preferably extends outward upon both sides of the door and is provided with convenient handles *f³ f⁴*. A head *f⁵* upon the slide is adapted to enter between faces *d³ d⁵* on the inner extensions *d² d³* of the jaws and lock said jaws in the closed position, and, as before stated, the spring E engages the slide at *f* and tends to crowd this head between the inner extensions of the jaws.

Starting with the latch in its closed position, as seen in Fig. 2, the opening of the door may be effected by grasping one of the handles and pulling laterally of the door toward the open position thereof. This first moves the slide to release the jaws, which open automatically, and the pull is then exerted upon the door to open the door. In closing the door the handles are pulled in the opposite direction, and the lug *c* of the keeper strikes the jaws of the latch between the pivotal points, forcing said jaws from the position seen in Fig. 1 to that seen in Fig. 2, when the head *f⁵* passes between the inner extensions of the jaws and secures them in their locked position. The pull upon the handle in closing the door will effect this movement of the head of the slide, or if the handle has been released the spring E will do the same.

The frame C' is formed with a curved extension *c⁶*, secured to the plate *c⁴* and forming therewith an eye through which the bow of a padlock may be thrust when the slide is in the position seen in Fig. 3, thereby preventing the same from being drawn back, and consequently locking the latch.

I am aware that more or less variation is possible in the construction above described and for that reason do not limit myself to the details thereof.

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

1. In a latch for laterally-sliding doors, a pair of suitably-pivoted jaws having means of engagement with each other whereby both jaws move simultaneously toward or away from each other, a guided slide engaging said jaws adapted to lock them together and a spring engaging one of said jaws to normally hold the jaws apart; substantially as described.

2. In a latch, a pair of jaws coacting so as to move simultaneously with each other into an open or closed position, a slide adapted to secure said jaws together and a spring having one end exerting a tension upon the slide to hold the same in engagement with the jaws and an end acting upon one of the jaws, to normally hold said jaws open; substantially as described.

3. In a latch, a pair of pivoted jaws, one of which is provided with a notch and the other with a projection engaging said notch, where-

by both jaws will move simultaneously, a spring engaging one of said jaws to normally hold both jaws in an open position, a handle and a slide operated thereby and adapted to secure the jaws in a closed position; substantially as described.

4. In a latch, the combination with a suitable frame, of a pair of opposing jaws pivoted to approach and separate from each other, a keeper, a guided slide adapted to engage the jaws to secure them upon the keeper and an eye upon the casing through which the bow of a padlock may be passed to prevent movement of the slide away from the jaws; substantially as described.

In witness whereof I have hereunto set my hand at Harvard, in the county of McHenry and State of Illinois, this 16th day of July, A. D. 1901.

HENRY L. FERRIS.

Witnesses:

BLAKE B. BELL,
W. S. DODGE.