G. M. BLAIR.

SLIDING DOOR LOCK.

APPLICATION FILED MAR. 31, 1908.

905,494. Patented Dec. 1, 1908.

Fig. 1.

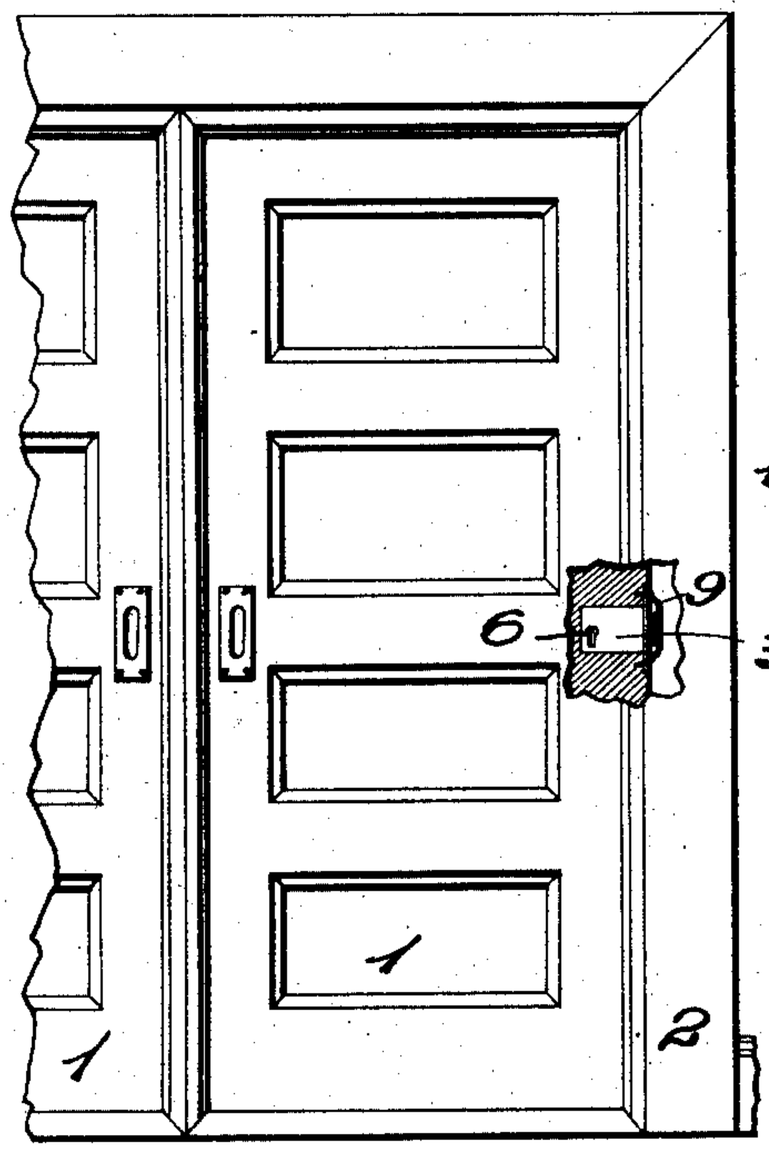


Fig. 2.

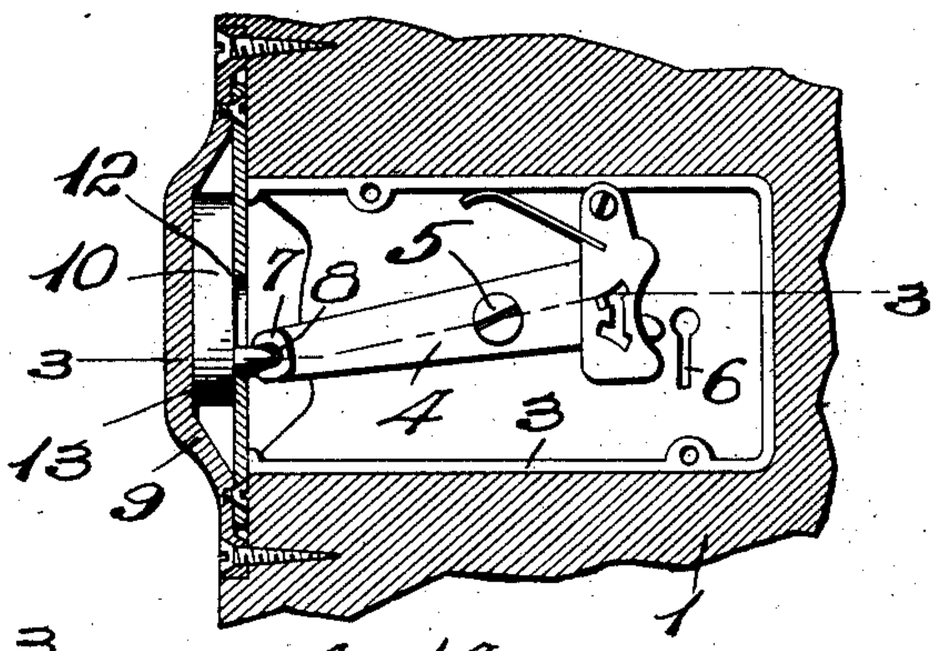


Fig. 3.

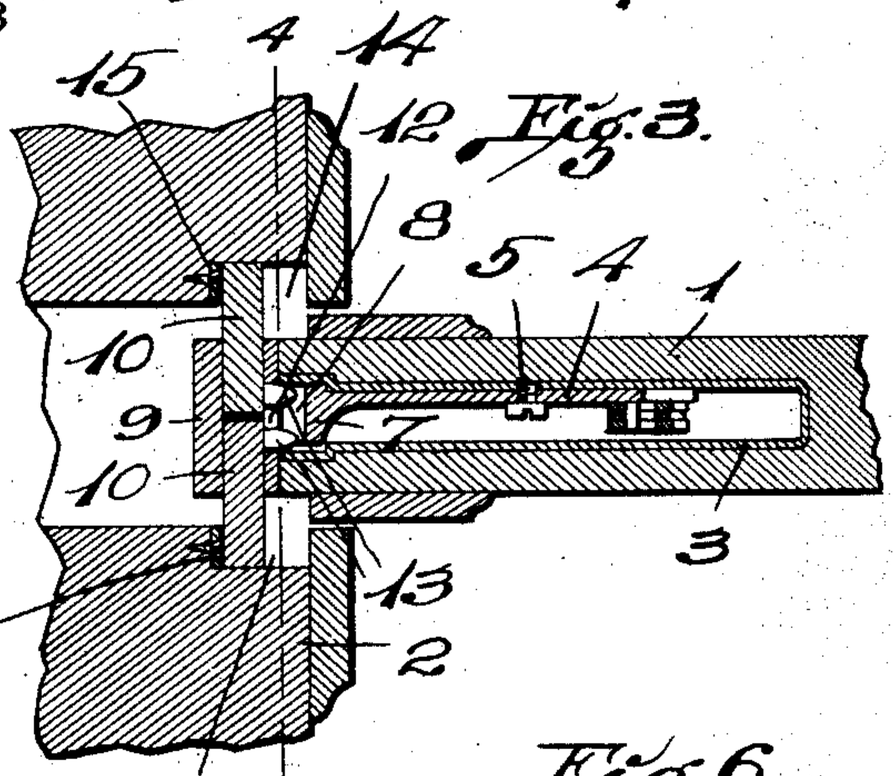


Fig. 4.

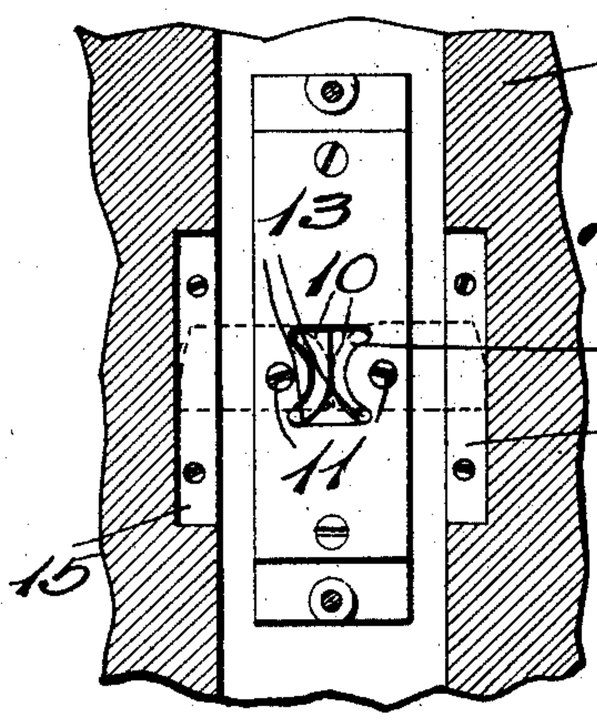


Fig. 5.

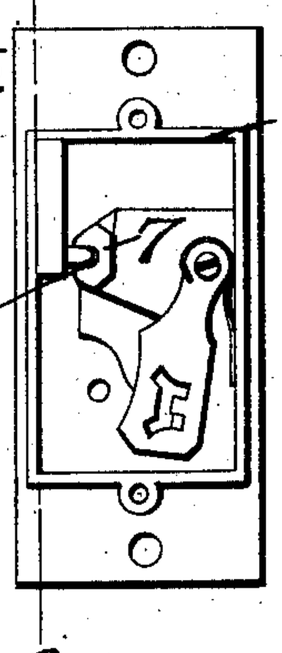
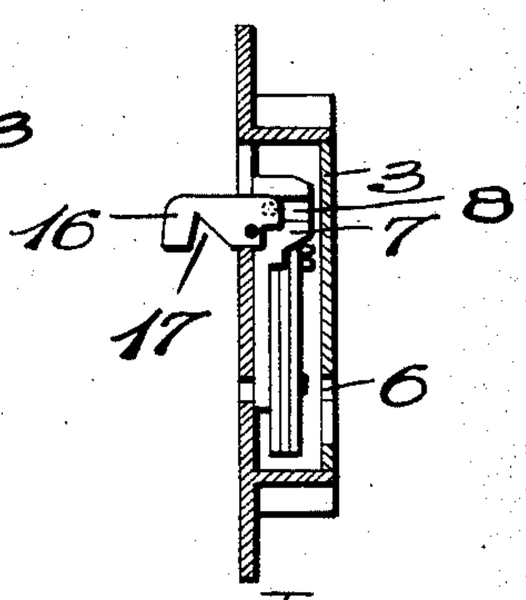


Fig. 6.



ATTEST.

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UNITED STATES PATENT OFFICE.

GEORGE M. BLAIR, OF ST. LOUIS, MISSOURI.

SLIDING-DOOR LOCK.

No. 905,494. Specification of Letters Patent. Patented Dec. 1, 1908.

Application filed March 31, 1908. Serial No. 424,450.

To all whom it may concern:

Be it known that I, GEORGE M. BLAIR, a citizen of the United States, and resident of St. Louis, Missouri, have invented certain new and useful Improvements in Sliding-Door Locks, of which the following is a specification, containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to a sliding door lock, my object being to construct a simple, inexpensive lock which is particularly applicable for sliding doors, and which is so located as that the locking bolts carried thereby will at all times enter their respective seats or recesses, regardless of the warping or settling of the doors on which the locks are carried, or the door casings in which the lock and bolt engage.

Heretofore it has generally been the practice to locate locks on the meeting stiles of sliding doors, and where either one of the doors warp or settle to even a slight degree, said locks are rendered inoperative owing to the fact that the locking bolt is out of alinement with the corresponding opening, and by my improved construction this difficulty and annoyance is overcome.

My invention consists of a lock housing located in one of the door stiles, preferably the rear stile, and there being a pair of locking bolts pivotally mounted in one end of the lock housing, which locking bolts are arranged to swing in a vertical plane when moved into or out of a locked position.

My invention further consists in certain novel features of construction and arrangement of parts which will be hereinafter more fully set forth, pointed out in the claims, and illustrated in the accompanying drawings, in which:

Figure 1 is an elevation of one of a pair of sliding doors equipped with a lock of my improved construction; Fig. 2 is a vertical section taken through the lock housing, the same being in position in the door stile; Fig. 3 is a horizontal section taken approximately on the line 3—3 of Fig. 2, and with the locking bolts shown in locked positions; Fig. 4 is a vertical section taken on the line 4—4 of Fig. 3, and with the locking bolts in an unlocked position; Fig. 5 is an elevation of a modified form of my improved lock, and which modified form is applicable for use on showcases, cabinets, and the like; and Fig. 6 is a vertical section taken approximately on the line 6—6 of Fig. 5.

Referring by numerals to the accompanying drawings: 1 designates the sliding doors, which are of the usual construction, and arranged for operation in the usual manner in the door frame 2.

Seated in the outer or rear stile of each door is a lock housing 3, and arranged to swing vertically therein is a plate 4, fulcrumed upon a pin 5, and the rear end of said plate is constructed to be engaged by a key which enters the housing 3 through a key hole 6.

Formed integral with the forward end of the plate 4 is a head or lug 7, of greater thickness than the body of the plate 4, and formed in the face of said head or lug is a horizontally disposed notch 8. Fixed to the front end of the lock housing 3 is a bolt housing 9, which projects silghtly beyond the edge of the sliding door, and positioned within this lock housing is a pair of vertically swinging locking bolts 10, which are pivotally mounted on pins 11 seated in the front wall of the lock housing 3, and said locking bolts are of such length as that when they are swung outward and downward into locked positions their outer portions project beyond the side faces of the sliding door.

Formed through the front plate of the lock housing 3 is an opening 12, and fixed in the lower portions of the locking bolts 10 and projecting through this opening 12 is a pair of pins 13, the outer ends of which engage in the notch 8, formed in the head 7.

Formed in the faces of the posts or studding, or of the sliding door pocket immediately adjacent the locks when the doors are closed, are vertically disposed grooves or notches 14, and fixed therein, against the rear faces thereof, are metal plates 15, which are for the purpose of preventing the outer ends of the locking bolts from cutting into the woodwork when said bolts are swung into locked positions.

When the doors are unlocked, the locking bolts 10 occupy vertical positions in the bolt housing 9, as shown in Fig. 2, and when so positioned the doors are free to be opened and closed as desired. When the doors are closed and it is desired to lock the same, the key is inserted through the key hole 6, and when said key is turned the rear end of the

plate 4 is engaged, and said plate is swung upon the pin 5, and as a result the head 7 of the forward end of the plate is elevated.

The outer ends of the pins 13, occupying and bearing in the notch 8 in the head 7, are moved upward through the opening 12, thus swinging the locking bolts 10 upon the pins 11, which movement swings the main body portions of said locking bolts outward and downward into a horizontal plane, and when so moved the outer ends of the locking bolts occupy the notches or recesses 14, thus effectually locking the doors. (See Fig. 3.) The slots or recesses 14 are made of considerable length, in order that the doors can be locked regardless of any settling or warping of either the doors or the sliding door pocket.

In the modification shown in Figs. 5 and 6, a single locking bolt 16 is pivotally arranged in the lock housing, and formed in the under side of said locking bolt is a notch 17, which is adapted to engage a plate or the like, and prevent the parts on which this form of lock is positioned from being pried apart. This form of lock is particularly intended for use on the sliding doors of show cases, cabinets, and the like.

A sliding door lock of my improved construction is very simple, comprises a minimum number of parts, is easily operated, and the locking bolts moving in a vertical plane at right angles to the vertical plane occupied by the sliding door and lock housing, very effectually locks the doors against any rearward or opening movement.

I claim:

1. The combination with a sliding door and sliding door pocket, of a lock arranged in the rear stile of the sliding door, a pair of locking bolts arranged to swing outward and downward in a vertical plane at one end of the lock housing, and means within the lock housing for moving the locking bolts from one position to another.

2. The combination with a sliding door and sliding door pocket, of a lock arranged in the rear stile of the sliding door, a pair of locking bolts arranged to swing outward and downward in a vertical plane at one end of the lock housing, means within the lock housing for moving the locking bolts from one position to another, and there being recesses formed in the walls of the sliding door pocket which receive the outer ends of the locking bolts when the door is locked.

3. A lock for sliding doors, comprising a housing, a pair of locking bolts pivotally arranged at one end of the housing and arranged to move in a vertical plane at right angles to the vertical plane occupied by the lock housing, and means within the housing for actuating the locking bolts.

4. A lock for sliding doors comprising a lock housing, a bolt housing at one end thereof, a pair of locking bolts arranged within the bolt housing and adapted to swing in a vertical plane, and key-operated means within the lock housing for shifting the locking bolts from one position to another.

5. A lock of the class described, comprising a housing, a locking bolt pivotally arranged in the housing so as to swing in a vertical plane at right angles to the plane occupied by the housing, and key operated means within the housing for shifting the locking bolt from one position to another.

6. The combination with a sliding door of a lock housing arranged in the rear stile of the door, a locking bolt pivotally held at one end of the lock housing so as to swing in a vertical plane at right angles to the vertical plane occupied by the sliding door, and key operated means within the lock housing for shifting the locking bolt from one position to another.

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

GEORGE M. BLAIR.

Witnesses:
M. P. SMITH,
E. L. WALLACE.