

(No Model.)

E. S. SUTTON.
DOOR LOCK.

No. 553,367.

Patented Jan. 21, 1896.

Fig. 1.

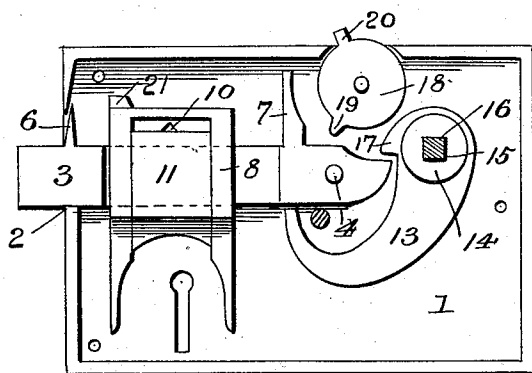


Fig. 2.

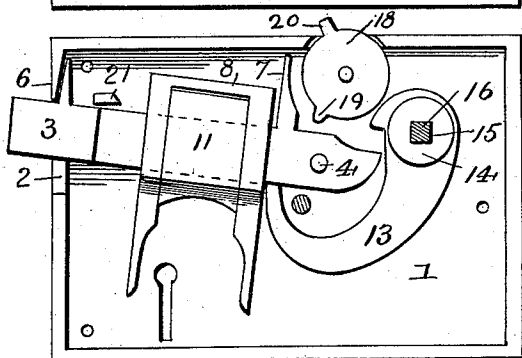


Fig. 3.

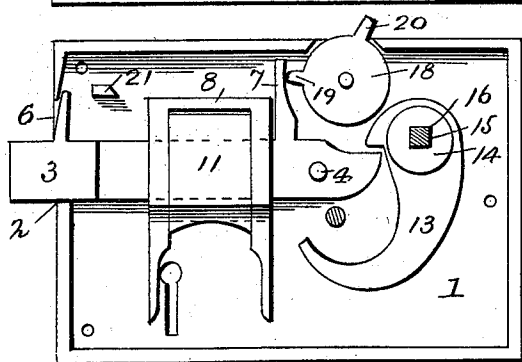
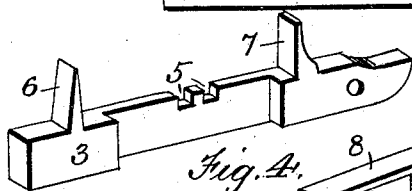


Fig. 4.



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DOOR-LOCK.

SPECIFICATION forming part of Letters Patent No. 553,367, dated January 21, 1896.

Application filed July 6, 1895. Serial No. 555,101. (No model.)

To all whom it may concern:

Be it known that I, EUGENE SILAS SUTTON, a citizen of the United States, residing at Snohomish, in the county of Snohomish and State of Washington, have invented certain new and useful Improvements in Door-Locks; and I do declare the following to be 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.

My invention relates to door-locks.

The object of the invention is to provide a simple and easily-operated lock which shall be of such construction that the employment of springs will not be necessary.

With this object in view the invention consists of certain features of construction and combination of parts, which will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a view in elevation of my improved lock, the front cover of the casing being removed to show the position the parts assume when they are locked. Fig. 2 is a similar view showing the position the parts assume when unlocked. Fig. 3 is a similar view showing the position assumed by the parts when they are set against being unlocked by a key. Fig. 4 is a detail perspective of the pivoted bolt, the actuating-lever, the yoke-frame, its sliding block, and the keeper with which the bolt engages.

In the drawings, 1 denotes the lock-casing, which may be of any well-known or approved construction, having the usual slot 2 at its outer end for the end of the bolt.

3 denotes the bolt which is pivoted to the casing at 4 and projects through the slot 2 in the edge of the casing. The upper edge of this bolt is provided with two notches 5 about midway of its ends, and the head of the bolt is provided with a lug 6, which is adapted to close the slot in the edge of the casing when the door is swung open, and thereby protect the mechanism from dust, &c. Near the inner end of the bolt is an upwardly-projecting arm 7.

8 denotes the yoke or frame provided with shoulders 9, by means of which it is supported upon the upper edge of the bolt. The upper cross-piece of this yoke is provided with a notch 10. A sliding block 11 is arranged between the vertical members of the yoke-frame,

and has a vertical sliding movement between the same, and is provided with a tooth 12 adapted to engage the notches in the pivoted bolt.

13 denotes the actuating-lever, which is provided with bosses 14 to fit into the sides of the casing, and which are provided with a central squared aperture 15 to receive the shank 16 of knobs, by means of which the lever is actuated. The upper end of this lever is provided with a lug 17, which engages the upper edge of the extreme inner end of the pivoted bolt at one side of its pivot, while the free end of the lever engages the lower edge of the bolt at the other side of its pivot, whereby the bolt may be actuated when the door-knobs are turned in either direction.

18 denotes a latch, by means of which the bolt is locked from within, so as not to enable a person having a key to unlock it. This latch consists of a disk which is pivoted between the sides of the casing, and which has a lug 19 that engages the arm 7 of the pivoted bolt, and thereby prevents the bolt being raised by the actuating-lever. A similar lug 20 projects through the top edge of the casing, by means of which the disk may be set.

In operation, when the parts are in the position shown in Fig. 1, with the upper end of the yoke-frame under the lug 21, the pivoted bolt cannot be thrown out of engagement with its keeper by turning the door-knobs, as the parts are prevented from rising by the said lug. To unlock the door a key is inserted through the keyhole in the casing, and when turned the bit thereof will strike the sliding block and raise its tooth from engagement with the outer notch of the pivoted bolt and then will slide the frame laterally inward by engaging the inner side member thereof, until the tooth in the sliding block is opposite the inner notch of the bolt, when the sliding block will fall by its own weight, bringing its tooth in engagement with the said inner notch. Now by turning the door-knob in either direction the bolt may be swung upward to throw it out of engagement with its keeper. To lock the door, the key is turned in the opposite direction, when the frame and its block will be moved under the lug 21, in which position the bolt will be prevented from being swung up by turning the knobs. The

notch in the upper cross-piece of the yoke or frame allows of the block being moved upward in said frame without causing the frame itself to have a vertical movement, so that the frame may be slid underneath the lug 21 and slid from under the same. When the bolt is locked and it is desired to close the house for the night and prevent any ill-disposed persons from entering it by means of a key which would operate the bolt, I turn the disk 18 so as to bring the lug thereon in engagement with the upwardly-extending arm of the bolt. With the parts in this position it would be impossible for any one to unlock the door with a key.

In the drawings I have not deemed it necessary to show the front cover or plate of the casing, as it is of the well-known or approved form, and attached in the usual way.

The lock is very simple, is composed of but few parts, which are so constructed that it will stand a great deal of wear and jar without getting out of order, and by dispensing with the springs the life of the lock is greatly increased.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a lock, the combination with a casing having a lug on its inner side, a bolt pivoted therein and provided with notches in one of its edges, a yoke mounted to slide longitudinally on said bolt, a block mounted to slide in said yoke, and provided with a tooth to engage said notches, substantially as set forth.

2. In a lock, the combination with a casing, a bolt pivoted therein, an actuating lever

adapted to be operated by a door knob shank, said actuating lever engaging the bolt on its upper and lower edges at points opposite to the pivot of the bolt, substantially as set forth.

3. In a lock, the combination with a casing, a pivoted bolt provided with an arm, a disk pivoted in said casing, and provided with a stud adapted to be moved against said arm to lock the bolt against vertical movement, substantially as set forth.

4. A lock comprising a casing having a lug on its inner side, a bolt pivoted in said casing and having notches formed in its upper edge, an upwardly projecting arm secured to said bolt, an actuating lever pivoted in said casing, and adapted to be operated by the door knob shank, said lever having a lower curved end adapted to engage the bolt at one side of its pivot to raise the same, and provided at its upper end with a lug adapted to engage the bolt at the other side of its pivot, whereby the bolt may be actuated when the shank is turned in either direction, a disk pivoted in said casing and provided with a lug to engage the upwardly projecting arm, a yoke frame having a longitudinal sliding engagement with the bolt, and a vertical sliding block mounted in said yoke frame and provided with a tooth to engage the notches in the bolt, substantially as set forth.

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

EUGENE SILAS SUTTON.

Witnesses:

T. E. MARKS,

WM. R. WHITTON.