H. G. VOIGHT.

LOCK.

APPLICATION FILED NOV. 6, 1917.

1,325,919.

Patented Dec. 23, 1919.

2 SHEETS-SHEET 1.

Fig. 1.

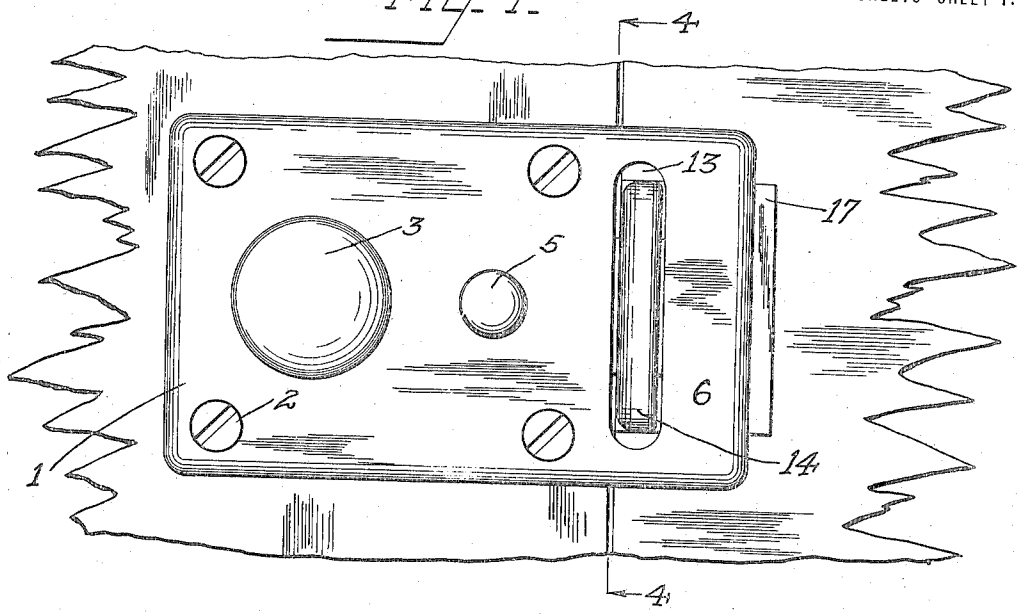
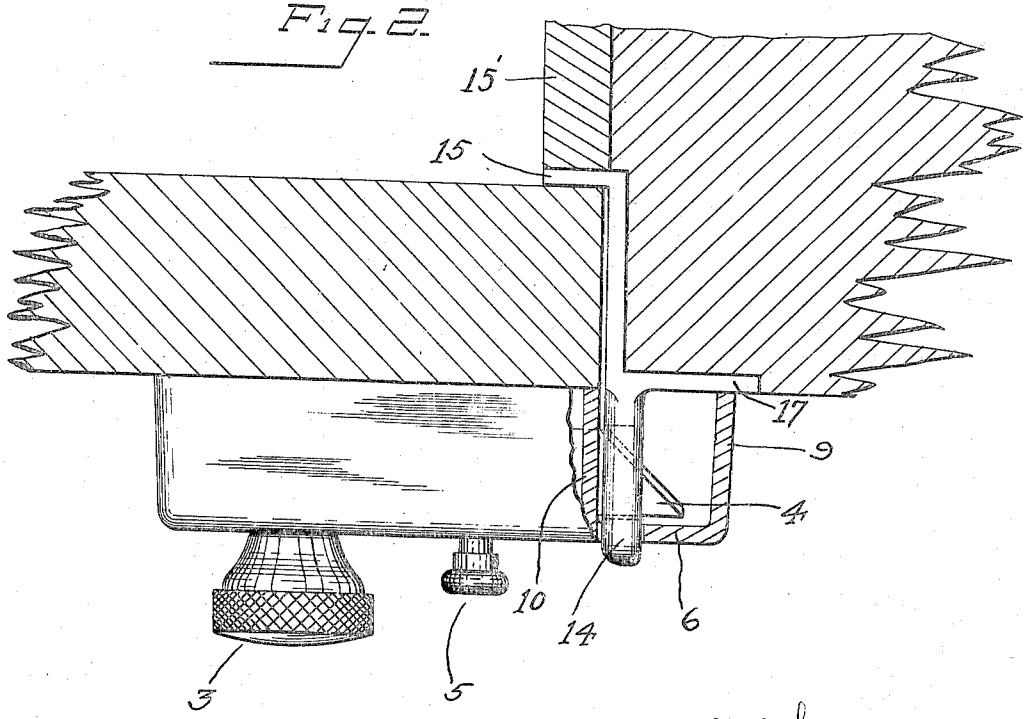



Fig. 2.




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2 SHEETS—SHEET 2.

Fig. 3.

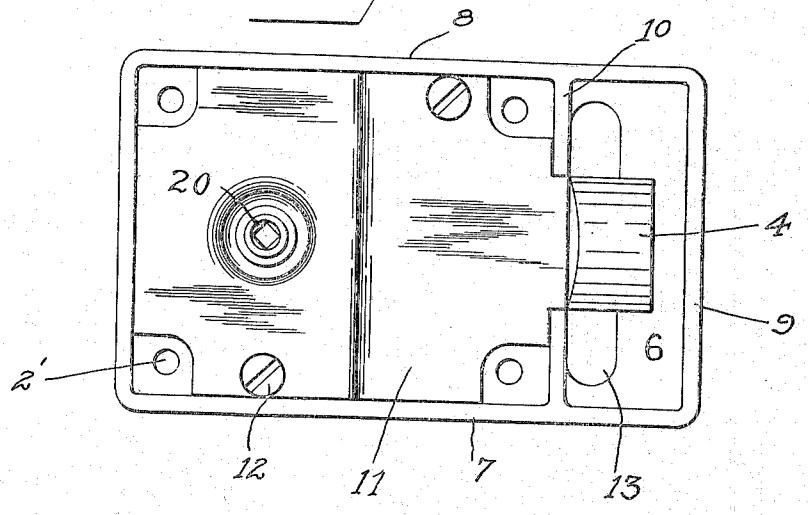



Fig. 4.

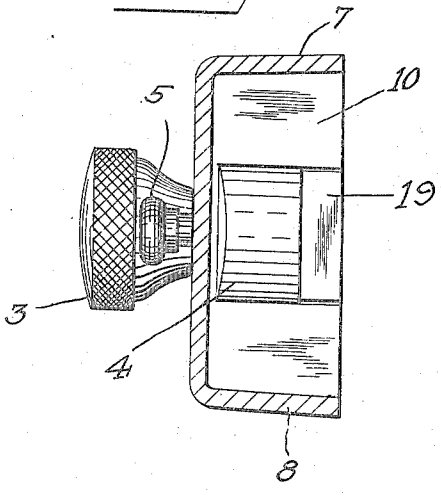
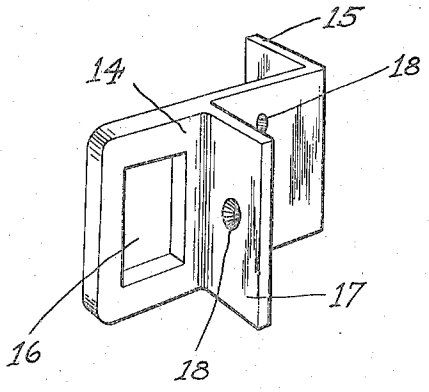



Fig. 5.




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# UNITED STATES PATENT OFFICE.

HENRY G. VOIGHT, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO SARGENT & COMPANY, OF NEW HAVEN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

## LOCK.

1,325,919. Specification of Letters Patent. Patented Dec. 23, 1919.

Application filed November 6, 1917. Serial No. 200,557.

*To all whom it may concern:*

Be it known that I, HENRY G. VOIGHT, of New Britain, county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Locks, of which the following is a full, clear, and exact description.

This invention relates to improvements in locks, and more particularly to the well-known type of rim lock and its coöperating strike plate, although my invention is not limited to this particular type of lock. The object of this particular invention is to provide a lock which is so constructed that it will be practically impossible for any ill-disposed person standing on the outside of the door to force the lock open by inserting an instrument between the door and door jamb.

In many of the locks now in general use upon doors, it is not difficult to force the door open by inserting a jimmy or similar instrument between the door and its jamb and springing the door and jamb apart until the latch bolt is withdrawn from its strike plate. My invention is directed more particularly to the construction of a lock which will prevent a door on which it is placed from being forced open in this manner.

I accomplish the object of my invention by providing a lock case with a housing formed at one end thereof and which projects over the latch bolt and incloses the same. This housing is provided with a slot or opening through which the end of the strike plate projects, thus preventing the strike plate from being sprung away from the lock as long as the end of the strike plate extends through this slot.

The preferred form of my invention is illustrated in the accompanying drawings, in which—

Figure 1 is a fragmentary inside elevation of a door equipped with a lock embodying my improvements;

Fig. 2 is a top view of the lock, showing a part of the case broken away, and showing a part of the door and its door jamb in section;

Fig. 3 is a rear view of the lock, detached;

Fig. 4 is a section taken on line 4—4 of Fig. 1, looking in the direction of the arrows; and

Fig. 5 is a perspective view of the strike plate.

The case of the door lock is indicated generally by the numeral 1. This case is secured in position upon a door by the screws 2, inserted through openings 2′ formed in the case.

3 designates a rotatable knob which operates any well-known type of latch bolt, such as designated by 4. 5 designates a sliding button by which any well-known type of dead lock may be operated manually. The elements so far described are all old and well-known and form no part of my invention.

The lock herein disclosed differs from those in general use in that the casing 1 is provided with an extension or housing 6, which in my preferred construction is formed integral with, and is positioned to extend beyond, the edge of the door when the lock is secured to the door, the housing being positioned to entirely inclose the bolt in its protracted position.

This housing may be formed by extending the side wall and the top and bottom walls 7 and 8 respectively of the case 1 so as to slightly increase the length of the lock. The extension or housing is provided with an end wall 9, which is preferably formed integral with the side wall and top and bottom walls 7 and 8 above referred to. Inside of the casing is formed an upright partition 10, presenting a guide opening or slot through which the latch bolt 4 operates. The lock is further provided with a back plate 11, secured in place by screws 12. This back plate is similar to those now in general use upon rim locks, except that the forward end of the plate 11 is provided with a flange 19 extending at right angles thereto and so positioned in a notch in the partition 10 as to present the latch bolt slot previously mentioned. The inwardly projecting end of the flange 19 forms a bearing upon which the latch bolt 4 slides. In the side wall of the case adjacent to the partition 10 is formed an elongated slot 13, through which the strike plate, hereinafter described, may project. The projecting

housing 6 is open at the back opposite the slot 13, thus permitting the strike plate to freely enter the housing and engage the slot 13.

The strike plate, designated in its entirety by 14, (see particularly Fig. 5) has formed at one end thereof a flange 15 extending substantially at right angles to the plate, and adjacent the other end of the plate 14 is formed the keeper opening 16 for the latch bolt 4. On the opposite side of the strike plate to that from which the flange 15 projects is a second flange 17 positioned between the opening 16 and flange 15, and extending substantially at right angles to the strike plate. The flanges 15 and 17 serve to secure the strike plate firmly in place upon the door jamb, as these flanges are preferably mortised into the jamb so as to lie flush with the faces thereof, and are secured in place by screws extending through the screw holes 18.

The flange 15 is mortised in the stop bead 15′ and acts as a supplementary door stop or the like for the outer face of the door, and the flange 17 is mortised in the inner face portion of the door frame.

From the foregoing it will be seen that as the door is closed the projecting end of the strike plate 14 will enter the housing 6 of the lock so that the outer end of the strike plate will extend through the opening 13 in the housing, thus preventing the strike plate from being sprung away from its lock. As the door reaches its closed position the latch or bolt 4 will be projected through the opening in the strike plate to locking engagement therewith in a well-known manner. When it is desired to open the door all that is necessary is to retract the bolt, whereupon the door may be freely opened.

It will be observed that when the door is closed and the latch bolt 4 is extended through the opening 16 in the strike plate 14, it will be practically impossible for any one standing on the outside of the door to force the lock open by inserting an instrument between the door and the door jamb, since the housing surrounding the projecting end of the strike plate prevents this. Furthermore, due to the fact that the outer end of the strike plate projects through the slot or opening 16, it will be practically impossible to spring the lock away from its strike plate.

While I have described my invention as being particularly applied to a rim lock, it will be obvious that my invention is not necessarily limited to this particular type of lock, and that various changes in the details of the construction may be made without departing from the scope of the invention as set forth in the claims.

It will be understood that in addition to the manual operation of the lock from the inside of the door by means of knob 3, it will usually be operable from the outside of the door by suitable key mechanism, for example, a cylinder lock (not shown), which, in this instance, is adapted to operate in the usual manner through an opening 20 of the back plate.

What I claim is:

1. In a door lock, a casing, a latch bolt therein, a strike plate having an outwardly projecting portion constructed to be engaged by said latch bolt, and means for preventing said casing and strike plate from being sprung apart sufficiently to disengage the latch bolt from its strike plate, comprising a housing for the strike-engaging end of said latch bolt formed upon said casing by extending the front and side faces of said casing, said front face of the housing having a slot formed therethrough to receive the outer end of the strike plate when the parts are in their locked position, substantially as described.

2. In a door lock, a casing, a sliding bolt therein, said casing having its front and side faces extended beyond the end of said bolt when protracted, whereby a housing is formed integral with and at one end of said casing, said housing having a slot formed through its outer face, and a strike plate cooperating with said door lock and having an end positioned to extend into said slot to thereby prevent the strike plate from being forced laterally away from its lock, substantially as described.

In witness whereof, I have hereunto set my hand on the 1st day of November, 1917.

HENRY G. VOIGHT.