Oct. 16, 1923. 1,471,061

E. A. REINEMAN

LOCK

Filed Aug. 25, 1922

FIG. 1

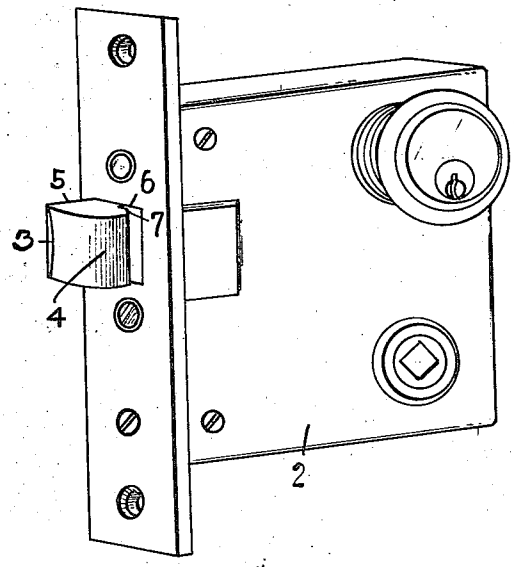


FIG. 2

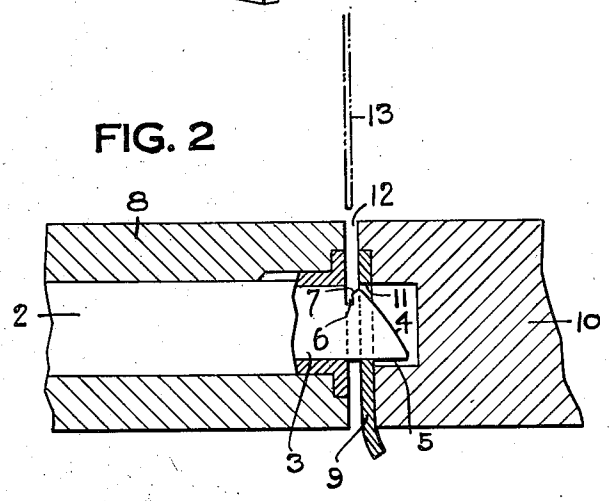
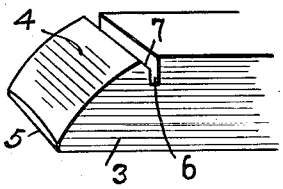


FIG. 3



INVENTOR

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UNITED STATES PATENT OFFICE.

EDWIN A. REINEMAN, OF PITTSBURGH, PENNSYLVANIA.

LOCK.

Application filed August 25, 1922. Serial No. 584,325.

To all whom it may concern:

Be it known that I, EDWIN A. REINEMAN, a citizen of the United States, and resident of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Locks; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to door locks and latches having protruding latch bolts which snap into place when the door is closed. Such a latch bolt has its outer end beveled on one side and straight on the other side, the beveled side serving as a wedge to push the latch bolt aside while the door is being closed, after which the spring of the lock snaps the latch bolt out into the opening provided for that purpose in the keeper which is fastened to the door jamb. A lock or latch having a bolt of this kind may be easily forced by inserting a flat instrument between the door and the jamb and pushing or jiggling the instrument with its end against the beveled face of the latch bolt so as to move the bolt laterally and open the lock. This is a common method used by burglars for opening doors, particularly such doors as are provided with night latches in which the latch bolt is the only means which keeps the door closed and locked.

The object of my invention is to provide a latch bolt with means for preventing the lock or latch from being forced in the manner just described. I accomplish this result by forming a transverse slot in the beveled side of the latch bolt, the slot being in such a position that it is just beyond the body of the lock or latch when the bolt is fully protruded. This slot therefore is in line with the opening which always exists between the edge of the door and the door jamb, and if any instrument is inserted in this opening its end will be received in the slot instead of coming in contact with the tapering surface of the latch bolt and will be held in the slot in such a way that no pushing or jiggling movement of the instrument will be capable of forcing back the bolt.

The opening between the door and the jamb differs in width in different doors, and may be increased through warping of either the door or the jamb. In order to insure that the tapered end of the bolt shall not be exposed through this opening, even though the opening should be wider than usual, I connect the slot with the tapering surface of the bolt by a surface which is inclined oppositely to the inclination of the tapered end of the bolt, this surface being wide enough to span the widest opening which will ordinarily exist between the door and the jamb. Should an instrument be inserted between the door and the jamb its end will either enter the slot directly or will engage the inclined surface which will direct it into the slot.

In the accompanying drawing, Fig. 1 is an elevational view showing my invention as applied to a night latch; Fig. 2 is a horizontal sectional view taken through the latch bolt; and Fig. 3 is a perspective view of the end of the latch bolt.

In the drawing the numeral 2 indicates the body of a night latch which may be of ordinary construction in every respect except as to the latch bolt 3. The end of this bolt has the usual tapered surface 4 on one side, the other side 5 being straight. A transverse slot 6 extends across the tapered side of the bolt adjacent to the upper edge of the taper and in a direction substantially parallel to the straight side 5 of the bolt. An inclined surface 7 connects the slot 6 with the tapered surface 4.

As shown in Fig. 2, the latch is carried by a door 8 and cooperates with a keeper 9 which is carried by a door jamb 10 and has an opening 11 to receive the end of the latch bolt 3. The opening 12 between the door and the jamb is much exaggerated in width to show the condition when the door is warped or is out of position for some other reason. It will be observed that the slot 6 and the inclined surface 7 span the full width of the opening 12. If a flat instrument 13 is forced into the opening 12 for the purpose of forcing the latch, it will either enter the slot 6 or will strike the inclined surface 7 which will guide it into the slot 6. It will then not be possible to force the latch by twisting, pushing or jiggling the instrument 13.

I have shown my invention as specifically applied to a night latch, and this is one of the most important of its uses, because a door provided with a night latch does not ordinarily have the locking bolt provided in other forms of locks in addition to the latch bolt. It will be understood, however, that my invention may be applied equally

well to any other form of lock or latch provided with a latch bolt having a tapered end.

I claim as my invention:

1. A latch bolt having its end tapered on one side and straight on the other side, and having a parallel-sided transverse slot at the inner or wider edge of said tapered side and an inclined surface connecting one of the sides of said slot and the said tapered portion of said bolt.

2. A lock or latch including a body portion adapted to be carried by a door or the like and having a protruding latch bolt having its end tapered on one side and forming an unbroken surface, said latch bolt being provided adjacent to its tapered side with a transverse slot having parallel sides, the inner side of said slot being longer than the outer side of said slot, and an inclined surface connecting the said shorter and outer side of said slot with the tapered surface of said bolt.

In testimony whereof I, the said EDWIN A. REINEMAN, have hereunto set my hand.

EDWIN A. REINEMAN.