Nov. 8, 1955 N. O. HOLMSTEN 2,722,819

SLIDE BOLT AND LOCKING MECHANISM

Filed Feb. 27, 1953

Fig. 1

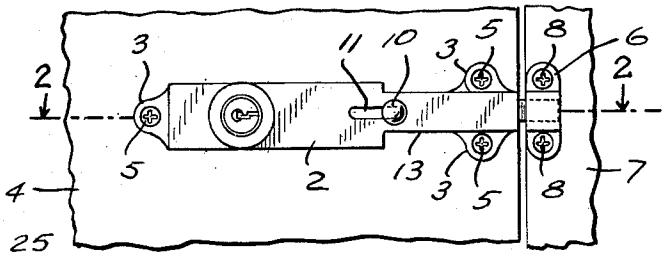



Fig. 2

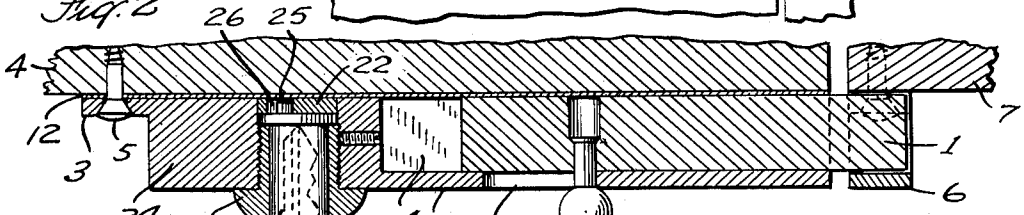



Fig. 3

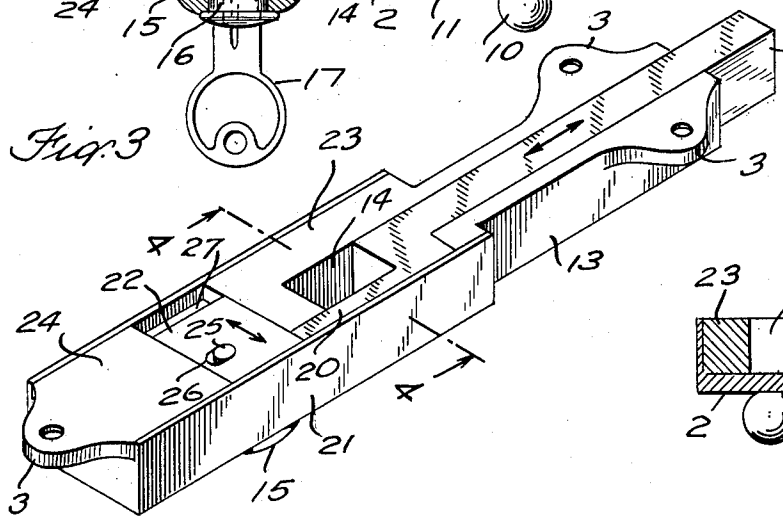






Fig. 4

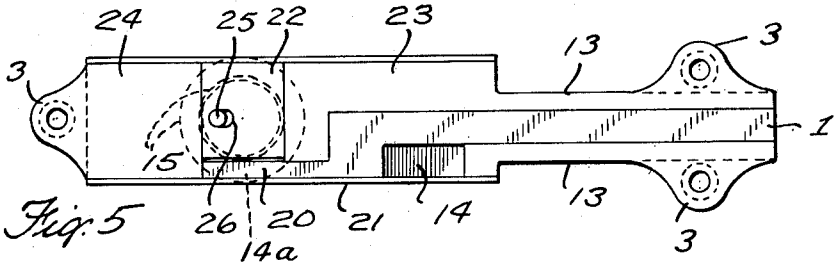



Fig. 5

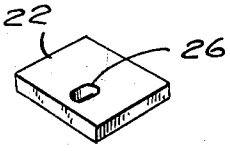



Fig. 6

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# SLIDE BOLT AND LOCKING MECHANISM

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Application February 27, 1953, Serial No. 339,363

1 Claim. (Cl. 70—129)

This invention relates generally to fastening means for doors, windows and the like of the type in which a movable bolt carried by one member is adapted to engage a keeper carried by another member. More specifically, the invention relates to fastening means of this type in which locking means is provided to prevent the unauthorized operation of the movable member.

An object of the invention is to provide a fastening means of this type with locking means which is so constructed and arranged that the fastening means cannot be released even after the glass in a door, window, or the like, has been broken to afford access to the fastening means.

Another object of the invention is to provide a novel and improved fastening means of the above type.

Another object is to provide a construction wherein the lock does not materially increase the overall size of the slide bolt housing.

Another object is to provide a construction which is mechanically strong so that the lock cannot be forced.

Other and more specific objects of the invention will be apparent from the following specification and the accompanying drawings forming a part thereof wherein:

Fig. 1 is a front elevation of a locking mechanism constructed according to my invention applied to a door and showing the various parts thereof in locking position;

Fig. 2 is a horizontal section taken on the line **2—2** of Fig. 1 but on a larger scale.

Fig. 3 is a perspective view of the bolt and locking mechanism with the base plate removed to show the internal construction, showing the bolt advanced and locked;

Fig. 4 is a transverse section taken on the line **4—4** of Fig. 3;

Fig. 5 is an elevation of the bolt and locking mechanism with the base plate removed, showing the bolt unlocked and retracted; and

Fig. 6 is a detail view of the locking slide.

Referring to the drawing more in detail, a slide bolt **1** is slidable in a housing **2** having attaching flanges **3** which are secured to a door or the like **4** by means shown as screws **5**. A keeper **6** is attached to the stationary frame **7** by screws **8** to receive the bolt **1** when extended. The bolt **1** is actuated by a handle **10** extending through a slot **11** in the housing **2**.

The housing is closed by a base plate **12** which may be permanently secured thereto if desired. The attaching screws **5** and **8** may be of the non-removable type or may be covered by a shield when the bolt **1** is extended to prevent unauthorized removal.

The housing **2** is formed with a restricted forward portion **13** in which the bolt **1** slides and is guided and with an enlarged rearward chamber **14** containing a rotary cylinder key actuated lock including a cylinder **15** secured in the housing **2** and a rotary barrel **16** adapted to be locked to the cylinder **15** or released therefrom for rotary movement by means of a key **17**.

The bolt **1** is formed with an offset tongue **20** which slides in a channel **14***a* in the housing **2** between the lock cylinder **15** and the wall **21** of the housing. A slide **22** slides over the end of the lock cylinder **15** in a channel formed in the housing **2** by a bottom wall **27**, a front guide wall **23** and a back guide wall **24**. The slide **22** when



retracted as in Fig. 5 provides clearance for the tongue **20** and when advanced as in Fig. 3 fills the space between the rear end of the tongue **20** and the back guide wall **24**, thereby preventing retraction of the bolt **1** from the keeper **6**. The slide **22** is actuated by an eccentric pin **25** on the end of the lock barrel **16** which enters an elongated slot **26** in the slide **22**.

In operation, when the slide **22** is retracted by rotation of the barrel **16** the bolt **1** is free to be advanced or retracted. When the bolt **1** is advanced as in Fig. 3 and the slide **22** is advanced by rotation of the barrel **16** and the key **17** removed the bolt cannot be retracted. Since the end of the tongue **20** bears against the slide **22** which is backed up by the back guide wall **24** which constitutes a part of the housing **2** the bolt cannot be forced open without using sufficient force to break the entire housing or to pull the attaching screws from the door.

The device is made compact by positioning the cylinder lock substantially in line with the bolt and providing the offset tongue which passes between the cylinder and the housing wall.

It is to be understood that a specific embodiment has been shown for purposes of illustration and that the invention is not restricted thereto, but may be supplied to various uses as will be apparent to a person skilled in the art.

I claim:

In a latching mechanism for securing a movable member against movement with respect to a stationary member, the combination of a housing secured to one of said members, a latching bolt slidably mounted in said housing, said housing having side walls extending along opposite sides of said bolt to confine and support said bolt for a substantial portion of its length, means for retracting and advancing said latching bolt, said housing having a rear wall and having additional side walls offset outwardly with respect to said first side walls and with said rear wall forming a lock chamber, the rear portion of said latching bolt being offset to conform to the offset of one of said additional side walls and to form a tongue which extends rearwardly along said one of said additional side walls, said housing having a slot adjacent said last mentioned side wall to receive said tongue, a locking mechanism for preventing retraction of said latching bolt, said locking mechanism comprising a cylinder lock mounted in said housing and projecting into said lock chamber in line with said latching bolt and having a rotary barrel to be locked or released, said offset tongue sliding in said slot between said last mentioned side wall and said cylinder lock, a locking slide sliding transversely of said housing against said rear wall and over the inner end of said cylinder lock, said locking slide being adapted when advanced to engage the rearward end of said tongue to prevent retraction of said latching bolt from latching position and when retracted to provide clearance for the passage of said tongue, and means connecting said lock barrel to advance and retract said slide when said barrel is released for rotation.

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