June 9, 1925. 1,541,093

J. AMICO

LOCK

Filed Oct. 11, 1923

Fig. 1.

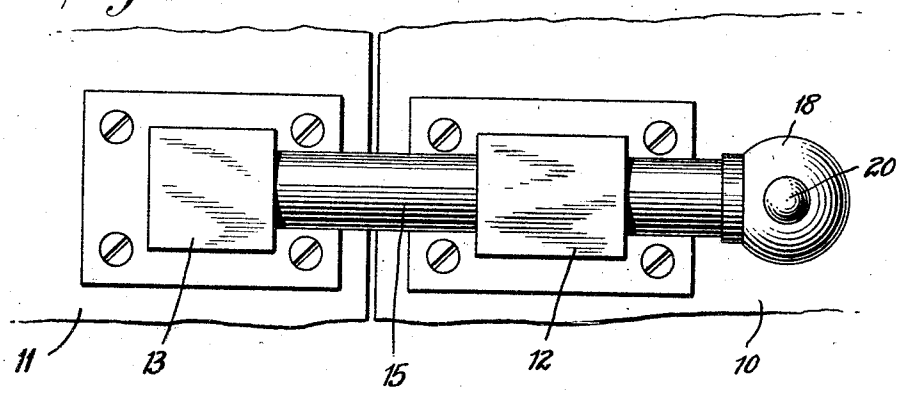


Fig. 2.

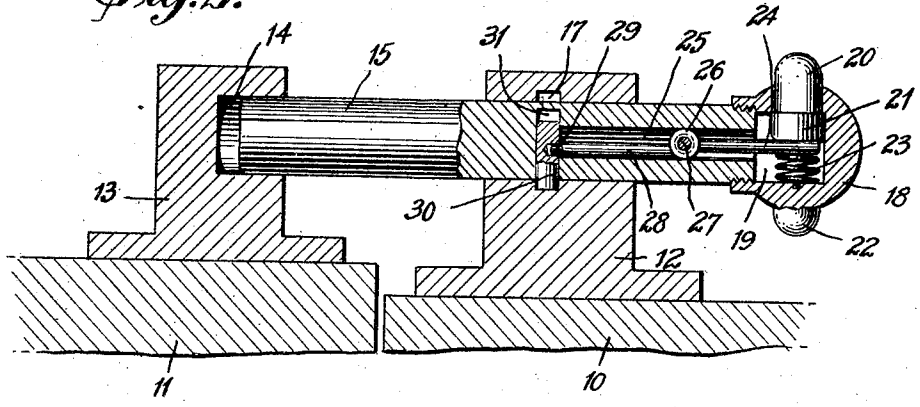


Fig. 3.

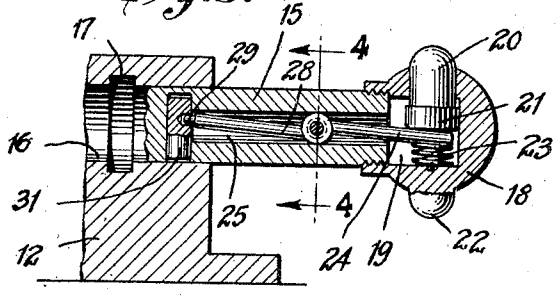
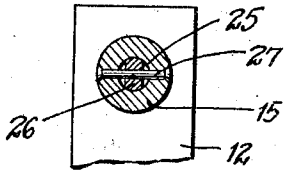


Fig. 4.



Inventor

John Amico

By his Attorney

Marion Reiner

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UNITED STATES PATENT OFFICE.

JOHN AMICO, OF NEW YORK, N. Y.

LOCK.

Application filed October 11, 1923. Serial No. 667,798.

To all whom it may concern:

Be it known that I, JOHN AMICO, a citizen of United States, residing at New York, in the county of Bronx and State of New York, have invented certain new and useful Improvements in Locks, of which the following is a specification.

This invention relates to improvements in locking devices for slide bolts and has as one of its objects to provide means for retaining a bolt in an engaged position, preventing its retraction by turning or a direct pull.

Another purpose is to provide a bolt locking device that is easily released, by those who know how, but which will defy the attempts of others to open the same.

A further aim is in the production of a neat appearing bolt, inexpensive to construct, effective in operation and easy to apply.

These several objects are attained by the novel construction and combination of parts hereafter described and shown in the accompanying drawing, forming part of this disclosure, and in which:—

Figure 1 is a plan view of an embodiment of the invention illustrating its application.

Figure 2 is a partial side, partial sectional view of the same.

Figure 3 is a fragmentary sectional view, similar to Figure 2, but showing the bolt in a retracted position.

Figure 4 is a transverse sectional view taken on line 4—4 of Figure 3.

Referring more in detail to the drawing, the numeral 10 designates a fixed or stationary part, as the frame or casement of a door 11, hinged or otherwise arranged so that one of its edges is movable into a different plane with respect to the adjacent fixed element.

Rigidly secured on the frame element 10 is the base of a bracket or block 12 and a similar bracket or block 13 is fixed on the movable element 11.

The bracket 13 contains a short cylindrical bore 14, constituting a keeper for the end of the bolt 15, which is slidable and rotatable in the bore 16 of the bracket 12, the opening being in register with the bore of the keeper.

Midway in the length of the bore 16 is an annular recess 17, the purpose of which will later become apparent.

The outer end of the bolt 15, which is shown as a cylindrical bar or rod, is provided with a short screw-thread by means of which is firmly attached a knob 18 containing a bored opening 19 entering from its engaging portion, and intersecting this opening is a lateral bore in which is fitted a movable stem 20, its rounded end extending normally outward to the limit of the enlarged shouldered inner portion 21.

On the side of the knob 18, opposite the slidable stem, is a rigid projection 22 extending out as far as the stem and having the same external appearance.

A coiled compression spring 23 is disposed in the opening 19, its function being to hold the stem 20 fully extended and interposed between the end of the spring and stem element 21 is one end of a thin lever 24, its opposite end extending from the opening 19 into an axial bore 25 formed in the outer end of the bolt 15, and being rigid in a disc 26, pivoted in the bore 25 on a pin 27 fixed transversely in the bolt.

Another similar lever 28 is fixed in the disc 26, opposite the lever 24, and is provided with a reduced outer end 29 loosely engaging an opening in the detent pin 30, said pin being slidably contained in a transversely drilled opening 31 in the bolt, the parts being so designed and proportioned that the pin will engage in the recess 17 when the bolt is properly extended in the keeper opening 14.

In operation, if it be desired to retract the bolt from its engaging position, as shown in Figure 2, the stem 20 is pressed inward, overcoming the force of the spring 23 and turning the levers 24 and 28 on the fulcrum pin 27, drawing the detent 30 out of the recess 17, into the bolt body, which can then be freely withdrawn so as to clear the keeper.

In engaging the bolt, the knob 18 is pushed towards the keeper, moving the bolt with it until the pin 30, under the effect of the spring 23, slips into the recess 17, whereupon linear movement of the bolt is prevented although it is free to turn.

The bolt will not respond to manual effort prior to depression of the stem 20 and therefore presents an element of safety as against surreptitious attempts at negotiation by those unfamiliar with the device.

It will be apparent that minor changes may be made within the scope of the ap-

pended claims, in proportions, arrangement and constructive details without departing from the spirit and scope of the invention.

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

1. A lock bolt comprising a cylindrical bar, a body in which said bar is slidably mounted, said body containing a cylindrical bore and an annular recess midway therein; said bar having an axial bore in one end and a transverse opening intersecting the bore, a chambered knob on said bar covering the bore, a stem slidable transversely in said knob, a disc pivoted to rotate in the bore of said bar, said disc having an arm operable by said stem, a pin movable in the transverse opening in the bar, said pin being engageable in the recess in said body, a connection between said pin and said disc, and resilient means in said knob opposing the movement of said stem.

2. A locking device comprising a pair of brackets fixed respectively on a stationary and movable part, one of said brackets having a keeper opening and the other a bore in register therewith, said bore being annularly recessed, a bolt slidable in the mentioned bore and engageable in said keeper opening, said bolt having an axial bore and a transverse recess intersecting the inner end thereof, a knob fixed on said bolt, a stem transversely movable in said knob, a pin movable in the transverse recess of said bolt to engage the annular recess of the bored bracket, a disc pivoted in the bore of said bolt, said disc having opposed arms operatively engaged at their respective outer ends with said stem and said pin, and a spring in said knob operating to force said stem outwardly and said pin into the recess.

In witness whereof I have affixed my signature.

JOHN AMICO.