

March 6, 1928.

E. L. WILSON

1,661,454

ADJUSTABLE LOCK

Filed Aug. 26, 1926

2 Sheets-Sheet 1

FIG. 1.

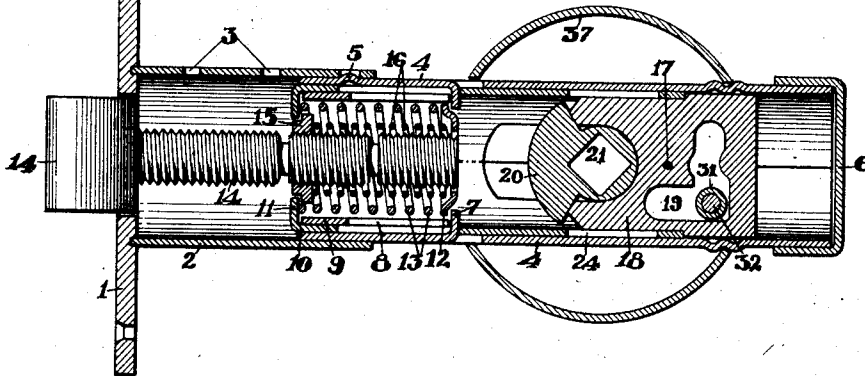
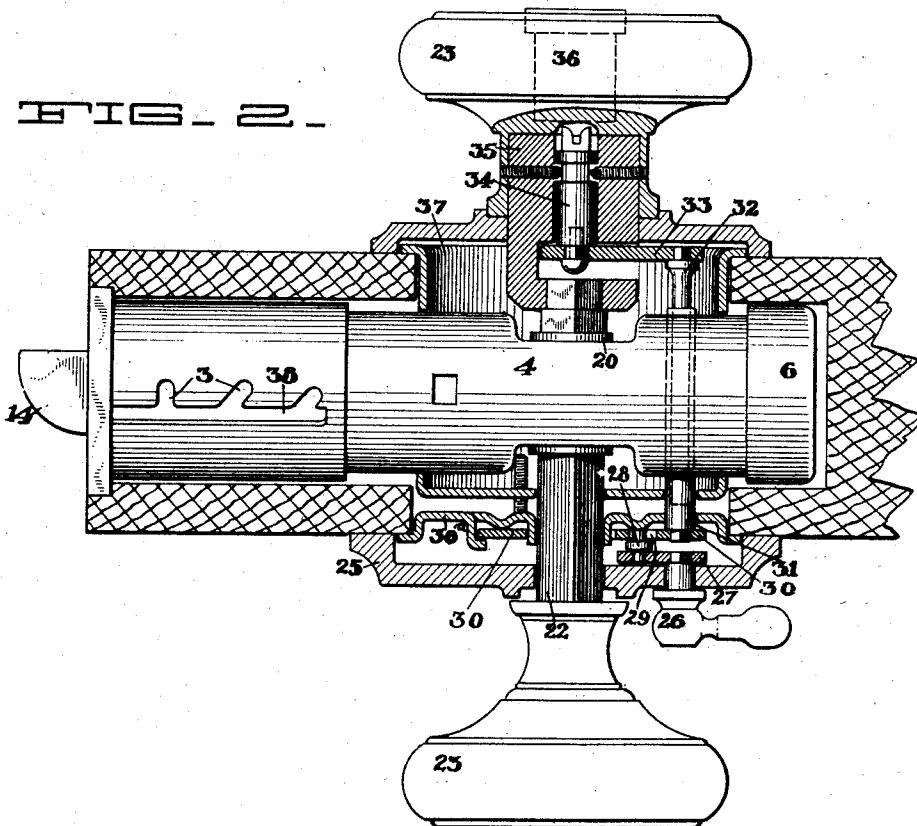


FIG. 2.



INVENTOR
E. L. Wilson
BY J. E. Frabucco
ATTORNEY

March 6, 1928.

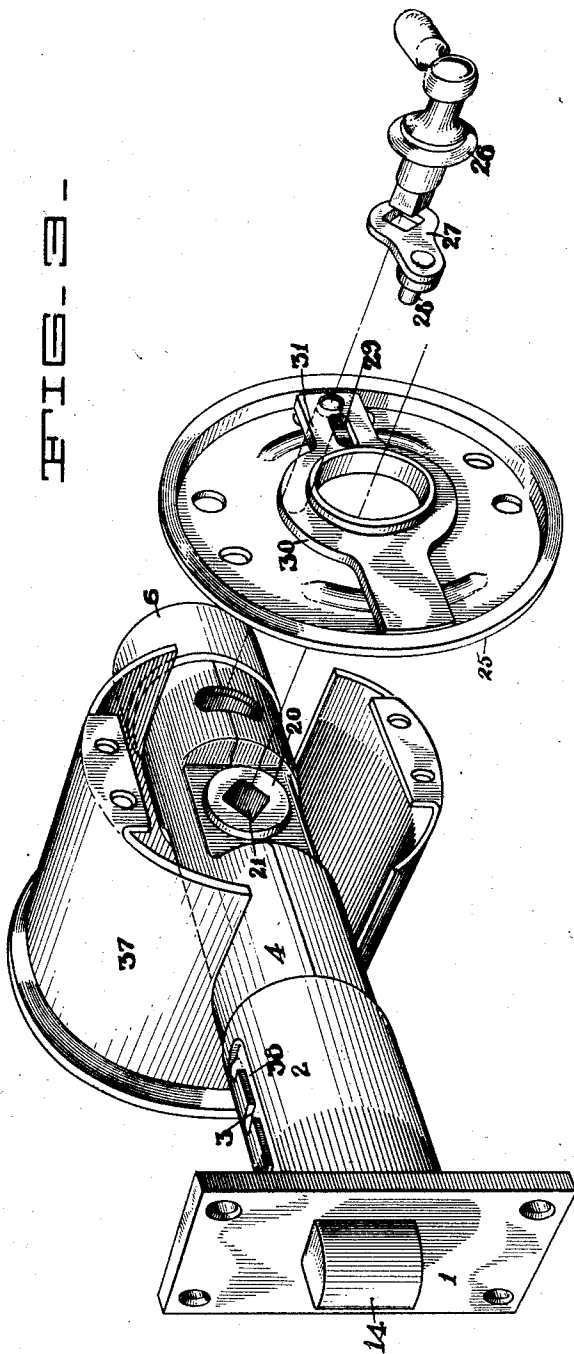
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INVENTOR
E. L. Wilson
BY
J. E. Trabucco
ATTORNEY

UNITED STATES PATENT OFFICE.

ELLIS L. WILSON, OF SAN ANSELMO, CALIFORNIA.

ADJUSTABLE LOCK.

Application filed August 26, 1926. Serial No. 131,597.

This invention relates to new and useful improvements in adjustable door locks of the type adapted to be positioned in the wood work of a door or other structure.

5 An object of my invention is to provide a lock mechanism for doors which may be conveniently locked from one side so that entry can not be made through the opposite side of the door without unlocking the mechanism.

10 Another object of my invention is to provide a locking mechanism which may be conveniently adjusted to fit various size openings in doors or other structures.

15 Another object of my invention is to provide an adjustable lock which may be conveniently applied to door-stiles of different widths without varying the openings therein or structure thereof.

20 Another object of my invention is to provide a door lock mechanism which may be conveniently adapted to fit within the ordinary openings of door stiles without alteration thereof.

25 With these objects the invention consists in the novel construction and combination of parts herein more fully described, claimed, and illustrated in the accompanying drawings, showing the preferred form of my invention, in which:

30 Fig. 1 is a vertical sectional view of a lock embodying my invention;

Fig. 2 is a horizontal sectional view of the same, showing the manner in which it is applied to a door-stile; and

Fig. 3 is a perspective view of the same.

Referring to the drawing, the numeral 1 represents a face plate having a tubular member 2 suitably clamped thereto, in which is provided a plurality of slots 3. Slidably located inside the tubular member 2 is casing 4, divided longitudinally into two sections and having a raised projection 5 thereon which is adapted to engage with one of the slots 3 so as to maintain the said casing in a fixed position with relationship to the tubular member 2. The two sections of the casing 4 are held in place by the tubular member 2 and by the end cap 6 which is suitably attached over the ends of the said sections. The casing 4 is provided with two turned under parts 7 which project through slots 8 located in tube 9, the said tube being adapted to be moved backward and forward inside the casing 4. Suitably clamped rigidly to the forward end of the tube 9 is a

ring 10 which has the end thereof turned inwardly at 11.

Located inside tube 9 and adjacent the turned under parts 7 and contacting therewith is a circular washer 12, against which one end of spiral wire spring 13 bears, the other end of said spring bearing against the inwardly projecting part 11 of the ring 10. The said spiral spring 13 serves to maintain the parts of the lock just described in their proper positions.

Extending through the face plate 1, and inside the tubular member 2, the ring 10, and the tube 9 is a plunger 14 which is threaded and provided in sections which may be broken off to permit its being used with different size door stiles, as will be explained hereafter. Screwed on the plunger 14 and located inside the ring 10 is a nut 15 which bears against the inwardly projecting part 11 of the said ring.

Located inside the spiral wire spring 13 with its ends bearing against the washer 12 and the nut 15, is a spiral spring 16 which tends to force the plunger 14 outwardly.

Secured to and located inside tube 9 by a suitable pin 17 is a locking member 18 which is provided with an L-shaped slot 19 there-through and a semicircular indentation in which a cam 20 fits.

The cam 20 is provided with a square shaped opening 21 therethrough, in which is inserted a spindle 22 having handles 23 attached thereon. The tube 9 is provided with slots 24 which are located adjacent the cam 20 so that the said cam may turn for the required distance. Thus by turning the handles 23 so that the spindle 22 turns, the cam 20 is made to move the locking member 18 backwardly, and to compress spiral spring 13, which upon the release of the handles brings the parts of the lock back to their normal positions.

Movably extending through a side plate 25 is a handle 26 which is secured to a lever 27, having a pin 28 thereon which extends through a slot 29 located in plate 30, the latter having a pivotal motion.

Secured to the plate 30 and extending through the L-shaped slot 19 is a cylinder 31 inside of which is located a rod 32, one end of which rod is secured to a lever bar 33. Secured to the bar 33 is a slotted rod 34, which extends loosely through a handle piece 35 fastened to the spindle 22. Thus by turning the handle 26 the rod 32 is

moved upwardly inside the upwardly projecting part of the L-shaped slot 19 thereby preventing the locking member 18 from being moved backwardly which causes the mechanism to become locked.

Located inside one of the handles 23 adjacent the slotted rod 34 is a lock cylinder 36 through which a key may be inserted to turn the said slotted rod in order that the rod 32 may be dropped downwardly from the upwardly projecting part of the L-shaped slot 19, thereby unlocking the mechanism.

Extending through a suitable opening provided in a door is a cylindrical guide member 37 through which the casing 4 extends diametrically. To the member 37 is secured a cover plate 30^a by screws, pins or other suitable means.

It frequently happens that a lock to be applied to various shaped door stiles must be adjusted to fit the openings therein, and in such cases the plunger must be of suitable length. I have therefore constructed the plunger 14 in a plurality of sections, so that the end thereof may be broken off in the event the distance from the face plate 1 and the opening in the door through which the cylindrical guide member 37 extends, is shorter than ordinarily. In such an event and in case the lock mechanism must be shortened, the casing 4 is moved toward the face plate 1 until the projection 5 thereon becomes located in the one of the slots 3 of the tubular member 2 which affords the satisfactory length therefor. The nut 15, in the event the lock mechanism is to be shortened, may be screwed on the plunger by inserting a screw driver through the opening 38 in the casing 2.

It is evident that the details of construction herein shown and described may be modified in a variety of ways without departing from the spirit or scope of my invention; and I desire it to be understood that the construction herein illustrated is but one form my improved lock may assume, and that I therefore desire my invention to be included within the spirit of the appended claims.

Having described my invention, what I claim is:

1. An adjustable lock comprising, a casing having a plurality of slots therein, a plunger movably extending through the casing and comprised of a number of sections adapted to be broken off to shorten the plunger, and a tubular member located inside the casing having a projection thereon adapted to engage with any one of the slots in the casing.

2. An adjustable lock comprising, a casing, a plunger movably extending through the casing and comprised of a number of sections adapted to be broken off to shorten

the plunger, and a tubular member carrying a locking means adjustably located inside the casing.

3. An adjustable lock comprising, a casing, a plunger extending through the casing and composed of a number of sections adapted to be broken off to shorten the plunger, a tubular member adjustably located inside the casing, having downwardly bent projections thereon, a tube movably located inside the tubular member with slots therein through which the downwardly bent projections extend, a ring secured to the end of the tube, a nut located on the plunger at a point thereon inside the end of the ring, and a spring located inside the tube between the end of the ring and the downwardly bent projections.

4. An adjustable lock comprising a casing, a plunger extending through the casing and comprised of a number of sections adapted to be broken off to shorten the plunger, a tubular member adjustably located inside the casing having downwardly bent projections thereon, a tube movably located inside the tubular member with slots therein through which the downwardly bent projections extend, a ring having a downwardly bent end fitting over the end of the tube, a nut movably located on the plunger at a point thereon inside the ring, a spring located inside the tube between the end of the ring and the downwardly bent projections, a locking member secured to and located inside the tube, and means for moving the locking member and tube whereby the plunger may be moved backwardly.

5. An adjustable lock comprising, a casing, a plunger extending through the casing and comprised of a number of sections adapted to be broken off to shorten the plunger, a tubular member adjustably located inside the casing having downwardly bent projections thereon, a tube movably located inside the tubular member with slots therein through which the downwardly bent projections extend, a ring having a downwardly bent end secured on an end of the tube, a nut movably located on the plunger at a point thereon inside the downwardly bent end of the ring, a locking member secured to and located inside the tube, means for moving the locking member and tube whereby the plunger may be moved backwardly, and means for returning the plunger to its normal position.

6. An adjustable lock comprising a casing, a plunger extending through the casing and comprised of a plurality of sections adapted to be broken off to shorten the plunger, a tubular member adjustably located inside the casing having downwardly bent projections thereon, a tube movably located inside the tubular member with slots thereon through which the downwardly bent projections ex-

tend, a ring having a downwardly bent end secured on the end of the tube, a nut movably located on the plunger at a point thereon inside the downwardly bent end of the ring, a locking member secured to and located inside the tube, means for moving the locking member and tube whereby the plunger may be moved backwardly, means for returning the plunger, the locking means and the tube to their normal positions, and means engageable with the locking means for preventing movement of the plunger.

7. An adjustable lock comprising, a casing having a tubular member adjustably located therein, a plunger extending inside the casing, a tube movably located inside the tubular member, a locking member secured to the inside of the tube for actuating the plunger, and means for moving the locking member backwardly, whereby the end of the plunger may be withdrawn from a fastening means.

8. An adjustable lock comprising a casing having a tubular member adjustably located therein, a plunger comprised of a plurality of sections which may be broken off to shorten the plunger, extending inside the casing, a tube movably located inside the tubular member, a locking member secured to the inside of the tube for actuating the plunger, means for moving the locking member backwardly whereby an end of the plunger may be withdrawn from a fastening means, and means for returning the plunger to its normal position.

9. An adjustable lock comprising a casing having a tubular member adjustably located therein, a plunger extending inside the casing and comprised of a plurality of sections which may be broken off to shorten the plunger, a tube movably located inside the tubular member, a locking member secured to the inside of the tube for actuating the plunger, means for moving the locking member backwardly whereby an end of the plunger may be withdrawn from a fastening device, and means engageable with the locking means for preventing its being moved backwardly.

10. An adjustable lock comprising a casing having a tubular member adjustably located therein, a plunger extending inside the

casing and comprised of a plurality of sections which may be broken off to shorten the plunger, a tube movably located inside the tubular member, a locking member secured to the inside of the tube for actuating the plunger, a cam for moving the locking member backwardly whereby an end of the plunger may be withdrawn from a fastening device, means engageable with the locking member for preventing its being moved backwardly, and separate means for returning the plunger to its normal position.

11. An adjustable lock comprising a casing having a tubular member adjustably located therein, a plunger extending inside the casing and comprised of a plurality of sections which may be broken off to shorten the plunger, a tube movably located inside the tubular member, a locking member secured to the inside of the tube for actuating the plunger, a cam for moving the locking member backwardly whereby an end of the plunger may be withdrawn from a fastening device, a pin engageable with the locking member for preventing said locking member from being moved backwardly, and means for moving the said pin to prevent or allow the movement of the locking member, the tube and the locking member to their normal positions.

12. In an adjustable lock, a plunger comprised of a plurality of sections which are adapted to be broken off to shorten the plunger, and means for moving the plunger backwardly and forwardly.

13. In an adjustable lock, a plunger comprised of a plurality of sections which are adapted to be broken off to shorten the plunger, a casing located around the plunger which may be adjusted as to length, and means for moving the plunger backwardly and forwardly.

14. In an adjustable lock, the combination of a casing comprised of a plurality of tubes adapted to be moved so as to lengthen or shorten the casing, and a plunger movably extending inside the casing comprised of a plurality of sections which are adapted to be broken off to shorten the plunger.

ELLIS L. WILSON.