Sept. 16, 1924. 1,508,919

E. R. CAIN ET AL

BURGLARPROOF LOCK BAR

Filed Jan. 23, 1924

FIG. 1.

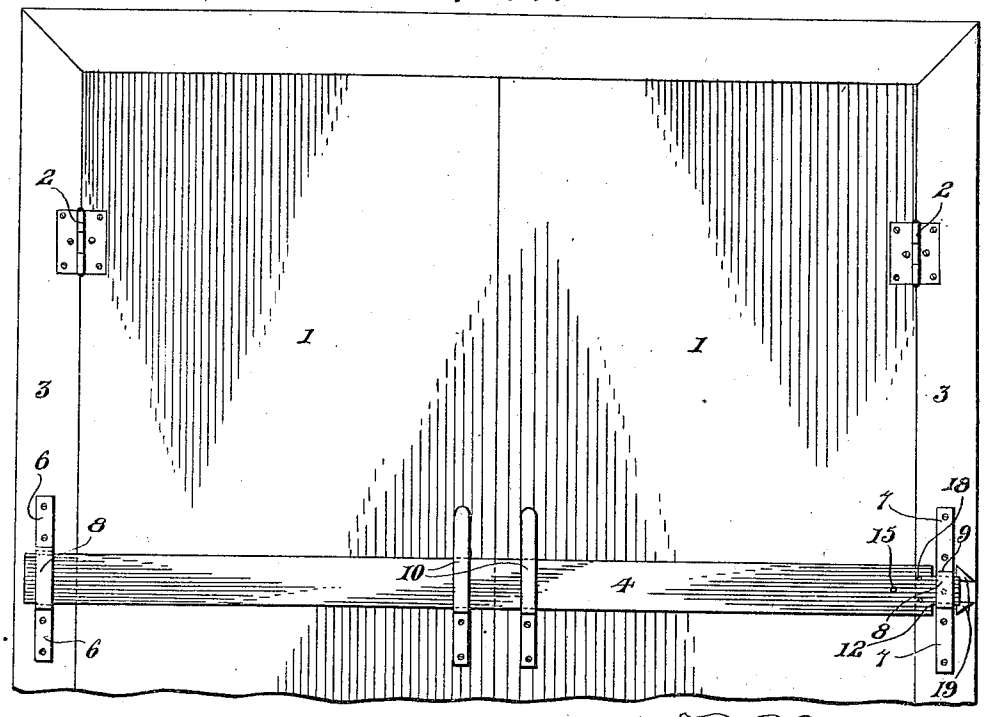
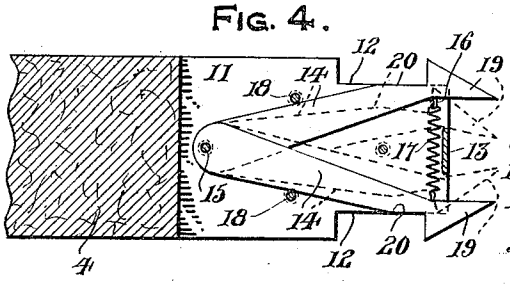



FIG. 4.



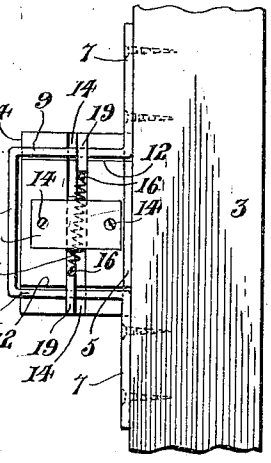
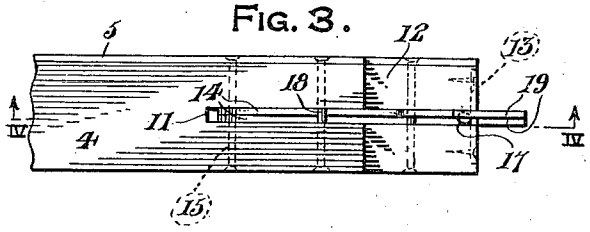




FIG. 2.

FIG. 3.




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# UNITED STATES PATENT OFFICE.

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## BURGLARPROOF LOCK BAR.

Application filed January 23, 1924. Serial No. 687,972.

*To all whom it may concern:*

Be it known that we, ERNEST R. CAIN and ANDREW F. STONE, citizens of the United States of America, residing at Kingstree, in the county of Williamsburg and State of South Carolina, have invented certain new and useful Improvements in Burglarproof Lock Bars, of which the following is a specification.

This invention relates to certain new and useful improvements in burglar proof lock bars and particularly to the type associated with doors or window shutters for securely locking the same and preventing tampering with the lock mechanism of the bar that is located upon the inner side of a door or window shutter.

The primary object of the invention is to provide a burglar proof lock bar wherein the bar supported at its ends in stirrups mounted upon a stationary object and engaging angle brackets carried by the meeting edges of movable objects has an automatically operating lock device associated with one end thereof and cooperating with the adjacent stirrup to prevent removal of the locking bar from the outer side of the movable and stationary members.

With the above and other objects in view that will become apparent as the nature of the invention is better understood, the same consists of the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawing and claimed.

In the drawing, wherein like reference characters designate corresponding parts throughout the several views,

Figure 1 is a front elevational view of a burglar proof lock bar constructed in accordance with the present invention, the same being illustrated in connection with hinged members mounted upon stationary supports that are fragmentarily shown,

Figure 2 is an end elevational view of the lock bar showing the lock carried by one end thereof engaging the supporting and keeper stirrup,

Figure 3 is a top plan view of the end of the bar supporting the lock mechanism, and

Figure 4 is a longitudinal sectional view taken on line IV—IV of Fig. 3 showing the latch levers of the lock bar.

While the invention disclosed herein is capable of wide and varied application for retaining hinged or swinging members in locked condition, for purposes of illustration and clearness the swinging members will hereinafter be referred to as swinging doors. In the accompanying drawing, the reference numeral 1 designates a pair of doors hinged at their outer vertical side edges as at 2 to the frame 3.

The lock bar 4 preferably of rectangular formation as shown in Fig. 2 is of a length to overlie the doors 1 and frame 3, the bar 4 being preferably formed of wood and having a metallic wearing plate 5 secured to one side thereof for engaging the doors and frame. Metallic straps 6 and 7 secured to the frame 3 have U-shaped offset portions intermediate the upper and lower ends thereof including outer sides 8 and side legs 9, the opposite ends of the locking bar 4 being received in the offset portion of the metallic keeper strap as shown in Fig. 1. The inner face of each door adjacent the swinging edge thereof and in alinement with the keeper strap is provided with an angle metallic stirrup 10 open at its upper side and slightly spaced from the carrying door to receive the intermediate portion of the locking bar, the locking bar when disposed in the keeper straps 6 and 7 and the stirrups 10 preventing opening movement of the doors 1.

A locking device is carried by the end of the bar 4 that extends into the keeper strap 7, said end of the bar being longitudinally slotted as at 11 with the side walls of the bar end at each side of the slot 11 being cut away as at 12 upon the upper and lower sides thereof while a metallic plate 13 is secured as at 14 to the outer ends of the portions of the bar at each side of the slot 11 and extends across said slot as shown in Fig. 2. A pair of latch levers 14 of blade formation are pivotally mounted at their inner ends upon the single cross pin 15 extending through the lock bar 4 and across the slot 11 and through the wearing plate 5 for retaining the latter in position, each latch lever carrying a pin 16 upon its inner edge adjacent the outer end thereof with which the adjacent end of a coil spring 17 is associated, the coil spring 17 tending to separate the outer ends of the latch levers with the separating movement thereof limited by the cross pins 18 as clearly shown in Fig. 4. The outer ends of the latch levers 14 are fashioned into beveled latch heads 19 with the outer edges of the latch levers adjacent

the inner ends of the latch heads being cut away as at 20 to lie parallel with the bottom edges of the cutaway portions 12 when the latch levers are extended outwardly to their limits of movement as shown in Fig. 4, the inner abutment walls of the latch heads 19 and the inner end walls of the cutaway portions 12 cooperating to form grooves or socket portions for enclosing the side legs 9 of the offset portion of the keeper strap 7.

In mounting the lock bar 4 in the keeper straps 6 and 7 and the stirrups 9, one end of the lock bar is first moved through the offset portion of the keeper strap 6 and is then lowered into the stirrups 10 to aline the lock end of the bar 4 with the keeper strap 7. Longitudinal movement of the lock bar projects the locking mechanism carried by one end thereof through the offset portion of the keeper strap 7 with the latch heads 19 ratcheting over and beyond the side legs 9 of the adjacent keeper strap with the side legs 9 received in the cutaway portions 12 and with the latch heads 19 automatically projected by the spring 17 to dispose the inner abutment shoulders of the latch heads outwardly of and in engagement with the outer edges of the side legs 9. With the lock bar 4 so positioned, movement thereof with respect to the keeper plates and keeper straps and stirrups is prevented and to remove the lock bar, it is necessary to grip the latch heads 19 and force the same toward each other against the tension of the spring 17 to displace the latch heads inwardly of the side legs 9 of the keeper straps 7, at which time, the lock bar may be longitudinally shifted for disengaging the same from the keeper straps and stirrups.

While there is herein shown and described the preferred embodiment of the present invention, it is nevertheless to be understood that minor changes may be made therein without departing from the spirit and scope of the invention as claimed.

What is claimed as new is:—

1. In a lock for doors and the like, the combination with a pair of keeper straps and a pair of intermediate stirrups, of a lock bar supported in the keeper straps, stirrups and automatically operable lock mechanism carried by one end of the bar engaging the adjacent keeper strap, said lock mechanism including a pair of tensioned latch levers pivotally carried by the bar, the adjacent keeper strap having an offset portion engaged by the latch levers, and the lock supporting end of the bar and latch levers being cooperatively constructed to provide side recesses receiving the sides of the offset portion of the keeper strap.

2. In a lock for doors and the like, the combination with a pair of keeper straps and a pair of intermediate stirrups, of a lock bar supported in the keeper straps, stirrups and automatically operable lock mechanism carried by one end of the bar engaging the adjacent keeper strap, said lock mechanism including a pair of tensioned latch levers pivotally carried by the bar, the adjacent keeper strap having an offset portion engaged by the latch levers, the lock supporting end of the bar and latch levers being cooperatively constructed to provide side recesses receiving the sides of the offset portion of the keeper strap, and means for limiting the movement of the latch levers toward and away from each other.

In testimony whereof we affix our signatures.

ERNEST R. CAIN.
ANDREW F. STONE.