

R. C. BALDWIN.
SLIDING DOOR LOCK.
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916,826.

Patented Mar. 30, 1909.

Fig. 1.

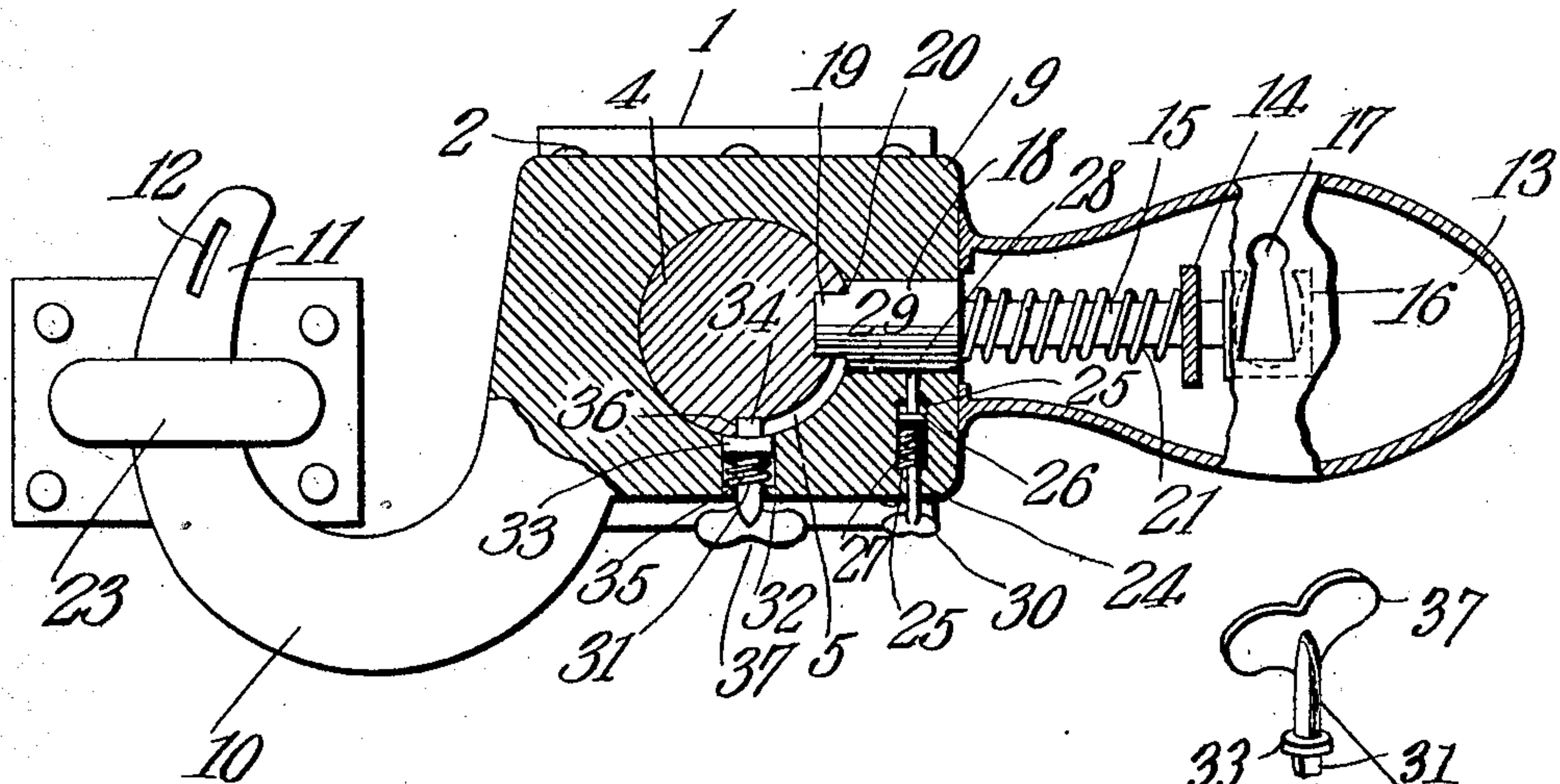


Fig. 3.

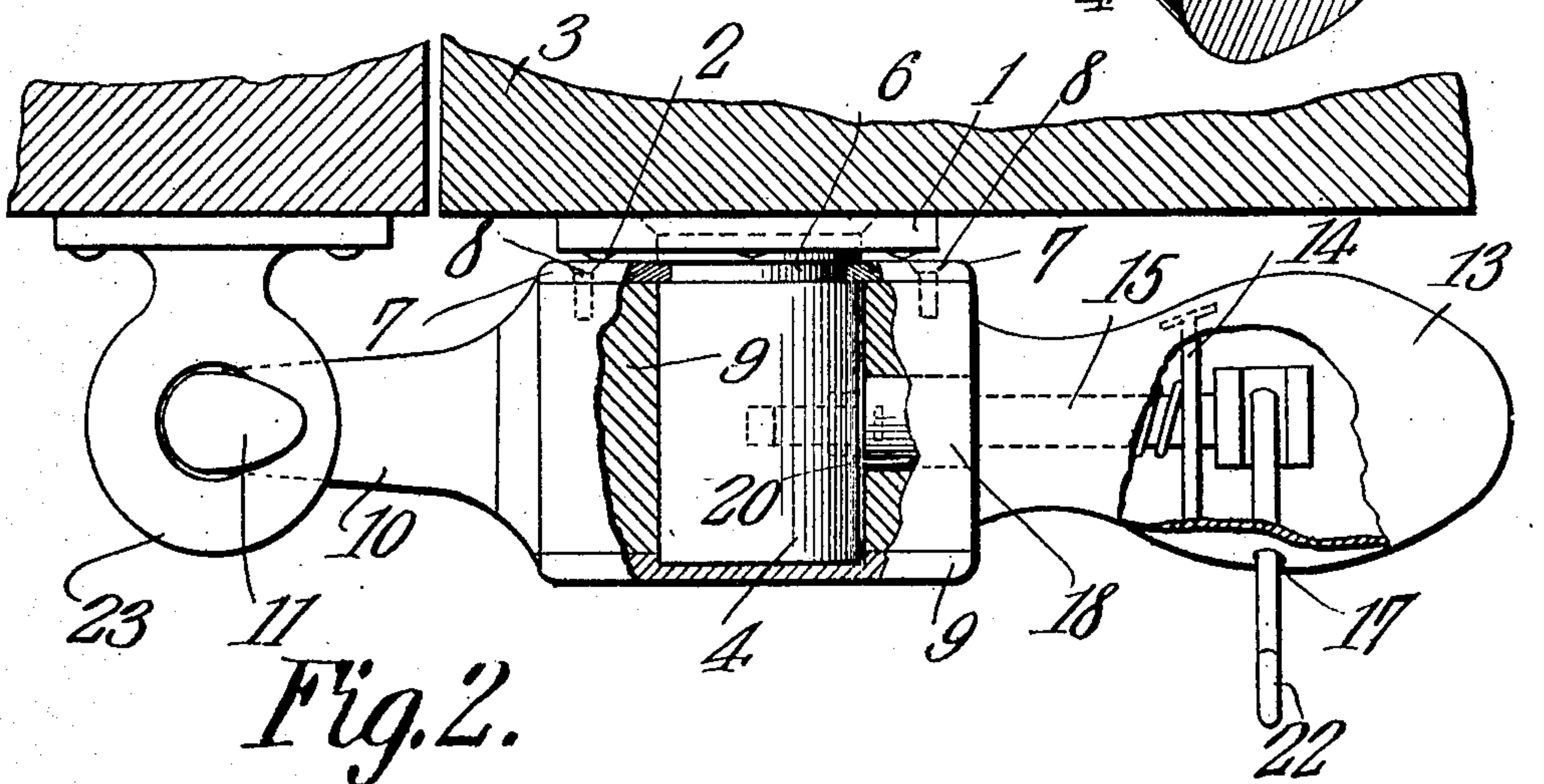


Fig. 2.

Witnesses

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ROLLINS C. BALDWIN, OF POMONA, CALIFORNIA.

SLIDING-DOOR LOCK.

No. 916,826.

Specification of Letters Patent.

Patented March 30, 1909.

Application filed May 28, 1908. Serial No. 435,590.

To all whom it may concern:

Be it known that I, ROLLINS C. BALDWIN, a citizen of the United States, residing at Pomona, in the county of Los Angeles and State of California, have invented a new and useful Sliding-Door Lock, of which the following is a specification.

This invention relates to locks and more particularly to those employed with car doors of the sliding type.

It has for its object to provide a device simple in construction and comparatively inexpensive to manufacture.

Another object is to provide a locking mechanism adapted to be operated with or without a key as desired. The advantage of the latter construction can be readily appreciated when compared with most locks of this type now in use, wherein a key is at all times necessary to operate the lock to open.

With these and other objects in view as will more fully hereinafter appear, the present invention consists in certain novel details of construction and arrangement of parts hereinafter fully described illustrated in the accompanying drawings and particularly pointed out in the appended claims, it being understood that various changes in the form, proportion, size and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings:—Figure 1 is a side elevation partly in section disclosing the locking mechanism. Fig. 2 is a plan view. Fig. 3 is a sectional perspective view illustrating the construction and arrangement of the auxiliary thumb lock bolt.

Similar numerals of reference are employed to indicate corresponding parts throughout.

In the construction illustrated in Fig. 2 the lock is shown applied to the sliding door of a freight car although it is to be expressly understood that I am by no means to be limited to such application since it will be readily seen that the lock of the present invention can be used in connection with the swinging doors of outbuildings and the like. A base plate 1 preferably formed of metal or other suitable material is provided adjacent the opposed edges thereof with suitable open-

ings for the reception of screws or bolts 2, by means of which it is secured to either a door or casing 3. The base plate is centrally provided with a seat into which is fitted a spindle projecting at right angles to the outer face of the plate and forming a pivot 4 provided with a circumferential groove 5 adjacent the outer end thereof and a similar groove 6 adjacent the inner end. The latter groove forms a guide for a pair of plates 7 the opposed inner sides of which have semi-circular depressions which form a circular opening of a diameter slightly greater than the floor of the groove, and adapted to turn thereon. The plates are provided with openings for the reception of screws which serve as a means for securing a locking member preferably formed of metal and provided with openings adapted to register with the openings of the plates 7 and into which fit the threaded ends of the screws 8.

The middle portion 9 of the locking member is substantially rectangular in marginal contour and has an opening adapted to receive the pivot bolt 4, as clearly illustrated in Figs. 1 and 2. On one end of the middle portion and adjacent the lower corner is integrally formed an engaging member curving outwardly forming a bow 10 and upwardly forming a bill 11, and adjacent the free end of the latter a longitudinal recess 12 is formed the function of which will presently appear. On the opposite end of the middle portion 9 is formed or otherwise secured a hollow handle 13 which may be formed into any convenient shape and is interiorly provided with a plate 14, the opposed ends of which are secured to the inner face of the handle 13. The plate has a central opening alining with a similar opening formed in the adjacent end of the middle portion 9 and these openings are made for the reception of shank 15 of a locking bolt having an enlarged U-shaped head 16 on one end normally registering with a key hole 17 formed in the handle 13. On the opposite end of the locking bolt is secured a cylindrical head 18 extending into the opening formed in the end of the middle portion 9, and terminating in a reduced portion forming a tongue 19 adapted to enter a seat formed in the pivot bolt 4. With this construction an annular shoulder 20 is formed which bears against the outer

face of the bolt 4; a coiled spring 21, encircling the shank 15 and the terminals of which bear against the head 18, and inner face of the plate 14 performs the function of holding the tongue 19 in engagement with the seat in the pivot bolt 4.

From the foregoing it is obvious that when the device is locked as shown in Figs. 1 and 2 that by inserting a suitable key 22 in the key hole 17 so as to engage the U-shaped edge 16, the tongue 19 may be withdrawn from engagement with the pivot bolt 4 and by rocking the handle upwardly the bill 11 will be withdrawn from the keeper 23. In order to retain the locking bolt in this position a suitable holding member is employed, and this in the present instance consists of a spindle 24, arranged to enter an opening extending inwardly from the lower side of the middle portion 9 and terminating at the wall of the opening formed for the reception of the head 18. Adjacent the outer and inner ends of the opening are shoulders 25 which form stops for a collar 26 on the spindle. Between the lower face of the collar and the lower shoulder 25 is arranged a coiled spring 27 that tends to hold the inner end 28 of the spindle in contact with the head 18, so that when the locking bolt is withdrawn from engagement with the pivot bolt 4, the end 28 will enter a circumferential recess 29 formed in the head 18 adjacent the shoulder 20. In this position the locking bolt is permanently held from engagement with the seat until the end 28 is withdrawn from engagement with the recess 29 which may be accomplished by pulling outwardly on the handle 30 at the outer end of the spindle 24. In order that the bill 11 may be held in engagement with the keeper 23 after the locking bolt has been withdrawn and retained in unlocked position by the spindle 24 a suitable sub-latch bolt is employed. This sub-latch bolt consists of a bolt member 31 adapted to enter an opening extending inwardly from the lower central portion of the block 9. The inner end of the bolt 31 is substantially rectangular in form, and fitting within the groove 5 of the pivot bolt 4. This groove extends through an arc of slightly more than 90°, passing beyond the main locking recess 19. The inner end of the bolt 31 being of substantially rectangular form, as described, is arranged to enter a similarly shaped locking notch 31' that is formed in the member 4. This notch is of a width slightly less than the width of the groove 5 and when the bolt 31 is turned to one position, its rectangular end will enter the locking notch 31', but by withdrawing the bolt and turning the same through an angle of 90° the broader end of the bolt may be disposed transversely of the groove and thus held from entering the locking notch 31', as will be evident on reference to Fig. 3. At a point near the outer end of

the bolt receiving opening is a shoulder 32 and between this shoulder and a collar 33 on the bolt is arranged a coiled spring 35, the terminals of which abut against the shoulder and collar and tend to hold the inner end of the bolt in locking position. It will be readily seen that with this construction it would be impossible to move the bill 11 to unlocked position even after the main locking bolt is withdrawn. When, however, it is desired to leave the device unlocked, the main locking bolt is first withdrawn and then the handle 37 of the sub-latch bolt is drawn down and turned through an arc of 90°, so that its inner end may ride freely in the groove 5. When the lock is used in connection with the door of a car, a suitable seal may be affixed to the bill 11 by inserting the usual wire of the seal through the opening or recess 12.

What is claimed is:—

1. In a lock the combination of a spindle having a recess, a movable locking member mounted on said spindle a key operated lock bolt carried by said locking member and adapted to enter said recess and a holding member serving to secure said lock bolt when out of engagement with said recessed spindle.
2. In a lock the combination of a spindle having a recess a locking member movably mounted on said spindle a key operated lock bolt carried by said locking member and having a tongue on one end yieldingly held within said recess, and a spring actuated holding member serving to secure said lock bolt when out of engagement with said recessed spindle.
3. In a lock the combination of a spindle having a recess, a locking member movably mounted on said spindle a key operated lock bolt carried by said locking member adapted to engage said recess spindle and having an opening adjacent one end thereof, and a spring actuated holding member having one end adapted to enter said opening and secure said lock bolt when out of engagement with said recessed bar.
4. In a lock the combination of a spindle a member rotatably mounted thereon a cam a key operated lock bolt carried by said member and yieldingly held in engagement with said spindle and a means serving to secure said member against movement when said lock bolt is out of engagement with said spindle.
5. In a lock the combination of a spindle a member rotatably mounted thereon having a curved engaging portion at one end and a handle on the opposed end thereof, a key operated lock bolt within said handle yieldingly held in engagement with said bar and a means adjacent said lock bolt serving to secure said member against movement when said lock bolt is out of engagement with said spindle.
6. In a lock the combination of a spindle, a

member rotatably mounted thereon, having
a key operated lock bolt yieldingly held in
engagement with said spindle, and a spring
actuated latch bolt adjacent said lock bolt
5 serving to secure the member against move-
ment when the lock bolt is out of engagement
with said spindle.

In testimony that I claim the foregoing as
my own, I have hereto affixed my signature
in the presence of two witnesses.

ROLLINS C. BALDWIN.

Witnesses:

E. R. YUNDT,
H. J. VANIMAN.