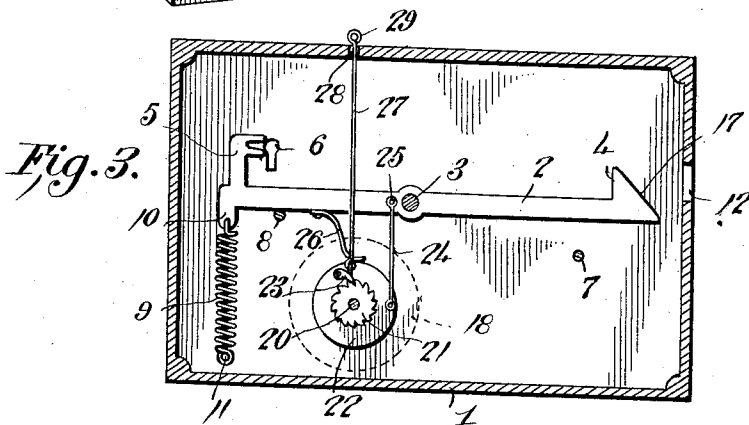
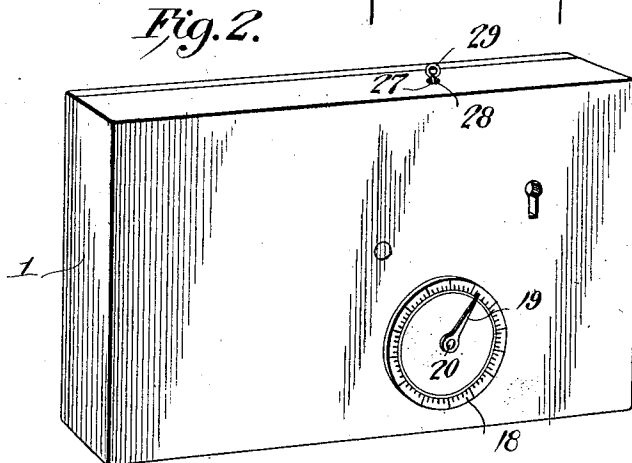
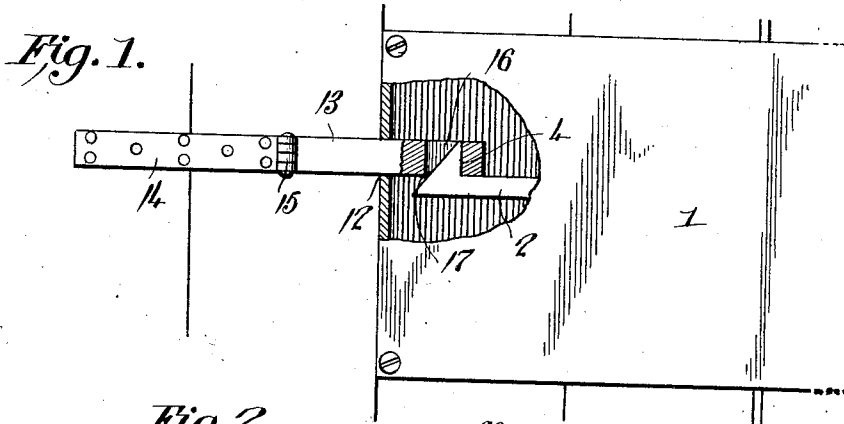


G. DANIEL & E. G. LEWIS.
 REGISTERING CAR LOCK.
 APPLICATION FILED DEC. 28, 1912.

1,062,539.

Patented May 20, 1913.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE DANIEL AND EDWARD G. LEWIS, OF MABSCOTT, WEST VIRGINIA.

REGISTERING CAR-LOCK.

1,062,539.

Specification of Letters Patent.

Patented May 20, 1913.

Application filed December 28, 1912. Serial No. 739,097.

To all whom it may concern:

Be it known that we, GEORGE DANIEL and EDWARD G. LEWIS, citizens of the United States, residing at Mabscott, in the county of Raleigh and State of West Virginia, have invented new and useful Improvements in Registering Car-Locks, of which the following is a specification.

This invention relates to registering car locks, the object in view being to provide a lock especially designed for use in connection with sliding doors of railway box cars, whereby with the aid of a suitable dial, coöperating with the lock mechanism, a clear indication or record is made each time the lock is operated in opening and closing the car door.

With the above and other objects in view, the invention consists in the construction, combination and arrangement of parts, as will be hereinafter more fully described, illustrated in the accompanying drawings, and pointed out in the claims hereunto appended.

In the drawings: Figure 1 is an inside elevation, showing the lock applied to a car door. Fig. 2 is a perspective view of the lock casing, showing the registering dial. Fig. 3 is a vertical longitudinal section through the lock case, showing the mechanism contained therein.

The lock contemplated in this invention comprises a substantially rectangular case 1, in which is arranged a latch bolt 2 pivotally mounted, at 3, intermediate its ends, and provided at one end with a hasp engaging shoulder 4, and at the other end with a lateral extension 5, normally held adjacent to a key hole 6, so as to be capable of being operated against by means of a key, as will be clearly understood by those familiar with the art to which this invention pertains.

Beneath the latch bolt 2 are stationary stops 7 and 8, which serve to limit the pivotal movement of the latch bolt, the latter being normally held in a certain predetermined position by means of a contractile spring 9, one end of which is connected to a lug 10 on one end of the latch bolt, while the other end of said spring is connected to a fixed point 11 within the case.

One end of the lock case is provided with an entrance opening 12 which is adapted to receive the pivoted end portion 13 of a hasp, said hasp having a base or fixed portion 14 which is secured to the side of the

car, either to the body of the car or the door, the parts 13 and 14 of the hasp being hinged together, as shown at 15. Adjacent to its outer end, the member 13 of the hasp is provided with an opening 16 adapted to receive the projection or shoulder 4 of the latch bolt, and the end of said latch bolt is beveled, as shown at 17, so that when the end of the hasp is thrust inward through the entrance slot 12 in the case, it will ride against the inclined edge 17 and thereby rock the latch bolt on its pivot 3, until the shoulder 4 snaps into engagement with the opening 16 in the hasp, thereby locking the door.

To unlock the door, a key is inserted through the key hole 6, so as to coöperate with the extension 5 of the latch bolt, which has the effect of moving the shoulder 4 out of engagement with the hasp, permitting the latter to be again withdrawn through the entrance slot 12.

In order to register the number of times the lock is operated, we provide a dial 18 on the outside of the car, where it may be plainly and easily observed, and in connection with such dial, we employ an indicating hand 19 mounted on an arbor 20 journaled in a suitable bearing on the car body. Mounted fast on the same arbor 20 is a ratchet wheel 21, while mounted loosely on said arbor is a disk 22 having pivotally mounted thereon a pawl 23 adapted to engage the ratchet wheel 21 for imparting an intermittent movement to the hand 19, causing the same to travel around the dial and register with the graduations thereon.

Connected to the disk 22 is a rod 24 which extends upward and is connected to the latch bolt 2, at the point 25, so that every time the latch bolt 2 is rocked on its pivot, motion is transmitted through the rod 24 to the disk 22. This causes the pawl 23 to engage the ratchet wheel 21 and move the hand 19 a certain distance.

26 designates a retarding spring mounted on the case and bearing against the periphery of the disk 22, for the purpose of preventing said disk from rotating too freely, thereby adding to the reliability of the registering apparatus.

From the foregoing description, it will now be understood that in order to unlock a car door, the latch bolt 2 must be rocked on its pivotal mounting, and therefore a certain amount of movement is imparted to

the ratchet wheel 21, moving the hand 19 a certain distance. A similar movement is again obtained when the door is locked, for the reason that as the hasp engages the latch bolt, the end thereof has to move downward in order to receive and engage the hasp. Therefore, the graduations on the dial 18 are so arranged and numbered that the hand 19 will move a distance equal only to the space between adjacent graduations for each two complete movements of the latch bolt 2. When the end of the route is reached, the observer by looking at the dial 18 may tell at a glance just how many times the lock has been operated during the trip.

In order to reset the registering mechanism in readiness for another trip, a flexible connection such as a cord or wire, indicated at 27, is attached to the pawl 23 and passes outward through an opening 28, where it is provided with a ring or other form of handle 29, by pulling upon which the pawl 23 is moved out of engagement with the ratchet wheel, after which the operator may move the indicating hand 19, until it stands at zero.

What is claimed is:

1. A registering car lock, comprising a lock casing having a hasp entrance, a key operated latch bolt pivotally mounted therein and having a hasp engaging shoulder, a dial, an indicator hand, a ratchet wheel fast on the arbor of said hand, a disk loose on said arbor, a pawl on said disk engaging the ratchet wheel, and a connection between said disk and latch bolt whereby the move-

ments of the latch bolt are transmitted to and indicated by the hand upon the dial.

2. A registering car lock, comprising a lock casing having a hasp entrance, a key operated latch bolt pivotally mounted therein and having a hasp engaging shoulder, a spring acting to normally sustain the latch bolt yieldingly in a horizontal position, a dial, an indicator hand, a ratchet wheel fast on the arbor of said hand, a disk loose on said arbor, a pawl on said disk engaging the ratchet wheel, and a connection between said disk and latch bolt whereby the movements of the latch bolt are transmitted to and indicated by the hand upon the dial.

3. A registering car lock, comprising a lock casing having a hasp entrance, a key operated latch bolt pivotally mounted therein and having a hasp engaging shoulder, a dial, an indicator hand, a ratchet wheel fast on the arbor of said hand, a disk loose on said arbor, a pawl on said disk engaging the ratchet wheel, a connection between said disk and latch bolt whereby the movements of the latch bolt are transmitted to and indicated by the hand upon the dial, and means for resetting the registering mechanism embodying a device for lifting the pawl from engagement with the ratchet wheel.

In testimony whereof we affix our signatures in presence of two witnesses.

GEORGE DANIEL.
EDWARD G. LEWIS.

Witnesses:

ASHTON FILE,
W. H. FILE.