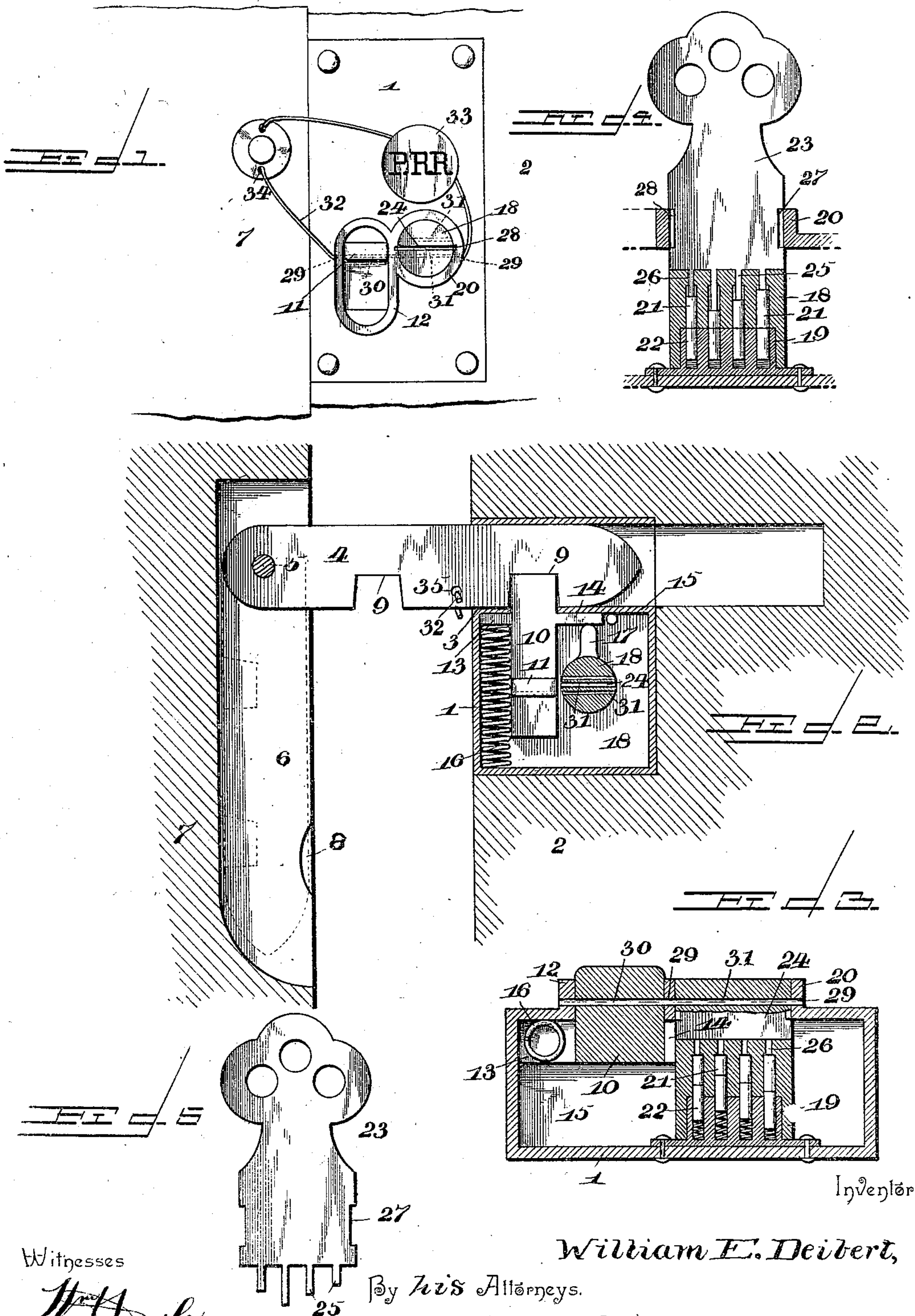


(No Model.)

W. E. DEIBERT.
SLIDING DOOR LOCK.

No. 556,309.

Patented Mar. 10, 1896.



Inventor

Witnesses

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WILLIAM E. DEIBERT, OF SHAMOKIN, PENNSYLVANIA.

SLIDING-DOOR LOCK.

SPECIFICATION forming part of Letters Patent No. 556,309, dated March 10, 1896.

Application filed April 29, 1895. Serial No. 547,549. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. DEIBERT, a citizen of the United States, residing at Shamokin, in the county of Northumberland and State of Pennsylvania, have invented a new and useful Car-Door Lock, of which the following is a specification.

The invention relates to improvements in car-door locks.

The object of the present invention is to improve the construction of car-door locks and to provide a simple and inexpensive one, which will enable a car-door to be locked and sealed with the door entirely closed or partly open to afford a ventilation, and which will permit the door of a car to be sealed without locking it in either position.

A further object of the invention is to provide a car-door lock which will absolutely prevent a car-door from being opened or even unlocked without breaking the wire of the seal.

The invention consists in the construction and novel combination and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a front elevation of a car-lock constructed in accordance with this invention. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a horizontal sectional view. Fig. 4 is a detail sectional view of a portion of the lock, illustrating the manner of mounting the locking-pins. Fig. 5 is a detail view of the key.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a lock-casing mounted on a car-door 2 and provided at the adjacent edge of the car-door with an opening 3 for the reception of a hasp 4, which is mounted by means of a pivot 5 in a vertical slot 6 of a post 7 or the adjacent portion of the car-frame against which the car-door abuts in closing. The hasp 4, when not in use or in actual engagement with the lock, swings downward into a vertical position and is concealed within the slot 6 of the car-frame, as illustrated in dotted lines in Fig. 2 of the accompanying drawings, and the car-frame is provided near the lower end of the slot 6 with re-

cesses 8 to enable the hasp to be grasped with the fingers when it is desired to lock the door.

The hasp is provided at its lower edge with a series of notches 9, adapted to be engaged by a vertically-movable bolt 10, mounted in the lock-casing and located beneath the hasp when the latter is in a horizontal position and is inserted in the casing 1. The vertically-movable bolt 10 is provided on its outer face with a flange or lug 11, arranged in an opening in the outer face of the casing between flanges 12, surrounding the opening and extended above and below the same a sufficient distance to enable the finger-piece 11 to be readily engaged by the fingers when it is desired to operate the bolt. The bolt is provided with laterally-disposed arms 13 and 14, normally bearing against a transverse flange or stop 15, forming the bottom wall of the hasp opening or way of the casing. The arm 13 is engaged by a coiled spring 16, adapted to hold the bolt normally elevated, and the other arm 14 is engaged by a lug 17 of a rotary head 18, whereby the bolt is locked against downward movement.

The rotary head 18 is mounted on a circular disk or block 19, and has its outer portion arranged within an annular flange 20 of the casing of the lock, and the head 18 and the disk or block 19 are provided with corresponding sockets adapted to register when the lug is in a vertical position in engagement with the arm 14 or at the opposite side of the head. These sockets receive spring-supported pins 21 and 22 adapted to be depressed by a key 23 inserted in a slot 24 of the head and provided at its lower edge with projections 25 of different lengths. The projections are adapted to extend through perforations 26 of the head and to engage and depress the series of spring-supported pins to bring the adjacent ends of each pair of pins in the same plane as the upper plates of the disk or block 19, as illustrated in Fig. 4 of the accompanying drawings. In this position of the pins the head is adapted to be rotated one-half revolution to carry the lug 17 directly beneath and in engagement with the arm 14 or at a point directly beneath the head and out of engagement with the arm 14. In either of these positions the sockets of the rotary head 18 and the stationary block

or disk 19 coincide or register, and when the key is removed the pins assume the positions illustrated in Fig. 3 of the accompanying drawings, whereby the head is held against rotation when the lug is in engagement with the arm 14 and when the lock is unfastened and the lug 17 is out of engagement with the arm 14.

In order to prevent the removal of the key from the rotary head at any other time except when the lock is fully locked or unlocked and when the pins are in position to engage the rotary head as soon as the key is removed, the latter is provided at opposite sides with notches 27 adapted to receive the annular flange 20 of the lock-casing, whereby when the flange is received within the notches 27 the key is prevented from being withdrawn.

The annular flange 20 is provided at opposite sides with notches or recesses 28, arranged in alignment with the line of sockets of the stationary block or disk 19, and adapted to permit the key to be inserted and removed only when the sockets of the head 18 and the block or disk 19 register.

The flanges 12 and 20 are provided with registering perforations 29, the finger-piece 11 is provided with a corresponding perforation 30, and the rotary head is provided at opposite sides of the slot 24 with a pair of perforations 31; and the perforations of the said parts are adapted to register and to receive a wire 32 of a seal 33. When the door is fully closed and is in contact with the car-frame, the wire 32 of the seal is passed through a perforation 34 of the head of a bolt, which forms the pivot 5 of the hasp, and when the door is partly open to form a ventilating-space the wire is passed through a perforation 35 of the hasp. The car-door is recessed in rear of the lock-casing to receive the hasp when the door is completely closed. By this arrangement of perforations the bolt cannot be moved downward without breaking the wire, and the head 18 cannot be rotated by the key without severing the wire, and the wire does not cross the key-hole, and is not in position to be engaged by the key, and cannot be jammed into the lock mechanism and work injury to the same or to the key.

A pair of perforations is provided in the rotary head 18 in order to enable the seal to be passed through the heads when the lug is in engagement with the arm 14 of the bolt, or when the lug 17 is rotated to its position beneath the head. It will sometimes be found convenient to seal the door when the lug 17 is not in engagement with the arm of the bolt. This is desirable for use on a train making stops at short distances and where it is not desirable to provide a key at each stop. The seal can be readily broken and the door opened, and the latter may be readily resealed, when desired, without locking the lock with a key, and when the lock is unlocked and

sealed the door cannot be opened without breaking the wire of the seal.

It will be seen that the lock is exceedingly simple and comparatively inexpensive in construction, that it possesses great strength, durability and efficiency, and that it cannot be opened without breaking the wire of a seal.

It will also be seen that the hasp is housed and protected when a car-door is not locked or sealed, and that it will enable a car-door to be readily sealed when it is not locked, and will prevent the opening of a door independent of the breaking of the seal. Furthermore, it will be apparent that the rotary head is adapted to be sealed in either of its positions, and that it is locked against rotation when in either position, and that the key cannot be removed without breaking the sockets in alignment, so that the pins will engage the rotary head.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

What I claim is—

1. In a car-door lock, the combination of a casing, provided with wire-receiving perforations, and having a hasp-opening, a sliding bolt mounted in the casing and provided with a perforation adapted to register with the perforation of the casing, and a locking device for engaging the bolt provided with a perforation registering with the said perforation, whereby the wire of a car-seal may be passed through the said perforations, substantially as and for the purpose described.

2. In a car-door lock, the combination of a casing having an opening in its outer face and provided with a flange extending around the same and having, adjacent to the said flange, a circular flange, both flanges being provided with registering perforations, a sliding bolt mounted in the casing and having a finger-piece arranged in the opening of the front of the casing and provided with a perforation adapted to register with the said perforations, and a rotary head arranged in the annular flange and provided with a wire-receiving perforation and having a lug for engaging and locking the bolt against movement, substantially as and for the purpose described.

3. In a car-door lock, the combination of a casing having a hasp-opening, a spring-actuated bolt mounted in the casing, and provided with a laterally-disposed arm, an annular flange mounted on the casing and provided at opposite sides with notches, and adapted to receive and engage a key having opposite recesses, a disk mounted on the casing and provided with sockets, a rotary head having a slot in its outer portion and provided with sockets corresponding with those of the disk, and spring-supported pins mounted in the sockets, substantially as described.

4. In a car-door lock, the combination of a

casing having a hasp-opening at its edge and provided at its outer face with parallel flanges 12, and an annular flange 20, and having registering wire-receiving recesses within the
5 same, a spring-actuated bolt having a finger-piece arranged between the parallel flanges and provided with a wire-receiving perforation, a rotary head having a stud to engage the bolt, and having its outer portion arranged
10 within the annular flange and provided with a slot and having a pair of perforations lo-

cated at opposite sides of the slot, and means for locking the rotary head, substantially as described.

In testimony that I claim the foregoing as 15
my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM E. DEIBERT.

Witnesses:

J. Q. ADAMS,

JNO. S. SAUSSER.