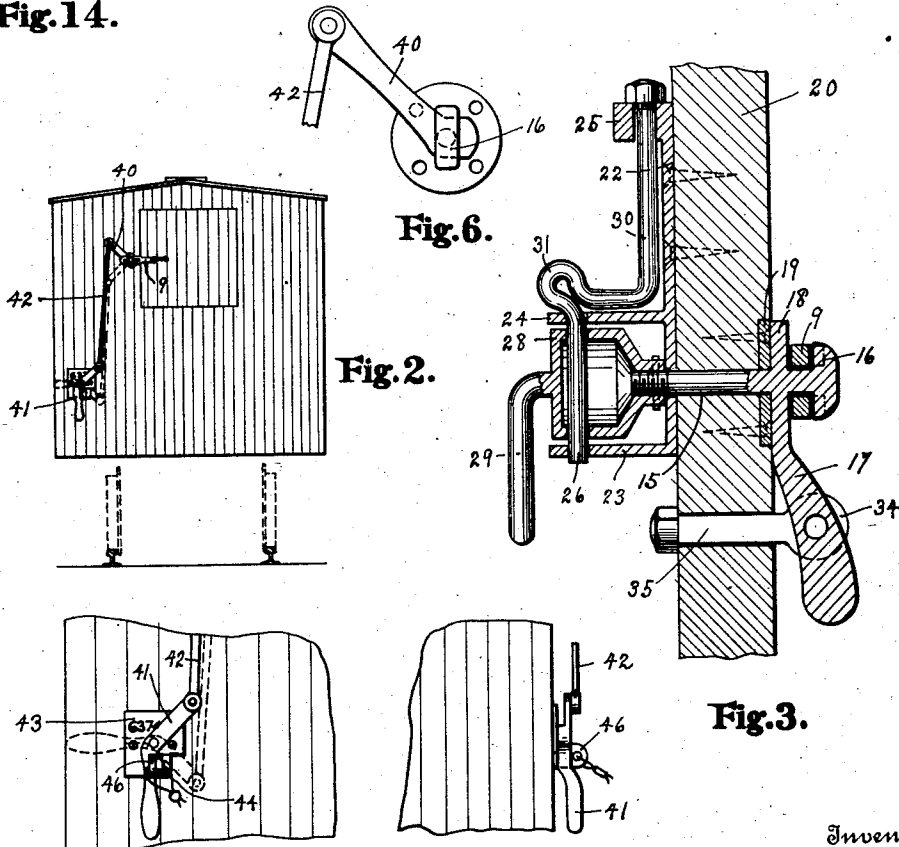
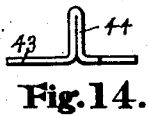
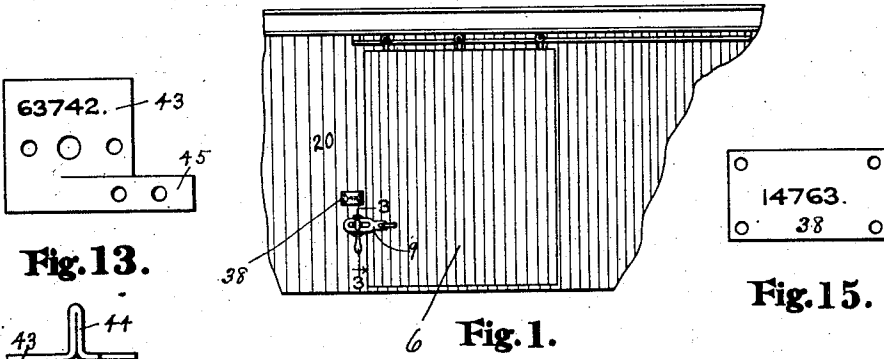


S. T. BILLINGSLEY.
CAR DOOR LOCK.
APPLICATION FILED MAR. 21, 1911.

1,010,344.

Patented Nov. 28, 1911.

2 SHEETS-SHEET 1.



Inventor

Witnesses
Albert A. Hofmann
W. C. Kutz

S. T. Billingsley
By Edward N. Page, Jr. Attorney

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2 SHEETS—SHEET 2.

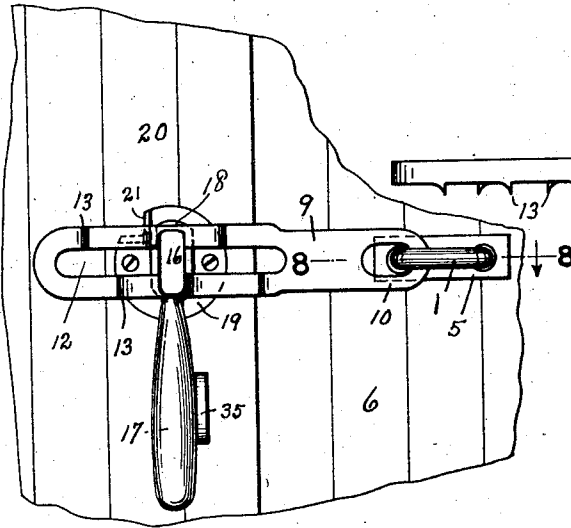


Fig. 7.

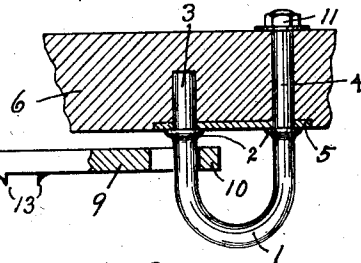


Fig. 8.

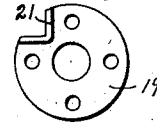


Fig. 10.

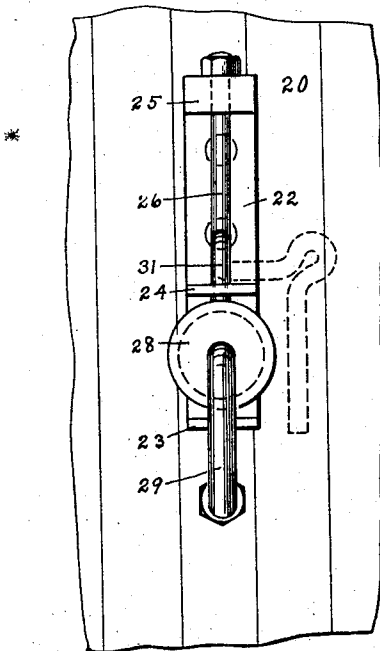


Fig. 9.

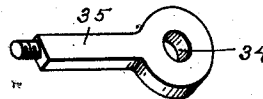


Fig. 11.

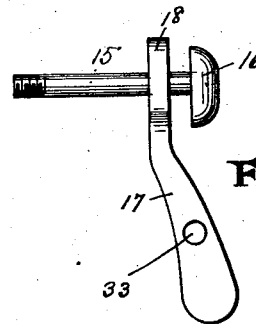


Fig. 12.

Inventor

Witnesses

Albert A. Hofmann

W. C. K. S.

S. T. Billingsley

By

Edward N. Pagelsen

Attorney

UNITED STATES PATENT OFFICE.

STERLING T. BILLINGSLEY, OF DETROIT, MICHIGAN.

CAR-DOOR LOCK.

1,010,344.

Specification of Letters Patent.

Patented Nov. 28, 1911.

Application filed March 21, 1911. Serial No. 615,935.

To all whom it may concern:

Be it known that I, STERLING T. BILLINGSLEY, a citizen of the United States, and a resident of Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Car-Door Lock, of which the following is a specification.

This invention relates to means for securing the doors of freight cars and other vehicles, and its object is to provide a locking device which may be rendered operative from the inside of the car and which may be tested from the outside of the car.

This invention consists in combination with a hasp, of a revoluble bolt having a flattened head to engage the hasp and a handle secured to said bolt, both on the outside of the car, together with an enlargement or knob on the inner end of the bolt within the car, a pin adapted to extend through a hole in said knob, and a frame to hold the pin in locking or in inoperative position.

In the accompanying drawings Figure 1 is a side elevation of a portion of a freight car showing the locking device in position. Fig. 2 is an end elevation of a car showing the locking device in connection with an end door. Fig. 3 is a vertical cross section of the locking device. Fig. 4 is an elevation of the testing member of the locking device shown in Fig. 2. Fig. 5 is a side view of the same. Fig. 6 is a detail of the locking device shown in Fig. 2 on a larger scale. Fig. 7 is a view of the locking device shown in Fig. 1 on a larger scale. Fig. 8 is a plan of a hasp and staple. Fig. 9 is an elevation of the inside portion of the locking device. Figs. 10 to 15 inclusive are details of construction.

Similar reference characters refer to like parts throughout the several views.

Freight cars are often opened by sneak-thieves who find little difficulty in breaking the ordinary wire or ribbon seals on the doors. Pad-locks and other key-operated devices are objectionable because they must either be uniform, in which case duplicate keys would soon be common, or they must be entirely different from each other, in which case the loss of a key necessitates destroying a lock.

While it is not intended to fasten all the doors of a car simultaneously by locks embodying this invention, all but one may be secured, thus reducing the possibility of

robbery through the side doors by one-half and absolutely eliminating robbery through the end doors. The seals of freight cars are examined at frequent intervals while in transit and the numbers of these seals are recorded. Railway authorities have found that the examination of end doors is so absolutely uncertain and so often neglected that they practically do not rely upon the reports of inspection, recognizing the fact that the danger of this inspection is too great, the inspector having to climb up between the cars in order to perform his duty. This present device permits of locking the end doors absolutely, and permits the inspector to test such lock while standing on the ground alongside the car. The construction and location of the various parts may differ from the designs shown in the drawings without departing from the spirit of my invention.

The staple 1 shown in Figs. 7 and 8 is preferably formed with shoulders 2, a short leg 3 and a long leg 4 having a nut 11 at its end. Both legs extend through holes in a plate 5. A hole is drilled through the door 6, of the car, for the long leg and another hole is drilled partly through for the short leg. The hasp 9 has an eye 10 of proper size, and, when in place, the nut 11 may be screwed down hard and the end of the leg 4 may be riveted down to lock the nut in position. The hasp is preferably provided with a long slot 12 and teeth 13, the purpose of which will be explained later on, but these teeth may be omitted if desired.

The locking bolt is shown in Figs. 3, 7 and 12, and comprises a shank 15, an oblong head 16, and an operating handle 17 connecting to the collar 18. This shank extends through a washer 19 secured to the car frame 20. This washer may be formed with a pressed-up shoulder 21 to limit the movement of the bolt. On the inside of the car is secured a locking frame comprising a base 22, having outwardly extending flanges 23 and 24, and a sleeve 25. These flanges and sleeve have holes to receive the locking pin 26, the upper end of which may be provided with a nut and may be riveted over to secure the nut in place.

A knob 28, preferably hollow, is secured to the end of the shank 15, and is provided with a hole to admit the pin 26, and a handle 29 so the locking bolt may be turned from within the car. The portion 30 of

the locking pin is of sufficient length to permit the pin being lifted out of the knob 28 and swung laterally, as shown in dotted lines in Fig. 9. A loop 31 may be formed in the stem, as shown in Fig. 3, to facilitate handling the locking pin.

The pin 26 being in the position shown in dotted lines in Fig. 9, the hasp 9 and locking bolt may be used in the usual manner. The handle 17 may be turned to horizontal position to permit the hasp to slip over or off the head 16 and it may also be turned down to vertical position, (Fig. 7) when a seal or pad-lock may be passed through the hole 33 in the handle and through the eye 34 of the bolt 35, which bolt may extend through the car frame and be secured by the nut 36, the proper location being shown in Figs. 3 and 7.

When the parts are as shown in Fig. 7, the locking pin may be dropped into the position shown in Fig. 3, by a person inside the car, thus locking the bolt and hasp. When the car-seal inspector makes his tour, he need only grasp the handle 17 to determine whether the door is locked. In order to check the tester, a plate 38, Fig. 15, may be secured to the door or frame near the lock, which plate will have a number to be recorded by the tester, in the absence of the usual car seal. The end door problem is met by the use of a similar construction. The washer 19 may be again employed but the handle 40, instead of being in line with the head 16 as before described, will preferably be at an angle thereto, as shown in Fig. 6. Pivoted near a lower left-hand corner of the car end is a lever 41 which connects to the handle 40 by means of a link 42. A plate 43 may be secured to the car end and be formed with a flange 44 to limit the movement of this lever 41 as shown in Fig. 4. This flange may be formed by bending up a tongue 45 as shown in Figs. 13 and 14. This flange may be perforated so that a seal or pad-lock may be passed through the same and through the perforated lug 46 on the lever 41. So long as a seal or pad-lock is in position, the seal inspector need look no farther. If no seal or pad-lock is in position, he will try to swing up the lever 41, and by being unable to do so he will know that that particular end door is locked from the inside. A plate 38 may also be secured to the car and be marked with a number so the tester may be checked. The hasp 9 has a long slot 12 through which the head 16 may be inserted at any point, depending upon whether the door has warped or whether the door is to be locked in a partly open position, for ventilation. The teeth 13 on the upper side of the hasp face the staple while those on the lower side face in the opposite direction. This prevents the hasp moving on the locking bolt

when the head has been swung to vertical position as shown in Fig. 7.

Having now explained my improvements, what I claim as my invention and desire to secure by Letters Patent is:—

1. In a car-door lock, the combination of a hasp pivoted to the door, a bolt revolubly mounted in the car frame and extending through the same and having an oblong head adapted to pass through a slot in the hasp, a manually operated member to engage the inner end of the bolt on the inside of the car to prevent it from turning, and a handle connected to said bolt on the outside of the car.

2. In a car-door lock, the combination of a hasp pivoted to the door, a bolt revolubly mounted in the car frame and having an oblong head adapted to pass through a slot in the hasp and to be turned across the hasp, a handle to turn said bolt, a knob on the end of the bolt within the car, a guiding-frame, and a locking pin carried by the guiding-frame adapted to enter a hole in the knob to lock the bolt from turning.

3. In a car-door lock, the combination of a hasp pivoted to the door and having a longitudinal slot and teeth along the slot, a bolt revolubly mounted in the car frame and having an oblong head adapted to pass through said slot and to be turned across the hasp into the paths of the teeth so as to prevent endwise movement of the hasp, means to engage the inner end of the bolt and to lock it from turning when the head is across the hasp, and a handle connected to said bolt on the outside of the car.

4. In a car-door lock, the combination of a hasp pivoted to the door, a bolt revolubly mounted in the car frame and having an oblong head adapted to pass through a slot in the hasp, means to engage the inner end of the bolt to prevent it from turning, a handle connected to said bolt on the outside of the car, a lever, and a link connecting the lever to said handle.

5. In a car-door lock, the combination of a hasp pivoted to the door, a bolt revolubly mounted in the car frame and having an oblong head adapted to pass through a slot in the hasp and to be turned across the hasp, a handle to turn said bolt, a knob on the end of the bolt within the car, a guiding-frame, a locking pin carried by the guiding-frame adapted to enter a hole in the knob to lock the bolt from turning, a plate having projections to limit the movements of the handle, a lever, and a link connecting the lever and handle.

6. In a car-door lock, the combination of a hasp pivoted to the door and having a longitudinal slot and teeth along the slot, a bolt revolubly mounted in the car frame and having an oblong head adapted to pass through said slot and to be turned across

the hasp into the paths of the teeth so as to prevent endwise movement of the hasp, means to engage the inner end of the bolt and to lock it from turning when the head is across the hasp, a handle connected to said bolt on the outside of the car, and means connected to said handle to operate the same.

7. In a lock for the door of a car, the combination of a hasp and a bolt movable relative to each other, one mounted on the door and the other on the door frame, the

bolt having an oblong head adapted to pass through the slot in the hasp, means to engage the inner end of the bolt to prevent the same from turning, and teeth on the hasp to prevent the bolt sliding in the slot.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

STERLING T. BILLINGSLEY.

Witnesses:

EDWARD N. PAGELSEN,
ELIZABETH M. BROWN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
