No. 700,298. Patented May 20, 1902.

P. BROWN.

SEAL LOCK.

(Application filed May 24, 1901.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

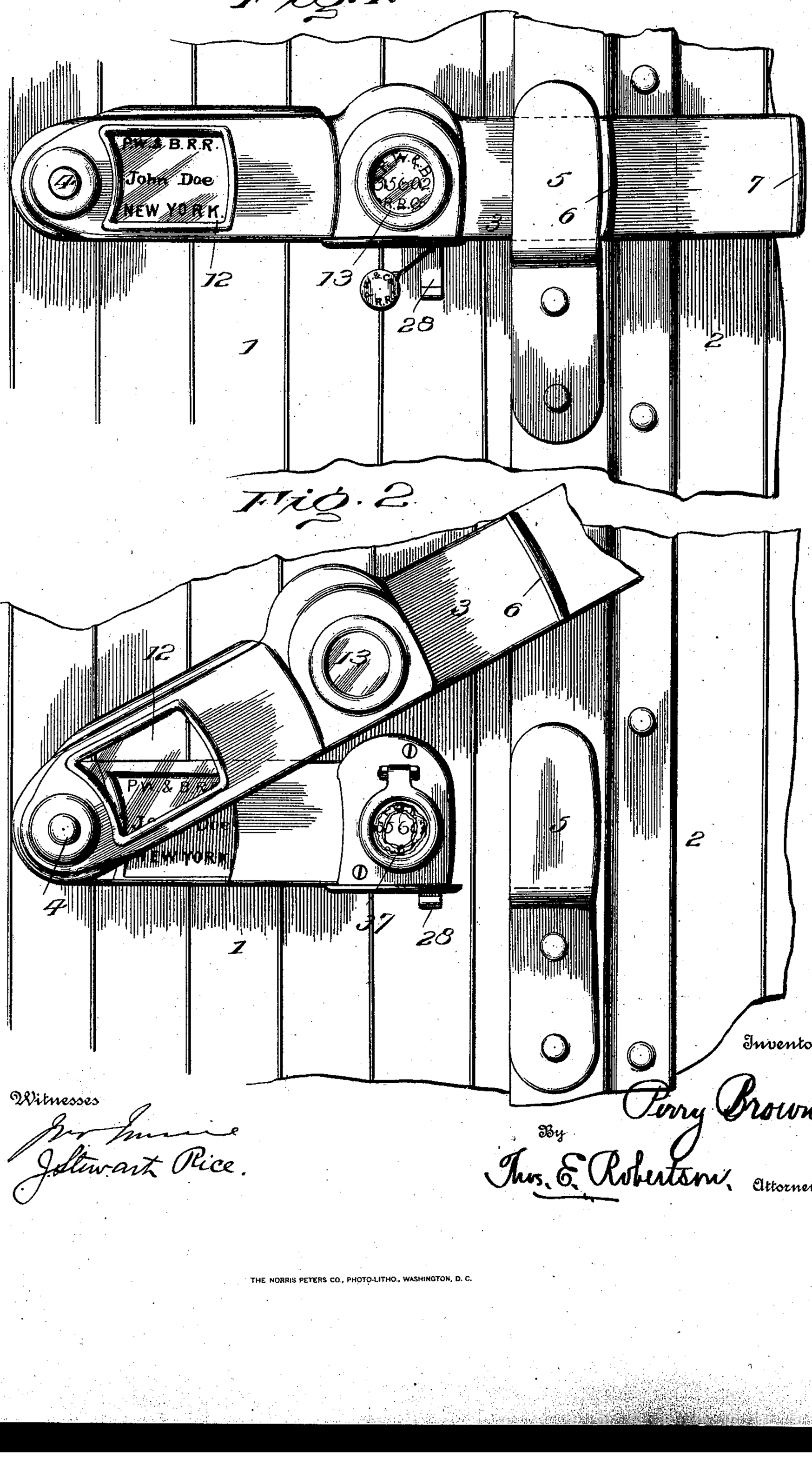

Fig. 2.

Witnesses

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Fig. 3

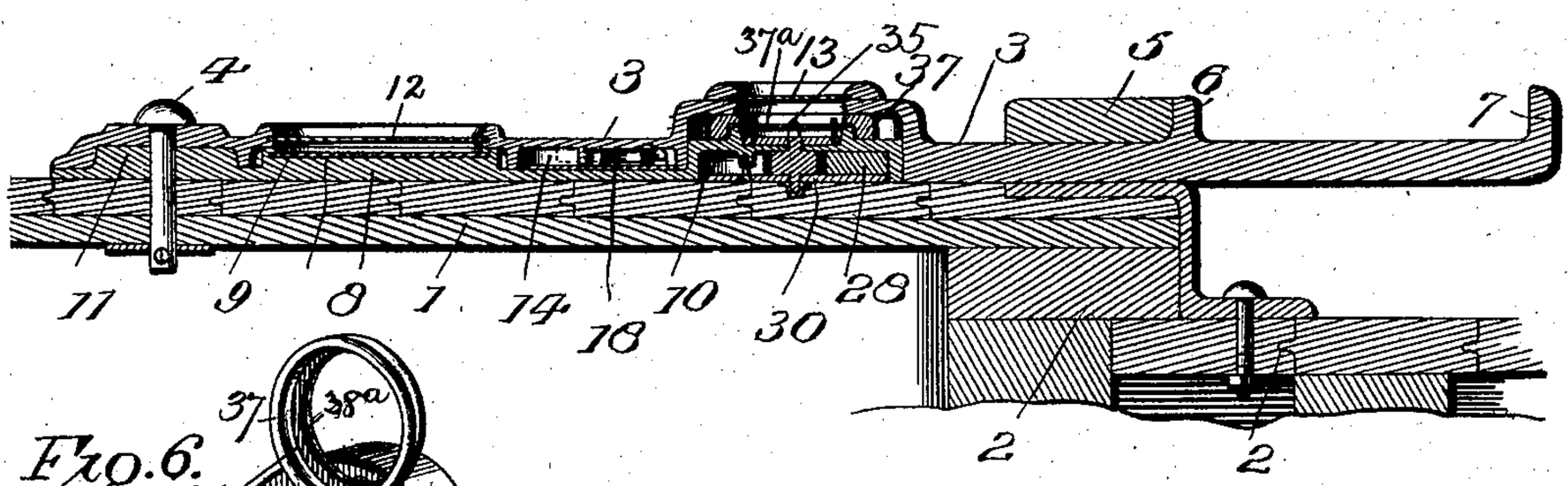


Fig. 6.

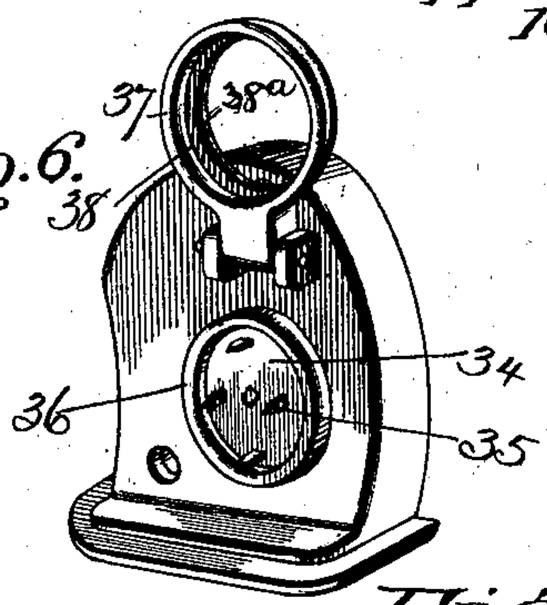
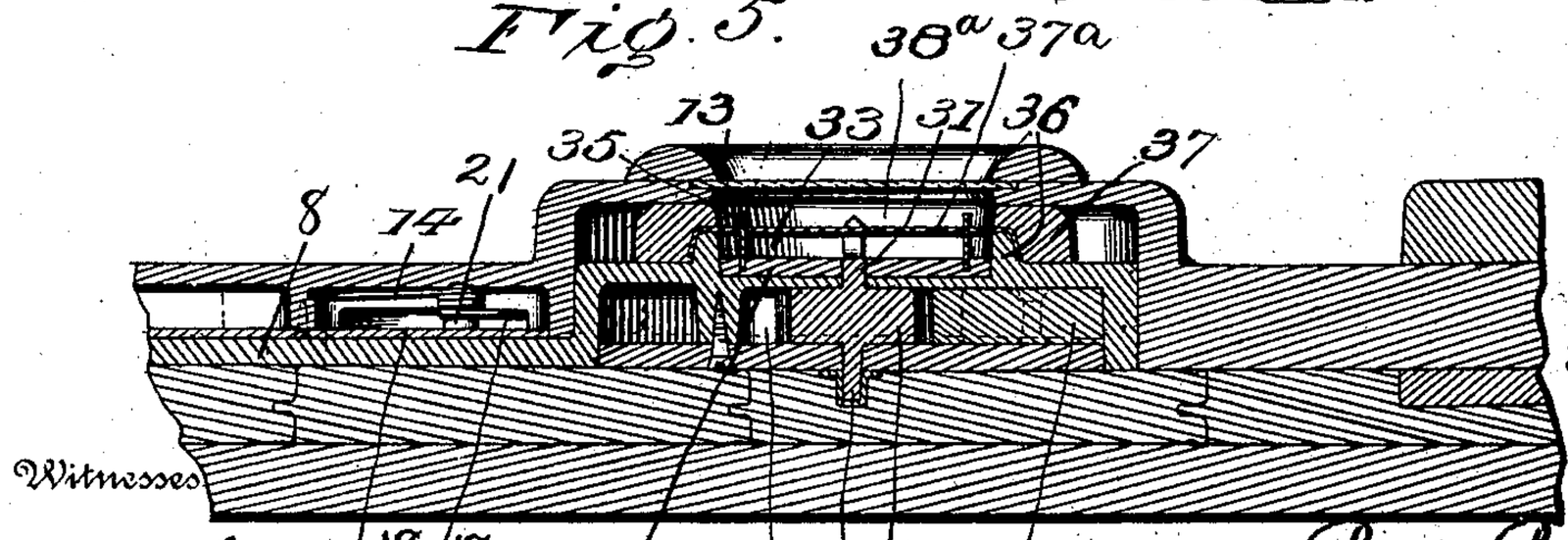


Fig. 4.

Fig. 5.



Witnesses

J. Stewart Rice.

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UNITED STATES PATENT OFFICE.

PERRY BROWN, OF WILMINGTON, DELAWARE.

SEAL-LOCK.

SPECIFICATION forming part of Letters Patent No. 700,298, dated May 20, 1902.

Application filed May 24, 1901. Serial No. 61,759. (No model.)

To all whom it may concern:

Be it known that I, PERRY BROWN, a citizen of the United States, residing at Wilmington, in the county of Newcastle, State of Delaware, have invented a certain new and useful Improvement in Seal-Locks, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to an improvement in seal-locks of the class particularly adapted for use on freight-car doors; and my object is to produce a simple, inexpensive, and durable lock which will be most effective in use and easily operated.

Having this object in view, my invention consists in the peculiar construction, arrangement, and combinations of parts as described in its preferable embodiment in the following specification and then definitely set forth by the claims at the end hereof.

In the accompanying drawings, illustrating my invention, Figure 1 is a side elevation of part of a car-door with my improvements illustrated thereon. Fig. 2 is a similar view of the same with the pivoted hasp raised. Fig. 3 is a longitudinal central section. Fig. 4 is an inverted side elevation taken from the rear side and with parts removed. Fig. 5 is a longitudinal central section through the lock on a somewhat larger scale, and Fig. 6 is a detail perspective view of the seal-holder with its pivoted cover raised.

Referring now to the details of the drawings by numbers, 1 indicates part of the car-door, and 2 part of the car, the former having a hasp 3, pivoted thereto by means of the pivotal bolt or pin 4 and the latter having the usual or any form of catch or keeper 5, rigidly secured thereto. The pivoted hasp 3 has two integral ribs 6 and 7, formed on its exterior surface, each of which is arranged to coact with the catch or keeper 5 to prevent the door from opening, the rib 6 being used when it is desired to hold the door entirely shut and the rib 7 when the freight being shipped is of such a nature as to require ventilation.

The casing for the seal and the way-card is secured to the car-door immediately under the pivoted hasp 3, and said casing consists of a plate 8, having a grooved recess 9, opening toward the front for the reception of the said way-card and an opening or chamber 10 for the purpose of acting as a housing for the mechanism for operating the seal-mutilator. The said plate 8 is provided with a boss 11, through which passes the pivotal bolt or pin 4, which thus performs the double function of securing the plate 8 in position and of acting as a pivot on which the hasp swings, as before described. This hasp has a glass-protected sight-opening 12, arranged so as to be over the recess 9, containing the way-card when the hasp is in its locked position, as shown in Fig. 1, and a similar opening 13 to expose the seal. The hasp 3 also has chambers or recesses 14 and 15, which open downward and which contain the bolt 16 and the spring 17 for actuating it and which are held in place by the plate or cover 18. This bolt 16 is arranged to be moved longitudinally of its length in its recess 15, so as to move into an opening 19, formed within the chamber 10 of the casing, and thereby lock the hasp to said casing. The spring 17 for causing the locking movement of the bolt 16 is supported by a pin or lug 21, and the inactive end of the spring is held against a rib 22, all of which is clearly seen in Fig. 4.

It will be obvious from the foregoing description and the accompanying drawings (see particularly Fig. 4) that when the hasp 3 is swung on its pivot 4 into the locking position (shown in Fig. 1) the bolt 16, projecting out of its recess 15, will strike against the curved surface 23 (see Fig. 4) of the casing and be thereby caused to enter its recess 15, so as to allow it to pass by said curved surface 23, when the spring 17 will shoot the bolt into the opening 19 of the casing, and thereby lock the hasp to said casing.

To unlock the hasp and at the same time operate the seal-mutilator, I provide the mechanism contained within the chamber 10, which may be described as follows: A sliding-bolt operator 25 is located in the opening 19 and is provided with a lug 26, sliding in a recess 27, to limit the movement of the operator 25. Situated substantially at right angles to said operator is a sliding pusher 28, having teeth thereon forming a rack 29, with which meshes a pinion 30, preferably journaled on trunnions 31 32, as shown in Fig. 5. The upper trunnion 31 of this pinion 30 is projected through an opening in the upper

wall of the chamber, and on the other side of said wall is a recess 33, in which a circular seal-mutilator rotates, said seal-mutilator being rigidly secured to said trunnion, as by riveting or otherwise. This seal-mutilator consists of a base 34, to which are rigidly connected the pointed knives 35, and the mutilator rotates within the aforesaid recess 33, formed by the annular rim 36, projecting upwardly from the casing. The said casing also has a cover 37 hinged thereto, which cover has an annular groove 38ª, so that the cover may fit down over the rim 36 and hold a seal 37ª thereon, the cover having an opening 38ª therein, through which the information on the seal may be read. On reference to Figs. 2 and 6 it will be observed that the knives 35, projecting from the seal-mutilator 34, are arranged at different distances from the center of the seal-mutilator, so that as the seal-mutilator rotates the knives will more effectually cut and mutilate the seal which is held by the cover 37.

When the hasp is closed, as seen in Figs. 1 and 4, it has a downwardly-projecting flange 39 formed thereon, (see said Fig. 4,) so that it will tightly fit the casing containing the seal and way-card, and thus prevent rain or moisture from entering between the hasp and casing.

The operation of my lock is as follows: Assuming that the car-door is unlocked, the employee sealing the car slips a way-card within the recess 9, raises the hinged cover 37, and places a seal (preferably of paper) on top of the projecting rim 36, forcing the seal over the knives 35 of the seal-mutilator. The cover 37 is then shut down, which bends the edge of the seal and securely holds it, as seen in Fig. 5. The hasp 3 is then swung on its pivot 4, and as it closes the bolt 16 carried thereby is first pushed within its recess 15 and then is forced (by its spring 17) into the opening in the casing, when the hasp will be securely locked and cannot be opened without moving the pusher 28, which would operate the seal-mutilator. Should any one attempt to unlock the car, the rack 29 on the pusher 28 would rotate the pinion 30 and the mutilator, and thus destroy the seal before it could operate the bolt 16. It is manifest that when it is desired to unlock the car the movement of the pusher would operate the bolt 16 through the medium of the bolt-operator 25. If it is desired to prevent innocent tampering with the pusher 28, an ordinary seal 40 may be secured thereto, as seen in Fig. 4.

The seal-lock herein described is most effective in operation and satisfies all the requirements of actual service, which are by no means easy to fill, as the lock must be easily operated and unlikely to become out of order and the way-card and seal (when the latter is made of thin paper) must be well protected from rain, which is so likely to beat in.

While I have illustrated the form of box which will best fill these rigid requirements, I wish it to be distinctly understood that my claims are not limited to the exact construction shown, as many changes and alterations may be made from my preferable embodiment without departing from my invention.

What I claim as new is—

1. In a seal-lock, a hasp, means for locking said hasp, a seal-mutilator, means comprising a rack and pinion for unlocking said hasp and operating said seal-mutilator, substantially as described.

2. In a seal-lock, a hasp, a lock therefor, a rotary seal-mutilator, and means comprising a rack and pinion for unlocking said hasp and for rotating said seal-mutilator, substantially as described.

3. In a seal-lock, a hasp, a lock therefor comprising a bolt, a rotary seal-mutilator, and a pusher for positively rotating said seal-mutilator and withdrawing said bolt, substantially as described.

4. In a seal-lock, a hasp, a casing containing a rotary seal-mutilator, a sliding bolt arranged to lock said hasp to said casing, and a pusher arranged to positively rotate said seal-mutilator and operate said bolt, substantially as described.

5. In a seal-lock, a hasp, a casing containing a rotary seal-mutilator, a sliding bolt arranged to lock said hasp to said casing, a pusher arranged to operate said bolt, and a rack and pinion between said pusher and said seal-mutilator, whereby a movement of said pusher to act on the bolt rotates the said seal-mutilator, substantially as described.

6. In a seal-lock, a casing supporting a seal-mutilator, a cover arranged to clamp a seal over said mutilator, and a hasp arranged to cover and protect said seal and the aforesaid cover, substantially as described.

7. In a seal-lock, a casing supporting a seal-mutilator and having a projecting ring or rim, a pivoted cover arranged to close over said ring or rim and clamp the seal thereon and a hasp arranged to cover and protect said seal and aforesaid cover, substantially as described.

8. In a seal-lock, a casing containing a seal-mutilator, a pivoted hasp arranged to be swung into operative position with said casing, a bolt locking said casing and pivoted hasp, and a pusher moving in a path at right angles to the movement of said bolt and arranged to operate said seal-mutilator and withdraw said bolt, whereby the pivoted hasp may be swung away from said casing, substantially as described.

9. In a seal-lock, a casing supporting a seal-mutilator and having a bolt-receiving recess therein, a hasp carrying a spring-actuated bolt arranged to enter said recess, and a pusher carried by said casing arranged to operate said seal-mutilator and unlock said bolt, substantially as described.

10. In a seal-lock, a casing supporting a rotary seal-mutilator and having a bolt-receiv-

ing recess therein, a hasp carrying a spring-actuated bolt arranged to enter said recess and lock the hasp to the casing, and a pusher carried by the casing and arranged to rotate the seal-mutilator and unlock the bolt, substantially as described.

11. In a lock, a casing supporting a seal-mutilator and having a bolt-receiving recess therein, a hasp carrying a spring-actuated bolt arranged to enter said recess, a pusher carried by said casing and arranged to operate said seal-mutilator, and a bolt-operator situated between the pusher and the bolt, substantially as described.

12. In a seal-lock, a casing secured to the car-door, and supporting a seal-mutilator and having a recess therein for supporting a way-card, an opening over the seal-mutilator, a cover for clamping a seal over said mutilator, and a hasp arranged to be locked to said casing and having sight-openings therein arranged over said recess for the way-card and the seal, substantially as described.

13. In a seal-lock, a casing having a seat for a seal, a seal-mutilator having a pinion contained within the casing and a knife carried on the opposite side of the casing, and means for operating said pinion, substantially as described.

14. In a seal-lock, a casing having a seat for a seal, a pinion and means for operating it carried within the casing, one of the trunnions for the pinion projecting through the casing and carrying a seal-mutilator, substantially as described.

15. In a seal-lock, a casing having a seat for a seal, a pinion and means for operating it carried within the casing, one of the trunnions for the pinion projecting through the casing and carrying a seal-mutilator, and a cover arranged to clamp a seal on said seat over the seal-mutilator, substantially as described.

16. In a seal-lock, a casing supporting a seal-mutilator and seal, a recess for a way-card, and a hasp having sight-openings exposing said seal and way-card and provided with a flange projecting over the casing, to protect the said seal and card, substantially as described.

17. In a seal-lock, a casing containing a seal-mutilator, a hasp carrying a bolt for locking said hasp to said casing, and a pusher for operating said seal-mutilator and bolt, substantially as described.

In testimony whereof I affix my signature, in the presence of two witnesses, this 18th day of May, 1901.

PERRY BROWN.

Witnesses:

J. STEWART RICE,

GEO. E. FRECH.