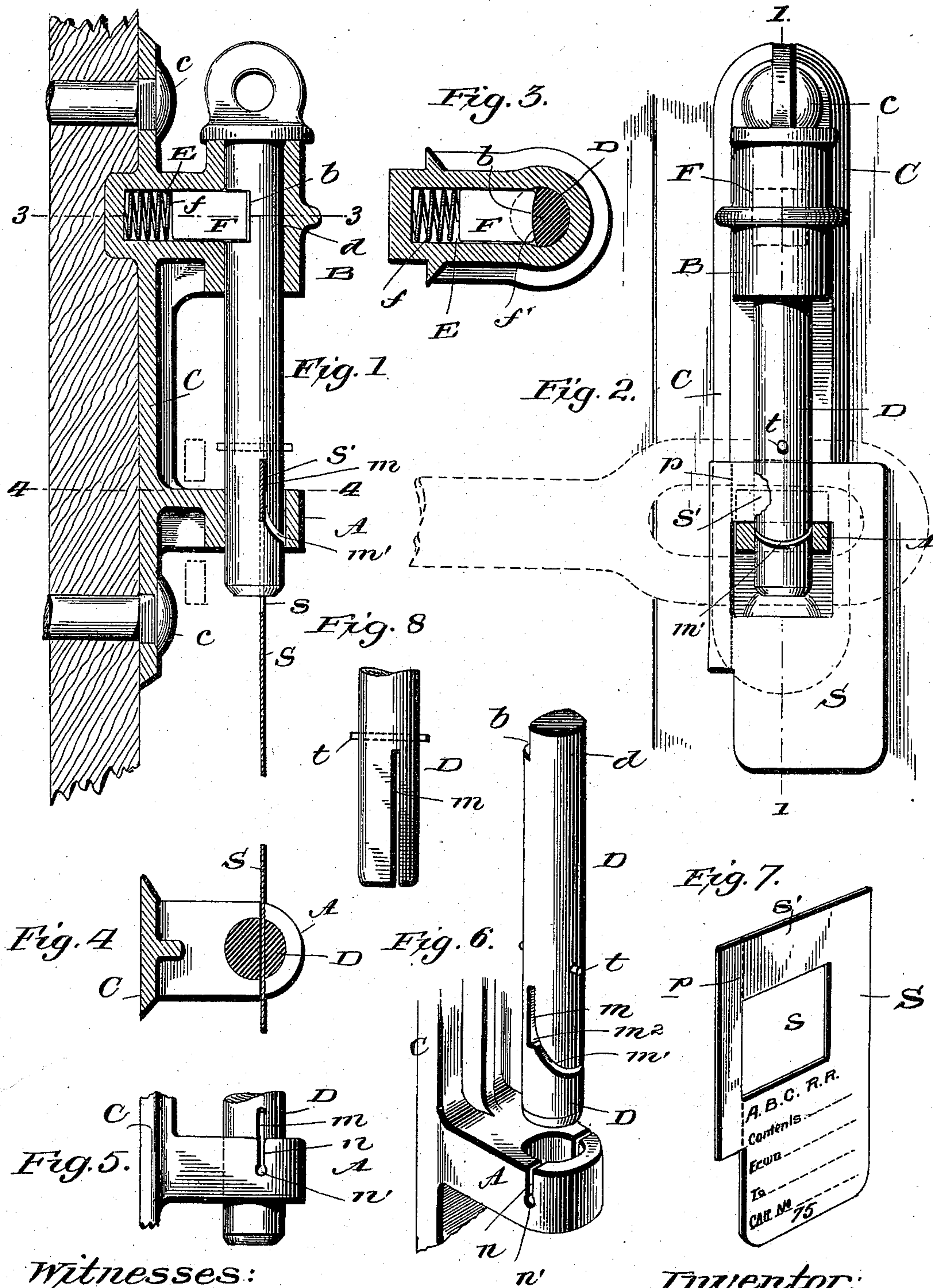


(No Model.)

W. P. HUNTLEY, Jr.
SEAL LOCK.

No. 571,230.

Patented Nov. 10, 1896.



Witnesses:
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UNITED STATES PATENT OFFICE.

WESLEY P. HUNTLEY, JR., OF RICHMOND, VIRGINIA.

SEAL-LOCK.

SPECIFICATION forming part of Letters Patent No. 571,230, dated November 10, 1896.

Application filed June 19, 1896. Serial No. 596,106. (No model.)

To all whom it may concern:

Be it known that I, WESLEY PAMPLIN HUNTLEY, Jr., of the city of Richmond, in the State of Virginia, have invented certain new and useful Improvements in Seal-Locks, of which the following is a specification.

My invention is directed to obtaining a simple, cheap, strong, easily operated, and efficient seal-lock for railway-cars and other uses.

Under my invention the lock proper consists, essentially, of a bolt which has a longitudinal movement to enter and quit the staple or its equivalent, which it engages for locking purposes, and a rotary movement by which it is caused to engage and disengage itself from a locking-dog, which has a movement transverse of the longitudinal movement of the bolt and is pressed toward said bolt by a spring or equivalent means. The bolt is provided with a retaining-notch and also with a longitudinal slot, open at its lower end for the insertion of the seal, and the staple is formed with a slot open upon its face which the bolt first meets, the arrangement being such that the retaining-notch prevents the retraction of the bolt only after it has moved its full extent in locking direction, while on the other hand the seal, when placed in position in the slot in the bolt and the slot in the staple, which register with each other, prevents the rotary movement of the bolt needed to disengage it from the locking-dog to permit its free lengthwise movement. Consequently, so long as the seal is unbroken the bolt must remain in locking position.

The nature of my invention and the manner in which the same is or may be carried into effect will be readily understood by reference to the accompanying drawings, in which—

Figure 1 is a section of the seal-lock with the bolt in elevation on line 1 1, Fig. 2. Fig. 2 is a plan view of the same with the staple in section and a part of the bolt broken away. Fig. 3 is a section on line 3 3, Fig. 1. Fig. 4 is a section on line 4 4, Fig. 1. Fig. 5 is a side elevation of the staple and the part of the bolt that adjoins it. Fig. 6 is a perspective view of the staple and the lower part of the bolt. Fig. 7 is a view of one form of seal

which I may use. Fig. 8 is a view of the lower end of the bolt, showing a modified form of the slot therein for receiving the seal. 55

The staple A and the sleeve B, which holds and guides the bolt D, are preferably carried by and formed in one with the base-plate C, which is secured to the car-door or other part to which it is to be applied by suitable bolts 60 or other fasteners c, the parts A B C being formed as a single casting. In this casting is also formed at right angles to the axis of the sleeve and on one side of the sleeve a pocket or receptacle E, closed at its outer 65 end and at its inner end communicating with the interior of the sleeve. This pocket contains a locking-dog F, which is movable to and from the bolt and is pressed toward the same by a spiral or other spring f, also contained in the pocket, and interposed between the closed bottom of the pocket and the base of the dog. This dog, while capable of back-and-forth movement, is restrained from rotation by suitable means—in this instance by 75 making it of rectangular form in cross-section and by making the pocket which fits around it of similar form in cross-section.

The bolt is of cylindrical form, so that it may not only move lengthwise in its guide-sleeve 80 B, but also be capable of an axial movement of rotation therein. The bolt has in it a cross-notch b of size and shape to receive the end of the locking-dog, this notch being so located that when the bolt is home in the 85 staple A the notch will be opposite to and in register with the dog F, which latter will be forced forward by its spring into the notch, as indicated in Fig. 1, thus locking the bolt securely in position. So long as the parts 90 are thus positioned the bolt cannot be withdrawn from the staple. In order to withdraw it, it must first be given a movement of partial rotation, so as to bring the opposite and unnotched side d of the bolt opposite to the 95 dog. The effect of this partial rotation of the bolt is to force the dog F outward (the bottom f' of the notch acting as a cam or wiper upon the contiguous end of the dog) until it is clear of the notch and opposite the smooth un- 100 notched side d of the bolt, and as soon as this is done the bolt is free to move lengthwise.

The parts thus far described constitute an efficient lock or fastening, which can be used

as such without other appliances; but to seal it against being opened it is necessary to so arrange things that when the bolt is home in the staple and in engagement with the locking-dog it shall be locked against that movement of partial rotation by which it disengages itself from the dog as an indispensable preliminary to its lengthwise movement of withdrawal from the staple. To this end I prefer to make use of a seal S, (such as shown in Fig. 7,) consisting of a sheet of metal or other suitable material having in it a rectangular opening *s* to permit it to pass over the staple and to form at the top a cross-bar *s'*, which is to engage the bolt and the staple for sealing purposes. The bolt has in it a longitudinal slot *m*, which, as shown in Figs. 1, 2, and 6, is continued in a slanting direction at *m'* to one side of the bolt. This slanting continuation, however, is simply to afford a means of introducing the cross-bar *s'* of the seal into the straight portion *m* of the slot. In the staple is a corresponding slot *n*, which opens on that side of the staple toward the bolt. The two slots *m n* are so positioned that when the bolt is home in the staple and in engagement with the locking-dog they (the slots) will be in register with and overlapping each other, with the exterior opposite ends of the two slots at a distance from each other about equal to the width of the cross-bar *s'* of the seal. The cross-bar *s'* of the seal is introduced into the slot *m* while the bolt is drawn up and away from the staple. Then as the bolt is moved down the seal is manipulated so as to bring its opening *s* over the staple, (there being sufficient play between the parts for this purpose,) while the lower edge of the bar *s'* enters the slot *n* in the staple, so that by the time the bolt is home in the staple the cross-bar *s'* of the seal will be held conjointly in the slots *m n*, extending crosswise of and through the bolt and staple, and thus effectually preventing the bolt from any rotary movement. It is impossible after this to withdraw the bolt without first withdrawing the cross-bar of the seal, and this can be done only by breaking the seal.

To permit the removal of the seal when required, it can be perforated or weakened along the line *p*, so as to permit the edge of the sheet to be broken off. This will release one end of the cross-bar *s'* and will remove the metal along one side of the opening *s*, thus leaving the seal with its cross-bar to be removed by withdrawing it laterally from the lock.

In lieu of forming the slot *m* in the bolt with a slanting extension *m'* to the side of the bolt I can continue it as a straight slot to the lower end of the bolt, as shown in Fig. 8, all that is needed being that the slot at its lower end

shall open out from the bolt in such manner as to allow the sealing-strip to enter it. I prefer, however, the form shown in Figs. 1 to 7, inclusive, for the reason that when the bolt is home in the socket-piece the open end of the slot will be entirely covered and shielded by the latter. I also prefer that the slot shall be to one side of the longitudinal center of the bolt, as indicated in the drawings.

The seal of the form shown in the drawings may serve conveniently as a tag on which can be imprinted or otherwise affixed all necessary directions and descriptive matter as to the car and its contents. I may, however, use seals of other kinds, and in lieu of a cross-bar or strip, such as *s'*, I may use an ordinary wire which can be threaded through registering holes formed for this purpose in the bolt and staple, respectively, and then have its ends secured together by any ordinary or suitable seal. For this purpose I have provided in the staple a cross-hole *n'* at the end of the slot *n*, which is of a diameter greater than the width of the slot and is to be used in connection with a wire, also of greater diameter than the width of the slot, this wire passing through the slot *m* at the point *m²*, where there is a retaining-shoulder which by engaging the wire will prevent the bolt from being withdrawn.

The bolt is provided with suitable means, such as the cross-pin *t*, to limit its lengthwise movement.

Having now described my improvements and the manner in which the same are or may be carried into effect, I desire to state in conclusion that I do not restrict myself narrowly to the structural details herein described and shown, since manifestly the same can be varied in several respects without departure from the real invention; but

What I claim herein as new, and desire to secure by Letters Patent, is as follows:

In combination with the base-plate, guide-sleeve and spring-pressed locking-dog, the bolt rotatable and longitudinally movable in said sleeve, provided with a retaining-notch which engages and prevents the retraction of the bolt only after said bolt has moved its full extent in locking direction and also with a longitudinal slot open at its lower end for the insertion of the seal, and the staple formed with a slot *n* open upon that face of the staple which the bolt first meets and arranged to register with the slot in the bolt when the latter is home in the staple, substantially as and for the purposes hereinbefore set forth.

In testimony whereof I have hereunto set my hand this 18th day of June, 1896.

WESLEY P. HUNTLEY, JR.

Witnesses:

WM. T. HOOPES,
T. A. CHALKLEY.