

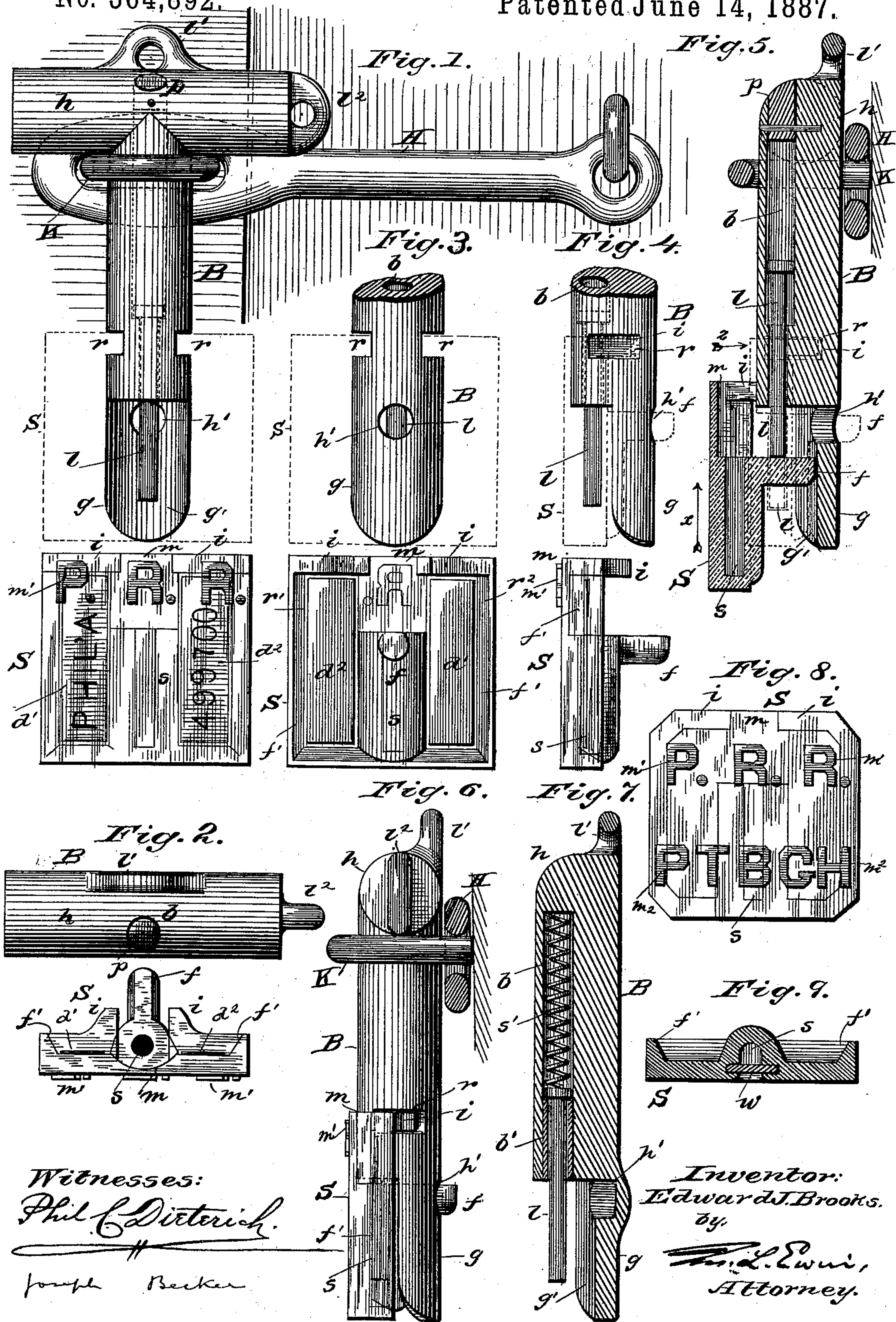
(No Model.)

E. J. BROOKS.

SEAL LOCK.

No. 364,892.

Patented June 14, 1887.





# UNITED STATES PATENT OFFICE.

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## SEAL-LOCK.

SPECIFICATION forming part of Letters Patent No. 364,892, dated June 14, 1887.

Application filed May 2, 1887. Serial No. 236,848. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD J. BROOKS, a citizen of the United States, and a resident of East Orange, in the State of New Jersey, have invented a new and useful Improvement in Seal-Locks, of which the following is a specification.

This invention relates to self-fastening seal-locks for the doors of railway freight-cars, and primarily to that variety of these fastenings in which a loose "pin" or bolt coacts with an ordinary hasp and keeper and with a seal, the latter applied to the pin or bolt so that it must be broken and detached before the pin or bolt can be withdrawn to release the hasp.

The present invention consists in certain novel combinations of parts, and in a peculiarly-constructed seal, forming part of the device, as hereinafter set forth and claimed.

A sheet of drawings accompanies this specification as part thereof.

Figure 1 of these drawings is a front view of a pin or a "bolt," as it is hereinafter termed, and its seal, together with an ordinary car-door hasp and staple or hasp and keeper, illustrating this invention. Fig. 2 is a top view of said bolt and seal. Fig. 3 represents a back view thereof, and Fig. 4 an edge or side view. Fig. 5 represents a vertical section of the bolt and seal, illustrating the fastening or sealing operation. Fig. 6 is a side view of the same fastened or sealed. Fig. 7 represents a vertical section of the bolt provided with an internal spring; and Figs. 8 and 9 are, respectively, a face view and a horizontal section of modified seals.

Like letters of reference indicate corresponding parts in the several figures.

In carrying out this invention in the best way now known to me I employ a strong bolt, B, and a frangible seal, S, in combination with an ordinary swinging hasp, H, attached to the car-door, and a fixed keeper, K, which may be an ordinary staple secured to the side of the car in a convenient position, said keeper receiving the hasp horizontally and the bolt outside thereof in vertical position, as seen in Figs. 1, 5, and 6, while said seal is applied to the lower end of the bolt, as represented in Fig. 6 and in dotted lines in Figs. 1, 3, 4, and 5, so as to prevent its withdrawal to release

the hasp until the seal is broken. For clearness the parts will be hereinafter described as occupying the relative positions above indicated.

The bolt B is preferably of T shape in front view, as represented in Fig. 1, and round in cross-section; and its head *h* is provided with a perforated lug, *l'*, to coact with an attaching-chain and with another such lug, *l''*, at one end, to coact with the shackle of an ordinary lead-and-wire seal, for example, passed therethrough and through the slot of the hasp on roads which employ such seals, and it is so shaped throughout as to be mainly formed in molds out of cast-iron; but these and like details are not considered essential to the respective features of my invention, as hereinafter claimed.

Said bolt B, for the purposes of this invention, is constructed with a recess or recesses, *r*, in its exterior, near its lower end, preferably in the form of a pair of lateral notches, which are horizontal, or substantially horizontal, as seen in Fig. 4, and the inner walls of which are parallel, or substantially parallel, and it has a shouldered longitudinal bore, *b*, the larger upper end of which is securely plugged, as represented at *p*, Fig. 6, while its contracted lower end extends through the extremity of the bolt. A headed locking-pin, *l*, slides freely within said bore, and is normally projected by gravity at the lower end of the bolt, as seen in Figs. 1 and 4, in dotted lines in Fig. 5, and through the seal S in Fig. 6.

Primarily to protect the projecting pin *l*, when the fastening is not sealed, said lower end of the bolt B is further provided with a rigid guard, *g*, which projects endwise behind the pin, as seen in Figs. 1, 3, 4, 5, and 6, and the face of said guard is provided with a longitudinal guiding-concavity, *g'*, and a terminal gage-hole, *h'*, extends through its upper end.

The seal S has rigid interlocking portions *i*, matching said recesses *r* in the bolt, a vertical socket, *s*, matching said locking-pin *l*, and a rigid finger-like projection, *f*, on its back matching said guiding-concavity *g'* and hole *h'*.

In sealing the fastening, as illustrated by Fig. 5, said finger-like projection *f* is engaged with the guiding-concavity *g'* at the lower end



of the guard *g*, and the seal *S* is then lifted vertically, as represented by arrow *x*. The projection *f* is thus guided so as to lift there-  
 5 with the locking-pin *l*, which is carried upon the flat top of the projection, as seen in full lines in the figure. When said interlocking  
 10 portions *i* of the seal come opposite said recesses *r* of the bolt, the projection *f* comes opposite said hole *h'* in the guard *g*, and the seal  
 15 is now moved horizontally backward, as represented by arrow *z*. This carries said interlocking portions *i* into said recesses *r*, and at the same time brings said socket *s* into line  
 20 with the locking-pin *l*, which thereupon drops into the socket and securely fastens the seal in place.

The fastened seal is represented by dotted lines in Figs. 1, 3, 4, and 5, as aforesaid, and is more fully shown by Fig. 6. The seal be-  
 20 ing, as it preferably is, of transparent glass, the locking-pin *l* is exposed to view within it, as indicated in the latter figure. The pin is still more clearly seen from the front of the seal, as indicated by the exposure of the socket  
 25 *s* in the full-line face view of the seal in Fig. 1. The condition of the seal is thus rendered manifest and thorough inspection facilitated. If preferred, the body of the seal may be opaque,  
 30 as of brittle metal, pottery, or the like; but in this case a window, *w*, Fig. 9, should be provided to form a transparent portion in front of the locking-pin socket *s*.

The preferred transparent seal shown in Figs. 1 to 6 is furthermore constructed with  
 35 recesses *r'*, *r''* in its back, Fig. 3, on the respective sides of the central portion in which said socket *s* is formed, and within these recesses distinguishing-labels *d'*, *d''* are cemented,  
 40 so that their faces are exposed to view at the front of the seal, as seen in Fig. 1. The seal is thus readily provided with different origin or destination marks, and with serial num-  
 45 bers or the like, as illustrated by said labels *d'* and *d''*, respectively. Said labels may be of paper or other fabric, and secured against counterfeiting by engraving and private marks in customary manner.

More permanent marks, *m'*, as the initials of the company applying the seal, may be molded  
 50 on the face of the seal, and these may include an original or destination mark, *m''*, Fig. 8, taking the place of said labels, as indicated, or supplemental thereto, as may be preferred. The shape of the seal may also be varied to  
 55 distinguish the seals of different roads, as indicated.

After the seal is fastened in place, as illustrated by Fig. 6, &c., as aforesaid, the lock-  
 60 ing-pin *l* cannot be retracted until the seal is broken, except by inverting the car; and the fastening may, if preferred, be readily rendered secure against being so unlocked by the  
 65 "ditching" of a car by simply providing said bore *b* of the bolt with a light spiral spring, *s'*, Fig. 7, of sufficient resistance to overcome the weight and inertia of the inverted locking-pin. So provided with a spring, the bolt will work in

horizontal or inclined position, as well as in vertical position. To coact with the bolt *B*, whether provided with a spring or not, a pair  
 70 of coinciding keepers, such as staples, upon the car side and door, respectively, are considered equivalents of a hasp and keeper.

To unfasten a car-door secured by the within-described fastening, the frangible seal *S* is  
 75 knocked off downward, which breaks off said interlocking portions *i*, and throws the seal clear of the locking-pin *l*. The bolt *B* is then withdrawn, which permits the hasp *H* to be disengaged from the keeper *K*.  
 80

To prevent successful tampering with the sealed fastening, the body of the seal is extended upward so as to mask the opening at the lower end of the body of the bolt, as best  
 85 seen at *m* in Figs. 5 and 6. The bottom and lateral edges are provided with rearwardly-projecting flanges *f'*, so as to coact with said guard *g* for this purpose. The socket *s* is made sufficiently large and deep to prevent  
 90 retracting the locking-pin by concussion; and the locking-pin *l* may be made of brass to prevent moving it by a magnet. A bushing, *b'*, Fig. 7, at the lower end of the bolt may take  
 95 the place of said plug *p*, so as to be secured by the seal; and said gage-hole *h'* in the guard *g* may be made in the form of a closed socket, as shown in the same figure, should the bolt and seal be so used as to expose their backs. Other like guards and modifications will sug-  
 100 gest themselves to those skilled in the art.

Having thus described my said improvement in seal-locks, I claim as my invention and desire to patent under this specification—

1. In a seal-lock, the combination, with a hasp and a keeper, of a bolt having a recess  
 105 or recesses in its exterior near one end and a longitudinal bore, and provided with a locking-pin which slides within said bore and normally projects at said end of the bolt, and a frangible seal having a rigid portion or por-  
 110 tions to engage with said recesses and a socket to receive said pin, substantially as herein specified.

2. The combination, with a hasp and a keeper, of a vertical bolt having a horizontal  
 115 recess or recesses in its exterior near its lower end and a longitudinal bore, and provided with a locking-pin which slides loosely within said bore and is normally projected at said lower end of the bolt by gravity, and a frangible seal  
 120 having a rigid portion or portions to engage with said recesses and a vertical socket to receive said pin, substantially as herein specified.

3. The combination, with a hasp and a keeper, of a bolt having a recess or recesses  
 125 in its exterior near one end and a longitudinal bore, and provided with a locking-pin which normally projects at said end of the bolt, and a frangible seal having a rigid portion or por-  
 130 tions to engage with said recesses, a socket to receive said pin, and a projection on its back by which to retract said pin in sealing the fastening, substantially as herein specified.

4. In combination with a frangible seal hav-



ing rigid interlocking portions and a locking-pin socket, a bolt having a recess or recesses in its exterior near one end to receive said interlocking portions, a longitudinal bore, a locking-pin which normally projects at said end of the bolt, and a rigid guard which projects endwise behind the projecting pin, substantially as herein specified.

5 5. In combination with a frangible seal having rigid interlocking portions, a locking-pin socket and a pin-retracting projection, a bolt having a recess or recesses in its exterior near one end to receive said interlocking portions, a longitudinal bore, a locking-pin which normally projects at said end of the bolt, and a rigid guard which projects endwise behind the projecting pin and is provided with a concave face and a terminal hole to coact with said projection in sealing the fastening, substantially as herein specified.

6. In combination with a bolt having a recess or recesses in its exterior near one end, a longitudinal bore and a locking-pin which normally projects at said end of the bolt, a frangible seal having a rigid portion or portions to interlock with said recesses, a socket which receives the projecting portion of said locking-pin, and a transparent portion which exposes the latter to view within the fastened seal, substantially as herein specified.

7. The within-described frangible seal of transparent glass having a central portion provided with its locking-pin socket and recesses in its back provided with a label or labels, substantially as specified, for the purpose set forth.

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Witnesses:

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JOSEPH BECKER.