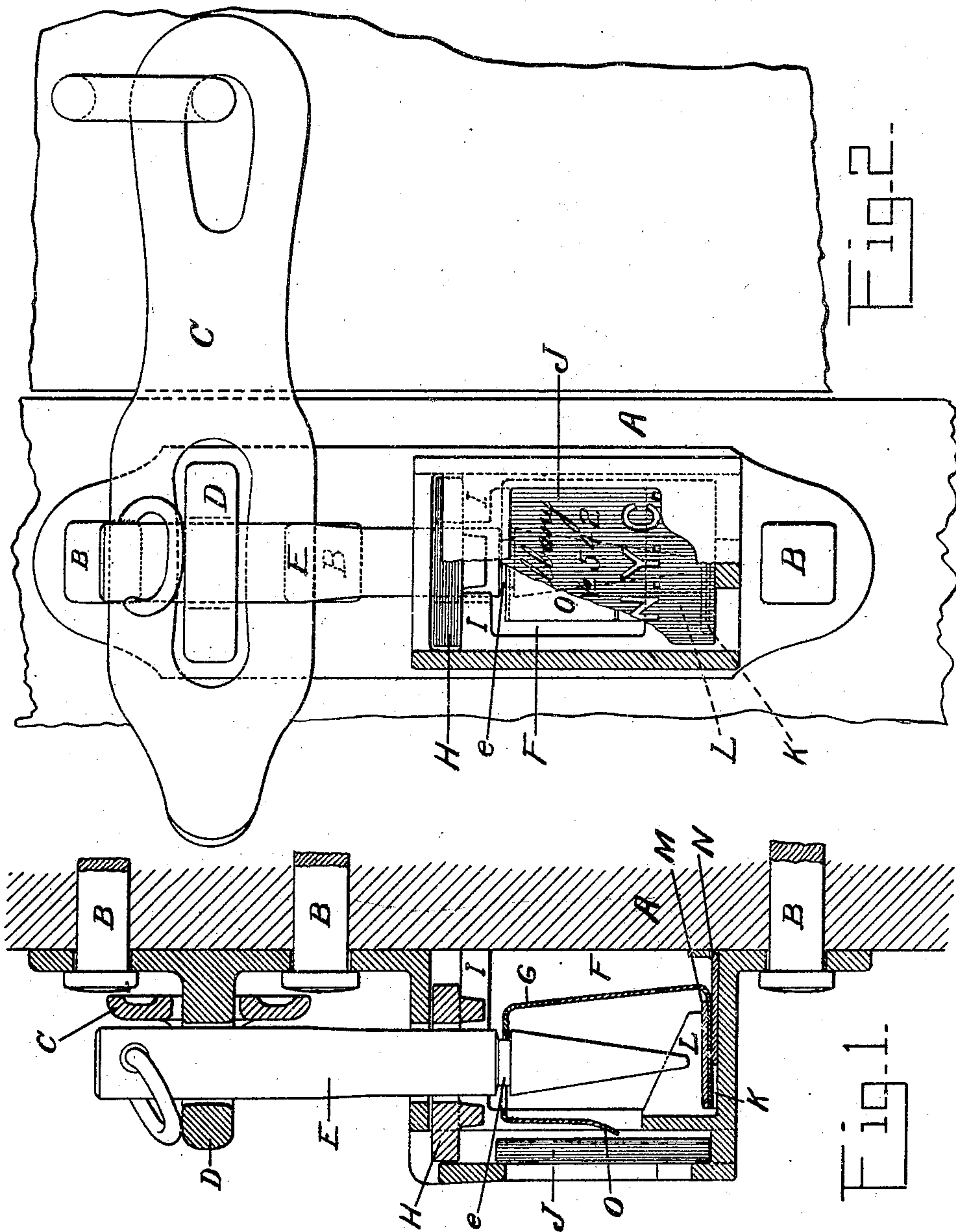


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CAR LOCK AND SEAL.
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UNITED STATES PATENT OFFICE.

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CAR LOCK AND SEAL.

No. 917,089.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN MacKENZIE, a citizen of the United States, residing at Watervliet, in the county of Albany and State of New York, have invented certain new and useful Improvements in Car Locks and Seals, of which the following is a specification.

My invention relates to locks and seals for freight cars and the objects of my invention are to construct a lock which will be simple, durable and inexpensive and which will hold the door of a freight car securely locked so that it cannot be opened without breaking the seal and when the seal is broken the lock can be easily opened. I obtain these objects by means of the mechanism illustrated in the accompanying drawings in which:

Figure 1 is a longitudinal section of my lock bolted to the door frame of a car. Fig. 2 is a front elevation of the same with parts broken away.

Similar letters refer to similar parts throughout the several views.

The reference letter A designates the door frame of the car. To this frame my lock is fastened by the bolts B, B.

C is the hasp one end of which is attached to the door of a car and the other end passes over the staple of my lock.

E is the pin passing through the staple D outside of the hasp C and holding the hasp securely upon the staple D. The lower end of the pin E is pointed and passes down through the staple into the body of the lock. The walls of the lower portion of the lock form a chamber F into which the pin E passes.

G is a spring made of band steel having an oval shaped hole in the top into which the pin passes.

The pin E has a groove *e* at or near the top of the tapering part of the end located at the proper distance from the end so that when it is inserted in the lock the groove *e* will be at the top of the spring G and when inserted in the hole in the top of the spring G the side of the spring G next to the hole at the top will fit into the groove *e* of the pin E. The bottom of the groove *e* is undercut or cut deeper at the rear of the groove than at the periphery, and the rear side of the spring G next to the hole is sprung downward so as to fit in the undercut in the groove *e* and make a better catch to hold the pin E in the

spring G. The sides about the groove *e* form shoulders for the spring G.

H is a slide inserted in the chamber F of the lock from the rear directly under the top wall of the chamber and is supported slidably on the brackets I, I. The slide H has a hole in the top to correspond with the hole in the top wall of the chamber F, so that the pin E in passing into the chamber F also passes through the hole in the slide H. The front part of the slide H is of a sufficient length to completely fill the space between the pin E and the inner surface of the front wall of the chamber F when the pin E is inserted in the lock. When the pin E is withdrawn from the lock the slide H may readily slide along the brackets I, I toward the rear of the lock leaving an open space between the front of the slide H and the inner surface of the front wall of the chamber F, for the insertion of the seal, it being arranged so that the hole in the slide H will not be completely withdrawn from under the hole in the upper wall of the chamber F so that when the pin E is inserted in the lock the pointed end will enter the side of the hole in the slide H and the beveled end of the pin E will push the slide H forward until the front portion of the slide H occupies the entire front part of the chamber F as above described.

J is a seal made of baked clay, porcelain or similar hard brittle material and of suitable size to slide down in the front of the chamber F when the pin E is withdrawn, and the slide H is slid backward so as to allow the seal to be inserted through an opening in the top wall of the chamber F and held in place by the front portion of the spring G. The front of the chamber F of the lock is open as shown in Fig. 2 and the seal may have the letters of the railroad upon which the car is used molded in the seal and may have the name of the shipper or the number of the station to which it is being sent stamped upon the face of the seal.

K is a slot in the bottom of the chamber F formed by the shoulders L in the chamber F. This slot tapers somewhat toward the front and is for the purpose of holding the bottom flange of the spring G.

M is a wedge inserted loosely in said slot and then the bottom flange of the spring G is inserted next to the wedge M.

N is another wedge which may be driven tightly in said slot to hold the spring G firmly

in position so that the spring will hold the rear edge thereof next to the hole in the top snug against the pin E in the groove *e*.

O is the front flange of the spring G which
 5 is next to or in contact with the seal J and holds the seal J against the front of the chamber F over the opening in the front of said chamber. The seal J is thin and made of brittle material and is easily broken.
 10 The operation of my lock and seal is as follows: The lock is bolted to the frame of the car door as shown and the hasp is attached to the door so that the open end will pass over the staple D of the lock. Then be-
 15 fore the pin is inserted the slide H is pushed backward and the seal J inserted in the opening in the top of the chamber F. The pin E is then inserted through the staple and through the hole in the top of the chamber
 20 F and through the hole in the slide H. This will force the slide H forward so as to completely cover the opening over the seal J. The pin E at the same time is inserted through the elongated hole in the top of the
 25 spring G and the spring G next to the rear side of the hole in the top occupies the groove *e* in the pin E. When in this position it is impossible to withdraw the pin E without pushing backward the spring G. The seal
 30 J covering the entire opening in the front of the lock it is impossible to force the spring G backward without first breaking the seal. The seal being thin and brittle it is easily broken. When the car reaches its destina-
 35 tion and it is desired to unlock it the seal is broken by pressure of the fingers and the spring G pressed backward so as to allow the pin E to be withdrawn. When the pin E is withdrawn the hasp C is taken from the
 40 staple D and the car easily opened. The spring G is so constructed that when the wedges M and N are in place it will be rigidly held in such position that the portion of the spring in the rear of the hole through which
 45 the pin E passes will be in close contact with the shoulders formed by the groove *e* and the rear side next the hold being sprung downward and the groove having an undercut as described the pin will be held firmly. When
 50 pressure is exerted on the front flange O of the spring the spring is pushed backward sufficiently to release the pin E. Constructed in this manner the lock is cheaply made, is very strong and durable and cannot be
 55 opened without first breaking the seal. The seals being made of clay or similar materials are inexpensive and easily broken when desired.

What I claim as my invention and desire
 60 to secure by Letters Patent is:

1. A seal lock for railway freight cars consisting of a frame adapted to be bolted to the door frame of a car, the upper portion of said frame having a staple and the lower portion
 65 of said frame having a chamber, an opening

in the top of said chamber adapted to allow the insertion of the seal, a hole in the top of said chamber adapted for the end of the pin passing through the staple to enter said chamber, a pin having the lower end beveled adapted to
 70 pass through said staple into said chamber, a slide under the top of said chamber adapted to be moved over the seal in said chamber by the insertion of said pin and to be held rigidly
 75 by said pin over said seal while the pin is in said chamber, a groove in said pin near the lower end thereof where the same will be within said chamber when the pin is in the staple, a spring within said chamber adapted
 80 to fit in said groove and hold said pin within said chamber, an opening in the front of said chamber, a thin seal adapted to be placed in said chamber when the pin is withdrawn therefrom and a hasp adapted to be attached
 85 to the car door at one end and passing over the said staple at the other end, substantially as described.

2. In a seal lock for a railway freight train a lock frame adapted to be bolted to the door frame of the car, a staple at the upper end of
 90 said frame, a hasp adapted to be fastened at one end to the door of the car and the other end to pass over said staple, a chamber in the lower end of said frame having an opening
 95 in the front thereof and also an opening at the top thereof adapted for the insertion of a thin seal, said opening so located that the seal when inserted in said chamber through said opening will lie directly back
 100 of and cover the opening in front of said chamber, a hole in the top of said chamber adapted for the insertion of a pin passing through said staple, a slide within said chamber under the top thereof having a hole corre-
 105 sponding to pin hole of said chamber said slide being of a sufficient size that when the hole therein is directly under the hole in the top of the chamber the side of said slide will completely occupy the opening for the inser-
 110 tion of the seal, the said slide being adapted to slide backward in said chamber leaving said opening unoccupied, a pin adapted to pass through said staple and through the holes in the top of said chamber and said
 115 slide into said chamber, the lower end of said pin being pointed, a groove, sufficiently above the pointed end of said pin to be within the upper portion of said chamber when said pin is in the staple whereby said pin will hold
 120 said slide rigidly occupying the opening intended for the entry of said seal when said pin is in said staple and the lower end thereof within said chamber, a spring within said chamber having an elongated opening in the
 125 top thereof adapted for the entry of said pin one end of said spring being back of the front opening of said chamber, the opening in said spring being adapted to occupy the groove in said pin when said pin is within said cham-
 130 ber, and a thin seal adapted to be inserted in

said chamber and to occupy the space back of said front opening and between said front opening and the said spring whereby the breaking of said seal will allow force to be
 5 exercised upon said spring thereby releasing said pin, substantially as described for the purposes set forth.

3. In a lock to a railway freight car, a frame, a staple on said frame adapted to receive a hasp, a hasp, a chamber formed by the frame of the lock, a spring contained in said chamber, an opening in the front of said chamber adjacent said spring, a thin seal adapted to occupy the space in said chamber
 15 between said spring and said opening in front of said chamber and cover said opening, a pin adapted to pass through said staple and one end thereof extend into said chamber and means for preventing said seal from being removed unbroken from said chamber
 20 while the end of said pin is within said chamber substantially as described.

4. A seal lock for railway freight cars con-

sisting of a frame adapted to be bolted to the door frame of a car, the upper portion of said
 25 frame having a staple and the lower portion of said frame having a chamber, an opening in the top of said chamber adapted to allow the insertion of the seal, a seal adapted to be inserted in said chamber, a hole in the top of
 30 said chamber adapted for the end of the pin passing through the staple to enter said chamber, a pin having the lower end beveled adapted to pass through said staple into said chamber, a slide under the top of said cham-
 35 ber adapted to be moved over the seal in said chamber by the insertion of said pin and to be held rigidly by said pin over said seal while the pin is in said chamber.

In testimony whereof I affix my signature
 40 in presence of two witnesses.

JOHN MacKENZIE.

Witnesses:

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 WALTER E. WARD.