(Model.)

3 Sheets—Sheet 1.

E. J. BROOKS.

SEAL LOCK.

No. 256,791. Patented Apr. 18, 1882.

Fig. 1,

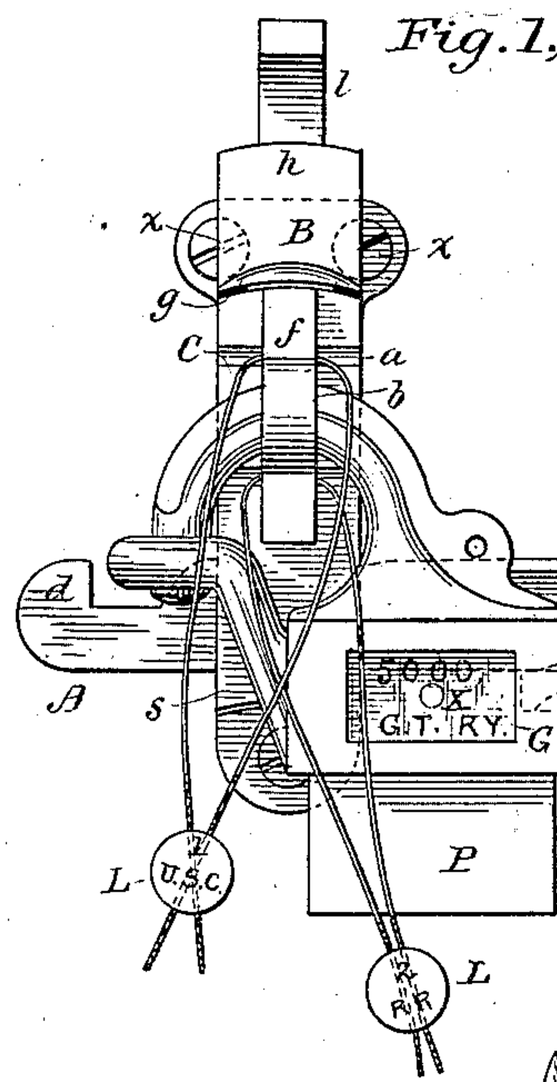


Fig. 4,

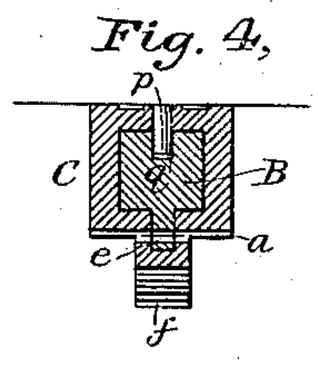


Fig. 3,

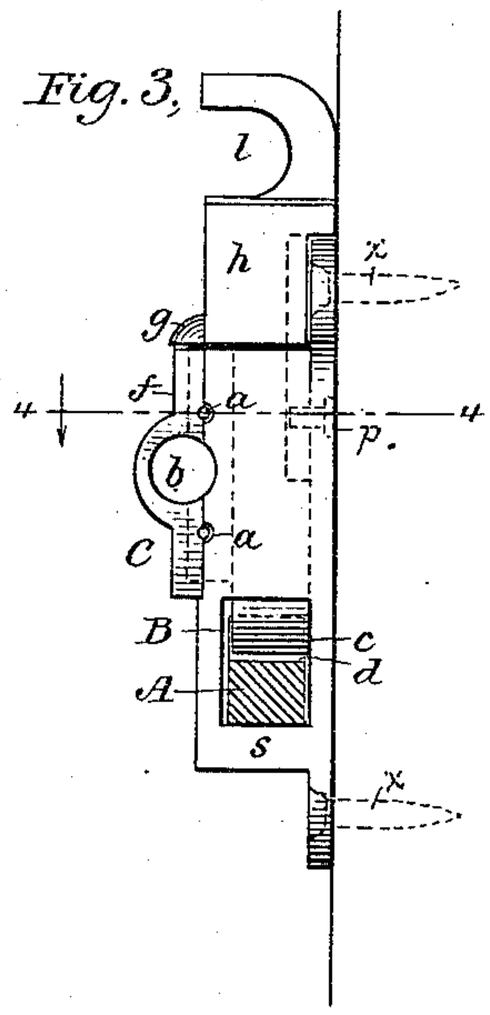


Fig. 5,

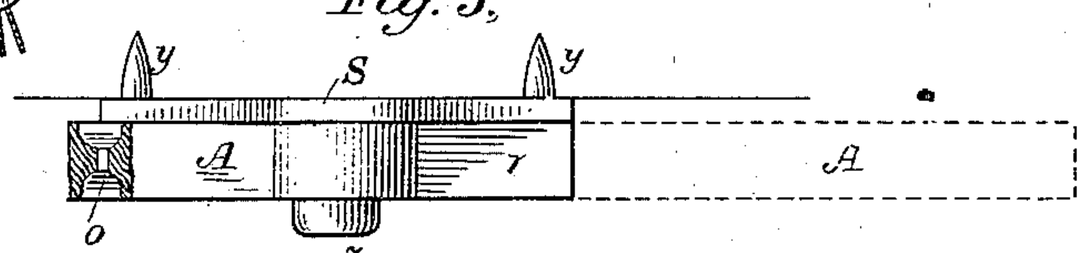


Fig. 2,

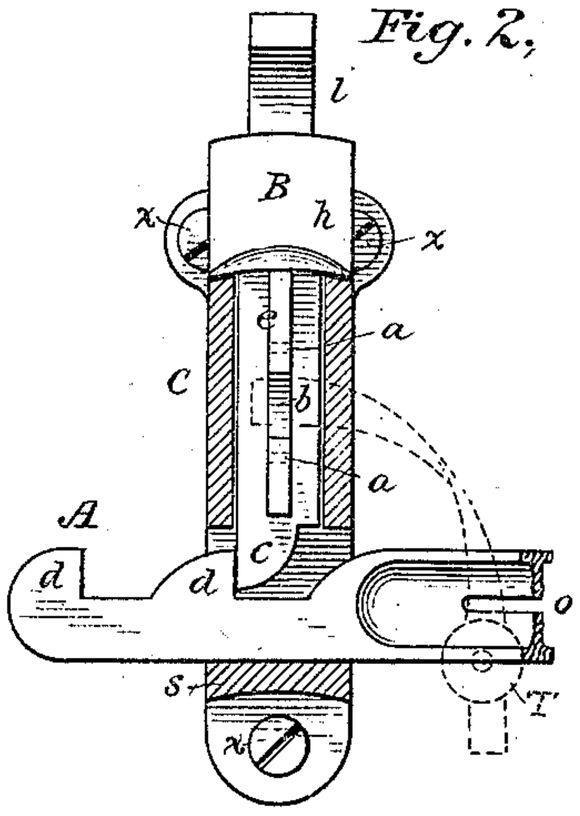


Fig. 6,

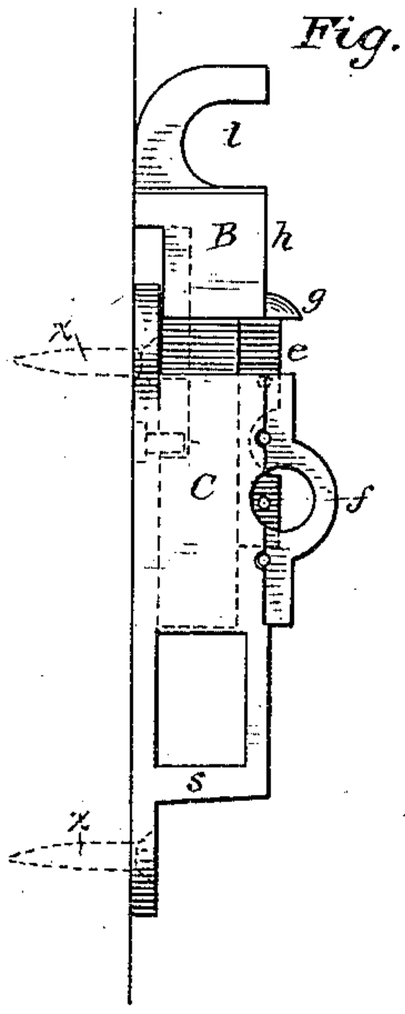
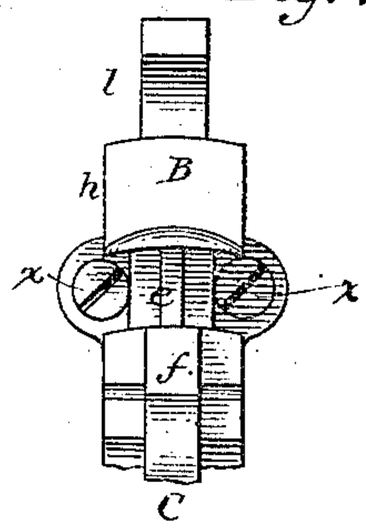


Fig. 7,



WITNESSES

Wm A. Skinkle

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(Model.) 3 Sheets—Sheet 2.

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Fig. 8,

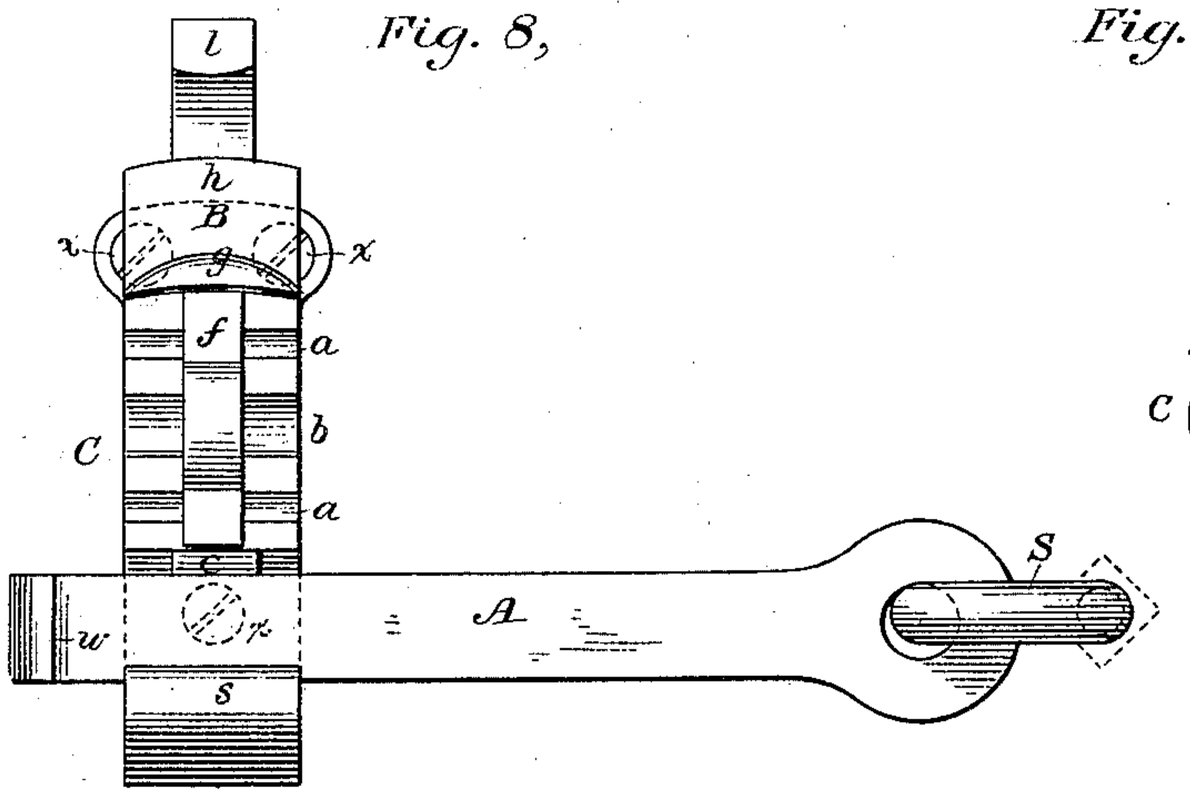


Fig. 9,

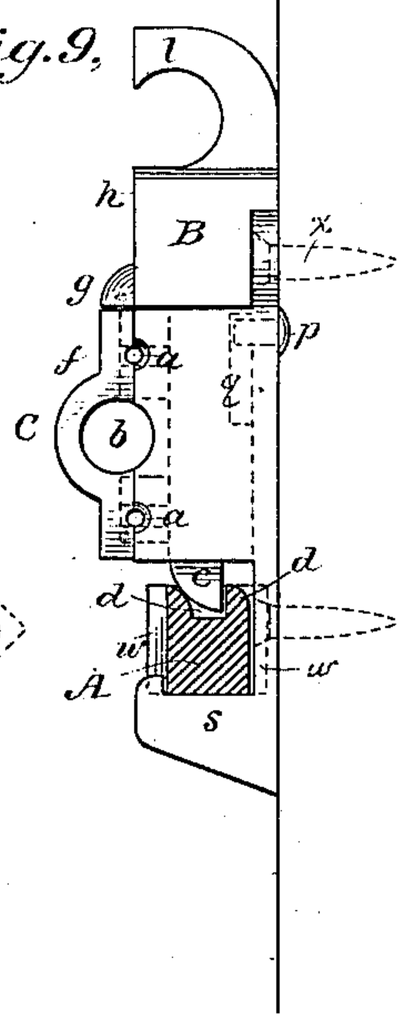


Fig. 10,

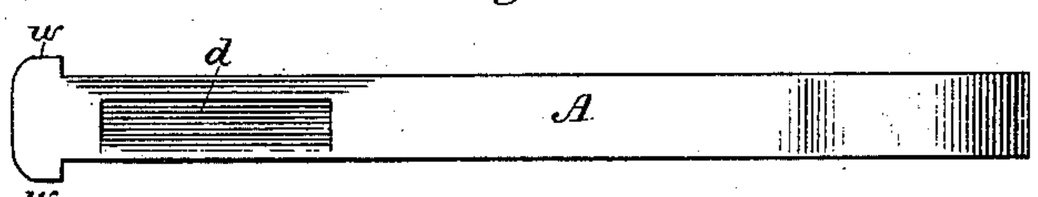


Fig. 11,

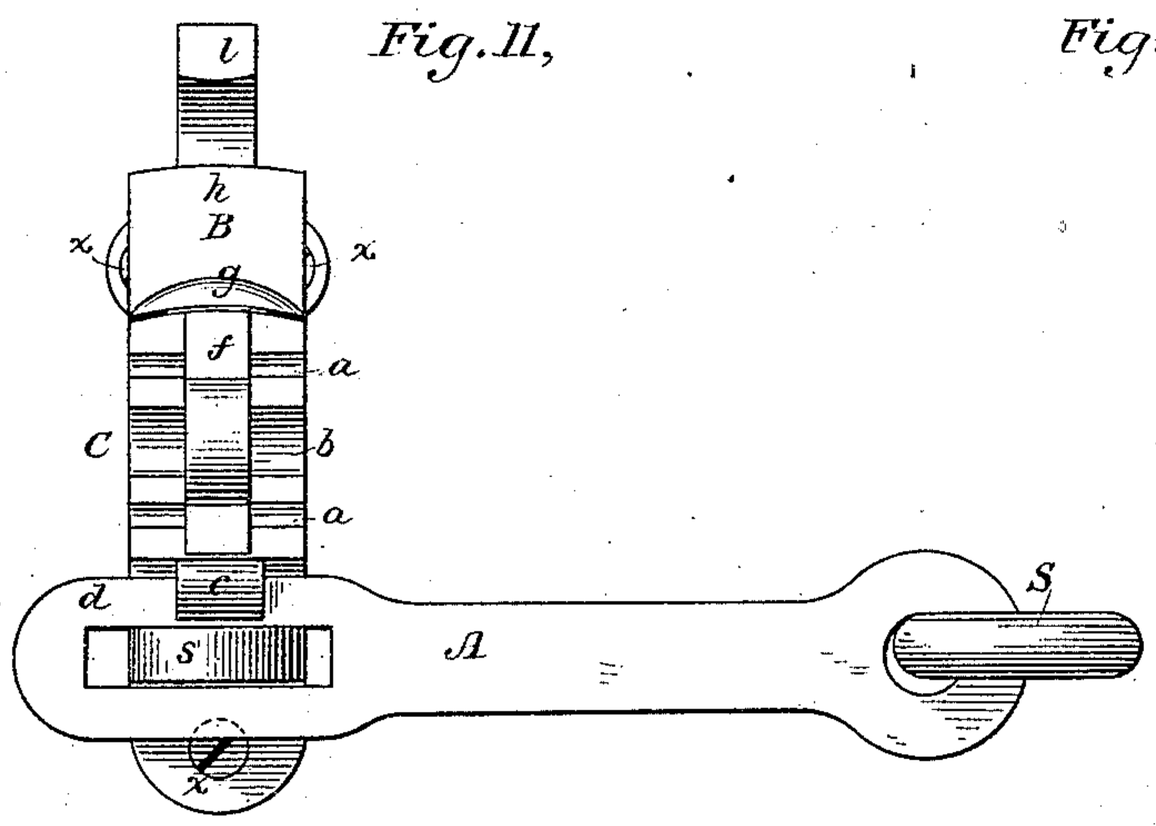
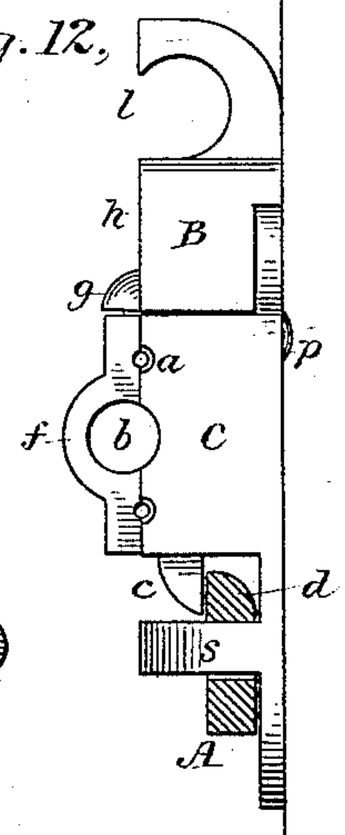


Fig. 12,



WITNESSES

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3 Sheets—Sheet 3.

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SEAL LOCK.

No. 256,791. Patented Apr. 18, 1882.

Fig. 13.

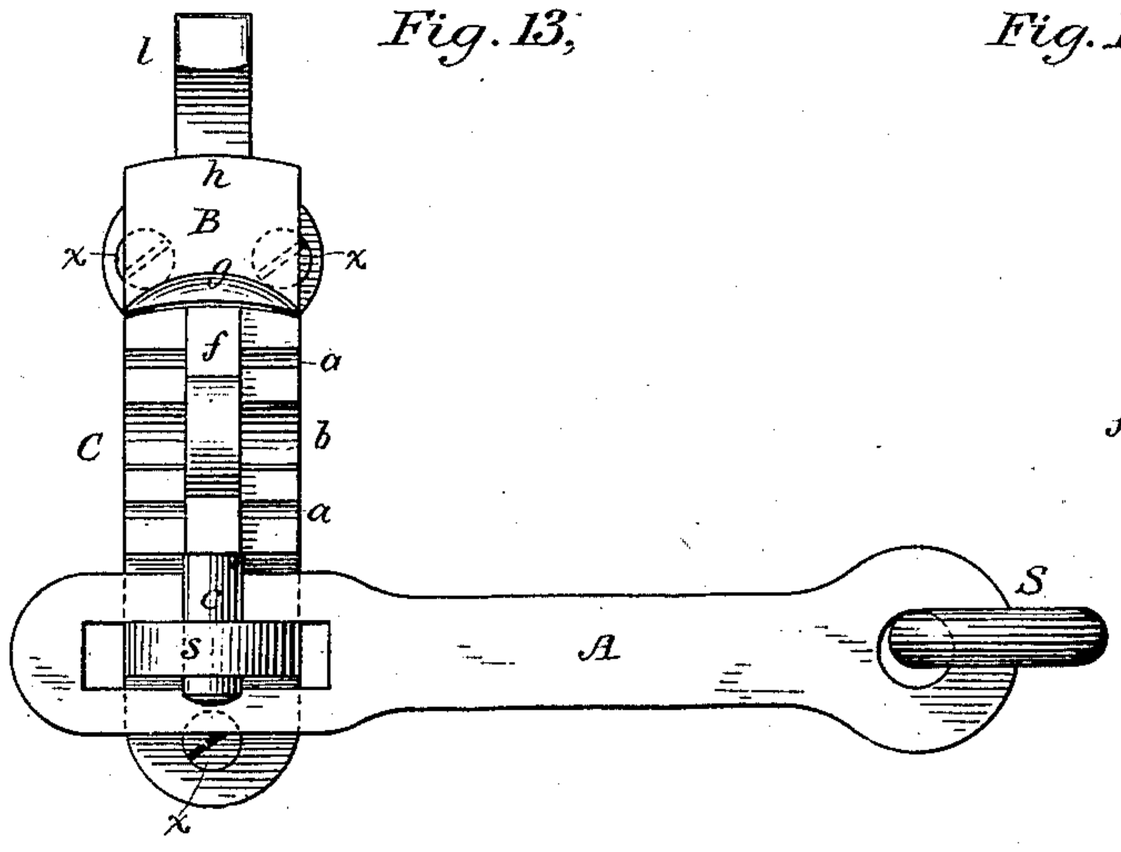
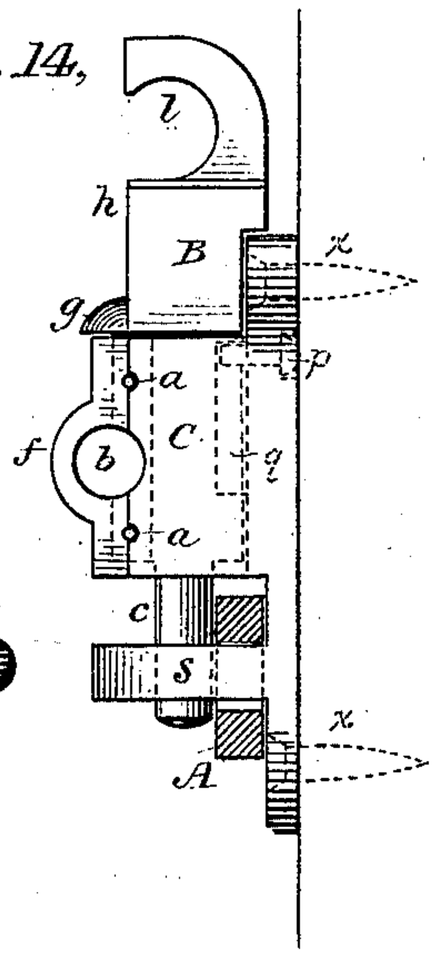


Fig. 14.



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UNITED STATES PATENT OFFICE.

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SEAL-LOCK.

SPECIFICATION forming part of Letters Patent No. 256,791, dated April 18, 1882.

Application filed February 23, 1882. (Model.)

To all whom it may concern:

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

This invention relates to improvements in means for temporarily fastening and for securely locking and sealing the doors of railway freight-cars, and more particularly those car-door fastenings which provide for the use of lead-and-wire seals.

My present invention consists in a car-door fastening of improved construction, embodying in its preferred form several novel combinations of parts, some of which may be used separately, as hereinafter described and claimed.

This improved car-door fastening, in each of its proposed forms, is composed of a gravitating vertical bolt and a casing therefor, each a single casting, united by a pin or screw inserted through the back of the casing into a stop-groove in the bolt, with a suitable shackle to engage with the lower end of the bolt, and the screws necessary to attach the bolt-casing to the car, the head of the sealed or locked bolt serving to secure the principal screws, while simple transverse threading-holes provide for sealing and locking the bolt by means of two lead-and-wire seals and a padlock, which may be a seal-lock, at one and the same time, either of the latter to be used, and the number of threading-holes to be varied by makers at will. With a single lead-and-wire seal thus applied a car-door is effectively guarded against unfastening accidentally under sudden starts, or even when the car is ditched, and the sealed door cannot be opened without breaking such seal or some part of the fastening, so as to insure detection. In its preferred form said improved fastening comprises a shackle of peculiar construction and peculiar means for attaching the same to a sliding car-door.

The principal objects of the several parts of my present invention are, first, adaptation to temporarily fasten a car-door and to readily unfasten the same without the aid of springs or other complications, with adaptation of the same means to coact with the forms of seals and unattached locks most commonly used on different roads for securing the car-door; second, the embodiment of the foregoing with adaptation to fasten automatically; third, adaptation to fasten and secure the door partly open as well as closed; fourth, superior adaptation to coact with lead-and-wire seals and padlocks; and, fifth, adaptation of the preferred form of shackle to present itself so as to engage automatically with the fastening-bolt or to be thrown back so as to prevent accidentally fastening the car-door and unnecessarily subjecting the parts to strain.

In the accompanying drawings, Figure 1, Sheet 1, is a face view of a car-door fastening fastened and secured by means of seals, illustrating the preferred embodiment of this invention. Fig. 2 is another face view of the same without the seals, with the bolt-casing in section, so as to expose the bolt and shackle, and the latter broken off between the bolt-casing and the shackle-support. Fig. 3 is a side view of the same with the shackle in cross-section. Fig. 4 represents a horizontal section on the line 4 4, Fig. 3. Fig. 5 is a top view of the shackle and shackle-support, showing the former in its two positions by full and dotted lines. Fig. 6 is a side elevation of the bolt and bolt-casing, showing the bolt in elevated position; and Fig. 7 is a partial face view, corresponding with Fig. 6. Fig. 8, Sheet 2, is a face view of the parts of a second car-door fastening fastened, illustrating the first of certain proposed modifications of the invention as a whole. Fig. 9 is a side view of its bolt and bolt-casing with a cross-section of its shackle; and Fig. 10 is a top view of said shackle, and Fig. 11 is a face view of the parts of a third car-door fastening fastened; and Fig. 12, a side view of its bolt and bolt-casing with a cross-section of its shackle, illustrating another modification. Fig. 13, Sheet 3, is a face view of a fourth car-door fastening fastened, illustrating another modification; and Fig. 14 is a side view of the bolt and bolt-casing thereof with a cross-section of its shackle.

Like letters of reference indicate corresponding parts in the several figures, and the re-

spective views are all of one and the same reduced scale.

A (in each figure when it occurs) represents a shackle attached at one end to a car-door; B, a vertical sliding bolt, adapted to engage by gravitation with the free end of said shackle so as to retain it; and C, a casing for said bolt, constructed with a support, *s*, for said shackle, and attached by screws or bolts to the side of the car or to another door in proper position to receive said free end of the shackle.

The bolt B in each of its forms is constructed with a heavy head, *h*, at its upper end, having a guard-lip, *g*, on its face to exclude water, and a lifting-lug, *l*, on its top, also with a longitudinal stop-groove, *q*, in its back, occupied by the point of a pin or screw, *p*, which is inserted through the back of the casing C and securely unites said bolt and casing; and these two principal parts are each adapted to be formed complete, save drill-holes, as a single iron casting, and both are securely attached to the car by the screws or bolts which attach the latter. The bolt B and bolt-casing C in each form are, moreover, provided with transverse threading-holes *a*, to receive one or more lead-and-wire seals, L, of any approved description, as the form most commonly used on different roads, as means for securing said bolt against being lifted, and thereby securing said shackle and the car-door. These threading-holes *a* are in duplicate, by preference, to receive two lead-and-wire seals L at one and the same time—one a customs-seal, for example, and the other a railroad-seal, as indicated in Fig. 1. Said bolt and bolt-casing are also provided with a transverse threading-hole, *b*, to receive the shackle of a padlock, P, in addition to or in lieu of said seal or seals of lead and wire, so that said bolt, and therethrough said shackle and the car-door, are secured by the same. This may be a seal-lock, containing a glass seal, G, for example, as shown in Fig. 1, or it may be an ordinary padlock of any of the forms used for locking car-doors. To accommodate said threading-holes *a* and *b*, the bolt B is constructed with a longitudinal flange, *e*, on the front thereof, and the bolt-casing C has an internally-grooved face-projection, *f*, fitted to said flange, said threading-holes *a* being drilled through both at suitable points, while the threading-hole *b* is formed centrally by notching said flange *e* and suitably coring the face-projection *f* in the mold. To further facilitate inserting the shackle of the lead-and-wire seals and padlocks, said threading-holes *a b* are extended in the form of open transverse grooves in the face of the casing C, said face-projection *f* being also thereby advantageously reduced in necessary prominence to the utmost limit. The bolt-casing C of each form is attached to the car-side or other door by three screws, *x*, two of which are covered and secured by said head *h* of the bolt B, while said bolt is sealed or locked, as shown in Figs. 1 to 3, being exposed by lifting the bolt, as illustrated by Figs. 6 and 7. In the preferred form, Sheet 1, the bolt B is constructed with a catch end, *c*, of the customary beveled or ratchet form, to adapt it to engage with the shackle A automatically—that is to say, by the impact of the shackle—so as to render the fastening self-locking. This is true also of the said second and third forms, Sheet 2. In said preferred form the face of said catch end *c* is on the door side, and correspondingly-arranged beveled catches or ratchet-projections *d* are formed on the top of the shackle end to engage therewith, the corresponding shackle-support, *s*, being the horizontal floor of a housing, having lateral openings, which allow the shackle end to pass through longitudinally, so as to be engaged with the bolt end in the act of closing an ordinary sliding car-door. This is peculiar to said first form. By constructing said shackle A of the preferred form with two or more catches or projections *d*, as clearly shown in Fig. 2, the fastening is adapted to secure the door in two or more positions, so that the door can, if desired, be securely fastened either partly open, for ventilating the contents of the car, or fully closed. At the same time the door cannot accidentally or surreptitiously be wholly closed nor opened to the limit of said provision after the bolt is sealed or locked, as this would involve lifting the bolt. The former, but not the latter, is accomplished by extending a catch-notch *d* longitudinally of the shackle in the second form, Figs. 8 to 10.

To provide for sealing the improved fastening by means of lead-and-tin seals or other forms of seals in which sheet-metal sealing-strips are used, said shackle A of the preferred form is constructed with a suitable narrow orifice, *o*, in a thin web portion, as shown in Figs. 2 and 5. The tin strip T, Fig. 2, is passed through the threading-hole *b* and the orifice *o*, and its ends are united in front of the latter, being provided in this act with a seal-disk or its equivalent, which will not pass through said orifice, and at the same time readily drawn tight enough to preclude disengaging the shackle. This is peculiar to the first form. Said shackle A of the preferred form is presented for engagement with the bolt B in the manner aforesaid by means of a shackle-support, S, Figs. 1 and 5, through the medium of which it is attached to the car-door. The shackle is attached to said support by a horizontal pivot-stud, *z*, and has a horizontal rest, *r*, on each side of its pivot. The shackle is supported on one and the same rest while fastened and preliminary to the fastening operation, as shown in Fig. 1, and in full lines in Fig. 5. It is thrown back on the other rest, as shown in dotted lines in Fig. 5, to prevent accidentally fastening the door and unnecessarily straining the shackle and bolt. Said horizontal pivot and rests are peculiar to this form. Said shackle-support is securely attached to the car-door by a pair of spurs, *y*, Fig. 5, and

a pair of screws, *x*, Fig. 1, and is protected against being detached while the fastening is sealed or locked, as shown in Fig. 1, by the body of the shackle, which lies in front of one of the attaching-screws. In forms 2 to 4, Figs. 8 to 14, the lower screw of the bolt-casing is also protected by the shackle, as shown. The shackle-supports *s* of said forms 2 to 4 are ordinary staples secured inside the car by nuts, as illustrated by dotted lines in Fig. 8. The stop *p* is an ordinary screw in said forms 2 to 4, with its head suitably sunken in form 4, as shown at *p*, Fig. 14, and a conical pin may be used instead. The shackle A of the said second form, Figs. 8 to 10, in addition to its extended longitudinal catch-notch *d* and a beveled back matching the beveled face of the catch end *c* of the bolt B of said form, has a pair of shoulders, *w*, at its free end to coact with the bolt-casing C as stops to resist the strain of outward movements of the sealed or locked door; and the support *s* for the shackle in the bolt-casing of said second form is a strong flanged projection, having a horizontal upper surface within its flange, which receives the shackle, as clearly indicated in Fig. 9. The shackle A of said third form, Figs. 11 and 12, is an ordinary hasp, with its upper edge beveled to form a catch-bar, *d*, which engages with the catch end *c* of a bolt, B, similar to that of the said second form, from which this third form differs otherwise in the shape of its support *s* and the lower end of the bolt-casing. Said support *s* is an imperforate projection having the external shape of a staple integral with the extended back of the casing, and fitted to the slot of the shackle, while said back of the casing is extended below said support to receive the lower attaching-screw *x*, as in the first form. The shackle A of said fourth form, Figs. 13 and 14, is simply an ordinary hasp, the catch end *c* of the bolt B taking the shape of a locking-pin integral with the body of the bolt, while the support *s* is provided with a hole to receive the same, taking the shape of an ordinary integral staple projection.

I do not claim broadly constructing a car-door fastening with a gravitating vertical bolt, nor the adaptation of car-door fastenings to be secured by means of ordinary lead seals; but

I claim as new—

1. In a car-door fastening, the combination, with a shackle, A, of a one-part gravitating bolt, B, and a one-part bolt-casing, C, provided with one or more transverse threading-holes and otherwise adapted to be secured by a lead-and-wire seal or a padlock in the manner herein specified, said shackle being adapted to engage with the lower end of said bolt, said bolt constructed with a heavy head at its upper end, and said bolt-casing constructed with a shackle-support near its lower end, and attached to the car by screws at its respective ends, the upper screws secured by said heavy head of the bolt, substantially as shown, for the purpose set forth.

2. A car-door fastening having a vertical gravitating bolt, B, constructed with a beveled lower end, *c*, to engage automatically with a shackle, A, for the purpose of securing the latter, a casing, C, for said bolt, constructed with a support, *s*, for said shackle, and one or more transverse threading-holes in said bolt and bolt-casing to receive a lead-and-wire seal or a padlock, substantially as herein specified.

3. A car-door fastening having a vertical gravitating bolt, B, constructed with a lower end, *c*, beveled on the door side, a shackle, A, provided with beveled catches *d* on top to engage automatically with said bolt with the door either partly opened or closed, a bolt-casing constructed with a support for said shackle, and one or more transverse threading-holes in said bolt and bolt-casing to receive a lead-and-wire seal or a padlock, substantially as herein specified.

4. A car-door fastening having a sliding bolt, B, adapted to engage with a shackle, A, for securing the latter, and constructed with a longitudinal flange, *e*, on the front thereof, and a bolt-casing, C, having an internally-grooved face-projection, *f*, fitted to said flange, with transverse threading-holes *a b*, extending through said flange and face-projection to receive a lead-and-wire seal or a padlock, and open grooves in the face of said bolt-casing in line with said threading-holes, substantially as herein specified.

5. In combination with a bolt-casing, C, having a shackle-support, *s*, a vertical gravitating bolt, B, constructed with a lower end, *c*, beveled on the door side, and a shackle, A, having beveled catches *d* on top to engage with said bolt, the shackle-support S, Sheet 1, having a central horizontal pivot-stud, *z*, and a horizontal shackle-rest, *r*, on each side of said pivot-stud, substantially as shown, for the purpose set forth.

EDWARD J. BROOKS.

Witnesses:
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L. FARLEY HOVEY.