F. W. CHAFFEE.

CAR DOOR FASTENER.

APPLICATION FILED OCT. 22, 1912.

1,083,001.

Patented Dec. 30, 1913.

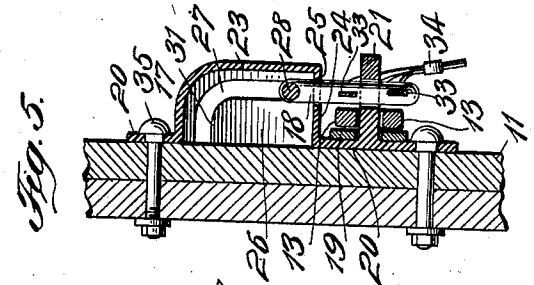


Fig. 5.

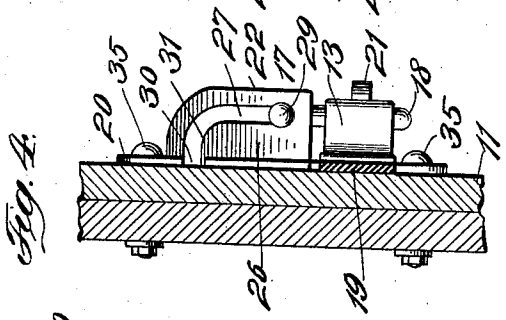


Fig. 4.

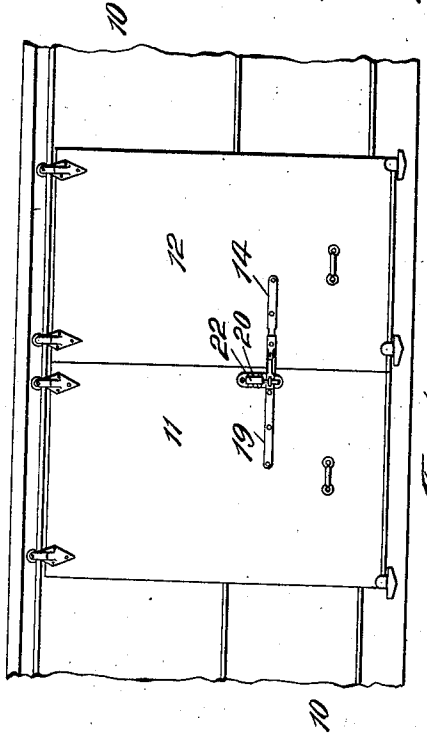


Fig. 1.

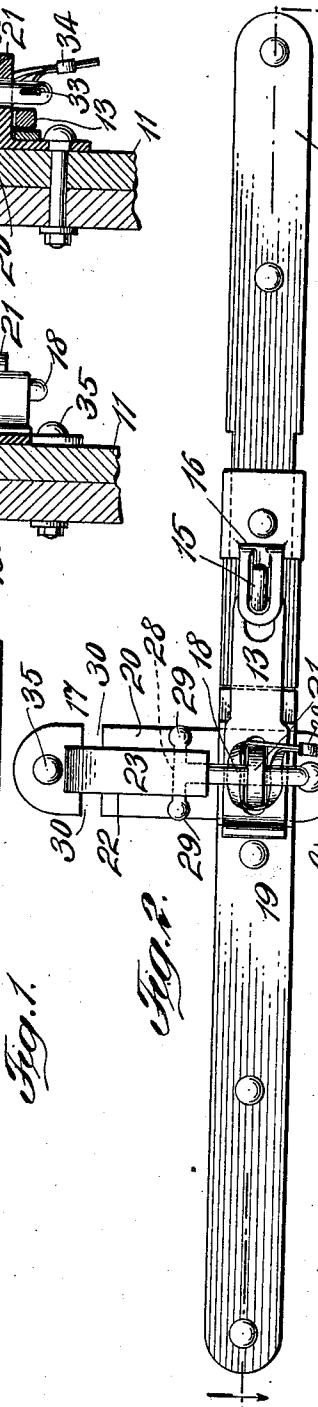


Fig. 2.

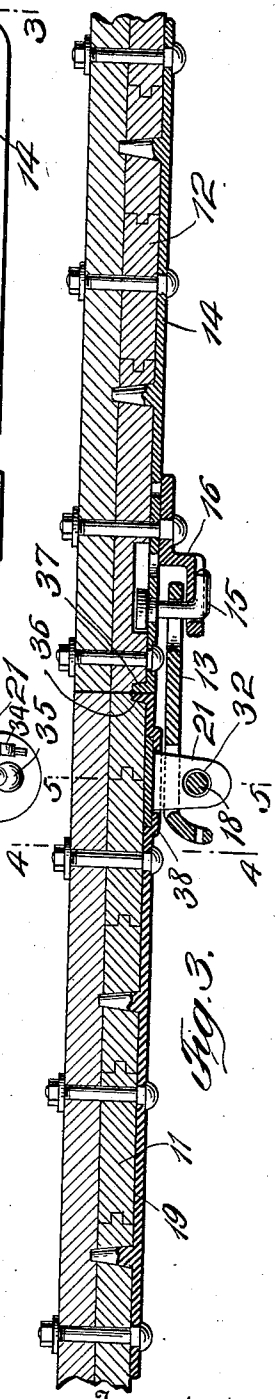


Fig. 3.

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CAR-DOOR FASTENER.

1,083,001. Specification of Letters Patent. Patented Dec. 30, 1913.

Application filed October 22, 1912. Serial No. 727,237.

To all whom it may concern:

Be it known that I, FRANK W. CHAFFEE, a citizen of the United States, and a resident of Albany, in the county of Albany and State of New York, have invented certain new and useful Improvements in Car-Door Fasteners, of which the following is a specification.

The invention pertains more particularly to fastenings for the doors of freight cars, and it is applicable to cars having a single sliding door and also to cars having two sliding doors and ordinarily called automobile cars.

I present my invention herein as applied to the doors of an automobile carrying railway car, without however intending to confine the invention in all its parts to any special character of freight car.

The object of the invention is to produce a very durable and highly efficient means for locking the hasp commonly employed on freight cars in securing the doors thereof, and in carrying out my invention I provide a suitable casing containing a vertically slidable bolt and carrying a staple over which the hasp may be placed and which staple contains a vertical opening to receive the said bolt, said casing being of the special construction hereinafter described and claimed. The casing referred to will be secured to the door-stop when employed in connection with a car having a single sliding door and will be secured to the edge of one of the two doors when employed on automobile cars, and in the latter case said casing will not only be bolted to the door but additionally secured and the door strengthened by a suitable bar secured thereto and extending over and engaging the base portion of the casing about the staple thereon. The means for properly holding the hasp, which is employed in connection with my new locking devices, may be of any suitable construction, but I recommend for this purpose the construction presented herein and described in Letters Patent of the United States No. 1,017,136, granted to me February 13, 1912.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which:

Figure 1 is a side elevation, on a reduced scale, of a portion of an automobile freight car having doors equipped with the fastening devices of my invention, the doors being shown in their closed position; Fig. 2 is a detached face view on a larger scale, of the door fastening devices embodying my invention; Fig. 3 is a horizontal longitudinal section through the same and a portion of the car doors taken on the dotted line 3—3 of Fig. 2; Fig. 4 is a vertical transverse section through a portion of the same on the dotted line 4—4 of Fig. 3, and Fig. 5 is a vertical transverse section through a portion of the same on the dotted line 5—5 of Fig. 3.

In the drawings, 10 designates a portion of the side of a freight car, and 11, 12 denote two corresponding sliding doors mounted thereon, said car and said doors being of any suitable or of the well known general construction. I apply to one of the doors, say the door 11, the features constituting my invention, and to the door 12 I apply the means disclosed in my aforesaid Letters Patent dated February 13, 1912 for securing the hasp 13 thereto, said means, generally speaking, comprising a bar 14 secured to the door, a pin 15 extending through an eye in the shank end of the hasp and a plate 16 secured to the bar 14 and engaging the outer bent end of the pin 15 and therewith serving to confine the hasp 13 and permit the same to have the usual movements required in applying it to or removing it from the staple.

The special features constituting my invention comprise a casing 17 secured to the door 11, a vertically slidable bolt 18 carried thereby and a bar 19 secured to the door 11 and engaging said casing 17, said casing 17 being preferably in one integral casting and comprising a base plate 20, a staple 21 projecting laterally therefrom and an outwardly projecting shell 22 having a closed outer face portion 23, a bottom 24 which is closed except for the presence therein of a vertical guiding aperture 25 for the bolt, a closed upper end, and plate sides 26 which are formed near the outer face portion of the shell with guiding and confining slots 27 which commence suitably above the bottom 24 and extend upwardly and then inwardly and are open at their upper inner ends, except as the material of the car door closes the same when the devices are applied thereto. Within the outline defined by the top, bottom and sides of the shell 22 the base plate of the casing is open and said opening

only becomes closed when the casing is applied against the car door or door stop, as the case may be, said shell being otherwise entirely closed by its front face portion 23, bottom 24 and sides 26, with the exception of the presence of the vertical opening 25 and slots 27, or in other words, the shell 22 forms within it a chamber offset from the base plate 20 which is entirely open at its back, except when on the car.

The bolt 18 is adapted to have a vertical movement within the shell 22 of the casing 17 and is formed at its upper end with a transverse member or bar 28, whose end portions extend within the slots 27 and are provided with knobs or handles 29 to be manually grasped when the bolt 18 is to be moved upwardly. The knobs or handles 29 are exposed outwardly beyond the sides 26 of the shell 22, as shown in Fig. 2, and at the back of the shell 22 the upper inner ends of the slots 27 are open so as to permit of the introduction of the bolt 18 through the back of said shell, the base plate 20 being recessed in line with the upper end of the slots 27, as at 30. The upper ends of the slots 27 turn rearwardly on an elbow curve and thereby permit of the convenient introduction of the bolt through the back of the shell 23 and the passage of the transverse bar 28 into the vertical portions of the slots 27, and in addition this formation of the upper ends of the slots 27 creates on the upper ends of the sides 26 of the shell 22 shoulders upon which the bar 28 may be rested when the bolt 18 is in its upper position and from which said bar may readily be jarred so as to permit the bolt to descend in the event that the bolt should be left in its upper position and the car started in motion, the motion of the car being sufficient to cause the bar 28 to leave said shoulders.

The staple 21 is in the form of a flat horizontal plate projecting outwardly from the base plate 20, and said staple is formed with a vertical hole 32 to receive the lower portion of the bolt 18 when the latter is in its lower position. The bolt 18 is formed with transverse openings 33 adapted to come one below and the other above the staple 21 to receive the wire or sheet metal of the seal 34, whereby the bolt is locked in its lower position and confines the hasp 13 upon the staple 21. I regard it as of particular importance that the openings 33 in the bolt 18 are so disposed as to come above and below the staple 21, since thereby without weakening the staple I am enabled to securely seal the bolt by a rod of wire or strip of metal engaging the bolt only. A special advantage of the upper and lower openings 33 in the bolt 18 over the use of a single opening in the lower end of the bolt, resides in the fact that when the sealing wire is placed through both said openings and sealed the bolt can not be opened without breaking the seal-wire, whereas when the sealing wire is inserted through only one opening in the lower end of the bolt and the hole through the staple is greater in diameter than the bolt or unduly large, as in many cases it is, the sealing wire may be pulled upwardly with the bolt through the hole in the staple and the door unfastened. The upper and lower openings 33, with the sealing wire and seal prevent the car from being opened and thereafter closed in such manner as to direct attention to the fact that the car has been entered.

The casing 17 will be secured to the door by means of bolts 35 and also by means of the bar 19, which near the inner edge of the door is recessed to receive the cross-section of the base plate 20, as shown in Fig. 3, and is also apertured to pass over the staple 21, and in addition the inner end of said bar 19 is formed with the right angular inwardly extending flange 36 to engage the inner edge of the door 11 and form an abutting surface to coöperate with a similar flange 37 on the inner end of the bar 14 secured to the door 12. I indicate at the reference numeral 38 the offset portion of the bar 19 affording a recess to snugly receive or fit transversely upon the base-plate 20. The bar 19 strengthens the door and aids in securing the casing 17 securely in place. The bars 19, 14 add greatly to the life of the doors in that they resist the wrenching action to which the doors are subjected tending to separate their parts during the travel of the cars.

In assembling the parts of the fastener for application to the car door, the bolt 18 is inserted through the back of the base plate 20 and the cross-bar or head 28 at the upper end of the bolt is entered into the guiding and confining slots 27, and thereupon the casing carrying the staple 21 will be bolted to the door and then further secured by the application of the bar 19.

The method of employing the fastening devices will be understood without detailed explanation. The staple 21 is in position to receive the hasp 13 and when it is desired to apply the hasp upon said staple the attendant will take hold of the knobs 19 and raise the bolt 18 sufficiently to allow the hasp to pass over the staple and thereupon the bolt will be dropped so that its lower portion may pass through the staple and confine the hasp thereon. The seal 34 will then be applied and this will conclude the locking of the door.

The casing 17 is of particular importance in the details of its construction in that its shell 22 projects outwardly from the base plate and affords the guiding slots 27 in its sides for the cross-bar 28 on the bolt 18, said sides also affording shoulders at their up-

per ends from which the cross-bar may be readily jarred by the motion of the car should the bolt be inadvertently left in its upper position and on said shoulders. The open back of the casing is also of importance in that the bolt may be readily inserted through the same into the shell 22 and that whenever required the casing may be removed from the car door and a broken bolt be readily withdrawn and a new bolt substituted for it. The exposed knobs 29 on the ends of the cross-bar 28 of the bolt serve as convenient means for the manual handling of the bolt and also, being greater in diameter than the width of the slots 27, act to aid in guiding the bolt and in preventing sidewise tilting of the bolt at its upper end. The outer portions of the shell 22 being closed, the interior chamber of said shell is protected as far as may be possible from the entrance of dust, snow and the like.

The devices constituting my invention are durable and may be readily and securely applied to the door and conveniently manipulated in locking and unlocking the door.

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

1. In a car-door fastening, a hasp and cooperating means therefor comprising a casing having a base-plate, a staple to receive the free end of the hasp and a shell offset from said base-plate, and a vertically slidable bolt mounted in said shell and adapted when in its lower position to extend through said staple and confine the hasp thereon, combined with a bar (19) secured to the door having an offset recessed portion transversely crossing and receiving said base-plate and apertured to pass over said staple.

2. In a car-door fastening, a hasp and cooperating means therefor comprising a staple to receive the free end of the hasp, a vertically slidable bolt adapted when in operative position to extend through said staple and confine the hasp thereon, and supporting means for said bolt, said bolt having openings extending transversely through it to come above and below said staple for a sealing strip, combined with a sealing strip extending continuously through both of said openings exteriorly to said staple and having a seal connecting its ends.

3. In a car-door fastening, a hasp and cooperating means therefor comprising a casing having a base-plate, a staple to receive the free end of the hasp and a shell offset from said base-plate, and a vertically slidable bolt mounted in said shell and adapted when in its lower position to extend through said staple and confine the hasp thereon, said shell having an open back, sides formed therein with vertical guide slots open at their upper ends only through the back of the casing, and a bottom having an opening for the passage of said bolt, and said bolt having at its upper end a transverse bar extending into said slots and exposed at its ends to serve as a handle for the manual operation of the bolt.

4. In a car-door fastening, a hasp and cooperating means therefor comprising a casing having a base-plate, a staple to receive the free end of the hasp and a shell offset from said base-plate, and a vertically slidable bolt mounted in said shell and adapted when in its lower position to extend through said staple and confine the hasp thereon, said shell having a closed front, an open back, sides formed with guide slots parallel with and opposite to each other and closed at their lower ends and open at their upper ends through the back of the casing and said sides affording curved shoulders at their upper ends along said slots and a bottom having an opening for the passage of said bolt, and said bolt having at its upper end a transverse bar extending into said slots and provided on its ends with exposed knobs which are greater in transverse width than said slots.

Signed at New York, in the county of New York, and State of New York, this 21st day of October A. D. 1912.

FRANK W. CHAFFEE.

Witnesses:
CHAS. C. GILL,
ARTHUR MARION.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."