Feb. 14, 1928. 1,658,867

K. J. TOBIN ET AL

DOOR SECURING MEANS

Filed May 17, 1926 2 Sheets-Sheet 1

Fig 1.

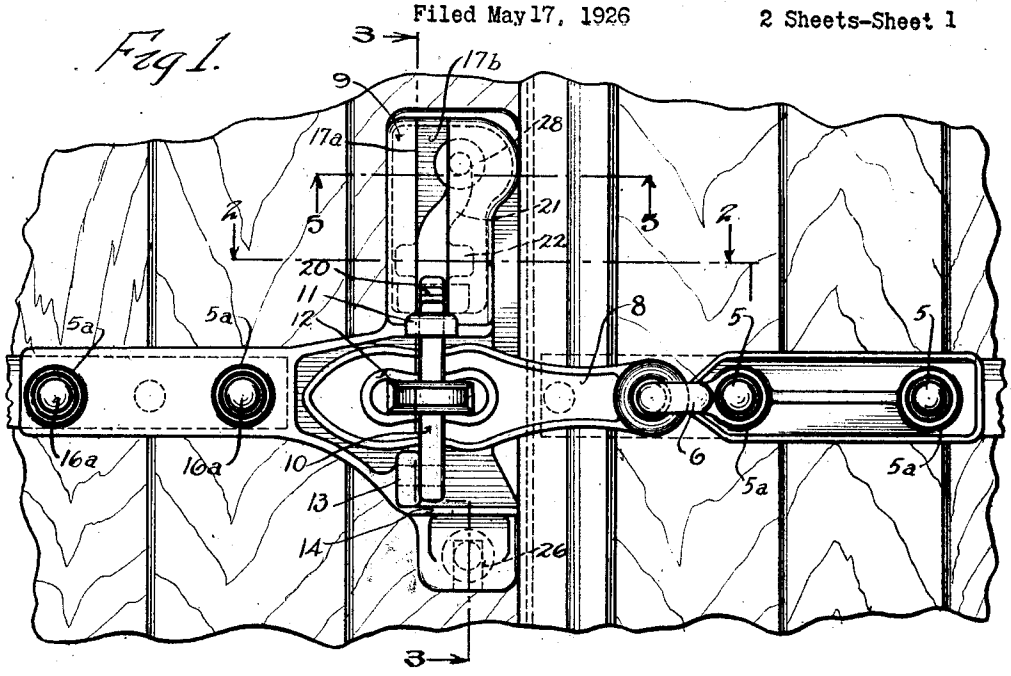
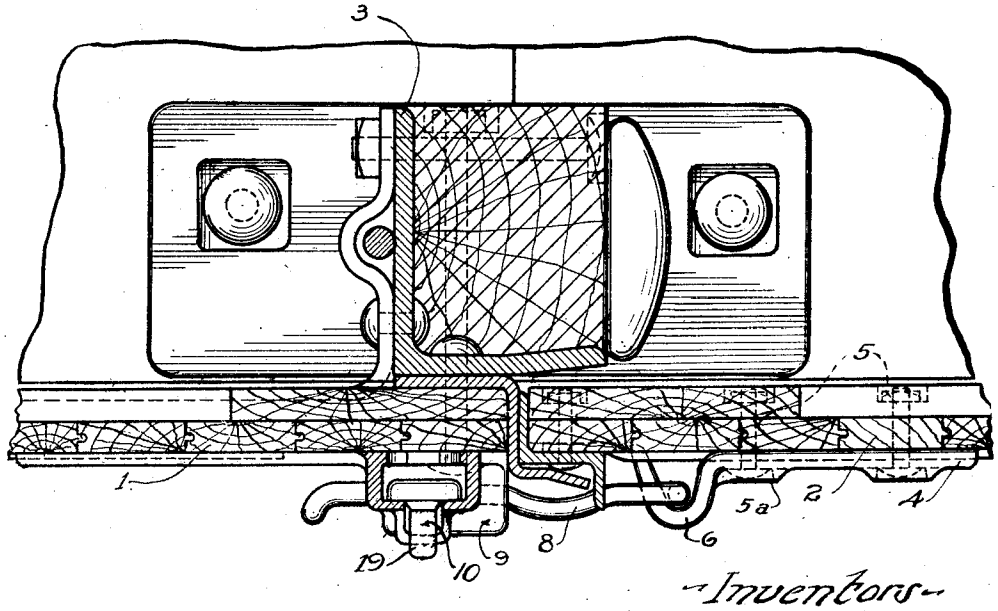


Fig 2.



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Fig-3.

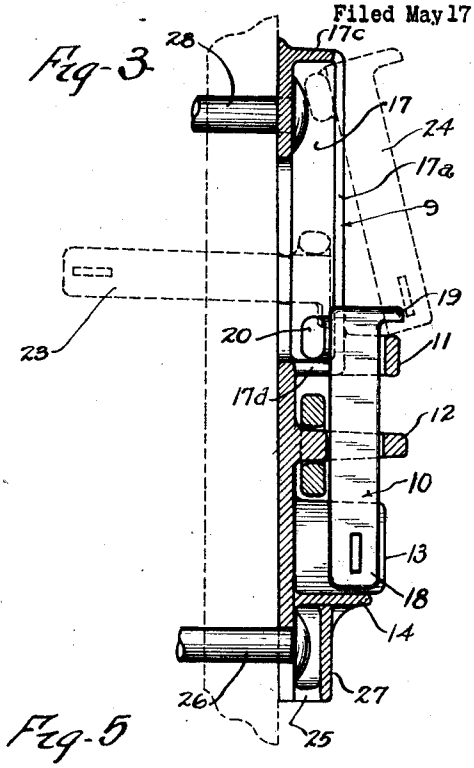


Fig-5

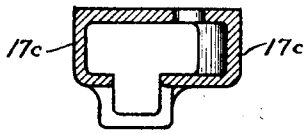


Fig-6.

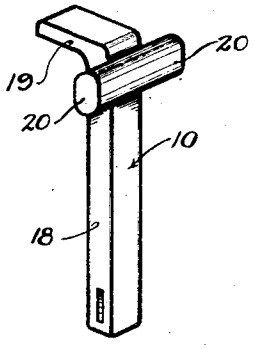
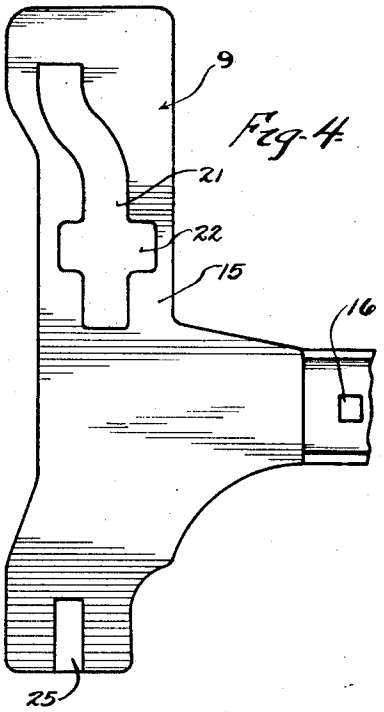


Fig-4



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UNITED STATES PATENT OFFICE.

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DOOR-SECURING MEANS.

Application filed May 17, 1926. Serial No. 109,497.

The present invention relates to door securing means.

More particularly the present invention relates to means for securing the sliding doors of railway freight cars. Great ingenuity has been displayed by car thieves in gaining access to railway freight cars without breaking the sealing ribbons which are commonly used for sealing freight car doors against opening. Drastic legislation has been passed penalizing robbers who have been caught breaking such sealing ribbons, and such legislation has the effect of making car thieves adopt methods which involve the breaking into cars without breaking said sealing ribbons. Car builders have adopted locking devices which are quite ingenious, but still the problem of protecting the contents of railway cars against thieving has been a very difficult one.

The securing means should be sturdy and simple in construction, and should present no parts which are liable to become loose from the car and to be mislaid. Moreover, the securing means should be so designed that the rivets or holding bolts for securing said securing means to the car are protected when the car is in secured position. The importance of the feature last mentioned may be realized when it is understood that car thieves will chip off the heads of rivets or bolts, if said heads are exposed, will insert other rivets or bolts after they have done their thieving, and leave the car in condition such that except upon close examination no outward evidence of thieving appears.

An object of the present invention is to provide an improved securing means which is simple and sturdy, which adapts itself for mounting either upon a steel car or a wooden car, and which effectually prevents the chipping off of the heads of sufficient of said rivets or bolts to permit the removal of the securing means.

A further object is to provide an improved securing means which obviates the danger of loosening any of the parts when the car is in secured position, which simplifies the matter of assembly, and which effectually guards the holding of the rivets or bolts which secure the securing means to the car.

Further objects will appear as the description proceeds.

Referring to the drawings—

Figure 1 is a fragmentary view showing part of a car side having one embodiment of the present invention applied thereto;

Figure 2 is a horizontal sectional view taken along the plane indicated by the arrows 2—2 of Figure 1;

Figure 3 is a vertical sectional view taken along the plane indicated by the arrows 3—3 of Figure 1;

Figure 4 is a view in elevation taken from the rear of the securing means shown in the preceding figures;

Figure 5 is a sectional view taken along the plane indicated by the arrows 5—5 of Figure 1; and

Figure 6 is a perspective view of a securing bolt forming part of the illustrated embodiment of the present invention.

Figures 1 and 2 indicate a door of wooden construction, though as the description proceeds it will be understood that the invention is equally applicable to cars of steel construction.

The numeral 1 indicates a car side and the numeral 2 indicates a sliding door. In the illustrated embodiment of the present invention the side 1 of the car takes the form of an auxiliary door such as is used with cars intended for carrying relatively bulky lading, such as automobiles and machinery, said auxiliary door 1 being provided with the movable door jamb 3. The details of the auxiliary door 1 and the door jamb 3 are not involved in the present invention and further description of same is unnecessary. It will be sufficient to state that the door 2 is adapted to have sliding relationship with the side 1 in substantially the same plane as said side 1. Secured to the sliding door 2 is the hasp retainer 4, which may be bolted or riveted to the door 2. The hasp retainer 4 is secured in place by means of bolts or rivets 5—5, the heads of which may be protected against tampering by any preferred means. According to the illustrated embodiment, the heads of the members 5 are protected against chipping by the annular shoulders 5^a, which are disposed upon the outer face of said hasp retainer in position to surround said heads. Other means for guarding said members 5 are being disclosed in another application about to be filed. The hasp retainer 4 provides a

loop 6 for swingingly supporting the hasp member 8.

Secured to the side member 1 is the keeper member 9, which includes the reciprocating bolt 10. Said keeper member 9 is provided with the guide lug 11, the keeper lug 12 and the sealing lug 13. In the illustrated embodiment of the present invention the guide lug 11 is uppermost, the keeper lug 12 appears below said guide lug, and the sealing lug 13 is lowermost of the three. The keeper member 9 is also provided with the bottoming portion 14, which limits the downward movement of the bolt 10. The keeper member 9 is adapted to be secured to the outer face of the side 1 of the car and is provided with the bed portion 15, which in the illustrated embodiment of the present invention provides a pair of holes 16, one of which is shown in Figure 4. Bolts or rivets 16[a] (Figure 1) are adapted to be mounted within the holes 16 for securing the keeper member 9 to the side 1 of the car, and the heads of said members 16[a] may be protected by the annular shoulders 5[a] or by other preferred means.

The upper portion of the keeper member 9 is formed to provide a housing 17, the back wall of which is formed by the bed portion 14 and the front wall of which is formed by the wall 17[a], which wall 17[a] has the vertical slot 17[b]. Said housing is provided with top walls and side walls, which top and side walls are indicated by the numeral 17[c]. The bottom wall 17[d] of said housing is slotted to permit the passage of the sliding bolt 10.

The outlines of the bolt 10 are best illustrated in Figure 6, which shows a bolt having the shank 18, the finger hold 19 projecting from one extremity of said shank 18, and the abutting portions 20 projecting laterally from the shank 18 at a region adjacent to the finger hold 19.

The bed portion at the rear of the housing 17 is slotted as above indicated. The numeral 21 indicates an elongated slot with which communicates the cross slot 22. Said cross slot 22 is of sufficient size to receive the laterally projecting portions 20—20 of the sliding bolt 10, and the side walls of the slot 21 are spaced apart a sufficient distance to permit ingress of the shank 18 of the bolt 10. It will be noted from an inspection of Figure 4 that the slot 21 extends to a region below the cross slot 22. As indicated above, the keeper bolt 10 is inserted within the keeper member before said keeper member is applied to the side of the car. Referring to Figure 3, the numeral 23 indicates a position of the bolt 10 in one of the initial stages of the operation of inserting said bolts within the keeper member 9. In order to insert said bolt 10 within the keeper member 9, said bolt is presented from the rear of said keeper member 9, with the finger hold 19 lowermost, the abutting portions 20—20 uppermost, and with the shank 18 extending outwardly from the plane of the bed portion 15 of the keeper member 19. After the laterally projecting portions 20 have passed through the slot 22 in the bed portion 15, the bolt 10 may be lifted, with the portions 20—20 riding within the space between the bed portion 15 and the front walls 17[a]. After said bolt 10 has been raised a short distance, said bolt may be swung to a position approximating that indicated by the numeral 24 in Figure 3. If it is desired to position the bolt 10 out of relationship with the keeper lug 12, said bolt may be disposed in the position indicated by numeral 24, wherein the lower extremity of said bolt 10 rests upon the upper surface of the guide lug 11. Removal of the bolt 10 from the keeper member 9 after said keeper member is mounted in place upon the side of the car is effectually prevented by reason of the engagement of the portions 20—20 of the bolt 10 with the front walls 17[a]—17[a] and with the top wall 17[c] of the housing 17.

The present invention contemplates a construction in which certain of the rivets or other holding means for the keeper member 9 are effectually protected against tampering. The lower extremity of the keeper member 9 is provided with the slot 25 adapted to receive the bolt 26 or other holding means. Said slot 25 is open at the bottom, whereby to permit the ready assembly of the bolt 26 within said slot. Mounted over the slot is the housing portion 27 forming a part of the keeper member 9, which housing portion 27 effectually protects the head of the bolt 26 against tampering. The slot 21 in the upper portion of the bed member 15 provides means whereby a bolt may be inserted for holding the keeper member 9 at the upper portion of said keeper member 9. As clearly shown in Figures 1 and 4, the slot 21 is curved at its upper portion laterally out of registry with the slot 17[b] in which the finger hold 19 moves. By reason of the fact that the upper extremity of the slot 21 is out of registry with said slot 17[b], the head of a bolt disposed in the upper extremity of said slot 21 will be protected by the front wall 17[b], whereby the head of said upper bolt will be effectually protected. Figure 3 indicates a bolt 28 disposed in the position referred to.

The manner of inserting the bolt 23 within the keeper member 9 has been described above. It will be clear without detailed explanation that when it is desired to mount the keeper member 9 upon the side of the car, a bolt 26 will be disposed within the slot 25 at the lower extremity of said keeper member and the bolt 28 will be disposed within the slot 21 at the upper portion of the keeper member 9. The walls of the slots 21 and 22 will be sufficiently spaced to permit the ingress of the head of the bolt 28. The

side walls of the slot 21 may be closer together at the upper extremity of said slot 21, whereby a good gripping contact is had between the bed portion 15 and the head of the bolt 28.

The present invention provides a construction in which the bolt 10 may be readily inserted before the keeper member 9 is mounted upon the side of the car, and which effectually prevents the removal of the keeper bolt after said keeper member 9 is in place upon the side of the car. When it is desired to hold the bolt 10 out of proximity with the keeper lug 12, said bolt 10 may be disposed in the position indicated in Figure 3 by the numeral 24, in which the lower extremity of said bolt rides upon the upper surface of the guide lug 11. The method of inserting the bolts 26 and 28 or other holding means is very simple, involving only the sliding of said bolts within their cooperating slots. After the keeper member 9 is bolted or otherwise secured in position, the heads of said bolts or other securing means are effectually protected by means of the housing 27 and the overhanging walls bounding the slot 17^b.

Though a preferred embodiment of the present invention has been described in detail, it will be clear that many modifications will occur to those skilled in the art. It is intended to cover all such modifications that fall within the scope of the appended claims.

What is claimed is—

1. In combination, a wall member, a door member, a hasp pivoted to one of said members, a keeper secured to the other of said members, said keeper being provided with a bolt, a housing portion for said bolt having front and rear walls, and a keeper lug for receiving said hasp and said bolt, said keeper having slots in its rear and front walls, said bolt being provided with lateral projections for sliding in said housing portion and adapted to be inserted into said housing portion through said opening and having a portion projecting through said front wall, a part of said slot in said rear wall being adapted to receive a headed holding member and being out of registry with the slot in said front wall.

2. In car construction, in combination, a wall member, a door member cooperating therewith, a hasp pivoted to one of said members, a keeper secured to the other of said members, said keeper including a bolt, a housing portion for slidably receiving said bolt, and a keeper lug for receiving said bolt and said hasp, said housing portion being provided with slots on its front and rear sides, said bolt being provided with lateral projections for sliding within said housing, the slot on the rear side of said housing portion being closed by the member upon which said keeper is mounted, part of the slot in said rear wall being out of registry with the slot in said front wall.

3. A securing device comprising, in combination, a housing portion having an opening in its rear wall and a slot in its front wall, a bolt within said housing portion having a part thereof mounted in said slot and having lateral projections confined within said housing portion, the opening in the rear side of said housing portion being sufficiently large to permit the ingress of said projections, part of the opening in said rear wall being out of registry with the slot in said front wall.

4. A securing device comprising, in combination, a housing portion having an opening in its rear wall and a slot in its front wall, a bolt within said housing portion having a part thereof mounted in said slot and having lateral projections confined within said housing portion, the opening in the rear side of said housing portion being sufficiently large to permit the ingress of said projections, said securing device being provided with a guide lug and a keeper lug, said guide lug being disposed in a position for receiving said bolt to hold said bolt out of proximity with said keeper lug.

5. A securing device comprising, in combination, a member adapted to be secured to a wall, said member including a housing portion having slots in its front and rear sides, a bolt within said housing having a portion projecting through the slot in said front side and having lateral projections adapted to ride within said housing, said securing device being provided with a holding device having a head, said holding device being disposed within the slot in the rear side of said housing and having its head disposed in holding engagement with said rear side, the upper extremities of said slots being out of registry, whereby the front face of said housing member will protect said head.

6. A securing device comprising, in combination, a housing portion having front and rear walls, each provided with a slot, a bolt within said housing portion having lateral projections confined within said housing portion between said front and rear walls, the slot in said rear wall being adapted to receive a headed holding device, the upper extremity of the slot in said rear wall being out of registry with the slot in said front wall.

7. A securing device comprising, in combination, a housing portion having front and rear walls each provided with a slot, a bolt within said housing portion having lateral projections confined within said housing portion between said front and rear walls, the slot in said rear wall being adapted to receive a headed holding device, the upper

extremity of the slot in said rear wall being out of registry with the slot in said front wall, said securing device being provided with another slot in the rear side thereof adapted to receive a headed holding member, said second slot being covered with a portion integral with said housing portion.

8. A securing device comprising, in combination, a casting including a housing portion having front and rear walls, a guide lug, a keeper lug, a sealing lug, and a second housing portion, said first mentioned housing portion having a bolt positioned therein, said first mentioned housing portion having a slot in its front wall adapted to receive said bolt and having an opening in its rear wall, said bolt having laterally projecting portions adapted to pass through said opening but of too great a width to pass through said slot in said front wall, said bolt being adapted to cooperate with said guide lug, keeper lug and sealing lug for securing purposes, said opening in said rear wall being adapted to receive a headed holding member, part of said opening being out of registry with the slot in said front wall.

9. A securing device comprising, in combination, a casting including a housing portion having front and rear walls, a guide lug, a keeper lug, a sealing lug, and a second housing portion, said first mentioned housing portion having a bolt positioned therein, said first mentioned housing portion having a slot in its front wall adapted to receive said bolt and having an opening in its rear wall, said bolt having laterally projecting portions adapted to pass through said opening but of too great a width to pass through said slot in said front wall, said bolt being adapted to cooperate with said guide lug, keeper lug and sealing lug for securing purposes, said opening in the rear wall of said first mentioned housing portion comprising a slot having its upper extremity out of registry with the slot in said front wall.

10. A securing device comprising, in combination, a casting including a housing portion having front and rear walls, a guide lug, a keeper lug, a sealing lug, and a second housing portion, said first mentioned housing portion having a bolt positioned therein, said first mentioned housing portion having a slot in its front wall adapted to receive said bolt and having an opening in its rear wall, said bolt having laterally projecting portions adapted to pass through said opening but of too great a width to pass through said slot in said front wall, said bolt being adapted to cooperate with said guide lug, keeper lug and sealing lug for securing purposes, said opening in the rear wall of said first mentioned housing portion comprising a slot having its upper extremity out of registry with the slot in said front wall, said second mentioned housing portion being disposed in protecting relationship with a bolt receiving slot in the rear of said securing device.

Signed at Chicago, Illinois, this 11th day of May, 1926.

KENNETH J. TOBIN.
WILLIAM W. DARROW.