June 24, 1930. G. MADLAND ET AL 1,767,251

DOOR LOCKING MECHANISM FOR HOUSE CARS

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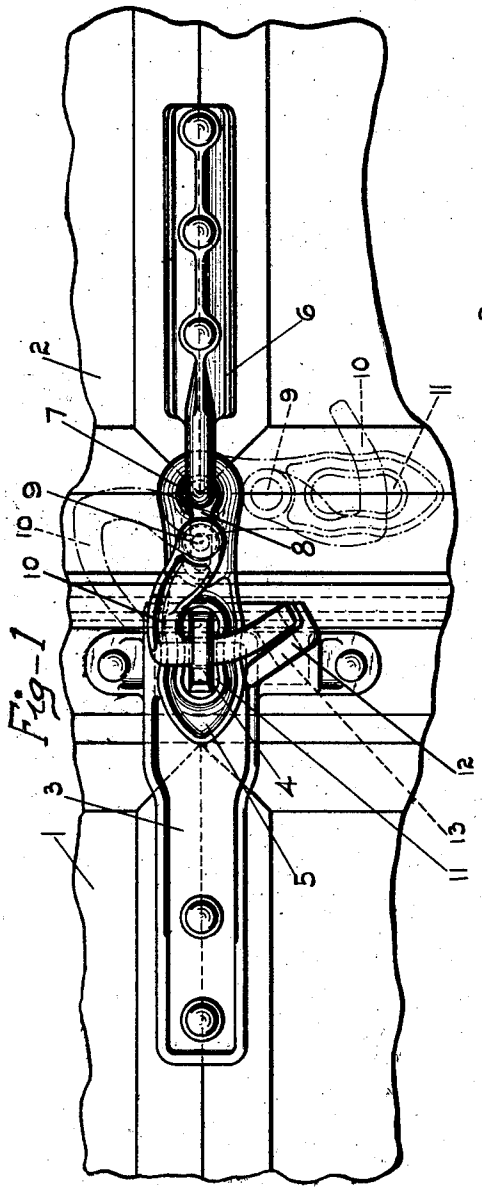


Fig-1

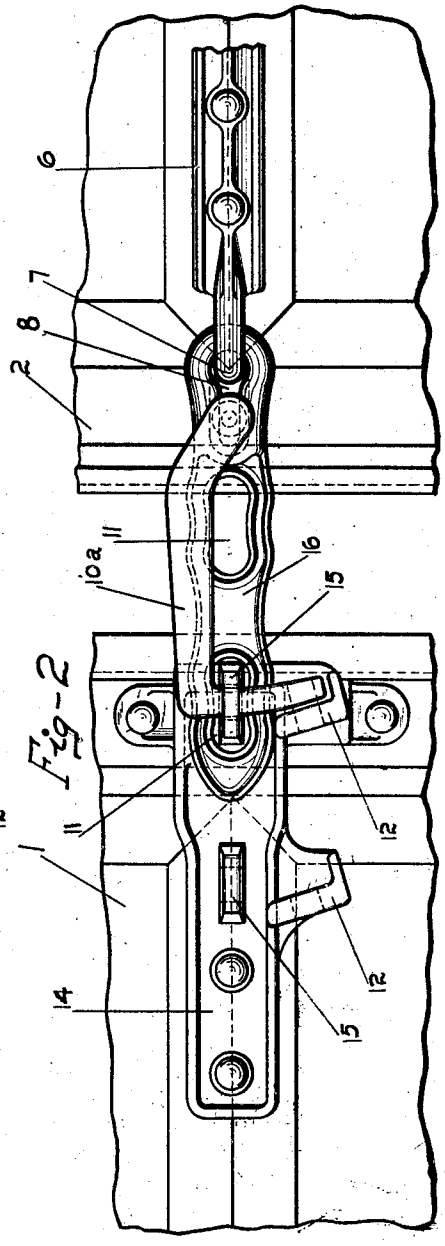


Fig-2

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DOOR LOCKING MECHANISM FOR HOUSE CARS

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Fig-3

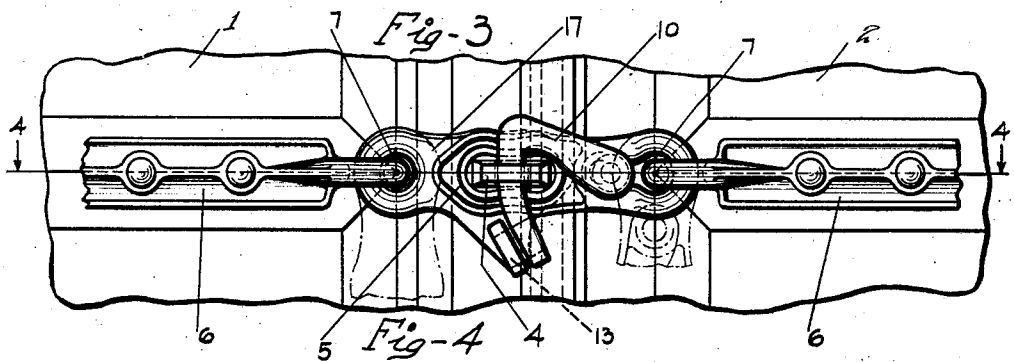


Fig-4

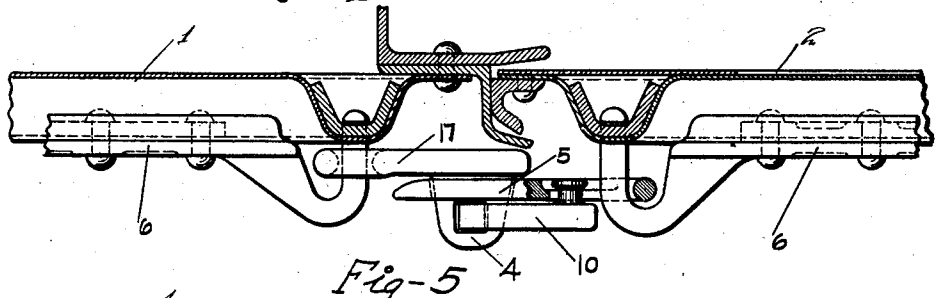


Fig-5

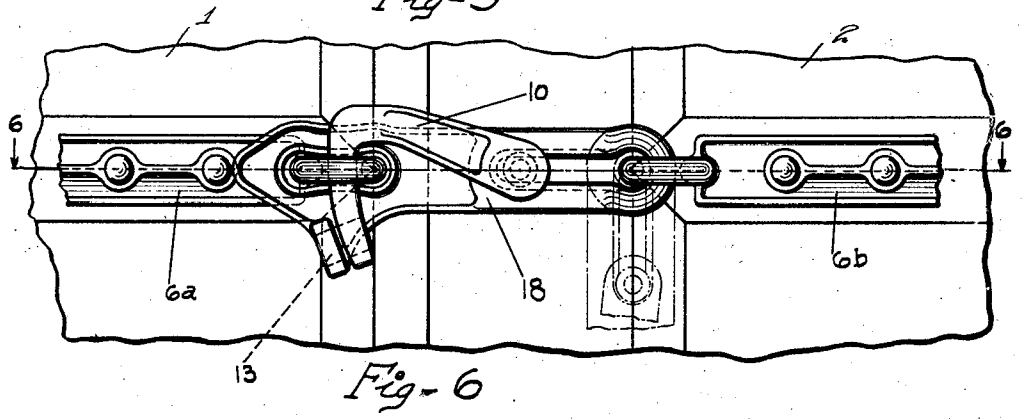
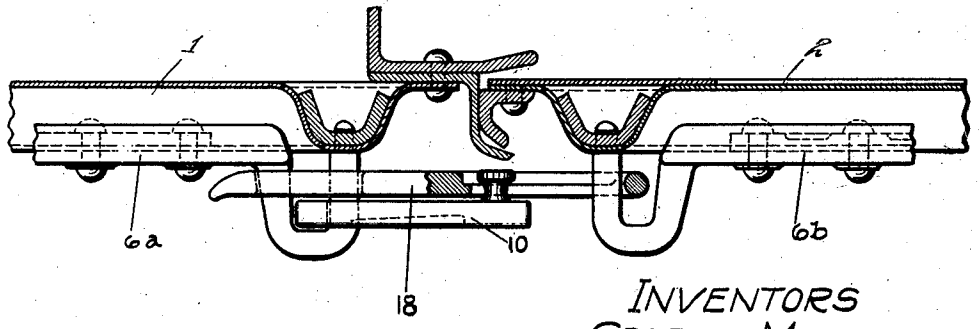


Fig-6



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DOOR LOCKING MECHANISM FOR HOUSE CARS

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Fig-7

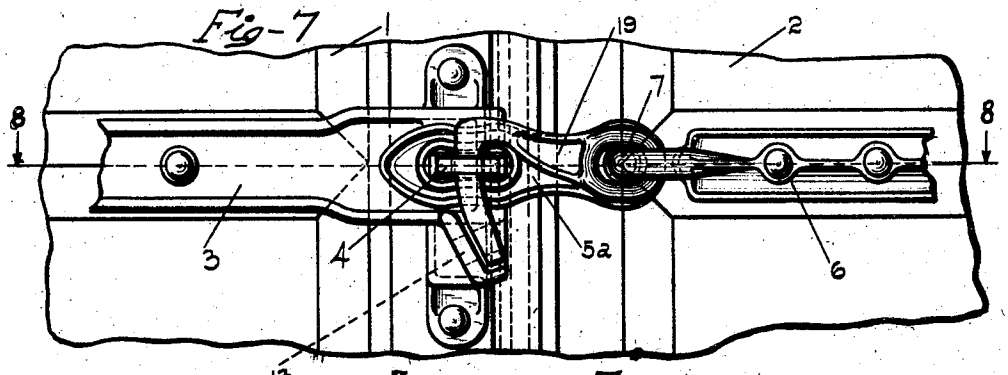


Fig-8

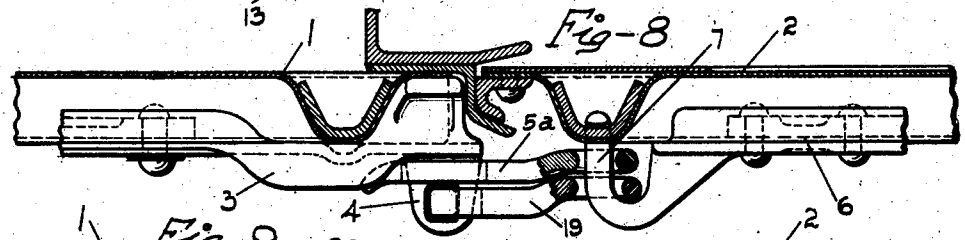


Fig-9

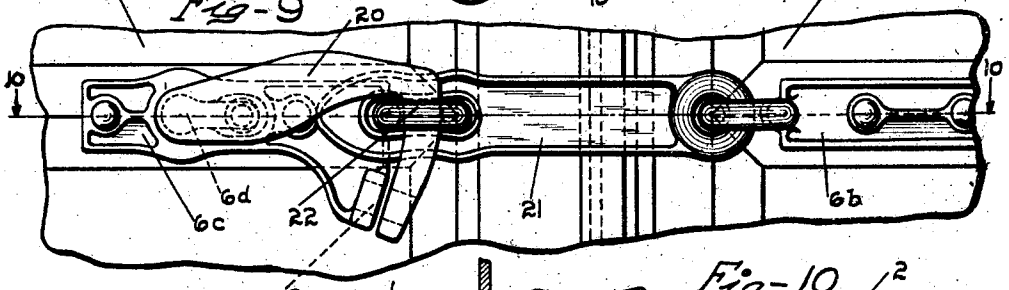


Fig-10

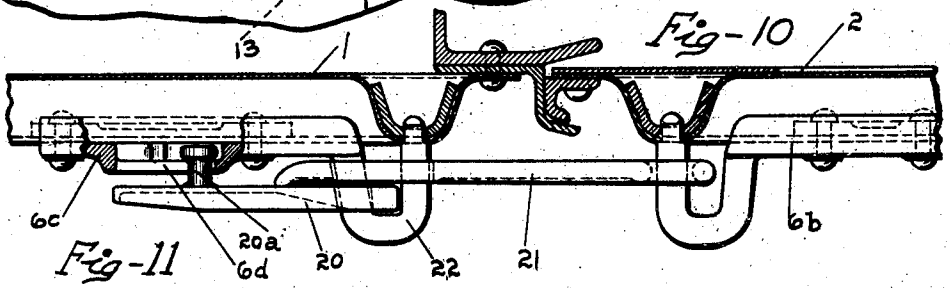
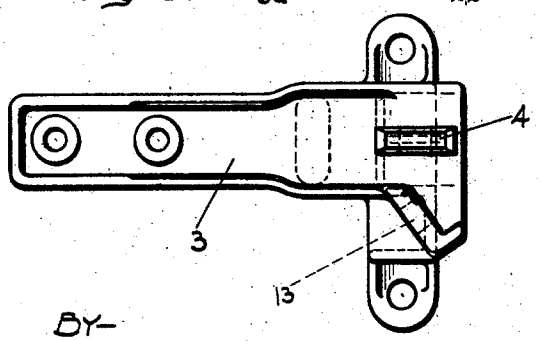


Fig-11



BY-

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Patented June 24, 1930

1,767,251

UNITED STATES PATENT OFFICE

GABRIEL MADLAND AND KENNETH J. TOBIN, OF CHICAGO, ILLINOIS, ASSIGNORS TO CAMEL CO., OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS

DOOR-LOCKING MECHANISM FOR HOUSE CARS

Application filed August 4, 1927. Serial No. 210,497.

This invention relates to door locking mechanism for house cars and concerns itself with mechanism that eliminates the usual sealing pin which is frequently lost or thrown away due to the fact that it becomes frequently detached from its support.

The invention further simplifies the construction of locking mechanism heretofore used and renders the same more desirable in various ways.

The invention comprises the novel structure and combination of parts hereinafter described and more particularly pointed out and defined in the appended claims.

In the accompanying drawings which illustrate certain preferred embodiments of this invention and in which similar reference numerals refer to similar features in the different views:

Figure 1 is a fragmentary elevational view of a pair of sliding doors on a house car equipped with locking mechanism, involving this invention.

Figure 2 is a view similar to Figure 1 illustrating a modified form of locking mechanism which may be used when it is desired to ventilate the car.

Figure 3 is a fragmentary elevational view of a pair of doors illustrating a further modified form of locking mechanism.

Figure 4 is a sectional view taken on the line IV—IV of Figure 3, showing parts in elevation.

Figure 5 is a view similar to Figure 3 illustrating a further modification of this invention.

Figure 6 is a part sectional and part elevational view taken substantially upon the line VI—VI of Figure 5.

Figure 7 is a fragmentary elevational view of a pair of sliding doors containing a further modification of this invention.

Figure 8 is a sectional view taken substantially upon the line VIII—VIII of Figure 7.

Figure 9 is a view similar to Figure 7 illustrating a further modification of this invention.

Figure 10 is a sectional view taken upon the line X—X of Figure 9.

Figure 11 is an elevational view of a locking member shown in Figures 1, 7, and 8.

Referring to drawings, it will be noted that a pair of doors 1 and 2 are illustrated in connection with various forms of locking mechanism. It will, however, be appreciated that the locking mechanism may be used for securing a single door. In referring to Figures 1 and 2 the locking mechanism therein illustrated consists of a locking member 3 which is adapted to be secured to the door 1 by suitable bolts or rivets. This locking member 3 is provided with an apertured lug or staple 4 designed for receiving a hasp 5 which is pivoted to a support 6 secured to the other door. The support 6 is provided with a hook 7 which is directed inwardly, as shown in Figure 8. The hasp 5 has an elongated slot 8 provided with a bearing recess for the hook 7. Forwardly in the slot 8 there is a stud 9 which is integral with and forms a pivot for a hook 10. The pivot pin 9 of the hook 10 has an enlarged head similar to the one shown upon the hook in Figure 4. It might be mentioned that the pivot 9 is inserted through the bearing recess in the slot and then moved forwardly into the narrow portion of the slot before the hasp 5 is applied to the hook 7, whereby the hook 10 is securely locked to the hasp. The hasp 5 has the usual opening 11 for receiving the lug or staple 4. After the hasp has been applied to the lug 4 the hook 10 is swung through the aperture in said lug for locking the hasp to the member 3. The locking member 3 is provided with an angular abutment 12 into the angle of which the end of the hook 10 extends when the same is moved to its locking position. The abutment 12 and the hook 10 are provided with apertures 13 for the purpose of receiving the usual sealing wire or the like (not shown).

In the operation of the locking mechanism shown in Figure 1 the doors are brought together, the hasp is then applied to the staple 4, the hook 10 is inserted through the staple and sealed.

The pivot 9 of the hook is locked in the slot 8 against removal. It will be appreciated that there is little or no liability of the

same becoming loose or dissociated from the hasp and being lost.

In the structure shown in Figure 2 the locking mechanism has been modified to lock the doors in partially opened position for ventilating purposes. It will be noted that the locking member 14 that corresponds to the member 3 is provided with a pair of apertured lugs or staples 15 which are spaced apart a suitable distance in accordance with the desired ventilating space between the car doors. Adjacent each lug 15 there is a sealing lug 12 similar to the one above described. In this case the hasp 16 is pivoted to the hook 7 of the support 6 as in the above form. In this case, however, the hasp is elongated and provided with two spaced slots 11 which are adapted for engaging the staples 15. When it is desired to lock the doors in ventilating position the elongated slot 11, which is more remote from the pivot 7, is engaged with the staple 15, as shown. The hasp 16 is then placed upon the staple 15 and the hook 10^a which is pivoted in the slot 8 of the hasp in a manner similar to the hook 10 is then engaged with the staple. This hook 10^a is also adapted to be sealed to the end of the lugs 12 above set forth.

The locking mechanism shown in Figure 2 is also adapted to lock the car doors in closed position. To do this it is merely necessary to engage the first slot 11 with the first staple 15 and the second slot 11 with the second staple 15 when the locking hook 10^a will be in position for passing through the second staple 15 in which position it may also be sealed by the second abutment 12.

The locking mechanism shown in Figures 3 and 4 differ from that shown in Figure 1 in the omission of the locking member 3 and the substitution therefor of a hook-shaped bracket 6 having a hook 7. In referring to said figures it will be noted that a hook-shaped support 6 is also attached to the opposite door. A staple carrying member 17 is pivotally connected to one hook-shaped member and carries a staple 4. A hasp 5 and hook 10 arranged as shown and described in connection with Figure 1 is supported by the other hook-shaped member 6. This modification shown in Figures 3 and 4 is, however, similar to the first form, in that the hook 10 is pivotally carried by the hasp 5 and is adapted to be sealed to the lug 13 in its operative position as in the first form.

In Figures 5 and 6 a further modification has been illustrated in which one door is equipped with a hook-shaped support 6^a, and another door is equipped with a hook-shaped support 6^b. The hook-shaped support 6^a is adapted to serve as a staple. A slotted hasp 18 is pivoted upon the hook-shaped support 6^b and its slot engages over the other hook-shaped part of member 6^a. The hasp 18 carries a locking hook 10 as in the first form shown in Figure 1, for locking the hasp upon the staple. In this case the hook 10 is also adapted to be sealed to a lug 13 which is provided upon the hook-shaped member 6^a.

In Figures 7 and 8 a further modification of the invention has been illustrated. In this particular modification a locking member 3 similar to the one shown in Figure 1 is secured to the door 1 and a hasp 5^a is pivoted upon a hook-shaped support 6 upon the door 2 for engaging the staple 4. This hasp does not support the hook as in certain of the other modifications. In Figure 7 the locking hook, which is designated by the reference numeral 19, is pivoted coaxially with the hasp 5^a upon the hook bracket 6. This modification offers some advantages in that the hasp 5^a and the locking hook 19 may be simultaneously hung on the hook bracket 6.

In Figures 9 and 10 a still further modification of the invention has been illustrated. In this modification, the locking hook 20 is carried by a stationary locking member 6^c which is secured upon the door 1, instead of being carried by the hasp. Referring to said figures it will be noted that a hasp 21 is pivoted at one end to a hook-shaped support 6^b similar to the one shown in Figures 5 and 6 and this hasp 21 engages over a staple 22 formed upon the stationary locking member 6^c. This locking member 6^c is provided with a bayonet slot 6^d for receiving the headed pivot pin 20^a on the locking hook 20. The hook 20 is adapted for engaging beneath the staple 22 when the hasp 21 has been applied thereto and the same may be sealed to the lug 13 as in the other forms illustrated.

It will be appreciated that according to this invention the old form of sealing pin that has been heretofore used and which has proven objectionable in that it frequently became dissociated from its sliding pivots and was lost or thrown away is eliminated. In the present instance the different forms of locking hooks are adapted to be permanently associated with parts of the locking mechanism, and there is less or no liability of their being lost or thrown away by careless workmen since they are locked against accidental removal.

We are aware that many changes may be made, and numerous details of construction may be varied through a wide range without departing from the principles of this invention, and we therefore do not purpose limiting the patent granted hereon, otherwise than necessitated by the prior art.

We claim as our invention:

1. In a car door latching mechanism, a pivot support, a hasp having a bearing recess for receiving said support and having a forwardly extending restricted slot, and a latch hook having a headed stud extending through said slot and locked from removal by said pivot support.

2. In a car door latching mechanism, a hasp having a bearing recess terminating in a restricted slot, in combination with a latching hook having a headed stud insertable through said bearing recess and slidable into said restricted slot, and a pivot stud entering said bearing recess and preventing the removal of said latching hook.

3. An article of manufacture comprising a hasp having a bearing recess terminating in a restricted slot in combination with a latching hook having a headed stud insertable through said bearing recess and slidable into said restricted slot.

In testimony whereof, we have hereunto subscribed our names.

GABRIEL MADLAND.
KENNETH J. TOBIN.