Sept. 15, 1925. 1,554,171

R. P. MANNY

DOOR LATCH

Filed Oct. 20, 1922 2 Sheets-Sheet 1

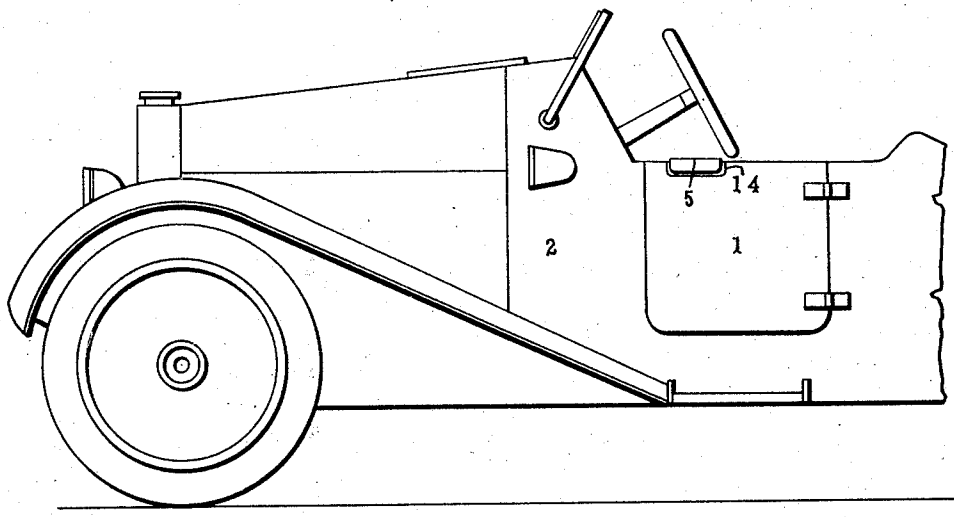


Fig. 1

Fig. 2

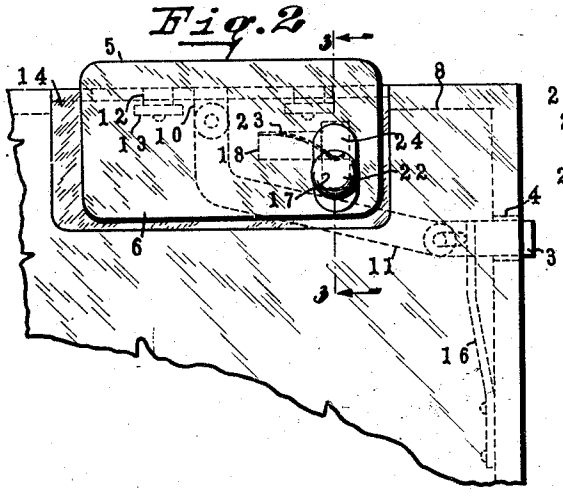
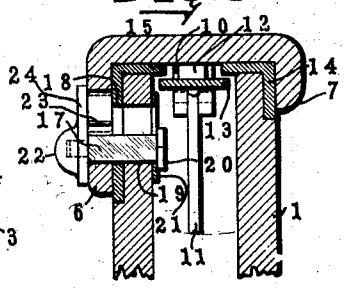


Fig. 3



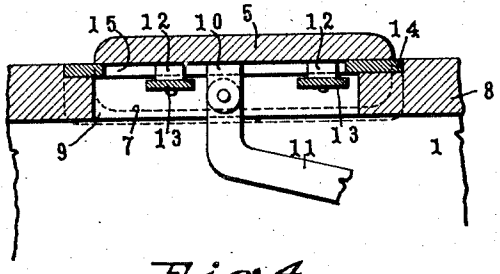


Fig. 4

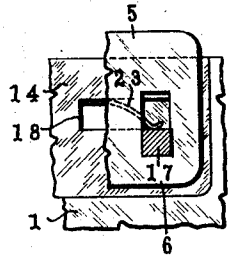


Fig. 5

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DOOR LATCH

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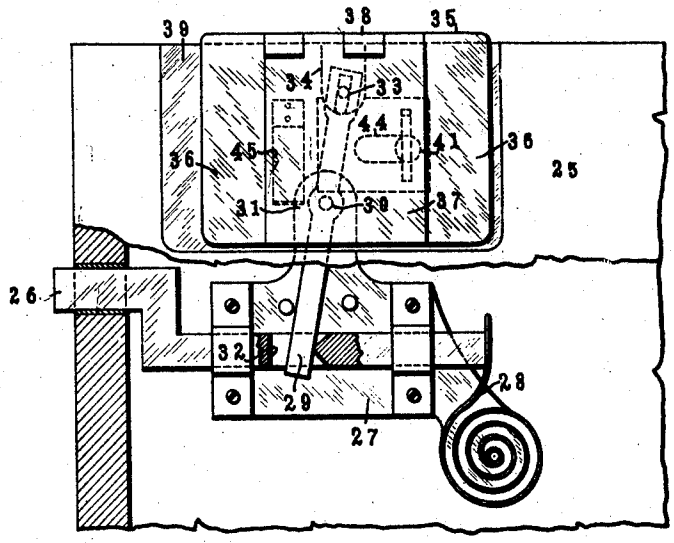
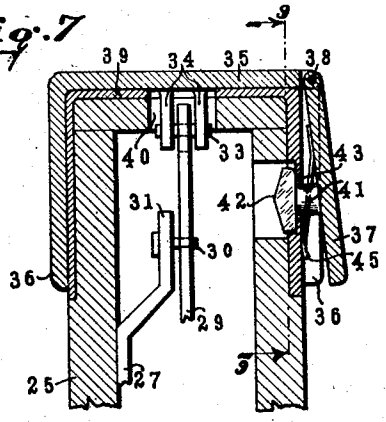


Fig. 6

Fig. 7



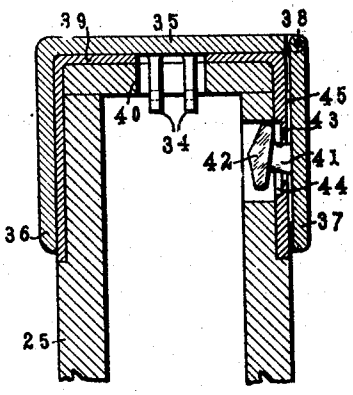


Fig. 8

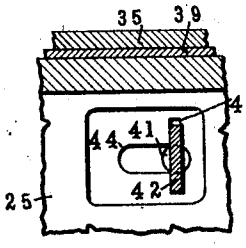


Fig. 9

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UNITED STATES PATENT OFFICE.

RALPH POLK MANNY, OF RYE, NEW YORK.

DOOR LATCH.

Application filed October 20, 1922. Serial No. 595,868.

To all whom it may concern:

Be it known that I, RALPH POLK MANNY, a citizen of the United States, residing at Rye, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Door Latches, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improvement in door latches, and with respect to its more specific features to latches for the doors of automobiles.

An object of the invention is to provide a simple, inexpensive and easily operated construction of latch controlling mechanism for automobile doors.

Another object is to provide a construction devoid of projecting knobs and handles to catch the clothing of the passengers.

Another object is to provide a single operating mechanism for controlling the latch accessible for operation from either side of the door.

Another object is to provide a mechanism which serves as a housing, cooperating with the door to conceal the mechanism, and to prevent the entrance of foreign bodies.

Another object is to provide releasable means in connection with the mechanism for locking it against movement when the latch is in operative position.

Other objects will be in part obvious and in part pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements and arrangement of parts which will be exemplified in the construction hereinafter set forth, and the scope of the application of which will be indicated in the following claims.

In the accompanying drawings forming a part of this specification wherein similar reference characters refer to similar parts throughout the several views,

Figure 1 is a side elevation of a portion of a car showing the door provided with the improved latch operating mechanism,

Fig. 2 is an enlarged detail of the operating mechanism,

Fig. 3 is a section on the line 3—3 of Fig. 2,

Fig. 4 is a vertical section at right angles to Fig. 3,

Fig. 5 is a detail in side elevation of the locking mechanism, with parts in section,

Fig. 6 is a partial side elevation, with parts in section showing a modified construction,

Fig. 7 is a transverse vertical section with the parts in one position,

Fig. 8 is a similar view with the parts in another position, and with parts omitted, and

Fig. 9 is a detail in section showing the locking mechanism.

The embodiment of the invention shown in Figs. 1 to 5, is shown in connection with the door 1 of an automobile 2 of usual construction, the door having a latch 3 for holding the same closed, which is also of usual construction. The latch is mounted between the inner and outer walls of the door, the door being hollow as is usual, and extends through an opening 4 in the edge of the door, to engage a suitable opening in the automobile body which forms the casing for the door.

The controlling mechanism for the latch is constituted by a housing mounted to slide on the upper edge of the door. The housing comprises a body 5, having depending flanges 6 and 7 fitting the inner and outer faces of the door respectively. The connection indicated at 8 in Fig. 4, between the inner and outer walls of the door is provided with a longitudinally extending slot 9, and the housing 5—6—7 is arranged at this slot. The body 5 of the housing has a depending lug 10 at approximately its center extending through the slot, and the lug is connected to the latch 3 by a link 11, the link being pivoted to the latch and to the lug.

Means is provided for preventing disengagement of the housing, said means being in the form of studs 12 depending from the body 5 of the housing through the slot, and having cross-plates 13 secured to their lower ends. An escutcheon 14 of substantially U formation is arranged on the edge of the door at the slot, in the form of a plate having an opening 15 registering with the slot, and of less length and width, so that the escutcheon projects above the slot at the op-

posite sides and ends thereof. The cross-plates 13, as shown in Fig. 3, are of a length sufficient to engage beneath the side edges of the slot 15 in the escutcheon to prevent lifting of the housing, and the studs engage the ends of the slot 15 to limit the movement of the housing. The escutcheon, as shown in Figs. 2 and 3, is counter-sunk in the material of the door, to be flush with the inner and outer faces and the upper edge thereof, and it is of sufficient extent to extend beyond the housing, whatever its position, during the controlling of the latch. The latch is normally spring pressed to operative position, by a spring 16, shown in Fig. 2, and mechanism is provided, for locking the latch against accidental disengagement. The said mechanism includes a bar 17 mounted in an angular slot 18 in the escutcheon, and registering with a similar slot 19 in the inner wall of the door. The inner end of the bar is headed as shown at 20, to prevent outward movement thereof, and the head engages a reinforcing plate 21 secured to the inner face of the inner wall of the door. The outer end of the bar has secured thereto a button 22 for manipulating the same. When the bar is in the vertical portion of the slot 18, the latch is locked in operative position, the bar preventing movement of the housing to release the latch. When the bar is in the horizontal portion of the slot, the housing may move freely to release the latch. A spring 23 is arranged in the slot 18, and acts normally to hold the bar 17 in the vertical portion of the slot. By pulling upward on the knob or button 22, the bar may be moved into the horizontal portion of the slot, after which the housing is free to move in a direction to release the latch. The button or knob 22 has an escutcheon 24 which is of sufficient length to cover the vertical portion of the slot when the bar is in position to lock the latch.

In operation, with the parts in the position of Fig. 2, when it is desired to open the door, the button 22 is moved upward into the horizontal portion of the slot 18. The hand which rests naturally upon the housing is moved rearwardly, and the latch is released. The housing is easily accessible from inside the car, or from outside, and it is in a place where the hand would naturally engage the door. There are no projecting knobs or handles to catch in the clothing, and all of the operative parts are concealed by the housing. The knob 22 extends but a slight distance from the face of the door, and it is rounded as shown, so that the clothing cannot catch thereon. The housing provides a single operating mechanism for the latch, capable of being operated from either side of the door, and the locking bar 17 is automatically moved into locking position when the housing is moved to close the latch. As soon as the bar comes into register with the vertical portion of the slot, the spring pushes it downward, thus locking the housing.

In the embodiment of the invention shown in Figs. 6 to 9, the door 25 is held closed by means of a bolt 26, mounted between the inner and outer walls of the door, and guided by means of a supporting bracket 27. The bolt is normally forced to operative position by a spring 28, secured at one end to the bracket, and engaging at the other the rear end of the bolt. The bolt is operated by a lever 29, which is pivoted at 30 to an extension 31 of the bracket, intermediate the ends of the lever, and the lower end of the lever passes through a vertical slot 32 in the bolt. The upper end of the lever is forked, and the arms of the fork engage a pin 33, supported by depending lugs 34 on the body 35 of a substantially U shaped housing.

The housing has a body 35, and integral depending flanges 36. One of the flanges has a hinged portion 37 intermediate the ends thereof, hinged to the body as indicated at 38 with a rule joint, which limits the outward swinging thereof to the position of Fig. 7. The housing is slidable on a substantially U shaped reinforcing plate 39 seated in the material of the door to be flush with the surface thereof, and the connection between the walls of the door, at the top of the door is longitudinally slotted as indicated at 40 to permit the passage of the lugs 34. When the housing is moved on the reinforcing plate 39, the lever 29 is swung to move the bolt longitudinally, to lock or unlock the door. The housing is in position to be grasped naturally by the hand, and the operation of grasping the housing swings the hinged flange 37, and this flange carries locking mechanism, for locking the housing with the door closed. The locking mechanism comprises a pin 41, which is movable through an opening in the reinforcing plate, and has a cross-head 42 at its inner end, which is adapted to engage a depression 43 in the inner face of the plate, thereby to lock the housing from movement on the edge of the door. The plate 39 is slotted longitudinally as indicated at 44 from the opening for the pin, to permit the movement of the housing, and the engagement of the pin with the ends of the slot limits the movement of the housing. A spring 45 is secured to the reinforcing plate, beneath the flange 37, and acts normally to force the flange outwardly to move the pin in locking position. When the head 42 is in engagement with the recess 43, the housing is locked against accidental displacement. The locking of the housing prevents movement of the housing and accidental opening of the door, in case a passenger should lean

against the housing, and move the same in such leaning movement. In practice the housing in both instances will be suitably upholstered, to correspond with the decorative scheme of the car. As for instance the housings may be covered with leather.

While the improved latch is shown in connection with the door of an automobile, it will be obvious that it might be used to equal advantage in other doors, as for instance with the doors of carriages of any kind, and in fact any character of door, gate or the like.

As many changes could be made in the above construction and many apparently widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the language used in the following claims is intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention, which, as a matter of language might be said to fall therebetween.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In combination, a door and a latch therefor, of a single means for controlling the latch from either side of the door, said means including a substantially U shaped housing mounted to slide on the edge of the door and engaging the opposite faces thereof.

2. In combination, a door and a latch therefor, of means for controlling the latch from either side of the door, said means including a housing mounted to slide on the edge of the door, and an escutcheon counter-sunk flush with the door on which the housing moves.

3. The combination with a door and a latch therefor, of means for controlling the latch from either side of the door, said means including a housing mounted to slide on the edge of the door, an escutcheon counter-sunk flush with the door on which the housing moves, and a releasable lock for holding the housing with the latch in operative position.

4. The combination with a door and a latch therefor, of means for controlling the latch from either side of the door, said means comprising a substantially U shaped housing supported for sliding movement along the upper edge of the door, and a connection between the housing and the latch.

5. The combination with a door and a latch therefor, of means for controlling the latch from either side of the door, said means comprising a substantially U shaped housing held slidably on the upper edge of the door, a connection between the housing and the latch, and a safety lock for securing the latch against accidental operation.

6. The combination with a door and a latch therefor, of means for controlling the latch from either side of the door, and means automatically controlled to operative position for locking said first-named means with the latch in operative position when said means is moved to latch the door.

7. The combination with a door and a latch therefor, of a single means for controlling the latch from either side of the door, said means being mounted to slide on the edge of the door, and means controlled to operative position by the movement of the first-named means for locking said means with the latch in operative position.

8. The combination with a door and a latch therefor, of a single means for controlling the latch from either side of the door, said means including a housing mounted to slide on the edge of the door, and means controlled to operative position by the movement of the controlling means for locking said housing with the latch in operative position.

9. The combination with a door and a latch therefor, of means for controlling the latch from either side of the door, including a housing mounted to slide on the edge of the door, and means for locking the housing with the latch in operative position, controlled to release position by the grasping of the housing to operate the latch.

10. The combination with a door and a latch therefor, of means for controlling the latch from either side of the door, said means being mounted to slide on the door, means for locking the same from movement, and controlled to release position by the grasping of the said means.

11. The combination with a door and a latch therefor, of means for controlling the latch from either side of the door, including a U shaped housing embracing the edge of the door and mounted to slide thereon, locking means for preventing movement of the housing when the door is closed, and controlled to release position by pressure on the sides of the housing toward each other.

12. The combination with a door and a latch therefor, of means for controlling the latch from either side of the door, including a U shaped housing embracing the edge of the door and mounted to slide thereon, locking means for preventing movement of the housing when the door is closed, and controlled to release position by pressure on the sides of the housing toward each other, one of the sides being hinged to swing toward

and from the door, and normally pressed outward, the hinged side carrying the locking mechanism.

13. The combination with a door and a latch therefor, of means for controlling the latch from either side of the door, including a substantially U shaped housing embracing the edge of the door and having a hinged portion, and means for locking the housing from movement controlled to operative and inoperative position by the movement of the portion.

In testimony whereof I affix my signature.

RALPH POLK MANNY.