Nov. 26, 1940. H. W. RIGHTMYER 2,223,186

VEHICLE DOOR LATCH

Filed Feb. 23, 1938

FIG. 1.

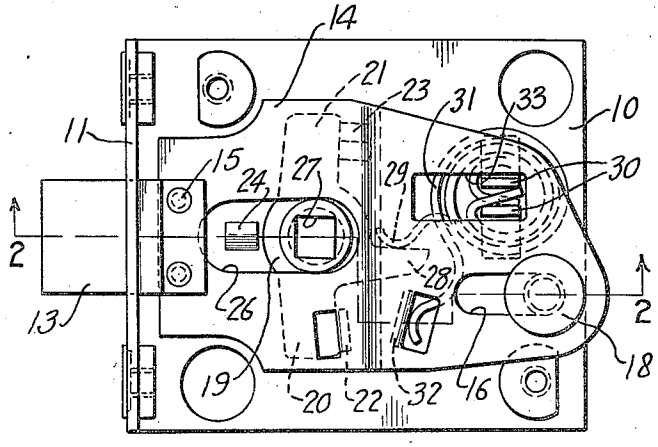


FIG. 2.

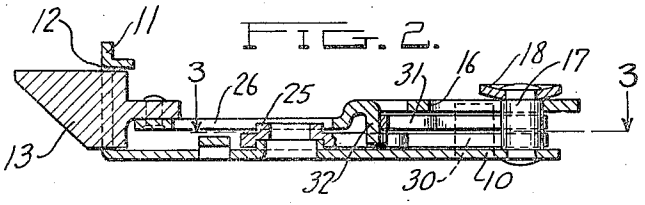
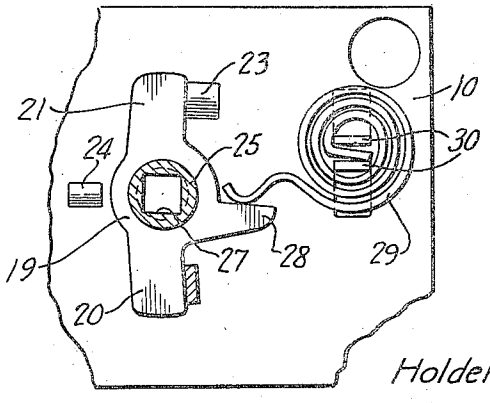


FIG. 3.



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VEHICLE DOOR LATCH

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Application February 23, 1938, Serial No. 191,989

1 Claim. (Cl. 292—169)

This invention relates to door latches but more particularly to latches for the doors of automobiles or similar vehicles and an object is to produce a new and improved door latch in which the handle parts are normally held in a predetermined position.

Other objects of the invention reside in details of construction and arrangement of parts and for purposes of illustration but not of limitation, an embodiment of the invention is shown on the accompanying drawing in which,

Figure 1 is a side elevation of a vehicle door latch;

Figure 2 is a longitudinal sectional elevation on the line 2—2 of Figure 1; and

Figure 3 is a sectional view on the line 3—3 of Figure 2.

The illustrated embodiment of the invention comprises a vehicle door latch having a case plate 10 connected to the door in any suitable manner and formed with an outwardly extending flange 11 at one end. The flange 11 is formed with an opening 12 through which the nose 13 of the latch bolt extends. The nose 13 is secured to the bolt plate 14 by rivets 15 and the bolt plate is formed with a longitudinally elongate slot 16 to receive a stud 17 having a head 18 for guiding the sliding movement of the latch bolt to and from latching position.

The latch bolt is retracted by a roll back 19 having oppositely extending arms 20 and 21, the arm 20 engaging an ear 22 struck from the bolt plate 14 and extending inwardly therefrom. The arm 21 normally engages an ear 23 struck from the case plate 10 and limits the clockwise or non-bolt retracting movement of the roll back 19. An ear 24 struck from the case plate 10 limits the counterclockwise movement of the roll back 19 and is disposed in the path of movement of the arm 21. The roll back is provided with a hub 25 which is disposed in an elongate slot 26 formed in the bolt plate 14 to enable sliding movement of the bolt plate independent of the roll back. The hub 25 is formed with a squared opening 27 to receive the squared shaft of an operating handle (not shown) and as will be readily understood by those skilled in this art. Forming a part of the roll back 19 and extending rearwardly therefrom at approximately right angles to the arms 20 and 21 is an arm 28 against which bears one end of a spiral spring 29. The opposite end of the spring 29 is disposed between a pair of outwardly projecting ears 30 struck from the case plate 10. The spring 29 serves to normally hold the roll back arm 21 against the ear or stop 23 on the case plate so that the handle for operating the latch is always disposed in a predetermined position.

It will be understood that the roll back is disposed between the bolt plate 14 and case plate 10 and the spiral spring 29 is arranged in close juxtaposition to the case plate 10. The bolt plate 14 is urged to latching position by a spiral spring 31 which is superposed upon the spiral spring 29 and also has its inner end arranged between the ears 30. The free end of the spring 31 bears against an ear 32 which is struck from the bolt plate 14 and extends toward the case plate 10. It is apparent that the spiral spring 31 urges the bolt nose 13 to its projected position, the movement being limited by the outer end of the slot 16 engaging the stud 17.

As best shown in Figure 2, the rear or inner end of the bolt plate 14 is embossed outwardly away from the case plate 10 to accommodate the spiral springs 29 and 31 which are disposed one upon the other. The rear end portion of the bolt plate is formed with a longitudinally elongate slot 33 into which project the outer ends of the upwardly extending ears 30. The width of the slot 33 is so chosen as to accommodate the ears 30 and insures against the ears spreading apart or away from each other due to the force exerted against them by the spiral springs. By making the slot elongate, it is obvious that the bolt plate 14 can freely move to and from latching position.

The above described latch bolt is useful particularly on the deck lids of automobiles, as for example on the rear end of the body and in cases where it is desirable that the operating handle upon being released is always returned to the same position. The arrangement of the springs one upon the other is of importance in that it conserves space thus simplifying and reducing the cost of the latch.

It is to be understood that numerous changes in details of construction, arrangement and operation may be effected without departing from the spirit of the invention especially as defined in the appended claim.

What I claim is:

A vehicle door latch comprising a case plate, a latch bolt on said case plate, a roll back for retracting said bolt, an arm forming a part of said roll back and movable therewith, a pair of ears struck from said case plate, said bolt having a slot into which the outer ends of said ears project, a spiral spring having its inner end disposed between said ears and its outer end bearing against said arm, and another spiral spring arranged upon said first spring and having its inner end disposed between said ears and its outer end engaging the bolt.

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