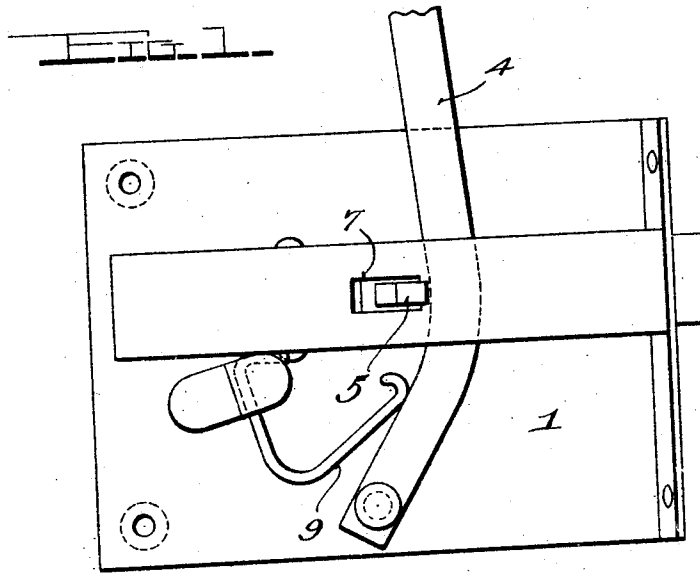
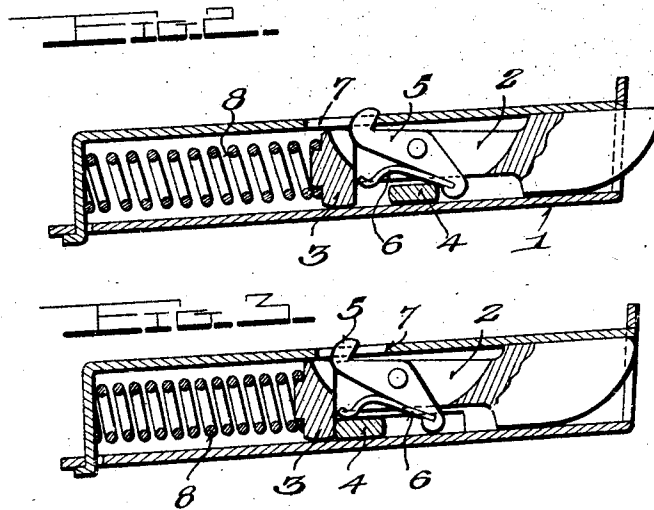


R. G. MOORE.
LATCH FOR DOORS.
APPLICATION FILED JAN. 13, 1921.

Patented Mar. 28, 1922.
2 SHEETS—SHEET 1.

1,411,059.

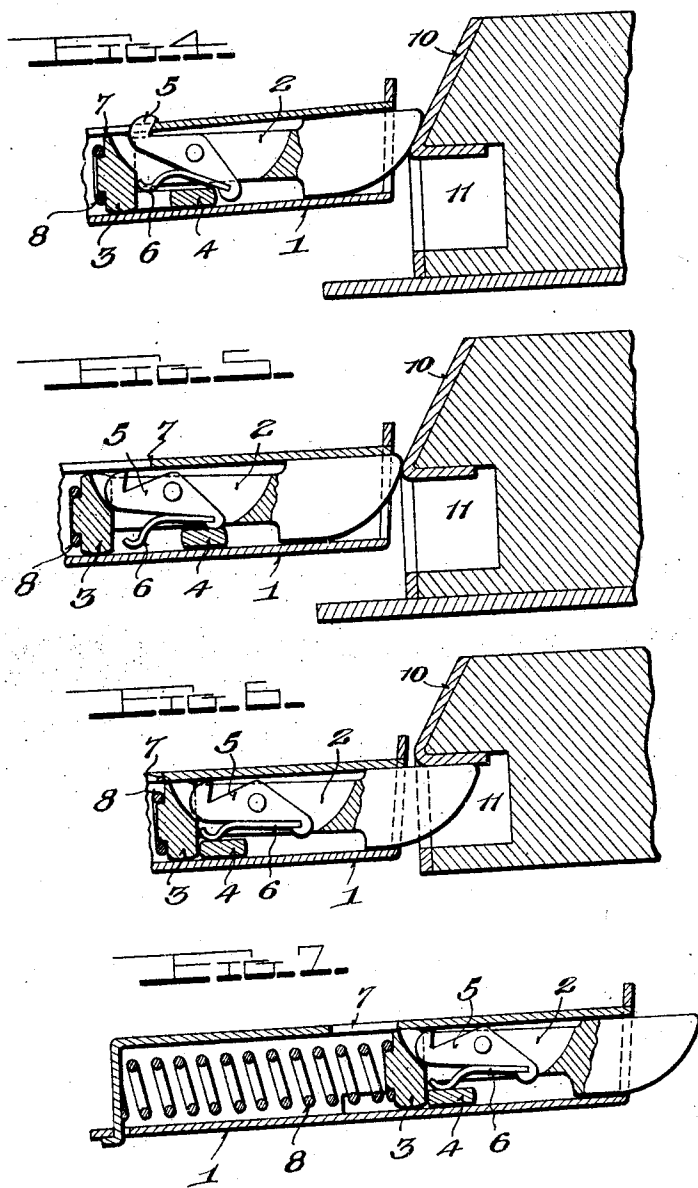


INVENTOR.
Raymond G. Moore
BY *J. W. Smith*
ATTORNEY.

R. G. MOORE.
LATCH FOR DOORS.
APPLICATION FILED JAN. 13, 1921.

Patented Mar. 28, 1922.
2 SHEETS—SHEET 2.

1,411,059.



INVENTOR.
Raymond G. Moore
BY *J. H. Smith*
ATTORNEY.

UNITED STATES PATENT OFFICE.

RAYMOND G. MOORE, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE BASSICK COMPANY, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF CONNECTICUT.

LATCH FOR DOORS.

1,411,059.

Specification of Letters Patent.

Patented Mar. 28, 1922.

Application filed January 13, 1921. Serial No. 436,937.

To all whom it may concern:

Be it known that I, RAYMOND G. MOORE, a citizen of the United States, residing at the city of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Latches for Doors; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain new and useful improvements in an automobile door latch and it has for its main object to provide a construction in which the latch bolt is held retracted when the door is open and automatically released upon closing the door.

Further the invention resides in the accomplishment of the bolt retraction without the aid of auxiliary trip bolts or other external devices.

It is well known that when an automobile door is wide open the latch bolt is fully projected as a rule, and this is the cause of innumerable tearings of clothing. Numerous attempts have been made to overcome this defect through various types of latch structures in which the latch is held retracted until the closing of the door contacts it with the striker which automatically releases the latch and causes it to be fully projected.

In the drawings:

Figure 1 is a side elevation of the structure with the latch retracted;

Figure 2 is a sectional elevation taken through the latch casing with the latch retracted and locked in this position;

Figure 3 is a similar view showing the relative arrangement of parts when the handle lever is moved to fully retract the latch bolt;

Figures 4, 5 and 6 depict the operation of the latch parts during the closing of the door, and

Figure 7 is a longitudinal section through the bolt showing the parts as arranged when the former is operative.

Referring more in detail to the drawings, numeral 1 designates the casing, 2 the latch bolt having an enlarged portion or shoulder 3 on its rear end, 4 the operating lever or handle, and 5 a pawl pivoted to the shank

of the latch bolt. The pawl is normally forced outwardly by means of a spring 6 which bears against the face of the lever 4 and incidentally keeps the latter in close contact with the side of the casing so that there can be no rattle of the lever. The spring 6 is of leaf form, having one end anchored to the heel of the pawl and its opposite end bowed outwardly whereby when the free end of the spring is engaged by the hand lever 4 the pawl will be accorded a tendency to move outwardly to engage in a slot 7 formed in the casing. A coiled spring 8 resiliently backs up the latch bolt, being arranged within the casing between an end wall thereof and the shoulder 3.

When the lever 4 is operated to unlatch the door and fully retract the latch the parts will be in the position shown at Figure 3, and when the door is opened and the lever released the latter will move forwardly under the influence of its spring 9, and the latch will be urged outwardly by its spring 8, until arrested by the pawl 5 whose end will engage or hook over the end wall of the opening or slot 7, as depicted in Figures 1 and 2. The lever 4 will be moved forwardly into contact with the heel end of the spring 6, as is clearly shown in Figure 2.

Upon closing the door the latch contacts and rides up the inclined face of a striker 10, causing the latch bolt to move rearwardly for releasing the pawl from the wall of the slot (Figures 4 and 5). In this connection it is to be noted that the lever 4 remains stationary so that when the pawl is disengaged the lever 4, acting on the heel thereof, withdraws it into the casing. Consequently, when the bolt rides off into the recess 11 of the striker the pawl will be carried past the slot 7 without engaging therein. The provision of the spring between the lever 4 and the pawl tends to force the nose of the pawl outwardly and the lever itself against the casing so that in the position shown at Figure 6 there is provided an anti-rattling arrangement between the pawl and lever, the same being held in close contact with the sides of the casing by said spring. The improved structure can be utilized in connection with the anti-rattler latch described and claimed in my copending application, Serial

No. 436,936 and filed on even date herewith. The simple provision of the pawl obviates complicated trip constructions which are so easily gotten out of order and thereby rendered useless.

What is claimed is:

1. In an automobile door latch, a bolt, a casing therefor, an operating member movable alongside the bolt to slide the same, and means for securing the bolt retracted, said means including a part movable into the path of said member and adapted to be placed under tension thereby to yieldably urge said means to its operative position.

2. An automobile door latch comprising a casing having an opening in its wall, a spring projected bolt movable therein, a pawl pivoted on the bolt for engagement in the opening to latch the bolt retracted, and means for simultaneously retracting the bolt and rendering the pawl yieldably operative.

3. An automobile door latch comprising a casing having an opening in its wall, a spring projected bolt movable therein, a pawl pivoted on the bolt for engagement in the opening to latch the bolt retracted, and a lever for retracting the bolt and for rendering the pawl both inoperative and operative.

4. An automobile door latch comprising a casing having an opening in its wall, a spring projected bolt movable therein, a pawl pivoted on the bolt for engagement in the opening to latch the bolt retracted, a spring fixed to the heel of the pawl and extending outwardly therefrom, and a bolt-retracting lever normally exerting pressure on the spring to urge the pawl to its operative position.

5. An automobile door latch comprising a casing having an opening in its wall, a spring projected bolt movable therein, a pawl pivoted on the bolt for engagement in the opening to latch the bolt retracted, a spring fixed to the heel of the pawl and extending outwardly therefrom, and a bolt-retracting lever normally exerting pressure on the spring to urge the pawl to its operative position, and adapted to release the spring and engage the heel of the pawl to render the latter inoperative.

6. In an automobile door latch, a spring-pressed latch bolt, means for retracting it, and means for holding it retracted, said second means rendered operative and inoperative by the first means.

7. A latch comprising a casing, a bolt movable therein, a pawl pivoted on the bolt for engagement with the casing to releasably hold the bolt retracted, said pawl having a pair of spaced parts alternately movable laterally beyond the bolt, and an operating member movable to engage the projecting part of the pawl to render it either operative or inoperative.

8. A latch comprising a casing, a bolt

movable therein, an operating member movable to operate the bolt, a pawl pivoted between its ends to the bolt and having one end formed for engaging the casing to releasably secure the bolt in retracted position and its opposite end adapted to project into the path of the operating member when the pawl is operatively disposed whereby said member will engage the projecting end to disengage the pawl, and a spring secured at one end to said pawl and having its opposite end adapted to be projected into the path of the operating member to be engaged thereby when the second named end of the pawl is removed from its path, whereby to place said spring under tension to effect throwing of the pawl to its operative position.

9. In a latch, a bolt, a guide therefor, a pawl freely pivoted on the bolt for releasably locking the same retracted, means for retracting the bolt, means engageable by the first means for positively moving the pawl to inoperative position and means under the control of said first means for yieldably urging the pawl to its operative position.

10. In a latch, a bolt, a holding pawl therefor having spaced parts one of which is resilient, and a bolt operating means movable either to place the resilient part under tension to thereby urge the pawl to its operative position or to engage the other part of the pawl to render the latter inoperative.

11. In a door latch, the combination of a spring pressed latch bolt having a nose adapted to enter the striker recess when the door is closed and to ride over the face of the striker when the door is being closed; to cause the retraction of the bolt, an abutment adjacent to the bolt, means for latching the bolt in retracted position, and a bolt retracting member, said parts being so arranged that said member, in retracting said bolt, moves said bolt latching means into operative position, and retraction of said bolt by the riding of its nose over the face of the striker causes the movement of said bolt latching means into inoperative position, said bolt latching means being entirely out of contact with the striker at all times.

12. In a door latch, the combination of a spring pressed latch bolt having a nose adapted to enter the striker recess when the door is closed and to ride over the face of the striker when the door is being closed, to cause the retraction of the bolt, an abutment adjacent to the bolt, a catch carried by the bolt, at all times entirely to the rear of the engaging face of said nose, and movable relatively to said bolt, and a single bolt retracting member adapted, when operated, to engage said bolt to retract the same and to move said catch into engagement with said abutment to hold the bolt retracted.

13. In a door latch, the combination of a

plate, a spring pressed latch bolt movable thereon, an abutment, a member adapted to engage said abutment and to then coast with said bolt to hold the same retracted, and
5 hand operated means movable over said plate to retract said bolt and to move said member into operative position, said mem-

ber being adapted, when thus moved, to press said means firmly against said plate.

In testimony whereof I affix my signature. 10
RAYMOND G. MOORE.

Witnesses:

H. BRENNAN,
M. E. BAILEY.