G. HARRISON, JR.

LOCK FOR AUTOMOBILE DOORS.

APPLICATION FILED NOV. 5, 1919.

1,354,104.

Patented Sept. 28, 1920.

2 SHEETS—SHEET 1.

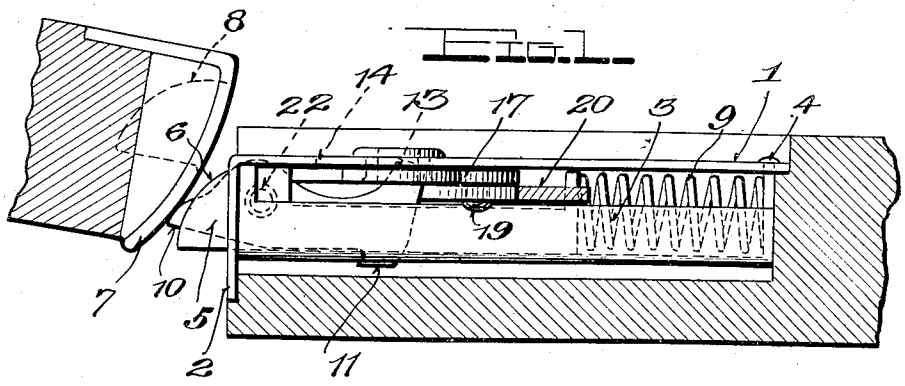


Fig. 1

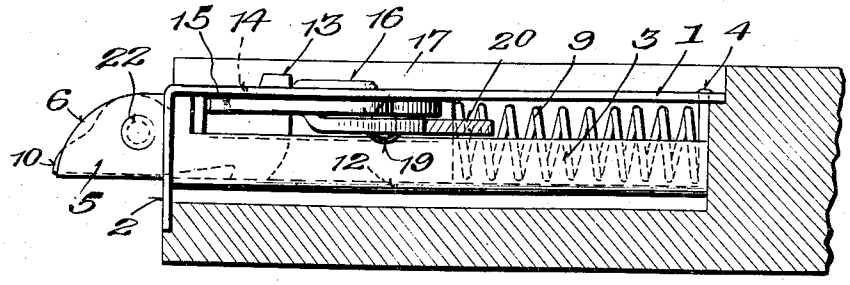


Fig. 2

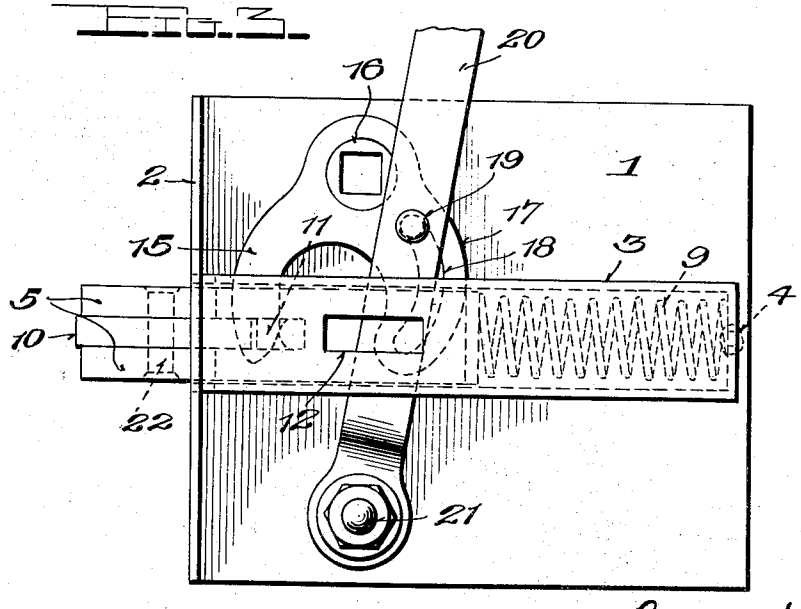


Fig. 3

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2 SHEETS—SHEET 2.

FIG. 4.

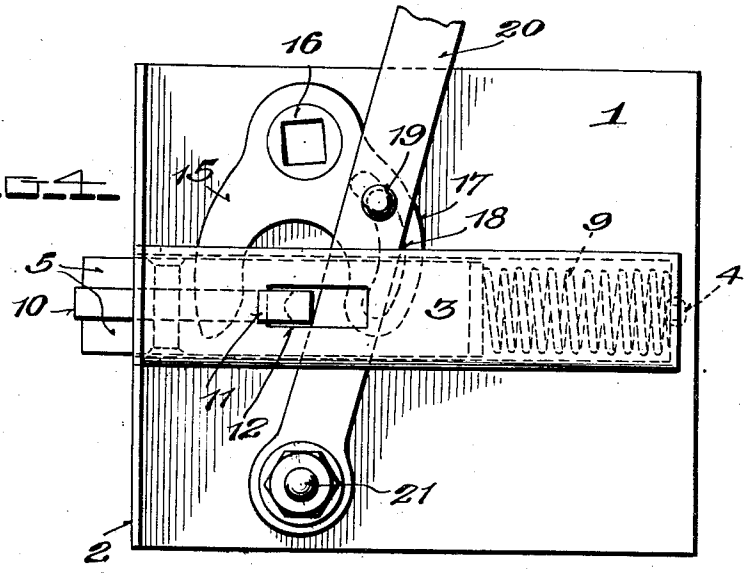


FIG. 6.

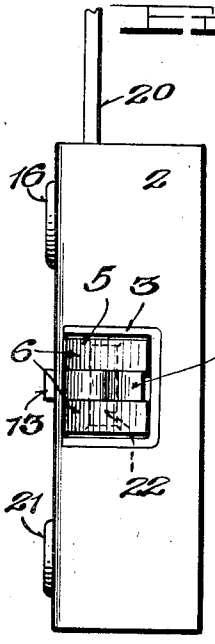
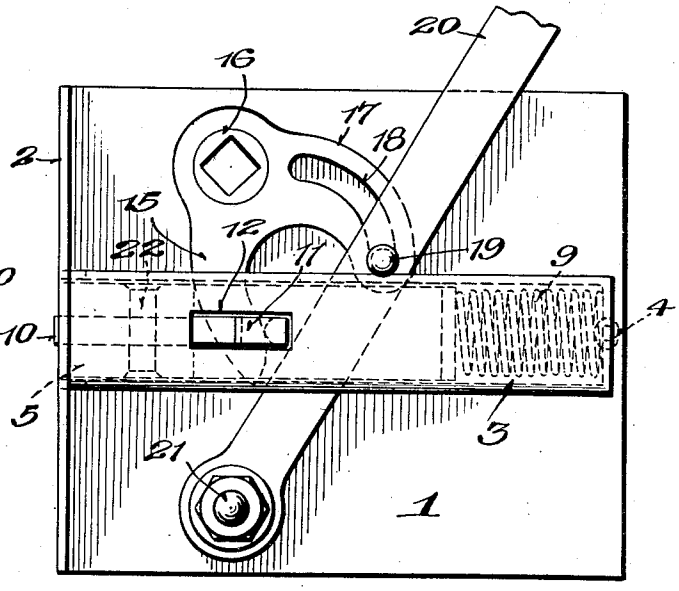


FIG. 5.



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UNITED STATES PATENT OFFICE.

GEORGE HARRISON, JR., OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE BASSICK COMPANY, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF CONNECTICUT.

LOCK FOR AUTOMOBILE-DOORS.

1,354,104. Specification of Letters Patent. Patented Sept. 28, 1920.

Application filed November 5, 1919. Serial No. 335,826.

To all whom it may concern:

Be it known that I, GEORGE HARRISON, Jr., a citizen of the United States, residing at the city of Bridgeport, county of Fairfield, State of Connecticut, have invented certain new and useful Improvements in Locks for Automobile-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 a lock for automobile doors, and it has for its primary 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 for entering the keeper socket.

The invention further resides in the features of construction and the arrangements and combinations of parts hereinafter described and claimed, reference being had to the accompanying drawings, wherein:

Figure 1 is a horizontal section through a door equipped with the present invention and depicting the trip release for the bolt engaging the keeper in advance of the retracted bolt to effect release thereof;

Fig. 2 is a similar view showing the bolt released;

Fig. 3 is an inside elevation of the lock *per se*, illustrating the bolt released;

Fig. 4 is a similar view in which the bolt is locked in its retracted position;

Fig. 5 shows the position to which the bolt is retracted, through the manipulation of the operating handle; and

Fig. 6 is an end elevation of the lock.

Referring more in detail to the drawings, the base or body plate 1 has an angular end wall 2 formed with an opening into which the opened end of the housing 3 extends, the opposite or closed end being suitably secured to the base plate as indicated at 4. Within the housing and slidable through the opening in the end wall is the latch bolt 5 having a cam or inclined face 6 for engaging the keeper 7 which has the bolt-receiving socket 8. A coiled spring 9 is compressed between the inner end of the bolt and the opposing, closed end of the housing for projecting the bolt. The latter is slotted lengthwise in its forward end and in this slot is pivoted an auxiliary trip bolt 10 which, when the latch bolt is retracted, is projected beyond the cam face of the latch or main bolt for initially engaging the keeper 7.

The auxiliary trip bolt 10 carries on its rear end a catch 11, adapted to be projected through a slot 12 in the housing, and a lug 13 which preferably acts in a slot 14 in the casing for being guided thereby and is designed to be engaged by one arm 15 of a substantially bell crank lever having pivotal mounting as at 16. This lever has its other arm 17 formed with an arcuate slot 18 in which operates a pin 19 carried by the operating handle lever 20, the latter being pivoted at 21 to the base plate 1.

In operation, to unlatch the door the handle is pulled back to swing the bell crank lever and through connection 13, 15, retract the bolt. When the catch or finger 11 passes over the slot 12 it will be moved therein by the arm 15 which imparts a tendency to the trip to swing about its pivot 22. Upon releasing the handle the catch 11 will engage the outer end wall of slot 12 and thus hold the bolt from moving outwardly. The setting of the catch to engage in its slot simultaneously throws the outer end of the trip outwardly beyond the cam face 6 of the bolt so that when the door is being closed the projecting trip will initially engage the keeper in advance of the bolt and be swung about its pivot to withdraw the operative catch and release the bolt for projection by the spring into the keeper socket 8. A turning knob, not shown, may be inserted through pivot 16, in an obvious manner, to provide additional means for oscillating the bell crank lever.

The construction is simple and positive in action, providing efficient means for holding the bolt retracted when the door is in its opened position.

By not projecting fully from the door the possibility of the bolt catching the clothing of the passengers entering or leaving the vehicle is reduced to a minimum.

What is claimed is:

1. A lock for automobile doors, comprising a casing, a bolt projecting therefrom, and a device carried by the bolt and operative to hold the same partly retracted, said device having a part projecting beyond and

carried by the partly retracted bolt for engaging the bolt keeper preliminary to the bolt for releasing the latter.

2. A lock for automobile doors, comprising a casing, a main latch member guided within the casing, a spring which normally projects said member, an auxiliary latch member rockable within the main latch member and having a striking nose and a heel projection, and means engaging said auxiliary member for retracting both members and causing said projection to interlock with the casing and hold said members retracted with the nose of the auxiliary member projected beyond the latch engaging face of the main latch member, whereby when the door is closed said nose will primarily engage the keeper and release the main latch member and allow it to be projected into locking engagement with the keeper.

3. A lock for automobile doors, comprising a casing, a bolt movable therein, a catch pivoted to the bolt for engaging the casing to hold the bolt retracted in a position to project partly beyond the casing, and means connected to the catch and adapted to project beyond the retracted bolt for engaging a fixed part of the door casing to release the bolt.

4. A lock for automobile doors, comprising a casing, a bolt movable therein, a catch pivoted to the bolt for engaging the casing to hold the bolt retracted, means for retracting the bolt and simultaneously rendering the catch operative, and means connected to the catch and adapted to project beyond the retracted bolt for engaging a fixed part of the door casing to release the bolt.

5. A lock for automobile doors, comprising a casing, a bolt therein, manual means for retracting the bolt, and means movably carried by the bolt and movable relative to and engageable by the first means for being moved by the latter to lock the bolt in a retracted position when said bolt is so disposed by said first means.

6. A lock for automobile doors, comprising a casing, a bolt therein, releasable means on the bolt movable relative thereto to engage the casing for holding the bolt retracted, and a single means for successively retracting the bolt and moving the first means into engagement with the casing to hold the bolt retracted.

7. A lock for automobile doors, comprising a casing, a bolt therein, a catch movable on the bolt and engageable with the casing for holding the bolt retracted, an operating member, and a rockable member engaging with the catch and operable by said operating member to retract the bolt.

8. A lock comprising a casing having an abutment, a bolt movable in the casing, a catch rockably carried on the bolt having a part engageable with said abutment for holding the bolt retracted, and means for retracting the bolt, said means being connected to the bolt through said catch and operating to effect the engagement of said part and abutment and to cause the nose of the catch to be projected beyond the latch engaging face of the bolt.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE HARRISON, JR.

Witnesses:
JOHN E. MILLER,
FRANK P. SARGENT.