D. F. OLIVER.

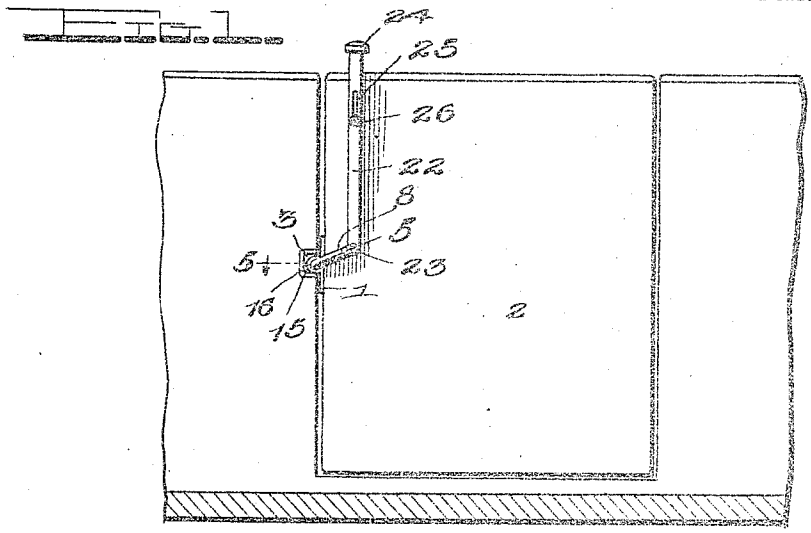
AUTO DOOR LATCH.

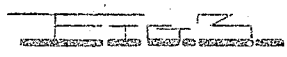
APPLICATION FILED SEPT. 11, 1915. RENEWED NOV. 3, 1917.

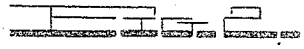
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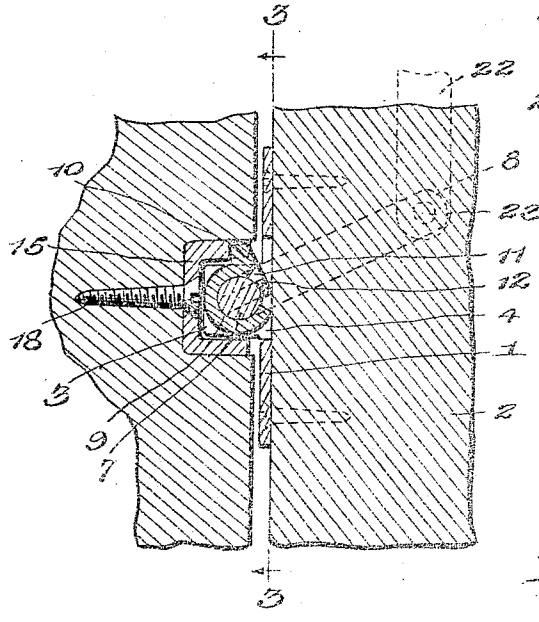
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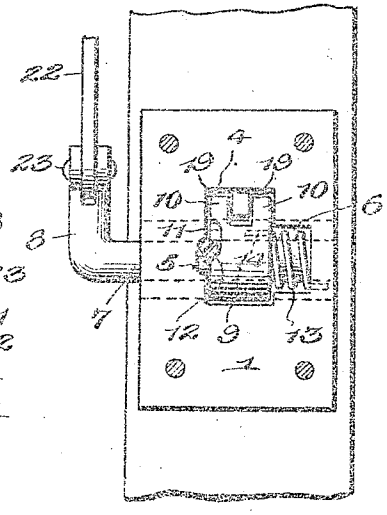
2 SHEETS—SHEET 1.











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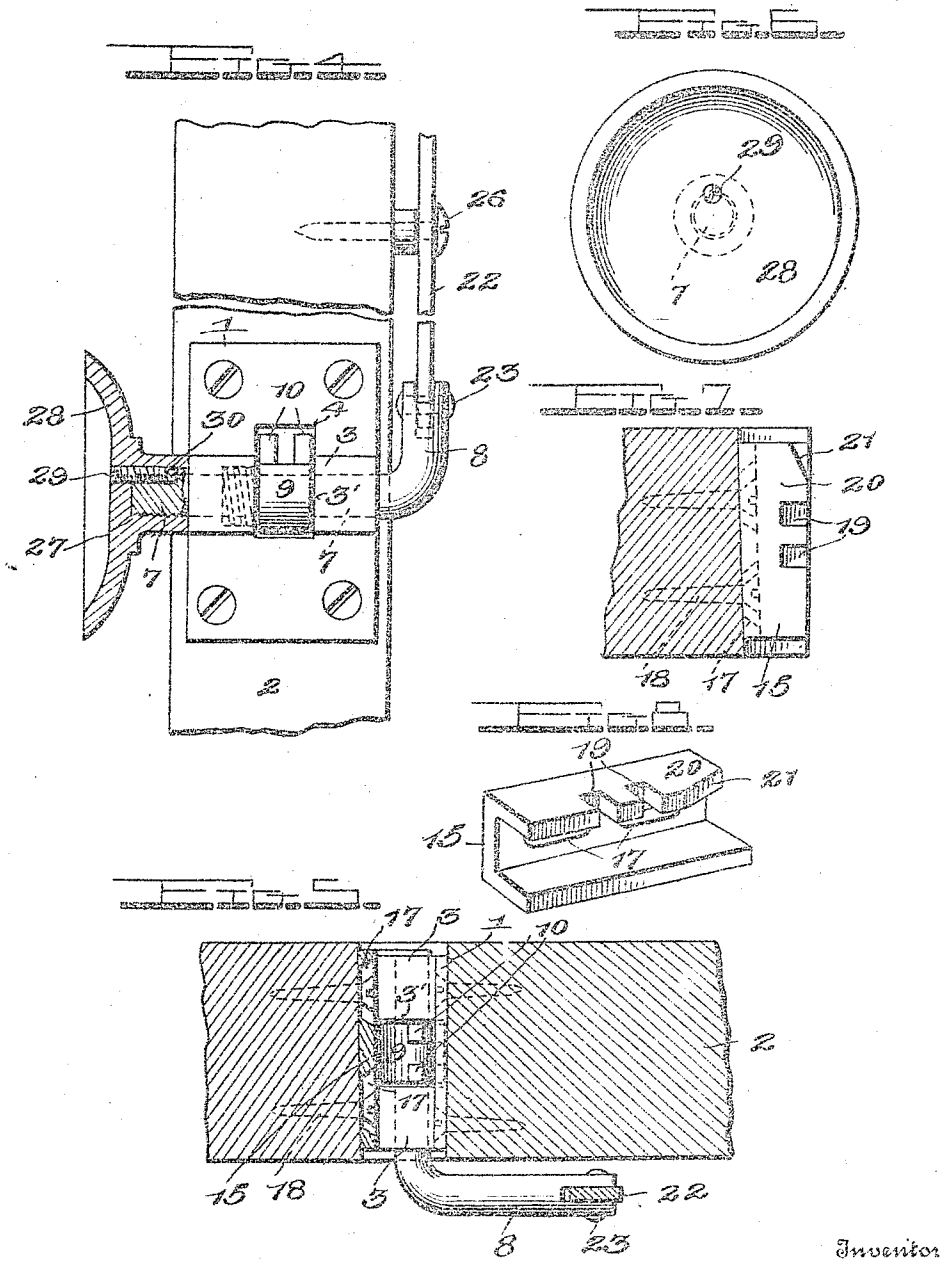
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AUTO DOOR LATCH.

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1,267,794. Patented May 28, 1918.

2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

DOCTOR FRANKLIN OLIVER, OF OAKLAND, CALIFORNIA.

AUTO-DOOR LATCH.

1,267,794. Specification of Letters Patent. Patented May 28, 1918.

Application filed September 11, 1915, Serial No. 50,207. Renewed November 3, 1917. Serial No. 200,197.

To all whom it may concern:

Be it known that I, DOCTOR FRANKLIN OLIVER, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented certain new and useful Improvements in Auto-Door Latches, of which the following is a specification.

This invention relates to certain new and useful improvements in automobile door latches and the primary object of the invention is to provide a latch which entirely eliminates mortising or any cutting of the door in applying the latch.

A further object of the invention is to provide a latch operated by a single hand engaging member which latter projects above the top of the door and may thus be as easily operated from the interior as well as exterior of the car.

Further, the invention aims to provide a structure in which the latch may be locked, by slamming the door, without such movement affecting the actuator employed in opening the latch.

Still further, the invention aims to provide a latch structure which may be positioned at a point midway between the top and bottom of the door, so as to more effectively and firmly hold the door in locked position.

The invention is also directed to attain simple, and economical construction of the parts and antirattling of the latch in use.

In the drawings:

Figure 1 is a side elevation showing the invention applied to the inner side of a door, the body of the auto being shown in section;

Fig. 2 is a vertical sectional view of Fig. 1;

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

Fig. 4 is a side elevation, partly in section showing a form of the invention adapted for use with doors of closed cars;

Fig. 5 is a section on the line 5—5 of Fig. 1;

Fig. 6 is a front elevation of the door knob shown in Fig. 4;

Fig. 7 is a detail view showing the keeper or striking plate in top plan and a fragment of the auto body in section; and

Fig. 8 is a perspective view of the keeper.

In proceeding in accordance with the present invention, a face plate 1 is employed which is attached to the outer vertical edge of the door 2 without cutting or mortising the latter in any way whatsoever. The face plate is formed with a stem 3, and with an opening, 4, which latter communicates with cut-out parts 5 and 6 at its opposite sides, as depicted more clearly in Fig. 3 of the drawings.

The stem 3 is hollow and receives therein a rod or shaft 7 which latter is formed with a right angular arm 8 so as to constitute a rocking actuator for a latch pawl 9, the latter being rotatably mounted on rod 7 and disposed within opening 4 and in a cut-out part 3′ formed in the stem 3. The latch pawl 9 is provided with a pair of spaced teeth 10 and is formed at one end with a cut-out part 11 in which is received a screw 12 (Figs. 2 and 3) the screw being projected into and carried by the rod 7. A coil spring 13 is located within the cut-out part 6 of plate 1 and surrounds the rod 7, one end of the spring bearing against the rear face of plate 1 while the other end of the spring is projected into an aperture 14 provided therefor in an end of the pawl.

The present invention further involves a keeper 15 which is secured in a cut-out provided therefor, in the jamb of the body 16 as depicted in Fig. 1. This keeper is preferably of U-form in cross-section and is formed with slots 17 receiving screws 18 so as to allow the keeper to be adjustably secured in proper position for accurate interengagement with the pawl latch teeth 10 for which purpose the upper member 20 of the keeper is formed with a pair of spaced slots 19 adapted to receive the teeth 10. This adjustment of the keeper also allows positioning of the latter so as to prevent rattling between same and the pawl.

The upper member 20 is beveled at 21 so that when the teeth 10 engage therewith (Fig. 2) the action will be one of turning

pawl 9, against the action of spring 16 to allow the teeth to ride into the slots 10, to thus lock the parts, which action is permitted by reason of the play which the screw 12 has in the cut-out 11 of latch pawl 9. By reason of the play which pawl 9 has on rod 7, it will be noted that the door may be slammed closed and such closing will not cause any movement of rods 7 or 22.

The arm 3 is actuated by a rod 22 pivoted at 23 thereto and having a knob 24 on its upper end, which knob extends above the top edge of the door 2 as shown in Fig. 1, so as to be equally accessible from the interior or exterior of the car. The rod 22 has a slot 25 in which a screw 26 secured to the door 2 is disposed, so as to assure a free sliding of the rod in a predetermined plane.

In cars of the closed type, the rod 22 remains as hereinabove described and permits of operation of the latch from the interior of the car, while for purpose of allowing operation of the latch from the exterior of the door, the outer end of rod 7 is threaded at 27 to receive a knob 28, the latter being apertured to receive a lock screw 29 adapted to be projected into a groove 30 cut into the rod 7 as depicted in Fig. 4. The screw 29 acts to prevent rotation of the knob relative to the rod 7.

From the foregoing, it will be apparent that the only requisite alteration of the car, in attachment of the invention, is the cutting of a slot in the jamb of a size sufficient to receive the keeper, following which the parts are attached with use of conventional wood screws.

Preferably, the keeper and stem 3 are made slightly tapering in the direction of their lengths so as to assure easier connection of the parts.

The object of employing two teeth 10 on the pawl is that of providing a double contact with the keeper, distributing the wear accordingly and insuring greater durability and longevity of the structure.

What is claimed is:

1. In a door latch, a spring actuated rockable latch pawl, a rocking member for unlatching the pawl, means to limit the rocking movement of said pawl, and a keeper for engagement with the pawl having an inclined part adapted to engage the pawl and rock the same independent of said member.

2. In an auto door latch, a door member having a rockable element, a spring pressed latch proper rotatable on said element, means whereby to restrict the extent of rotation of the latch on said element, a keeper engageable with the latch and having a beveled part to engage the latch and rotate the same on and independent of movement of the element, a crank arm in connection with said element, and a push rod connected to said arm and adapted to have its upper end projected above the top of the auto door.

3. In a door latch, a member for mounting on the door, a rocking element borne by said member, a spring actuated latch pawl rotatably mounted on said rocking element, means for limiting the relative rotation of the element and pawl, and a keeper for mounting on the door jamb adapted to receive said member and to rock the latch independent of said element.

4. In an auto door latch, a face plate having a hollow stem the latter provided with a central opening, a rod rotatable in said stem, a latch pawl rotatable on the stem and extending in said stem opening, a spring encircling the rod and having its ends engaged with the face plate and pawl, said pawl having a cut out in an end thereof, a screw carried by the rod and extending into said pawl cut out, said pawl having a pair of teeth, and a keeper of U-shape in cross-section having an inclined end to engage the teeth and having its top formed with a pair of slots to receive the pawl teeth.

5. In an auto door latch, a cranked latch member adapted to extend across the edge of the door, a depressible element connected to the crank and adapted for mounting on the inside of the door to actuate the latch, and a knob mounted on the latch member and adapted for disposition outside of the door to actuate the latch.

6. In an auto door latch, a rockable latch actuator, and a latch mounted on said actuator and having limited rockable movement independent thereof to allow the latch to move to full locked position without movement of the actuator.

7. In a door latch, a keeper of substantially U-shape in cross-section, adapted to be mounted in a door jamb, said keeper having one of its edges formed with a slot, and a latch adapted for mounting on a door and having a tooth movable into the slot of the keeper.

8. In an auto door latch, a face plate having a stem projecting from the front thereof, said stem having an opening, a rockable rod in the stem, a spring tensioned latch rotatable on the rod, means to limit the extent of rocking of the latch on the rod, a pair of teeth on the latch, and a keeper of U-shape in cross-section adapted to receive the stem, said keeper having its top member formed with a pair of slots to receive the latch teeth and having an end thereof beveled, the stem and keeper being longitudinally tapered.

9. In an auto door latch, a keeper having a pair of spaced slots and a rockable latch pawl having a pair of teeth projecting of

substantially right angles therefrom and receivable in said slots.

10. In a door latch, a member for mounting on the door, a rocking lever borne by the member, a spring actuated latch pawl rotatably mounted on said rocking lever, means for limiting the relative rotation of the lever and pawl, and an inclined keeper for mounting on the door jamb adapted to receive said member and formed to be engaged by the latch pawl.

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

DOCTOR FRANKLIN OLIVER.

Witnesses:
FANNIE MANDERBACH,
ANNETTE MARKHAM.