Sept. 4, 1934. E. JONES ET AL 1,972,626

AUTOMOBILE DOORLOCK

Filed May 9, 1933 2 Sheets-Sheet 1

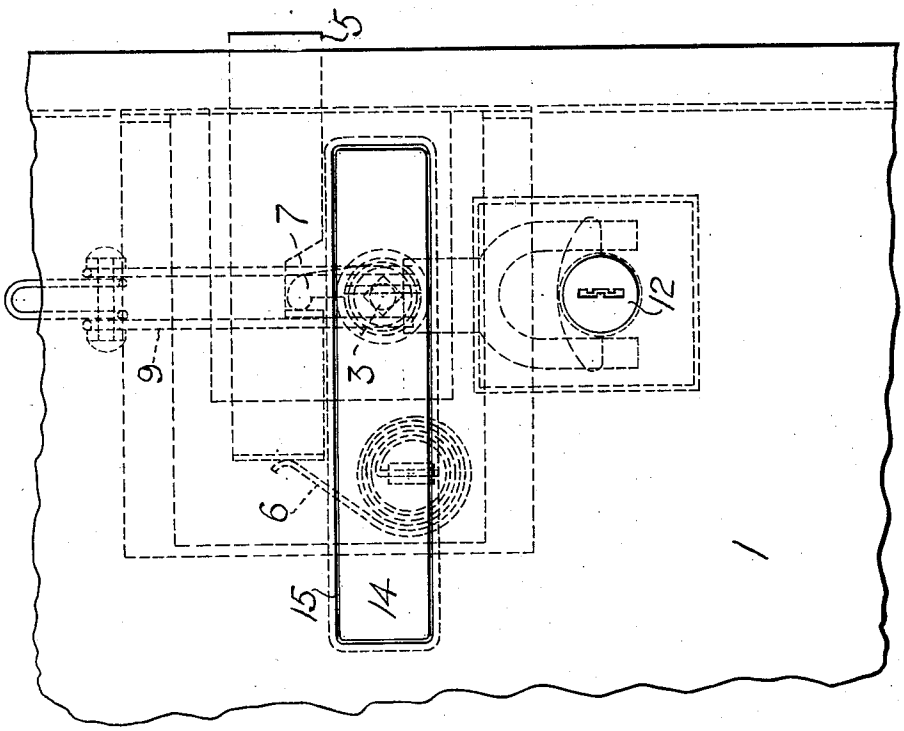


Fig. 2

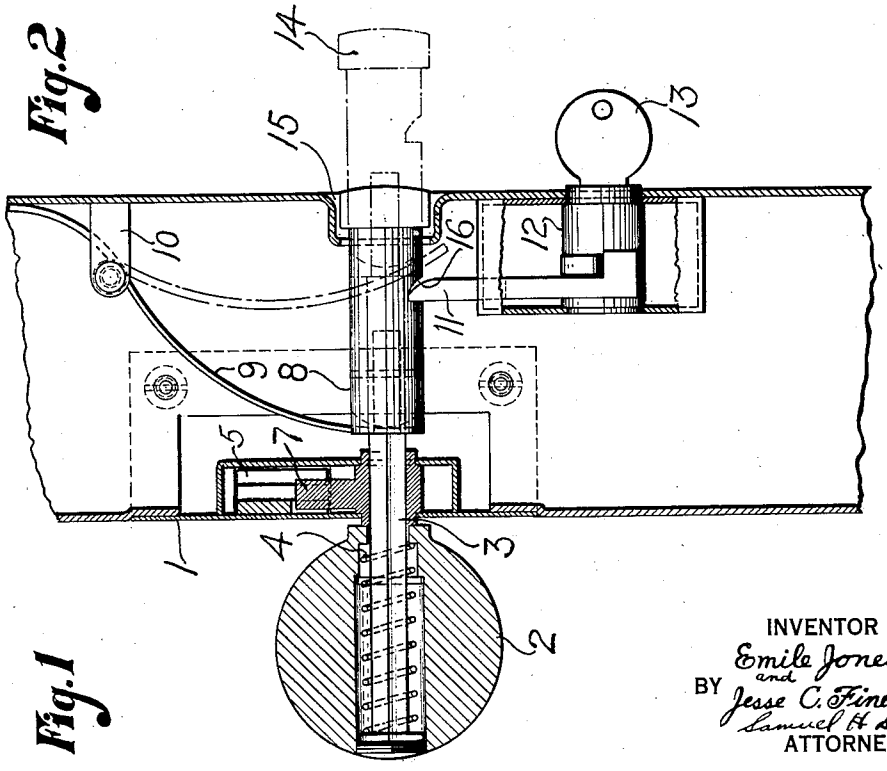


Fig. 1

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Filed May 9, 1933 2 Sheets-Sheet 2

Fig. 3

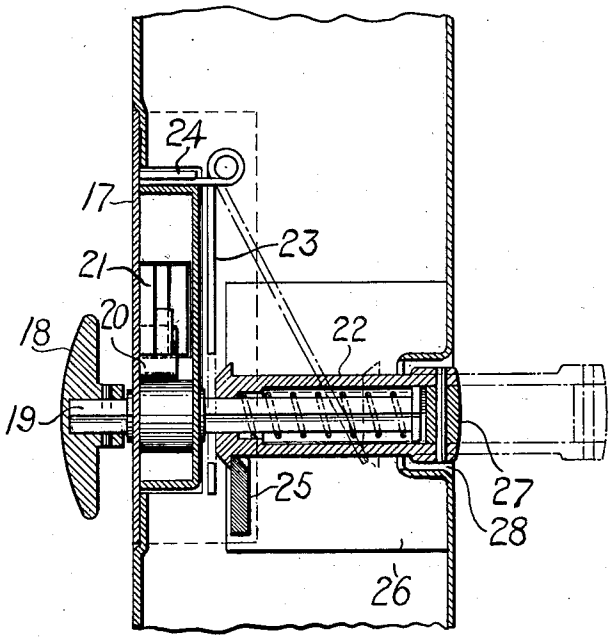
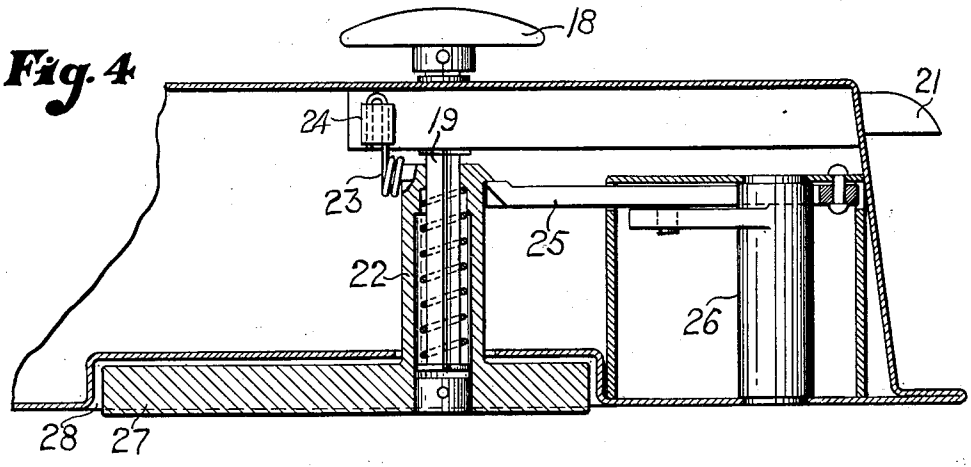


Fig. 4



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UNITED STATES PATENT OFFICE

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AUTOMOBILE DOORLOCK

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Application May 9, 1933, Serial No. 670,152

1 Claim. (Cl. 70—29)

This invention relates to automobile door locks, and has for its object the provision of means of special construction and arrangement whereby while the door may be readily opened from within by a suitable knob or the like on the inside when unlocked, but, when the door is locked there is no projecting knob or handle extending on the outside of the door within reach of any unauthorized person attempting to open the door, and it is only when the devices are unlocked that a hand piece or the projecting portion of a similar purpose and character is extended beyond the outside surface of the door.

In the accompanying drawings are illustrated the formation and disposition of the parts of this invention. Fig. 1 is a vertical cross section of a portion of an automobile door showing this invention applied thereto, all parts being assembled. Fig. 2 is a view of the same portion of the door from the outside. Fig. 3 is a vertical section of a door having applied thereto a modified arrangement of this invention, and Fig. 4 is a horizontal section of the portion of the door and showing the parts set out in Fig. 3.

Throughout the drawings and description, the same number is used to refer to the same part.

Considering Figs. 1 and 2, door 1 has a knob 2, of any chosen shape, on the inside of the door, and a squared headed rod 3 enters the knob and is movably held thereon by the coil spring 4. The squared rod may be rotated by the knob, and is movable lengthwise in the knob. A sliding latch 5 is spring pressed by the spiral spring 6, and is operated when the roll-back 7 is turned by the knob.

Movable lengthwise with rod 3 is a hollow sliding member 8, normally pressed towards the right hand by the curved spring 9 attached to the door at the place 10. The sliding member 8 is held inwardly in its position towards the knob, by the detent 11 of the lock 12, operated by the key 13. This invention is not limited to any particular lock structure or key therefor. In both Figs. 1 and 2 it will be observed that the sliding member has an arm 14 projecting from it on one side, and that the door facing on the outside of the door has a recessed seat 15 for the arm. When the detent of the lock engages notch 16 formed in the sliding member, the arm 14 is in the seat and closely contiguous to the surface of the door. It cannot be taken into the hand until the lock has been unlocked. When the lock has been unlocked the arm 14 is moved out of its recess seat into the position indicated by broken lines in Fig. 2, and the arm becomes a handle for turning the rod 3 and roll-back 7, and operating the latch 5. The spring 9 which actuates the sliding member 8 and unseats the handle arm 14 is intentionally stronger and overcomes the coil spring on the rod 3 which presses the knob towards the roll-back 7 as shown.

Considering Figs. 3 and 4, the door 17 has the knob 18 on the inside, and the knob engages the squared rod 19 which passes through the door as before. A roll-back 20 operated by the knob actuates a sliding latch 21, as in the previous description. The hollow member 22 slides on the rod, and is controlled by the spring 23 in such manner that part 22 will be forced towards the outside of the door. The spring 23 is attached at one end to the door by the holder 24. In this modified form of the invention, the detent 25 of the lock 26 engages the sliding member 22 near its inner end, and secures the member in its position towards the knob, with its operating arm 27 in the seat 28 provided for it in the outer door sheet or plate. The arm 27 cannot be grasped by the hand when it occupies its seat as illustrated in Fig. 4.

The operation of this invention in the form first described and in its modified form is the same. When the door is unlocked the knob may be turned and the door readily opened from the inside, but when the occupant has left the car and the door has been locked, it is very difficult to force the door open, as there is no projecting knob or handle to grasp. The applicant believes that this invention is not limited to the particular forms illustrated, or to any special size of the elements herein described.

Having now described this invention, we claim.

In a door lock of the character described, the combination with a door, of a rotative squared and headed rod passing into the door, a roll-back carried by the rod, a latch bolt operated by the roll-back, a knob carried by the said rod, the knob being arranged to operate the roll-back and latch from the inside of the compartment when the door is closed, a coil spring encircling the rod and acting in one direction against the head of the rod and constructed and arranged to press the knob towards the roll-back, a sliding member, the squared rod being arranged axially within the sliding member, the said member having a transverse handle arm, the door having a recess seat in its outer surface constructed to receive the handle arm, a lock for securing the sliding member in its innermost position and the handle arm in its seat, and a spring constructed and arranged to overcome the force of said coil spring and to move the sliding member and unseat the handle arm when the said member is unlocked.

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