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N. B. HURD

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DOOR LOCK

Filed March 18, 1922

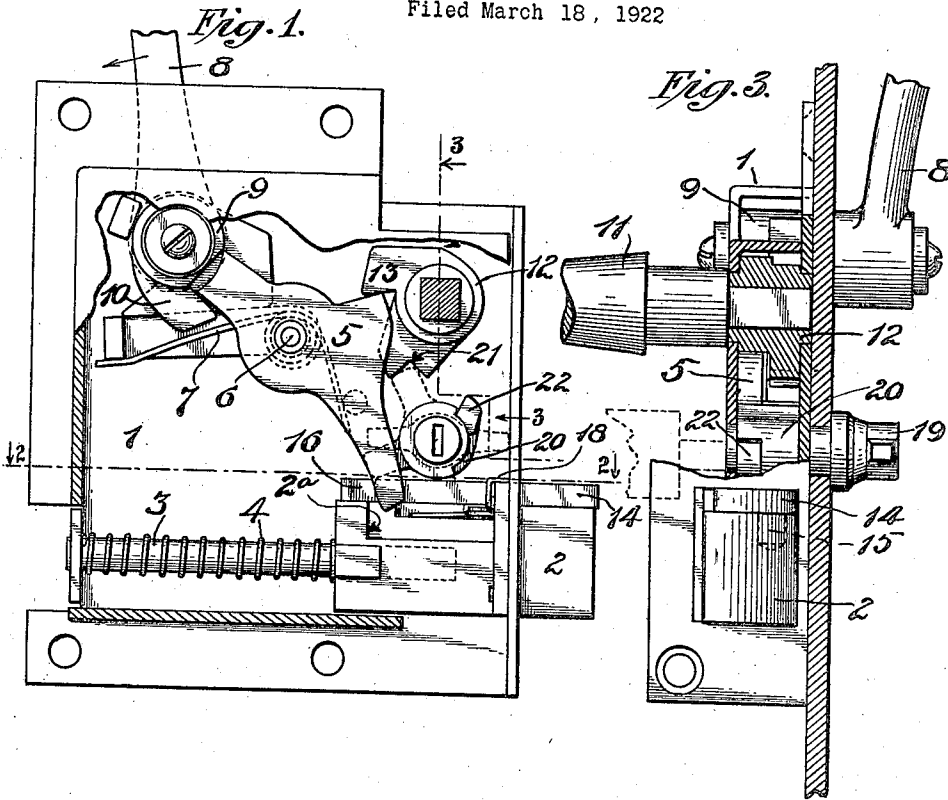
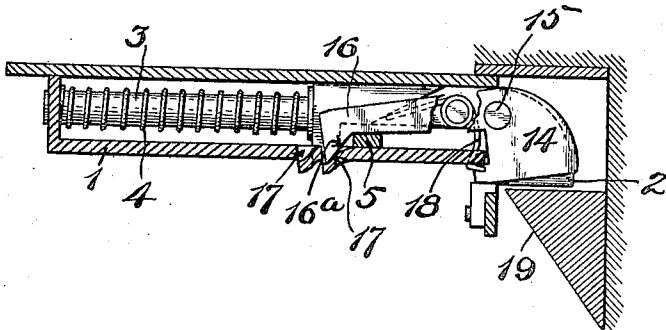


Fig. 2.



Norman B. Hurd, INVENTOR.
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UNITED STATES PATENT OFFICE.

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DOOR LOCK.

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To all whom it may concern:

Be it known that I, NORMAN B. HURD, a citizen of the United States of America, residing at New Britain, Connecticut, have invented a new and useful Door Lock, of which the following is a specification.

My invention relates to improvements in locks of a type which may be used to great advantage on doors for automobile bodies. The object is to provide a simple and efficient latch dogging means which will prevent the latch from accidentally working back and releasing the door. Another object is to provide means for effectively dogging the outside handle in the event the lock should be used on a closed car wherein it is sometimes desirable to lock the door.

In the drawings:

Fig. 1 is a side elevation of the lock case with the cap partially removed to show the internal mechanism.

Fig. 2 is a cross-section on the line 2—2 of Fig. 1.

Fig. 3 is a cross-section on the line 3—3 of Fig. 1, certain parts being shown in elevation.

1 represents a lock case or housing in which the various parts of the lock mechanism are mounted. 2 is a latch bolt head. 3 is a guide pin which extends into a hole in the rear of the latch so that the latter may slide back and forth thereon. 4 is a coil spring carried by said guide for impelling the latch bolt forwardly. 5 is a lever pivoted at 6 within the case and by which the latch 2 may be retracted. 7 is a spring for the lever 5 to normally hold it in the non-retracting position. 8 is an inside operating handle which is suitably connected to a roll back hub 9 having a roll back arm 10. When this roll back arm 10 is moved in one direction it engages the lever 5 and swings it so as to retract the latch bolt 2. The lever 5 may also be operated, if desired, by an outside handle 11 which is connected with another roll back hub 12 having a roll back arm 13 cooperating with the lever 5 to retract the latch. Mounted directly on one edge of and carried by the latch 2 is what I may term a latch dog comprising a head 14 pivoted at 15 on the latch bolt head 2. 16 is an arm extending rearwardly from the head 14 and having a nose which is adapted to engage in a notch 17 in the side wall of the latch case.

18 is a spring for normally moving said dog in the dogging direction.

When the parts stand as in Fig. 2, it will be seen that the latch 2 cannot work back or be pressed back until the dog is released. When the door is being closed, the projection 14 first strikes against the strike plate 19 which causes the same to tilt and release the dog so that the following engagement of the beveled side of the latch bolt head with said strike plate will cause the latter to slide back so that when said door is fully closed it may snap into place in the keeper slot in the usual manner. If the door is closed and it is desired to open the same the lever 5 may be rocked by either of the aforesaid handles 8 or 11. The lower end of the lever 5 first engages the beveled or inclined plane portion 16^a of the arm 16 adjacent to the nose so as to first tilt the dog and release the latch after which said lever engages the shoulder 2^a on the latch bolt 2 and draws the same back.

I also provide dogging mechanism for the outer knob which comprises a thumb-turn 19 or equivalent device at the inside of the door. This thumb-turn is connected with a roll back arm 20 within the lock which when the parts stand as shown in the solid lines, Figs. 1 and 3, will leave the roll back arm 13 free so that the door may be unlocked by the outside handle 11. If, however, the thumb-turn 19 is turned so as to throw the arm 20 into the position indicated in dotted lines, it will engage in a notch portion 21 on the roll back hub 12 as shown, and thereby block the arm 13 so that the door cannot be opened by the outside handle 11 until this stop is thrown off. If desired, a supplemental key controlled roll back 22 may be mounted at the end of the roll back 20 so as to have limited rotary movement. I have indicated conventionally in dotted lines, Fig. 3, an ordinary cylinder lock with a flat spindle extending into a slot in the supplemental roll back 22. By turning this supplemental roll back the dogging roll back 20 may be thrown off. The limited lost motion in the supplemental roll back permits the latter to be restored to its normal position shown in Fig. 1 so that the key may be removed in the customary manner.

What I claim is:

In a lock, a case, a spring latch bolt slid-

able therein, a dog mounted for movement upon and carried by the latch, the outer end of said dog normally projecting beyond the beveled face of the latch bolt to be engaged by a strike plate in advance of said bolt, an abutment on the inner wall of the case, the inner end of said dog being ar-

ranged to normally engage the said abutment when the bolt is projected, means for retracting the latch, said means cooperating with the inner portion of said dog to disengage the same from said abutment preparatory to retracting the latch.

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