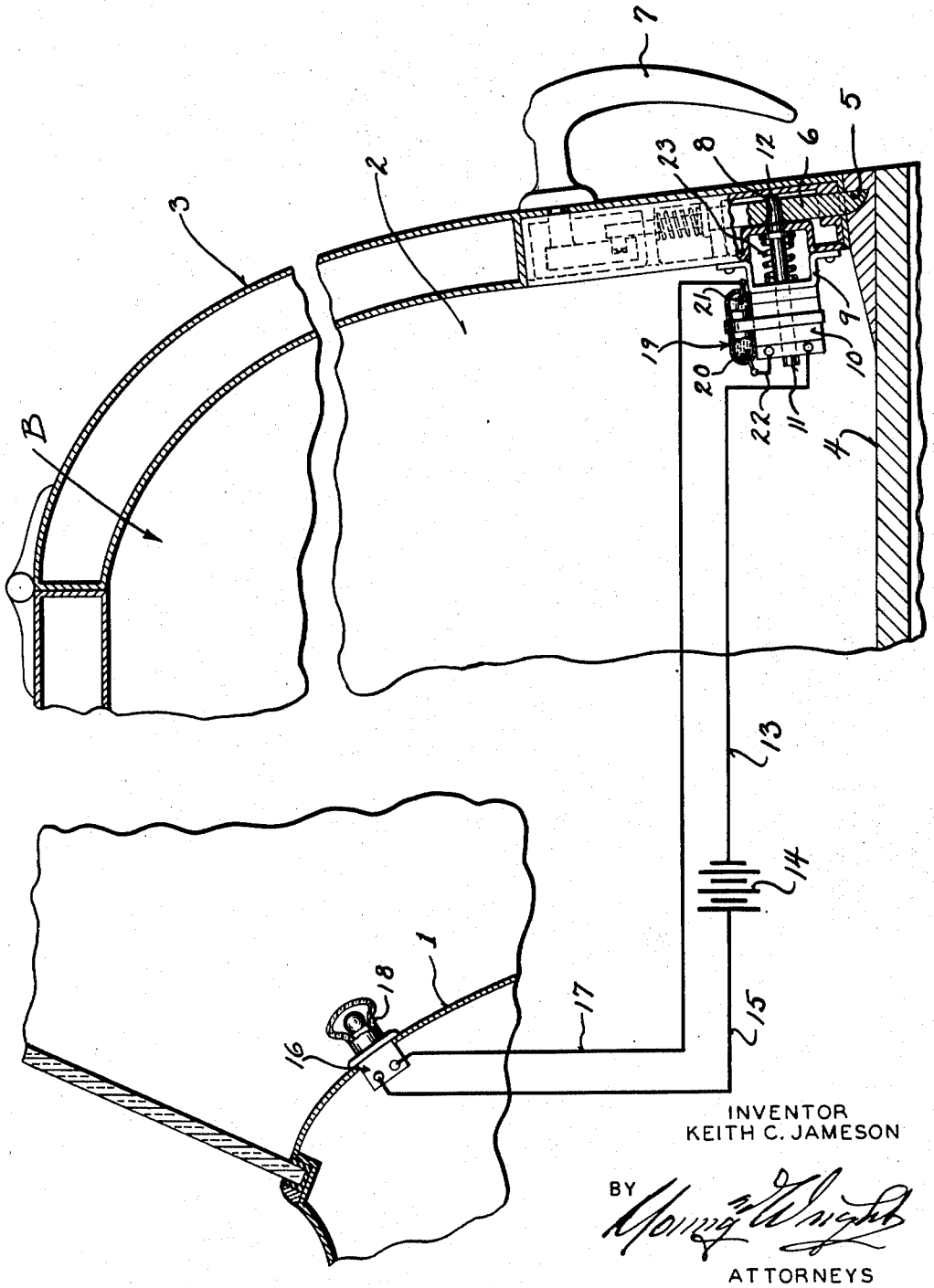
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AUTOMOBILE TRUNK LOCK

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AUTOMOBILE TRUNK LOCK

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This invention appertains to locks and latches, and more particularly to a novel lock for the cover of an automobile trunk.

It is customary in automobiles to provide a key operated lock for the operating handle of the cover of the trunk compartment. Much difficulty has heretofore been encountered with the use of such locks, particularly in winter in that the locks often freeze up, preventing the operation of the lock by the key.

One of the primary objects of my invention is to provide means for effectively preventing unauthorized operation of the handle for the trunk latch bolt, without the use of an exposed key operated lock, whereby the inconveniences encountered with the use of a key operated lock are eliminated.

Another salient object of my invention is to provide the trunk latch bolt with a keeper opening and to provide a movable pin engageable in said opening whereby to prevent normal actuation of the bolt, with means including a solenoid or magnet for withdrawing the pin from the bolt upon the energizing of an electric circuit, so that, thereafter, the trunk latch bolt can be actuated by the handle.

A further object of my invention is to provide means for closing the circuit through the solenoid by means of a switch conveniently located to the driver's seat of the automobile and arranged within the automobile, whereby upon the locking of the doors of the automobile, access to the switch by unauthorized persons will be prevented.

A further object of my invention is to provide means for automatically opening the circuit upon the raising of the trunk cover, so as to prevent undue use of the automobile storage battery during the loading and unloading of the trunk.

A further object of my invention is to provide an improved device of the above character, which will be durable and efficient in use, one that will be simple and easy to manufacture and one which can be placed upon the market and incorporated with an automobile at a low cost.

With these and other objects in view, the invention consists in the novel construction, arrangement and formation of parts, as will be hereinafter more specifically described and claimed, and illustrated in the accompanying drawing which is a fragmentary longitudinal sectional view through an automobile showing my improved device incorporated therewith.

Referring to the drawing in detail, the letter B generally indicates an automobile body.

The automobile body B can be of any preferred

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type or make, and forms no part of the present invention, and hence will not be described in minute detail. It is to be seen, however, that the body is provided with the usual instrument panel, and a trunk compartment, normally closed by a hinged cover 3. The floor 4 of the body B is provided at its rear end and in the trunk compartment 2 with a keeper socket 5 for a sliding latch bolt 6. The latch bolt 6 is operated through a rotatable handle 7. This handle 7 is also employed, after the raising of the bolt 6 from out of engagement with its keeper socket 5 for lifting the cover 3.

In accordance with my invention the latch bolt 6 is provided intermediate its ends with a keeper opening 8 and the entrance mouth to the keeper opening can be flared, if such should be desired.

Secured to the inner face of the cover 3 adjacent to its lower end, by means of a bracket 9, is a solenoid 10. The core 11 of the solenoid is pulled back and inwardly upon the energizing of the solenoid and the forward end of the core is provided with a latch pin 12, which is adapted to fit within the keeper opening 8, under normal conditions. Obviously, when the keeper pin 12 is in the keeper opening 8, actuation of the latch bolt 6 is prevented.

To permit the energizing of the solenoid 10, a feed wire 13 is connected to a source of electrical energy, such as the automobile storage battery 14, and this wire 13 is electrically connected to one terminal of the coil of the solenoid. A return wire 15 is connected to the other side of the battery 14 and this wire leads to one terminal of a control switch 16, which has been shown more or less diagrammatically. The other terminal of the switch 16 has connected thereto a conductor wire 17. The switch 16 is of a type found in the open market and includes a rotatable switch knob 18, which can be illuminated upon the closing of the switch. The switch 16 can be located at any convenient point within the automobile but preferably on the instrument panel, in front of the driver's seat. Secured to the bracket 9 or to the solenoid 10, as shown, is a mercury switch 19. This switch is also of a type which can be purchased in the open market and includes spaced terminals 20 and 21, which are bridged by the mercury (in this instance) when the cover 3 is in a lowered position. When the cover 3 is in a raised position, the mercury flows away from one of the terminals in order to break the circuit. The wire 17 is connected to the terminal 21 and the terminal 20, has electrically connected there-

to a conductor wire 22, which leads to the other terminal of the solenoid 10.

In operation of the improved device, and considering that the cover 3 is in its lowered position with the latch bolt 6 in its keeper socket 5, with the latch pin 12 in the keeper opening 8, and it is desired to gain access to the trunk compartment, the switch knob 18 is turned in a direction to close the circuit through the solenoid 10 and upon the energizing thereof, the latch pin 12 will be withdrawn from the latch bolt 6, against the tension of an expansion spring 23. The handle 7 can now be turned for raising the latch bolt 6 and the cover 3 can be swung open. As soon as the cover is swung open, the circuit will be automatically broken by the mercury switch 19 and hence the consumption of current during the loading and unloading of the trunk is eliminated. The latch pin 12 is held in its retracted position, due to the fact that the outer end thereof will engage against the inner face of the latch bolt 6. Upon the lowering of the cover 3 the circuit will be again automatically closed by the mercury switch. Upon the turning of the switch knob 18 to break the circuit, the latch pin 12 will be automatically returned to the keeper socket 8 by the spring 23.

From the foregoing description, it can be seen that I have provided an exceptionally simple and novel device for preventing the unauthorized opening of a trunk without the use of a key operated lock.

Changes in details may be made without departing from the spirit or the scope of this invention, but what is claimed as new is:

1. A device for preventing unauthorized operation of a latch bolt for the hinged cover of an automobile trunk compartment of the type having a handle for raising and lowering the hinged cover and for moving the latch bolt out of and into a keeper socket comprising; a solenoid carried by the inner face of the trunk cover adjacent to its lower end, a core for the solenoid, a latch pin integral with the inner end of the reciprocating core of the solenoid, said latch bolt having a transverse keeper opening therethrough of a size and configuration to receive the latch pin therein, a spring about said solenoid core for resiliently holding the latch pin in the keeper opening, and means for closing a circuit through the solenoid from the interior of the automobile for withdrawing the pin from the keeper opening upon the energizing of the solenoid.

2. A device for preventing unauthorized operation of a latch bolt for the hinged cover of an automobile trunk compartment of the type having a handle for raising and lowering the hinged cover and for moving the latch bolt out of and into a keeper socket comprising; a solenoid carried by the inner face of the trunk cover adjacent to its lower end, a core for the solenoid, a latch pin integral with the inner end of the reciprocating core of the solenoid, said latch bolt having a transverse keeper opening therethrough of a size and configuration to receive the latch pin therein, a spring about said solenoid core for resiliently holding the latch pin in the keeper opening, means for closing a circuit through the solenoid from the interior of the automobile for withdrawing the pin from the keeper opening upon the energizing of the solenoid, and means for automatically breaking the circuit through the solenoid upon the raising of the cover.

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