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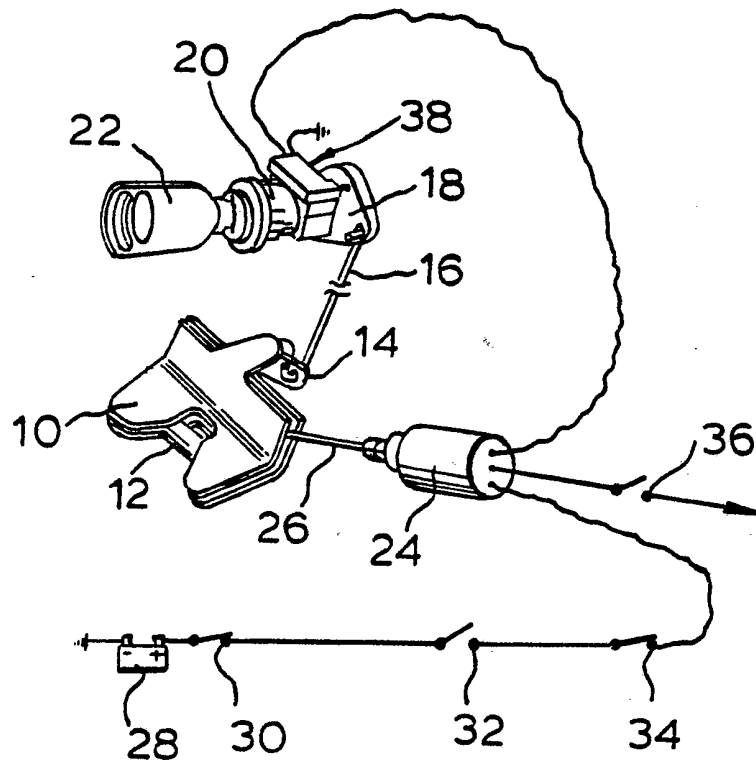
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None

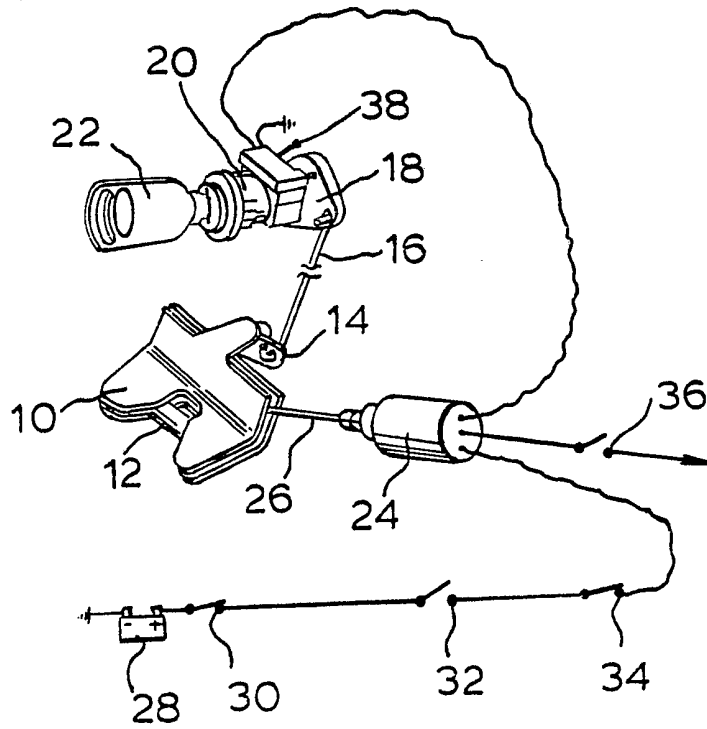
(58) Field of search
E2A

(54) Lock arrangement

(57) In a vehicle having a central locking system, the boot lid or tailgate is openable at all times, when a key 22 is inserted in the lock and turned, a link 16 opening the tongue 12 of a latch 10. Also, when the central locking system is "unlocked", the latch can be opened by using the end of the lock 20 as a push button to operate a microswitch 38 which actuates a solenoid 24 to open the latch.



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SPECIFICATION

Lock arrangement

5 This invention relates to a lock arrangement for locking the rear closure of a motor vehicle which has a central locking system. The rear closure may be closed by a tailgate or a boot lid.

10 According to the present invention, there is provided a lock arrangement for locking the rear closure of a vehicle which has a central locking system, the arrangement comprising a latch for holding the closure closed, a lock, a
15 mechanical link between the lock and the latch so that when a key is inserted in the lock and turned, the latched is released through the mechanical link, and a switch operable from outside the vehicle, the switch being
20 connected in an electrical circuit with a solenoid arranged to release the latch, the switch being enabled when the central locking system is "unlocked".

When the central locking system is "locked" the latch can be released by means of the mechanical connection, using a key in the lock. When the central locking is "unlocked" the latch can be opened by operating the switch which allows current to pass to the solenoid to release the latch.

30 In one convenient embodiment, the switch can be a micro-switch associated with the lock, and a particularly advantageous embodiment has the micro-switch arranged so that it is operated by pressure on the end of the lock barrel.

The same solenoid can also be powered from a dash board mounted switch when the central locking system is "unlocked".

40 The invention will now be further described, by way of example, with reference to the accompanying drawing which is a schematic representation of a lock arrangement in accordance with the invention.

45 *Figure 1* shows a latch 10 with a movable tongue 12 which closes the latch. The tongue 12 is provided with an arm 14 connected to a link 16 which in turn is connected to a lever plate 18. The lever plate 18 is mounted at the
50 end of a lock cylinder 20 which receives a key 22 in the usual way. When the central locking system is "locked" and the key 22 is inserted in the cylinder 20, and turned, the lever plate 18 turns lifting the link 16 and the arm 14 so
55 that the tongue 12 opens.

The tongue 12 can also be opened by an electrically driven solenoid 24 when the central locking system is "unlocked". This solenoid has a rod 26 connected to the tongue
60 12 and when the rod 26 is retracted by operation of the solenoid, the tongue 12 is opened.

The solenoid can be operated in one of two ways. A first operating circuit includes the
65 vehicle battery 28 and a switch 30 which is

closed when the vehicle engine has stopped and open when the engine is running, so that the blocking system cannot be operated whilst the engine is running. Additionally there is a
70 switch 32 which is closed when the central locking is "unlocked". Then there is another switch 33 which is a security switch located in the load compartment and which can be opened and closed at will by the vehicle user.
75 This switch will be opened to provide a higher degree of security against burglary than would otherwise be the case. Fourthly there is a switch 36 which will be mounted on the vehicle dashboard. When the engine is
80 stopped and the central locking system is "unlocked", operation of the switch 36 will release the tongue 12 of the latch 10 and the boot lid or tailgate will open.

Alternatively, with of the switches 30, 32 and 34 in the same positions, a micro-switch 48 can be operated from outside the vehicle to open the boot lid or tailgate. This switch is operated by pressure on the end of the lock cylinder 20 (normally without the key 22
90 being in place) so that the switch contacts in the switch 38 are closed to complete a circuit which will operate the solenoid 24 and release the latch.

95 CLAIMS

1. A lock arrangement for locking the rear closure of a vehicle with a central locking system, the arrangement comprising a latch for holding the closure closed, a lock, a mechanical link between the lock and the latch
100 so that when a key is inserted in the lock and turned, the latch is released through the mechanical link, and a switch operable from outside the vehicle, the switch being connected in an electrical circuit with a solenoid
105 arranged to release the latch, the switch being enabled when the central locking system is "unlocked".

2. An arrangement as claimed in Claim 1, wherein the switch is associated with the lock.

3. An arrangement as claimed in Claim 1, wherein the switch is mounted in line with the lock so that pressure on the lock at the position of the keyhole operates the switch.

4. An arrangement as claimed in any preceding claim, wherein the electrical circuit includes a second switch that is only closed when the vehicle engine is not running.

5. An arrangement as claimed in Claim 4, wherein the electrical circuit includes a third switch provided as a security measure and located inside the vehicle.

6. An arrangement as claimed in any preceding claim, including a fourth switch operable from inside the vehicle and connected in an electrical circuit with the solenoid, in parallel with the first switch.

7. A lock arrangement substantially as herein described with reference to the accompanying drawing.

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