(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 372 791 A2**

(12) EUROPEAN PATENT APPLICATION

(21) Application number: **89312334.9**

(51) Int. Cl.5: **E05B 49/00**

(22) Date of filing: **28.11.89**

(30) Priority: **06.12.88 GB 8828416**

(43) Date of publication of application:
13.06.90 Bulletin 90/24

(84) Designated Contracting States:
DE FR GB IT

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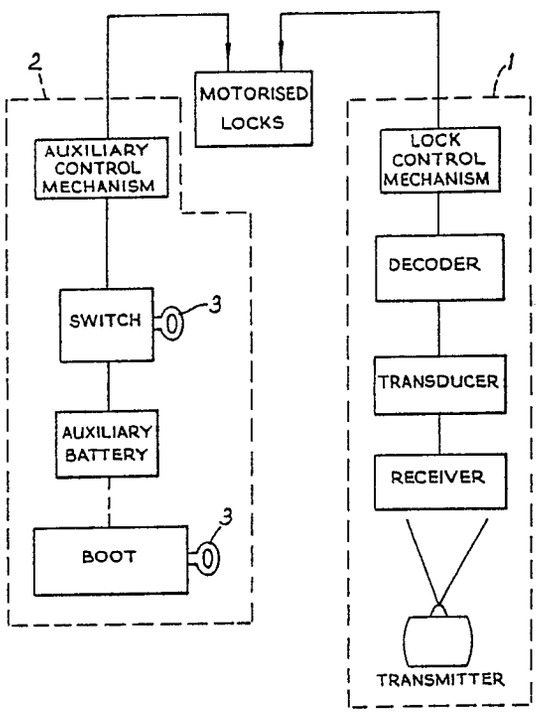
(54) A vehicle and locking system.

(57) The invention provides a vehicle and locking system therefor. The locking system includes central door lock actuating means (1) operable externally of the vehicle only by a signal from a remote transmitter and having a first power source, eg first battery, and auxiliary door lock actuating means (2) operable from a position remote from the doors, eg in the vehicle boot, and having a second power source, eg second battery, to unlock, separately from the central door lock actuating means (1), at least one door of the vehicle; the second battery being kept charged independently of the first battery.



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A VEHICLE AND LOCKING SYSTEM

This invention relates to a vehicle and locking system therefor and in particular to a vehicle locking system for a vehicle on which the doors may be centrally locked on receipt of a signal from a transmitter held by a user.

Vehicles having central door locking rely upon a power source, usually the vehicle battery, to actuate locks on each door. To date, if the power source has failed for any reason, manually operable means adjacent one of the door handles has been necessary to override the central locking actuation and release the door lock to enable the latch to be operated and entry to be gained to the vehicle.

It is a disadvantage with such known systems that the manually operable means on the door or doors reduces security of the vehicle by providing an opportunity for the lock to be forced from outside the vehicle.

It is an object of the invention to overcome disadvantages of the prior art.

According to a first aspect of the invention there is provided a vehicle locking system including central door lock actuating means operable externally of the vehicle only by a signal from a remote transmitter and having a first power source, and auxiliary door lock actuating means operable from a position remote from the doors and having a second power source to unlock, separately from the central door lock actuating means, at least one door of the vehicle.

Increased vehicle security is thus provided.

The central door lock actuating means may be operable by any suitable type of signal, for example infra red or a sonic signal. The signal is preferably coded.

The auxiliary door lock actuating means may be key operated, for reliability, and preferably by a high security key.

According to a second aspect of the invention there is provided a vehicle incorporating a locking system according to the first aspect of the invention.

For additional security and for reasons of weather protection, the auxiliary door lock actuating means may be located in a lockable compartment within the vehicle, for example within the boot. For simplicity the compartment may be unlocked by the same key used to operate the auxiliary door lock actuating means.

It will be appreciated that the auxiliary door lock actuating means may also be used for vehicle systems other than door locking; for example a vehicle alarm, a boot interior release or any other security operating system.

The second power source may be a second battery which may be kept charged for example by charging means in an electrical system for the vehicle independently of the first power source or main battery.

Preferably the doors have no keyholes.

The invention will now be more particularly described with reference to a preferred embodiment thereof as illustrated in the accompanying schematic drawing showing the components and procedural steps involved in a vehicle locking system according to the invention.

Referring to the drawing, central door lock actuating means 1 operated by a signal from a hand held transmitter is connnected to a motorised door lock on each door in parallel with auxiliary door lock actuating means 2.

In normal use the door locks are actuated by the central door lock actuating means 1 by means of a coded infra red signal from the hand held transmitter. The coded infra red signal is received by one or more receivers positioned wherever desired on the vehicle. These may be positioned on the doors, for example, or a single receiver may be positioned in a suitably visible position within the vehicle. The coded infra red signal then passes from the receiver to a transducer where it is converted into a coded electrical signal which passes to a decoder. The decoder is positioned on the vehicle such that it, and a lock control mechanism to which its decoded signal passes, are inaccessible to unauthorised tampering. The positioning and routing is also arranged such that it is made difficult to intercept a signal sent from the control mechanism to the lock.

Should the central door lock actuating means 1 be unusable for any reason, for example because of a flat battery or because of component failure, the auxiliary door lock actuating means 2 may be used. Access is gained to the auxiliary means 2 by unlocking the vehicle boot with a high security key 3 and then using the same key 3 to operate the auxiliary means 2. The auxiliary means 2 is powered by an auxiliary battery housed in the boot and kept charged by the vehicle alternator. The auxiliary battery is housed in an accessible position in the boot for charging or for replacement in the event of failure. It will be appreciated that access to the auxiliary battery does not render the auxiliary means 2 non secure as operation is still dependant upon use of the high security key 3.

Rotation of the key 3 sends a signal to the auxiliary control mechanism which actuates motorised locks on two front doors of the vehicle to allow entry into the vehicle to be gained.

Removal of the key 3 will automatically actuate the motorised locks to re-lock the front doors and render the vehicle secure in case it has not been possible to restore operation of the central door lock actuating means 1.

Claims

1. A vehicle locking system including central door lock actuating means (1) operable externally of the vehicle only by a signal from a remote transmitter and having a first power source, and auxiliary door lock actuating means (2) characterised in that the auxiliary door lock actuating means (2) is operable from a position remote from the doors and has a second power source to unlock, separately from the central door lock actuating means (1), at least one door of the vehicle.

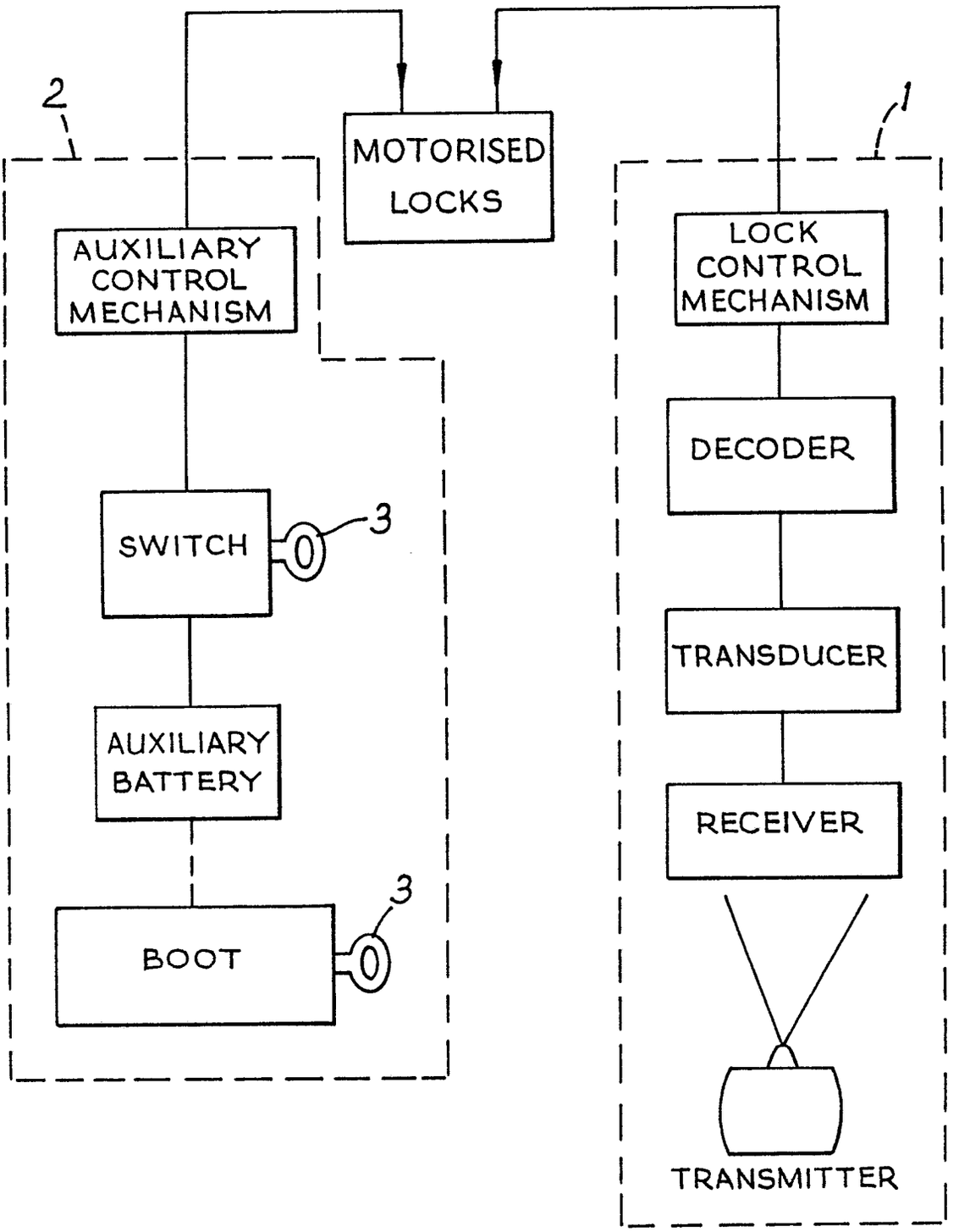
2. A vehicle locking system as in claim 1, wherein the central door lock actuating means (1) is operable by infra red coded signal.

3. A vehicle locking system as in claim 1 or 2, wherein the auxiliary door lock actuating means (2) is key (3) operated.

4. A vehicle incorporating a locking system as in claim 1, 2 or 3, wherein the auxiliary door lock actuating means (2) is located in a lockable compartment within the vehicle.

5. A vehicle as in claim 4, wherein the second power source is a second battery kept charged independently of the first power source by charging means in an electrical system for the vehicle.

6. A vehicle as in claim 4 or 5, wherein doors thereof have no keyholes.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1
MOTORISED LOCKS
AUXILIARY CONTROL MECHANISM
LOCK CONTROL MECHANISM
DECODER
SWITCH
3
TRANSDUCER
AUXILIARY BATTERY
RECEIVER
3
BOOT
TRANSMITTER