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Aktenzeichen / Case Number / N^o du recours : T 37/89 - 3.2.2

Anmeldenummer / Filing No / N^o de la demande : 83 100 251.4

Veröffentlichungs-Nr. / Publication No / N^o de la publication : 0 084 351

Bezeichnung der Erfindung: Electronic door locking system for an automatic
Title of invention: vehicle
Titre de l'invention :

Klassifikation / Classification / Classement : E05B 49/00

ENTSCHEIDUNG / DECISION

vom / of / du 23 April 1990

Anmelder / Applicant / Demandeur : NISSAN MOTOR COMPANY, Ltd.

Patentinhaber / Proprietor of the patent /
Titulaire du brevet :

Einsprechender / Opponent / Opposant :

Stichwort / Headword / Référence :

EPO / EPC / CBE Article 56

Schlagwort / Keyword / Mot clé : "Inventive step (yes); - generalisation of a
specific feature was not allowed"

Leitsatz / Headnote / Sommaire



Case Number : T 37/89 - 3.2.2

D E C I S I O N
of the Technical Board of Appeal 3.2.2
of 23 April 1990

Appellant : Nissan Motor Company, Ltd.
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Representative : Ter Meer-Müller-Steinmeister & Partner
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Decision under appeal : Decision of Examining Division 109
of the European Patent Office
dated 1 July 1988 refusing European
patent application No. 83 100 251.4
pursuant to Article 97(1) EPC

Composition of the Board :

Chairman : G. Szabo
Members : C. Andries
L. Mancini

Summary of Facts and Submissions

- I. European patent application No. 83 100 251.4, filed on 13 January 1983 (publication number: 0 084 351), was refused by a decision of the Examining Division 109 dated 1 July 1988.

The decision was based on Claim 1 filed with letter dated 24 February 1988 and Claims 2 to 8 filed with letter dated 9 December 1987.

- II. The reason given for the refusal was that in view of the prior art disclosed in

D1: EP-A-2948; and in

D2: WO-A-80/01477

the subject-matter of Claim 1 did not involve an inventive step (Article 56 EPC).

- III. The Appellant lodged an appeal against this decision on 30 August 1988, paying the appropriate fee on the same date. The statement of grounds was submitted on 2 November 1988.

- IV. In reply to communications of the Board, the Appellant submitted

- with a letter dated 13 March 1990: a new Claim 1 and modified pages 2 and 3 of the description;

- with a letter dated 4 October 1989: new Claims 2 to 4, modified pages 13 and 15 of the description and an amended sheet 1/1 of the drawing.

Claim 1 reads now as follows:

"An electronic door locking/unlocking system for an automotive vehicle for locking/unlocking vehicle doors, said system comprising:

- inputting means (10a-10e, 11, 12, 13)
 - for inputting at least one locking coded number and for outputting locking code signals corresponding thereto,
 - and for inputting a sequence of unlocking coded numbers and for outputting unlocking code signals corresponding thereto,
- means (2) for generating a locking command signal in response to the locking code signals outputted from said input means, as soon as the at least one locking coded number is inputted correctly,
- means (1) for generating an unlocking command signal in response to the unlocking code signals outputted from said inputting means, as soon as the sequence of unlocking coded numbers is inputted correctly,
- means (3) responsive to said locking command signal for locking the unlocked vehicle doors, and responsive to said unlocking command signal for unlocking the locked vehicle doors,
- an unsafe-park detecting means section (4) detecting whether the parking brake has not been actuated or the gear shift lever has not been set to its park position, and developing an unsafe-park signal in case that at least one of these unwanted conditions is fulfilled,

- means (27) for disabling said locking command signal for preventing the doors from being locked if said unsafe-park signal is provided, and
- means (39 + 40) for outputting an alarm if said unsafe-park signal and said locking command signal are both provided commonly."

V. The Appellant requested that the decision under appeal should be set aside and that a patent should be granted on the basis of the following documents:

- Claims: Claim 1 filed with letter dated
 13 March 1990;
 Claims 2 to 4 filed with letter dated
 4 October 1989;
- Description: pages 2 and 3 filed with letter dated
 13 March 1990;
 pages 4 (starting from line 2) to 10, 12
 and 14 as published;
 pages 11 and 16 filed with letter dated
 9 December 1987; and
 pages 13 and 15 filed with letter dated
 4 October 1989;
- Drawing: sheet 1/1 filed with letter dated
 4 October 1989.

Reasons for the Decision

1. The appeal is admissible.

2. Amendments

2.1 Present Claim 1 is supported by the combination of the originally filed Claims 1, 4 and 5 and by the description (page 11, lines 11 to 17 and page 12, line 23 to page 13, line 7).

The alarm outputting means are disclosed in a detailed and unambiguous manner, not only in the description but also in the drawing (sheet 1/1), showing the circuit configuration of the electronic door locking system.

2.2 Claims 2 to 4 are supported respectively by the originally filed Claims 2, 6 and 7.

2.3 The amendments in the description relate, apart from the correction of clerical errors, to an adaptation of the description to the newly filed Claim 1, to the object of the invention and to the description of the state of the art. These amendments do not give rise to any objection.

2.4 The modification of the drawing (output signal from the second timer 28 is used to reset the second RS-FF 27) is unambiguously supported by the originally filed description (page 10, lines 6 to 10).

2.5 The application, therefore, complies with Article 123(2) EPC.

3. One-part form of Claim 1

Although it would be theoretically possible to have Claim 1 in the two-part form (Rule 29(1) EPC), the Board is of the opinion that in the present case the one-part form of the claim is appropriate, particularly since the system as defined in Claim 1 has to be considered as a control circuit entity, wherein an artificial separation between

the constituting features is not appropriate and not useful for the good understanding of the system.

4. Novelty

After examination of the cited documents, the Board is satisfied that none of them discloses an apparatus having all the features as defined in Claim 1.

Indeed, document EP-A-62 851 (D3), which has to be considered as comprised in the state of the art in accordance with Article 54(3) and (4) EPC, discloses an analogous electronic door locking system in which the vehicle doors cannot be locked when the ignition key is left in the ignition keyhole. There is, however, no disclosure in this document D3 that means are provided to detect whether the parking brake has not been actuated or the gear shift lever has not been set to its park position. The other cited documents do not disclose such means either.

Therefore, the subject-matter as set forth in Claim 1 is to be considered novel within the meaning of Article 54 EPC.

5. Closest state of the art

- 5.1 The Board considers the vehicle securing and lockout prevention system according to document D2 as the closest state of the art. The system is designed to prevent the lockout of the operator (if the key remains in the ignition), and to automatically secure the vehicle and its accessories when the operator and occupants exit by opening and closing doors (only if the key is removed from the ignition and if a door is opened and closed in sequence,

but without any further action taken by the operator) shutting down thereby all vehicle accessories.

The system comprises, according to Claim 2 (document D2), coding means (an encoded key device, such as a magnetically encoded card, or other coded input to a selector/detector circuit. The coded card also provides access to the vehicle); detecting and identification means for producing an enabling signal; enabling means for enabling the operation of the ignition system and accessories of the vehicle, such as the horn, door locks, door windows, antenna, ignition enable, roof window, hood and trunk release, and inhibiting circuits on mechanical elements therefor; securing means automatically securing the vehicle and its accessories; and door unlocking means including a horn (Claim 11) both activated when the vehicle door is opened and closed while the key is positioned in the ignition switch (avoiding thereby a lockout of the operator).

5.2 Although Document D1 describes a keyless locking and entry system using a digital access code by sequential operation of a digital keyboard mounted on the outside of the vehicle, it neither discloses an unsafe-park detecting means nor the corresponding disabling and alarm outputting means. In view of these differences, the system according to document D1 cannot be considered as the closest prior art.

6. Problem and solution

6.1 Document D2 describes a control circuit which does not allow the locking of the doors when the ignition key or a coded card (when a keyless vehicle is present) is left in the ignition or card reader respectively, so that the vehicle may be re-entered after the operator departs from

the vehicle (lockout prevention system). The lockout prevention system will automatically not only unlock the locked doors, but also blow the horn when the unwanted condition is present. However, the door can also be locked under otherwise unsafe conditions.

- 6.2 It may become important that the door can be locked only after the vehicle has been kept parked in a safe state. The expression "safe state" was explained in the present description as a situation wherein all the vehicle doors have been perfectly closed and/or the parking brake has been actuated or the gear shift lever has not been set to its park position. The last two conditions should prevent the parking of a vehicle in such a manner that it could roll away and thereby cause an accident.
- 6.3 The technical problem to be solved in respect of document D1 therefore consists in providing a keyless electronic door locking/unlocking system for an automatic vehicle providing additional and improved security measures.
- 6.4 The so-defined problem differs from the originally disclosed object of the invention (page 3, lines 2 to 10) in that it does not contain pointers to the solution, i.e. doors can be locked only after the vehicle has been kept parked in a safe state (cf. T 229/85 "Etching process/SCHMID", OJ EPO 1987, 237).
- 6.5 The problem is solved by the features mentioned in Claim 1, particularly by the unsafe-park detecting means section as defined in Claim 1, as well as by the disabling and alarm outputting means connected to this section.

7. Inventive step

- 7.1 The available prior art discloses a number of measures either for preventing a vehicle from being stolen, or for avoiding in the emptied vehicle, while closing a door, the presence of features enabling the functioning of that vehicle, as for example the ignition key, a coded card, etc.

None of the cited documents indicates or suggests measures to prevent a parked vehicle from rolling away. A person skilled in the art could, therefore, not be led by the available prior art to add, to the known system, means taking account of the specific conditions (parking brake not actuated or gear shift lever not being set to its park position) defined in Claim 1, to prevent the doors from being locked.

The idea of taking into account these conditions in a system to prevent the doors from being locked also supports the presence of an inventive step. It is only by knowing the solution that it becomes clear for a person skilled in the art that it is indeed possible to add the claimed safety device into the known system.

- 7.2 The impugned decision generalised the disclosure of document D2 in a manner which cannot be followed by the Board. Indeed, in the second and third complete paragraph on page 4 of the impugned decision, it is stated that the signal generated to prevent the locking of the vehicle does not solely depend on the ignition key signal, but that it may depend on other signals, so "that it is clear that any unwanted condition can be used to generate the lockout preventing signal". This argumentation is said to be supported by page 3, second complete paragraph of document D2.

The Board, however, disagrees with the interpretation of the cited passages. The first complete paragraph (page 3, lines 8 to 14) only indicates as a door unlocking condition the presence of an ignition key (lines 8 to 11) or, if a keyless vehicle is used, the presence of a coded card (lines 11 to 14). Both ignition key or coded card are features allowing the functioning of the motor. This paragraph clearly defines only one single, specific, unwanted condition, which does not imply for a person skilled in the art a link with other different conditions, particular since there is a clear difference between "the problem of operating means left in the vehicle receptacle while closing a door" on the one hand, and "unsafe parking in the meaning of the present application" on the other. The general expression "any unwanted condition" is therefore not derivable from the precise information contained in this paragraph.

The second complete paragraph (page 3, lines 15 to 24) exactly defines the conditions which must exist for securing the vehicle, i.e. a removed key and the door opened and closed in sequence. Here too, no indication or suggestion can be found in this paragraph to "any unwanted condition" in the meaning given by the Examining Division.

It is, therefore, only the result of an ex-post-facto analysis to deduce from the specific and limited content of document D2 a general teaching that any unwanted condition should be avoided, let alone the unwanted conditions as defined in present Claim 1.

- 7.3 Thus, the subject-matter as set forth in Claim 1 involves an inventive step within the meaning of Article 56 EPC.

8. The subject-matter as set forth in Claim 1 is, therefore, patentable within the meaning of Article 52 EPC, so that based on this allowable Claim 1, and dependent Claims 2 to 4, which concern preferred embodiments of the system according to Claim 1, and the modified description and drawings, a patent may be granted.

Order

For these reasons, it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to grant a European patent on the basis of the documents as defined in above point V.

The Registrar:



S. Fabiani

The Chairman:



G. Szabo