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T 83/84

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79 301 008.3

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

0 006 010

Bezeichnung der Erfindung:

Anti-theft system for automotive vehicles

Title of invention:

Titre de l'invention :

Klassifikation / Classification / Classement :

B 60R 25/04

ENTSCHEIDUNG / DECISION

vom / of / du

6 November 1986

Anmelder / Applicant / Demandeur :

Patentinhaber / Proprietor of the patent /
Titulaire du brevet :

NIPPONDENSO CO. LTD.

Einsprechender / Opponent / Opposant :

ROBERT BOSCH GmbH

Stichwort / Headword / Référence :

EPÜ / EPC / CBE

Article 56

Kennwort / Keyword / Mot clé :

"Inventive step"

Leitsatz / Headnote / Sommaire

Summary of Facts and Submissions

- I. European patent No. 6010 comprising four claims was granted on 18 November 1981 in response to European patent application No. 79 301 008.3 filed on 30 May 1979 and claiming the priority of a previous application of 2 June 1978.
- II. An opposition was filed by Robert Bosch GmbH against the grant of the patent, requesting the revocation of the patent in toto. In support of his request, the Opponent referred to an article "Application of Microprocessors to the Automobile", published in "SAE-paper 750432", 1975, pages 65 to 74, as well as the documents cited in the patent specification.
- III. After considering the Grounds for Opposition, the Opposition Division revoked the patent at the conclusion of the oral proceedings of 26 October 1983.
- IV. On 31 March 1984, the proprietor of the patent lodged an appeal against this decision which had been dispatched on 13 February 1984, requesting that the decision under appeal should be set aside and that the patent should be maintained. The fee for appeal was paid on 3 April 1984.

The Statement of Grounds was received on 9 June 1984. At the same time the appellant filed new Claims 1 and 2 and requested oral proceedings.

Claim 1 reads as follows:

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Case Number : T 83 /84



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D E C I S I O N
of the Technical Board of Appeal 3.2.1
of 6 November 1986

Appellant :
(Proprietor of the patent) NIPPONDENSO CO., LTD.
1, 1-chome Showa-cho
Kariya-shi Aichi-ken (JP)

Representative :
Billington, Lawrence Emlyn et al,
HASSELTINE LAKE & CO
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London WC2A 1AT (GB)

Respondent :
(Opponent) Robert Bosch GmbH
Robert-Bosch-Platz 1
D-7016 Gerlingen-Schillerhöhe (DE)

Representative :
R.H. Behrens
Robert Bosch GmbH
Zentralstelle Patente 2
Robert-Bosch-Platz 1
D-7016 Gerlingen-Schillerhöhe (DE)

Decision under appeal : Decision of Opposition Division of the European
Patent Office dated 26 October 1983 revoking
European patent No. 6010 pursuant to
Article 102(2) EPC dispatched on 13 February 1984.

Composition of the Board :

Chairman : P. Delbecque

Member : C. Maus

Member : G. Paterson

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- I. European patent No. 6010 comprising four claims was granted on 18 November 1981 in response to European patent application No. 79 301 008.3 filed on 30 May 1979 and claiming the priority of a previous application of 2 June 1978.
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The Statement of Grounds was received on 9 June 1984. At the same time the appellant filed new Claims 1 and 2 and requested oral proceedings.

Claim 1 reads as follows:

"1. An anti-theft system in combination with an electrical control apparatus adapted for use with an internal combustion engine of an automotive vehicle having control means (12a - 12d) for controlling the operation of said internal combustion engine in dependence upon changes of a condition of said internal combustion engine, said apparatus comprising

a first electrical circuit (5A) for generating an electrical binary signal indicative of a condition of said internal combustion engine during operation of said internal combustion engine,

a digital computer (70) for calculating a control value corresponding to a setting of said control means (12a - 12d) in dependence upon said electrical binary signal as of a selected instant in time, said computer (70) being programmed to calculate said control value from a function describing a desired relationship between the condition of said internal combustion engine and the setting of said control means (12a - 12d),

a second electrical circuit (11) coupled between said digital computer (70) and said control means (12a - 12d) for converting said control value into a setting of said control means (12a - 12d),

an electrical input circuit (6A) connected to said computer (70) for producing a control signal for the computer when an authorisation is entered into the input circuit (6A), said computer (70) being further programmed to discriminate whether said input circuit (6A) produces the control signal or not and to make said second electrical circuit (11) inoperative upon discriminating lack of the control signal,

and a key operated ignition switch (2A)

characterised in that

(a) said electrical input circuit comprises a keyboard (6A) provided thereon with a plurality of character-indicated keys to produce said control signal only when said keys are actuated to define a predetermined sequence of characters,

(b) the computer (70) and the keyboard (6A) are arranged to be in a deenergized inoperative state before the ignition switch (2A) is turned on, and are enabled to be rendered energized and operative by the ignition switch (2A) being turned on, and

(c) the computer (70) is programmed to halt calculation of said control value upon discriminating lack of the control signal when the computer (70) and the keyboard (6A) are energized and operative, thereby indicating that the keys have not been actuated in said predetermined sequence."

Referring to the cited state of the art and to US patent specification No. 3 784 839 the appellant argued that the subject-matter of Claim 1 involved an inventive step. He submitted that the characterising features led to results over the prior art which were surprising and unexpected.

V. The respondent (opponent) requested in his letter of 7 August 1984 that the appeal should be dismissed and that the impugned decision should be maintained.

VI. In response to a Communication of the rapporteur, the appellant declared in a letter, received on 19 June 1985, that Claim 2, submitted on 9 June 1984, should be cancelled. Simultaneously he filed a new description.

VII. In the oral proceedings on 6 November 1986, the appellant (patentee) requested that the decision under appeal be set aside and that the patent be maintained on the basis of Claim 1, filed on 9 June 1984, of the description, filed on 19 June 1985, and of the original drawings.

He emphasized that the combination of the teachings according to the SAE-paper and to US patent specification No. 3 784 839 did not lead directly to the subject-matter of the claim. Although the feature (b), insofar as it concerned the input circuit, was known *per se* from US patent specification No. 3 870 895, it was not obvious to apply it to the combination of the teachings of the aforementioned two documents. Therefore, the subject-matter of the claim was unobvious.

The respondent contested this. He requested that the appeal should be dismissed. Furthermore, he raised objections to the wording of the claim.

Reasons for the Decision

1. The appeal complies with Articles 106 to 108 and Rule 64 EPC. It is, therefore, admissible.
2. Having examined the documents cited in the patent specification and by the appellant, the Board has come to the conclusion that the anti-theft system according to the only claim is not disclosed anywhere in these publications. As the respondent did not raise any objection against novelty either, it is not necessary to give the reasons in detail for the conclusion that the subject-matter of the claim is novel having regard to the state of the art.

3. On the question of whether or not the system characterised in the claim could be derived from the prior art in an obvious manner, the following should be observed:
- 3.1 The subject-matter of the claim is an improvement of the anti-theft system described in the "SAE-paper 750432", 1975, pages 65 to 74. This system is a subsystem of a digital computer used for performing several control functions in an automobile. It receives its input from the door lock. If a correct key is used to open the door lock, an electrical input circuit connected to the computer produces a control signal for the computer pursuant to which the combustion engine can be started; otherwise the control signal is not produced and the engine cannot be started. Consequently, no anti-theft effect is provided if the door lock is operated by means of the correct key.
- 3.2 According to the patentee the system disclosed in the above-mentioned document is disadvantageous, because the engine is prevented from being started only if the closed car has been entered without a key being used to unlock the door, and also because the computer must always be energised in order to detect whether or not a key is used to open the door, even if the car is placed in a parking position.
- 3.3 The problem underlying the subject-matter of the claim in this respect is to provide an anti-theft system in combination with a computerised control apparatus, in which the protection against theft is substantially increased by using simple means requiring no permanent energisation.

- 3.4 In the Board's judgement, the anti-theft system according to the claim proposed as the solution of the problem was obvious to the skilled person having regard to the cited prior art, for the reasons which follow:
- 3.4.1 This state of the art includes several other anti-theft systems, in addition to the system described in the "SAE-paper 750432", 1975, which prevent the start of the engine only if the car has been entered without a key being used. One of them is the system disclosed in US patent specification No. 3 784 839. It prevents the combustion engine from being started unless the car-user inputs the same code signal into a logic control circuitry which is stored in the storage means of the circuitry, by means of a keyboard provided with a plurality of character-indicated keys. Hence, knowledge of the particular combination code number to be entered through the keyboard is necessary for starting the engine.
- 3.4.2 The skilled person would recognise immediately that by reason of the use of a keyboard instead of the key for the door lock as the means for enabling the engine to be started, this system offers a greater security against theft; and he would also recognise that a keyboard is applicable in combination with a digital computer according to the "SAE-paper 750432", 1975. It was, therefore, obvious for him to utilise a keyboard as the means for entering the authorisation into the input-circuit connected to the computer, which accordingly produces the control signal for the computer only when the keys are actuated to define a predetermined sequence of characters. The computer would then consequently be programmed to halt calculation of the control value necessary for starting the engine, upon discriminating lack of the control signal.

- 3.4.3 With regard to the fact that the input circuit of such a system no longer receives its input from the door lock, it would not then be necessary to energise the computer and the keyboard for entering the authorisation permanently, but only during the operation of the engine, i.e. they can be de-energised if the engine is out of operation.

From US patent specification No. 3 870 895 the skilled person would learn to use the key for operating the ignition switch simultaneously in order to energise the logic cell of an anti-theft system and to de-energise it to an inoperative state. It falls within the scope of normal considerations of a person skilled in the art to use this idea for fundamentally the same purpose in a system comprising a keyboard and a digital computer, and to recognise that the memorised code signal can be deleted by means of the de-energisation of the computer. It is self-evident that the utilisation of the key for operating the ignition switch for energising and de-energising the keyboard and the computer additionally increases the protection against theft.

- 3.4.4 It follows from the foregoing that contrary to the patentee's submission the subject-matter of the claim provided no surprising technical results. Rather, these results were foreseeable as a result of the application of measures which constituted part of the state of the art in the technical field of anti-theft systems. They cannot, therefore, be taken as evidence suggesting that the system according to the claim was inventive.

- 3.4.5 Consequently, in the Board's judgement this system does not involve an inventive step in the sense of Article 56 EPC.

4. The patent cannot, therefore, be maintained on the basis of the claim as requested.

5. Under these circumstances, it is not necessary to examine whether or not the objections of the respondent to the wording of the claim are correct.

Order

For these reasons,

it is decided that:

The appeal is dismissed.

The Registrar

The Chairman

B A Norman

P Delbecque