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D E C I S I O N
of 15 June 1999

Case Number: T 0523/96 - 3.2.1

Application Number: 88118447.7

Publication Number: 0315207

IPC: B60K 31/10

Language of the proceedings: EN

Title of invention:
A system and method for automatically controlling a vehicle speed to a desired cruise speed with a release function

Patentee:
Nissan Motor Co., Ltd.

Opponent:
Mannesmann VDO AG

Headword:
-

Relevant legal provisions:
EPC Art. 56
EPC R. 71(a), 67

Keyword:
"Inventive step (yes) after amendment"
"Substantial procedural violation (no), discretionary power"

Decisions cited:
-

Catchword:

-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0523/96 - 3.2.1

D E C I S I O N
of the Technical Board of Appeal 3.2.1
of 15 June 1999

Appellant: (Proprietor of the patent)
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Representative:
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Respondent: (Opponent)
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Representative:
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Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted 2 April 1996 revoking European patent No. 0 315 207 pursuant to Article 102(1) EPC.**

Composition of the Board:

Chairman: F. A. Gumbel
Members: P. Alting van Geusau
V. Di Cerbo

Summary of Facts and Submissions

I. The mention of the grant of European patent No. 0 315 207 in respect of European patent application No. 88 118 447.7, filed on 4 November 1988 was published on 27 October 1993.

II. Notice of opposition was filed on 27 July 1994 by the present respondent on the grounds of Article 100(a) EPC.

In respect of an alleged lack of novelty and inventive step the opposition was supported in particular by the following prior art document:

D7: DE-A-2 544 454.

III. By decision posted on 2 April 1996 the Opposition Division revoked the patent.

The Opposition Division was of the opinion that the subject-matter of the patent was novel but lacked an inventive step when having regard to the prior art disclosed in the document EP-A-0 171 287 (D2) cited in the description of the patent in suit and the teaching the skilled person would gain from D7 concerning providing a redundant disabling means to assure a fail-safe state of the system in case that the microcomputer does not work properly.

IV. On 3 June 1996 a notice of appeal was lodged against that decision by the patent proprietor and the appeal fee was paid the same day. In the statement of grounds

of appeal, filed on 25 July 1996, the appellant also submitted, in addition to arguments concerning inventive step, that the Opposition Division committed a substantial procedural violation by not allowing amended claims to be filed during the oral proceedings.

V. In a first communication and a further communication issued in preparation for oral proceedings, the Board raised doubts as to whether the Opposition Division's refusal to consider amended claims submitted by the appellant during oral proceedings amounted to a procedural violation.

The Board further addressed the prior art disclosed in D2 and D7 and expressed the provisional opinion that whilst a combination of the teachings of these documents did not appear to lead to the subject-matter of the patent the respondent's opinion, according to which the independent claims did not sufficiently clearly define that both the "vehicle speed determining unit" and the "interrupt means" were independent and additional to the control unit, could be followed. Therefore further clarification of the claimed subject-matter appeared to be necessary.

VI. With response dated 28 April 1999 the appellant filed new sets of claims in accordance with a main request and three auxiliary requests.

VII. Having given notice with facsimile dated 14 June 1999 of its non-appearance the oral proceedings were held on 15 June 1999 in the absence of the respondent.

At the oral proceedings the appellant filed new

claims 1 to 10 as a main request.

The independent claims 1 and 10 read as follows:

"1. A system for automatically controlling a vehicle speed to a desired cruise speed, comprising:

(a) a vehicle speed sensor (20) for detecting the vehicle speed and outputting a signal indicative thereof;

(b) a switch (17, 18, 19) for setting a current vehicle speed as the desired cruise speed; and

(c) a control unit (30) including a microcomputer and adapted to compare the detected speed with both the desired cruise speed and a predetermined vehicle speed range in which the control unit (30) works adequately, and

(c1) upon determining the detected speed being within the predetermined range, to actuate an engine driving force adjusting mechanism (31) installed in a vehicular engine so that the vehicle speed is maintained at the desired cruise speed, and

(c2) upon determining the detected speed falling outside the predetermined range, to instruct first interrupt means to interrupt power supply to the actuating mechanism (31) for withholding the automatic speed control,
characterised in that

(d) a vehicle speed determining unit (40; 51, 52, 53)

is installed independently from the control unit (3) and is adapted to independently determine whether the detected vehicle speed falls in the predetermined speed range, and

(e) a second interrupt means (41, 42, 43; 51, 52, 53) is connected to the vehicle speed determining unit (40; 51, 52, 53) for interrupting power supply of said engine driving force adjusting mechanism (31) independently from the first interrupt means if the vehicle speed determining unit (40, 51, 52, 53) determines that the detected vehicle speed does not fall in said predetermined speed range."

"10. A method for automatically controlling a vehicle speed to a desired cruise speed, comprising the steps of:

(a) detecting the vehicle speed and outputting a signal indicative thereof, said signal being supplied to a control unit (30) including a microcomputer;

(b) setting a current vehicle speed as the desired cruise speed;

(c) comparing, in said control unit the desired cruise speed with the vehicle speed and actuating an engine driving force adjusting mechanism so that the vehicle speed is maintained at the desired cruise speed;

(d) determining, in said control unit, whether said detected vehicle speed falls in a predetermined speed range in which the operation of step (c) is performed adequately, and

(e) cancelling said operation of step (c) and instructing first interrupt means to interrupt power supply to the engine driving force adjusting mechanism if the detected vehicle speed does not fall in said predetermined speed range,

characterised in that a second step of determining whether said detected vehicle speed falls in said predetermined speed range is performed independently of the operation of step (d), and in that said cancellation of step (c) is performed by interrupting power supply of said engine driving force adjusting mechanism (31) independently from said first interrupt means if it has been found in said second determining step that the speed is not within said predetermined range."

The appellant requested that the decision under appeal be set aside and that the patent be maintained on the basis of claims 1 to 10 presented at the oral proceedings (main request) or, in the alternative, on the basis of the auxiliary requests I to III filed with letter dated 28 April 1999. The appellant further requested reimbursement of the appeal fee.

VIII. In support of its requests the appellant essentially relied upon the following submissions:

Request for maintenance of the patent in amended form

The independent claims 1 and 10 were amended to clearly define that both the vehicle speed determining unit and the interrupt means were independent and additional to the control unit so that two fully independent steps

were provided for determining whether the detected vehicle speed fell within the predetermined speed range and for ensuring that the control system could be disabled reliably even when the computerised control unit failed to determine correctly whether or not the vehicle speed was within the admissible range in which the speed control could be performed properly or failed in respect of its interrupt means.

Since none of the prior art documents disclosed the two-fold or redundant check whether the detected speed was within the admissible range, and none of the prior art documents suggested to implement a fail-safe property in respect of the disabling means, the subject-matter of the amended claims fulfilled the requirements of novelty and inventive step.

Request for reimbursement of the appeal fee

At the oral proceedings before the Opposition Division the patent proprietor was confronted with the fact that the Opposition Division had meanwhile abandoned its earlier position communicated to the parties. It was considered a substantial procedural violation that the proprietor was not given the opportunity to react to the changed position of the Opposition Division by filing an auxiliary request based on amended documents. The reimbursement of the appeal fee was therefore deemed equitable within the meaning of Rule 67 EPC.

IX. The respondent requested dismissal of the appeal. Its arguments in support of this request may be summarised as follows:

The closest prior art represented by D2 disclosed a microcomputer controlled cruise control system comprising most of the features of claim 1 of the patent in suit. Starting from this prior art and wanting to improve the reliability of the system, document D7 disclosed how the functions of cruise control and cancellation of the control because of an inappropriate speed of the vehicle could be separated. Therefore, when the skilled person wanted to improve the reliability of the control known from D2, simple application of the teaching found in D7 immediately would lead him to the subject-matter claimed in the patent in suit.

Although D7 did not relate to a microcomputer controlled system, no inventive activity was necessary to apply the teachings of D7 to the system of D2 because both documents were concerned with improving reliability and belonged to the same technical field.

Reasons for the Decision

1. The appeal is admissible.

2. *Amendments*

2.1 The independent claims 1 and 10 of the main request are based on the granted claims 1 and 10, but now contain further specifications concerning additional power supply interrupt means which are independent from the first interrupt means.

This subject-matter is for example disclosed in the

originally filed application documents in relation to the embodiment of the invention disclosed in Figure 1 described on pages 5 to 10, the operation of which is explained on page 10 starting from line 25 to page 11, line 35 of the originally filed application documents.

Dependent claims 2 to 9 are repetitions of the granted claims 2 to 9.

In view of these assessments no objections under Article 123(2) and (3() EPC arise against the present set of claims of the main request.

2.2 The amendments to the description only concern clerical corrections and also do not give rise to objections under the EPC.

3. *Novelty*

Novelty of the subject-matter of the independent claims 1 and 10 follows from the fact that the available prior art does not disclose a cruise control system or method based on a control unit including a microcomputer, with additional speed determining means and interrupt means being independent from first interrupt means, for interrupting power supply to the engine force adjusting mechanism if the detected vehicle speed does not fall in a predetermined speed range.

In fact, novelty of the subject-matter of the independent claims was not in dispute.

4. *Inventive step*

4.1 The parties and the Board are in agreement that D2 represents the closest prior art. This document discloses a system for automatically controlling a vehicle to a desired cruising speed in accordance with the features comprised in the preamble of claim 1 and a method for automatically controlling a vehicle speed to a desired cruise speed in accordance with the features comprised in the preamble of claim 10.

4.2 In accordance with the indications given in column 2, lines 1 to 6 of the patent in suit, controlling means constituted by a microcomputer are unreliable and thus may perform inappropriate automatic vehicle speed control leading to loss of riding comfort or even dangerous situations.

4.3 The problem to be solved by the present patent is therefore to be seen in the provision of a system and method for automatically controlling the vehicle speed to a desired cruising speed in which the function of the automatic speed control can reliably be released if the vehicle speed does not fall in a predetermined speed range in which the automatic vehicle speed control is performed adequately (see also column 2, lines 8 to 14 of the patent in suit).

4.4 The patent in suit solves this technical problem by an arrangement starting from the automatic speed control disclosed in D2 essentially by the provision of an independent vehicle speed determining unit with second interrupt means independent from the first interrupt means already comprised in the computerised control. Consequently the cruise control method comprises a second step of determining whether the detected vehicle

speed falls in the predetermined speed range which determination is assessed independently from the first step and the interruption of power supply to the engine driving force adjusting mechanism is controlled independently from the first interrupt means.

4.5 In D2 the interruption of the power forms part of the microprocessor control which arrangement was found to lack the required reliability.

D7, considered to be pertinent by the respondent, discloses a cruise control system with a controller and a separate interruption circuit. However, although the interruption circuit is independent from the control unit it uses the same output transistor for control of the engine driving force adjusting mechanism. Consequently this prior art cannot be considered to suggest a vehicle speed determining circuit including interrupt means that is fully independent from the control unit as is now clarified in the subject-matter claimed in the patent in suit.

Therefore the Board cannot follow the respondent's opinion according to which the features of claims 1 and 10 are based on a simple combination of features known from D2 and D7.

4.6 Although D7 comprises distinct means for initiating power interruption this merely follows from the concept of an arrangement composed of discrete components instead of a microcomputer. In so far D7 also lacks any suggestion in the direction of providing redundancy in case of a system comprising a microcomputer which already performs the respective functions and therefore

cannot be considered to suggest to the skilled person any additional independent means for determining the vehicle speed and interrupting the power supply.

Furthermore, although it is generally known to provide double control or double checks (redundancy) for enhancing the reliability of control systems, neither D2 nor D7 nor the other cited documents relating to cruise control systems for vehicles disclose the application of such known back-up of functions in a cruise control system. Therefore the skilled person was not led by the available prior art to look for a solution involving additional means for carrying out essentially the same function already present in the system and method for automatically controlling the vehicle speed to a desired cruise speed as known from D2.

4.7 Summarising, in the Board's judgment, the proposed solution to the technical problem underlying the patent in suit defined in the independent claims 1 and 10 is inventive and therefore these claims as well as the dependent claims 2 to 9 relating to particular embodiments of the invention in accordance with Rule 29(3) EPC, can form the basis for maintenance of the patent in amended form (Article 52(1) EPC).

5. Since the main request is allowable there is no need to consider the auxiliary requests.

6. *The alleged procedural violation*

6.1 The appellant essentially argued that insufficient opportunity was given by the Opposition Division to the

appellant for reacting to the changed position of the Opposition Division by not allowing him to file an auxiliary request during the oral proceedings before the Opposition Division.

6.2 It is to be noted that in its communication attached to the summons for oral proceedings the Opposition Division emphasised that the preliminary conclusion expressed in the communication should not be construed as binding for the final decision to be taken.

Furthermore, the opponent subsequently clearly set out why in its opinion document D7 was relevant also with respect to the amended claims filed by the appellant with letter dated 27 February 1995 and why the subject-matter of the independent claims was considered to lack an inventive activity. In so far the patent proprietor had been informed of the possible reasons why the subject-matter of the claims to be discussed at the oral proceedings may not be considered inventive.

6.3 Attention is further drawn to the official notice dated 24 April 1995 concerning amendment of the Guidelines for Examination in the European Patent Office (OJ 1995, 424) in connection with the introduction of Rule 71a(1) and (2) EPC which entered into force on 1 June 1995 (OJ 1995, 9). The procedural measures in accordance with Rule 71a(2) are said to be intended to give the Opposition Division a discretion to disregard amendments because these are filed too late before the oral proceedings. It appears from the minutes of the oral proceedings that the Opposition Division made use of its discretionary power not to allow the filing of new amended claims during the oral proceedings for the

reason that this auxiliary request dealt with subject-matter, which had not been discussed previously in the proceedings.

6.4 In the Board's opinion, although the filing of amended claims could be considered as appropriate under the circumstances, since the newly filed independent claim seems to be intended to overcome the objections raised and to be based on subject-matter already claimed in the first sub-claim of the appellant's main request, the appellant's request cannot be granted.

The discretionary power given to the Opposition Division allows a certain amount of freedom in deciding each individual case and also the reason given for the negative attitude of the Opposition Division does not point to any procedural abuse. Therefore, the Board does not find any evidence of a substantive procedural violation by not allowing to file the auxiliary request during the oral proceedings and consequently there is no basis for a reimbursement of the appeal fee under Rule 67 EPC.

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 maintain the patent on the basis of claims 1 to 10 and the description presented at the oral proceedings together with the drawings as granted.

3. The request for reimbursement of the appeal fee is rejected.

The Registrar: The Chairman:

S. Fabiani F. Gumbel