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D E C I S I O N
of 17 May 1994

Case Number: T 1024/93 - 3.5.1

Application Number: 89200557.0

Publication Number: 0324531

IPC: G05D 13/62

Language of the proceedings: EN

Title of invention:
Brake-initiated release of an electric motor driven cruise control apparatus

Applicant:
General Motors Corporation

Opponent:
-

Headword:
-

Relevant legal norms:
EPC Art. 76, 123(2)

Keyword:
"Divisional application; requirements of Art. 76 met (yes)"
"Feature implicitly disclosed by parent application (yes)"
"Remittal to the first instance"

Decisions cited:
-

Catchword:
-

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Case Number: T 1024/93 - 3.5.1

D E C I S I O N
of the Technical Board of Appeal 3.5.1
of 17 May 1994

Appellant:
General Motors Corporation
General Motors Building
3044 West Grand Boulevard
Detroit
Michigan 48202 (US)

Representative:
Denton, Michael John
Patent Section
1st Floor
Gideon House
28 Chapel Street
Luton
Bedfordshire LU1 2SE (GB)

Decision under appeal: **Decision of the Examining Division of the European Patent Office dated 3 May 1993 refusing European patent application No. 89 200 557.0 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: P.K.J. van den Berg
Members: C.G.F. Biggio
G. Davies

Summary of Facts and Submissions

I. The application at issue, i.e. application No. 89 200 557.0 = EP-A2-0 324 531 (referred to in the present decision as "A2"), is a divisional application of earlier application No. 87 301 984.8 = EP-A2-0 242 039 (referred to in the present decision as "A1"), which claimed the priority of patent application No. 852 762, filed in the USA on 16 April 1986.

II. The object of the present appeal is the decision of the Examining Division dated 3 May 1993 rejecting A2, pursuant to Article 97(1) EPC, on the ground that A2 did not meet the requirements of Article 76 EPC.

The decision was based on A2 comprising the following documents

Description: pages 1 to 4, as filed on 10 February 1992, and pages 6 to 3, as originally filed;
Claims: 1 to 4, as filed on 22 September 1992;
Drawings: Figures 1 to 14, as originally filed.

Claim 1, as filed on 22 September 1992, reads:

"Apparatus for controlling throttle means of a motor vehicle upon actuation of a vehicle service brake, the throttle means including an electric motor (10) mechanically coupled to an engine throttle (62) of the motor vehicle through a selectively engageable clutch mechanism (60), the apparatus being **characterised** by first control means (78, 32) effective in response to actuation of the vehicle service brake for energizing the electric motor (10) in a manner to return the engine throttle (62) to a rest position until the motor position indicates that said rest position has been

substantially achieved (290, 310-314); and second control means (78, 168, 66) effective in response to actuation of the vehicle service brake beyond a predetermined interval of time (172) to disengage the selectively engageable clutch mechanism (60), thereby interrupting the mechanical coupling between the electric motor (10) and the engine throttle (62)".

III. The Examining Division considered that in A1, as first filed, there was

- no claim and no broad statement corresponding to the above-quoted Claim 1 of A2,
- no hint that the combination of features, mentioned in the above-quoted Claim 1 of A2, constituted a potentially inventive combination which might itself qualify for patent protection, and
- no disclosure of "first control means effective in response to actuation of the vehicle service brake".

The Examining Division, accordingly, rejected A2 on the ground that it did not meet the requirements of Article 76 EPC.

For the sake of completeness, it is to be noted that, in a communication dated 15 June 1992, the Examining Division made the further objection that description pages 1 to 4, as filed on 10 February 1992, infringed Article 123(2) EPC.

IV. On 18 June 1993, the Appellant gave notice of appeal, paying the appropriate appeal fee on the same day.

Grounds of Appeal were filed on 31 August 1993.

The Appellant's submissions may be summarized as follows:

Support for Claim 1, as filed on 22 September 1992, was to be found in the following passages of the description of A2, as filed:

- page 27, lines 6 to 12, corresponding to column 16, lines 34 to 40, of A1, as published;
- page 28, lines 5 to 29, corresponding to column 17, lines 10 to 35, of A1, as published;
- page 12, line 24, to page 13, line 4, corresponding to column 8, lines 1 to 14, of A1, as published;
- page 8, lines 12 to 17, corresponding to column 5, lines 18 to 22, of A1, as published;
- page 8, line 24, to page 9, line 15, corresponding to column 5, lines 30 to 55, of A1, as published;
- page 11, lines 25 to 26, corresponding to column 7, lines 23 to 25, of A1, as published;
- page 11, line 32, to page 12, line 10, corresponding to column 7, lines 28 to 42, of A1, as published.

It was pointed out further that the wording of the mentioned passages of A1, as published, was identical to passages found in A1, as first filed.

It was accepted that A1 did not explicitly state that "depression of the vehicle service brake causes the cruise flag to be cleared". It was, however, submitted that such a feature is a standard, well-known feature in the art of vehicle cruise control.

The parent application (A1) states that "... the CRUISE flag is set or reset (block 290 of Figure 12) by background program of Figure 8 in accordance with the status of the ON/OFF, Brake, S/C and R/A switches 72, 78, 84 and 90 respectively to indicate whether vehicle speed control is active" (see: column 16, lines 34 to

40 of A1, as published, corresponding to page 27, line 6, to page 28, line 29, of the pending application (A2)).

Having regard to the fact that "depression of the service brake causing the cruise flag to be cleared" is a standard, well-known feature in the art of vehicle cruise control, and referring to Figure 12, it was pointed out that, according to A1 as first filed, block 310 is executed to set the desired motor position to zero if the cruise flag is not set and the motor is on.

The first control means recited in the presently effective Claim 1 therefore includes blocks 290 and 310 of Figure 12, the accompanying motor control flow diagrams of Figures 13 and 14, and, physically, the brake switch 78 and controller 32.

Although the second control means recited by the presently effective Claim 1 was not explicitly objected to in the appealed decision, for completeness, the Appellant pointed out that

- said second control means includes the brake switch 78, the "brief delay" of RC network 172, the AND-gate 168 and the coil 66 (see: column 8, lines 1 to 14, of A1, as published, corresponding to page 12, line 24, to page 13, line 4, of the pending application (A2));

- the arrangement of the RC network 172 and its effect could easily be deduced by a person skilled in the art, and as a consequence it would be obvious to said skilled person that the "brief delay" provided the predetermined interval of time of said second control means.

The Appellant, accordingly, submitted that

- to a person skilled in the art, the invention claimed in the presently effective Claim 1 was directly and unambiguously derivable from the disclosure of A1 (parent application), as first filed, and
- the pending application (A2) met, therefore, the requirements of Article 76 EPC.

The Appellant requested: "cancellation of the Decision to Refuse in total, and reinstatement of the application".

Reasons for the Decision

1. The appeal complies with 106 to 108 and Rule 64 EPC and is therefore admissible.

2. The Board construes the Appellant's request as meaning that the appealed decision be set aside and the case remitted to the First Instance for further prosecution.

3. *Article 76 EPC*

After inspection of A1 (parent application) as first filed, there is not the slightest doubt that the relevant passages of A2 (pending application), as filed, are identical to the corresponding passages in A1, as submitted by the Appellant.

3.1 The Board inclines to agree with the Appellant's submission that "depression of the service brake causing the cruise flag to be cleared" was a standard, well-known feature in the art of vehicle cruise control, at the priority date of A1 (parent application).

In fact, according to its own knowledge, the Board is aware that, at least in some countries and well before the priority date of A1, vehicle cruise control systems were forbidden by legislation if they were not compulsorily associated with suitable means intended to automatically disengage them as soon as the vehicle service brake is actuated; such a rule being intended to ensure that the vehicle cruise control systems mounted in vehicles met standard safety requirements.

This, however, does not appear sufficient to remedy the fact that A1 does not explicitly disclose that "depression of the service brake causes the cruise flag to be cleared", as admitted by the Appellant. It is, accordingly, to be examined whether or not such a feature might be considered as implicitly disclosed by A1 (parent application), as first filed.

3.1.1 A1, as first filed, states that "... the CRUISE flag is set or reset (block 290 of Figure 12) by background program of Figure 8 in accordance with the status of the ON/OFF, **Brake**, S/C and R/A switches 72, **78**, 84 and 90 respectively to indicate whether vehicle speed control is active" (see: column 16, lines 34 to 40 of A1, as published, corresponding to page 27, line 6, to page 28, line 29, of the pending application (A2)).

This passage does not state in which way the respective status of the ON/OFF, Brake, S/C and R/A switches 72, 78, 84 and 90 influences the setting or resetting, respectively, of the CRUISE flag.

This information may, however, be derived from A1, as first filed, by considering and analysing the respective characteristics and functions of said switches, as disclosed by A1 on column 5, lines 30 to 55, of the published version. Such a consideration and analysis will be carried out below.

3.1.2 **S/C Switch 84** is disclosed as being the "**set/coast switch**" and is stated to be "**normally open**" and destined to be "**closed momentarily or continuously by the driver to set a desired vehicle speed or to coast to a slower vehicle speed**" (see A1, column 5, lines 43 to 49).

R/A Switch 90 is disclosed as being the "**resume/accel switch**" and is stated to be "**normally open**" and destined to be "**closed momentarily or continuously by the driver to resume a previously set speed or to accelerate to a higher vehicle speed**" (see A1, column 5, lines 49 to 55).

Since the status of both said switches **84** and **90** is **normally open**, it has to be deduced that they may influence the setting, respectively, the resetting of the CRUISE flag only when they are **momentarily or continuously closed**.

Having regard to the respective functions to be performed by said two switches **84** and **90** - when they are **momentarily or continuously closed** - it is to be deduced that none of said functions - **resume/accelerate** and **set/coast** - imply any setting or resetting of the CRUISE flag which might be considered as related to an operation of the vehicle service brake. For the sake of completeness, it is in fact pointed out that the meaning of "**coast**", as given by any good technical dictionary of the English language, excludes any operation of the brake.

3.1.3 **ON/OFF switch 72** is disclosed as being destined to be **"actuated by the driver to enable or disable the vehicle speed control"** (see A1, column 5, lines 35 to 39). Switch **72**, accordingly, sets the CRUISE flag when it **closes** and **resets** the CRUISE flag when it **opens**.

Brake (BR) switch 78 is disclosed as being **"normally closed"** and destined to be **"opened whenever the service brakes of the vehicle are operated"** (see A1, column 5, lines 39 to 43).

Brake switch 78, accordingly, may have an action on the CRUISE flag only when it **opens - the vehicle service brakes having been operated** - and said action may only be that of **resetting** the CRUISE flag, **if the latter is set** because **ON/OFF switch 72** has been closed at a previous time.

3.1.4 The Board, accordingly, agrees that a person skilled in the art would have considered that A1 (parent application), as first filed, implicitly disclosed the feature: "depression of the service brake causes the cruise flag to be cleared".

3.2 It is, moreover, pointed out that the passage (column 17, lines 10 to 35, of A1, as published, corresponding to page 28, lines 5 to 29, of the pending application (A2)), disclosing Figure 12 of the drawings, reads as follows:

"If vehicle speed control is not active, the decision block 290 is answered in the negative, and instruction block 306 is executed to extinguish the driver indicator lamp 190" (see A1, column 17, lines 10 to 13).

"If the stepper motor is on, the instruction block 310 and the decision block 312 are executed to set the desired motor position, M-POS-DES, to zero, and to determine if the stepper motor has actually returned to the "zero throttle" position. If so, instruction blocks 314 - 316 are executed to disable the stator windings 14a - 14c and the solenoid coil 66 ..." (see A1, column 17, lines 17 to 24).

The Board, accordingly, agrees that A1 (parent application), as first filed, disclosed first control means including blocks 290 and 310 of Figure 12, the accompanying motor control flow diagrams of Figures 13 and 14, and, physically, the brake switch 78 and controller 32, as submitted by the Appellant.

3.3 The Board notes, however, that Figure 12 of A1 is not consistent with the above-quoted disclosure thereof, since, according to said disclosure, the outputs "YES/NO" of decision block 308 should be reversed. The same consideration applies to Figure 12 of A2.

This inconsistency is nevertheless regarded as irrelevant for the effective disclosure of A1 and A2, respectively, since, if the outputs "YES/NO" of decision block 308 would have to be as presently shown by said Figure 12, this would result in a technical nonsense. In fact, according to Figure 12 as presently drawn

- if decision block 308 is answered "YES" - this meaning that the motor is "off", i.e. that all the stator (phase) windings are disabled (see: column 17, lines 13 to 15), instruction block 310 - "SET DESIRED M-POS-DES=0" - is executed to set the desired motor position to zero, and

- if, thereafter, decision block 312 is also answered "YES", instruction block 314 - "TURN OFF PHASE WINDINGS ..." - is executed to disable all the stator (phase) windings, which were already disabled, as previously established by decision block 308.

The inconsistency referred to above should, nevertheless, be remedied in the pending application (A2), by amending Figure 12, as it was done in the granted specification of A1 (parent application).

3.4 The second control means recited by the presently effective Claim 1 was not explicitly objected to in the appealed decision.

After inspection of the passage referred to by the Appellant (column 8, lines 1 to 14, of A1, as published, corresponding to page 12, line 24, to page 13, line 4, of the pending application (A2)), the Board does not see any reason to dispute the Appellant's submissions in respect of said second control means.

3.5 For the reasons stated in previous points 3 to 3.4, the Board is of the opinion that, subject to suitable amendment of its Figure 12 (see point 3.3), the pending application (A2) meets the requirements of Article 76 EPC.

4. *Article 123(2) EPC*

Since the question whether or not amended description pages 1 to 4, as filed on 10 February 1992, meet the requirements of Article 123(2) EPC was not decided in the appealed decision, said question is not the subject of the present appeal.

Nevertheless the Board considers it expedient for the procedure to express its *prima facie* opinion on the matter.

4.1 In said amended description pages 1 to 4, the first passage to be considered is that extending from page 2, line 10 to page 3, line 1, or to be more precise, from page 2 line 26 to page 3, line 1, which constitutes an explicit acknowledgement that:

"A hallmark of any cruise control apparatus is that the throttle control is automatically released upon driver actuation of the vehicle service brakes. Such a release is referred to herein as a brake-initiated release. In electric motor driven arrangements, the release may be achieved by de-clutching the electric motor from the throttle.

While this achieves a quick release of the cruise control, the accompanying movement of the accelerator pedal can produce an annoying noise, referred to herein as pedal slap".

Although no prior art document showing such a prior art is explicitly mentioned in the above passage (Rule 27(1b) EPC), for the reasons already indicated in previous point 3.1 (second sentence thereof), the Board has no reason to dispute that this passage merely contains a fair acknowledgement of the prior art cruise control arrangements, known by any person skilled in the art at the priority date of the pending application, and of their (also known) normal way of functioning.

Such an acknowledgement of the prior art does not infringe Article 123(2).

It is, moreover, noted that document EP-A1-0 026 656, mentioned in the European Search Report of A2, discloses an example of such prior art (see: page 6, lines 5 to 10).

4.2 The second passage to be considered is that on page 3, lines 2 to 8, which constitutes a statement of the object of the invention according to the pending application, i.e. of the problem to be solved by said invention.

At the priority date of the pending application, a person skilled in the art, having made reference to the closest prior art, i.e. to that acknowledged in the passage considered in previous point 4.1, would have immediately realised that one of the problems left unsolved by said closest prior art was that stated in the considered passage.

Since Article 123(2) does not forbid a reformulation of the problem to be solved by an invention, having made reference to those left unsolved by the closest prior art, this second passage has to be considered as not infringing Article 123(2).

4.3 The third passage to be considered is that extending from page 3, line 9, to page 4, line 14, which constitutes a statement of the invention according to the pending application i.e. of the solution proposed by the invention, as originally claimed.

Article 123(2) does not forbid a reformulation of a statement of the invention according to a pending application, if the claims of said application are amended before grant. In such a case, it is, on the

contrary, required by Rule 27(1c) EPC that the statement of the invention be amended to bring it into conformity with the amended claims.

Consequently, insofar as the statement of the invention contained in the considered passage is a fair statement of the invention, as claimed, said statement may not be considered to infringe Article 123(2) EPC.

It is, however, noted that the presently effective claims are not identical to the originally filed claims and, moreover, that the presently effective independent Claim 4 should be further amended in order to be consistent with independent Claim 1. It appears, accordingly, that the considered passage should be further amended, to bring the statement of the invention into conformity with independent Claims 1 and 4.

5. *Procedural violation*

5.1. In its communication dated 15 June 1992, the Examining Division stated that, in its opinion, "**first control means effective in response to actuation of the vehicle service brake**" was not disclosed by A1 (parent application). A similar objection was also raised in respect of the second control means, as defined by Claim 1, as effective at the date of said communication.

5.2 In the appealed decision, the ground of refusal was that Claim 1, as filed on 22 September 1992, did not overcome the objection raised under Article 76 EPC, because it still included the "**first control means effective in response to actuation of the vehicle service brake**". The Examining Division thus maintained, although only partly, the same objection already communicated to the Appellant, upon which the latter has had, at least, an opportunity to comment.

5.3 No procedural violation, of the kind referred to by Rule 67 EPC, is to be seen in the fact that the Examining Division did not offer the Appellant a further opportunity to comment on an objection already raised, although the latter was only partially maintained in the appealed decision.

It appears, accordingly, that the conditions mentioned by Rule 67 EPC are not met. Refund of the appeal fee, therefore, may not be granted.

Order

For these reasons, it is decided that:

1. The appealed decision is set aside.

2. The case is remitted to the first instance for further prosecution.

The Registrar: The Chairman:

M. Kiehl P.K.J. van den Berg