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Datasheet for the decision of 18 December 2009

Case Number: T 0026/07 - 3.5.02

Application Number: 98302247.6

Publication Number: 0891034

IPC: H02K 41/035

Language of the proceedings: EN

Title of invention:
In-line linear/rotational drive

Patentee:
Systems, Machines, Automation Components Corporation

Opponent:
INA Drives & Mechatronics GmbH & Co. oHG

Headword:
-

Relevant legal provisions:
EPC Art. 56
EPC R. 103

Relevant legal provisions (EPC 1973):
-

Keyword:
"Inventive step - (no)"
"Reimbursement of the appeal fee - (refused)"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0026/07 - 3.5.02

D E C I S I O N
of the Technical Board of Appeal 3.5.02
of 18 December 2009

Appellant: (Opponent)	INA Drives & Mechatronics GmbH & Co. oHG Mittelbergstr. 2 D-98527 Suhl (DE)
Representative:	Engel, Christoph Klaus Engel Patentanwaltskanzlei Markplatz 6 D-98527 Suhl/Thüringen (DE)
Respondent: (Patent Proprietor)	Systems, Machines, Automation Components Corporation 5807 Van Allen Way Carlsbad California 92008 (US)
Representative:	Johnstone, Helen Margaret Potter Clarkson LLP Park View House 58 The Ropewalk Nottingham NG1 5DD (GB)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted 22 November 2006 rejecting the opposition filed against European patent No. 0891034 pursuant to Article 102(2) EPC 1973.**

Composition of the Board:

Chairman: M. Ruggiu
Members: M. Rognoni
P. Mühlens

Summary of Facts and Submissions

I. The opponent (appellant) appealed against the decision of the opposition division rejecting the opposition filed against European Patent No. 0 891 034.

II. In the decision under appeal, the opposition division held, *inter alia*, that the subject-matter of claim 1 of the contested patent involved an inventive step with respect to the following documents:

E1: US-A-5 446 323,
E2: "Gerätetechnische Antriebe", herausgegeben von E. Kallenbach und G. Bögelsack, Carl Hanser Verlag München Wien, 1991, Seite 110 and 237 to 240,
E4: DE-T-69 203 760 (German translation of EP-B-503 823),
E7: EP-A-701 316.

III. In response to the summons to attend oral proceedings, the representative of the patent proprietor (respondent) informed the Board with a letter dated 20 October 2009 that the respondent would not be represented at the oral proceedings scheduled for 18 December 2009.

IV. The oral proceedings, which the Board held on 18 December 2009, were attended only by the representative of the appellant.

V. The appellant requested that the decision under appeal be set aside, that the patent be revoked and that the appeal fee be reimbursed.

VI. The respondent did not submit any arguments in defence of the contested patent, nor did he file any request.

VII. Claim 1 of the contested patent reads as follows:

"An in-line linear/rotary drive mechanism (36) which comprises:

a housing;

an actuator probe (14) mounted on said housing (12) for translational (16) and rotational (18) movement respectively along and around a predetermined axis (38) relative to said housing (12);

a bearing unit mounted on said housing (12) and engaged with said actuator probe (14) to constrain translational movement (16) of said actuator probe (14) along said predetermined axis (38);

an electro-magnetic drive means mounted on said housing (12) for translational movement (16) with said probe (14) along said predetermined axis (38); and

a helical spring interconnecting said drive means in-line with said actuator probe (14) for transferring translational (16) and rotational (18) forces from said drive means to said actuator probe (14) to minimise distance changes therebetween."

The contested patent further comprises claims 2 to 9, dependent on claim 1, claim 10, directed to a method for translating and rotating an actuator probe, and claims 11 and 12 dependent on claimed 10. These claims are not relevant to the present decision.

VIII. The arguments of the appellant relevant to the present decision can be summarized as follows:

E1 (Figure 9), which represented the closest prior art document, disclosed an in-line linear/rotary drive mechanism corresponding essentially to the subject-matter of claim 1 of the patent in suit. At the most, it could be questioned whether in E1 the element interconnecting the electromagnetic drive means with the actuator probe was a helical spring. For the skilled person, however, it was self-evident that this element could not be a screw-bolt, as assumed by the opposition division, but had to be an elastic joint in order to compensate for a possible slight misalignment of the longitudinal axes of the actuator probe and of the drive means. This was confirmed by document E7, which related essentially to the same drive mechanism disclosed in E1 and which showed in Figure 14 the joint interconnecting the drive means and the actuator probe drawn with the cross hatching customary for rubber. Furthermore, as shown for instance in E2 and E4, it was well known in the art to use a helical spring as an elastic joint capable of transferring translational and rotational forces between shafts. For a skilled person, wishing to implement the linear/rotary mechanism known from E1, it was obvious to use a helical spring for interconnecting the electro-magnetic drive means and the actuator probe.
Hence, the subject-matter of claim 1 did not involve an inventive step within the meaning of Article 56 EPC.

With a letter dated 8 June 2004, the opponent specified that they intended to speak German in the oral proceedings before the opposition division and

requested interpretation from English into German and from German into English. This request for simultaneous interpretation was clearly not made under the sole condition that the oral proceedings would be held at the patent proprietor's request.

Even if the content of the opponent's letter was not understood as an explicit request for oral proceedings, it would have been the opposition division's duty to clarify whether the opponent had wished to make such a request. As the right to oral proceedings was fundamental for satisfying a party's right to be heard, an opposition division could be expected to seek a clarification of the opponent's intention to present its case orally. The more so as an enquiry addressed directly to the opponent would not have delayed the opposition proceedings.

By depriving the opponent of their right to be heard in oral proceedings, the opposition division committed a substantial procedural violation. It was thus equitable to grant the appellant the reimbursement of the appeal fee.

Reasons for the Decision

1. The appeal is admissible.

2.1 E1 (see Figure 9) relates to a linear/rotary drive mechanism comprising the following features recited in claim 1 of the patent in suit:

- a housing 22

- an actuator probe 24 mounted on said housing 22 for translational and rotational movement respectively along and around a predetermined axis relative to said housing 22,

- an electro-magnetic drive means 102, 106 and 108 for translational movement with said probe along said predetermined axis.

- a bearing unit mounted on [the bottom side of] the housing 22 and engaged with said actuator probe 24 to constrain translational movement of said actuator probe 24 along said predetermined axis.

2.2 As to the feature that the electro-magnetic drive means is interconnected *"in-line with said actuator probe"*, the opposition division considered that it implied a common predetermined axis for the linear/rotary drive means and for the actuator probe. In other words, the opposition division assumed that the drive means and the actuator probe of the linear/rotary drive mechanism of the present invention had to be coaxial.
As pointed out by the appellant, however, the interpretation of the expression *"in-line"* adopted by the opposition division cannot be correct because the embodiment of the invention described in detail in the contested patent shows a linear drive having its longitudinal axis parallel to the axis of rotation of the rotary drive means. Thus, *in-line* in the context of the present invention can only indicate that the drive force applied by the linear drive means to the actuator probe acts in a direction parallel to the probe's longitudinal axis and that the longitudinal axes of the linear and rotary drive means are parallel.

2.3 The drive mechanism shown in Figure 9 of E1 comprises a rotary drive means having its axis of rotation parallel to the longitudinal axis of the probe and to the translational force generated by the linear drive means. Furthermore, Figure 10C of E1 shows an embodiment of the drive mechanism of Figure 9 in which the actuator probe is rotated without requiring any mechanical linkage with the rotary drive means. As explained in E1 (column 10, line 57 to column 11, line 22) the actuator ("grip/rod 24") is surrounded by a stator comprising coil magnets, whose polarization is controlled by an electronic drive so as to apply a torque to the magnetized portion of the actuator. As the actuator probe is in fact the rotor of the rotary drive means, it is evidently coaxial with the rotary drive means.

2.4 Figures 13 and 14 of E1 show a linear/rotary mechanism comprising a drive coupling 261 attached to the upper end of the grip 24 and to the rotary actuator 263. E1 does no specify how the linear/rotary drive shaft should be interconnected with the grip 24 of the actuator probe.

2.5 In summary, the subject-matter of claim 1 of the patent in suit is novel with respect to E1 and, in particular, differs from the known linear/rotary drive mechanism in that:

- the means for interconnecting the drive means with the actuator probe is a helical spring.

3. Starting from document E1 a problem addressed by the present invention can be seen in providing a suitable

link between the linear/rotary shaft and the actuator probe.

4.1 E2 ("Gerätetechnische Antriebe) teaches, *inter alia,* that springs are often used as flexible joints for reducing play and ensuring power transmission (see E2, page 110, first paragraph). In paragraph 5.4.3.2 of E2 it is further specified that joints used in measuring systems should not allow any play, slippage or phase shift between the driving and the driven shafts.

4.2 E4 relates to a "*flexible connection for interconnecting shafts, the connection comprising a spiral shape-memorizing material member which fits onto the ends of the shafts to be connected*" (see claim 1 of the corresponding European patent specification). As pointed out by the appellant, E4 specifies that such flexible joints can be properly adjusted to compensate for any slight axial deviation or curvature between the shafts to be connected (E4, page 3, lines 5 to 7).

4.3 The appellant has further referred to E7 and argued that this document, apart from relating to the same linear/rotary drive mechanism as disclosed in E1, showed a rubber joint connecting the drive shaft of the rotary motor with the actuator probe. Thus, E7 taught the skilled person to use a flexible joint in the context of the present invention.

4.4 In summary, the state of the art cited by the appellant shows that, prior to the filing date of the contested patent, the advantages of connecting a driving shaft and a driven shaft by means of a flexible joint were well known to the skilled person. In particular, it was

known that a helical spring provided a flexible connection which compensated for a slight misalignment between interconnected shafts.

4.5 Hence, the Board considers that it was obvious to a skilled person, starting from the linear/rotary drive mechanism known from E1 and wishing to select a suitable means for interconnecting the drive means with the actuator probe, to apply the teaching known in the art, as exemplified for instance in E2 and E4, and thus arrive at the drive mechanism of the present invention. For these reasons, the subject-matter of claim 1 does not involve an inventive step within the meaning of Article 56 EPC.

Reimbursement of the appeal fee

5.1 According to Rule 103(1)(a) (EPC 2000), the appeal fee shall be reimbursed, *inter alia*, if such reimbursement is equitable by reason of a substantial procedural violation.

5.2 The opposition division considered that the main request of the patent proprietor (rejection of the opposition against the contested patent) could be allowed without holding oral proceedings, because only the patent proprietor had filed an auxiliary request for oral proceedings.

5.3 According to the appellant (opponent), however, there could be no doubt that some of the statements contained in the opponent's letter dated 8 June 2004 corresponded to an unconditional request for oral proceedings. The fact that the opposition division did not hold oral

proceedings before issuing their decision and did not seek clarification from the opponent, if there were doubts about the meaning of the opponent's request, constituted a procedural violation.

5.4 Hence, the question to be considered is whether, under the present circumstances, the opposition division violated the opponent's right to be heard by rejecting the opposition without summoning the parties to oral proceedings.

6.1 It is uncontested that the statement of grounds of opposition does not contain a request for oral proceedings.

In reply to the notice of opposition, the patent proprietor requested by letter dated 18 May 2004 that the opposition division allowed the European patent "*in the form in which it was granted".* In the same letter, the patent proprietor requested oral proceedings, in "*the event of the Opposition Division being unable to reach this conclusion on the basis of the documents present*", and confirmed that they intended *"to use English language during Oral Proceedings".*

With a letter faxed on 8 June 2004, the opponent specified that they intended to speak German in the oral proceedings and requested interpretation from English into German and from German into English.

6.2 The opponent's letter of 8 June 2004 referred to a possible event (i.e. use of the German language in oral proceedings) and contained a request for simultaneous interpretation which appeared to be conditional upon

the decision of the opposition division to grant the patent proprietor's auxiliary request for oral proceedings. In other words, *if* oral proceedings were to take place at the patent proprietor's request, the opponent would speak German and then simultaneous interpretation would be needed.

Thus, even if the opponent sent his request for interpretation under the assumption that he would have occasion to present his case orally, his letter of 8 June 2004 cannot be regarded as tantamount to a request for oral proceedings.

6.3 According to the case law of the boards of appeal, a party's right to oral proceedings is subject to a clear and unconditional request for such proceedings. As the onus to submit a clear request for oral proceedings rests on the party itself, in the present case, the opposition division could not have been expected to query whether a letter addressing the issue of interpretation in oral proceedings requested by the patent proprietor in fact implied the same request on the part of the opponent.

6.4 Hence, the opposition division's decision to reject the opposition according to the patent proprietor's request without holding oral proceedings, which only the patent proprietor had explicitly requested, did not violate the opponent's right to be heard.

7. Under these circumstances the Board comes to the conclusion that the contested patent has to be revoked according to the appellant's request.

On the other hand, the appellant's request for reimbursement of the appeal fee has to be refused as no substantial procedural violation was committed by the department of first instance.

Order

For the above reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

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

The Registrar: The Chairman:

U. Bultmann M. Ruggiu