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Datasheet for the decision of 4 December 2014

Case Number: T 1940/13 - 3.2.08

Application Number: 10161890.8

Publication Number: 2221509

IPC: F16H57/02, F16D21/06

Language of the proceedings: EN

Title of invention:
A motor-vehicle transmission

Applicant:
C.R.F. Società Consortile per Azioni

Headword:

Relevant legal provisions:
EPC Art. 76(1)

Keyword:
Divisional application - added subject-matter (no) - after amendment

Decisions cited:

Catchword:

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Case Number: T 1940/13 - 3.2.08

D E C I S I O N
of Technical Board of Appeal 3.2.08
of 4 December 2014

Appellant: (Applicant)	C.R.F. Società Consortile per Azioni Strada Torino, 50 10043 Orbassano (Torino) (IT)
Representative:	Rondano, Davide Corso Emilia 8 10152 Torino (IT)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 16 April 2013 refusing European patent application No. 10161890.8 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	T. Kriner
Members:	M. Foulger
	D. T. Keeling

Summary of Facts and Submissions

I. The appellant (applicant) lodged an appeal against the decision of the Examining Division refusing the European patent application 10161890.8 which was dispatched on 16 April 2013. The Examining Division held that the only request then on file did not comply with Article 76(1) EPC.

The notice of appeal and the statement setting out the grounds of appeal were filed within the relevant time limits.

II. Oral proceedings took place before the Board of Appeal on 4 December 2014.

III. The appellant requested that the impugned decision be set aside and a patent be granted on the basis of the main request with the claims filed on 22 November 2011. As an auxiliary request the appellant requested that a patent be granted on the basis of the claims filed with the letter dated 4 November 2014.

IV. Claim 1 of the main request reads:
"A motor-vehicle transmission comprising:
a gearbox having at least one input shaft (11, 111);
a clutch unit (12) having at least one clutch (13, 113) operable to connect the crankshaft (14) for rotation with said at least one input shaft (11, 111), wherein said at least one clutch (13, 113) includes a driven portion (48, 50, 148, 150) connected for rotation with said at least one input shaft (11, 111) and a driving portion (41, 52, 54, 141, 152, 154) connected for rotation with the crankshaft (14); and
a bearing (44) which supports for rotation the driving portion (41, 52, 54, 141, 152, 154) on said at least

one input shaft (11, 111) and which is able to withstand axial loads, the bearing (44) having an inner race which is mounted on said at least one input shaft (11, 111) and an outer race which is axially locked or restrained with respect to the driving portion (41, 52, 54, 141, 152, 154);
characterized in that the inner race of the bearing (44) is axially locked or restrained with respect to said at least one input shaft (11, 111) in such a manner that the axial forces resulting from actuation of said at least one clutch (13, 113) are transmitted through the bearing (44) to said at least one input shaft (11, 111)."

Claim 1 of the auxiliary request reads:
Claim 1 of the main request reads:
"A motor-vehicle transmission comprising:
a gearbox having at least one input shaft (11, 111);
a clutch unit (12) having at least one clutch (13, 113) operable to connect the crankshaft (14) for rotation with said at least one input shaft (11, 111), wherein said at least one clutch (13, 113) includes a driven portion (48, 50, 148, 150) connected for rotation with said at least one input shaft (11, 111) and a driving portion (41, 52, 54, 141, 152, 154) connected for rotation with the crankshaft (14); and
a bearing (44) which supports for rotation the driving portion (41, 52, 54, 141, 152, 154) on said at least one input shaft (11, 111) and which is able to withstand axial loads, the bearing (44) having an inner race which is mounted on said at least one input shaft (11, 111) and an outer race which is axially locked or restrained with respect to the driving portion (41, 52, 54, 141, 152, 154);
characterized in that the inner race of the bearing (44) is axially locked or restrained on both sides with

respect to said at least one input shaft (11, 111) and in that the outer race of the bearing (44) is axially locked or restrained on both sides with respect to the driving portion (41, 52, 54, 141, 152, 154), in such a manner that the axial forces resulting from actuation of said at least one clutch (13, 113) are transmitted through the bearing (44) to said at least one input shaft (11, 111)."

V. The appellant argued essentially that:

a) In the light of the technical problem underlying the invention, the skilled person would directly and unambiguously recognise that the presence of the second bearing 60 is totally irrelevant.
b) The second bearing 60 was not presented as an essential feature of the invention. The second bearing was not able to transmit axial forces resulting from actuation of the clutches and does not therefore contribute to solving the technical problem underlying the invention.
c) The removal of the second bearing requires no real modifications of other features of the transmission, since the first bearing alone was able to ensure the required support of the clutch unit on the input shaft of the gearbox.
d) With relation to the mounting of the bearing, the person skilled in the art would recognise that the essential feature to solve the problem was that the axial forces resulting from actuation of the clutch are transmitted through the bearing to the input shaft. As having the races of the bearing fixed in both directions was not necessary to solve the problem then it was permissible to omit that the bearing races were fixed in both directions.

Consequently, the main request met the requirements of Articles 76(1) EPC.

The auxiliary request included the features relating to the axial fixation of the bearing races and consequently overcame the objection of the Examining Division that the possibility was not disclosed that the transmission could be made without the bearing being fixed on both sides. Therefore, the auxiliary request also also met the requirements of Article 76(1) EPC.

Reasons for the Decision

1. The appeal is admissible.

2. Main request - Article 76(1) EPC

2.1 The current application was filed as a divisional application in accordance with Article 76(1) EPC. A divisional application may therefore only be filed in respect of subject-matter which does not extend beyond the content of the earlier application as filed.

2.2 In the contested decision the examining division objected to the features:
a) "a bearing (44)"
b) "the inner race of the bearing (44) is axially locked or restrained with respect to said at least one input shaft (11,111) in such a manner that..."

The earlier application disclosed, in the characterising part of claim 1, that the rotation support means comprise a pair of bearings (60,44) mounted on the gearbox support housing and on the at

least one input shaft (11,111), respectively. The examining division considered that the second bearing was essential for the invention and consequently could not be removed from claim 1.

The Board, however, notes that the only part of the earlier application which could provide a basis for the two bearings being essential is paragraph [0005], according to which "these objects are achieved in full by a motor-vehicle transmission having the characteristics defined in independent Claim 1". These objects are set out in paragraphs [0002]-[0004] of the earlier application. The Board doubts, however, that all of these objects were indeed solved by claim 1 of the earlier application. For example, one object was to provide a transmission having a clutch unit that can filter out the torsional oscillations of the crankshaft (see [0004]). This problem is solved most probably by the features of dependent claim 12 relating to the two-mass flywheel. Thus the person skilled in the art would recognise that the statement of paragraph [0005] cannot be relied upon and would use his own technical judgement to decide what was indeed essential for the invention in the light of the problem to be solved.

Furthermore the skilled person would recognise that the second bearing plays no role in the axial support of the clutch because its outer race is free axially, see paragraph [0028]. Thus in view of the object of the invention identified in paragraph [0002], i.e. to provide a motor-vehicle transmission which is arranged in a manner such that the clutch-actuating forces are not discharged onto the crankshaft and do not therefore represent a potential critical factor for the axial supports thereof, the skilled person would recognise that the second bearing was not essential to solve this

problem.

The change of "a pair of bearings " in the earlier application to "a bearing" is therefore regarded by the Board as being directly and unambiguously derivable from the earlier application.

The feature of claim 1 whereby "the inner race of the bearing (44) is axially locked or restrained with respect to said at least one input shaft (11,111) in such a manner that..." was, however, not as such disclosed in the earlier application. This formulation allows the bearing to be axially fixed in simply one direction. However, all the examples of the earlier application have the races fixed in both directions and there is no disclosure of a bearing race being fixed in only one direction. The Board is therefore of the opinion that this feature was not directly and unambiguously derivable from the earlier application as required by Article 76(1) EPC.

The main request is therefore not allowable.

3. Auxiliary request - Article 76(1) EPC

Claim 1 of the auxiliary request defines the bearing races as being axially locked or restrained on both sides. Thus the claim excludes the undisclosed possibility, discussed above, of the bearing being fixed in only one direction.

The features of claim 1 relating to the bearing fixation are disclosed in [0017] and figures 1-4 of the earlier application. In particular, the axial fixation of the outer race is described in the penultimate sentence of this paragraph and that of the inner race

is described in the final sentence of this paragraph.

Therefore, the application meets the requirements of Article 76(1) EPC.

4. Article 123(2) EPC

Claim 1 of the present auxiliary request is a combination of claims 1,2 and 3 as originally filed and thus meets the requirements of Article 123(2) EPC.

5. Novelty and inventive step

In the communication dated 10 February 2012 the Examining Division considered that the subject-matter of claim 1 filed on 22 November 2011, i.e. the current main request, was new and involved an inventive step. The Board sees no reason to depart from this finding. As the subject-matter of claim 1 of the auxiliary request is even further restricted, this also fulfills the requirements of Articles 52(1),54(1) and (2), and 56 EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the Examining Division with the order to grant a patent in the following version:

- Description:
  Pages 1,3-9 as originally filed,
  Page 2 as filed in electronic form on 22 November 2011

- Claims:
  Nos. 1-8 as filed in electronic form on 4 November 2014

- Drawings:
  Figures 1-4 as originally filed.

The Registrar: The Chairman:

V. Commare T. Kriner

Decision electronically authenticated