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**Datasheet for the decision
of 20 September 2021**

Case Number: T 0549/14 - 3.2.05

Application Number: 06008940.6

Publication Number: 1719944

IPC: F16L37/12

Language of the proceedings: EN

Title of invention:

A quick connector

Patent Proprietor:

TI Group Automotive Systems, L.L.C.

Opponent:

Hutchinson

Relevant legal provisions:

EPC 1973 Art. 54, 56, 84

EPC Art. 123(2)

Keyword:

Added subject-matter (no)

Clarity (yes)

Novelty (yes)

Inventive step (yes)

Decisions cited:

G 0009/91, G 0003/14, T 0345/90, T 0701/91



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Case Number: T 0549/14 - 3.2.05

D E C I S I O N
of Technical Board of Appeal 3.2.05
of 20 September 2021

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
20 January 2014 concerning maintenance of the
European Patent No. 1719944 in amended form.**

Composition of the Board:

Chairman P. Lanz
Members: B. Spitzer
T. Karamanli

Summary of Facts and Submissions

I. The appeal by the opponent is against the interlocutory decision of the opposition division that the European patent No. 1 719 944 as amended during the opposition proceedings according to the first auxiliary request filed on 18 October 2013 meets the requirements of the EPC.

II. The opposition had been filed against the patent as a whole on the basis of the grounds for opposition under Article 100(a) EPC together with Article 54(1) EPC (lack of novelty) and Article 56 EPC (lack of inventive step).

III. Oral proceedings before the board of appeal were held on 20 September 2021.

IV. The documents cited during the appeal proceedings include the following:

A3: FR 2 827 364 A1

A4: EP 1 526 320 A1

A8: US 6 846 021 B2

V. *Requests*

The appellant (opponent) requested that the decision under appeal be set aside and that the patent be revoked.

The respondent (patent proprietor) requested that the appeal be dismissed or, as an auxiliary measure, that the decision under appeal be set aside and that the patent be maintained in amended form on the basis of

the claims of any of the first to ninth auxiliary requests filed with its reply received on 23 September 2014.

VI. Claim 1 according to the first auxiliary request, which formed the basis for the decision under appeal, has the following wording (using the parties' feature designations in square brackets):

"[Features i:]

[1.1] A quick connector coupling (110, 310) for forming a severable connection in a fluid line comprising:

[1.2] a connector body (112, 312) defining a through bore (126) extending axially rearward from a male reception end (128, 328) of said connector body (112, 312),

[Features ii:]

[1.3] a male member (114, 314) extending through said male reception end (128, 328) of connector body (112, 312) and into said bore (126, 326),

[1.4] said male member (114) having a generally cylindrical sealing surface (194)

[1.5] and an annular upset (190),

[1.6] said upset having a diameter greater than the diameter of said generally cylindrical tubular surface (194),

[Features iii:]

[1.7] a primary retainer (116) to releasably secure said male member (114) within said connector body (112, 312)

[1.8] and including spaced apart legs (196)

[1.9] movable between a locked position and a released position

[1.10] in which the spacing between said legs (196) is

increased,

[Features iv:]

[1.11] a separate redundant latch/verifier (118, 318)

[1.12] releasably coupled to said connector body (112, 312)

[1.13] and including spaced apart fingers (222, 422)

[1.14] each having a verifying tab (242, 442),

[1.15] said redundant latch/verifier (118, 318) is movable relative to said connector body (112, 312) toward and away from said primary retainer (116)

[1.16] between an unlatched position and a latched position

[1.17] only if said upset (190) of said male member (114) is in contact with said verifying tabs (242, 442),

[1.18] characterized in that each of said fingers (222, 422) has a seat (262, 462) defined at the end of each finger (222, 422)

[1.19] and wherein said connector body (112, 312)

further includes an axially extending body post (152)

[1.20] disposed in said seat (262, 462) if said latch/verifier (118, 318) is in said unlatched position."

VII. With respect to the first auxiliary request, which formed the basis for the decision under appeal, the appellant argued essentially as follows.

Added subject-matter

The objection under Article 123(2) EPC was based exclusively on an unallowable intermediate generalisation because feature 1.20 of claim 1 did not comprise the features (256) and (258) defining the seats. Feature 1.20 was generally based on the wording of originally filed claim 6. Reference was also made to

paragraphs [0024], [0071], [0072] and [0080] and Figure 16 of the originally filed application, which refer to an unlatched position. However, these passages contained more details for the seat, especially the locking edge 256 and the body post edge 258, which were not part of claim 1 as amended. The omission of these features constituted an unallowable intermediate generalisation in the context of feature 1.20 "*disposed in said seat (262, 462) if said latch/verifier (118, 318) is in said unlatched position*".

Lack of clarity

Several clarity objections were raised.

Firstly, amended claim 1 was a combination of claims 1 and 4 as granted. The latter depended on granted claims 1 to 3. Granted claims 2 and 3 were not incorporated into claim 1. This modification, thus, was not just a formal amendment. Therefore, the requirements of Article 84 EPC had to be fulfilled as held in decision G 9/91 (OJ EPO 1993, 408, Reasons, point 19) and further case law. The features of dependent claims 2 and 3 as granted were essential features. Since claim 1 as amended did not comprise these features, it was not clear.

Secondly, throughout the whole patent specification, three positions were mentioned: the unlatched position (see Figure 16), the intermediate position (see Figure 17) and the latched position (see Figure 18). Granted claims 1 and 4 referred to the unlatched position. Granted claims 2 and 3 referred to the latched position and the unlatched position. An intermediate position was not mentioned in the granted claims. This was not in accordance with the description and resulted in a

further clarity objection.

A third objection raised under Article 84 EPC concerned the omission of the feature relating to the retainer beam, which was presented as an essential feature in the description (see paragraphs [0078] and [0088] of the patent in suit). A passage of the respondent's letter dated 26 September 2011 dealing with an auxiliary request filed during opposition proceedings was cited, which included the feature concerning the retainer beam.

Fourthly, feature 1.20 was not clear. It was technically wrong because the axially extending body post 151 was disposed in the seat 262, 462, both in the unlatched position and the latched position. Reference was made to paragraphs [0072] and [0086] and Figures 19 and 29 of the patent in suit.

Finally, the triangular-parabolic shape of the axially extending body post 152 as shown in Figures 16 to 19 of the patent in suit was an essential feature for cooperating with the fingers of the latch/verifier in the latched and unlatched positions. As the shape was not specified in claim 1, it did not fulfil the requirements of Article 84 EPC.

Lack of novelty

The subject-matter of claim 1 was not new over document A3. The disclosure of features 1.10, 1.12 and 1.17 to 1.20 in document A3 was contested by the respondent. However, feature 1.10 was disclosed in Figure 3, which showed the released position. The distance between the legs was larger than in the locked position shown in Figure 5. With respect to feature 1.12, reference was

made to page 13, lines 9 to 11 and Figures 2, 4 and 5. The latch/verifier 8 was movable with respect to the connector body 1 between a latched and an unlatched position. Feature 1.17 was disclosed on page 9, lines 21 to 35, page 10, lines 1 to 3 and page 10, lines 9 to 12. The upset 22 of the male member was pressed against the conic surface 7 of the primary retainer 5 and the surface 17 of the latch/verifier 8. The conclusion of the opposition division that in document A3 no interaction between the upset of the male member 22 and the latch/verifier 8 was possible was contested (see decision under appeal, Reasons, 6.). The opposition division referred to document A3, page 9, lines 21 to 35. However, alternatives were mentioned on page 14, lines 23 to 28. The latch/verifier 8 could also slide in the connector body 1 without the primary retainer 5. In the intermediate position, there could be snap elements (see page 14, lines 12 to 14). This corresponded to the body post, which inevitably extended in the axial direction (see feature 1.19). Parts 13 of the latch/verifier 8 corresponded to the fingers. These fingers had seats 14 at the end of each finger (see feature 1.18). The latter cooperated with the connector body in the different positions as shown in Figures 2 to 6 of document A3.

Lack of inventive step (documents A3 and A4)

The starting point was the embodiment on page 14 of document A3. The distinguishing features as identified by the board during the oral proceedings were features 1.12 and 1.17 to 1.20. The technical effect of feature 1.12 was that the latch/verifier was detachable. The technical effect of features 1.17 to 1.20 was to guarantee and secure a full insertion of the tube. This resulted in two separate partial

objective technical problems, namely, to make the latch/verifier detachable and to find a construction with which a full insertion of the tube was guaranteed and secured. The solution to the first partial problem was merely a result to be achieved and did not contribute to inventive step. For the solution to the second partial problem, the skilled person would consult document A4, a document from the same field on the same objective technical problem (see document A4, paragraphs [0001] and [0002]). It disclosed a primary retainer and a latch/verifier. In contrast to its written submission, the appellant no longer considered element 112 in document A4 to be the primary retainer but instead the latch/verifier. Starting from document A3, the skilled person would replace the latch/verifier 8 of document A3 with the element 112 of document A4 while keeping element 5 of document A3 as the primary retainer. Document A3 disclosed an embodiment where the latch/verifier slid directly in the connector body (see document A3, page 14, lines 21 to 25). Thus, the skilled person would be prompted to replace element 8 of document A3 with the latch/verifier 112 of document A4, which was in direct contact with the connector body 102. With such a solution, the latch/verifier 112 was releasably coupled to the connector body 102 according to feature 1.12 (see document A4, Figure 23). Features 1.17 to 1.20 were implemented, too. The fingers of feature 1.18 corresponded to the elements 121 of part 112, and the seat at the end of each finger had the reference number 122 (see document A4, Figure 25). The axially extending body post of feature 1.19 corresponded to the stepped portions 123 with the tapered face 124 (see document A4, Figures 23 to 25). Feature 1.20 was anticipated as could be seen from Figure 23 of document A4. Element 112 of document A4 could only be moved from an unlatched position (see

document A4, Figure 23) to a latched position (see document A4, Figure 25) if the male member was in contact with the verifying tabs, which corresponded to clamps 122 in document A4. Therefore, the subject-matter of claim 1 lacked an inventive step over document A3 in combination with document A4.

Lack of inventive step (documents A3 and A8)

Alternatively, the skilled person would consult document A8, also from the same technical field. It disclosed a connector body 2, a male element 4 with an upset 5, a primary retainer 7 with legs 8 cooperating with the upset of the male member and a latch/verifier 14 with spaced apart fingers 15 having a curved seat at its end cooperating with the connector body 2. The unlatched position was disclosed in Figure 3 and column 3, lines 51 to 57. The latched position was disclosed in Figure 5 and column 4, lines 5 to 10. In the latched position, the curved seat of the finger 15 was received in the bar of the connector body.

The skilled person would have found the solution to the objective technical problem in document A8 and would - by providing the connector known from document A3 with the axially extending body post known from document A8 - have arrived at the claimed invention. Thus, the subject-matter of claim 1 also lacked an inventive step over document A3 in combination with document A8.

VIII. With respect to the first auxiliary request, which formed the basis for the decision under appeal, the respondent's submissions may be summarised as follows.

No added subject-matter

The passages cited by the appellant disclosed further features of the seat 262. However, these features were optional. This was apparent from claims 6 and 10 of the originally filed application. Originally filed claim 6 described the unlatched position, where the axially extending body post was disposed in the seat. In original claim 6, the seat was defined in a general way, i.e. "*each of said fingers has a seat defined at the end of each finger*". The seat was further specified in dependent claim 10, where special parts of the seat, such as a locking edge and a body post edge, were mentioned. Thus, the amendment "*disposed in said seat (262, 462) if said latch/verifier (118, 318) is in said unlatched position*" did not constitute an unallowable intermediate generalisation.

Clarity

The features of granted claims 2 and 3 were not essential. None of the elements of granted claim 4 referred to the subject-matter of granted claims 2 or 3. These claims were concerned with the intermediate position, whereas granted claim 4 specified the unlatched position.

With respect to the three positions, reference was made to feature 1.16, which had been present in originally filed claim 1. The position between an unlatched and a latched position was the intermediate position. This

was clear from the whole specification.

The objection concerning the retainer beam was not occasioned by post-grant amendments as the retainer beam was not related to the elements of granted claim 4, i.e. the axially extending body post 151 and the seat 262. Hence, in view of decision G 3/14, Article 84 EPC was not to be discussed.

There was no contradiction concerning feature 1.20. The cited paragraphs of the description referred to the rounded edge 250 of the verifying tab 242 and not to the seat 262.

Regarding the axially extending body post, it could have different shapes. A triangular-parabolic shape was not required. Thus, the shape was not an essential feature.

Consequently, the requirements of Article 84 EPC were met.

Novelty

Document A3 did not disclose features 1.10, 1.12 and 1.17 to 1.20. In the position shown in Figure 3 of document A3, the space between the legs was the same as in Figures 2 and 5. For the legs snapping into recess 15, the space between the legs had to be increased a little to overcome the small protrusion (see document A3, Figure 3). However, in the released position (shown in Figure 2 of document A3), the spacing between the legs was not increased. Therefore, feature 1.10 was not disclosed in document A3.

Feature 1.12 was a further distinguishing feature.

Taken from Figures 1 and 2, the latch/verifier 8 was located inside the primary retainer 5, which was locked inside the connector body 1 via snap connection elements 19 and 20. Latch/verifier 8 was movably but permanently connected inside the housing 4 of the connector body 1.

Feature 1.17 was also not disclosed as the latch/verifier 8 was also movable when the male member 21 was not inserted into the connector body 1. This could be seen from Figure 2. As soon as the male member 21 was inserted and removed once, the ligaments 14 were broken and the latch/verifier 8 was movable within the retainer 10.

The characterising portion could not be derived from the passage on page 14, lines 21 to 23, which stated that there could be an interaction not only between the primary holder 5 and the latch/verifier 8 but also between the connector body 1 and the latch/verifier 8. This passage disclosed the interaction in very vague terms without specifying the different elements. Interpreting this passage to contain features 1.18 to 1.20 could only result from an *ex post facto* analysis. One possibility might be that the verifying tabs 14 of the fingers 13 interact with a recess in the inner housing of the connector body. However, such a recess would not constitute an axially extending body post. Moreover, there was no unlatched position in document A3 except for a "Rastposition" (snapped position).

Thus, the subject-matter of claim 1 was new over document A3.

Inventive step (documents A3 and A4)

Starting from document A3, the skilled person had no incentive to look for an alternative solution. The connector coupling of document A3 already solved the objective technical problem.

Even when considering document A4, the skilled person would not have arrived at the claimed solution. In document A4, the latch/verifier 112 and the primary retainer 115 were not separate elements (see document A3, Figure 23: 126 and paragraph [0050]). Hence, feature 1.11 was not disclosed. If element 8 of document A3 was replaced by element 112 of document A4, the resulting connector would not have worked correctly. As the element 112 of document A4 would have slid inside the closed connector body of document A3, the fingers 121 of element 112 could not have spread anymore. The connector body 111 of document A4 had openings at its side (see reference sign 120 in Figure 23 of document A4) and thus was incompatible with the connector body 1 of document A3. Overall, the appellant's view was based on an *ex post facto* analysis.

The subject-matter of claim 1 was inventive over a combination of documents A3 and A4.

Inventive step (documents A3 and A8)

Features 1.17, 1.19 and 1.20 were not disclosed in document A8. The hook-shaped verifying tabs of the latch/verifier 14 did not contact the upset 5 of the male member 4. Therefore, the condition of feature 1.17 was not disclosed in document A8. Although the part

near the hook-shaped verifying tabs might be considered a seat, no element was disposed in this seat as required by feature 1.20. An axially extending body post could not be seen in any figure (see especially Figures 1, 2 and 4). The connector body did not have any axial protrusion (feature 1.19).

The subject-matter of claim 1 involved an inventive step because even when combining the teachings of documents A3 and A8, features 1.17, 1.19 and 1.20 were not known.

Reasons for the Decision

1. Applicable law

The European patent application on which the opposed patent is based was filed on 28 April 2006. In accordance with the decision of the Administrative Council of 28 June 2001 on the transitional provisions under Article 7 of the Act revising the EPC of 29 November 2000 (OJ EPO 2007, Special edition No. 4, 219), Articles 54(1) and (2), 56 and 84 EPC 1973, and Article 123(2) EPC apply in the case at hand.

2. First auxiliary request, which formed the basis for the decision under appeal: Article 123(2) EPC

2.1 Claim 1 has been amended as compared with originally filed claim 1 by features 1.18, 1.19 and 1.20. These features further specified the latch/verifier by incorporating the features of originally filed claim 6. However, the original wording of claim 6 "*if said upset of said male member is spaced from said verifying tabs*" was replaced with the disputed feature "*if said latch/verifier (118, 318) is in said unlatched position*". The

appellant argued that the latter feature resulted in an unallowable intermediate generalisation because this feature was only disclosed in paragraphs [0024], [0071], [0072] and [0080] and Figure 16 in combination with further details of the seat 262, in particular the locking edge 256 and the body post edge 258.

2.2 This objection is not persuasive. Originally filed claim 6 refers to the unlatched position, where *"each of said fingers has a seat defined at the end of each finger and wherein said connector body further includes an axially extending body post disposed in said seat"*. In originally filed claim 6, this condition is fulfilled *"if said upset of said male member is spaced from said verifying tabs"*. In the request now under consideration, the condition was changed to *"if said latch/verifier (118, 318) is in said unlatched position"*. A literal basis for this feature is for instance disclosed in paragraphs [0071] and [0072] of the application as filed. Although these passages, as well as Figure 16 of the application as filed, define the seat with further structural features, such as the locking edge and the body post edge, the omission of these features does not constitute an unallowable intermediate generalisation. The change of the condition to *"if said latch/verifier (118, 318) is in said unlatched position"* does not have an impact on the structural features of the *"seat"*. According to originally filed claim 6, the seat is defined independently from, and therefore not inextricably linked to, further structural features like the locking edge and the body post edge, which are subject of originally filed claim 10 depending on claim 6.

2.3 Thus, the amendment in claim 1 of the first auxiliary request, which formed the basis for the decision under

appeal, does not constitute an unallowable intermediate generalisation. The requirements of Article 123(2) EPC are met.

3. First auxiliary request, which formed the basis for the decision under appeal: clarity (Article 84 EPC 1973)

3.1 The appellant raised the following five clarity objections.

- (a) Features of granted claims 2 and 3 were essential features missing from current claim 1, which is a combination of claims 1 and 4 as granted.
- (b) The granted claims mentioned a latched and an unlatched position. An intermediate position was not claimed in the granted claims resulting in a contradiction with the description for claim 1 of the first auxiliary request.
- (c) The retainer beam (219) was an essential feature missing from claim 1 of this request.
- (d) Feature 1.20 in claim 1 of this request was technically wrong.
- (e) The shape of the axially extending body post was an essential feature not specified in claim 1 of this request.

3.2 Clarity objection (a)

3.2.1 General principles

For the following discussion of the objections with respect to Article 84 EPC 1973 in this opposition appeal proceedings, the board refers to the order of decision G 3/14 (OJ EPO 2015, A102), which was issued after the filing of the current statement of grounds of appeal: "*In considering whether, for the purposes of*

Article 101(3) EPC, a patent as amended meets the requirements of the EPC, the claims of the patent may be examined for compliance with the requirements of Article 84 EPC only when, and then only to the extent that the amendment introduces non-compliance with Article 84 EPC."

In decision G 3/14 (*supra*), the Enlarged Board of Appeal identified the following main types of amendments:

- amendments which encompass a literal insertion of elements of dependent claims as granted into an independent claim (type A);
 - these include amendments in which a dependent claim contains within it alternative embodiments, one of which is then combined with its independent claim (Type A(i)), and
 - amendments in which a feature is introduced into an independent claim from a dependent claim, being a feature which was previously connected with other features of that dependent claim from which it is now disconnected (Type A(ii));
- furthermore, amendments which encompass a literal insertion of complete dependent claims as granted into an independent claim (Type B).

For type A(ii) amendments, the Enlarged Board of Appeal stated under item 84: "*As regards Type A(ii) amendments (features disconnected by the amendment from other features of the dependent claim), it has never been doubted that where an alleged lack of compliance with Article 84 EPC is introduced by such an amendment, the claim may be examined for such compliance. Where the alleged lack of compliance has not been introduced by the amendment, the Enlarged Board considers that the question should be answered in the same way as for*

Type B amendments. This is not only for reasons of uniformity and consistency, but because it is difficult to see how a logically consistent yet different answer could be formulated."

- 3.2.2 In this case, the contested amendment (incorporation of granted claim 4, which depends on claims 1 to 3, into current claim 1) could be subsumed under Type A(ii) amendments.

In applying the principles of decision G 3/14 (*supra*) to the case at hand, objections under Article 84 EPC 1973 against the combination of granted claims 1 and 4 are to be examined to the extent that the omission of the features of granted dependent claims 2 and 3 introduce a lack of clarity.

Therefore, the question to be answered is whether the incorporation of the features of granted claim 4 into granted claim 1 without the features of granted claims 2 and 3 infringes Article 84 EPC 1973.

- 3.2.3 Granted claim 2 reads as follows: "*The quick connector coupling (110, 310) as set forth in claim 1, **characterised in that** said redundant latch/verifier (118, 318) is movable between said unlatched position and said latched position only if said annular upset (190) of said male member (114) is located in between said verifying tabs (242, 442)."*

Granted claim 3 reads as follows: "*The quick connector coupling (110, 310) as set forth in claim 1 or 2, **characterised in that** each of said verifying tabs (242, 442) includes a lead-in ramp surface (260, 460) facing toward said male member reception end (128) of said connector body (113, 312)."*

Granted claim 4 reads as follows: "*The quick connector coupling (110, 310) as set forth in claims 1 to 3, **characterised in that** each of said fingers (222, 422) has a seat (262, 462) defined at the end of each finger (222, 422) and wherein said connector body (112, 312) further includes an axially extending body post (152) disposed in said seat (262, 462) if said latch/verifier (118, 318) is in said unlatched position.*"

Hence, granted claim 4 describes the interaction of the fingers of the latch/verifier with the axially extending body post of the connector body in the unlatched position. This is not related to granted claims 2 or 3, where the intermediate position is specified, i.e. where the upset of the male member is located and how the movement from the unlatched to the latched position is improved. As the features of granted claims 2 and 3 are not referred to in granted claim 4, the amendment does not infringe Article 84 EPC 1973.

3.2.4 Clarity objection (b)

Feature 1.16 was present in claim 1 as originally filed. This feature refers to the movement between an unlatched and a latched position, which, according to the whole application as filed and the patent as granted, is the intermediate position. Thus, the three positions were present in claim 1 as originally filed and granted. The features of granted claims 2 and 3 are not essential for defining these three positions. Moreover, this objection is not occasioned by the post-grant amendment of claim 1. In accordance with decision G 3/14 (*supra*), the amendment of one claim or part of a patent cannot lead to a re-examination of other parts

of the patent not affected by the amendment (see point 3.2.1 above).

3.3 Clarity objection (c)

With respect to the appellant's argument of the retainer beam being an essential feature, the board refers again to decision G 3/14 (*supra*). The retainer beam is not related to the features of granted claim 4. Therefore, this objection is not occasioned by the post-grant amendment of claim 1. As stated above, in accordance with decision G 3/14 (*supra*), the amendment of one claim or part of a patent cannot lead to a re-examination of other parts of the patent not affected by the amendment (see point 3.2.1 above).

3.4 Clarity objection (d)

With respect to the feature 1.20, the seat 262 is the part on top of the verifying tab 242 (see Figure 15 of the patent). This part does not have a reference sign in Figures 16 to 19 of the patent. In the unlatched position (see Figure 16 of the patent), the axially extending body post is disposed in the seat 262. In the latched position (see Figure 19 of the patent), the axially extending body post contacts the rounded edge 250 of the verifying tab 242 but not the seat 262 (see paragraph [0072]). The contradiction alleged by the appellant is therefore not apparent to the board.

3.5 Clarity objection (e)

The alleged lack of clarity with respect to the shape of the axially extending body post is not occasioned by the post-grant amendment of claim 1 because the whole dependent claim 4 as granted was inserted into granted

claim 1 (see decision G 3/14 (*supra*) and point 3.2.1 above).

3.6 To sum up, in so far as the appellant's clarity objections were open to examination in view of decision G 3/14 (*supra*), the amendments to claim 1 of the first auxiliary request, which formed the basis for the decision under appeal, comply with Article 84 EPC 1973.

4. First auxiliary request, which formed the basis for the decision under appeal: novelty (Article 54(1) and (2) EPC 1973)

The disclosure of features 1.10, 1.12 and 1.17 to 1.20 of current claim 1 in document A3 is disputed.

Feature 1.10 refers to the released position, in which the spacing between the legs is increased, and not to the motion between the locked position and the released position. This is confirmed by the definition of the released position in paragraph [0091] of the patent in suit: "*Eventually, the legs 196 will be spread apart to a released position in which the distance between them is sufficient to allow removal of the upset 190.*"

Figure 3 of document A3 corresponds to the released position. In this position the legs 10 of the primary retainer 5 rest on the surface 15 (see document A3, Figure 3). In the locked position as shown in Figure 5 of document A3, the legs of the primary retainer 5 rest on the surface 16 (reference number shown in Figure 2 of document A3). Compared to this locked position, the spacing between the legs 10 is increased in the released position. Thus, feature 1.10 is anticipated by document A3.

The term "*releasably coupled to*" in feature 1.12 does

not only mean "movably coupled to" as interpreted by the appellant but that the latch/verifier 8 can also be released/detached from the connector body 1. As shown in Figure 2 of document A3, the latch/verifier 8 is located inside the primary retainer 5, which, in turn, is locked inside the connector body 1 via snap connection elements 19 and 20. Therefore, feature 1.12 is not disclosed in document A3.

With respect to feature 1.17, it is undisputed that in the arrangement of document A3 there is an interaction between the upset 22 of the male member and the latch/verifier 8 when it is inserted for the first time. However, as soon as the ligaments 14 are broken (see document A3, page 9, lines 21 to 24), the latch/verifier is freely movable within the primary retainer 5. Then the condition mentioned in feature 1.17 is no longer fulfilled. Consequently, the latch/verifier is movable between an unlatched and a latched position not only if the upset of the male member is in contact with the verifying tabs as stipulated in claim 1 of the first auxiliary request.

It is not disputed that the embodiment shown in Figures 2 to 5 of document A3 do not show the features 1.18 to 1.20. The fingers 13, 14 do not have a seat (feature 1.18), and the connector body 1 does not interact with the latch/verifier 8 (features 1.19 and 1.20). For features 1.18 to 1.20, the appellant instead referred to page 14, lines 9 to 28 of document A3, where other embodiments including the following were described.

- The latch/verifier 8 could also slide in the connector body 1 without the primary retainer 5 (see document A3, page 14, lines 21 to 25).

- The latch/verifier and the primary retainer could be independent elements (see document A3, page 14, lines 11 to 12).
- When the latch/verifier and the primary retainer were independent elements, there could be snap elements to hold the latch/verifier in the intermediate position (see document A3, page 14, lines 12 to 14).

The appellant argued that the snap elements corresponded to the body post, which inevitably extended in the axial direction. Parts 13 of the latch/verifier 8 were fingers with seats 14 at the end of each finger. The latter cooperated with the connector body in the different positions as shown in Figures 2 to 6.

However, these arguments are not persuasive. This passage of document A3 refers in a very general manner to different possibilities for different individual parts without disclosing specific embodiments for the whole arrangement. Even when choosing an embodiment where the latch/verifier 8 slides directly in the connector, the claimed invention is not directly and unambiguously disclosed in document A3. In addition, there is no disclosure in document A3 that the connector body comprises an axially extending body post.

Since features 1.12 and 1.17 to 1.20 are not disclosed in document A3, the subject-matter of claim 1 of the first auxiliary request, which formed the basis for the decision under appeal, is new over document A3 (Article 54(1) and (2) EPC 1973).

5. First auxiliary request, which formed the basis for the decision under appeal: inventive step (Article 56 EPC 1973)

5.1 Closest prior art and distinguishing features

The appellant contested the presence of an inventive step of the subject-matter of current claim 1 starting from document A3 and combining it with either document A4 or document A8. As established under point 4. above, the subject-matter of claim 1 differs from the disclosure of document A3 in features 1.12 and 1.17 to 1.20.

5.2 Technical effect and objective technical problem

As put forward by the appellant, the technical effect of feature 1.12 is that the latch/verifier is detachable. The technical effect of the further distinguishing features 1.17 to 1.20 is that on assembly of the quick connector coupling, the redundant latch/verifier cannot be moved to its latched position unless the associated tube is in its fully inserted position.

The appellant proposed two separate partial objective technical problems, namely, to make the latch/verifier detachable and to find a construction with which a full insertion of the tube was guaranteed and secured.

While the board agrees with the first partial technical problem suggested by the appellant, it does not concur with the appellant's formulation of the second partial technical problem because document A3 already solves

the problem of providing a connector with which a full insertion of the tube is guaranteed and secured.

Therefore, the second partial objective technical problem is to find an alternative design for a connector with which a full insertion of the tube is guaranteed and secured.

5.3 Combination with document A4

For the subject-matter of the claim to be considered inventive, it suffices to show that the solution to just one of these partial technical problems is not obvious (T 345/90, Reasons, point 5 and T 701/91, Reasons, points 6.4 and 6.5). Considering the obviousness of the proposed solution to the second partial objective technical problem, the board shares the respondent's view that starting from document A3, the skilled person had no incentive to look for alternative solutions. Moreover, there would have been no reason to pick out individual elements of document A4 and combine them with separate elements of document A3, in particular to replace the latch/verifier 8 of document A3 with the element 112 of document A4 while keeping element 5 of document A3 as the primary retainer. Such a mosaic-like combination would have taken these elements out of their respective contexts. This approach would also ignore the teaching of document A4, which discloses element 112 as the retainer and element 115 as the checker (see document A4, paragraph [0041]). Even if the board accepted the appellant's arguments, the skilled person still would not have arrived at the claimed invention. Document A3 discloses several alternative embodiments (see document A3, page 14, lines 9 to 28), albeit in a very general manner. The appellant in particular referred to

document A3, page 14, lines 21 to 28, which discloses that the latch/verifier could also slide directly in the connector body without sliding in the primary retainer. In such an embodiment, the skilled person would not have kept the primary retainer 5 of document A3. In addition, it is not clear how the skilled person could or even would have implemented an embodiment with a connector body 1 and a primary retainer 5 according to document A3 and a latch/verifier 112 according to document A4. This line of argument is based on an *ex post facto* analysis and does not result in a quick connector coupling according to claim 1. The proposed solution to the second partial objective technical problem is therefore not obvious in view of document A4.

Consequently, the subject-matter of claim 1 of the first auxiliary request, which formed the basis for the decision under appeal, involves an inventive step over a combination of documents A3 and A4 (Article 56 EPC 1973).

5.4 Combination with document A8

Document A8 is from the same technical field and is concerned with a quick connector coupling for forming a severable connection in a fluid line. The board observes that the construction details of the connector coupling of documents A3 and A8 are completely different. Thus, the skilled person had no incentive to combine individual parts of document A8 with parts of document A3. Even if the skilled person did so, a combination of documents A3 and document A8 still would not have rendered obvious features 1.17, 1.19 and 1.20 for the following reasons. The condition claimed in feature 1.17 is not fulfilled as there is no contact

between the hooked-shaped verifying tabs of the latch/verifier 14 and the upset 5 of the male member 4. Since the wall 10 of the grooves 13 is extending radially and because the connector body does not have axial protrusions in the longitudinal cut shown in Figures 1, 2 and 4, features 1.19 and 1.20 are not disclosed by document A8. The proposed solution to the second partial objective technical problem is thus not obvious in view of document A8.

Therefore, a combination of documents A3 and A8 would not have rendered obvious the subject-matter of claim 1 of the first auxiliary request, which formed the basis for the decision under appeal (Article 56 EPC 1973).

5.5 Conclusion

For these reasons, the subject-matter of claim 1 of the first auxiliary request, which formed the basis for the decision under appeal, meets the requirements of the EPC. There is therefore no reason to set aside the decision under appeal. Consequently, the appeal has to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



N. Schneider

P. Lanz

Decision electronically authenticated