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**Datasheet for the decision
of 21 October 2014**

Case Number: T 0783/13 - 3.2.01

Application Number: 09165201.6

Publication Number: 2272726

IPC: B60R21/237

Language of the proceedings: EN

Title of invention:

An air-bag for a motor vehicle

Applicant:

Autoliv Development AB

Headword:

Relevant legal provisions:

EPC Art. 54(1), 111(1)

Keyword:

Novelty - main request (no) - auxiliary request (yes)
Remittal to the department of first instance - (yes)

Decisions cited:

Catchword:



**Beschwerdekammern
Boards of Appeal
Chambres de recours**

European Patent Office
D-80298 MUNICH
GERMANY
Tel. +49 (0) 89 2399-0
Fax +49 (0) 89 2399-4465

Case Number: T 0783/13 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 21 October 2014

Appellant: Autoliv Development AB
(Applicant) Wallentinsvägen 22
447 83 Vårgårda (SE)

Representative: Beattie, Alex Thomas Stewart
Forresters
Skygarden
Erika-Mann-Strasse 11
80636 München (DE)

Decision under appeal: **Decision of the Examining Division of the European Patent Office posted on 15 October 2012 refusing European patent application No. 09165201.6 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman G. Pricolo
Members: H. Geuss
D. T. Keeling

Summary of Facts and Submissions

- I. The appeal is directed against the decision of the Examining Division posted on 15 October 2012 refusing European patent application No. 09 165 201.6 on the grounds of lack of novelty (Article 54 EPC).

The Examining Division considered that document

JP 2001 138848 A (**D1**)

disclosed the subject-matter of claim 1 according to the sole request on file.

The Examining Division further cited the following prior art:

XP007123278, ISSN: 0374-4353 (**D2**)

US 5 482 318 A (**D3**)

FR 2 824 029 A (**D4**)

EP 1 283 136 A (**D5**)

JP 10 035381 A (**D6**)

- II. With the statement of grounds of appeal, the appellant requested that the decision under appeal be set aside and that the application be remitted to the Examining Division for issuance of a communication under Article 71(3) EPC on the basis of the claims filed with the statement of grounds of appeal.
- III. In a communication pursuant to Rule 100(2) EPC, dated 24 April 2014, the Board expressed the preliminary view that the subject-matter of claim 1 was not new in view of the disclosure of D1 because the airbag according to D1 implicitly disclosed two first fold arrangements according to claim 1 (see point 1 of the

communication).

The Board further pointed out that the prior art cited by the Examining Division did not show two or more first fold arrangements forming each an omega fold and announced its intention of remitting the case to the department of first instance for further prosecution if amended claims were filed including the above mentioned feature as novelty would be acknowledged (see point 4 of the communication).

- IV. With letter dated 25 June 2014, the appellant filed an auxiliary request and requested oral proceedings in the event that the Board did not set aside the decision to refuse the application on the basis of either the main request as filed with the statement of grounds of appeal or the auxiliary request.
- V. Claim 1 according to the main request reads as follows:

"An air-bag having a surface thereof formed from a first layer of fabric, the first layer of fabric having two or more first fold arrangements formed therein, each first fold arrangement comprising a pair of folds of the fabric along substantially parallel first fold lines, so that the length of fabric between the first fold lines is significantly greater than the distance between the first fold lines, wherein each first fold arrangement forms a pocket or cell which is substantially sealed at its ends, the first layer of fabric having at least one second fold arrangement formed therein, the or each second fold arrangement comprising a pair of folds of the fabric along substantially parallel second fold lines, the second fold lines crossing the first fold lines and being substantially perpendicular thereto, so that the length

of fabric between the second fold lines is significantly greater than the distance between the second fold lines."

VI. Claim 1 according to the auxiliary request reads as follows (difference with respect to the wording of claim 1 according to the main request is printed in bold, emphasised by the Board):

"An air-bag (12) having a surface thereof formed from a first layer of fabric (1), the first layer of fabric (1) having two or more first fold arrangements formed therein, each first fold arrangement comprising a pair of folds of the fabric along substantially parallel first fold lines (4a, 4b, 4c), so that the length of fabric between the first fold lines (4a, 4b, 4c) is significantly greater than the distance between the first fold lines (4a, 4b, 4c), wherein each first fold arrangement forms a pocket or cell which is substantially sealed at its ends, the first layer of fabric (1) having at least one second fold arrangement formed therein, the or each second fold arrangement comprising a pair of folds of the fabric along substantially parallel second fold lines (8), the second fold lines (8) crossing the first fold lines (4a, 4b, 4c) and being substantially perpendicular thereto, so that the length of fabric between the second fold lines (8) is significantly greater than the distance between the second fold lines (8), **wherein at the pair of first fold lines (4a, 4b, 4c) in each of the first fold arrangements, the first layer of fabric (1) is folded back on itself at an acute angle at each of the first fold lines (4a, 4b, 4c), and is then folded over in the opposite direction, again at an acute angle, wherein the result is to form a first upper layer (5) of fabric which overlies the pair of**

first fold lines (4a, 4b, 4c), thus forming an omega fold."

VII. The appellant's arguments, in so far as they are relevant for this decision, can be summarized as follows:

Claim 1 of the main request was new over the disclosure of D1. The difference was that D1 did not disclose two or more first fold arrangements but just one.

Specifically, the folds 3 and 4 in the annotated version of the diagram on page 5 of the contested decision did not appear in the cut-away views of the omega folds of the airbag of D1. According to figure 2 of D1, which was not specified in the description as being schematic or simplified, the region of fabric between the two folds that corresponded to the folds 2 and 5 of the diagram was clearly flat and featureless. There was no indication to believe that forces would act in this region and cause the upper layer to follow the non-flat contour of the folded layer underneath, resulting in a fold as indicated in the diagram by 3 and 4. In the contrary, the situation in practice is exactly the one shown in the drawings of D1. The reason is that the fabric of the airbag of D1 was of high stiffness as it was apparent from its inflated state of figures 3 and 4 because the ridges formed by the intersecting omega folds remained in place and the region of fabric in question retained its flat configuration of its deflated state according to figures 1 and 2. There was then no reason to suspect that the region of fabric mentioned would fold due to flexibility so that folds 3 and 4 would not be present. Therefore two first fold arrangements like the one according to figure 3b of the application were not

shown in D1. Consequently, the subject-matter of claim 1 was new.

As regards claim 1 of the auxiliary request, it required two omega folds, both crossed by further fold lines, and this combination of features did not appear anywhere in the prior art cited by the Examining Division.

Reasons for the Decision

1. The appeal is admissible.

Main request

2. The invention as defined in claim 1 of the main request is not new (Article 54 EPC), because document D1 discloses all features of claim 1 of the main request.

- 2.1 The appellant argues that D1 does not disclose the feature of claim 1 that reads "the first layer of fabric having two or more first fold arrangements formed therein". All other features of claim 1 are disclosed in document D1 beyond dispute.

- 2.2 Due to the flexibility of the sheet of cloth of the airbag, each of the omega folds as shown in D1 can be regarded as two separate first fold arrangements in the sense of the present invention, cf. the annotated diagram in the decision of the Examining Division, page 5, the numbered version of the diagram was also filed by the appellant with letter of 10 April 2014.

The parts of the sheet covering the fold lines 1 and 6

on the diagram will have a bend along those fold lines resulting in fold lines similar to 3 and 4. These bends (3,4) are a consequence of the flexibility of the cloth, its weight and packing of the airbag in its folded and pre-inflated form, and result in two first fold arrangements (1-2-3 and 4-5-6) each similar to the fold arrangement according to the invention as shown in figure 3b (cf. paragraph [0022] of the published application).

- 2.3 The Board agrees with the appellant that the specific folds 3 and 4 as they appear in the annotated version of the diagram (cf. letter of the appellant of 10 April 2014, and decision of the Examining Division, page 5) are not explicitly disclosed in D1.

However, the Board holds, contrary to the appellant's opinion, that the drawings of D1 are clearly schematic and simplified and as such are not an exact representation of the shape taken by the sheet of cloth of the airbag of D1 in practice.

- 2.4 According to the appellant's opinion, the sheets 11 and 12 of D1 were of high stiffness. The high stiffness of the sheet of cloth of D1 can be derived from the comparison of the folded and inflated forms of the airbag as shown in figures 1 to 4 because the ridges formed by the intersecting omega folds remained in place and the region of fabric in the intersection as shown in figure 3 retained its flat and featureless configuration of its deflated state according to figures 1 and 2.

The Board does not follow this view and considers that the sheet of cloth of the airbag according to D1 is flexible in order to inflate and adopt its final

intended shape for the protection of vehicle occupants. If the sheets 11 and 12 of D1 were of high stiffness, then the airbag would not inflate and change shape but rather break when a determined inflation pressure is reached inside the space between the sheets according to figure 2. The flexibility of the sheet of cloth for an airbag is implicit due to its intended use.

In figure 3 of D1 the section of the sheet at the intersection of the omega folds 21 and 22 keeps its flat configuration of figure 2. Nevertheless, in figure 4 this part is oblong. This is due to the schematic representation of the airbag in its different states. Further, the ridges formed remain in place but this is not the result of the high stiffness of the sheets of cloth but a consequence of the sewing up together the folded sheets of cloth 11 and 12 from figure 1 along their periphery - as disclosed in D1, see paragraph [0020] of the automatic translation - that is similar to the stitching 7 done in the airbag of the application.

- 2.5 It follows that each omega fold as shown in D1 contains two further fold lines - comparable to fold lines 3 and 4 of the diagram from letter of 10 April 2014 corresponding to the diagram shown on page 5 of the decision of the Examining Division - which are implicitly disclosed for the reasons discussed above. Consequently each omega fold as shown in D1 represents two first fold arrangements according to the invention.

Auxiliary request

3. Claim 1 according to the auxiliary request differs from claim 1 of the main request by the following feature:
"wherein at the pair of first fold lines (4a, 4b, 4c)

in each of the first fold arrangements, the first layer of fabric (1) is folded back on itself at an acute angle at each of the first fold lines (4a, 4b, 4c), and is then folded over in the opposite direction, again at an acute angle, wherein the result is to form a first upper layer (5) of fabric which overlies the pair of first fold lines (4a, 4b, 4c), thus forming an omega fold."

- 3.1 This feature is disclosed on the bridging paragraph between pages 5 and 6 of the application as filed. Consequently, claim 1 of the auxiliary request has not been amended in such a way that it contains subject-matter which extends beyond the content of the application as filed (Article 123(2) EPC).
- 3.2 Furthermore, claim 1 defines the matter for which protection is sought. It is clear and concise and supported by the description (Article 84).
4. The invention as defined in claim 1 according to the auxiliary request is considered to be new (Article 54 EPC) in view of D1.
- 4.1 None of the prior art documents cited by the Examining Division discloses the feature which was inserted in claim 1 (cf. point 4, above).
5. Considering that claim 1 according to the auxiliary request overcomes the sole ground for the refusal (lack of novelty), and that the appellant did not object to the Board's intention to remit the case to the department of first instance for further prosecution if novelty was acknowledged, the Board decides to remit the case to the Examining Division for further prosecution pursuant to Article 111(1) EPC, based on

the auxiliary request as filed with letter dated
25 June 2014.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance for further prosecution on the basis of the auxiliary request submitted with letter dated 25 June 2014.

The Registrar:

The Chairman:



A. Vottner

G. Pricolo

Decision electronically authenticated