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Datasheet for the decision of 12 January 2007

Case Number: T 0475/05 - 3.2.01

Application Number: 99916081.5

Publication Number: 1073564

IPC: B60J 7/02

Language of the proceedings: EN

Title of invention:
Open roof construction for a vehicle

Patentee:
Inalfa Roof Systems Group B.V.

Opponent:
Webasto AG

Headword:
-

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step (yes)"

Decisions cited:
-

Catchword:
-

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Case Number: T 0475/05 - 3.2.01

D E C I S I O N
of the Technical Board of Appeal 3.2.01
of 12 January 2007

Appellant: (Opponent)	Webasto AG Krailinger Straße 5 D-82131 Stockdorf (DE)
Representative:	Wiese, Gerhard Wiese & Konnerth Patentanwälte Georgenstraße 6 D-82152 Planegg (DE)
Respondent: (Patent Proprietor)	Inalfa Roof Systems Group B.V. Smakterweg 70 NL-5804 AH Venray (NL)
Representative:	Metman, Karel Johannes De Vries & Metman Overschiestraat 180 NL-1062 XK Amsterdam (NL)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted 23 February 2005 rejecting the opposition filed against European patent No. 1073564 pursuant to Article 102(2) EPC.**

Composition of the Board:

Chairman: S. Crane
Members: P. L. P. Weber
T. Karamanli

Summary of Facts and Submissions

I. The appeal of the opponent is against the decision of the opposition division posted 23 February 2005 to reject the opposition.

The notice of appeal was filed on 14 April 2005 and the fee paid on the same day.
The statement of the grounds of appeal was filed on 4 July 2005.

II. Claim 1 of the granted patent reads as follows (feature numeration as proposed by the appellant):

1.1 An open roof construction for a vehicle

1.2 having an opening (2) in its fixed roof (1),

1.3 said open roof construction comprising a stationary part (3,6) to be secured to the roof,

1.4 a closing element (9) supported by said stationary part,

1.5 which is slidably guided at its side edges by means of sliding shoes (12,112,212) in guide grooves (10) formed in said stationary part,

1.6 which are open on the side facing towards the closing element,

1.7 the sliding shoes (12; 112; 212) are biased outwardly with respect to the closing element by means of spring members (13; 113; 213),

characterized

1.8 in that respectively two sliding shoes (12; 112; 212) are connected to the closing element (9) on both sides of a fixing point to said closing element,

1.9 and in that said sliding shoes are biased by an associated spring member,

1.10 whilst means (16; 123; 225) are provided by which said spring members (13; 113; 213) are symmetrically loaded in vertical direction with respect to said fixing point.

III. The following documents played a role in the appeal proceedings:

D1: DE-C-4135955
D3: DE-A-3425273
D5: DE-A-1630330
D6: DE-A-2234852

IV. Oral proceedings were held on 12 January 2007.

The appellant requests the revocation of the patent in its entirety.

The respondent requested that the appeal be dismissed (main request) or in the alternative, that the patent be maintained in amended form on the basis of the documents according to one of the auxiliary requests 1-4 filed in the opposition proceedings on 23 December

2004 or of the auxiliary requests 5 and 6 as filed on 12 December 2006.

V. The arguments of the appellant can be summarized as follows:

Contrary to the provisional opinion expressed by the board in the annex to the summons, the wording of the claim cannot be understood as meaning that one and the same spring member loads the respectively associated sliding shoe in the outwardly direction as well as in the vertical direction. On the contrary, as far as the spring members are concerned, the wording of the claim has to be understood in a more general way. According to the appellant's understanding the outwardly directed load and the vertical load can be applied by two different spring members.
This interpretation is supported by the fact that all the embodiments described in the patent in suit have to fall under claim 1 as granted and that in the embodiment according to figures 9 and 10 there are two springs acting on the shoes, namely the spring 113 in the outwardly direction and the spring 121 in the vertical direction.

Having this interpretation of the claim in mind the document D3 discloses all the features of claim 1. D3 discloses an open roof construction for a vehicle with a closing element fixed on sliding elements which are guided in a groove. These guiding elements comprise sliding shoes constituted by the tip of the bow of the resilient elements 45, 46, 31, 32, 33, 34 or 56, 57, 58, 59, 61, 62 the rest of the resilient elements constituting the respective spring member associated

with the sliding shoe. There are also two spring elements on each side of a fixing point, since the closing element must be fixed in the slots of the sliding elements. Figures 6 and 7 show shoes 56, 57, 58, 59 which are symmetrically loaded in vertical direction. Hence all features of claim 1 are disclosed in D3, so that its subject-matter is at least not inventive over D3.

The subject-matter of claim 1 is also not inventive starting from D1 as closest prior art, and considering the teaching of D3 or D6.
It is undisputed that D1 discloses all the features of the first part of claim 1. Additionally features 1.9 and 1.10 of the claim are also disclosed in D1 when the claim is interpreted according to the explanation given further above. The spring 24 giving the load in the outward direction and the flexible element 29 giving the load in the vertical direction. It is clearly mentioned in D1 column 6 lines 47 to 52 that the element 29 is resilient.
Feature 1.8 is the only feature not present in D1, since in the open roof construction according to D1 there is only one sliding shoe and not two as required by the wording of this feature.
However, the addition of this second sliding shoe cannot be considered inventive, since it would be obvious for the skilled man to make the sliding shoe of the open roof construction according to D1 in two pieces instead of one if this were needed for instance to be able to follow a groove which is not perfectly straight. The skilled man could for instance easily cut the sliding shoe of the open roof construction according to D1 into two pieces if needed. This feature

of having two sliding shoes instead of one is also suggested by D3 as already explained further above. Document D6 as well as D5 also suggests the use of two sliding shoes, both documents showing open roof constructions with two sliding shoes with associated spring members vertically symmetrically loading the shoes and it would be obvious for the skilled man to use such a design in the construction according to D1 when needed.
It is further to be noted that starting from D1, rattling cannot be a problem to be solved, since it is clear for the skilled man that the construction according to D1 also avoids rattling because of the spring load on the sliding shoe.

VI. The arguments of the respondent can be summarized as follows:

The respondent agrees with the appellant in considering that the wording of claim 1 encompasses the case of the vertical load and the horizontal load being applied to the respective shoe by two separate springs.

Concerning inventive step it is accepted that the most relevant prior art is disclosed in D1, but the open roof construction according to D1 only comprises one shoe and even if it were cut into two pieces it would not be biased in the vertical direction. Additionally the shoes do not prevent rattling, they are mounted in the way shown in D1 only in order to be able to compensate for manufacturing tolerances.
In the construction of D3 there are not just the two shoes in the construction as required by the present

claim, but six shoes with no relationship between each other, so that this document cannot suggest to make two shoes out of the one shown in D1.
Concerning D5 and D6, there is no reason as to why the skilled man would rather choose the one or the other of the two embodiments described in these documents, and even if he chose the one with the two shoes he would not arrive at the subject-matter of claim 1.

Reasons for the Decision

1. The appeal complies with the requirements of Articles 106 to 108 and Rule 64 EPC; it is therefore admissible.

2. Interpretation of Claim 1

2.1 The appellant as well as the respondent argued that the spring member mentioned in claim 1 (features 1.7, 1.9 and 1.10) could also encompass two different spring elements the outwardly directed load on the sliding shoes being given by one of the spring elements and the vertical load being given by the other. This interpretation is supposed to be based on the embodiment shown in figures 9 and 10 in which the outwardly directed load would be given by spring 113 whereas the vertical load would be given by spring 121. Since this embodiment would also have to fall under the wording of claim 1, the feature of the spring member of claim 1 could only be interpreted in this way.

2.2 The board cannot agree with this interpretation. In the board's opinion such an interpretation is not in conformity with the technical content of the description of the patent in suit.

In the description of the patent three embodiments of the invention claimed in claim 1 are disclosed.
The first embodiment is shown in figures 2 to 8 and described from paragraph [0018] to paragraph [0027], the second in figures 9 and 10 and described from paragraph [0028] to paragraph [0029] and the third embodiment is shown in figures 11 and 12 and described from paragraph [0030] to paragraph [0036].

In the first embodiment the respective arms of the leaf spring used to connect each of the two sliding shoes to the fixing point are twisted by 90° at approximately the middle of their lengths and the first part of each leaf spring arm gives the outwardly directed load whereas the second part of the same leaf spring arm gives the vertical load to the sliding shoe when the unit is in the mounted position. In other words the shape of the leaf springs when the shoes are not mounted in the grooves is so that from their rest positions, the shoes must be twisted and pulled inwardly in order to be able to enter the groove and once in the groove they will force the shoes outwardly and twist them pushing their sliding surfaces against the respective guiding surfaces of the groove.
In the first embodiment the shoe is thus forced into a rotation around an axis perpendicular to the bottom of the groove and at the same time forced into the groove.

This construction corresponds to the claimed feature 1.10 clearly requiring that the said spring member (the one responsible for the outwardly directed load) is also loaded so as to load the shoe vertically.

In the second embodiment the load applied in the vertical direction is not given by means of a preloading of the leaf spring 113 but by a projection 123 connected with the central part of the leaf spring and a guide 124 forcing the projection and with it the central part of the leaf spring upwards and thus forcing the shoes against the upper surface of the groove in which they are placed. In this embodiment too the outwardly directed load is created by means of a preload, but the vertical load is created by a guiding surface.
Here again the shoes are linked through the same and unique spring element to the fixing point and the vertical load as well as the horizontal load are applied to the shoes through the same spring element as required by feature 1.10 of claim 1.

It is to be noted that according to the description of the patent in suit, column 6, lines 13-17, the springing portion 121 only serves to flexibly link the sun screen to the spring member 113 and allow the vertical displacement of the spring 113 by cam 123 as explained further down in the description column 6, lines 22-28. The springing portion 121 thus plays no role in the vertical loading of the spring member 113.

The third embodiment is a combination of the principles applied in the first and the second embodiment with the difference that the upper surface of the groove

directly acts as a guiding surface for the central cam element.
But here again the vertical as well as the horizontal load are applied to the sliding shoes through the same spring element as required by the wording of claim 1.

The board can only interpret the claim in the light of the description of the patent as an unbiased skilled man would do, and not according to the views put forward by the parties, when these views find no support in the description of the patent. According to the understanding of the board, there is no room for the interpretation of the claim according to the one proposed by the parties.

In the board's opinion the claim has thus to be understood as already mentioned in the annex to the summons to the oral proceedings, namely that on each side of a fixing point there is one shoe (feature 1.8), that each shoe has an associated spring member (feature 1.9), that this spring member biases the sliding shoe outwardly with respect to the closing element (feature 1.7) and that this spring member is also the one which is loaded in vertical direction with respect to the fixing point (feature 1.10).

3. The implicit lack of novelty objection raised through one of the lines of arguments of lack of inventive step presented by the appellant in relation with document D3, thus cannot be followed by the board. This objection was based on a misinterpretation of the claim, possibly covering also the case of the two loads in the two different directions being applied to the shoes by two separate spring members.

As explained above, this interpretation has no basis in the description of the granted patent and since the open roof construction according to D3 clearly comprises different spring members for the different directions of load applied to the shoes a further analysis of this implicit novelty objection is not necessary.

4. Inventive step

4.1 The closest prior art is accepted to be disclosed by D1. It is undisputed that the open roof construction according to D1 comprises all the features of the first part of claim 1.
It has a stationary part 7,11,13 and a closing element 12 supported by that stationary part. The closing element 12 is slidably guided at its side edges by means of sliding shoes 31 in guide grooves 13 formed in said stationary part. The grooves 13 are open on the side facing towards the closing element and the sliding shoes 31 are biased outwardly with respect to the closing element by means of spring members 26.

4.2 The open roof construction according to claim 1 comprises the additional features that:

1.8 respectively two sliding shoes (12; 112; 212) are connected to the closing element (9) on both sides of a fixing point to said closing element,

1.9 and that said sliding shoes are biased by an associated spring member,

1.10 whilst means (16; 123; 225) are provided by which said spring members (13; 113; 213) are symmetrically loaded in vertical direction with respect to said fixing point.

4.3 The construction of having two sliding shoes connected to one fixing point through a respective associated spring member, each one connecting respectively one shoe to the fixing point and this spring member loading the sliding shoes outwardly clearly is a much simpler and more stable construction than the one used in D1 which includes numerous elements (connecting arms 29, spring element 24, gliding tongue 34, supporting arms 22) and in which the sliding shoe is not even effectively fixed to the closing element. Furthermore the fact that the spring member is additionally symmetrically loaded in vertical direction with respect to the fixing point and the spring element is fixed to the closing element is a better guarantee that rattling will be avoided, since the gliding tongue used in D1 is avoided and the sliding shoes are pressed against their guiding surfaces. Finally the provision of two sliding shoes instead of one as in D1 also contributes to a better gliding of the shoes in the grooves avoiding any jamming as the adaptability of the sliding shoe unit to the longitudinal shape of the groove is improved.

4.4 The appellant has submitted in this context that the construction according to D1 already avoids rattling and that as a consequence rattling cannot be part of the problem to be solved.

It is an aim of the invention in D1 to build a sun screen which can compensate for manufacturing

tolerances in vertical as well as in transversal direction (see column 2, lines 7 to 15). This is achieved by using a sliding shoe which is resiliently maintained on the closing element, the maintaining means showing resiliency both in vertical and in transverse direction. Nowhere in the description is there mentioned that the sliding shoe is in any way pressed vertically against the guiding surfaces of the groove in which it has to move. Such a pressing is technically also irrelevant to compensate for manufacturing tolerances for which it is enough that the shoe is allowed some freedom of movement in both the vertical and the transverse directions with respect to the closing element. In order to avoid rattling it is on the contrary necessary to press the shoes so much against the guiding surfaces that under all driving circumstances the shoes remain against them.

For these reasons the board cannot agree with the argument of the appellant in this respect.

4.5 The objective problem solved by the characterising features can thus be seen in the provision of a simpler and more stable construction of the sliding shoe units while at the same time diminishing the probability of occurrence of rattling and having a better adaptability of the sliding shoe unit to the longitudinal shape of the groove.

4.6 In the opinion of the board none of the cited documents can suggest the claimed solution, because none of the cited documents shows a fixing point from which two spring members extend with a sliding shoe at their ends, these spring members biasing the shoes outwardly and

also being loaded in vertical direction with respect to said fixing point.

With respect to D3 it is questionable whether the skilled man would consider the resilient elements 45, 46, 31, 32, 33, 34 shown in figures 2 and 3 or the resilient elements 56, 57, 58, 59, 61, 62 shown in figures 6 and 7 as being a combination of a sliding shoe and a spring member when they are described as spring arm or spring element. If nevertheless he did so, six such elements would be present and not two as required by claim 1 of the patent in suit. In addition none of the spring members is used for applying both the outwardly directed load and the vertical load, since in the embodiments of D3 two spring members apply the outwardly directed load and four spring members apply the vertical load.
It is therefore not apparent how the skilled man could arrive at the solution of claim 1 when considering document D3.

Concerning document D6 mentioned by the appellant, in the opinion of the board it is already questionable whether the skilled man wishing to solve the above mentioned problem would consider D6, since the problem dealt with in this document is a possible falling out of the part of the roof meant to be opened in case of an accident.
Should the skilled man nevertheless consider D6, he could not come to the claimed subject-matter, since the shoe or shoes used in the open roof construction according to D6 are not biased outwardly with respect to the closing element as required by feature 1.7 of claim 1 and even if the shoes of D6 were simply

replacing the shoes of D1, then feature 1.10 would still be missing, since two different spring members would be used for the two loads applied to the shoes. It seems therefore that here again the combination of D1 and D6 cannot lead to the subject-matter of claim 1.

The same reasoning applies to the succinctly mentioned document D5 since there as well the spring member loaded vertically is not loaded outwardly.

4.7 The appellant also submitted that the skilled man would simply make two sliding shoes out of the one shown in D1 for instance in order to allow a better guiding without possible blocking when the groove is not straight enough.

This line of arguments of the appellant also cannot be followed by the board, since the board does not see any reason as to why it would be obvious for the skilled man to divide the mentioned shoe into two pieces. Should he have the kind of problems mentioned by the appellant, he would within the framework of the invention disclosed in D1 diminish the thickness and/or the length of the shoe, or choose an appropriate material for it.

5. For the reasons, the claimed subject-matter of claim 1 involves an inventive step with respect to the available prior art (Articles 52(1), 56 EPC). Hence, the ground for opposition under Article 100(a) EPC does not prejudice the maintenance of the patent unamended and the opposition had to be rejected under Article 102(2) EPC. Therefore, the appeal must fail.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

A. Vottner S. Crane