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Datasheet for the decision of 27 April 2010

Case Number: T 0801/08 - 3.2.05

Application Number: 01917387.1

Publication Number: 1284852

IPC: B29C 65/40

Language of the proceedings: EN

Title of invention:
Joined profile sections, apparatus and method for joining profile sections

Patentee:
HENNIGES AUTOMOTIVE SEALING SYSTEMS

Opponents:
Metzeler Automotive Profile Systems GmbH
WENO Werkzeug & Maschinenbau GmbH
SG Technologies GmbH

Headword:
-

Relevant legal provisions:
EPC Art. 54, 56

Relevant legal provisions (EPC 1973):
-

Keyword:
"Novelty (main request, no; auxiliary request, yes)"
"Inventive step (auxiliary request, no)"

Decisions cited:
-

Catchword:

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Case Number: T 0801/08 - 3.2.05

D E C I S I O N
of the Technical Board of Appeal 3.2.05
of 27 April 2010

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Decision under appeal: **Interlocutory decision of the Opposition Division of the European Patent Office posted 18 February 2008 concerning maintenance of European patent No. 1284852 in amended form.**

Composition of the Board:

Chairman: W. Zellhuber
Members: S. Bridge
M. J. Vogel
W. Widmeier
E. Lachacinski

Summary of Facts and Submissions

I. The appellants I (opponent O2) and II (patent proprietor) lodged respective appeals against the decision of the Opposition Division maintaining the European patent No. 1 284 852 in amended form.

II. Oppositions were filed by party as of right I (opponent O1), appellant I and party as of right II (opponent O3) against the patent as a whole based on Article 100(a) EPC (lack of novelty, Article 54 EPC, and lack of inventive step, Article 56 EPC). Appellant I further invoked the grounds of opposition under Article 100(b) and (c) EPC but did not provide any corresponding substantive arguments.

III. The Opposition Division held that the grounds for opposition cited in Article 100(a) EPC did not prejudice the maintenance of the patent in amended form.

IV. Oral proceedings were held before the Board of Appeal on 27 April 2010 in the absence of appellant II, whose representative had previously informed the Board that he would not attend.

V. Appellant II requested, as main request, that the decision under appeal be set aside and that the patent in suit be maintained as granted, or, as an auxiliary measure, that the appeal of appellant I be dismissed.

VI. Appellant I and the parties as of right I and II requested that the decision under appeal be set aside and that the European patent No. 1 284 852 be revoked.

VII. Independent claims 1, 6 and 15 of the patent in suit as granted (main request) read as follows:

"1. A joined profile section arrangement, comprising two strip lengths (5,6) joined end to end by sheet-shaped heat-bonding air-permeable connecting material (24) between and bonded to the ends, **characterised in that** the connecting material (24) is placed between and bonded to the faces of the ends to be joined so as to be substantially perpendicular to the strip lengths at the joining thereof, whereby the air-permeable connecting material (24) permits the passage therethrough of air in the direction from one of the strip lengths (5,6) to the other one thereof (5,6)."

"6. Apparatus for joining two strip lengths end to end, comprising means (18,20) for clamping the two strip lengths (5,6) with one end face of one of them (5,6) facing towards one end face of the other one of them (5,6), means (22) for positioning heat-responsive connecting material (24) between the faces of the ends of the strip lengths (5,6) when the said faces of the ends are spaced apart from each other, heating means (26,28) for heating the connecting material (24) and the said faces of the ends of the strip lengths (5,6), and transporting means for moving the strip lengths (5,6) towards each other so that the heated faces of the ends make contact with the heated connecting material (24) whereby the connecting material (24) bonds those faces of the ends of the strip lengths (5,6) together, **characterised by** aperture-forming means (36,46) operative when the heat-responsive connecting material (24) has been positioned between the faces of the ends of the strip lengths (5,6) for forming one or

more apertures in the connecting material (24) to allow the passage of air through the connecting material in the direction from one of the strip lengths (5,6) to the other one thereof when the two strip lengths (5,6) have been joined."

"15. A method of forming a joint between the faces of respective ends of two profile sections (5,6), comprising the steps of holding the profile sections (5,6) apart from each other with the said faces of the end facing each other, positioning, heat-responsive connecting material (24) between the said faces of the ends of the profile sections (5,6), heating the connecting material (24) and the said faces of the ends of the profile sections (5,6), and moving the profile sections (5,6) towards each other so that the heated faces of the ends make contact with the heated connecting material (24) whereby the connecting material (24) bonds the faces of the ends of the profile sections (5,6) together, **characterised by** the step of forming one or more apertures (24A) in the connecting material (24) after it has been positioned between the faces of the ends of the profile sections (5,6), whereby to allow the passage of air in the direction through the joint in the direction from one of the profile sections (5,6) to the other thereof."

VIII. The auxiliary request comprises two independent claims:

- independent claim 1 which corresponds to claim 6 of the main request, and
- independent claim 10 which only differs from claim 15 according to the main request in that, in the preamble of claim 10, the comma after the word "positioning" has been deleted.

IX. The following documents are referred to in the present decision:

E0: Transcript of the hearing of the witness Mr Philippe Dassin, "Procès-verbal de l'audition de témoins, brevet européen 1 284 852, numéro de la demande 01917387.1, établi lors de la procédure orale devant la division d'opposition le 21 novembre 2007";
E3: DE-A-39 06 278;
E9a: JP-A-2000-263648;
E9d: certified English translation of JP-A-2000-263648;

X. The arguments of appellant I and of the parties as of right in the written and oral proceedings can be summarised as follows:

Main Request

According to the testimony of Mr Dassin, such large number of sealing profiles were produced and delivered to Citroën that there was no doubt that these were fitted to cars and subsequently sold. Furthermore, appellant II had not provided any evidence which would have cast a doubt on the testimony of Mr Dassin. There was therefore no need for additional evidence concerning the public availability of prior use 1.

In consequence, prior use 1 was sufficiently proven and, in consequence, the subject-matter of claim 1 according the main request lacked novelty with respect to prior use 1.

Auxiliary Request - Novelty

The subject-matter of apparatus claim 1 (auxiliary request) contained method features concerning the transporting means. The wording of these method features also encompassed reading the term "heated" in the present tense, so that the method features concerning the transporting means only specified that the transporting means had to be suitable for withstanding the heat of the faces and connecting material during bonding. In consequence, apparatus claim 1 according to the auxiliary request was not limited to a sequence of operations in which the connecting material and the end faces of the strip lengths were first heated and only then transported into joining contact.

In the context of the first embodiment (Figures 1 to 3), document E9a disclosed that the sheet member 1 and the extruded components were subject to "heat treatment" so as "to be integrally joined to each other". One form of "heat treatment" was vulcanisation and the other was "heat seal treatment" in which "the ends to be joined together [were] previously heated to be joined together" (document E9d, paragraph [0022], last two sentences). Furthermore, the manner in which document E9a is drafted implies that these alternatives also carry over to the second embodiment (Figures 4 and 5).

Document E9a did not explicitly disclose any heating means in the variant embodiment which used "heat seal treatment" instead of vulcanisation (document E9d, paragraph [0022], last sentence). It was argued on

behalf of appellant I, that in this variant, it was nevertheless implicit for the skilled person that the sheet member 1 was also subject to heating as, otherwise, no effective bonding was achievable. It was further argued on behalf of party as of right I, that the "previously heated" "ends to be joined together" would have themselves acted as heating means for the sheet member 1 when they entered into contact.

Furthermore, heating means, which, for example, were configured to extend along the whole of the moving distance of the ends of the strip lengths to be joined, would also anticipate the subject-matter of claim 1.

In consequence, the subject-matter of apparatus claim 1 according the auxiliary request lacked novelty with respect to document E9a.

The above reasoning also applied to the subject-matter of method claim 10 according the auxiliary request, which, in consequence, similarly lacked novelty with respect to document E9a.

Auxiliary Request - Inventive step

Heating the connecting material prior to the joining of the ends of the strip lengths was generally known to the skilled person, for example, from document E3 (acknowledged as prior art in the patent in suit in paragraphs 5 to 7 of the B-publication), in which both the connecting material, in the form of one or two foils 3, and the faces at the ends of the two profile sections were heated prior to joining (document E3,

sentence spanning columns 3 and 4 and column 4, lines 42 to 57).

Therefore, the subject-matter of claim 1 according to the auxiliary request lacked an inventive step with respect to document E9a in combination with the knowledge of the skilled person obtained from document E3.

XI. In the written procedure, appellant II argued essentially as follows:

Main Request

Concerning prior use 1, the witness Mr Dassin was not employed by Citroën but by "La Barre Thomas" and thus was not in a position to provide evidence that the sealing rings were received by Citroën or, if received, fitted to Citroën Xsara cars. No supporting evidence concerning the subsequent use of the sealing rings had been provided. Therefore, it was not proven "up to the hilt" that the subject-matter of prior use 1 was made available to the public before the relevant priority date of the patent in suit.

Therefore, the subject-matter of prior use 1 was not to be used as prior art.

Auxiliary Request

Claim 1 required "transporting means for moving the strip lengths (5,6) towards each other so that the heated faces of the ends make contact with the heated connecting material...". It followed from this that the

faces of the ends of the profile sections and the connecting material must have been heated before the strip lengths were moved towards each other by the transporting means. A person skilled in the art was not able to interpret this part of claim 1 in any other way from the language used.

Furthermore, claim 1 (auxiliary request) must be interpreted in the light of the description of the patent in suit. From this, it was evident to a person skilled in the art that the various "means" specified in claim 1 operated in the sequence stated in claim 1 and must therefore be controlled to operate in that way. These so-called "method" features in claim 1 were features which (in part) defined the apparatus of claim.

According to both claims 1 and 10 (auxiliary request) the heat-responsive connecting material was heated and subsequently bonded the ends of the strip lengths together when the heated faces of the ends made contact with the heated connecting material under the action of the transporting means. These features were not disclosed in document E9a, which, instead, used a vulcanisation process in which the mould parts 5A and 5B containing the two respective pipe-lengths were brought together with the sheet material 1 between them before heat was applied. It would not have been possible to reverse the order of these steps, because the heated end faces of the strip lengths would have become at least partially vulcanised before coming into contact. A person skilled in the art therefore knew that these steps could not be reversed.

In the invention of claim 1 (auxiliary request), the aperture-forming means was operative to form "one or more apertures in the connecting material to allow the passage of air through the connecting material". However, in the arrangement disclosed in Figures 4 and 5 of document E9a, the "balloon 24", when expanded, removed all of the "connecting material" (sheet 1) from the interior of the joined pipe-lengths so that there was no connecting material for the air to pass through.

In document E3, there were no transporting means for moving the strip lengths so that the heated faces of the ends made contact with the heated connecting material, because the faces of the ends were already in contact with the connecting material when the heating takes place.

The subject-matter of claims 1 and 10 according to the auxiliary request was therefore new and involved an inventive step.

Reasons for the Decision

1. Main Request

1.1 The only issues which were raised with respect to prior use 1 was the question of whether the sealing strips manufactured at the "La Barre Thomas" plant were delivered to "Automobiles CITROËN" and whether they were fitted to Citroën Xsara cars.

1.2 According to the transcript E0 of the hearing of the witness Mr Dassin, the "La Barre Thomas" plant in

Rennes belonged to Citroën and Mr Dassin was employed by "PSA Peugeot Citroën" in their design office in charge of research for body sealing ("recherche - étanchéité - carrosserie") (transcript E0, page 1). In consequence, Mr Dassin was in a position to know what became of the sealing rings made in the "La Barre Thomas" plant in Rennes as a result of working for "PSA Peugeot Citroën" and being in charge of "research for body sealing".

According to the transcript E0, appellant II also cross examined the witness during the hearing (paragraph 3 on page 5 of the transcript E0), but did not ask any questions concerning the receipt by Citroën of the sealing rings made in the "La Barre Thomas" plant or concerning the details of the fitting of such sealing rings to Citroën Xsara cars.
Furthermore, appellant II did not contest that Citroën Xsara cars were sold to the public in the period between 1997 and 24 May 2000.

As appellant II did not provide further evidence on the basis of which a doubt would be cast on the statements made by the witness Mr Dassin, the Board has no cause to question the testimony provided or to require additional evidence from party as of right I concerning these issues at this late stage of the proceedings.

1.3 In consequence, the Board considers that it is sufficiently proven that the sealing strips manufactured in the "La Barre Thomas" were made available to the public.

1.4 The sealing strips made at the "La Barre Thomas" plant according to prior use 1 exhibit all the features of claim 1 according to the main request.

Neither the technical features of the sealing strips made at the "La Barre Thomas" plant according to prior use 1, nor the lack of novelty of claim 1 according the main request with respect to prior use 1, once it had been admitted as prior art, were contested by appellant II.

Therefore, the subject-matter of claim 1 according the main request is not new with respect to prior use 1 (Article 54 EPC).

2. Auxiliary Request

2.1 Document E9a

The subject-matter of claims 6 and 15 of the main request, respectively claims 1 and 10 of the auxiliary request, does not enjoy the right of priority in respect of the first priority document (GB0012652, dated 24 May 2000), which only discloses the joined profile section arrangement of claims 1 to 5 of the main request.

Document E9a was published on 26 September 2000 and therefore represents prior art according to Article 54(2) EPC for apparatus claims 6 to 14 and method claim 15 of the main request, respectively apparatus claims 1 to 9 and method claim 10 of the auxiliary request.

2.2 Novelty - Article 54 EPC

2.2.1 The subject-matter of claim 1 according the auxiliary request is new, because document E9a does not directly and unambiguously disclose that the sheet member 1 is heated when "heat seal treatment" is used for bonding the two strip lengths (translation E9d, page 12, lines 23 to 25).

2.2.2 The above argumentation applies correspondingly to method claim 10 according to the auxiliary request, which claim is therefore new with respect to document E9a.

2.2.3 It was advanced on behalf of appellant II that document E9a only discloses vulcanisation as the means of joining the hollow extruded components. This argument cannot be accepted for the following reasons.

Document E9a has to be read as a whole and is drafted such that the second embodiment (document E9a, figures 4 and 5 and translation E9d, paragraphs [0026] and [0027]) is only described in terms of those features which differ with respect to the first embodiment (document E9a, figures 1 and 2 and translation E9d, paragraphs [0018] to [0025]). In consequence, the second embodiment inherits all other technical features from the first embodiment.

In the context of the first embodiment, document E9a discloses that the sheet member 1 and the hollow extruded components 2 and 3 are joined by means of "heat treatment", two alternative examples of which are vulcanisation and "heat seal treatment". For the latter

"the ends to be joined together are previously heated to be joined together" (translation E9d, paragraph [0022], last two sentences). As argued above, these alternatives are therefore also disclosed in the context of the second embodiment.

Therefore, document E9a discloses a variant of the second embodiment wherein "heat seal treatment" is used for joining the hollow extruded components 2 and 3.

2.2.4 It was advanced on behalf of appellant II that document E9a does not disclose aperture forming means in the sense of claim 1 according to the first auxiliary request, because the balloon member 24, once inflated in the position shown in figure 5 of document E9a, removes all the sheet member 1 material contained in the hollow extruded components 2 and 3 so that no connecting material is left in which an aperture could have been said to have been formed.

This argument cannot be accepted, because document E9a merely states that the balloon member 24 penetrates sheet member 1 and is subsequently inflated (translation E9d, paragraph [0027]). It does not disclose any statement to the effect that the balloon member 24 removes the sheet member 1. Instead, parts of the latter remain integrally joined between the join end surfaces of the extruded components 2 and 3 (translation E9d, paragraph [0022], second sentence). Furthermore, claim 1 (auxiliary request) does not specify that any connecting material has to be left inside the strip lengths.

In consequence, in the second embodiment disclosed in document E9a, the inflatable balloon member 24 is used as an aperture-forming means, operative when the heat-responsive connecting material has been positioned between the faces of the ends of the strip lengths for forming an aperture in the connecting material (document E9a, figures 4 and 5 and translation E9d, paragraph [0027]).

It was not contested that the aperture created by the inflating the balloon member 24 in the position shown in figure 5 clearly allows the passage of air through the sheet member 1 in the direction from one of the hollow extruded components 2 and 3 to the other one thereof once the two hollow extruded components 2 and 3 have been joined.

Therefore, the characterising feature of claim 1 (auxiliary request) is disclosed in connection with the second embodiment of document E9a.

2.2.5 It was advanced on behalf of appellant I and of the parties as of right that the skilled person would implicitly understand that the sheet member 1 is also heated before the ends of the strip lengths are joined.

The Board cannot follow this argument, because, on the one hand, no supporting evidence was provided and, on the other, there remains the possibility that only the ends of the strip lengths are heated prior to joining. The possibility of using the heated ends of the strip lengths to heat the previously not heated connecting material was mentioned by party as of right I in connection with the lack of explicit disclosure of

heating means in document E9a. In consequence, document E9a does not directly and unambiguously disclose heating the sheet member 1 before joining the ends of the strip lengths in the embodiment variant in which the "heat seal treatment", with the "previously heated" ends to be joined, is used.

2.2.6 It was advanced on behalf of appellant I and of the parties as of right that, heating means, which, for example, were configured to extend along the whole of the moving distance of the ends of the strip lengths to be joined, would anticipate the subject-matter of claim 1.

This argument cannot be accepted, because such heating means are not described anywhere in document E9a.

2.2.7 Claim 1 according to the auxiliary request specifies that the "transporting means for moving the strip lengths (5,6) towards each other" also exhibits the following functional features:

> "so that the heated faces of the ends make contact with the heated connecting material (24) whereby the connecting material (24) bonds those faces of the ends of the strip lengths (5,6) together".

It was advanced on behalf of appellant I and of the parties as of right that the term "heated" can also be understood in the present tense, so that these functional features merely specify that the transporting means have to be suitable for withstanding the heat of the faces and connecting material during bonding.

The Board cannot accept this argument, because it is an artificial manner of reading the claim. The straight forward reading of these functional features is that the term "heated" used in the past tense and thus that heating occurs before the heated end faces of the strip lengths have been brought into contact with the heated connecting material.

Furthermore, as was argued on behalf of appellant II, there is no basis in the description of the patent in suit for heating being applied after the end faces of the strip lengths have been brought into contact with the connecting material.

In consequence, the apparatus according to claim 1 (auxiliary request) is implicitly limited to a sequence of operations in which the connecting material and the end faces of the strip lengths are first heated and only then transported into joining contact.

2.3 Inventive step - Article 56 EPC

The closest prior art is represented by document E9a. The disclosure in document E9a which comes closest to the subject-matter of claim 1 (auxiliary request) is the variant of the second embodiment in which the "heat seal treatment" is used for bonding the two strip lengths.

The subject-matter of claim 1 (auxiliary request) is distinguished over this disclosure by the provision of means for heating the connecting material 24 before the

heated faces of the ends make contact via the heated connecting material.

This distinguishing feature is not related to the stated purpose of the invention in the patent in suit, namely to allow air to pass through the joint in the direction from one profile section to the other (paragraph [0005] of the published version of the patent in suit). Instead, prior heating of the connecting material generally relates to the bonding of the strip lengths.

The person skilled in the art is generally familiar with heat-bonding connecting materials and in particular with how these are to be used. Evidence for this general knowledge is, for example, disclosed in document E3, which is acknowledged as prior art in the patent in suit (published version, paragraph [0005]).

Document E3 discloses an arrangement in which two strip lengths are positioned so as to be generally facing each other and a separate sheet of connecting material is placed on at least one of the two end faces. Heat is then applied to both the connecting material and the end faces of the two strip lengths. The two strip lengths, at least one of them with the heated piece of connecting material already mounted on it, are subsequently moved together into contact with each other so as to join and become bonded (sentence spanning columns 3 and 4 and column 4, lines 42 to 64).

In consequence, the skilled person would select to heat the connecting material before joining the heated ends of the strip lengths as a matter of routine for

obtaining a suitable bond. Thus the only distinguishing feature is not regarded as contributing to an inventive step.

Therefore, the subject-matter of claim 1 of the auxiliary request does not involve an inventive step (Article 56 EPC).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

D. Meyfarth W. Zellhuber