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**Datasheet for the decision
of 18 September 2012**

Case Number: T 1397/09 - 3.2.04

Application Number: 01117622.9

Publication Number: 1197157

IPC: A43B 7/08, A43B 7/06

Language of the proceedings: EN

Title of invention:
Shoe

Patentee:
adidas International Marketing B.V.

Opponents:
Hendriks, Ralph
Nike Retail B.V.

Headword:
-

Relevant legal provisions:
EPC Art. 100(a), 56, 123(2), 101(2), 101(3)(b)

Keyword:
"Inventive step - (no) main request, auxiliary requests I, III"
"Added subject-matter (yes) auxiliary requests IV, V, VIII"
"Referral to the Enlarged Board of Appeal - (no)"

Decisions cited:
T 1067/07, T 1408/04

Catchword:
-



Case Number: T 1397/09 - 3.2.04

DECISION
of the Technical Board of Appeal 3.2.04
of 18 September 2012

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted
29 April 2009 concerning maintenance of the
European patent No. 1197157 in amended form.**

Composition of the Board:

Chairman: A. de Vries
Members: T. Bokor
C. Scheibling

Summary of Facts and Submissions

- I. Both the Opponent II and the Proprietor lodged appeals against the interlocutory decision of the Opposition Division posted 29 April 2009 on the amended form in which the Patent No. 1 197 157 can be maintained.

The notice of appeal of the Proprietor was received 24 June 2009 together with payment of the appeal fee. The statement setting out the grounds followed on 8 September 2009.

The Opponent II filed a notice of appeal on 6 July 2009 together with payment of the appeal fee. The statement setting out the grounds was received 9 September 2009.

- II. Oppositions had been filed against the patent as a whole and were based, among others, on Article 100(a) together with Articles 52(1), 54 and 56 EPC for lack of novelty and inventive step.

The Opposition Division held that the grounds for opposition mentioned in Article 100 EPC did not prejudice the maintenance of the patent as amended having regard to the following prior art in particular:

D1: WO-A-98/51177
D2: US-A-5 983 524
D10: JP-A-06 141 906 and its English language translation.

- III. The Proprietor as Appellant requests that the decision under appeal be set aside and that the patent be maintained as granted (main request), or, in the alternative, that it be maintained in amended form

according to one of auxiliary requests I, III, IV and V filed with the grounds of appeal, with a correction to auxiliary request III filed with letter of 12 July 2010, or according to auxiliary request VIII filed on 16 August 2012. Additionally, the Appellant I requests the referral of two questions regarding claim interpretation to the Enlarged Board of Appeal.

The Opponent II as Appellant requests that the decision under appeal be set aside and the patent be revoked in its entirety. Additionally, refusal of the request for referral to the Enlarged Board of Appeal is requested.

The Opponent I as Respondent has neither filed requests nor made submissions.

IV. Oral proceedings were duly held before the Board on 18 September 2012. At the oral proceedings the Appellant I withdrew auxiliary requests II, VI and VII then on file.

V. The wording of claim 1 of the requests is as follows:

Main Request

"Shoe, in particular sports shoe, comprising:

- a. an insole layer (1) with first openings (2, 3);
- b. a support layer (10) with second openings (11, 12) which partially overlap the first openings (2, 3); and
- c. an outsole layer (30) with at least one third opening (33, 34, 35) which at least partly overlaps the second openings (11, 12)."

Auxiliary Request I

With respect to claim 1 as granted feature c. is amended to read as follows (italics added by the Board to indicate what has changed):

"c. an outsole layer (30) with at least one third opening (33, 34, 35) *wherein the third opening at least partly overlaps the second openings (11, 12).*"

Auxiliary Request III

With respect to claim 1 as granted feature c. is amended to read as follows (italics again indicate what has changed):

"c. an outsole layer (30) with at least one third opening (33, 34, 35) *wherein at least one third opening is arranged in the toe part and/or at least one third opening in the region of the arch of the foot thus overlapping with the corresponding second openings in the support layer.*"

Auxiliary Request IV

Claim 1 of this request adds to claim 1 as granted a further feature d. which reads:

"d. an additional support element (20) in the region of the arch of the foot interconnecting the forefoot part and the rearfoot part like a frame, wherein the support element is an open frame construction with a plurality of openings corresponding to the openings of the support layer"

Auxiliary Request V

Claim 1 of this request adds text to feature d. of claim 1 of auxiliary request IV so that this feature now reads (italics indicate added text):

" ... with a plurality of openings corresponding to the openings *and the struts of the support layer.*"

Auxiliary Request VIII

Claim 1 of this request adds text to feature d. of claim 1 of auxiliary request IV so that this feature now reads (italics indicate added text):

" ... with a plurality of openings corresponding to the openings *and struts of the support layer, and wherein the support element determines the resistance of the sole ensemble to foot movements and controls the longitudinal stiffness of the shoe.*"

VI. The Appellant-Proprietor argued as follows:

As regards the question of referral it is clear that different approaches are applied to claim interpretation in the light of the description. The different approaches give different results in the present case. The exact interpretation of the claim is however decisive for the issues of novelty and inventive step.

Feature b) can only be interpreted in terms of the "offset" approach, with an offset between individual

openings. This is the only solution disclosed in the patent to the problem of maintaining mechanical stability and aeration of the sole. A central aspect is to avoid through holes which weaken the structure. By offsetting holes in the two layers mechanical stability is improved without significant loss of ventilation. This does not lead to loss in ventilation as a single support layer opening can overlap with plural insole layer openings. The "averaging" approach would not solve the problem and therefore does not fall within such a purposive reading of the claim. The interconnection of the insole openings by channels described in paragraph [0023] is merely a subsidiary aspect and is unrelated to the main idea of partial overlap.

Feature c) is to be read as one or more third openings that each overlap plural openings in the support layer.

In D1, D2 the membrane is not a support layer in the sense of the claim and cannot be considered for the purpose of feature b) or c). With regard to layer 314 there is no opening in the outsole that overlaps plural openings of layer 314. This feature results in improved ventilation. Starting from D2 the obvious solution would be to increase the number of openings, not widen them to overlap plural support layer openings as this would expose the inner membrane to damage. This line of argumentation applies also to claim 1 of auxiliary requests 1 and 3 when considering inventive step.

Auxiliary requests IV, V and VIII incorporate the feature of granted claim 12 together with important detail from patent specification paragraph [0049]. Thus

having the openings of the additional support element correspond to the openings of the support layer allows the use of the element while maintaining ventilation through the support layer. It is clear what is meant, in particular also when reading the claim in the light of the description and figures, namely that the openings in the element should correspond to the areas of openings in the support layer.

VII. The Appellant-Opponent argued as follows:

Dependent claim 5 and the corresponding passage in paragraph [0023] of the patent specification describe an important, central aspect of the solution of the problem addressed by the patent. That problem is to achieve optimal ventilation of the shoe while maintaining mechanical stability. This "averaging" approach is the only approach described in any detail in the patent, and the claim should be interpreted accordingly.

In D2 elements 314, 315 and 318 together form the sole's support layer with holes that are in fact offset with openings in the overlying insole layer. In the shoe as presently claimed the only difference is that one or more openings in the outsole each overlap a plurality of support layer openings. As sole difference, without the other essential features, that feature has no clear technical effect and is technically arbitrary. It does not improve ventilation as that would depend on the exact distribution and size of the openings in the other layers. At best it is a design alternative to the distribution of outsole openings in D2.

The feature of the additional support element added to claim 1 in auxiliary requests IV, V and VIII, in particular the correspondence of the openings in the element and in the support layer is not originally disclosed in that general manner. The relevant section describes this feature in reference to the figures in the specific context of features that together achieve a balance between ventilation and mechanical stability. Outside of that specific context the feature of correspondence adds subject-matter.

Reasons for the Decision

1. Both appeals are admissible.
2. *Background of the Invention & Claim Interpretation*
 - 2.1 The patent is directed at a shoe with an insole and support and outsole layers. The insole and support layers have first and second openings respectively, and the outsole layer has at least one third opening. According to claim 1 as granted the second openings in the support layer "*partially overlap*" with first openings in the insole layer, and the at least one third opening "*partly overlaps*" the openings in the openings in the support layer. The partial overlap is described in paragraph [0019] of the patent specification as allowing for a greater number of openings in the insole so as to remove heat and humidity more quickly without however endangering mechanical stability. This problem of finding an optimal balance between mechanical properties and

ventilation is the central problem addressed by the patent, cf. specification paragraph [0016].

2.2 The parties contest the exact interpretation of feature b. requiring that the first and second openings must "*partially overlap*". Reading the terms in their usual sense, the Board reads this feature broadly as embracing any form of overlap between the first and second openings that is not a full overlap. This reading certainly includes the Appellant-Proprietor's understanding of a first opening that is offset with respect a second opening though still overlapping. This is referred to as the "offset" approach. Whether this is the only interpretation of the claim, or this wording also allows for other readings, and whether this or other readings find support in detailed embodiments in the description is of no relevance to the decisive issues of this case as will become apparent from the following sections. These questions therefore requires no further consideration. Suffice it to say that the Board finds the "offset" approach to be a reasonable reading of the claim, also in the light of the description and figures when it tries to understand the claim as defining the solution to a technical problem. The Board shall read the claim accordingly to include this "offset" interpretation.

2.3 As for the feature c. requiring that there is "at least one third opening [in the outsole layer] which at least partly overlaps the second openings [in the support layer]", this is read by the Board as requiring one or more outsole layer openings, each of which overlaps, at least partly and thus also completely, a plurality of the support layer openings. A broader reading in which

one or more third openings partly overlap plural second openings, which would allow individual overlap of one third opening with one second opening, is not supported by the claim's syntax nor is it borne out by the description and figures. The only embodiment of this feature is shown in figures 1, 3 and 4, and described in specification paragraph [0054]. Each of openings 33, 34, and 35 in the lower and side surfaces of the outsole 30 are shown overlapping corresponding areas of support hole openings 11, 12 in the support layer 10.

- 2.4 The Board adds that whereas "insole" and "outsole" are recognized terms in the field and are well understood by the relevant skilled person, the term "support layer" is less well-defined. Apart from being an intermediate layer within the composite sole, its main characteristic is to provide some form of support. The term does not imply any particular material (other than those that support), much less that it is central to the shoe's structural integrity. Specification paragraph [0025] does describe a compression proof support layer that controls deformations of the shoe and so acts as a frame, but this is clearly a preferred embodiment of the support layer, cf. dependent claim 7. That preferred embodiment cannot be used to give the term a more restrictive meaning, and therefore "support layer" is read generally as an intermediate layer providing some form of support.

3. *Request for referral to the Enlarged Board*

- 3.1 The Appellant-Proprietor's request for referral concerns questions of claim interpretation:

Do Article 69 EPC and its protocol apply to the interpretation of a claim in opposition and appeal proceedings so that these are to be read in the light of the description and drawings even if other possible clear readings are possible from the wording of the claim alone, or is it an underlying principle that then applies to use description and figures to interpret the claims? Or should the claims simply be interpreted in isolation?

3.2 As explained in section 2 above the Board agrees with the Appellant-Proprietor's reading of claim 1 as encompassing the "offset" approach. Whether or not this interpretation follows from a reading of the claim in its own right or in the light of the description and figures is immaterial to the question of lack of inventive step addressed below. The outcome will be the same either way and the question is thus purely academic.

3.3 Nonetheless, the Board adds that it is unable to see any major divergences in the way the Boards of Appeal generally approach claim interpretation. They read a claim as would the skilled person, namely to make *technical* sense of it. Given that a claim is an integral part of the overall disclosure of a patent that is meant to encapsulate its central teaching regarding the solution to a technical problem, cf. Rule 42(1)(c) EPC, it is normally read in that context. Rule 43(7) EPC indeed provides for inclusion of reference signs in a claim for this express purpose, to improve its intelligibility by reference to the drawings. Often it is only when reading a claim against the backdrop of description and drawings that it can be fully

understood technically. This is not to say that a claim may nevertheless already be technically comprehensible from its wording alone.

3.4 As the questions posed are not decisive in the present case, they need not be referred to the Enlarged Board. The Board therefore decided not to allow this request.

4. *Inventive Step: Main Request, Auxiliary Requests I & III*

4.1 Bearing in mind the interpretation of the claim's terms given above, the Board finds that D1 and D2 each represent valid starting points for assessing inventive step. Both documents show composite soles, with an insole, a support layer and an outsole, each of which is perforated to enable aeration or ventilation of the inside the shoe. Both documents thus have the same aim and purpose as the invention and propose a similar solution.

4.2 In more detail, D1 in figure 1, see also page 6, line 1, to page 7, line 17, shows a shoe in cross-section with an insole layer at 17, a "support layer" 19, identified as such, as part of an insert/midsole 14 (which further includes membrane 15 and protective layer 15, both vapour permeable), and an outsole or tread sole 13. Each layer is perforated, see the text, as is also clearly shown in the figures. Some of the support layer openings 19a are shown as offset with respect to the nearest perforation or opening in the insole 17.

A similar structure is disclosed in D2, see for example figures 5 to 7, and column 5, lines 1 to 20. The

perforated insole layer 317 directly overlies filler layer 318 shown as having openings some of which again are offset against corresponding perforations in the insole layer. The two are arranged on the outsole or tread 313 with membrane 314 and protective layer 315, both vapour permeable. The tread is also perforated. The filler layer 318, which acts generally to give the sole bulk, naturally also provide support and thus broadly constitutes a support layer (indeed in D1 support layer 19 is also said to act as filler layer, page 7, line 17).

4.3 In that both documents show insole openings individually offset from support layer openings, that is as feature b. is understood by the Appellant-Proprietor, they are both regarded as disclosing that feature. The only feature not derivable from either document is feature c., namely that there is an outsole opening that overlaps partly or completely multiple support layer openings. In D1 and D2 the outsole holes are smaller than the support layer openings and only some of the former overlap with the latter, cf. figure 1 in D1 and figure 5 in D2.

This differing feature can be associated with a facilitated dispersion of hot and humid air from the inside of the shoe via the support layer openings 11,12 to the outside air, see specification paragraph [0054]. Compared to the situation in D1 or D2 with limited overlap between individual openings, the large scale openings 33, 34 and 35 shown in figure 1 of the patent and each covering a large number of supply layer openings allow air to exit from or enter the supply layer openings almost unimpeded. The objective

technical problem vis-à-vis D1 or D2 can be formulated accordingly as how to further facilitate ventilation in a shoe such as that of D1 or D2.

4.4 The skilled person, an engineer involved in the design and development of shoes, will understand from basic physics considerations that the amount of ventilation from the inside to the outside of the shoe depends on factors such as the number of openings in each layer, their relative size and placement. Neither D1 nor D2 provide any specific teaching in this regard so that if he is to put their teaching into practice for a given shoe he realizes he will need to choose appropriate values. He will do this by varying these factors in routine trial and error with the aim of achieving optimal ventilation while still meeting the other specifications of the shoe. One obvious way for him to maximize ventilation is to increase the number of openings in each of the layers. Another equally obvious possibility, either alone or in combination with an increase in number of openings, is to make the openings as large as possible, in particular where air exits the shoe in the outsole. The maximum effect is achieved with outsole openings large enough to each fully encompass at least one support layer opening so that air can pass unimpeded to and from the support layer. Choosing the size of outsole opening to cover one or more support layer openings makes no difference in this regard, as will be clear to the skilled person from straightforward considerations, and is in fact technically arbitrary.

4.5 This measure is also known to him from D10, see paragraph [0014] of its English language translation.

This document teaches to make through holes, shown at 2 in figure 1, in the heel and arch portion of the outsole 1 "as large as possible" for effective aeration. These through holes 2 are very much larger than the openings in the protective metal mesh 3 or the overlying elastic mesh material 4 through which air passes to or from the insole 10. Alternative to using common general knowledge, the skilled person would, as a matter of obviousness, draw on D10's teaching to improve aeration and dimension the holes in the outsole very much larger than those in the support layer of a shoe as in D1 or D2.

In this regard the Board is unconvinced that the shoes of D1 or D2 and D10 are of such a fundamentally different design that the skilled person would not consider their straightforward combination. In its view the solution taught in D10 is so basic and simple, that the skilled person recognizes immediately that it is broadly applicable to different types of ventilating sole, with different layering and different materials, and to different areas of the sole.

Nor does the Board believe that the skilled person would not generally consider enlarging the holes for fear of objects entering them and damaging membranes within the sole. Both D1 and D2 already include additional protective layers for that purpose, shown at 16 in figure 1 of D1, at 316 in figures 6 and 7 in D2, and this gives some leeway in setting the size of the openings. If these measures are not enough D10 also specifically teaches the use of a metallic mesh. The Board adds that there is nothing in the claims that excludes further layers within the sole. Indeed, the

patent itself allows for insertion of a further membrane between support and insole, see specification paragraph [0054], lines 30 to 33.

4.6 Whether the skilled person modifies the D1 or D2 shoe using common general knowledge, or applies to either the teaching of D10, in both cases he will arrive at the subject-matter of present claim 1 in obvious manner. Either way, the subject-matter of claim 1 as granted lacks an inventive step, Articles 100(a) with Article 52(1), 56 EPC.

4.7 The same conclusion holds for claim 1 according to the auxiliary requests I and III.

In auxiliary request I feature c. has been rephrased to exclude any other interpretation than that given above which the Board already accepts as a reasonable interpretation. This amendment thus changes nothing with respect to the above evaluation.

Auxiliary request III adds to claim 1 the location of the third opening(s) in the toe and/or arch part of the sole. Where D1 is unspecific, figure 5 of D2 however squarely places the openings in the toe part of the tread sole. The feature added to claim 1 in this request is thus already present in D2. It thus fails to define a difference, let alone an inventive difference over D2 when combined with common general knowledge or adopting the underlying broad teaching of D10.

The subject-matter of claim 1 in either amended version of auxiliary request I or III thus also does not involve an inventive step, Articles 52(1), 56 EPC.

5. *Added Subject-Matter: Auxiliary Requests IV, V & VIII*

5.1 Auxiliary requests IV, V and VIII incorporate into claim 1 as feature d. the features of granted dependent claim 12 directed at an additional support element. They also add material from the corresponding parts of the description which describe the additional support element in greater detail, namely paragraph [0049] in the A-publication, which is identical to the like numbered paragraph in the patent specification. The Board notes firstly that claim 12 both as granted and as filed is dependent at least on claim 7, but that the features of the latter claim have not been included in claim 1 of any of these requests. Apart from this omission, these versions of claim 1 also omit features that appear together with those added from paragraph [0049], that is those features have been added in isolation from a specific context in which they are originally disclosed. According to established jurisprudence, as summarized for example in the Case Law of the Boards of Appeal of the EPO, 6th edition, 2010, section III.A.2, see in particular T 1067/07 or T 1408/04, this may result in an unallowable intermediate generalization, unless the skilled person recognizes immediately that these features are not inextricably linked in terms of a functional or structural relationship.

5.2 Paragraph [0049] describes the additional support element as arranged in the foot's arch and having an open frame construction with openings 21 "which ... correspond to the openings 11,12 and the struts 14 of the support layer". This passage must be read in

conjunction with the figures, in particular figure 1, which makes fully clear what exactly is meant by term "correspond". Figure 1, an exploded view of the support, outsole and tread layers, shows the element 20 and its openings 21. These openings 21 of the support element have the same shape as corresponding respective areas of support layer openings 12 and are arranged in the same manner, that is separated by struts 14 without any openings. When assembled the support element openings overlie the respective areas of openings in the support layer so that these are fully exposed and optimal ventilation is achieved.

Paragraph [0049] also specifies the element's function, which is "for reinforcing the support layer 10" and which "determines the resistance of the sole ensemble to foot movements ... and controls the longitudinal stiffness of the shoe". These functions have important implications for the material and structure of the element, as well as the way it connects to the support and other layers.

The open frame structure, its function as reinforcing element, as well as the arrangement of its openings relative to the areas of openings on the support layer are all closely interlinked in terms of function and structure. To the skilled person it will not be immediately clear that any one of those features can be considered in isolation from another, as these are all definitive features of the element described in paragraph [0049]. The omission of any of these features will thus represent an intermediate generalization of the specific teaching of this embodiment of the support element.

- 5.3 None of the versions of claim 1 according to the auxiliary requests IV, V or VIII specify the particular arrangement of the openings relative to the opening areas on the support layer as follows from paragraph [0049] read in conjunction with figure 1. Auxiliary requests V and VIII do repeat almost verbatim the formulation in paragraph [0049] of the element openings "corresponding to the openings and the struts of the support layer" but severed from the figures this formulation no longer conveys the specific meaning it had in that context. It acquires a much broader meaning that allows for different forms of correspondence that are not originally disclosed. For example, it allows for the element openings to each correspond with an individual opening in the support layer; they need not correspond in shape but only in location or arrangement; correspondence need not be complete and so forth. None of these possibilities is originally disclosed.
- 5.4 Auxiliary request IV and V additionally fail to include the function of the element and thus omit the structural and material limitations implicit therein. Their claim 1 also covers additional support elements that do not carry out this function or only part of it. These could be elements that provide additional support for the foot without reinforcing the support layer and/or without determining the sole ensemble's stiffness and torsional properties. These possibilities were however not originally considered in the application as filed.
- 5.5 The Board concludes that the amendments to claim 1 according to the auxiliary requests IV, V and VIII add

subject-matter extending beyond the original content of the application as filed, contrary to the requirements of Article 123(2) EPC.

6. Maintenance of the patent as granted and in amended form according to auxiliary requests I and III is prejudiced by a lack of inventive step, while the patent in amended form according to auxiliary requests IV, V and VIII still on file does not meet the requirements of the EPC for added subject-matter. The Board must therefore revoke the patent, Articles 101(2), (3) (b) EPC.

Order

For these reasons it is decided that:

1. The request for a referral to the Enlarged Board of Appeal is refused.
2. The decision under appeal is set aside.
3. The patent is revoked.

The Registrar

The Chairman

G. Magouliotis

A. de Vries