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**Datasheet for the decision
of 24 June 2019**

Case Number: T 1851/16 - 3.2.03

Application Number: 07252009.1

Publication Number: 1857006

IPC: A43C15/16, A43B13/26

Language of the proceedings: EN

Title of invention:

Footwear sole

Applicant:

Berghaus Limited

Headword:

Relevant legal provisions:

EPC 1973 Art. 54(1), 54(2), 56, 84

EPC Art. 52(1), 123(2)

RPBA Art. 13(1)

Keyword:

Claims - clarity after amendment (yes)

Novelty - after amendment (yes)

Inventive step - after amendment (yes)

Decisions cited:

Catchword:



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Case Number: T 1851/16 - 3.2.03

D E C I S I O N
of Technical Board of Appeal 3.2.03
of 24 June 2019

Appellant: Berghaus Limited
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Representative: Mewburn Ellis LLP
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 17 March 2016
refusing European patent application No.
07252009.1 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman C. Donnelly
Members: V. Bouyssy
E. Kossonakou

Summary of Facts and Submissions

- I. European patent application No. 07252009.1 (in the following: "the application") relates to soles for footwear, and in particular soles for use in trekking.
- II. The examining division refused the application because the amended claims filed with letter dated 27 June 2011 were not clear and their subject-matter lacked novelty in view of prior art documents D1 and D6, and inventive step in view of prior art documents D4 and D2.
- III. The decision was issued according to the state of the file, using a standard decision form which referred to the communications dated 26 March 2014 and 18 September 2015.
- IV. This decision was appealed by the applicant (in the following "the appellant").
- V. With the summons to oral proceedings, the Board sent a communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA) indicating its preliminary opinion of the case.
- VI. Oral proceedings before the Board were held on 24 June 2019. Reference is made to the minutes of the oral proceedings, in particular with regard to the submission and withdrawal of requests by the appellant.
- VII. Final requests

The appellant requested that the decision under appeal be set aside and a patent be granted on the basis of the set of amended claims filed as the main request during the oral proceedings, alternatively on the basis

of the set of amended claims filed as auxiliary request 2 during the oral proceedings.

VIII. Claims of the main request

Independent product claim 1 reads as follows (the feature numbering is introduced by the Board for ease of reference; compared with claim 22 as originally filed, added passages are indicated in bold, deleted passages in strike-through):

- (a) A shoe sole **intended for trekking,**
- (b) **the shoe sole** having a bottom surface (31) **comprising a toe region and heel region, and having a** ~~with~~ plurality of stud clusters (5,7) extending therefrom,
- (c) each stud cluster (5,7) comprising **three studs arranged in a V-shape including** a primary stud (51,71), **located at the apex of the V-shape,** ~~connected via one or more connection elements to one or more~~ **two** secondary studs (52,72), **located at the ends of the V-shape, via respective connection elements (53,73),**
- (d) wherein **the spatial extent over a cross section of the primary stud (51,71) is greater than the spatial extent over a cross section of each secondary stud (52,72) such that** the primary stud (51,71) is larger than ~~the~~ **each** secondary studs (52,72) and
- (e) **has a height from the bottom surface (31) that is equal to or greater than the height of each secondary stud (52,72) from the bottom surface (31), and**
- (f) **the connection elements (53,73) have a height from the bottom surface (31) that is less than respective heights of the primary and secondary**

studs (52,72) from the bottom surface (31) so as not to extend beyond the primary and secondary studs (52,72) at any point,

- (g) the stud clusters (5,7) at the toe region of the sole are oriented such that the primary stud of each stud cluster (5,7) is forward of the secondary studs so as to be closer to the toe end of the sole than each of the secondary studs of the stud cluster, and
- (h) the stud clusters (5,7) at the heel region of the sole are either oriented such that the secondary studs of each stud cluster (5,7) are forward of the primary stud of the stud cluster so as to be closer to the toe end of the sole than the primary stud, or oriented such that the primary stud is positioned sideways of the secondary studs so as to be closer to a lateral or medial side of the heel region.

Dependent claims 2 and 3 define preferred embodiments of the shoe sole defined in claim 1.

IX. Prior art

The following prior art documents were cited in the examination proceedings:

- D1: US 3,656,245 A;
- D2: US 4,393,604 A;
- D3: DE 28 01 964 A1;
- D4: JP 2002272506 A;
- D5: US 3,063,171 A; and
- D6: WO 03/071893 A1.

X. The arguments of the appellant, insofar as relevant for the present decision, can be summarised as follows:

(a) Article 123(2) EPC

The claims have been amended to overcome the objections raised in the oral proceedings as well as those set out in the Board's communication pursuant to Article 15(1) RPBA. Support for feature (a) of claim 1 can be found on page 7, line 24 and page 11, line 11 of the description as originally filed. Feature (c) is supported by the teaching on page 9, lines 20 to 23 and page 15, lines 21 and 22. Support for feature (d) can be found on page 5, lines 13 and 14 and page 8, lines 22 and 23. Features (e) and (f) are supported by the disclosure in figures 4a and 7b and the teaching on page 8, lines 21 and 22 and page 16, lines 2 to 7. Support for features (g) and (h) can be found on page 7, lines 24 to 27, page 11, lines 11 to 21 and page 18, lines 12 to 16 and in figures 5, 9a and 10a. Claim 2 is based on the teaching on page 10, lines 8 and 9. Claim 3 corresponds to claim 10 as originally filed.

(b) Novelty

The subject-matter of claim 1 is novel over the prior art documents cited by the examining division. In particular, it differs from the sole for football boots disclosed in D1 by features (a) and (g), from the sole for football boots disclosed in D6 (figures 1 and 5) by features (a), (c), (f), (g) and (h), and from the sole for a hiking boot disclosed in D6 (figure 7) by features (c), (f), (g) and (h).

(c) Inventive step

The sole for a hiking boot disclosed in figure 7 of D6 forms the closest prior art for assessing inventive

step, since this is the only available prior art document specifically relating to a shoe sole intended for trekking. The objective technical problem solved by distinguishing features (c), (f), (g) and (h) is that of improving comfort while maintaining good traction and grip.

The claimed solution to this problem is not rendered obvious by the cited prior art documents.

D6 relates to a hiking boot which is intended to provide grip on ice. Thus, starting from D6 the skilled person would not provide connection elements extending from the bottom surface of the sole, as required by feature (f), since this would prevent the secondary studs which are in the form of spikes from engaging ice when walking.

D4 is the only document that discloses stud clusters having a V-shape as defined in feature (c). However, not all the stud clusters have such a V-shape (feature (c)). Also, it fails to disclose features (f), (g) and (h). Thus, the teaching of D4 cannot lead the skilled person to the claimed solution.

D1 is directed to the provision of cleats on football boots for use on an artificial grass surface. The general teaching of D1 is that the user's comfort may be improved by increasing the contact area of the studs, namely by disposing small projections 13 in a concentric array around the large central projection 16 (column 3, lines 7 to 35). However, D1 does not suggest that the orientation of the stud clusters has any bearing on comfort. Furthermore, D1 fails to disclose feature (g) of claim 1.

Reasons for the Decision

1. Applicable provisions of the EPC
 - 1.1 The patent is based on an application which was filed on 16 May 2007 and was still pending at the time of entry into force of the EPC 2000 on 13 December 2007.
 - 1.2 According to Articles 1(1) and 6, first sentence of 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 (Special edition No. 4, OJ EPO 2007, 217), Articles 54(1), 54(2), 56 and 84 EPC 1973 as well as Articles 52 and 123 EPC (2000) apply.
2. Admissibility of the main request
 - 2.1 The appellant filed the current main request after oral proceedings had been arranged. The Board exercised its discretion to admit this new request into the proceedings for the following reasons (Article 13(1) RPBA):
 - 2.2 Claim 1 of the current request differs from that of the main request filed with the statement of grounds of appeal - apart from minor editorial amendments - in that it no longer requires that "each stud cluster is oriented such that the secondary stud trails the primary stud in a predetermined direction of gross shear motion of the stud cluster", and it comprises the further limitations that the shoe sole is intended for trekking (feature (a)) and that the stud clusters at the toe and heel regions are oriented in the particular manner defined in features (g) and (h).

- 2.3 In addition, claim 1 of the current request differs from that of the main request filed in response to the Board's communication pursuant to Article 15(1) RPBA essentially in that feature (h) has been added.
- 2.4 These amendments are in response to objections under Article 84 EPC 1973 which were raised for the first time in the Board's communication pursuant to Article 15(1) RPBA as well as objections under Article 123(2) EPC which were raised for the first time in the oral proceedings.
- 2.5 They clearly overcome all outstanding objections without introducing any new issues.
3. Amendments
- 3.1 The Board is satisfied that the amendments to the claims meet the requirements of Article 123(2) EPC:
- 3.2 Claim 1 differs from independent claim 22 as originally filed - apart from minor editorial amendments - in that features (a) and (e) to (h) have been incorporated in it and features (b), (c) and (d) have been amended. These amendments are supported by the information in the application documents as originally filed, as indicated by the appellant.
- 3.3 Claim 2 is based on the teaching on page 10, lines 8 and 9 of the description as originally filed.
- 3.4 Claim 3 is based on the teaching on page 12, lines 1 and 13 of the description as originally filed and claim 10 as originally filed.

4. Article 84 EPC 1973

4.1 The amended claims are clear and concise and supported by the description.

4.2 In the communications dated 26 March 2014 and 18 September 2015, the examining division objected that the feature "each stud cluster is oriented such that the secondary stud trails the primary stud in a predetermined direction of gross shear motion of the stud cluster" rendered claim 1 unclear because the unusual parameter "predetermined direction of gross shear motion of the stud cluster" was not clearly defined. Since amended claim 1 does not comprise this feature it overcomes this objection.

5. Novelty

5.1 In the communications dated 26 March 2014 and 18 September 2015, the examining division objected that the claimed subject-matter lacked novelty in view of D1 and D6 (figure 5).

5.2 This objection is overcome by the amendments made to claim 1.

5.3 D1 discloses in figures 1 and 2 an American football shoe 10 for playing on artificial turf, with a plurality of cleats 12 secured to the shoe sole 11. Each cleat comprises three projections 13 which are disposed in concentric array around a larger central projection 16, each projection 13 being connected to the central projection 16 by a web 18 (figure 3). Each cleat 12 forms a stud cluster in the sense of claim 1, comprising a large primary stud 16 and two smaller secondary studs 13 which together form a V-shaped stud

cluster in the sense of feature (c). The cleat 12 comprises, additionally, a third outer projection 13 which may be seen as a tertiary stud in the sense of dependent claim 2. In figures 5 and 6 of D1 it is apparent that the central projection 16 has a height from the bottom surface that is substantially equal to that of the outer projections 13 (feature (e)). However, the Board shares the appellant's view that it cannot be derived from D1 that the shoe sole is adapted for trekking, as required by feature (a) of claim 1, and that the stud clusters at the toe region are oriented as required in feature (g) of the claim. With respect to the intended use defined in feature (a), it is apparent that the direction and magnitude of the shear forces applied on the studs during trekking are different to those of the shear forces imparted on the studs when playing football on turf, since when trekking the forces will essentially be applied along the length of the sole whereas when playing football the forces will be applied from all directions as the player twists and turns.

- 5.4 D6 discloses football and hiking boots with stud clusters provided at the toe and heel regions of the shoe sole, namely football boots as illustrated in figures 1 and 5 and a hiking boot as illustrated in figure 7. As shown in figure 1, each stud cluster 3 comprises a primary stud 7 and two smaller secondary studs 9 and 11 on either side of the primary stud 7, and is arranged so that the three studs 7, 9 and 11 are arranged in a line substantially parallel to an outer edge 13 of the sole 5 (page 5, lines 25 to 30). The Board shares the appellant's view that the soles for football boots shown in figures 1 and 5 of D6 lack features (a), (c), (f), (g) and (h) of claim 1, while

the sole for a hiking boot shown in figure 7 lacks features (c), (f), (g) and (h).

5.5 The Board is also satisfied that the claimed subject-matter is not anticipated by D2, D3, D4 and D5. D2 is concerned with a shoe sole for such sports as baseball, American football and football. D3 discloses a sole for a sports shoe which is suitable both for running on hard tracks, such as roads, and for running through woods and cross-country running (page 8, paragraph 4). D4 is concerned with a football shoe (paragraph 15). D5 concerns cleats used with baseball shoes. D2, D3 and D5 fail to disclose at least features (a), (c), (f), (g) and (h), whereas D4 fails to disclose features (c), (d), (g) and (h). In particular, it is apparent in figures 1 to 3 of D4 that the toe and heel regions of the sole both comprise stud clusters (1, 3a, 3b, 7) with a Y-shape as well as stud clusters (2, 4, 5, 6) with a V-shape (contrary to feature (c)), that all studs (20) have the same extent over their cross-section (contrary to feature (d)), and that each V-shaped stud cluster (2, 4, 5) at the toe region is oriented such that the stud (20) at the apex of the V-shape is further away from the toe end than at least one of the two other studs (20) (contrary to feature (f)).

5.6 In conclusion, in light of the prior art cited by the examining division, the subject-matter of claim 1 is new in the sense of Article 52(1) EPC and Article 54(1) (2) EPC 1973.

6. Inventive step

6.1 In the communication dated 18 September 2015, the examining division objected that the claimed subject-

matter lacked an inventive step in view of D4 alone, or D4 in combination with D2.

6.2 However, among the prior art documents cited by the examining division in the examination proceedings, D6 forms the most realistic and promising starting point for the assessment of inventive step. In fact, D6 is the only prior art document which discloses a shoe sole designed for trekking (figure 7), while D1 to D5 are concerned with shoe soles for (American) football, baseball or running. Such soles have different design requirements compared to a sole for a trekking shoe, in particular because the direction and magnitude of the shear forces are different.

6.3 As reasoned above, the shoe sole defined in claim 1 differs from that disclosed in figure 7 of D6 by features (c), (f), (g) and (h).

6.4 Feature (c) has the effect that each primary stud has two buttresses which reduce any pivoting of the primary stud during ground contact, thereby improving the user's comfort as well as the grip of the studs (page 9, lines 6 to 13, page 9, line 20 to page 10, line 2, page 16, lines 25 to 28). Feature (f) guarantees that the primary contact between the sole and the ground is still via the primary and secondary studs, rather than the connection elements (page 16, lines 2 to 7). Features (g) and (h) ensure that, at the toe and heel regions, the (large) primary studs receive higher shear forces than the (small) secondary studs during a trekking step (page 7, lines 24 to 27, page 11, lines 11 to 21, page 18, lines 14 to 16 and figures 5, 9a and 10a).

- 6.5 Hence, starting from the trekking sole disclosed in figure 7 of D6, the objective technical problem to be solved can be formulated as how to improve comfort whilst maintaining good traction and grip.
- 6.6 The Board shares the view of the appellant that the claimed solution to this problem is not part of the common general knowledge of the skilled person and is neither disclosed nor suggested in the cited prior art documents.
- 6.7 D4 is concerned with the problem of reducing the discomfort caused by vertical forces transmitted from the studs to the foot of a football player, when the studs contact the ground, while maintaining sufficient ground penetration of the studs (paragraph 5). D4 achieves this by minimising the size of the studs 20, spreading the studs 20 out in a triangular array, and providing connecting portions 21 which spread the vertical loading between the three studs of each cleat (paragraph 7). The Board can see no reason why the skilled person would consider this teaching. Moreover, even if he were to consult the teaching of D4, he would inevitably consider arranging Y-shaped stud clusters as well as V-shaped stud clusters at the toe and heel regions of the sole in the manner shown in figures 1 to 3 of D4. By so doing he would not arrive at distinguishing features (c), (g) and (h) (see point 5.5 above).
- 6.8 D1 is generally concerned with an athletic shoe cleat for use on a playing field comprising artificial turf, such as an American football field, which cleat gives good traction to the player while reducing foot soreness (column 1, lines 38 to 54; column 3, lines 7 to 35; column 4, lines 34 to 67). Again, the Board can

see no reason why the skilled person would consider this teaching. Further, D1 contains no information which would point towards distinguishing feature (g) (see point 5.3 above). Therefore, even if the skilled person were to consider combining the teaching of D6 with that of D1, he would not arrive at the claimed solution in an obvious manner.

- 6.9 In conclusion, with regard to the prior art cited by the examining division, the subject-matter of claim 1 involves an inventive step in the sense of Article 52(1) EPC and Article 56 EPC 1973.
7. The description has been brought into conformity with the amended claims.
8. The Board comes to the conclusion that the application documents according to the main request meet the requirements of the EPC.
9. Under these circumstances, there is no need to consider auxiliary request 2.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the examining division with the order to grant a patent in the following version:
 - claims 1 to 3 filed as main request in the oral proceedings before the Board;
 - description pages 1 to 3, 3A and 4 to 21 filed in the oral proceedings before the Board; and
 - drawing sheets 1/9 to 6/9, 8/9 and 9/9 of the application as originally filed, and drawing sheet 7/9 filed in the oral proceedings before the Board.

The Registrar:

The Chairman:



C. Spira

C. Donnelly

Decision electronically authenticated