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Datasheet for the decision
of 26 April 2016

Case Number: T 1988/13 - 3.2.03
Application Number: 00990130.7
Publication Number: 1238163
IPC: E01C13/08
Language of the proceedings: EN

Title of invention:
ARTIFICIAL TURF INCLUDING DAMPING MATERIAL

Patent Proprietor:
Ten Cate Thiolon B.V.

Opponents:
LANO SPORTS
GEP Sportstättenbau Holding GmbH
Textile Management Associates Inc

Headword:

Relevant legal provisions:
EPC Art. 100(b), 111
EPC R. 3
Keyword:

Decisions cited:

Catchword:
DEcision of Technical Board of Appeal 3.2.03 of 26 April 2016

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Decision under appeal: Decision of the Opposition Division of the European Patent Office posted on 16 July 2013 revoking European patent No. 1238163 pursuant to Article 101(3)(b) EPC.

Composition of the Board:

Chairman: G. Ashley
Members: Y. Jest
M.-B. Tardo-Dino
Summary of Facts and Submissions

I. By its decision dated 16 July 2013 the opposition division revoked European Patent No. 1 238 163 on the grounds that the subject-matter defined in claim 1 was not sufficiently disclosed and therefore contravened article 100(b)/83 EPC.

II. The patent has been revoked on the grounds of insufficient disclosure of the claimed invention due to the alleged undefined features "less stiff" and "improved/inherent damping (characteristics)". The opposition division found:
- that the qualification "less stiff" applied to the fibrous structure/layer and not to the material from which the fibres are manufactured, and that owing to the lack of disclosure in the patent of a method for measuring the stiffness of a fibrous structure, the teaching of "less stiff" was insufficiently defined, and
- that the skilled person, partly because of the undefined feature "less stiff", had no understanding of what was "inherent/improved damping", namely if a higher or lower damping in terms of resiliency or of ability to reduce vibrations was contemplated.

In its decision the opposition division also concluded that:
- the subject-matter of claim 1 as granted did not contravene to article 100(c) EPC,
- the content of documents D16 and D18, which were not originals but only copies of brochures, could not be confirmed, so that D16 and D18 were not considered as prior art, and
- the translations of documents D6, D14, D15 were not admitted to the proceedings because their origin remained open.

III. The patentee, hereinafter the appellant, lodged an appeal on 16 September 2013 and paid the appeal fee on the same day. The statement of grounds was received on 26 November 2013.

IV. Requests

(a) Appellant

The appellant requested that the decision of the opposition division to revoke the patent be set aside and that the patent be maintained as granted (main request) or, alternatively in amended form on the basis of any set of claims of auxiliary requests 1 to 4 submitted with the grounds of appeal dated 26 November 2013 or of auxiliary requests 5 to 7 as filed with the letter of 25 March 2016.

The appellant further requested that, if the board decided that the requirement of sufficiency of disclosure was met, it should not remit the case to the opposition division but deal with novelty and inventive step issues itself.

(b) Respondents

Opponents 1 and 2 (hereinafter the respondents 1 and 2) requested that the appeal be dismissed.

Respondent 2 requested the case to be remitted to the opposition division in the case that the board concluded that the requirement of article 83/100(b) EPC
was met for the subject-matter of claim 1 as granted, and if it overturned the opposition division's decision to not admit the translations of D6, D14 and D15.

(c) Other parties

The third opponent withdrew its opposition with letter of 20 June 2013 during the opposition proceedings and is therefore not party to the appeal proceedings.

V. Claim 1 as granted (main request) reads:

"Artificial turf (33;43;53), comprising a backing (34;44;54), a large number of artificial grass blades (35;45;55) which are fixed thereto, protrude substantially transversely thereof and are manufactured from plastic, and a fibrous material (36;46;56) arranged between the artificial grass blades (35;45;55) and connected to the backing (34;44;54) or the blades (35;45;55), said fibrous material (36;46;56) differing from the plastic from which the artificial grass blades (35;45;55) are manufactured,

characterized in that
the fibrous material (36;46;56) is less stiff than the plastic from which the artificial grass blades (35;45;55) are manufactured so as to have inherent damping characteristics and improved damping relative to said artificial grass blades (35;45;55)."

VI. Documents

(a) from the opposition procedure
D1  EP-A- 0 678 622
D6  JP-A- 11 093112
D14 JP-Y2- 58 022625
D15 JP-U- 58 166379
D16  "Introducing AstroPlay®, No Mow, No Grow, No H20"
D18  "Astroplay® Sports, Surfaces, Like Grass, Only Better"

(b) cited by respondent 2 with letter dated
31 March 2016

D16' coloured version of D16
D18' coloured version of D18

VII. The appellant submitted essentially the following arguments:

(a) Claim 1 as granted – Article 100(b) EPC

The skilled person, when using the common general knowledge, would have been able to determine if a fibrous material was less stiff than a plastic from which artificial grass blades were manufactured, and if this fibrous material had inherent damping characteristics and improved damping relative to the artificial grass blades. Therefore the invention could be carried out without difficulty on the basis of the characterizing part of claim 1 of the patent in suit.

The qualification "less stiff" related to the material of the fibrous material per se and not to the fibrous structure, as had been concluded by the opposition division. The understanding that the material of the damping fibres was less stiff than the material (plastic) of the artificial grass blades, was confirmed by the overall disclosure of the patent, see especially paragraphs [0008], [0012], [0014] and [0016] of the description.

Furthermore, this interpretation was the only one that made sense in view of the way that the closest prior
art was discussed in the patent. In paragraph [0006] document EP-A-0678622 was said to disclose an artificial turf having artificial grass blades and so-called "assist filaments" which were made from a stiffer material than the synthetic resin from which the artificial grass blades were manufactured.

Concerning the feature of damping characteristics, the skilled person would consider the damping material defined in claim 1 as being an alternative to the prior art conventional damping materials described in paragraphs [0004] and [0005] of the patent. Thus the expression "improved damping" clearly related to a material having an enhanced damping effect, as compared to an artificial turf not provided with such a damping material.

The skilled person simply has to compare one material with another material, that is to compare the characteristics of the material of the "assist filaments", i.e. the fibrous material per se, with those of the material of the artificial grass blades. This understanding was again fully in line with the patent and supported in numerous passages of its description.

(b) Further prosecution

The Board should deal with the novelty and inventive step issues since all the parties had come with their arguments, provided that the case was taken as it stood and that no objection under Article 100(c) EPC was raised. The respondents had been given an opportunity to present their case. The case lasted already a long time and a remittal would take at least another three years of proceedings.
(c) State of the art

By referring to D16' and D18' in its last submission, respondent/opponent 1 was implicitly requesting that these documents be taken into consideration. However, D16' and D18' were not original brochures but only colour copies. Thus neither newly filed D16' and D18' nor D16 and D18, should be admitted as state of the art.

Furthermore, the decision of the opposition division not to admit the translations of D6, D14 and D15 should be confirmed.

VIII. In summary the respondents argued as follows:

(a) Article 100(b)/83 EPC

Independent claim 1 as granted did not meet the requirement of sufficient disclosure pursuant to article 100(b)/83 EPC, because the features of its characterising portion were not clear enough so that the teaching of the patent was not sufficient for enabling a skilled person to carry out the claimed invention.

The determination of stiffness could not be considered to be the same as the determination of the Young’s modulus for a material, because stiffness is a structural property dependent upon both the material from which the component was made as well as its geometry. When determining the stiffness of a component, in this case, the grass blades and the fibrous material, the geometry of the component was an essential parameter. According to paragraph [0016] of the patent, the damping material was formed by blades or fibres of, for
instance, natural or synthetic rubber which was more flexible than the plastic from which the artificial grass blades 35 were manufactured. The term "more flexible" was substantially equivalent to the expression "less stiff", and therefore did not simply concern a straightforward comparison between two materials of the same shape and size, as would be the case in determining Young’s modulus and elasticity. In this respect, the disclosure of the patent was also not sufficient, in that it did not define the type of the elastic modulus to be compared. The different elastic moduli include the Young’s modulus describing the material’s reaction to tensile stress, the shear modulus relevant for shear forces, or the bulk modulus concerning the deformation under uniform stress. Thus for the skilled person, the qualification "less stiff" as claimed, which defined a comparison between the stiffness of the grass blades and the stiffness of the fibrous material, had to be based on two requirements, a first one that is geometry-dependent and a second one that is material-dependent.

In summary the disclosure of the patent was insufficient as to whether it was the fibrous material in terms of its structure or the material per se, from which it was made, which had to be less stiff than the plastic material of the grass blades.

Furthermore, it remained unclear to the skilled person how a less stiff fibrous material could solve the problem described in the description, namely to "provide an artificial turf with improved damping characteristics", because the damping property of the turf was largely influenced by other materials, namely those forming filling material, e.g. a mix of sand and rubber granules.
(b) Translations of D6, D14 and D15

The decision of the opposition division not to admit the translations of documents D6, D14 and D15 on the grounds that their origin remained open lacked any legal basis and amounted to a procedural violation. The translations have to be admitted.

(c) Documents D16,D16' and D18,D18'

Documents D16' and D18' submitted with the letter of 31 March 2016 were believed by respondent 1 to be the originals of documents D16 and D18. This meant implicitly that the documents D16 and D18, not considered by the opposition division for doubts about origin, should now be admitted into the proceedings.

According to respondent 2, the admissibility of the newly filed documents D16' and D18', given that the case was to be remitted, should be decided upon by the opposition division as part of the debate on novelty and inventive step.

(d) Remittance to the opposition division

The case should be remitted as had been requested by the appellant in its written submissions, in particular if the board overturned the opposition division's decision on the non-admissibility of the translations of D6, D14 and D15.
IX. Oral proceedings

Oral proceedings were held on 26 April 2016 in the absence of respondent 1, as announced in its letter of 31 March 2016. At the end of the oral proceedings the board announced its decision.

Reasons for the Decision

1. Patent as granted - Article 100(b)/83 EPC

1.1 Article 100(b)/83 EPC requires that the invention claimed in a patent is disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art. It is established case law that the question of disclosure must be determined on the basis of the application as a whole, including the description, the drawings and the claims. Whether or not the invention as claimed is clearly defined is a matter that falls under the scope of Article 84 EPC, which is not a ground for opposition.

Regarding the issue of sufficiency of disclosure, it is also well established that the disclosure is aimed at the skilled person, who may use his common general knowledge to interpret and/or supplement the information contained in the application or patent. Moreover, it has been established in the case law that an invention is, in principle, sufficiently disclosed if at least one way is clearly indicated that enables the person skilled in the art to carry out the invention.
1.2 The decision of the opposition division is partly based on an insufficiency due to ambiguities arising from expressions used in the claim ("less stiff", "inherent damping characteristics" and "improved damping"). In such a case it is not enough to show that an ambiguity exists, but it is necessary to show that an ambiguity in part of the claim deprives the person skilled in the art of the promise of the invention (see Case Law of the Boards of Appeal, 7th Edition, II.C. 7.2, page 329).

In this respect, the board considers that the features in this specific case are not so ill-defined that the skilled person is not able, on the basis of the disclosure as a whole and using his common general knowledge, to identify, without undue burden, the technical measures (e.g. the selection of suitable compounds/materials for the fibres) necessary to solve the problem underlying the patent at issue.

The board has reached this conclusion on the basis of the following considerations.

1.3 The introductory part of the patent describes the closest state of the art as being known from D1, see paragraph [0006]. The known artificial turf, which discloses all the features of the preamble of granted claim 1, comprises so-called assist filaments made of a material which is stiffer than the synthetic resin from which the artificial grass blades are manufactured. The assist filaments serve to support the artificial grass blades in order to prevent them from being compressed or folded under load. Due to their stiffer material the assist filaments do not have inherent damping.
characteristics and improved damping relative to the grass blades.

Starting from D1, the technical problem as set out in the patent is to provide the artificial turf known from D1 with improved damping properties (see paragraph [0007]).

The solution proposed by the patent consists in using the assist filaments, which form a fibrous structure for supporting the artificial grass blades of the turf according to D1, to improve the damping property. This is achieved by selecting a material for the fibrous structure which is less stiff than the plastic from which the artificial grass blades are manufactured, so as to provide inherent damping characteristics and improved damping relative to the artificial grass blades.

The patent discloses various embodiments of this aspect of the claimed invention. For instance figure 3 shows an embodiment of the artificial turf as defined in claim 1 and described in paragraphs [0016] and [0017] of the description. In this embodiment the damping material is present in the form of blades or fibres made of natural or synthetic rubber or of a plastic which is more flexible than the plastic from which the artificial grass blades are manufactured (see column 4, lines 18 to 23). The plastic from which the artificial grass blades are manufactured is referred to in paragraph [0014] of the patent, which qualifies the plastic of the artificial grass blades as being a relatively hard and smooth plastic material, such as for instance polyolefins such as polyethylene, polypropylene or mixtures thereof, or polyamides such as nylon.
Figure 4 shows an embodiment in which the fibrous damping material is present in the form of "fizzed" rather than straight damping blades, which are arranged between the artificial grass blades. This ensures that a relatively high density of damping blades are located between the artificial grass blades. It is unambiguously clear for the skilled reader that for all the embodiments the same type of damping material is to be used, namely a natural or synthetic rubber, or alternatively a plastic which is less stiff than the plastic from which the artificial grass blades are manufactured.

The board thus considers that the patent contains several embodiments which are clearly described and illustrated so as to enable the skilled person to carry out the invention.

1.4 Another general consideration is that the issue of sufficiency of disclosure is to be dealt with in an objective manner in the light of the overall disclosure of the patent.

The board agrees with the opposition division and the respondents that the choice of some technical terms used in the patent in suit, namely "less stiff", "inherent damping" and "improved damping", may not be fully adequate and appropriate when taking into account their meaning stricto sensu. The board however disagrees with the reasoning given in the impugned decision, since the meaning of the technical expressions used should not be assessed in isolation, but has to be considered in a broader approach, i.e. in the light of the overall disclosure of the patent, including the discussion of the state of the art, the aim of the invention, the technical problem to be
solved and the embodiments in the description for illustration of modes of realisation of the invention.

1.4.1 "less stiff" - "inherent/improved damping"

There are several passages in the patent (see below) teaching the skilled reader that the expressions "less stiff" and "damping" when characterising the fibrous material of claim 1 concern the material from which the fibres are made and not the structured body made of the fibres.

Dependent claim 10 defines a preferred embodiment of the fibrous, inherently damping material as being rubber. In dependent claims 11 and 12 the fibrous, inherently damping material is a different, flexible plastic. Several parts of the description also refer to the material itself of the damping fibers, e.g. at column 2, lines 42 to 47 (fibrous material different from plastic of artificial grass blades, suitable choice of material), column 3, paragraph [0012] (examples of suitable materials for the fibres), column 3, lines 19 to 23 (a plastic which is more flexible than the plastic of the grass blades). In lines 47 to 52 of column 2 there is clear disclosure that the qualification "less stiff" defines the material and not the fibrous nature of a layer, since a different damping is achieved even in the case of corresponding thicknesses for both the artificial grass and the damping fibre structures.

The board notes that there are other parts of the patent in suit which refer to a structured body in terms of the fibrous material, see for instance dependent claims 2, 7 and 12, according to which the fibrous damping material takes the form of blades...
connected to the backing, or a knit or a foam.
In the board's view, these indications are neither misleading nor confusing for the skilled person. They are drafted in the form of a contracted syntax indicating that the pack of fibres made of the less stiff material may be arranged in different structures. Some of these structures can further enhance the overall damping effect of the artificial turf, as compared to the inherent damping merely resulting from the selected material, see also, for the sake on better understanding the publication WO-A-01/48322 of the application on which the patent is based, especially page 3, lines 1 to 4 ("the fibrous nature of the (inherently: added) damping material also results in a further improvement of the damping action").

The board also shares the appellant's view that the skilled person is aware of the various well-known standard tests which can be used to determine the relative stiffness of the fibrous material as compared to that of the material used to make the artificial grass blades. It is not important to determine the exact values of the measurements, but to arrive at comparative values of the stiffness of the material of the damping fibres on one hand and that of the material of the artificial grass blades on the other, in order to determine if the damping fibres are indeed "less stiff".

1.4.2 "Damping"

Concerning the damping action of the fibrous material, it is noted that the damping property is defined in the characterising portion of claim 1 as being the result
of the selection of a "less stiff" material for the fibres supporting the artificial grass blades ("so as to"), and not as a second and separate characterising feature on its own.

As indicated above, the interpretation of "less stiff", as meaning the material from which the fibres are made, is also in full agreement with the introductory part of the patent in which the state of the art is acknowledged to be represented by D1 which discloses an artificial turf as defined in the preamble portion of claim 1. The selection, according to the characterising portion of claim 1, of assist filaments/fibres made from a material that is not stiffer (as disclosed in D1) but "less stiff" than the synthetic resin from which the grass blades are manufactured provides an inherent damping action and an improved damping as compared to the artificial grass blades.

This understanding of the claimed subject-matter is fully supported by the description of the patent in suit.

From the introductory part of the description, in particular column 1, line 39 to 47, the skilled person knows that a damping material was used in an artificial turf at the priority date of the patent; the damping material being frequently made of a rubber granulate arranged between the artificial grass blades. The patent further teaches that its object is to provide an improved damping material, which will obviate the drawbacks of such conventional solutions (such as rubber granulate). These drawbacks are identified as being the indirect damping action resulting from damping material arranged beneath the artificial turf, and the problem of obtaining and maintaining a uniform
damping action over the entire surface of the artificial turf when loose rubber granules are used. The damping material of the invention is distinguished from prior art damping materials in that it is provided in the form of fibres and is connected to the backing or the blades of the artificial turf.

The patent further discusses in paragraph [0006] the state of the art disclosed in D1, according to which assist filaments are provided between artificial grass blades, but which are made of a material that is stiffer than the synthetic resin from which the artificial grass blades are manufactured.

From the discussion of the various embodiments known in the art, the skilled reader understands that the damping material as defined in claim 1 is an alternative to the prior art damping materials described in paragraphs [0004] and [0005] of the patent and is a further development of the artificial turf known from D1.

It is therefore clear to the skilled person that the "improved damping" provided by the inherent damping characteristics of the less stiff material used for the fibrous structure (comparable to the assist filaments of D1), is actually achieved when compared to conventional artificial turfs.

In summary, it is immediately clear to the skilled person, simply when reading the introductory part of the description and the definition of the problem underlying the invention, that the term "improved damping" as used in connection with the fibrous, inherently damping material defines only a higher degree of damping. This higher degree of damping,
relative to the harder and stiffer assist filaments of D1, would provide improved shock damping and thus prevention of injuries.

The description in the patent of the expressions "inherent damping characteristics" and "improved damping" defined in claim 1 as granted is sufficient to allow the skilled person to understand and carry out the invention without undue burden.

1.5 From these considerations, the board arrives at the decision that the definition given in claim 1 as granted, and especially in the features of its characterising portion, is clear enough and that the teaching of the patent in suit, when read as a whole in an objective manner, is sufficient for enabling a skilled person to perform the claimed invention.

The requirement of sufficient disclosure pursuant to article 100(b)/83 EPC is thus met.

2. Documents not admitted during opposition procedure

2.1 Translations of D6, D14 and D15

2.1.1 With their respective grounds of opposition, opponent 2 cited D6 and provided a German translation of part of D6 and opponent 3 cited D14 and D15 accompanied by English translations. In its reply dated 19 December 2007 (see pages 9/13, 11/13 and 12/13), the patentee disputed the accuracy of the German and English translations of the Japanese documents as provided by the opponents.

2.1.2 The issue of admittance of these translations was discussed during the oral proceedings held before the
opposition division (paragraphs 3.4 and 3.5 of the minutes). The opposition division came to the conclusion not to admit the translations of Japanese patent documents D6, D14 and D15 on the grounds that "the origin of these translations remains open" (see paragraph 21.6 of the impugned decision). In this respect, the decision does not refer to any legal basis upon which this conclusion was based.

2.1.3 The provision in the EPC regarding requirements for translation of documentary evidence is given in Rule 3(3) EPC, which allows an instance of the EPO to require that a translation of a document written in a foreign language in one of its official languages be filed within a given period of time.

From the course of the opposition procedure, however, - as far as can be derived from the content of the file - the opposition division did not require a translation pursuant to rule 3(3) EPC. Prior to the oral proceedings, the opposition division did not object either that the submitted translations were incomplete or provided from undefined origin. On the contrary, it appears from the communication accompanying the summons to attend oral proceedings dated 2 April 2013, see paragraphs 4 and 7.1, that the opposition division considered that documents D6, D14 and D15 belonged to the state of the art according to article 54(2) EPC and that it neither required a translation of these documents in a specific form/content, nor did it set a time limit for filing new translations for substitution.

2.1.4 The board thus arrives at the conclusion that the non-admittance of the translations provided by the
opponents of D6, D14 and D15 was taken without legal basis.
The board therefore has to overturn the opposition division's decision and to admit into the proceedings the translations of the Japanese documents D6, D14 and D15 as provided by opponents 2 and 3 with their grounds of opposition. It remains however for the opposition division to determine the relevant teaching which can be derived from these translations.

2.2 Documents D16,D16' and D18,D18'

Documents D16' and D18' submitted with letter of 31 March 2016 were believed by respondent 1 to be originals of documents D16 and D18, which amounts to implicitly requesting that D16 and D18, which had not been considered by the opposition division, were now to be admitted into the proceedings and considered for the issue of novelty and inventive step.

Respondent 2 argued during the oral proceedings held before the board that the admissibility of newly filed documents D16' and D18', given that the case was to be remitted, should be decided upon, not be the board itself, but by the opposition division as part of the debate on novelty and inventive step.

The board agrees with the appellant in the sense that it was not proven that the coloured pages D16' and D18' were actually the original brochures, which were missing from the beginning. The opposition division's grounds for not admitting D16 and D18 into the proceedings are therefore upheld. Thus neither newly filed D16' and D18' nor D16 and D18 are part of the state of the art.
3. **Remittal**

3.1 The board has decided on the appeal, and more particularly on all the issues, which were part of the impugned decision and which have been challenged in the appeal proceedings by either the appellant or by the respondents, i.e. the sufficiency of disclosure, the admittance or non-admittance of the translations of D6, D14 and D15 as well as the status of documents D16, D16', D18, D18'.

Concerning the ground of opposition pursuant to article 100(c) EPC, which was rejected by the opposition division (see paragraph 22 of the contested decision), the board takes note that the respondents made no written submissions and that respondent 2, which attended the oral proceedings, declared that it would not raise an objection pursuant to article 100(c) EPC.

3.2 Even considering the fact that the overall procedure in the current case has already taken 16 years, and that economy/efficiency of procedure remains an important issue, the board however considered itself not in a position for deciding on the requirements of novelty and inventive step of the claimed subject-matter for the following reasons. The opposition division has not yet decided upon these issues, and there is a need to reconsider the prior art, since the decision to exclude the translations of D6, D14 and D15 is overturned. Under these circumstances it was not possible for the board to conduct a reasonable examination for the first time of novelty and inventive step.
The board therefore decides to remit the case to the opposition division for further prosecution pursuant to article 111 EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the opposition division for further prosecution on the basis of the claims of the patent as granted.

The Registrar: The Chairman:

C. Spira G. Ashley

Decision electronically authenticated