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**Datasheet for the decision
of 10 November 2021**

Case Number: T 0744/19 - 3.2.01

Application Number: 10008299.9

Publication Number: 2342988

IPC: A44B18/00, A61F13/62

Language of the proceedings: EN

Title of invention:
Direct hook engagement

Patent Proprietor:
VELCRO BVBA

Opponent:
3M Innovative Properties Co.

Headword:

Relevant legal provisions:
EPC Art. 54, 56

Keyword:
Novelty - (yes)
Inventive step - (no) - obvious alternative
Disclosure in Drawings

Decisions cited:

G 0002/10, G 0003/89, G 0011/91

Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 0744/19 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 10 November 2021

Appellant:
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Decision under appeal:

**Decision of the Opposition Division of the
European Patent Office posted on 8 January 2019
revoking European patent No. 2342988 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman P. Guntz
Members: M. Geisenhofer
V. Vinci

Summary of Facts and Submissions

- I. The appeal was filed by the patent proprietor (appellant) against the decision of the opposition division to revoke the European patent EP 2 342 988.
- II. During the opposition proceedings, the opponent had raised the grounds for opposition under Article 100(a) EPC (lack of novelty and/or lack of inventive step) and 100(b) EPC (insufficiency of disclosure).

The opposition division held that the main request (patent as granted) complied with the requirements of Article 100(b) EPC, but failed to comply with the requirements of Article 100(a) EPC taken in combination with Article 54 EPC since the subject-matter of claim 1 was anticipated by

D1 US 5 900 350 A,
D3 US 6 054 091 A and
D7 US 6 163 939 A.

The opposition division further held that

- auxiliary request 1 (filed with the letter of 27th September 2018) did not meet the requirements of Article 123(2) EPC since claims 6 - 13 were unallowably amended;
- auxiliary request 1a (filed during the oral proceedings) did not comply with Article 54 EPC since the subject-matter of claim 1 lacks novelty over D1 and D7;
- auxiliary request 2 (filed with the letter of 27th September 2018) did not meet the requirements of Article 123(2) EPC since claims 4 - 11 were unallowably amended; and

- auxiliary request 2a (filed during the oral proceedings) did not comply with Article 54 EPC since the subject-matter of claim 1 still lacked novelty over D1 and D7.

III. The appellant (patent proprietor) requested that the decision under appeal be set aside and that the opposition be rejected, i.e. that the patent in suit be maintained as granted, or in the alternative that the patent be maintained in amended form based on one of auxiliary requests 1, 1a, 2 or 2a filed during the opposition proceedings.

IV. The respondent (opponent) requested that the appeal be dismissed.

V. Since the appellant withdrew its request for oral proceedings in response to the summons issued by the Board, the oral proceedings were cancelled and the present decision was issued in writing.

VI. Independent claim 1 according to the **main request** (patent as granted) reads as follows:
*"A fastening tape comprising
a sheet-form base carrying an array of hooking members
(10,22,24),
each hooking member having a stem (14,14',28)
integrally molded with and extending from a side of the
base, and
a head (16,16',26) overhanging the base in a
common direction along the tape,
the head extending from the stem to a distal, re-
entrant tip (18,18',32) to define an engageable crook
(20,30);*

wherein the hooking members each have a height (h) of about 0.2 millimeter (0.008 inch) or less, as measured from the base; and characterized in that the re-entrant tips (18,18',32) are each disposed less than about (d) 0.08 millimeter (0.003 inch) from an upper surface of their respective hooking members, as measured normal to the base."

Claim 1 of **auxiliary request 1** differs from claim 1 according to the main request in that it additionally stipulates the following feature:

"wherein the hooking members (10,22,24) each have a thickness, as molded, of less than about 0.13 millimeter (0.005 inch)"

Claim 1 of **auxiliary request 1a** is identical to claim 1 of auxiliary request 1, except that claims 6 to 13 have been deleted.

Claim 1 of **auxiliary request 2** differs from claim 1 according to auxiliary request 1 in that it also stipulates the following feature:

"wherein the hooking members (10,22) are of J-shape overhanging the base in a single direction, or of palm tree shape each having two re-entrant tips (32) and defining two engageable crooks (30) and overhanging the base in two opposite directions"

Claim 1 of **auxiliary request 2a** is identical to claim 1 of auxiliary request 2, except that claims 4 to 11 have been deleted.

VII. The appellant's arguments can be summarised as follows:

(a) The subject-matter of claim 1 of the main request is novel over D1, D3 and D7.

(i) The passages disclosing the various features of claim 1 stem from different embodiments of D1. The same applies to D7.

(ii) Furthermore, the figures of D1, D3 and D7 are merely schematic and thus it is not possible to derive a value relating to the distance between the tip and the upper surface of the hooking members shown therein.

(b) Claim 1 is not rendered obvious by the prior art either, since the particular geometry of the hooking member allows use with a plurality of different materials.

VIII. The respondent's arguments can be summarised as follows:

(a) D1, D3 and D7 anticipate the patent in a manner detrimental to the novelty thereof.

(i) The passages cited in the opposition division's decision stem from one and the same embodiment of D1 (and this is also true of D7).

(ii) Although the drawings are schematic, it is possible to derive an approximation of the distance between the tip and the upper surface of the hooking members by comparing it to the overall height of the hooking members.

(b) Even if it is assumed that D1 does not disclose the characterising feature of claim 1, this particular limitation of the distance would be obvious.

Reasons for the Decision

Main request

Novelty (Article 54 EPC)

1. Contrary to the decision of the opposition division, the subject-matter of claim 1 of the main request (patent as granted) is novel within the meaning of Article 54 EPC.

1.1 It is undisputed between the parties that **document D1** discloses the features cited in the preamble of claim 1 of the main request.

What is disputed, however, is whether they stem from one and the same embodiment.

1.1.1 The relevant embodiment is shown in Figure 17b and described in column 17, starting in line 49, which states that the hook element of Figure 17b is similar to the hook element of Figures 2a - d and is denoted a "sub-microhook". It has an overall height H of 0.008 inch. As can be seen in Figure 17b, the sub-microhook is provided with a head having a re-entrant tip defining an engageable crook.

1.1.2 In view of the reference to Figures 2a - d, it is clear that the hook element of Figure 17b is also part of a fastening tape with a sheet-form base carrying an array

of hooking members (cf. Figures 2 and 3; column 10, lines 55 - 63).

- 1.1.3 Hence, the opposition division did not combine a plurality of embodiments but instead merely took into consideration the references to the embodiment of Figures 2a - d in order to derive corresponding characteristics of the embodiment of Figure 17b ("according to FIGS. 2a-d").
- 1.2 Furthermore, it is disputed between the parties whether the information provided in D1 makes it possible to deduce the distance between the tip of the hooking member and the hooking member's upper surface, as measured normal to the base.
 - 1.2.1 The Board shares the opposition division's view that Figure 17b is indeed a schematic representation which cannot be considered to be a technical drawing to scale. It is thus not possible to measure the distance in the drawing itself.
 - 1.2.2 The opposition division argued that it was, however, allowable to estimate the distance using the ratio between the distance and the height of the hooking element. Since the height was *expressis verbis* disclosed in the description (column 17, line 50: "overall height H of 0.008 in"), the distance could thus be deduced from said ratio. They estimated the distance to be 2/5 of the height, with 2/5 of 0.008 inch equalling 0.0032 inch.
 - 1.2.3 The Board cannot support this. Estimations derived from schematic drawings - even if they are ratios and not absolute values - are an imprecise means of establishing the disclosure of a document. Thus, values

calculated on the basis of such estimations will rarely meet the gold standard of what a skilled person would derive directly and unambiguously from the document (G 2/10, point 4.3, with reference to G 3/89 and G 11/91). Since claim 1 requires the distance to be "less than about 0.08 millimeter (0.003 inch)", the result of the estimation (2/5 of 0.008 inch equalling 0.0032 inch) cannot be considered to be clearly and beyond any doubt within these limits. The criteria of being "directly and unambiguously derivable" is therefore not met.

- 1.3 Claim 1 of the main request thus differs from D1 in that the re-entrant tips of the hooking members are each disposed less than about 0.08 millimetres (0.003 inch) from their upper surface, as measured normal to the base.

The same applies to **document D7**, which belongs to the same applicant and contains the same information in Figure 17b and column 17, line 64 - column 18, line 5, as D1.

- 1.4 **Document D3** does not anticipate the subject-matter of claim 1 either.

- 1.4.1 The opposition division held that D3 discloses hooking members having a height within a range of 0.05 mm and 4.0 mm (cf. column 8, lines 19 - 21) wherein the distance between the re-entrant tip and the upper surface of the hooking members must automatically be less than their total height of 0.05 mm, thus falling within the scope of claim 1.

- 1.4.2 In the Board's view, the passage of column 8 does not make it possible to derive a particular geometry. Rather, in the view of the Board this is merely a

general statement which does not give any further details of the geometry of the hooking members. D3 in particular does not disclose an embodiment having a height of about 0.05 mm; rather, the embodiments disclosed use hooking members having a height of 0.25 mm (cf. table II on column 9).

- 1.4.3 Thus, it is not possible to directly and unambiguously derive a distance between the re-entrant tip and the upper surface of the hooking member.
- 1.5 Hence, claim 1 of the main request also differs from D3 in that the re-entrant tips of the hooking members are each disposed less than about 0.08 millimetres (0.003 inch) from their upper surface, as measured normal to the base.
- 1.6 With regard to the additional lines of argument regarding the novelty of claim 1 of the main request over **documents D4 and D15**, which were presented by the opponent during the opposition proceedings and which were cited again by the opponent (now the respondent) in the appeal proceedings, the Board completely agrees with the opposition division's decision.

Inventive step (Article 56 EPC)

2. The subject-matter of claim 1 of the main request is however not inventive.
- 2.1 Starting from document D1 as the closest prior art, the skilled person reproducing the fastening tape disclosed in D1 needs to choose a suitable geometry for the sub-microhooks. At the same time, the skilled person is

aware of the general tendency to minimise the size of the hooking members.

2.2 A skilled person trying to reproduce said fastening tape would start with the dimension of the hook *expressis verbis* disclosed in the description (column 17, line 50: "overall height H of 0.008 in") and would need to find a suitable extension of the re-entering tip. After studying the - schematic - figures, they would estimate the distance from the top to be around $\frac{2}{5}$ of the hook's overall height, with $\frac{2}{5}$ of 0.008 inch equalling 0.0032 inch. The skilled person would therefore arrive at an extension of the re-entering tip of a little less or a little more than 0.08 mm below the upper surface of the hook.

2.3 Thus, the use of a hooking member having a height of less than 0.2 millimetres and a distance between the re-entrant tip and the upper surface of the hooking member of less than 0.08 millimetres, thus falling within the ranges given in claim 1, cannot be considered to involve an inventive step. Rather, this is simply the result of estimating the dimensions in D1 or, at best, it constitutes a slight modification which the skilled person would consider when reproducing D1 in the customary manner.

2.4 Although the appellant argues that the specific limitation to 0.08 millimetres means that it is possible to use the fastening tape with a plurality of different materials, the Board notes that the patent does not say that this effect is linked to the particular distance (or to the overall size of the hooking members), or that it is reasonable to assume that the fastening tape acts significantly differently when the hooking member's re-entrant tip is disposed

less than 0.08 millimetres from the upper surface of the hooking member, as compared to a value of more than 0.08 millimetres.

2.5 Thus, when reproducing the fastening tape it is obvious to use the estimated dimensions or to slightly modify the geometry of the hooking members of the fastening tape known from D1, and therefore the skilled person will arrive at the subject-matter of claim 1 without involving an inventive step.

2.6 Hence, the main request does not comply with Article 56 EPC.

Auxiliary requests 1 and 1a

Inventive step (Article 56 EPC)

3. Auxiliary requests 1 and 1a comprise the same independent claim 1, which differs from claim 1 of the main request in that it additionally stipulates that the hooking members each have a thickness, as moulded, of less than about 0.13 millimetres.

3.1 The hooking members of document D1 are also produced by moulding, wherein a mould is used that has been milled photochemically into the side of a plate to a depth of 0.003 and 0.005 inch, such that the resulting hooking member cannot have a thickness of more than 0.13 millimetres (0.005 inch), as was correctly deduced by the opposition division.

The appellant does not contest this finding.

- 3.2 The subject-matter of claim 1 of auxiliary requests 1 and 1a therefore differs from the fastening tape with hooking members known from D1 in that the re-entrant tips of the hooking members are each disposed less than about 0.08 millimetres (0.003 inch) from their upper surface, as measured normal to the base.
- 3.3 As set out above with regard to the main request, selecting the distance between the re-entrant tip and the upper surface of the hooking member such that it is equal to a value of less than 0.08 millimetres cannot be considered to involve an inventive step.
- 3.4 Auxiliary requests 1 and 1a thus do not comply with Article 56 EPC.

Auxiliary requests 2 and 2a

Inventive step (Article 56 EPC)

4. Auxiliary requests 2 and 2a comprise the same independent claim 1, which differs from claim 1 of auxiliary request 1 in that it additionally stipulates that the hooking members are either J-shaped (with the hooking member overhanging the base in a single direction) or palm tree shaped (with two re-entrant tips defining two engageable crooks and overhanging the base in two opposite directions).
- 4.1 The hooking members of D1 are J-shaped, which is not contested by the appellant.
- 4.2 The subject-matter of claim 1 of auxiliary requests 2 and 2a in the first alternative (J-shaped hooking members) thus again only differs from the fastening

tape with hooking members known from D1 in that the re-entrant tips of the hooking members are each disposed less than about 0.08 millimetres (0.003 inch) from their upper surface, as measured normal to the base.

- 4.3 As set out above with regard to the main request, selecting the distance between the re-entrant tip and the upper surface of the hooking member such that it is equal to a value of less than 0.08 millimetres cannot be considered to involve an inventive step.
- 4.4 Auxiliary requests 2 and 2a therefore do not comply with Article 56 EPC.
5. Since none of the requests on file complies with Article 56 EPC, the patent must be revoked in accordance with the decision of the opposition division.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



A. Vottner

P. Guntz

Decision electronically authenticated