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Datasheet for the decision
of 24 July 2014

Case Number: T 2527/11 - 3.2.03
Application Number: 01906461.7
Publication Number: 1276941
IPC: E04F15/04
Language of the proceedings: EN

Title of invention:
A FLOORING MATERIAL COMPRISING SHEET-SHAPED FLOOR ELEMENTS WHICH ARE JOINABLE BY MEANS OF JOINING MEMBERS

Patent Proprietor:
Pergo (Europe) AB

Opponents:
Spanolux N.V.- DIV. Balterio
Berry Finance N.V.
Välinge Innovation AB
Hamberger Flooring GmbH & Co. KG

Headword:

Relevant legal provisions:
EPC Art. 56, 123(2)
EPC R. 99

Keyword:
Admissibility of appeal - notice of appeal
Main request - Inventive step (no)
Auxiliary request - Amendments - allowable (no)
Decisions cited:
G 0002/98

Catchword:
Case Number: T 2527/11 - 3.2.03

DECISION of Technical Board of Appeal 3.2.03 of 24 July 2014

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Respondent: Hamburger Flooring GmbH & Co. KG (Opponent 4) Rohrdorfer Strasse 133 83071 Stephanskirchen (DE)

Decision under appeal: Decision of the Opposition Division of the European Patent Office posted on 21 October 2011 revoking European patent No. 1276941 pursuant to Articles 101(2) and 101(3)(b) EPC.

Composition of the Board:
Chairman G. Ashley
Members: Y. Jest
M. Blasi
Summary of Facts and Submissions

I. By its decision dated 21 October 2011 the opposition division revoked European patent No. 1 276 941 on the grounds that the claimed subject-matter of the patent as granted according to the main request lacked inventive step having regard to the combination of two documents (D10 and D8), and that the amendments made to claim 1, as defined in auxiliary requests 1 to 3, did not meet the requirements of Article 123(2) EPC.

The opposition division at the same time considered that:
- the priority claimed on the basis of Swedish patent application SE 0001149 filed on 31 March 2000 was not valid (Articles 87(1) and 88(3) EPC, Headnote of G 2/98);
- the effective date for the claims as granted was therefore the filing date of the European patent application, namely 14 February 2001 for the international patent application (D0);
- as a consequence, the documents published before the effective filing date, which included D10, were comprised in the state of the art within the meaning of Article 54(2) EPC; and
- the amendments made to claim 1 as granted did not infringe the requirements of Article 100(c) EPC.

II. The patentee, hereinafter the appellant, lodged an appeal on 8 December 2011 and paid the appeal fee on the same day.

In the notice of appeal, the appellant stated: "Hiermit wird ... Beschwerde gegen die Entscheidung ... eingelegt. Es wird beantragt, die angefochtene Entscheidung aufzuheben ...."
The statement of grounds of appeal was received on 21 February 2012. It contained reasons as to why the appellant considered the subject-matter of claim 1 of the patent in suit to be novel and inventive. By telefax on 10 January 2013 the appellant filed three sets of claims according to auxiliary requests 1 to 3.

III. Relevant documents:

a) for determining the filing date for the patent

D0 WO-A-2001/075247 (11 October 2001)  
International patent application filed on 14 February 2001
P1 SE 0001149 (filed on 31 March 2000)  
Priority claimed by D0
P2 English translation of priority application P1
P2a Page missing in P2
P3 Content of P2 as compared to D0

b) State of the art


IV. The following requests were confirmed during the oral proceedings on 24 July 2014:

The proprietor (appellant) requested that the decision under appeal be set aside and that the patent be maintained as granted (main request) or, alternatively, that the patent be maintained in amended form on the basis of the set of claims filed as the first auxiliary request with letter of 10 January 2013.
Opponents I to IV (respondents I to IV) requested that the appeal be dismissed. Respondent II to IV's initial objection against the appellant's proper representation was not maintained.

At the end of the oral proceedings the board announced its decision.

V. Claim 1 of the requests has the following wording (the numbering of the features corresponds to that introduced by the opposition division in the appealed decision:

a) Main request (patent as granted):

1) "A flooring material comprising sheet-shaped floor elements (1) with a mainly square or rectangular shape, which floor elements (1) are each provided with edges (2), a lower side (5) and an upper decorative layer (3), wherein the floor elements (1) are so constructed as to be joined by means of joining members (10), wherein

2) each of the floor elements (1) is provided with

2.1) the male joining member (10I) is provided with a tongue (11) and a lower side (5) groove (12),

2.2) while the female joining member (10II) is provided with a groove (13) and a cheek (14), the cheek (14) being provided with a lip (15), and

3) the floor elements (1) are so constructed as to mainly be joined together by tilting a floor element (1) to be joined with an already installed floor element (1) or a row of already installed floor elements (1),
3.1) with the male joining member \((10^I)\) of the floor element (1) angled downwards, while the first edge \((2^I)\) is allowed to be mainly parallel to the second edge \((2^{II})\) of the already installed floor element (1) or elements (1),

3.2) whereby the tongue (11) of the tilted floor element (1) is inserted into the groove (13) of the female joining member \((10^{II})\) of the already installed floor element (1) or elements (1),

3.3) whereby the tilted floor element (1) is turned downwards, with its lower edge as a pivot axis,

3.4) so that the lip (15) eventually snaps into the lower side (5) groove (12) where the decorative upper layer (3) of the floor elements (1) are mainly parallel,

4) each of the floor elements (1), on a third edge \((2^{III})\), is provided with a male vertical assembly joining member \((10^{III})\), while a fourth edge \((2^{IV})\) of each floor element (1) is provided with a female vertical assembly joining member \((10^{IV})\), the fourth edge \((2^{IV})\) being arranged on a side opposite to the third edge \((2^{III})\),

characterized in that

4.1) the male vertical assembly joining members \((10^{III})\) are provided with mainly vertical lower cheek surfaces (21) arranged parallel to the closest edge (2),

4.2) which lower cheek surfaces (21) are so constructed as to interact with mainly vertical upper cheek surfaces (22) arranged on the female vertical assembly joining members \((10^{IV})\),

4.3) so that two joined adjacent floor elements (1) are locked against each other in a horizontal direction, and

4.4) the male and female vertical assembly joining members \((10^{III} \text{ and } 10^{IV}, \text{ respectively})\) are provided with
one or more snapping hooks (23) with matching undercuts (24).

4.5) which, by being provided with mainly horizontal locking surfaces, limit the vertical movement between two joined adjacent floor elements (1),

5) in that the floor elements (1) are so constructed that when two floor elements (1) are joined, the joint between a third edge (2^{III}) of one of these floor elements (1) and a fourth edge (2^{IV}) of the other one of these floor elements (1) comprises contact surfaces which are constituted by

5.1) said mainly horizontal locking surfaces of said one or more snapping hooks (23) and matching undercuts (24),

5.2) said mainly vertical upper (22) and lower cheek surfaces (21)

5.3) as well as mating upper surfaces (25) of the two joined floor elements (1), and

6) in that the floor elements (1) are so constructed that two adjacent edges (2) of a floor element (1) can be joined with a floor element (1) adjacent to the first edge (2^{I}) and a floor element adjacent to the third or fourth edge (2^{III} and 2^{IV}, respectively) at the same time, and in the same turning motion."

b) Claim 1 of the auxiliary request

"A flooring material ...

[with features 1) to 4.5) of claim 1 of the main request],

4.6) and which, by being provided with said mainly horizontal locking surfaces, limit the horizontal movement between two joined adjacent floor elements (1), ...

[features 5) to 6) of claim 1 of the main request]."
VI. The appellant submitted essentially the following arguments:

   a) Admissibility of the appeal

In the notice of appeal it was requested that the decision of the opposition division be nullified, i.e. set aside. In accordance with established case law, an explicit request was not needed. The requirements of Rule 99(1)(c) EPC were thus fulfilled. The grounds of appeal made clear that the appellant wished that the patent be maintained in accordance with the main request before the opposition division, namely that the oppositions be rejected.

   b) Priority

The flooring material defined in claim 1 as granted was directly and unambiguously derivable by the person skilled in the art from the priority application P1 because of the following considerations. In particular, the skilled person in the field of flooring, when reading the priority document P1 in the year 2000, would directly and unambiguously derive feature 4.5) from its disclosure. Furthermore s/he would understand that the object of D0 was to provide a flooring system which avoided ingress of dust and moisture into the joints of all four sides of the panels. The general principle of the invention consisted therefore in a flooring material which could be assembled by angling in a first pair of adjacent edges, and in the same motion and at the same time, by engaging a second pair of adjacent edges in a fold-down movement.

The invention according to D0 therefore obviated any shifting of panels along the finalised joint between
the first pair of edges. Given this general teaching, the skilled person would be unable to ascribe any technically sensible meaning to feature 4.6) in the context of the priority application and, as a consequence thereof, would regard it as an obvious error, the intended meaning being "vertical" rather than "horizontal". The repetition of feature 4.6 in the priority application P1 merely reflected the consistency of the author when drafting the application and provided no further evidence for interpreting the feature. But even if feature 4.5) was not considered to constitute a correction of feature 4.6), feature 4.6) was a consequence of the structural features of the product defined in claim 1 as granted and therefore redundant.

Finally, feature 4.6) was not presented as an essential feature for the invention of the priority application P1. Nor was any technical problem described which was associated with horizontal movement of adjacent panels along joined third and fourth edges in an assembled floor covering; in this respect the static friction required by claim 2 of the priority application clearly concerned the joint between two male and female joining members of first and second edges and not the joint between the assembly joining members of the third and fourth edges. Therefore feature 4.6 could be omitted in claim 1 as granted without affecting the criterion of "the same invention".

The subject-matter of claim 1 of the main request was thus entitled to priority.
c) Main request - novelty

The flooring material of granted claim 1 was novel over the disclosure of D6. There was no objective proof that the flooring material of D6 presented features 4.1), 4.5) and 5) to 5.3) of claim 1. It was not possible to rely on the schematic representation of the joint elements in the drawings for establishing the presence of mainly horizontal locking surfaces or of any contact between them as required by granted claim 1.

The claimed material was also new as compared to D10, which comprised a plethora of embodiments, none of which included all of the features 3.4), 4.4), 4.5), 5.1) and 6). Common to each embodiment was only the hinge joint on the long pair of sides (see figures 1 to 7). Concerning possible joints at the short pair of sides, the third embodiment (page 7, lines 20 to 28) made use of first and second hook elements having holding surfaces to lock the panels together so as to prevent gaps at the joint. Fourth to sixth embodiments concerned further developments of the third embodiment.

In claim 1, feature 3.4) was a consequence of feature 3.3); hence, the snapping action was a result of the tilted floor element’s pivoting movement. No such snapping action was disclosed in D10. Rather, the panel 3 with a complementary projection 6 is inserted in an inclined position in direction P and thereafter rotated about the common centre point K (figures 2 to 4). As the curvatures 7, 23 constituted segments of a circle having the same centre point K about which the panel 3 is rotated, there was no snapping action from the lower lip during or after the rotation. When reading the associated text of the detailed description (page 17, lines 5 to 15) the skilled person would
notice a contradiction with the representation of figures 2 to 4. A snapping action according to feature 3.4) was thus not unambiguously disclosed in D10.

Concerning features 4.4), 4.5) and 5.1), the bulge 65,73 and the recess 66,74 shown in figures 11 and 12 did not define a hook with horizontal surfaces engaged with an undercut for limiting vertical movement. The alternative construction using a nose-shaped protrusion instead of the bulge (page 23, lines 24 to 37) was not described in detail, but a nose with horizontal surfaces would stiffen the joint and thus obviously defeat the object of D10, namely to provide increased flexibility at the joints. Feature 6) was also new, since the assembling mode in D10 required a shifting along the joint of two adjacent edges of assembled panels before engaging the other pair of edges (paragraph bridging pages 7 and 8).

d) Main request - inventive step

D10 could not represent the most promising starting point because it criticised the use of tight joints and suggested a laying method which still required shifting of two assembled panels along their joint between a first pair of edges prior to engagement of third and fourth edges implying a degree of play. The aim of D10 was to reduce stresses in flooring panels when laid on uneven grounds. D10 sought therefore a solution in form of an articulated engagement ("Gelenkverbindung") at the joints so as to keep the panels together while providing enough flexibility of the joints. The disclosure of D10 was thus in complete contradiction with the subject-matter of the patent.
But even if the skilled person started from D10 and made attempts to increase the vertical release force, s/he would not have considered D8, which proposed a purely vertical push-down lock on all four sides of the flooring panels. It was not apparent that the skilled person would have been prompted by D8, since there was no evidence that any push-down lock and its constructional elements would work in a fold-down lock, as required by feature 6) of claim 1 as granted.

e) Auxiliary request - Article 123(2) EPC

Feature 4.6) was derivable from the drawings, especially from figure 8, which represented a contact between mainly horizontal surfaces of hooks and undercuts. The skilled person would indeed consider that said mechanical contact implied necessarily some static friction which inevitably limited horizontal movement between the surfaces in contact. The inclusion in claim 1 of feature 4.6), which was implicitly disclosed in the patent application, thus met the requirement of Article 123(2) EPC.

VII. The arguments presented by respondents I to IV can be summarised as follows:

a) Admissibility of the appeal

The appeal as filed was not admissible since the sole request of the patentee to set the contested decision aside did not fulfil the requirements of Rule 99(1)(c) EPC. In particular, such a request does not define clearly the subject of the appeal. The statement of grounds for appeal did not define the subject of the appeal either.
b) Priority

The flooring material of granted claim 1 was not supported by the disclosure of the Swedish application on the basis of which priority was claimed. The omission of feature 4.6 in claim 1 according to the main request and its replacement by feature 4.5 defined subject-matter which was not directly and unambiguously derivable by the skilled person from the previous Swedish application as a whole. The effective date was therefore the filing date of D0. Document D10, published prior to the filing date, was thus part of the state of the art within the meaning of Article 54(2) EPC.

c) Main request - Novelty

The flooring material according to granted claim 1 was anticipated by D6 (state of the art under Article 54(3) EPC) and by D10 and thus lacked novelty. Contrary to the findings of the opposition division, - the panels of D6 once joined comprised horizontal surfaces limiting vertical movement (see hooks 18 in figures 9 and 11) and vertical cheek surfaces (figures 7 to 13), thus features 4.5) and 5) to 5.3) were disclosed,
- an alternative to the bulge 65 shown in figures 11 and 12 of D10 consisted in the provision of a nose-shaped protrusion (see lines 24 to 34 of page 23 of D10); said nose-shaped protrusion would obviously have a mainly horizontal surface engaging a mainly horizontal surface of the recess engaged by the protrusion.
d) Main request - Inventive step

The flooring material defined in granted claim 1 was obviously derivable from D10 in combination with the general knowledge of the skilled person or with the teaching of D8. In order to increase vertical release force at the joint of edges comprising the nose-shaped protrusion and the corresponding recess (embodiment described at page 23, lines 24 to 34, and shown in figure 12 of D10), the skilled person would have been prompted by D8. This document referred to horizontal locking surfaces of heels 31 and recesses 32 adapted for limiting vertical movement between the edges of two joined panels, see page 2, lines 2 to 5. The nose-shaped heels 31 represented in figure 4 of D8 comprised inclined vertical locking surfaces, which would be interpreted by the skilled reader as being "mainly horizontal" in order to ensure vertical locking according to the general aim of D8. The resulting nose-shaped protrusion would thus disclose mainly horizontal locking surfaces while still allowing an articulated joint connection.

e) Auxiliary request - Article 123(2) EPC

The documents of the originally filed application from which the contested patent issued did not disclose feature 4.6). The embodiment of figure 8 of the patent was not covered by claim 1 as granted and could therefore not serve as a basis for disclosure of engaged horizontal locking surfaces. Furthermore feature 4.6) was not a mere consequence of feature 4.5 since mainly horizontal surfaces providing limitation of vertical movement did not necessarily imply sufficient friction for enabling the limitation of
horizontal movement. The auxiliary request thus infringed Article 123(2) EPC.

VIII. Articles and rules cited in this decision refer to the revised version of the EPC as entered into force on 13 December 2007 except where "1973" has been added in which case reference is made to the provision in the version in force until that date.

Reasons for the Decision

1. The appeal is admissible.

The board considers the requirements of Rule 99(1) (c) EPC and Rule 99(2) EPC as being fulfilled, contrary to the respondents' objections in this respect, and has itself no further objections concerning the admissibility of the appeal.

Rule 99(1)(c) EPC requires the notice of appeal to contain "a request defining the subject of the appeal". This means that it must be clear from the notice of appeal to which extent cancellation of the decision under appeal is requested, i.e. whether it should be set aside in whole or only as to part (Case Law of the Boards of Appeal, 7th edition 2013, IV.E.2.5.2.c), page 956, 2nd and 3rd paragraphs). It is not required that the request be explicitly formulated. In this regard the board does not share the respondent IV’s view that Rule 99(1)(c) EPC further requires an indication in which form the appellant wishes to defend the patent or whether remittal is requested. Such indication concerns the extent to which amendment is requested and is therefore a requirement which has to be fulfilled in the statement of the grounds of appeal.
In the notice of appeal, the appellant requested that the decision of the opposition division be set aside. The opposition division had decided to revoke the patent, and its decision contains the revocation of the patent as the sole order. Against this background, it unambiguously follows from the appellant’s request that the opposition division’s decision as a whole should be the subject of the appeal. The requirements of Rule 99(1)(c) EPC are therefore met.

In the subsequent statement of grounds of appeal of 21 February 2012 the appellant defended the patent as granted. This makes clear that the appellant requested that the patent be maintained in accordance with the main request before the opposition division, namely that the oppositions be rejected (Rule 99(2) EPC).

2. Representation

In the light of the documents submitted by the appellant, especially the authorisation and the extract from the Commercial Register filed with the letter of 14 July 2014, the board considers that the appellant was represented during the appeal proceedings by duly authorised representatives. In this respect, it can also be noted that the objection initially raised was not maintained by the respondents.

3. Priority - Articles 87(1) EPC 1973 and Article 88 EPC

The board confirms the finding of the opposition division that the priority claim is not valid. The requirement for claiming priority of "the same invention" referred to in Article 87(1) EPC 1973 is not fulfilled because a skilled person can not derive the subject-matter of claim 1 as granted directly and
unambiguously, using common general knowledge, from the previous application P1 as a whole (see Headnote of G2/98, OJ EPO 2001, 413).

The board does not share the appellant's interpretation of the priority application that the skilled person, when reading P1, would immediately have assessed that a horizontal limitation of movement as defined in feature 4.6) lacked any technically sensible meaning, and that what was meant instead by the author was clearly limitation of movement in a vertical direction according to feature 4.5).

3.1 The skilled person in the field of flooring, when reading the priority document P1 in the year 2000, would understand that the object is to provide a flooring system which avoids ingress of dust and moisture into the joints on all four sides of the panels. This general principle is maintained in D0. The solution suggested relates to a flooring material which can be assembled by angling in a first pair of adjacent edges and in the same motion and at the same time engaging a second pair of adjacent edges in a fold-down movement. The invention according to D0 therefore obviates any shifting of panels along a finalised joint between the first pair of edges; such a shifting would require non-negligible play, which in turn would create gaps at the joints.

3.2 However, the skilled person has no reason to consider that feature 4.6),

[... snapping hooks (23) with matching undercuts (24) ...] "which, by being provided with said mainly horizontal locking surfaces, limit the horizontal movement between two joined adjacent floor elements (1),"
analysed within the context of the priority application P1, lacks any technically sensible meaning.

First, feature 4.6) is technically sensible when considering the mode of realisation of the invention of P1, which incorporates hooks and undercuts. The skilled person is taught that cheek surfaces (21,22) perform horizontal locking in the direction perpendicular to the joints, see features 4.1) to 4.3) of claim 1 and claim 3 of P1. S/he thus understands the function of the hooks and undercuts defined by feature 4.6) as being to prevent horizontal movement along the joined third and fourth edges (in the detailed embodiment, the short edges). It should be noted at this stage that claim 1 as granted deals with a flooring material which can comprise only three panels and is not limited to fully laid flooring, so that a horizontal movement along the joint at the third and fourth edges may in theory not be excluded from a purely technical approach.

Thus, the skilled reader of P1 has no reason to arrive at the conclusion that the wording of feature 4.6) is based on an obvious error and that the function of the hooks and undercuts was only to limit vertical movement according to an implicitly disclosed feature 4.5).

3.3 A further consideration concerns the fact that the joined floor elements are mainly vertically locked along their long (first and second) edges and that the hook-undercut arrangement with its mainly horizontal locking surfaces contributes to the vertical lock of panels only along their short (third and fourth) edges. Hence the additional function of the hook-undercut arrangement, namely limiting vertical movement according to feature 4.5), would appear to be negligible as compared to the vertical locking function
along the long edges shown in Figures 1 to 4, whereas a limitation of the horizontal movement along the joined short (third and fourth) edges can only be achieved by the mainly horizontal locking surfaces of the hook-undercut arrangement.

A further indication, if necessary, that the function of horizontal limitation is closely linked to the hook-undercut arrangement lies in its multiple repetition in the description of P1, see P2, page 5, line 28, page 6, line 5, page 10, lines 24, 29 and 30, and page 11, line 14. Therefore, even if the skilled person might recognise in the hook-undercut arrangement of the embodiments shown in Figures 5 to 7 a small contribution towards limiting vertical movement (feature 4.5)), s/he indubitably acknowledges a technically sensible meaning in the explicitly defined function of said arrangement, namely the limitation of horizontal movement. Contrary to the view of the appellant, this is not merely repetition by the drafter of P1 of the same error.

3.4 Feature 4.6) of P1 is therefore not an obvious error and its replacement by feature 4.5) in granted claim 1 does not constitute a permissible correction.

3.5 As regards another argument of the appellant, the board considers that feature 4.6) is not a consequence of the structural features, in particular feature 4.5), of the product defined in claim 1 as granted, and is therefore not redundant. In fact the current situation is rather the reverse; the horizontal surfaces provided at the hooks and undercuts for limiting vertical movement (feature 4.5)) do not necessarily and automatically limit horizontal movement (feature 4.6)) at the joint. The function of horizontal limitation, which is closely linked to the
hook-undercut arrangement in P1, is not self-evident starting from the definition given by granted claim 1. On the contrary, it rather requires additional specific qualities or characteristics of the horizontal surfaces in contact. Therefore the skilled person would not have derived any inherent function of the hook-undercut arrangement, other than the one explicitly defined by feature 4.5). Thus the assumption "same structure - same function" does not apply here and feature 4.6) cannot be considered redundant.

3.6 Finally, feature 4.6) is to be considered as an essential feature for the embodiment defined by claim 3 of P1, which concerns a preferred embodiment having hooks and undercuts on the third and fourth edges. The horizontal surfaces provided on the hooks and the undercuts are defined as co-operating in limiting horizontal movement of adjacent panels along joined third and fourth edges. This function is thus inextricably linked with the particular embodiment of P1 having a hook-undercut arrangement on the short edges.

Therefore omitting feature 4.6) in claim 1 as granted affects the criterion of "the same invention" in the sense that the invention claimed in the patent as granted cannot be directly and unambiguously derived from the priority application P1.

3.7 The subject-matter of claim 1 of the main request does not satisfy the requirements of Article 87(1) EPC 1973 and Article 88 EPC and is thus not entitled to priority. Hence the effective date of the patent is the filing date of application D0, i.e. 14 February 2001.
3.8 Since the claimed priority is not valid for the reasons indicated above, a decision on the validity of the filing of the Swedish priority application by the company having the name "Perstorp Flooring AB" is irrelevant.

4. State of the art

As a consequence of the effective date for granted claim 1, being 14 February 2001,
- D6 filed on 12 January 2001 and published on 19 July 2001 becomes state of the art according to Article 54(3) EPC and Article 54(4) EPC 1973, and
- D10 filed on 9 October 1999 and published on 11 January 2001 belongs to the state of the art according to Article 54(2) EPC 1973.

5. Main request - novelty

5.1 The flooring material of granted claim 1 is novel over the disclosure of D6. The board confirms the decision of the opposition division that features 5) to 5.3) of granted claim 1 cannot be directly and unambiguously derived from the flooring material presented in D6. The text of D6 is silent as to whether or not there is a contact between the upper surfaces of adjacent panels (5.3)), between the upper and lower cheek surfaces (5.2)) and between the mainly horizontal surfaces of the hooks and recesses in the embodiment of figure 9 or 11. Furthermore it is not possible to rely on the schematic representation of the joint elements in the drawings, in particular figures 9 and 11, of D6 for establishing the presence of mainly horizontal locking surfaces, or of any contact between the different pairs of surfaces facing each other as required by granted claim 1.
5.2 The claimed flooring material is also new as compared to D10.

5.2.1 This document discloses not only features 1) to 3.3), 4) to 4.3), 5), 5.2) and 5.3), which is undisputed, but also features 3.4), 4.4), 5.1) and 6) in combination. The flooring material disclosed in D10 comprises sheet-shaped floor elements with a rectangular shape (page 13, line 25). The floor elements are each provided with edges, a lower side and an upper decorative layer (page 19, lines 13 to 17) and are so constructed as to be joined by means of joining members. Contrary to the assertion of the appellant, the skilled person would not consider the disclosure of D10 to encompass a plethora of separate embodiments addressing wholly different modes of realisation of the invention, but that it concerns one and the same constructional arrangement.

Each floor element is provided with a male joining member 4 on a first long edge (claim 1, lines 22 and 25 to 27), while the second long edge of the floor elements is provided with a female joining member 5 (Figure 1; claim 1, lines 32 and 33). The male joining member 4 is provided with a tongue 6 and a lower side groove 25. The female joining member 5 is provided with a groove 20 and a cheek 21, the cheek being provided with a lip. Each of the floor elements is provided on a third short edge with a male vertical assembly joining member 67 (claim 11, lines 2 and 3), while the fourth short edge of the floor element is provided with a female vertical assembly joining member 64, the fourth edge being arranged on the side opposite to the third edge (figure 12; claim 11, lines 4 and 5). The male vertical assembly joining member 67 is provided with mainly vertical lower cheek surfaces 69
arranged parallel to the closest edge, which lower cheek surface is adapted to interact with a mainly vertical upper cheek surface 68 arranged on the female vertical assembly joining member 64, so that two joined adjacent floor elements are locked against each other in a horizontal direction (figure 12 with page 23, lines 7 to 10, in combination with page 22, lines 29 to 32). The male vertical assembly joining member 67 is provided with a snapping hook 73, while the female vertical assembly joining member 64 is provided with a matching undercut 74 (figure 12 and page 23, lines 13 to 15). The hook 73 and the undercut 74 are provided with locking surfaces which limit the vertical movement between two joined adjacent floor elements (figure 12, page 23, lines 18 to 21, and page 22, lines 27 to 29).

When two floor elements are joined, the joint between the third edge of one of these floor elements and a fourth edge of the other one of these floor elements comprises contact surfaces, which are constituted by the locking surfaces of the snapping hook and matching undercut (page 10, lines 26 to 28), the mainly vertical upper and lower cheek surfaces, as well as the mating upper surfaces of the two joined floor elements (see page 7, lines 25 to 28; page 9, lines 21 to 24; page 10, lines 6 to 9).

The floor elements are adapted to be joined together by tilting a floor element to be joined with two previously installed floor elements along its long edge (figures 1 to 4) and its short edge (figures 8 to 12).

According to the paragraph bridging pages 7 and 8 of D10, the laying method is to first bring the long edge of the panel to be laid into an oblique position and to engage the tongue 6 with the groove 20 of the long edge
of a first previously laid panel (figure 3), thereby forming an articulated joint. The panel is then maintained in its angled and engaged position and shifted until it contacts with its short edge a second already laid panel. The panel to be laid is then angled downwards for completion of the snap joint along the long side of the first already laid panel and for progressively snapping the lip at its joining element 44 into the lower side groove of the joining element 45 at the short edge of the second previously laid panel. As a result, the decorative upper layers of the floor elements are mainly parallel (see Figure 3 and page 17, lines 5 to 15).

The appellant argued that because the curvatures 7, 23 illustrated in figure 3 constituted segments of a circle having the same centre point K about which the panel 3 was rotated, a snapping engagement according to feature 3.4) from the lower lip during or after the rotation was not possible. The board is however of the view that the skilled person would realise that the representation in figures 2 and 3 corresponds to alternative assembling modes for the long edges of adjacent panels. S/He would however recognise that the mode shown in figure 2 is in perfect agreement with the overall laying method described in the paragraph bridging pages 7 and 8. The snapping action at both the long and short edges is thus unambiguously disclosed in D10.

Therefore, and even if the panel might have to be shifted in an intermediate position along the long edge, the finalisation of the joints at both the long and short edges occurs at the same time and in the same turning motion and in accordance with features 3.4) and 6) of granted claim 1.
5.2.2 Hence, the claimed flooring material differs from the state of the art disclosed in D10 by feature 4.5) of granted claim 1, namely that the surfaces of the snapping hooks and the matching undercuts limiting the vertical movement between two joined adjacent floor elements are mainly horizontal.

The snapping hook 73 of D10, see figure 12 and page 23, lines 23 and 25, being designed as a bulge ("Wulst"), discloses curved but no mainly horizontal surfaces. The alternative shape described on page 23, lines 21 to 30, of a snapping hook having the shape of a protruding nose does not disclose this distinguishing feature either. This alternative embodiment with a snapping nose is however not illustrated. Hence, it cannot be derived directly and unambiguously from this passage of D10 that in the embodiment having a snapping nose, the locking surfaces of the nose and the matching undercut would inevitably be "mainly horizontal".

5.3 The subject-matter of granted claim 1 is thus new within the meaning of Article 54(1) EPC 1973.

6. Main request - inventive step

6.1 D10 - closest prior art

6.2 The flooring material of D10 constitutes the closest prior art since it discloses a large number of features of claim 1 as concluded above. As with the disputed invention, it enables the flooring panels to be laid by the fold-down technique, that is by angling-in a pair of two (long) edges and vertically snapping an adjacent pair of two (short) edges at the same time and in a single turning motion.
6.3 As determined above, the difference between the invention of claim 1 of the main request and the flooring material of D10 is that the locking surfaces of the snapping hook and the matching undercut are "mainly horizontal" (feature 4.5) of granted claim 1.

6.4 The technical effect of this distinguishing feature is that the vertical movement between two joined adjacent floor elements is limited in an optimum manner. The objective technical problem associated with D10 is therefore to further develop the flooring material as disclosed therein so as to achieve this effect, while maintaining the flexibility of the articulated connections at the long edges as well as at the short edges of the flooring panels.

6.5 D10 itself, see page 23, lines 21 to 30, suggests a nose-shaped protrusion as an alternative to the bulge 65,73 shown in figures 11 and 12. It is apparent to the skilled person that a nose-shaped protrusion engaged in a matching recess would improve the vertical lock as compared to the illustrated bulge because of the relative extension in horizontal direction of a "nose" as compared to a bulge.

This effect is confirmed by D8, which teaches that heels/hooks that snap-join with matching recesses/undercuts, are provided with essentially horizontal locking surfaces, which limit vertical movement between two joined adjacent flooring panels (see D8, page 2, lines 2 to 5, figures). The skilled person also gains the additional information that the surfaces in contact for limiting vertical movement need not be perfectly horizontal, and that inclined vertical surfaces may also perform the function, see figure 4 and corresponding description, paragraph bridging pages 7
and 8 of D8. The skilled person would further notice that the geometry of the hook 31 provided with inclined vertical surfaces as shown in figure 4 resembles the nose shape, as suggested by the alternative in D10.

The skilled person would recognise that the nose-shaped hooks provided with inclined vertical surfaces according to the embodiment illustrated in figure 4 of D8, when applied to the flooring material known from D10, would not defeat the object of D10 but still provide an articulated connection, thereby maintaining a flexible joint as sought by D10.

6.6 The resulting flooring material would then also meet the requirement of feature 4.5) of granted claim 1, namely that the locking surfaces of the snapping hook and the matching undercut are "mainly horizontal".

6.7 It may be noted that the patent itself defines the concept of "mainly horizontal" locking surfaces in a broad manner. According to the patent, any surface within the range of perfectly horizontal surfaces (figure 5, column 5, line 26) to inclined vertical surfaces (figure 6, column 5, line 42) is considered to meet to definition of "mainly horizontal". The upper surface of the nose-shaped hook having the geometry of figure 4 of D8 would thus fall under the broad definition of "mainly horizontal", as set out in the patent.

The fact that the laying technique recommended by D8 consists in vertically pushing/pressing the panels down into engagement does not hinder the skilled person from being prompted by the function inherent in the geometry of the heels/undercuts of D8, namely the limitation of vertical movement once the panels are assembled.
It is worth adding that the fold-down method of granted claim 1 when considered in terms of assembling the short (third and fourth) edges includes a similar movement, namely a progressive push-down motion to continuously snap the hooks into the recesses.

Therefore the skilled person would consider the teaching of D8 as being perfectly applicable to a flooring material known from D10.

6.8 Accordingly, the subject-matter of claim 1 does not involve an inventive step within the meaning of Article 56 EPC 1973.

7. Auxiliary request

Claim 1 of the auxiliary request 1 differs from granted claim 1 in that feature 4.6) has been added.

This amendment is however not supported by the disclosure of the application documents as originally filed. Feature 4.6) is neither expressly nor inherently present in these application documents. Feature 4.6) also does not implicitly follow from the features of granted claim 1, and especially not from features 4.5) and 5.1). Mainly horizontal surfaces providing limitation of vertical movement as defined by feature 4.5) do not necessarily imply a sufficient degree of friction between the contacting surfaces to also enable a limitation of horizontal movement. Furthermore no information can be gained from the embodiment shown in figure 8 of the application since it is clearly excluded from the scope of the claimed subject-matter.
Hence, claim 1 of the auxiliary request introduces subject-matter which extends beyond the content of the application as filed and therefore does not meet the requirements of Article 123(2) EPC.

8. Conclusion

In summary, neither of the requests is allowable, the subject-matter of claim 1 of the main request lacking inventive step and amended claim 1 according to the auxiliary request infringing Article 123(2) EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

C. Spira G. Ashley

Decision electronically authenticated