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D E C I S I O N
of 23 July 1998

Case Number: T 0245/97 - 3.2.3

Application Number: 91310984.9

Publication Number: 0490529

IPC: E02D 31/00, E02B 3/12

Language of the proceedings: EN

Title of invention:
Clay liner for steep slopes

Patentee:
Claymax Corporation

Opponent:
Naue Fasertechnik GmbH & Co. KG
Huesker Synthetic GmbH & Co.
Firma Paul Schreck

Headword:
Bentonite liner/CLAYMAX

Relevant legal provisions:
EPC Art. 56, 107
EPC R. 61, 20(1), (2), (3)

Keyword:
"Admissibility of the appeal - yes"
"Inventive step (no)"

Decisions cited:
-

Catchword:
-



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Boards of Appeal

Chambres de recours

Case Number: T 0245/97 - 3.2.3

D E C I S I O N
of the Technical Board of Appeal 3.2.3
of 23 July 1998

Appellant: Claymax Corporation
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 14 January 1997
revoking European patent No. 0 490 529 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: C. T. Wilson
Members: J. B. F. Kollar
M. K. S. Aúz Castro

Summary of Facts and Submissions

- I. European patent No. 490 529 was granted on 16 August 1995 on the basis of application No. 91 310 984.9.

Independent claim 1 reads as follows:

"1. A liner for use in containing liquid, the liner being of elongate shape and comprising at least two non-biodegradable sheets (22, 24) which are held together by stitching (17) and which have a layer of water-swellaible clay (20) between them, the stitching (17) comprising polymeric leachate-resistant stitching means (19) extending through the clay layer (20) so as to hold the sheets (22, 24) together after the water-swellaible clay has become hydrated,
characterised in that:

- (a) the stitching means (19) comprise spaced-apart rows (14) of stitching extending lengthwise of the liner; and
- (b) the clay layer (20) is, optionally, attached to at least one of the sheets (22 or 24) by means of a water-based and water-soluble adhesive."

- II. Notice of opposition was duly filed by opponents OI, OII and OIII with letters of 13 May 1996, 15 May 1996 and 14 May 1996, respectively, requesting the revocation of the patent in accordance with Article 100(a) EPC.

In their letters of opposition the opponents relied mainly on the following documents:

D1: EP-A-0 362 193
D2: US-A-4 565 468
D3: EP-A-0 278 419.

In their statements of opposition, all three opponents observed that feature (b) of the characterising portion of claim 1 is optional and has therefore to be disregarded when assessing novelty and inventive step of the subject-matter of claim 1 of the patent in suit.

More specifically, opponent OI asserted that the subject-matter of claim 1 lacked novelty or at least an inventive step with respect to the disclosure of D1. Opponent OII was of the opinion that the subject-matter of claim 1 was not novel with respect to document D3. Opponent OIII argued mainly that the subject-matter of claim 1 was an obvious combination of the teachings of D1 and D2.

III. By a decision dispatched on 14 January 1997 the Opposition Division revoked the patent for the reason that the subject-matter of claim 1 in its broadest definition (without the optional feature (b)) did not involve an inventive step as required by Articles 52(1) and 56 EPC, since the skilled person starting from documents D1 would arrive at the solution proposed by feature (a) of the characterising portion of claim 1 of the patent in suit simply by applying obvious design considerations and well-known techniques in the field of stitching or by transferring the solution of document D2 to the liner of D1.

IV. On 27 February 1997, the appellant (patentee) filed an appeal against the revocation and paid the appropriate fee on 28 February 1997.

V. On 8 May 1997, the appellant filed a statement of grounds of appeal contesting the Opposition Division's decision and requested maintenance of the patent on the basis of claims 1 to 8 as granted (**main request**), alternatively on the basis of claims according to **auxiliary requests** A or B or C or D or E or F in descending order of preference.

VI. By his submission dated 18 August 1997 opponent 0I (respondent I) withdrew the opposition.

VII. Respondent II (opponent 0II) requested that the appeal be dismissed.

Respondent III requested that the appeal be rejected as inadmissible, by way of auxiliary request that the appeal be dismissed and by further auxiliary request oral proceedings.

In support respondent II introduced with his submission 16 September 1997 two new documents into the appeal proceedings:

D4: US-A-3 445 322 and

D5: CH-A-464 807.

VIII. The appellant's main arguments are:

(i) Since the new proprietor - Claymax Corporation - was recorded at the EPO with effect from 26 October 1996 no reasons for challenging the admissibility of the appeal can be recognised with respect to Article 107 EPC.

- (ii) The subject-matter of claim 1 of the patent is novel over the disclosure of the cited documents. In particular, the term "Fadensystem" in D1 does not imply the arrangement of the threads in spaced-apart rows of stitching extending lengthwise of the liner.

- (iii) The words "spaced-apart rows of stitching" support a regular pattern of stitches. There is nothing in D1 to encourage the skilled person to arrange the stitching in individual spaced-apart rows. The creation of a regular pattern does not necessarily mean that the threads should be in spaced-apart rows of stitching extending lengthwise of the liner.

- (iv) It is more likely that the filling of the liner element in D1 would be carried out with the liner element lying on level ground rather than filing the lining element in place on the slope as stated in the contested decision. The performance of stitching on a steep slope would involve a real danger that the labourer would fall down the slope. Therefore it is denied that a lengthwise (downhill) arrangement of the rows of stitches would be considered normal when carrying out the subject-matter of D1.

- (v) It is not permissible to isolate a particular feature of D2 and then apply it to D1 in order to produce the present invention.

If D2 is to be applied to D1 then it must be the whole teaching of D2 which is applied and not just an isolated part of it.

- (vi) The subject-matter of claim 1 in its broadest definition, i.e. without the optional feature (b), does involve an inventive step, particularly as the "Fadensystem" of D1 is not precisely defined.

IX. The arguments of respondent III concerning the admissibility of the appeal are:

The appeal is inadmissible since the appellant - Claymax Corporation - is not entitled to appeal according to the provisions of Article 107 EPC.

According to the impugned decision "James Clem Corporation" was the patent owner and in view of Article 107 EPC only this firm could have filed an appeal where as "Claymax Corporation" had no right to do so, as it had not been a party to the opposition proceedings. According to his information from the Register of European Patents by on-line the assignment was indicated to the European Patent Office only on 3 March 1997. Therefore, the appeal would have been filed **before** the assignment, i.e. at a time when the appellant was not yet entitled to file an appeal in view of Rule 61 EPC in combination with Rule 20 EPC.

X. The arguments of respondents II and III concerning the patent in suit can be summarised as follows:

- (i) The subject-matter of claim 1 as granted lacks an inventive step in view of the disclosure of documents D1 and D2. The teaching according to Figures 1, 4, 5 and the corresponding part of the description of D2 relating to a liner forming an impermeable barrier is particularly useful to the skilled person starting from D1 in

leading him in an obvious way to perform the thread system ("Fadensystem") mentioned in D1 and to arrive at the liner according to claim 1 of the patent in suit.

- (ii) The subject-matter of dependent claims 2 to 8 does not add anything inventive to claim 1 with regard to the disclosure of D1 and D2.
- (iii) The different versions of claim 1 according to the appellant's auxiliary requests A to F are based on the incorporation of the subject-matter of the dependent claims into claim 1 as granted. This subject-matter does not add anything inventive to the main claims of the auxiliary requests as mentioned in point (ii) above and as specified below:

Request A

Claim 6 is incorporated in claim 1 as granted.

D2 shows that the barrier is rolled up in a roll 46 and is ready for transporting to the site (cf. Figure 4 and column 5, lines 19 to 21 of D2). It follows from D2 that the liner according to the embodiment shown in Figure 6 may be rolled up about an axis with the stitching means extending spirally around that axis.

Request B

Claim 5 is incorporated in claim 1 as granted. It follows from D2 and from the reasoning in point 3.5 of the contested decision that the liner comprises generally parallel rows of stitching.

Request C

In deleting the word "optionally" the characterising feature (b) becomes obligatory. However, this feature is known from column 1, lines 36 and 41 of D2.

Request D

Claim 5 and claim 2 are incorporated as feature (c) in claim 1 as granted and the word "optionally" is deleted making the feature (b) obligatory. Reference is made to Request B (feature (a)) and Request C (feature (b)) above. As to feature (c) reference is made to column 2, line 23 of D2.

Request E

Claim 1 of this request joins claim 1 of Request D and claim 3 as granted together. Reference is made to Request D above. As to the polypropylene material reference is made to column 2, line 23 of D2.

Request F

Claim 1 of this request corresponds to claim 1 of Request B with the word "chain" inserted in feature (a). Reference is made in this respect to Request B above.

XI. In a communication of 23 March 1998, pursuant to Article 110(2) EPC, the Board expressed its provisional evaluation view that the appeal appeared to be admissible, but that neither the appellant's main nor any of the auxiliary requests A to F appeared to be allowable.

XII. In his teleprinted submission of 19 May 1998 the appellant informed the Board that he wished to make no further observations.

Reasons for the Decision

1. *Admissibility of the appeal*

During opposition proceedings the patent in issue was assigned by the original patent owner "James Clem Corporation" to "Clem Environmental Corporation" the name of which was changed to "Claymax Corporation".

The decision of the Opposition Division indicates on its cover page "Claymax Corporation" as proprietor of the patent. In the part "Facts and Submissions" of the decision, however, the name of the patent proprietor is given as "James Clem Corporation".

According to the file the assignment took effect vis-à-vis the European Patent Office, already on 26 October 1996 (Rules 61 and 20(1), (2), (3) EPC). The corresponding publication in the European Patent Bulletin appeared on 2 January 1997, issue 01/1997 under I.12/II.12.

The decision of the Opposition Division being issued after that date, is correctly directed to the present appellant as the new proprietor, (see cover page of the decision).

The fact that in the text of the decision the former owner of the patent is named proprietor is an obvious mistake, which can be corrected according to Rule 89 EPC. This does not affect the position of the appellant as party to the opposition proceedings.

Apparently, the information respondent III got from the Register of European Patents as to the date on which evidence of the assignment was filed in the European Patent Office was wrong or referred to another case.

For the above reasons the Board holds, contrary to the respondent's III allegations, that the requirements of Article 107 EPC are fulfilled with the consequence that the appeal is admissible.

2. *Closest prior art*

2.1 The Board considers document D1 as the closest state of the art in the case. The features specified in the preamble of the main claim according to the present requests are known from this document.

2.2 Claim 1 in the versions of the appellant's request on file differs from the disclosure of D1 by the characterising features in the respective requests.

3. *Novelty*

Novelty has to be acknowledged on the basis of the differences mentioned in point 2.2 above.

4. *Problem and solution*

4.1 The patent specification concerns liners which are used to form an impermeable barrier.

4.2 As stated above (point 2.1), such a liner is disclosed in D1 considered to form the closest state of the art.

4.3 According to the introductory part of the patent specification (column 2, lines 28 to 37) the technical problem underlying the invention is seen in the provision of an improved bentonite liner which

- may be used to form an impervious barrier along a relatively steep slope,
- does not allow for the migration of liquid through the liner, and
- has significantly improved resistance to shear stresses.

4.4 According to the patent specification this problem is solved by means of the features mentioned in point 2.2 above.

5. *Inventive step*

5.1 Appellant's main request (claims 1 to 8 as granted)

5.1.1 The basic idea behind the liner according to the present invention which comprises a clay-containing layer located between an upper and lower non-biodegradable sheet, appears to be the same as in the liner of document D1, namely to overcome the restricted use of said art of liners on inclined slopes caused by the slick nature of the clay layer when hydrated and to improve said kind of liners for the use along a relatively steep slope.

5.1.2 A closer study of document D1 reveals that in order to accomplish the above idea this document (D1) not only teaches to provide the liner with a thread system

(Fadensystem) binding the upper and the lower non-biodegradable sheets together at a predetermined distance apart, as already considered in the impugned decision, but also suggests to distribute said binding thread system over the area of the liner.

Document D1 leaves open the exact manner of the distribution of the thread system over the area of the liner but it follows from the overall teaching of D1 that said thread system not only has to resist loads developed by the swelling of the clay-containing layer in the cross direction related to the surrounding sheets but moreover should, in cooperation with said sheets, assist in resisting lateral loads involved in the liner.

- 5.1.3 Being in possession of the aforementioned teaching and logically concluding from it that the thread density of the thread binding system will be determined in accordance with the degree of load resistance required by a particular application of the liner, the skilled person would at least have made an experiment to find out a convenient pattern of said binding thread system in order to satisfy the requirements for the use of liners arranged along a relatively steep slope.

Concerning choice of a convenient pattern of said system the Board finds, with regard to the disclosure of documents D1 and D2, that the skilled person was not left without suggestions in the prior art in this respect. Figures 1 and 2 of D1 already show stitching means 2 in a row and Figures 1, 4 and 5 together with the corresponding part of the description of D2, (see especially column 3, lines 40 to 41), show stitch lines extending parallel to one another in spaced-apart rows and in a longitudinal direction of the liner.

In the light of said prior art teaching no inventive step can be recognised in the feature of claim 1 that the stitching means (19) comprise spaced-apart rows (14) of stitching extending lengthwise of the liner.

- 5.1.4 It follows from the foregoing considerations that claim 1 according to the main request cannot be maintained due to lack of inventive step of its subject-matter (Article 56 EPC).
- 5.1.5 Claim 1 not being allowable, the same applies to dependent claims 2 to 8 which are directed to preferred embodiments of the liner according to the main claim and thus fall with it.
- 5.1.6 For the above reasons the Board finds that the subject-matter of the claims according to the main request does not involve an inventive step within the meaning of Article 56 EPC. Therefore, the main request has to be rejected.
- 5.2 Appellant's auxiliary requests A to F
 - 5.2.1 The different versions of claim 1 according to the auxiliary requests A to F are based on the incorporation of additional features corresponding to the subject-matter of dependent claims 2, 3, 5 and 6 into the main claim as granted.
 - 5.2.2 The appellant could not put into doubt that the aforementioned added features are already known from the cited prior art, especially from D2 as laid down in point X.(iii) above, and that a skilled person without exceeding normal practice could modify the known bentonite liner in a way as defined in claim 1 according to the requests A to F. When each of the features serving to solve the problem is known or obvious, an invention can only be seen in the

combination of features if there is a functional relationship between the features, i.e. if the features support each other in their effects to such an extent that a new and surprising technical result is achieved.

In the present case, however, the features function in their normal way and do not produce any non-obvious functional interrelationship or synergetic effect. The overall effect of the combined features is merely the sum of the effects of the single features. Thus, the claims are directed solely to a juxtaposition of features and not to a true combination.

5.2.3 The Board comes to the conclusion that, in view of the cited prior art known from D2, it comes within the scope of normal skills and knowledge of a practitioner to conceive the subject-matter of claim 1 according to requests A to F when starting from a known liner as disclosed in D1, given the problem specified in point 4.3 above. The versions of claim 1 according to said auxiliary requests are thus not allowable for lack of an inventive step pursuant to Article 56 EPC.

5.2.4 Since the Board can only decide on the request to grant a patent as a whole, dependent claims of the respective auxiliary requests must fall with their non allowable main claims.

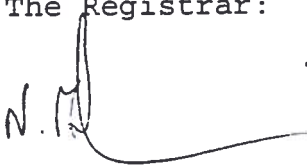
Hence, the appellant's requests A to F have to be rejected as well.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:



N. Maslin

The Chairman:



C. T. Wilson

For
2195.D *He*