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Aktenzeichen / Case Number / N° du recours : T 106/86 - 3.2.1

Anmeldenummer / Filing No / N° de la demande : 82 103 239.8

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Bezeichnung der Erfindung: Fabrics with a crepe effect made of textured  
Title of invention: synthetic yarns  
Titre de l'invention :

Klassifikation / Classification / Classement : D 03 D 15/08, D 04 B 1/15

**ENTSCHEIDUNG / DECISION**  
vom / of / du 6 July 1988

Anmelder / Applicant / Demandeur : Val Lesina S.p.A.

Patentinhaber / Proprietor of the patent /  
Titulaire du brevet :

Einsprechender / Opponent / Opposant :

Stichwort / Headword / Référence :

EPÜ / EPC / CBE Art. 6

Schlagwort / Keyword / Mot clé : Inventive step(yes) - different problems -  
simplification - surprising effect.

Leitsatz / Headnote / Sommaire

Europäisches  
Patentamt

European Patent  
Office

Office européen  
des brevets

Beschwerdekammern

Boards of Appeal

Chambres de recours

Case Number : T 106/86 - 3.2.1



**D E C I S I O N**  
of the Technical Board of Appeal 3.2.1  
of 06 July 1988

**Appellant :** Val Lesina S.p.A.  
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**Decision under appeal :** Decision of Examining Division 122  
of the European Patent Office  
dated 13 November 1985 refusing  
European patent application  
No. 82 103 239.8 pursuant to Article  
97(1) EPC

**Composition of the Board :**

**Chairman :** P. Delbecque  
**Members :** M. Huttner  
F. Benussi

## Summary of Facts and Submissions

- I. European patent application No. 82 103 239.8, filed on 17 April 1982 and published on 8 December 1982 with publication number 66 072 claiming the priority of the prior application of 24 April 1981 (IT 2 137 281) made in Italy, was refused by a decision of the Examining Division 122 of the European Patent Office dated 13 November 1985. The decision was based on Claims 1 to 5 received on 12 April 1985.
  
- II. In the decision, the Examining Division stated that the subject-matter of the independent Claim 1 did not involve an inventive step (Art. 56 EPC) with respect to the teaching of FR-A-2 135 092 and that both Claim 1 and method Claim 5 do not satisfy the requirements of Article 84 EPC (lack of clarity and of support by the description).
  
- III. The Appellants lodged an appeal against the decision by telex on 8 January 1986 which was followed by a confirmation letter within the time limit and the appeal fee was duly paid. The letter of appeal cites the number of the European patent application 8 210 32 39.8 and states the filing of an appeal against the decision to refuse issued 13 November 1985. Further information on the extent to which amendment or cancellation of the impugned decision is required was not submitted.

With the written statement of grounds submitted within the prescribed time the Appellants argued that the publication FR-A-2 135 092 discloses a fabric of the bath towel type exhibiting entirely different properties. Compared with the creped fabric as claimed in the product Claim 1 and in the method for making such fabrics according to Claim 5 in

the known fabric yarns of special properties are used that are not revealed in the citation deemed relevant by the Examining Division. Hence the Appellants adhere to the claims on which the refusal was based.

- IV. In a communication of 20 July 1987 the Appellants were notified that there are objections on formal grounds to the wording of the specification and the method Claim 5 and that there were still certain doubts as to the involvement of inventive step of the subject-matter of product Claim 1.

By a letter dated 19 October 1987 (received on the 20 October 1987) the Appellants filed a new set of Claims 1 to 4 and an amended new page 3 of the description. The Appellants took the view that the high shrinkage of more than 28% of the substantially non-twisted texturised synthetic endless filament yarns concomittant with the deliberate singling out and combining of the proper yarn count and the count/number of filament ratios allows the accomplishment of the creped fabric as claimed in Claim 1 and obtained by the method claimed in Claim 4. In support of their arguments and on request of the Rapporteur they submitted several samples of crepe fabrics including a conventional one and several ones made according to the invention exhibiting the distinct crepe characteristics similar to the conventional creped fabrics made of highly twisted yarns.

In a further communication (dated 7 March 1988), the Rapporteur pointed out that the newly filed claims, drawn to a plurality of constituent yarns within the count/number of filaments range indicated may lack support by the description and thus contravene Article 84 EPC.

In the response received May 9, 1988, the Appellants in an

attempt to avoid the expressed concerns, stressed that one constituent yarn of the fabric having the claimed properties suffices to achieve the characteristic crepe effect and consequently an accordingly amended Claim 1 was submitted.

Claim 1 now reads as follows:

A woven or knitted fabric with a crepe effect constituted by continuous synthetic yarns, characterized in that at least part of the yarns having parallel filaments, are texturized through the false twisting method, are substantially non twisted, have a count of between 30 and 160 Dtex and a "yarn count/number of filaments" ratio of between 5 and 19 Dtex and have a shrinkage in boiling water of at least 28%.

Claim 4 reads as follows:

Method for producing fabric with a crepe effect, characterized by comprising a stage in which yarns having "yarn count/number of filaments" ratio as defined in claim 1, are texturized through the false twisting method, either with a magnetic or a friction spindle, and a further stage in which the yarns are passed through the setting oven at such a temperature as to obtain high shrinkage of at least 28% in boiling water.

- V. For the wording of the original claims and description, see publication No. 66072.

#### Reasons for the Decision

1. The appeal complies with Articles 106 to 108 EPC and Rule 64(a) EPC.

In the notice of appeal the Appellants do not explicitly state the extent to which amendment or cancellation of the impugned decision is requested. However, it is clear from the circumstances of the case that the Appellants are asking for cancellation of the decision. Therefore the appeal can be considered as complying with the provisions of Rule 64(b) EPC (cf. decision T 07/81, OJ EPO 3/1983, 98).

The appeal is admissible.

2. In the Board's view, no objection can be raised against the prior art part of the independent Claims 1 and 4 acknowledging a woven or knitted fabric with a crepe effect constituted according to Claim 1 by filament yarns generally known in the trade as set forth in the introductory portion of the description as the most pertinent prior art for such creped fabric. This fabric is undoubtedly closer to the subject-matter of the application than the terry cloth bath towel fabric disclosed in FR-A-2 135 092. Hence for these claims the requirements of Rule 29(1) (a) EPC are met.

There can likewise be no objection to the present version of the claims on formal grounds, since they are no longer ambiguous and are adequately supported by the original documents (cf. original Claims 1 to 4 and 8 to 10 and Examples 1 to 3). The amendments are, therefore, allowable under the terms of Articles 84 and 123(2) EPC.

Likewise, the description thus meets the requirements of Rule 27(1)(c) EPC.

3. The examination of all the documents uncovered by the search report and the state of the art acknowledged in the

application itself reveals that none of them discloses a fabric with crepe effect or method making such fabric having all the features of either of the two independent Claims 1 and 4. The subject-matters of these claims are therefore novel in relation to this state of the art (Article 54 EPC).

4. In the fabric having a crepe effect acknowledged in the introductory portion of the description synthetic yarns having a high twist, often exceeding 1000 twists per meter, are used, which must be produced at low hourly production rates with significant adverse economic implications, apart from disadvantages which arise from the stringent requirements as to the care to be taken during the preparatory stages of fabric making. The Applicant has regarded these as disadvantages.
5. The problem underlying the application and which the invention seeks to solve resides in the provision of a crepe fabric that can be produced not only at high production rates but also with enhanced reliability while retaining the special crepe appearance.
6. Therefore the question now arises whether the fabric according to Claim 1 and the method for producing such fabric as recited in Claim 4 involves an inventive step. From the assessment of the matter the following points emerge:
  - 6.1 Claim 1 differs from the most relevant prior art by the features of the characterising part of the claim. These are intended to solve the problem set forth in section 5 and are based on the idea of replacing the hitherto used highly twisted synthetic endless filament yarns by substantially non twisted ones having an appropriately

selected count and number of filaments per yarn and an imparted high shrinkage.

According to the application this idea is realised by interlacing yarns consisting of substantially parallel filaments and having a count and a count/number of filament ratio range of 30 to 160 Dtex and 5 to 19 Dtex respectively and a degree of shrinkage in boiling water exceeding 28%.

- 6.2 Before the content of the document FR-A-2 135 092 can be meaningfully compared with the subject-matter set out in the application, the teaching of the citation must be clearly determined.

Throughout that specification the constituent, synthetic filament yarns are termed in French as "crépé" and the fabric is said to show "une surface crépée". In this context the following is of relevance.

Firstly, these French expressions, cannot possibly be associated with the English term "crepe fabric" which, as the skilled person is aware, designates a general classification of fabrics woven or knitted with a broad range of crinkled or grained surface effect.

Secondly, the method of manufacture of the known fabric is not suited to such crepe fabric for the simple reason that at least the wefts are provided with protruding loops between the warps and properly placed and fully developed by agitation of the fabric in a hot water bath. Such method thus can by no means lead to a crepe fabric in the proper sense of the term. Thus, there is a clear indication of an improper interpretation of the expression in question which has been reached by the Examining Division due to an erroneous translation from the French language into the

language of procedure of this case. The French terminology used in the citation ought to be correctly interpreted as "crimped" rather than, as enunciated in the Examining Division, erroneously attributed to a crepe effect of the fabric.

Consequently, the impression conveyed by the mis-interpretation of the "crêpé" undoubtedly tended to mislead the Examining Division to the establishment of a non-existent context of crepe fabrics to which Appellants' invention pertains.

- 6.3 The prior art document FR-A-2 135 092, considered as the most relevant by the decision of refusal discloses a woven fabric and in particular a fabric usable as bath towels. It consists of crimped multifilament thermoplastic weft yarns of 100 to 400 deniers count (= 111-444 Dtex) preferably composed of 10 to 40 filaments and likewise thermoplastic warp yarns consisting of a non crimped monofilament or optionally crimped multifilaments within a total count range of 10 to 30 deniers (11,1 - 33,3 Dtex). A great count difference exists between the warp and the weft in that the warp count amounts to approximately 1/10th of weft count.

The not necessarily crimped warp yarns intersect the weft yarns fortuitously at their loops, thus preventing full development of the latter. In order to remove this inconvenience, the warp yarn must be made to move between the loops of the weft by agitating the fabric in a water bath, whereby the high count of the weft in relation to the warp enhances this movement. Thus the loops of the crimped weft become free to fully develop and to form a loop pile, which is a characteristic feature of a terry cloth bath towel.

Consequently it has been established that the fabric described in FR-A-2 135 092 pertains to a type of fabric, which possesses no similarity whatsoever to what is termed in English a crepe fabric exhibiting per definitionem an accentuated crinkled or grained surface effect.

Undoubtedly the citation discloses counts and numbers of the weft and warp yarns that partly overlap the values recited in Claim 1. Likewise, there is no question as to the way these yarns are texturized, i.e. inter alia by a false twisting operation. The citation further reveals a crimp development in particular of the weft yarns obtained by a treatment in boiling water which brings about a contraction of these yarns.

- 6.4 The decisive point at issue now is whether or not this document chosen as a key item of prior art by the Examining Division could induce the skilled person to make use of these teachings so as to enable him to arrive at a fabric exhibiting a crepe like surface effect equal or similar to that of this fabric featuring the yarns recited in Claim 1. For this purpose, the problems underlying the citation and the application must be taken into consideration.

The problem sought to be solved by the subject-matter of FR-A-2 135 092 resides in the creation of a terry towel fabric that does not allow of any substantial elongation of the fabric in the direction of the warps, while providing considerable contraction potential in the direction of the wefts.

By contrast, as pointed out in section 5, the application is based on the problem of increasing the rate and the reliability of the production of a crepe fabric, and this by doing away with the hitherto commonly used highly

twisted yarns. Hence the citation and the application are directed to the solution of different specific problems and each admits to its own solution.

The mere fact that the yarn figures of the citation are overlapping with those of the application does not support the view taken by the impugned decision that the invention is obvious. Inventiveness cannot solely be denied on the grounds that overlapping features were known before the application date in a field related to the subject-matter of the application. In order to properly assess whether an inventive step is involved, it is essential to examine whether the prior art gave the skilled person an indication for making use of these overlapping features for applying them in the manner of the present case. This must be denied. The purpose of the known measures in the citation is not the same as in the case to be decided. The investigation of the problems revealed readily shows that they are vastly disparate. This fact has to be taken as proof that it was not obvious to make use of these features in the different context provided for in the application. Consequently, the impugned decision has failed to take this Board's decision T 39/82, OJ EPC 11/82, 119 into account.

Moreover, the additional feature regarding the further yarn property of a shrinkage exceeding 28% as another essential yarn characteristic greatly significant for achieving the desired results has also not been revealed by the citation.

The considerable contraction of the fabric stemming from the development of the crimp to enhance the loops specifically disclosed has nothing to do with the claimed shrinkage property inherent to and consequent upon the heat treatment of the filament yarn in a setting oven.

Therefore, for lack of identity or similarity of that contraction with the shrinkage feature of the invention known per se, the combination of the former with the overlapping yarn values would definitely fail to lead to the subject-matter of Claim 1.

- 6.5 Although, it cannot be denied that the document FR-A-2 135 092 at first sight appears to be a most pertinent reference in that upon superficial consideration it seems to pertain to a creped fabric particularly in view of the interlaced yarns specified in French as being "crêpé". The Board nevertheless concludes that the known fabric would not provide a basis for the perception of a solution to the problem of simplifying the manufacture of crepe fabrics for the further reason that the skilled person reading that document would expect to obtain a loop pile fabric when applying the non-twisted crimped yarns of the type disclosed in the manner indicated therein.

At any rate the practitioner would not expect to arrive at a crepe fabric and he would further not find any guidance or hint in what manner he would have to modify the yarns of the prior art from which the invention sets out in order to obtain the desired fabric.

7. The Boards view, therefore, is that the subject-matter of Claim 1 would not be obvious from the citation FR-A-2 135 092 relied on by the decision of the Examining Division nor from any other citation uncovered by the search report regardless of whether they are taken singly or together. Hence, the inventive step required by Article 56 EPC is not lacking. This Claim 1 is therefore allowable having regard to Article 52(1) EPC.

8. For the same reasons method Claim 4 likewise contains non-obvious subject-matter, for this claim embraces salient features of Claim 1. Thus Claim 4 is equally allowable under the terms of Articles 52(1) and 56 EPC.
9. The dependent Claims 2 and 3, having as subject-matter special embodiments of the invention as claimed in the independent Claim 1 on which they depend, are also allowable, since their acceptance is contingent on the allowability of Claim 1 which has to be approved.

Order

For these reasons, it is decided that:

1. The decision of the Examining Division of the European Patent Office dated November 13, 1985 is set aside.
2. The application is remitted to the first instance with the order to grant a European patent on the basis of the following documents:
  - Claim 1 received on May 9, 1988,
  - Claims 2 to 4 received on October 20, 1987,
  - the description pages 1, 2 and 4 to 8 as filed and page 3, received on October 20, 1987.

The Registrar

The Chairman

F. Klein

P. Delbecque