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D E C I S I O N
of 20 May 2003

Case Number: T 1204/00 - 3.2.6

Application Number: 90830311.8

Publication Number: 0452607

IPC: D04B 21/04

Language of the proceedings: EN

Title of invention:

Method for making a skin effect elastic fabric

Patentee:

EUROJERSEY S.P.A.

Opponent:

Puntiblond S.A.

Headword:

-

Relevant legal provisions:

EPC Art. 54(2), 56

Keyword:

"Novelty (yes)"

"Inventive step (yes)"

Decisions cited:

G 0002/88, T 0651/91

Catchword:

-



Case Number: T 1204/00 - 3.2.6

D E C I S I O N
of the Technical Board of Appeal 3.2.6
of 20 May 2003

Appellant: Puntiblon S.A.
(Opponent) Ctra. S. Antoni a S. Pere Vil. KM. 1
ES-08459 San Pere de Vilamajor/Barcelona
(ES)

Representative: Hilgers, Hans Hubert
Patentanwälte
Grünecker, Kinkeldey
Stockmair & Partner
Maximilianstrasse 58
D-80538 München (DE)

Respondent: EUROJERSEY S.P.A.
(Proprietor of the patent) Via San Giovanni Bosco, 260
I-21042 Caronno Pertusella (Varese) (IT)

Representative: Lunati, Vittoriano
LUNATI & MAZZONI S.a.s.
Via Carlo Pisacane, 36
I-20129 Milano (IT)

Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 5 October 2000
rejecting the opposition filed against European
patent No. 0452607 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: P. Alting van Geusasu
Members: G. Pricolo
M. B. Tardo-Dino

Summary of Facts and Submissions

I. The appeal is from the decision of the Opposition Division posted on 5 October 2000 to reject the opposition against European patent No. 0 452 607 granted in respect of European patent application No. 908 303 11.8.

Granted claim 1 reads as follows:

"A method for making skin effect elastic fabrics including a first not elastomeric fibrous component (2), a second elastomeric fibrous component (1) and, optionally, at least a third not elastomeric fibrous component, on a warp knitting machine including at least a front knitting bar and a rear knitting bar, said method comprising the step of introducing at least a portion of said first not elastomeric fibrous component into the fabric with a long loose portion so that, as said fabric is removed from said knitting machine, the elasticity of said second elastomeric fibrous component causes the latter to be contracted thereby the long loose portions of the first not elastomeric component are forced to dispose in a suitable arrangement to be raised, sheared, or ground, to provide a skin effect elastic fabric,
- characterized in that said elastomeric fibrous component is fitted on said front knitting bar and is knitted thereon with a notation of 1-0/1-2,
- and in that said not elastomeric fibrous component is fitted on said rear knitting bar and is knitted thereon with a notation from 1-0/2-3 to 1-0/9-10".

II. The Opposition Division held that the subject-matter of claim 1 was novel and involved an inventive step having regard to the disclosures of documents on file, in particular

D5: D.F. Paling: "Warp Knitting Technology", Columbine Press 1965, page 100 to 105;

D6: DE-A-32 13 581.

III. The appellant (opponent) lodged an appeal, received at the EPO on 14 December 2000, against this decision. The appeal fee was paid simultaneously with the filing of the appeal. The statement setting out the grounds of appeal was received at the EPO on 15 February 2001.

IV. With letter dated 13 September 2001, the appellant filed an additional page of the book of which D5 constituted an extract. This page is herewith referred to as

D5a: page 97 of "Warp Knitting Technology", by D.F. Paling, Columbine Press 1965.

With letter dated 21 May 2002, the appellant filed a declaration of Mr Krüger stating that dyed elastic fibers were imported by Du Pont de Nemours (Deutschland) GmbH in 1989 and introduced on the European market.

V. Oral proceedings took place on 20 May 2003.

The appellant requested that the decision under appeal be set aside and that the patent be revoked.

The respondent (patentee) requested that the appeal be dismissed and that the patent be maintained as granted.

VI. In support of its request the appellant relied essentially on the following submissions:

Document D6 disclosed not only the features defined in the preamble of claim 1 of the patent in suit, but also the features of the characterizing portion. The notations used in D6 for the elastomeric and non elastomeric fibrous components were, respectively, 1-0/1-2 and from 1-0/4-5 to 1-0/9-10 and corresponded to the notations provided for the respective fibrous components in the method of claim 1. Furthermore, D6 disclosed that the elastomeric yarn could be woven on a guide bar other than the rear guide bar of a warp knitting machine. This implied that the elastomeric fibrous component which was woven with the notation 1-0/1-2 could be woven on the front guide bar of a warp knitting machine, whereby the non-elastomeric fibrous component was then fed through the rear knitting bar with a notation in the range of 1-0/4-5 to 1-0/9-10. This possibility would be clearly contemplated by a skilled person since there was no hindrance to be found in D6 in this respect. Furthermore, the choice of fitting the elastomeric fibrous component on the rear bar was dictated by the desire to hide the elastomeric garn. If the elastomeric fibrous component was fitted on the front knitting bar then it would be clearly discernible on the visible side of the knitted fabric and this had a negative effect in terms of the appearance of the fabric. Clearly, as soon as dyed elastic fibres were introduced, shortly before the

relevant date of the patent in suit as documented by the declaration of Mr Krüger, the skilled person would immediately consider that the teaching of D6 clearly comprised the possibility of fitting the elastomeric fibrous component on the front knitting bar. Therefore, the subject-matter of claim 1 was not novel.

Anyway, the subject-matter of claim 1 did not involve an inventive step. D6 specifically disclosed that the elastomeric yarn could be woven equally well on a guide bar other than the rear guide bar. Therefore when dyed elastic fibers made their appearance on the market the skilled person would realise that hiding the otherwise grey elastomeric yarn was no longer necessary and when looking for alternative fittings for the fibrous components would immediately consider the possibility of fitting the elastomeric fibrous component on the front knitting bar. Furthermore, notations in accordance with the patent in suit for the front and rear knitting bar respectively, were a matter of general technical knowledge, as shown by D5 and D5a which were extracts of a textbook of warp knitting technology. In particular, Figure 64(a) of D5 showed fittings for the front and rear knitting bars corresponding to those referred to in claim 1 of the patent in suit. The fact that the movements of the bars were made in opposition rather than in the same direction, as in the patent in suit, did not constitute a fundamental difference as the structure of the fabrics obtainable in both cases differed only to a very minor extent.

VII. The respondent argued essentially as follows:

Although D6 actually did not exclude the feature that the elastomeric fibrous component was fitted on the front knitting bar, lack of novelty could only be substantiated by a clear and unambiguous disclosure in D6 of such knitting configuration. The generic statement in D6 that the elastomeric fibrous component could also be fitted on a bar other than the rear bar of a warp knitting machine having three or more bars was not a direct and unambiguous disclosure of the elastomeric fibrous component being fitted on the front knitting bar. Considering the context of this statement in D6 it could only be seen as an indication to provide the elastomeric fibrous component on one of the intermediate bars, such as the middle bar of a machine having three bars as in the example on page 9, last paragraph. In fact, throughout the whole disclosure of D6 it was the non-elastomeric fibrous component that was fitted on the front knitting bar. Therefore, the subject-matter of claim 1 was novel.

It also involved an inventive step. The technical problem underlying the patent in suit consisted in the provision of a method allowing skin effect elastic fabric with a very even pile to be produced. The fact that dyed elastic fibers might have been available before the relevant date of the patent in suit was irrelevant for the question of inventive step. Indeed, the skilled person would not be prompted to fit such fibres on the front knitting bar by the mere fact that they were dyed since for reasons of obtaining a uniform colouring it would anyway be necessary to dye the finished knitted fabric. As regards D5 and D5a, none of

the yarns shown therein were elastomeric. Moreover, in the knitting configurations of Figure 64a the yarns were knitted with notations causing discordant directions of the yarn underlaps, i.e. crossing of the yarns, contrary to what was obtained by applying the notations claimed in claim 1 of the patent in suit according to which the yarns ran parallel, thereby providing a fabric in which the elastomeric fibrous components were more effectively covered by the non-elastomeric fibrous components.

Reasons for the Decision

1. The appeal is admissible.
2. *Novelty*
 - 2.1 Document D6 undisputedly discloses (see claim 1) a method according to the preamble of claim 1 of the patent in suit, namely a method for making skin effect elastic fabrics including a first not elastomeric fibrous component, a second elastomeric fibrous component and at least a third not elastomeric fibrous component, on a warp knitting machine including at least a front knitting bar and a rear knitting bar, said method comprising the step of introducing at least a portion of said first not elastomeric fibrous component into the fabric with a long loose portion so that, as said fabric is removed from said knitting machine, the elasticity of said second elastomeric fibrous component causes the latter to be contracted thereby the long loose portions of the first not elastomeric component are forced to dispose in a

suitable arrangement to be raised, sheared, or ground, to provide a skin effect elastic fabric.

D6 discloses (see page 9, lines 5 to 10) to knit the elastomeric fibrous component on the rear knitting bar (Legeschiene 1, see page 8, last paragraph) with a notation of 1-0/1-2 and the non-elastomeric fibrous component on the front knitting bar (Legeschiene 3) with a notation from 1-0/4-5 to 1-0/9-10.

D6 also discloses to knit a non-elastomeric fibrous component on the rear knitting bar (page 9, last paragraph), but in this case with a different notation of 3-4/1-0 since this component does not serve to provide the pile effect (see page 8, last paragraph - page 9, first full paragraph), which is provided by the non-elastomeric fibrous component knitted on the front bar (see the last paragraph of page 9), but serves to cover the elastomeric fibrous component fitted on an intermediate knitting bar (see the sentence bridging pages 8 and 9; see page 10, second paragraph).

On page 9 (see the last paragraph) of D6 it is stated that the elastomeric yarn could equally well be knitted on another bar than the back bar of a three or more bar knitting machine. This disclosure, in the case of a machine having three knitting bars, leaves open two possibilities: the front bar or the intermediate bar. Since a disclosure is to be regarded as generic even if it leaves the choice between two alternatives only (see T 651/91, point 2 of the reasons), and considering that in accordance with the established case law of the boards of appeal a generic disclosure does not take away the novelty of a specific embodiment, the Board

concludes that the cited passage of D6 does not directly and unambiguously disclose that the elastomeric fibrous component is fitted on the front knitting bar.

Furthermore, in the examples of D6 (see in particular the second sentence of the last paragraph of page 9) the elastomeric fibrous component is either fitted on the rear knitting bar or at the most on the intermediate bar. Therefore, as far as the front bar is concerned, the disclosure of D6 only clearly and unambiguously contemplates fitting the non-elastomeric fibrous component.

- 2.2 The appellant argued that at the time when coloured (dyed) elastomeric fibrous components became available the skilled person would immediately contemplate in the arrangement disclosed in D6 the fitting of the elastomeric fibrous component on the front knitting bar.

However, even if it were assumed that coloured elastomeric fibrous components were known before the relevant date of the patent in suit, this would be an additional information which does not form part of the information content of document D6, which information content alone is decisive for the assessment of novelty (see G 2/88, OJ EPO 1990, 93, paragraph 10 of the reasons). Accordingly, the question of whether the skilled person, knowing that coloured elastomeric fibrous components are available, would provide such components on the front knitting bar in the method of D6, pertains to the assessment of inventive step since it relates to the combination of information taken from different pieces of prior art.

2.3 The other available prior art documents do not disclose a method for making skin effect elastic fibers in which the elastomeric and non elastomeric components are respectively fitted on the front and rear knitting bars as defined in the characterizing portion of claim 1.

It follows that the subject-matter of claim 1 is found to be novel.

3. *Inventive step*

3.1 The technical problem underlying the patent in suit is to provide a method for making skin effect elastic fabrics allowing fabric with a very even pile to be easily produced (see page 2, lines 15 and 16 of the patent in suit).

3.2 Document D6 undisputedly represents the closest prior art. It discloses a method for making skin effect elastic fabrics which has the most technical features in common with the claimed invention.

3.3 The above-mentioned technical problem is solved, in accordance with the definition of claim 1, by the following features:
the elastomeric fibrous component is fitted on the front knitting bar and is knitted thereon with a notation of 1-0/1-2,
and the non-elastomeric fibrous component is fitted on the rear knitting bar and is knitted thereon with a notation from 1-0/2-3 to 1-0/9-10.

3.4 According to D6 the non-elastomeric yarn is fitted on the front bar so as to be laid with long floats on the surface of the technical back of the fabric (see page 8, last paragraph), whereby the non-elastomeric yarn forms free standing loops when the elastomeric component relaxes as the knitted fabric comes from the needles of the knitting machine (see page 10, second paragraph). These free standing loops of the non-elastomeric component are necessary for obtaining the desired pile fabric (see page 5, second paragraph). There is no hint in D6 that if the elastomeric yarns are fitted on the front bar then free-standing loops of the non-elastomeric component fitted on the rear or intermediate bars are obtained which also result in a satisfactory elastic pile fabric. Therefore, there is no reason for the skilled person to deviate from the specific teaching of D6 to fit the non-elastomeric component on the front knitting bar.

This conclusion is moreover supported by the disclosure of document D5, according to which (see page 100, from line 5) in the production of loop-raised fabrics (pile) it is always the front guide bar which makes underlaps of two or more needle-spaces in order to develop long floats of the fibrous component fitted on the front bar.

3.5 The above conclusion does not change in case the skilled person was aware of the existence of coloured elastomeric fibrous components before the relevant date of the patent in suit, since the colouring of the fibres does not change the fact that they are elastomeric in nature.

It is true that D6 discloses that the elastomeric fibrous component should be hidden (see page 8, last sentence); however, the specific reason given in D6 for fitting the non-elastomeric fibrous component on the front knitting bar, which is to develop long floats thereof on the surface of the technical back of the fabric, is still valid in case the elastomeric fibrous components used have an appearance such (ie they may be coloured instead of being grey) that they no longer need to be hidden.

In view of the above, the question whether coloured elastomeric fibers were effectively made available to the public before the relevant date of the patent in suit can be left aside.

3.6 The appellant submitted that notations in accordance with the patent in suit for the front and rear knitting bar, respectively, were a matter of general technical knowledge, as shown by D5 and D5a, in particular having regard to Figure 64(a) of D5.

However, there is no mention in D5 and D5a of a fabric, in particular a pile fabric, which comprises an elastomeric fibrous component. Already for this reason, these documents cannot suggest to fit an elastomeric fibrous component in a manner which is different from that specifically disclosed by D6 for obtaining a satisfactory elastic pile fabric.

Furthermore, Figure 64(a) of D5 shows a notation 1-0/1-2 for the front bar and a notation 3-4/1-0 for the back bar, whilst the notations according to the patent in suit are, respectively, 1-0/1-2 and 1-0/2-3 to 1-0/9-10

(for instance 1-0/3-4 on the back bar; see page 3, line 34 of the patent in suit). This means that in accordance with Figure 64(a) of D5 the lapping movements are made in opposition to each other whilst according to the patent in suit they are made in the same direction. Accordingly, different fabrics are obtained.

The appellant submitted that the differences between these fabrics were irrelevant. However, as pointed out by the respondent, during the manufacturing of a pile fabric in accordance with the patent in suit the elastomeric and non-elastomeric yarn underlaps are caused to extend between the loops in the same direction, ie to have the same orientation and to develop to the same side, excluding a crossing of the two yarns. The two yarns remain essentially adjacent to each other and also between the loops in the finished fabric. This results in a pile fabric which is very even, and also has a very good appearance because the elastomeric yarns are essentially concealed by the non-elastomeric yarns. This latter technical effect, in particular, is not obtained if the fabric is manufactured with the notations according to Figure 64(a) of D5, because the mentioned fibrous components would rather cross each other. Thus, an important difference exists between a fabric obtained with the notations as defined in claim 1 of the patent in suit and a fabric obtained with the method of D6 modified to have the elastomeric fibrous component fitted on the front bar and the notations in accordance with Figure 64(a) of D5.

3.7 Furthermore, the available prior art does not give any indication that a particular selection of the fitting of the elastomeric and non-elastomeric components on the knitting bars would contribute to the solution of the problem underlying the patent in suit, to provide a fabric with a very even elastic pile.

In this respect, it is noted that the appellant's view that the skilled person would arrive at the claimed subject-matter simply through the process of seeking alternative fittings for the fibrous components is based on an ex-post facto analysis, since, as convincingly shown by the respondent (see point 3.6 above), the selection of fittings in accordance with claim 1 of the patent in suit provides a specific technical effect.

3.8 Thus, the realization that by fitting the elastomeric fibrous component on the front knitting bar and knitting it thereon with a notation of 1-0/1-2, and fitting the non-elastomeric fibrous component on the rear knitting bar and knitting it thereon with a notation from 1-0/2-3 to 1-0/9-10, an elastic pile fabric could be obtained which not only is satisfactory but also very even, is not rendered obvious by the available prior art. It follows that the subject-matter of claim 1, and of dependent claims 2 to 5, is found to involve an inventive step.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

M. Patin

P. Alting van Geusau