PATENTAMTS

OFFICE

BESCHWERDEKAMMERN BOARDS OF APPEAL OF CHAMBRES DE RECOURS DES EUROPÄISCHEN THE EUROPEAN PATENT DE L'OFFICE EUROPEEN DES BREVETS

Internal distribution code:

- (A) [] Publication in OJ
- (B) [] To Chairmen and Members (C) [] To Chairmen
- (D) [X] No distribution

Datasheet for the decision of 9 February 2011

T 1481/09 - 3.2.06 Case Number:

Application Number: 98308916.0

Publication Number: 0919655

IPC: D04B 21/10

Language of the proceedings: EN

Title of invention:

Modified schuss knitted netting

Patentee:

Tama Plastic Industry

Opponents:

RKW SE

WBV Westdeutscher Bindegarn Vertrieb Eselgrimm MESH PACK GmbH

Headword:

Relevant legal provisions:

EPC Art. 123(2), 84

Relevant legal provisions (EPC 1973):

EPC Art. 56

Keyword:

"Inventive step (yes)"

Decisions cited:

Catchword:



Europäisches **Patentamt**

European **Patent Office** Office européen des brevets

Beschwerdekammern

Boards of Appeal

Chambres de recours

Case Number: T 1481/09 - 3.2.06

DECISION of the Technical Board of Appeal 3.2.06 of 9 February 2011

Appellant: RKW SE

(Opponent OI) Nachtweideweg 1-7

D-67227 Frankenthal (DE)

Representative: Isenbruck, Günter

Isenbruck Bösl Hörschler LLP

Eastsite One

Seckenheimer Landstraße 4 D-68163 Mannheim (DE)

Respondent:

Tama Plastic Industry Kibbutz Mishmar-Ha'Emek (Patent Proprietor)

IL-19236 Mishmar Ha'Emek (IL)

Representative: Lederer, Christian

> Taylor Wessing Isatorplatz 8

D-80331 München (DE)

Other Parties: WBV Westdeutscher Bindegarn Vertrieb Eselgrimm

(Opponent OII) GmbH & Co. KG

> Wiedenbrücker Str. 3 D-59302 Oelde

Schober, Mirko Representative:

Patentanwälte

Thielking & Elbertzhagen Gadderbaumer Straße 14 D-33602 Bielefeld (DE)

(Opponent OIII) MESH PACK GmbH

> Ing.-A.-Rudow-Straße 1 D-38486 Kusey (DE)

Representative: Rehberg Hüppe + Partner

Patentanwälte

Nikolausberger Weg 62 D-37073 Göttingen (DE) Decision under appeal: Interlocutory decision of the Opposition

Division of the European Patent Office posted

29 April 2009 concerning maintenance of European patent No. 0919655 in amended form.

Composition of the Board:

Chairman: P. Alting van Geusau

Members: G. de Crignis

K. Garnett

- 1 - T 1481/09

Summary of Facts and Submissions

I. European patent No. 0 919 655, granted on application No. 98308916.0, was maintained in amended form by the decision of the opposition division announced during the oral proceedings on 25 March 2009 and posted on 29 April 2009.

Claim 1 such as maintained has the following wording:

"A knitted netting comprising longitudinal polyolefin ribbons (20), lateral polyolefin ribbons (18) knitted with said longitudinal polyolefin ribbons (20) on a machine to form a knitted netting with schusses (18) and franzes (20), wherein a schuss (18) creates legs of a triangle while a franze (20) creates a triangle base, characterised in that

when rolled as knitted on the machine, at least one of said lateral polyolefin ribbons (18) of said knitted netting has an actual length more than 110% of the length of a calculated schuss length for said knitted netting."

Claim 7 such as maintained has the following wording:

"A method of producing knitted netting in a knitting machine, comprising supplying lateral polyolefin ribbons (18), supplying longitudinal polyolefin ribbons (20), adjusting at least one of the lateral polyolefin ribbon paths in the knitting machine, knitting the lateral polyolefin ribbons (18) knitted with the longitudinal polyolefin ribbons (20) to form a knitted netting (16) with schusses (18) and franzes (20),

- 2 - T 1481/09

wherein a schuss (18) creates legs of a triangle while a franze (20) creates a triangle base, characterised in that said step of adjusting at least one of the lateral polyolefin ribbons paths results in a lateral polyolefin ribbon (18) in the knitted netting when rolled as knitted on the machine, having an actual length more than 110% of the length of a calculated

In this context it is clear, and not in dispute, that the references to "schuss" and "franze" are references to a lateral ribbon and a longitudinal ribbon respectively.

schuss length for the knitted netting."

II. The opposition division considered the invention to be disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art (Article 83 EPC). Furthermore, it considered the requirements of Article 123(2) EPC as being met with regard to the insertion of the term "when rolled as knitted on the machine". However, the subject-matter of claim 1 as granted was considered not to involve an inventive step (Article 56 EPC) when starting from either of

D4 (= E2) DE-A-4 301 232 or

E3 DE-A-4 301 242

combined with the teaching of

E5 Wirktechniken durch Fadenreservebildung in Schussrichtung; W. Schinkoreit; Melliand Textilberichte 12/1995, p. 1090

and the general knowledge of the skilled person. In the auxiliary request the subject-matter of the independent claims was directed to nettings having a triangular

- 3 - T 1481/09

structure. The opposition division held that there was no evidence on file that a skilled person would have adapted such a netting to a widening in use. Therefore, an inventive step was considered to be present.

- III. On 7 July 2009 the appellant (opponent OI) filed an appeal against this decision and simultaneously paid the appeal fee. A statement setting out the grounds of appeal was received at the European Patent Office on 9 September 2009. The appellant based its arguments upon the following documents in addition to those above:
 - E1 US-A-5 104 714
 - E4 DE-A-69 36 578
 - E6 EP-A-0 304 104
 - E7 Karl Mayer, Internet-Auftritt, 20.2.2009
 - E7a Sonderdruck Karl Mayer Textilmaschinenfabrik GmbH, 2007
 - E7b Sonderdruck Karl Mayer Textilmaschinenfabrik GmbH, 10/1998
 - E7c Sonderdruck Karl Mayer Textilmaschinenfabrik GmbH,
 1995
 - E8 S. Raz, Warp Knitting Production, Melliand
 Textilberichte 1987, S. 4, 5, 174 177, 216/217,
 384/385
 - E9 R. Arnold et al., Verarbeitung monoaxial gereckter Folien auf Kettenwirkmaschinen, Textiltechnik 26(1976) 1, S. 45-50
 - E10 R. Arnold et al., Herstellen von

 Verpackungsmitteln nach der Kettenwirktechnik,

 Techn. Textilien 20(1977) 2/3; S.68-75
 - Ell Meyers Lexikon, Online Wissen "Chemiefasern"
 - E12 Prospekt KBS Armierung "KBS-Polypropylenfasern"
 - E13 Synthesefasern, Verlag Chemie, 1981, S. 194 197

- 4 - T 1481/09

- E14 R. Huschka et al., Herstellung und Eigenschaften von Textilien aus Foliefäden, Deutsche Textiltechnik 18, 1968, 3/4, S. 137-141, 210-216
- E15 DE-A-36 30 821
- D3 US-A-4 570 789
- D5 US-A-4 569 439
- D6 DE-A-4 301 231
- D7 Offene Umhüllungsnetze mit hoher Leistung herstellen; Kettenwirk-Praxis 3/90; Obertshausen; S. 11-14
- IV. In a communication annexed to the summons to oral proceedings, the Board in particular pointed to the issues of Article 123(2) EPC and inventive step in respect of the amended claim.
- V. Oral proceedings were held on 9 February 2011.

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

The respondent requested that the patent be maintained on the basis of the main request filed during the oral proceedings.

The other parties did not attend the oral proceedings. Opponent OII did not submit any comments during the written proceedings. Opponent OIII had announced with letter of 8 December 2010 that it would not attend the oral proceedings.

The subject-matter of claims 1 and 7 differs from the subject-matter of claims 1 and 7 of the request upheld

by the opposition division in that the knitted netting is specified as "Raschel" netting.

VI. The arguments of the appellant may be summarised as follows:

Claims 1 and 7 now included the term "Raschel" for the knitted netting, which term was not further defined. Hence, its subject-matter was not clear as required by Article 84 EPC.

Claims 1 and 7 included further the term "when rolled as knitted on the machine". It was not clear how such a feature could be recognized on any claimed knitted Raschel netting.

El was one possible starting point as representing the closest state of the art. Although it did not disclose the characterising feature, the skilled person would have been well aware of techniques for obtaining knitted nettings having a schuss length with a yarn reserve of at least 10%. Such knowledge was documented in E2 and E3. Accordingly, no inventive step was involved in arriving at the claimed combination of features.

Equally, E3 could be taken as representing the closest state of the art, either alone or in combination with E5, as discussed in the appealed decision. Figures 6a-d of E3 showed that warp knitting was a well-known method for nettings and could be used with any material. The material was known from E1.

- 6 - T 1481/09

The opposition division had already decided that the subject-matter of claim 1 as granted was obvious when starting from the knitted netting according to E3, and taking into account E5 and the general knowledge of the skilled person. Based upon such a decision, the further features concerning the triangular pattern resulting from Raschel knitting were known from E1, and hence the skilled person would apply such a pattern when using the Raschel machine for making the netting.

Additionally, E4 could be taken as representing the closest state of the art. It disclosed polyolefins for Raschel nettings and the problem could be formulated as the provision of a knitted netting for hay bales. The triangular pattern was suggested on page 5. In combination with E2, which disclosed the technique to obtain a "Fadenreserve", the problem of obtaining a greater width during use could be solved.

Moreover, the problem was not solved over the whole scope of the claim with regard to the requirement that "at least" - and accordingly, only - one lateral polyolefin ribbon had to have the claimed length. It was nowhere demonstrated that such a netting solved the alleged problem stated in the description.

Hence, various problem/solution approaches were possible and no inventive step should be accorded to the subject-matter of claim 1.

Concerning the subject-matter of claim 7, E1 represented the closest prior art. In its example a method for manufacturing a knitted netting was disclosed. The problem was to find a method for

- 7 - T 1481/09

producing a netting having a modified schuss. This problem was evident when applying the netting. Hence, the skilled person would look for a suitable manufacturing method to avoid shrinkage and consider the teaching in E15 that a prolongation of the schuss was possible via an adjusted path length of the lateral ribbon. The result of performing the method suggested in E15 was an actual length such as that claimed. No inventive step was necessary.

VII. The arguments of the respondent may be summarised as follows:

The subject-matter of claim 1 was now limited to knitted Raschel netting, which represented an old and well-known kind of knitted netting. The skilled person knew exactly what kind of netting should be understood by such a term. No lack of clarity could arise by the use of this term.

Moreover, the skilled person would easily understand the meaning of "when rolled as knitted on the machine" for the knitted Raschel netting. Raschel knitting implied that the knitted netting was rolled up firmly, and, given the usual separation of the knitting needles of 1 inch, exceptionally 2 inches, the skilled person would be able to determine without any difficulty whether the condition of "when rolled as knitted on the machine" was satisfied. Therefore, the objections concerning clarity of such an expression were not valid.

The subject-matter of claim 1 involved an inventive step. El represented the closest prior art and disclosed the features of the preamble. No other

- 8 - T 1481/09

document was suitable for such purpose, in particular as El referred to the stretched and oriented elastic polyolefin ribbons in a triangular knitted Raschel netting, which represented the starting point for the present invention.

The skilled person was not given any suggestion as to the claimed combination of features, in particular E2 and E3 provided a solution to a similar problem but the techniques available therein could not be linked to the Raschel netting of E1. There was nowhere to be found the suggestion for the skilled person to combine knitted Raschel nettings having a triangular pattern with a modified schuss. Such a combination obtained a synergistic effect with regard to speedy and costefficient production. An inventive step should be recognised.

The further documents cited (E3, E3/E5, E4) were not suitable as representing the closest prior art as they did not concern Raschel-knitting of elastic polyolefin ribbons. Therefore, the skilled person was not faced with the problem upon which the present invention was based.

The subject-matter of claim 7 also involved an inventive step. E15 referred to a particular part of the machine for warp knitting and introduced pile loops into an otherwise undefined knitting machine. Hence, it did not refer to a Raschel netting and the schuss length thereof. It was not even clear whether such a machine was suitable for triangular nettings.

Accordingly, even when starting form the disclosure of

- 9 - T 1481/09

E1 it would not lead the skilled person to the claimed subject-matter.

Reasons for the Decision

- 1. The appeal is admissible.
- 1.1 Amendments
- 1.2 Article 123(2) EPC
- 1.2.1 Limitation to "Raschel" type netting and knitting in claims 1 and 7

Figures 1 and 2 of the patent in suit show knitted
Raschel netting according to the prior art (Figure 1)
and according to the invention (Figure 2). The whole
patent specification is concerned about the difference
between the "modified" schuss of the knitted Raschel
netting according to the invention and a "usual" schuss
according to conventional Raschel netting. Hence, only
Raschel-type netting is disclosed in relation to the
combination of features of claims 1 and 7 and the
requirements of Article 123(2) EPC are met.

1.2.2 Inclusion of the wording "when rolled as knitted on the machine" in claims 1 and 7

The feature "when rolled as knitted on the machine" was introduced into the subject-matter of claims 1 and 7 during the examination proceedings. No literal support in the specification is present. However, Figures 3a-c demonstrate that the length requirement defined in the

- 10 - T 1481/09

characterising portion can only be deduced in such a state. Therefore, no other interpretation of this feature is possible for the skilled person and such feature is necessary to calculate the claimed length requirements. Hence, such a feature is implicitly disclosed and the requirements of Article 123(2) EPC are met.

1.2.3 Limitation to triangular netting of the subject-matter
 of claims 1 and 7 by the wording
 "with schusses (18) and franzes (20), wherein a schuss
 (18) creates legs of a triangle while a franze (20)
 creates a triangle base"

This amendment is based on paragraph [0012] of the A-publication corresponding to paragraph [0016] of the B-publication. It limits the netting to the triangular structure upon which the whole specification is based. Accordingly, the requirements of Article 123(2) EPC are met.

1.3 Clarity of the term "Raschel"

Claims 1 and 7 now include the term "Raschel" for the knitted netting, which term is used in the art for a particular knitting machine and knitting method. The skilled person would be aware of these knitting techniques and no lack of clarity arises by the use of this term.

- 11 - T 1481/09

1.4 Clarity of the wording "when rolled as knitted on the machine" (Article 84 EPC)

Knitted Raschel netting is well-known in the art (see inter alia cited documents E1, D3, D5, D7, E10). Although the patent in suit does not specify that an equidistant spacing of the franzes/needles has to be present, such condition is implicit when using the Raschel machine. The skilled person would be capable of recognizing knitted Raschel nettings via a limited number of typical needle distances and accordingly could recognize whether the netting was rolled as knitted on the Raschel machine. The argument of the respondent in this respect is considered to be correct in view of the equidistant spacing of the nettings shown in all the cited documents showing Raschel nettings. Hence, the feature is sufficiently clear for the skilled person working in the field of warp knitting, and the requirements of Article 84 EPC are met.

- 2. Inventive step closest prior art E1
- 2.1 Figure 1 of the patent in suit shows a prior art knitted Raschel netting and it is explicitly stated in the description that this represents a netting according to E1. Hence, such triangular netting represents the starting point for the present invention and also qualifies objectively as representing the closest prior art as it includes all the features of the preamble of claim 1.

- 12 - T 1481/09

- 2.2 El discloses an elastic plastic netting made of oriented strands (title). The knitted netting is intended for wrapping hay bales (col. 1, 1. 7 - 10; col. 6, 1. 46) and comprises longitudinal and lateral polyolefin ribbons (col. 3, 1. 12 - 17, example) which are knitted on a Raschel machine (col. 4, 1. 11, example). The netting has a triangular pattern (Figure 6) and in use, it can be stretched about 30 -50% when wrapped around its load (col. 2, 1. 22 - 30, example). Accordingly, El discloses all features of the preamble. An important aspect concerning the polyolefin ribbons of El is that the netting therein is produced by slitting a substantially unoriented polyolefin film into ribbons, orienting the ribbons by an amount to maximize the tensile energy at break or to at least about 80% of such maximum value, and then knitting such ribbons into a netting. Such method optimizes the relationship between strength, elasticity and stretchability, which depends on the type of polyolefin and the manufacturing of the ribbons. Considering the intended use for the wrapping of cylindrical bales of hay, it is important that continued tension is provided to the load after wrapping in order to provide sufficient load-holding tension, something which necessitates a certain elasticity of the netting.
- 2.3 The patent in suit explains in its paragraph [0002] that when starting from such knitted Raschel netting, the triangular pattern has the effect that the Raschel netting becomes narrower when pulled lengthwise.

 Therefore, the subject-matter of claim 1 of the patent in suit is distinguished from the netting according to E1 by the features of the characterising portion.

- 13 - T 1481/09

- 2.4 Accordingly, the objective technical problem to be solved is to provide a cost efficient solution to allow the available triangular nettings to be widened to more than their full production width in use while maintaining their elastic properties. The solution according to claim 1 is to provide the schuss ribbon of such netting with more length than necessary for the knitting so that lengthwise elastic extension of the net does not affect production width.
- 2.5 When starting from the embodiment shown in Figure 6 of El and desiring to solve the above problem, none of the cited documents suggests the claimed combination of features. The opponent argued that the skilled person would combine the teaching of either E2 or E3 with that of El and thus arrive at the claimed solution. However, such combination would not lead the skilled person to the claimed combination of features, as explained in the following.
- 2.6 E2 (= D4) discloses a knitted netting and its manufacturing method. For the method, reference is made to a warp knitting machine (which is a generic term including the sub-type "Raschel"-machine). The illustrated nettings have patterns which all include parallel lateral yarns in extended state and parallel longitudinal yarns at least in their not-extended state. These nettings can be extended by the presence of a "Funktionsfadenreserve" (Figures 11(a-f)) which allows the lateral yarns to extend to their full actual length and which extension allows the nettings to be widened. The material of the yarns is not defined. The problem solved in E2 is to incorporate the yarns into the structure in such a manner that it is possible to

- 14 - T 1481/09

extend the netting further. However, elasticity and the effect of narrowing of the netting due to longitudinal stretching is not addressed at all and, moreover, for this type of netting these effects are not present.

- 2.7 The disclosure of E3 is consistent with that of E2 in that it refers to identical knitted nettings having straight longitudinal and transversal yarns knitted in a warp knitting manner. In neither document is the material of the yarns specified and no triangular pattern for the netting is suggested. The fact that the lateral yarn in the knitted netting has an actual length extending beyond its calculated length is linked to the "Funktionsfadenreserve" and to the more or less rectangular pattern of these yarns.
- The skilled person looking for a cost-efficient method of providing the triangular Raschel-netting of E1 with the possibility of its being widened to more than the production width might consider the disclosures of E2 or E3. The Figures in these documents show that the nettings can be widened to a defined length and pattern, dependent on the material and on the position of the "Funktionsreservefäden". The advantage of the netting disclosed in E2 and E3 is the variable spaces of netting. However, the skilled person when following this approach would abandon the triangular Raschel netting and simply use this kind of nettings.
- 2.9 In contrast thereto, in the present case, the skilled person would try to find a solution based on the triangular polyolefin Raschel nettings, which have advantages when cost-effectiveness and speedy production are required and which have had proven

successful in agricultural appliances. In particular the elasticity and strength of the polyolefin ribbons in combination with this structure satisfies the need for elasticity in order to wrap the netting sufficiently closely around the hay in the bales during storage without undue loosening of the structure as the bales dry out. Although the width of the netting plays a role, the problem is related to the particular properties of the Raschel netting with its triangular configuration and not really to variable width.

- 2.10 Accordingly, when desiring to retain the triangularstructured Raschel netting of El, neither E2 nor E3
 would help the skilled person in solving the problem he
 is faced with. The skilled person would have to adapt
 the Raschel-machines and -method in order to enable a
 modifying of the schuss of the triangular patterned
 nettings. No suggestion in this direction is present in
 either E2 or E3 since they are not related to the
 triangular Raschel netting with its specific properties.
 Therefore, when starting from E1 and considering the
 yarn reserve of E2 or E3, the skilled person would not
 arrive at the claimed subject matter without exercising
 inventive skill. Accordingly, the subject-matter of
 claim 1 involves an inventive step (Article 56 EPC).
- 3. Inventive step closest prior art E3/E5/E4
- 3.1 The appellant cited documents E3, E3/E5 and E4 as also being suitable as representing the closest prior art. Although this view is not shared by the Board, in the following it is demonstrated that the corresponding lines of argument do not alter the final conclusion.

- 16 - T 1481/09

- 3.2 E3 is concerned with the provision of a process for obtaining structured three-dimensional spaced fabrics with particularly large and variable spaces (col. 1, 1. 26 - 32). Such fabrics are generated by two parallel partial nets from groups of mesh side-threads arranged in the working direction and interconnected transversely to the working direction by fabric working-threads (Figures 1 - 4). At least one spacing working-thread is tied up to one group of mesh sidethreads of a partial net, the spacing working-thread is led out of the plane of said partial net, is formed into a loop in order to form a reserve of spacing working-thread and is tied up with at least one group of mesh side-threads of the other partial net. In such a way the three-dimensional nettings shown in Figures 15 and 16 are obtained. The textile material of the yarns is not specified. Accordingly, E3 discloses formed constructions wherein the elasticity of the yarns and of the resultant netting does not play a role.
- 3.3 Hence, when starting from this prior art, the subjectmatter of claim 1 differs from this knitted netting in that
 - no three-dimensional netting is claimed,
 - a triangular pattern of the netting is obtained by Raschel knitting,
 - polyolefin ribbons are specified for the longitudinal and transverse yarns.
- 3.4 The objective technical problem to be solved could be to provide a cost efficient possibility for allowing the available nettings to be more flexible, to maintain their elasticity and to conform to various structures.

- 17 - T 1481/09

The solution according to claim 1 is to provide the claimed Raschel netting.

- 3.5 The use of polyolefin ribbons, which were well-known, would solve the problem of improved elasticity and flexibility in the netting and thus could not involve an inventive activity. However, there is no reason for the skilled person simultaneously to change the geometry and production method of the netting.
- 3.6 When starting from E3, the skilled person looking for a flexible and elastic netting and considering the disclosure of E1, which is specifically concerned with the tensile strain recovery and the elastic limits of the netting upon elongation (see Figures 1 to 5 of E1), would certainly choose polyolefin ribbons as the material of the yarns. However, when taking into account the narrowing of the Raschel nettings when elongating the netting for winding around a structure, the disadvantages of such material and netting become apparent. Hence, the skilled person would recognize that the maintenance of the yarn reserve according to E3 in a rectangular pattern results in an even better solution to the above problem. Moreover, no disclosure or suggestion is present as to whether it is possible to use a Raschel machine when carrying out the elongated schuss yarn. Hence, the subject-matter of claim 1 cannot be considered as being obvious, and accordingly involves an inventive step.
- 3.7 Also the combination of E3 with E5, which refers to the "Funktionsfadenreserve" in schusses, is not suitable as closest prior art. On the one hand, only exceptionally can two documents be read together for this purpose. In

- 18 - T 1481/09

the present case there is no reason why the skilled person would read E3 and E5 together as one document representing the state of the art. Moreover, the only information E5 provides additionally to the features set out above for E3 is that three-dimensional formed nettings which can be made inter alia on Raschelmachines could be useful for reinforced nettings having constructional (forming, architectural) purposes. Accordingly, consistent with the above finding, (elastic) polyolefin yarns are not appropriate for such nettings. Therefore, even when taking the disclosure of E3 and E5 in combination as an appropriate starting point, the skilled person would not consider implementing the flexible nettings of E1, with their drawback concerning shrinkage upon longitudinal elongation, because the essence of the disclosure of E3 and even more of E5 is the provision of structured formed nettings. It follows that E3, either considered in isolation or in combination with E5 and with regard to E1, cannot be of any guidance for the solution of the technical problem in the manner as claimed in the patent in suit.

3.8 The appellant considered that independently of the above arguments, E3 should be considered in combination with E5 as closest state of the art because based upon such a combination the appealed decision considered claim 1 as granted as not involving an inventive step. However, the subject-matter of claim 1 as granted did not include the features concerning the Raschel method and the resultant triangular pattern of the netting. Therefore, this reasoning is not correct.

- 19 - T 1481/09

- 3.9 E4 discloses nettings for bags or for covering the roots of trees and shrubs. The nettings can be knitted from oriented polyolefin ribbons and Raschel machines provide a suggested manufacturing method (p. 6, second paragraph). Figure 1 shows a pattern of straight longitudinal and lateral ribbons forming a rectangular pattern of the netting, while Figure 2 shows a trapezoidal pattern of the lateral ribbons It is explained in the description (p. 5, second paragraph) that the transverse ribbons can be bound in only one loop of the longitudinal yarn, which could result in a triangular pattern. Accordingly, E4 discloses fewer features in common with the subject-matter of claims 1 and 7 than E1, having regard to the fact that E1 already discloses specifically a Figure (Figure 6) with exactly the triangular pattern of the netting to be considered and includes the desired kind of polyolefin ribbons.
- 3.10 Taking this document into account as closest prior art purely for the sake of argument, the assessment is basically the same as when taking E1 as closest prior art, since the distinguishing features and accordingly the problem to be solved are the same. Hence, the conclusion set out under point 2 above applies.
- 3.11 Inventive step problem allegedly not solved

A further objection concerned the consideration that the problem would not be solved over the whole scope of the claim. The scope of claim 1 included (at least) one lateral ribbon having the claimed length in the netting. The issue was whether such one lateral ribbon could solve the problem posed. The respondent's argument that

- 20 - T 1481/09

the skilled person could easily assess which part of the net needed widening and would tailor the net accordingly - for example including only one lateral ribbon for covering the end edges of a hay bale - is considered by the Board to be correct. In particular as regards the use with cylindrical bales of hay, the end edges have properties different from the remainder of the netting, as shown in Figure 8 of the patent in suit. When adjusting the structure of the netting for widening in such a specific area while maintaining the elasticity of the netting, the problem is solved for such nettings.

- 4. Inventive step claim 7
- 4.1 E1, discussed above (see point 2.1), also represents the closest prior art with regard to the method claimed in claim 7. It discloses in its example a method according to the preamble of claim 7. The subjectmatter of claim 7 differs from the method of producing a knitted Raschel netting according to the example of E1 in the step set out in the characterising portion. This distinguishing feature solves the problem of providing a cost-efficient method for reducing shrinkage of the netting during use.
- 4.2 E15 discloses a warp knitting machine having various hole needle bars with the pile sinker bar positioned below the action area of the hole needles in order to obtain a relatively small extension in the lateral direction of the pile sinker bar, and thus to take account of the load and mass thereof. Hence, the issue in E15 is to maintain the action area of the hole

needles. This part of the warp knitting machine is shown in its single Figure.

- 4.3 Hence E15 does not disclose a complete process for manufacturing a knitted netting but only one part of such a method. Additionally, E15 does not disclose whether the shown detail of positioning of the pile sinker bar and the shown mechanism is consistent with a Raschel-machine. Reference is only made generally to a warp knitting machine and only the specific functioning of the pile sinker bar is shown. No reference to any particular method providing defined knitted nettings or their materials is present. Hence, it is not disclosed whether such a pile sinker bar can be included without any modifications in a Raschel-type machine nor whether such method step would be suitable for the polyolefin triangle Raschel nettings. Accordingly, when starting from E1, the skilled person would not receive any guidance as to how to implement such a method in combination with polyolefin ribbons and the triangular pattern of E1.
- 5. Hence, the subject-matter of claims 1 and 7 involves an inventive step (Article 56 EPC). Accordingly, the documents in accordance with the sole request of the respondent form a suitable basis for maintenance of the patent in amended form.

- 22 - T 1481/09

Order

For these reasons it is decided that:

- 1. The decision is set aside.
- 2. The case is remitted to the Opposition Division with the order to maintain the patent on the basis of
 - (a) claims 1 to 8 according to the main request,
 - (b) the description pages numbered 2, 3 and 4,
 - (c) Figures 1 to 8,

all as filed during the oral proceedings.

The Registrar

The Chairman

M. Patin

P. Alting van Geusau