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D E C I S I O N
of 11 March 1997

Case Number: T 0005/95 - 3.2.4

Application Number: 88201606.6

Publication Number: 0304977

IPC: A01F 15/14

Language of the proceedings: EN

Title of invention:
Netting for wrapping round bales

Patentee:
FORD NEW HOLLAND, INC.

Opponent:
BP Chemicals PlasTec GmbH

Headword:
Use of a net/FORD NEW HOLLAND

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step (yes) - use of a novel product"

Decisions cited:
-

Catchword:
-

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Case Number: T 0005/95 - 3.2.4

D E C I S I O N
of the Technical Board of Appeal 3.2.4
of 11 March 1997

Appellant: (Opponent)
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Decision under appeal: **Interlocutory decision of the Opposition Division of the European Patent Office posted 8 November 1994 concerning maintenance of European patent No. 0 304 977 in amended form.**

Composition of the Board:

Chairman: C. A. J. Andries
Members: P. Petti
M. Lewenton

Summary of Facts and Submissions

I. The European patent No. 304 977, against which an opposition based upon Article 100(a) EPC was filed, was maintained in amended form by the decision of the opposition division dispatched on 8 November 1994.

II. On 30 December 1994 the appellant (opponent) lodged an appeal against this decision and simultaneously paid the appeal fee. A statement setting out the grounds of appeal was received on 4 March 1995.

III. Oral proceedings were held on 11 March 1997. During the oral proceedings the respondent (patent proprietor) filed a further amended independent Claim 1 which reads as follows:

"The use of an extruded plastic netting (26) comprising a plurality of longitudinal strands (28) and a plurality of transverse strands (30); said longitudinal and transverse strands (28, 30) being arranged substantially perpendicular to each other and interconnected at a plurality of intersecting joints (32) to define a plurality of substantially rectangular openings (33) therebetween and said use being for wrapping the outer surface of a cylindrically shaped bale (10) of crop material in its circumferential direction and in a manner so that said rectangular openings (33) in said netting (26) have their main dimensions, as defined by said longitudinal and transverse strands (28, 30), oriented in the circumferential and axial directions of said bale (10), such that the spacing between longitudinal strands is smaller than the spacing between transverse strands, the rectangular openings (33) in this netting (26) being dimensioned so that, when the outer surface of said bale (10) is wrapped with said netting (26), crop

material in said outer surface of said bale (10) pokes through said openings (33) to thereby hold said bale (10) together; said netting (26) having, in the longitudinal direction, a minimum elasticity before tensile failure of about 15%"

IV. During the oral proceedings the appellant based its arguments essentially upon the following documents:

D2: US-A-4 152 479;
D5: US-A-4 570 789;
D8: U. Fritz, *Netzbindung und Folienbindung, Neue Bindeverfahren für Rundballen*, Sonderdruck aus Lohnunternehmen in Land- und Forstwirtschaft, 40. Jahrgang, Mai 1985 (6 pages);
D10: "Betriebsvorschrift/Lieferspezifikation" of the company Polydress Plastic GmbH (4 sheets).

V. The appellant argued that the subject-matter of Claim 1 did not involve an inventive step since the use of a netting of the type "MX 1000" as referred to in documents D8 and D10 for wrapping the outer surface of a cylindrical bale of crop material was already known and an extruded plastic netting with interconnected longitudinal and transverse strands defining a plurality of square openings was known from document D2.

The respondent essentially contested the arguments of the appellant.

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

The respondent requested that the decision under appeal be set aside and the patent be maintained in amended form on the basis of the following documents:

Claims: No. 1 to 6 as filed during the oral proceedings on 11 March 1997; Description: pages 2 and 3 (columns 1 to 3), pages 1a and 1b, as filed during the oral proceedings on 11 March 1997; Drawings: Figures 1 to 3 as granted.

Reasons for the Decision

1. The appeal is admissible.

2. *The amendments*

2.1 The independent Claim 1 has been amended with respect to Claim 1 of the patent as granted by the addition of the following expressions:

(a) "an extruded plastic" before the word "netting" in the first line of the claim, and

(b) "such that the spacing between longitudinal strands is smaller than the spacing between transverse strands" after the feature " oriented in the circumferential and axial directions of said bale",

(c) and by addition of the features of Claim 2 as granted.

The amendment according to item (a) can be derived from Claim 5 of the application as filed. The amendment according to item (b) can be clearly derived from Figure 3 read in conjunction with a first passage of the description of the application as filed (page 2, lines 30 to 37 corresponding to column 2, lines 41 to 40 of the patent) which defines "a plurality of rectangular shaped openings in the netting" and with a

second passage (page 3, lines 12 to 15 corresponding to column 3, lines 8 to 12 of the patent) according to which "when the netting is wrapped in the circumferential direction ... , it is pulled in the longitudinal direction 34 without any shrinking in a transverse direction 36 taking place". The amendment according to item (c) can also be derived from a passage of the description of the application as filed (page 3, lines 28 to 32).

2.2 The subject-matter of the present Claims 2 to 6 is identical with that of Claims 3 to 6 and 8 of the patent as granted.

2.3 The description was amended to adapt it to the new claims and to insert information concerning the prior art.

2.4 There is no objection with respect to Article 123 EPC. This has not been disputed.

3. *Novelty*

The subject-matter of Claim 1, whose novelty was also not disputed, is novel within the meaning of Article 54(2) EPC.

4. *The closest prior art*

4.1 Document D8 discloses the use of a special netting of the type "MX 1000" manufactured by Polydress Plastic GmbH for wrapping the outer surface of a cylindrical shaped bale of crop material in its circumferential direction. With respect to this netting, the German utility model DE U 8 311 900 (corresponding to the document D5) is mentioned in document D8, the applicant of this German utility model also being Polydress Plastic GmbH.

Document D8 furthermore comprises an advertising sheet of the firm Polydress Plastic GmbH in which *inter alia* the prices of the netting "MX 1000" are indicated. Thus it must be considered that the netting "MX 1000" manufactured by Polydress Plastic GmbH was available on the market before the priority date of the patent in suit so that it could be bought and tested in order to obtain information on its intrinsic properties.

According to document D10 (sheet dated 16 March 1984, "2. Ausfertigung") a netting for round bales ("Rundballenwickelnetz") made by Polydress Plastic GmbH and having the code "52123 MX 1000" has, in the longitudinal direction, an extension at tensile failure of at least 15%. Thus, although there is no evidence that document D10 itself was accessible to the public, it can be assumed that the information that the netting "MX 1000" referred to in document D8 had an elasticity before tension failure of at least 15% was available to the public. This was not disputed by the respondent.

4.2 Having regard to the above comments and to the content of documents D8 and D5 and in agreement with the parties, the following features have to be considered not only as having been made available to the public before the priority date of the patent in suit but also as representing the closest prior art:

"The use of a netting comprising a plurality of longitudinal strands and a plurality of transverse strands, the longitudinal and transverse strands being interconnected to define a plurality of triangular openings, the netting having, in the longitudinal direction, a minimum elasticity before tensile failure of about 15%, said use being for wrapping the outer surface of a cylindrical shaped bale of crop material in its circumferential direction in a manner so that, when the outer surface of the bale is wrapped with said

netting, the longitudinal strands are oriented in the circumferential direction of the bale and crop material in the outer surface of the bale pokes through the triangular openings to hold the bale together".

According to document D8 the netting "MX 1000" is made of plastic foil strips ("HDPE-Bändchen") of knit fabric ("gewirktes Netz"). Having regard to document D5, this netting is of the type made on a Raschel loom.

5. *Problem and solution*

5.1 According to the respondent the closest prior art netting used for wrapping round bales has the disadvantages that it is difficult to cut and that it shrinks in overall width when pulled lengthwise.

These disadvantages are attributed to a netting of Raschel fabric as specified in the description of both the patent as granted (column 1, lines 15 to 20) and the application as originally filed (page 1, second paragraph). According to the board, it is credible that the closest prior art netting, due to both the material and the triangular shape of the openings, has the above mentioned disadvantages.

The argument of the appellant that a shrinkage in the transverse direction does not take place because in a Raschel fabric net the transverse strands are not fixed to the longitudinal strands cannot be accepted by the board in view of the fact that, although in a Raschel fabric net there is no fixed connection between the strands, there is no complete freedom of movement of the transverse strands with respect to the longitudinal

strands. Indeed, there is a frictional resistance impeding the movement of the transverse strands relative to the longitudinal strands. This frictional resistance is one of the reasons of the above mentioned transverse shrinking.

Therefore, the problem to be solved relates to the elimination of the above mentioned existing disadvantages.

5.2 The subject-matter of Claim 1 differs from the closest prior art essentially in that a different netting is used, namely

(i) an **extruded plastic** netting,

(ii) a netting whose transverse and longitudinal strands are **arranged substantially perpendicular to each other** and interconnected at a plurality of intersecting joints to define a plurality of **substantially rectangular** openings therebetween,

(iii) a netting wrapped in a manner so that the rectangular openings have their main dimensions, as defined by said longitudinal and transverse strands, oriented in the circumferential and axial directions of the bale such that **the spacing between longitudinal strands is smaller than the spacing between transverse strands**.

5.3 According to the board it is credible that an extruded plastic netting of the type defined in Claim 1, having also more rigid transverse strands, does not shrink in the transverse direction when pulled longitudinally and, thus, when used according to Claim 1 maintains its original width such that the outer surface of the bale is covered over its entire length with the netting. It

is also credible that after a round bale has been wrapped by a netting of this type the netting can be easily cut, for instance between two adjacent transverse strands.

6. *Inventive step*

6.1 In the present case, it must be considered that, on the one hand, the claimed invention concerns the use of a product (i.e. of a specific netting) for performing an activity (i.e. for wrapping round bales) and that, on the other hand, there is no available prior art document disclosing, solely as such, the specific structure of the netting used in accordance with Claim 1.

It must therefore be stated that the available prior art neither refers to an extruded plastic netting having rectangular openings as defined by above feature (ii) nor indicates the advantageous effects obtainable on account of such a netting (see above section 5.3). Therefore, the skilled person cannot be guided by the available prior art to the use of an extruded plastic netting according to Claim 1 of the patent in suit.

6.2 Document D2 discloses an extruded plastic netting whose transverse and longitudinal strands are arranged substantially perpendicular to each other and interconnected at a plurality of intersecting joints to define a plurality of **square** openings. However, document D2 does not suggest the use of this netting for wrapping bales.

Moreover, there is no indication in document D2 permitting the skilled person to realize that an extruded plastic netting with square openings, if used for wrapping cylindrical bales of crop material, would result in avoiding a transverse shrinking of the netting or in making its cutting easier. In other words, there is no link between the content of document D2 and the problem with which the skilled person is confronted.

Furthermore, document D2 does not contain any information concerning either the dimensions of the square openings (let alone information that the openings of the netting are dimensioned so that the material of the bale pokes through them) or the minimum elasticity of the netting in the longitudinal direction. In other words, the skilled person is not immediately taught by the content of document D2 that the extruded plastic netting described therein is suitable for being used for wrapping round bales instead of a netting of the type "MX 1000".

6.3 According to the appellant however, document D8 discloses not only the use of a very specific netting (the netting "MX 1000") as a possibility among others, but also the general teaching of how round bales are wrapped with a net, i.e. the conditions to be fulfilled by a net in order to be used for wrapping round bales. The appellant argued that a skilled person, having regard to this general teaching, would obviously try to use different types of available nets, such as for example an extruded plastic netting having square openings as disclosed in document D2. The skilled person would obviously use this extruded plastic netting for wrapping round bales in a manner analogous to the wrapping according to document D8, i.e. with the longitudinal strands oriented in the circumferential direction of the bale. The use of an extruded plastic

netting having square openings would result in the same advantages as the use of an extruded plastic netting having rectangular openings. In any case, having regard to the nature of the material of the bale, it would be obvious to increase the spacing between the transverse strands such that the crop material pokes through the openings of the netting. Thus, according to the appellant, a skilled person would arrive at the subject-matter of Claim 1 without exercising any inventive skill.

The board cannot accept the arguments of the appellant for the following reasons:

The netting "MX 1000" is described in document D8 as a special netting developed by the Polydress Plastic GmbH in order to perform all the functions of a binding twine. Thus, the teaching of document D8 has to be considered as a specific teaching pointing towards a particular netting.

As already mentioned above, the skilled person had no reason to consider document D2 because there is no link between the content of this document and the problem to be solved.

Even if the skilled person were to use a netting according to document D2 for wrapping round bales, he would not directly arrive at the subject-matter of Claim 1, because the netting according to document D2 needs to be further modified in order to have rectangular openings whose longer dimensions are defined by the longitudinal strands.

In this context it must be emphasized that this further modification of the netting, i.e. the fact that the spacing between the longitudinal strands is smaller than the spacing between the transverse strands, makes

it possible not only for the spacing between the transverse strands to be chosen independently from the spacing between the longitudinal strands but also for a higher number of strands per axial length of a bale be arrived at so that the tensile strength of the netting in circumferential direction can be increased independently of the spacing between the transverse strands.

Since the prior art does not contain any suggestion of these additional advantages, it would be highly unlikely that the skilled person would further modify the netting according to document D2.

The above arguments of the appellant try to show how the claimed solution might have been arrived at but in fact fail to consider that the prior art does not suggest the combination of the claimed features to the skilled person. According to the board this is the result of a typical *a posteriori* analysis. The board wishes to emphasize that, when assessing inventive step, the decisive question is not whether a skilled person **could** have arrived at the claimed subject-matter but whether the skilled person **would** have done so in the expectation of solving the technical problem (cf. T 2/83 OJ EPO 1984, 285, Headnote). Furthermore, even if an invention seems very simple this is not an unequivocal indication of lack of inventive step.

6.4 Therefore, having regard to the cited prior art, the subject-matter of Claim 1 would not be obvious for a skilled person so that the requirements of Article 56 EPC are met.

7. Dependent Claims 2 to 6 concern particular embodiments of the invention defined in Claim 1.

8. The further arguments put forwards by the appellant in the written proceedings were not brought forward any more during the oral proceedings and are, furthermore, not relevant for the findings of the present decision.

9. The patent can therefore be maintained.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the first instance with the order to maintain the patent in the following version:

Claims: 1 to 6 as filed during the oral proceedings;

Description: pages 2, 1a, 1b and 3 as filed during the oral proceedings;

Drawings: Figures 1 to 3 as granted.

The Registrar: The Chairman:

N. Maslin C. Andries