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File Number: T 189/92 - 3.2.4

Application No.: 85 304 935.1

Publication No.: 0 208 034

Title of invention: Improvements relating to the wrapping of hay bales

Classification: A01F 15/14

D E C I S I O N
of 7 October 1992

Applicant: Eight Milieu Nominees Pty. Ltd.

Headword:

EPC Articles 56 and 115

Keyword: "Inventive step - no"
"Documents filed by a third party"



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Boards of Appeal

Chambres de recours

Case Number : T 189/92 - 3.2.4

D E C I S I O N
of the Technical Board of Appeal 3.2.4
of 7 October 1992

Appellant : Eight Milieu Nominees Pty. Ltd.
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Victoria (AU)

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Decision under appeal : Decision of the Examining Division 2.3.13.125 of
the European Patent Office dispatched on
19 September 1991 refusing European patent
application No. 85 304 935.1 pursuant to Article
97(1) EPC.

Composition of the Board :

Chairman : C.A.J. Andries
Members : P. Petti
J.P.B. Seitz

Summary of Facts and Submissions

- I. European patent application No. 85 304 935.1, filed on 10 July 1985, was refused by a decision of Examining Division 2.3.13.125 dispatched on 19 September 1991.
- II. The reason for the refusal was that the subject-matter of Claim 1 lacked an inventive step and that the subject-matter of Claim 4 lacked novelty having regard to documents:
- D1: EP-A-110 110
D2: DE-A-3 311 279.
- III. A notice of appeal was filed with a facsimile letter on 14 November 1991 and the prescribed fee was paid on 13 November 1991. A written statement setting out the grounds of appeal was filed with a facsimile letter on 23 January 1992.
- IV. In a communication annexed to the summons to oral proceedings the Board drew the attention of the Appellant to a commercial leaflet of the firm "Dario Manuli SpA", entitled "Agripack", which was brought forward - together with further observations - by a third party in accordance with Article 115 EPC. This commercial leaflet will be hereinafter called "the leaflet".

In order to show that there were serious grounds for doubting the leaflet was made available to the public before the filing date of the present application, the Appellant filed with a letter of 1 October 1992 an affidavit signed by Mr M.G. Elmslie and some exhibits referred to in this affidavit.

V. Oral proceedings were held on 7 October 1992. The Appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of Claims 1 to 7 as filed with his letter of 15 March 1990. He also filed three auxiliary requests. The first auxiliary request is based, inter alia, on an independent Claim 1 having the same wording as Claim 1 according to the main request.

The second auxiliary request includes seven claims while the third auxiliary request only includes four claims (Claims 4 to 7).

During the oral proceedings the Board drew the attention of the Appellant to document

D3: US-A-4 281 500.

VI. Independent Claim 1 according to the main as well as to auxiliary request I is worded as follows:

" A method of treating hay to form silage comprising the steps of supporting a hay bale on a support (11,13,15), said support being adapted to rotate said hay bale about two axes simultaneously, rotating said hay bale (30) about two axes by operation of said support, (11,13,15) and applying a sheet of impervious self-adhering plastic film material (16) to said bale (30) by wrapping the plastic film material around the bale in an overlapping close fitting fashion whilst operating the support to rotate the bale, whereby the overlapping portions of the plastic film material (16) self-adhere to form a close fitting airtight package completely enveloping the hay bale (30), characterised in that said sheet is attached to a bale of hay with a moisture content capable of forming silage, whereafter the bale is wrapped by the rotation aforesaid, and in that the wrapped bale is left

substantially sealed from the atmosphere for a sufficient period of time to allow the formation of silage within the package to occur."

Independent Claim 1 according to auxiliary request II is worded as follows:

" A method of treating hay to form silage comprising the steps of supporting a hay bale on a support (11,13,15), said support being adapted to rotate continuously said hay bale about two axes simultaneously, continuously rotating said hay bale (30) about two axes by operation of said support (11,13,15) applying an elongate sheet of impervious self-adhering plastic film material (16) to said bale (30) by wrapping the plastic film material around the bale in a continuous overlapping close fitting fashion whilst operating the support to rotate the bale, whereby the overlapping portions of the plastic film material (16) self-adhere to form a close fitting airtight package completely enveloping the hay bale (30), characterised in that said sheet is attached to a bale of hay with a moisture content capable of forming silage, whereafter the bale is wrapped by the rotation aforesaid, and in that the wrapped bale is left substantially sealed from the atmosphere for a sufficient period of time to allow the formation of silage within the package to occur."

Independent Claim 4 according to auxiliary request III is worded as follows:

" Use of an apparatus to perform a method of treating hay for silage-making, in which a round bale of hay with a moisture content capable of forming silage is wrapped by applying an elongate sheet of impervious self-adhering plastic film material to said bale by continuously

rotating the bale about two axes simultaneously and applying the plastic film material to become wrapped around the bale in a continuous overlapping close-fitting fashion so as thereby to form an air-tight package completely enveloping the bale, and then leaving the wrapped bale substantially sealed from the atmosphere for a sufficient period of time to allow the formation of silage within the package to occur, characterised in that the apparatus includes a turntable (11) for rotatably supporting a hay bale (30), said turntable (11) being rotatable about a substantially vertical axis and including rotatable support means (15,13) thereon for rotating the bale about a substantially horizontal axis, and means for supplying a sheet of plastic film 16 to the bale (30) whilst the bale is rotated about said two axes, whereby the film (16) becomes wrapped round the bale in an overlapping close-fitting manner."

Reasons for the Decision

1. Admissibility of the appeal

The appeal complies with Articles 106 to 108 and Rule 64 EPC and is, therefore, admissible.

2. Observations by a third party (Article 115 EPC)

The observations presented to the Examining Division by a third party relate not only to the leaflet but also to the Norwegian patent application No. 833 911 corresponding to the European patent application No. EP-A-110 110 (D1) and to the article of Mr Jens Johnsen Hoy: "Ensilering af graes i rundballer".

2.1 The Norwegian patent application has not been considered by the Board since neither the document itself nor a proper translation in one of the official languages of the EPO was submitted by the third party, whereas the article of Mr Jens Johnsen Hoy was also not considered because no translation in an official language of the EPO was submitted.

It is the responsibility of a third party (Article 115 EPC) to ensure that the facts and evidence filed are not only unequivocally clear but also as complete as possible so that they can be handled directly by the investigating instance without doubt and without further inquiry. In particular, if such a third party files documents in a non-official language of the EPO a translation in one of the official languages of the EPO should be enclosed.

2.2 Having regard to the fact that an English translation of the leaflet had been produced, this leaflet was considered by the Board which, however, also considered the affidavit of Mr Elmslie and the exhibits annexed thereto. The question to be decided is whether the leaflet, which has on its last page the reference "Studio 360/83", was made available to the public before the filing date of the present application. Since the date on which this leaflet was distributed to third parties or was otherwise made available to the public has not been established beyond any doubt, the Board considers that this leaflet cannot be taken into account in the present proceedings.

3. Interpretations of the terms "hay" and "silage"

The present independent claims relate either to a method of treating hay to form silage or to the use of an apparatus to perform a method of treating hay for silage-

making. The claims also contain the expressions "hay bale" or "round bale of hay".

During the oral proceedings the Appellant asserted that the term "hay" used in the present application and claims is not to be construed as the final product obtained by drying the crop (cut herbage) at a moisture such that the crop can be stored as a dry fodder but that this term should be construed as "silage crop", i.e. as cut herbage, from which silage is intended to be made. Such an interpretation also corresponds to the technical report on "Scientific Aspects of Forage Conservation" by G. Alderman submitted by the Appellant with his letter of 15 March 1990, wherein the term "silage" is defined as "the succulent material produced by a process of controlled vital changes from a green crop ... of high moisture content". Such process requires anaerobic conditions. In other words: silage represents the product obtained by a process of anaerobic fermentation of a green crop having a high moisture content.

Such interpretation of the term "hay" and "silage" in the present application also corresponds to the view of the Board.

The expressions "hay bale" or "round bale of hay" therefore define in this application a round bale of green crop, i.e. cut herbage, from which silage may be made.

4. Allowability of amendments

The independent Claim 1 of the main and auxiliary requests I and II, as well as the independent Claim 4 of auxiliary request III, all include the features that the hay has a moisture content capable of forming silage and

that the bale is left sealed from the atmosphere for a sufficient period of time to allow the formation of silage within the package to occur.

These features are not explicitly disclosed in the application as originally filed.

During the oral proceedings the Appellant asserted that these features are however implicitly disclosed in the original application insofar as the application explicitly discloses a method of making silage.

The Board accepts this argument. Indeed these features, which define conditions to be necessarily met for forming silage, can be attributed to any method of forming silage.

The Board therefore is satisfied that the amended claims do not contravene Article 123(2) EPC.

5. Novelty

According to the Board none of the documents cited in the search report is prejudicial to the novelty of the subject-matter of the independent Claim 1 according to the main request and auxiliary requests I and II and the subject-matter of independent Claim 4 according to auxiliary request III.

In particular, document D1, which is concerned with a method of hermetically wrapping hay bales, does not disclose the intention of making silage.

6. Inventive step

6.1 Main request

6.1.1 The closest prior art is considered to result from document D2.

This document - in the acknowledgement of prior art - refers to the wrapping of round bales in airtight (luftdicht) bags, which form silos for silage and describes such method as being time and labour consuming (see page 1, second paragraph). Document D2 further refers explicitly in that paragraph to acid lactic fermentation such that the intention of forming "silage" is unambiguously disclosed in relationship to this acknowledged prior art.

In the paragraph following the acknowledgement of prior art it is stated that "the invention intends to improve the wrapping of such cylindrical bodies ...". Therefore, the intention of making silage is disclosed also in relationship to the invention defined in document D2.

The method according to document D2 is described as comprising the steps of supporting a round bale of crop on a support (4 - 4d), the support being adapted to rotate the bale about a horizontal axis, applying sheets of impervious self-adhering plastic material to the bale so that the plastic film material is wrapped around the bale in an overlapping close fitting fashion. The overlapping portions of the plastic film material self-adhere to each other to form the close fitting airtight package completely enveloping the bale.

Moreover, the fact that document D2 clearly discloses the intention of making silage has to be considered as an

implicit disclosure of the features that the sheet of plastic material is applied to a bale of green crop with a moisture content capable of forming silage and that the wrapped bale is left substantially sealed from the atmosphere for a sufficient time to allow the formation of silage within the package to occur.

In the specific method disclosed in document D2 the film is applied to the bale by means of an oscillating arm which supports the film material, and which rotates about a vertical axis while the bale remains stationary.

Although the method of wrapping the bale as described in document D2 already suggests the use of a sheet of impervious self-adhering plastic film material, avoiding thereby the problems arising when using pre-formed plastic bags, it still appears to suffer many drawbacks which are all linked with the specific method of applying the plastic film to the bale, namely: (1) the arm supporting the plastic film requires an oscillating mechanism; (2) the film can only be applied in an oscillating fashion so that useless time is required for the return movement of the oscillating arm; (3) a film cutting device is required.

For a person skilled in the art it becomes clear that the specific method proposed and used in document D2 is rather complicated, so that - starting from document D2 - a technical problem to be solved can be seen as being to eliminate the drawbacks mentioned above.

6.1.2 The subject-matter of Claim 1 is distinguished from the closest prior art by the following features:

(a) the bale support is adapted to rotate the bale about two axes simultaneously whereby a sheet of film

material is applied to the bale whilst operating the support to rotate the bale;

(b) the crop, from which silage is intended to be made, is hay, (i.e. cut herbage).

6.1.3 The features of the group (a) result in the wrapping process of the bale being simplified and, thus, contribute to the solution of the problem of eliminating the drawbacks of the method according to document D2. Such problem directly relates to the technological field of packaging.

The feature (b) defines the particular crop from which silage is intended to be made. Such feature relates to the field of agriculture, more particularly to silage-making.

Since there is no functional interrelationship between the features of the group (a) and feature (b), it must be investigated whether these features, taken separately, are derived in an obvious way from the prior art.

6.1.4 A person skilled in the art trying to simplify the packaging method and its corresponding apparatus disclosed in document D2, and recognising that the complicated structure of the apparatus depends solely on the manner in which packaging takes place, and does not depend at all on the known silage-forming as such, would try to find a solution either in the general technical field of packaging or in the same or neighbouring technical fields of wrapping bales of crop.

6.1.4.1 Document D3 discloses a low-cost system (column 1, lines 64 to 68) for wrapping large diameter cylindrical objects, which avoids the drawbacks not only of a prior art method which is defined in this document as being

"time consuming" (see column 1, lines 29 to 33) but also of the method using large plastic bags, (column 1, lines 51 to 57), which was also the starting prior art of document D2. The system comprises a support adapted to rotate the object about two axes simultaneously, so that a sheet after being attached to the object is wrapped around the cylindrical object in an overlapping close fitting fashion.

It is obvious for a skilled person that such a system, which also avoids the same difficulties relating to the use of large plastic bags as mentioned in document D2, additionally avoids the complications relating to an oscillating arm, so that the skilled person seeking an effective and simple solution to the problems concerning the hermetical wrapping of round bales for the purpose of making silage would turn to document D3 which gives him the general teaching how to wrap a cylindrical object in a simple, effective and quick manner. He would therefore apply the teaching of document D3 to the method according to document D2.

6.1.4.2 The argument that document D3 does not mention hay, and that it should therefore not be considered by a skilled person, cannot be followed by the Board. It is not correct, as it was suggested by the Appellant, that the person skilled in the art in this case could only be a farmer who is confronted solely with the problem of silage-making. Indeed a skilled person would not limit himself to the specific limited technical field he is working in, but would try to develop an apparatus and the corresponding method by looking around in all those technical areas where a solution for his specific problem can be found. Such an approach is backed by the jurisprudence of the Boards of Appeal, which indicates that a person skilled in the art would try to find a

solution for a specific problem in any general technical field in which the same or similar problem arises, and of which the person skilled in the art of the specific field must be expected to be aware. In this particular case, it is clear for a skilled person that the problem to be solved, i.e. the simplification of a complicated packaging method and apparatus, which problem is only related to packaging, and not to silage-forming, can also be found in the general field of packaging. Document D3, which relates to wrapping of cylindrical rolls not only of paper, paperboard and tissue in the paper industry, but also of rolls in other fields, must be considered as representing such general information of packaging technology which would be consulted by a person skilled in the art wanting to solve a packaging problem.

6.1.4.3 Moreover, the skilled person would find in the field of agriculture another hint towards the same solution. Indeed, even in the specific technical field of wrapping round bales of (dry) hay, a person skilled in the art would notice document D1, which is concerned with the same packaging problem of hermetically wrapping cylindrically shaped bales of (dry) hay for the purpose of avoiding any alteration of the fodder. Although document D1 does not disclose the intention of making silage from cut herbage, it nevertheless teaches to a person skilled in the art how it is possible within a rotor press to wrap a bale by rotating the cradle, which is supporting the bale, about two axes which maintain the film unwinding reel or roll stationary (Figure 9; page 9, lines 15 to 23).

The skilled person looking at document D1 will immediately realise that the packaging method described in this document permits the method according to document D2 to be simplified. He would therefore try to apply the

teaching relative to the packaging method known from document D1 to the method of making silage according to document D2.

6.1.4.4 It must be concluded that the skilled person would combine the features known from the closest prior art with the features of the group (a) as mentioned in section 6.1.2 above without exercising any inventive activity.

6.1.5 Feature (b) mentioned in section 6.1.2 above only represents the choice of a particular crop from which silage is intended to be made.

Document D2, which discloses a method of wrapping round bales to form silage, contains a general reference to bales of crop ("Erntegut") as well as a particular reference to bales of cereals ("Halmfrüchte").

A skilled person reading document D2 however immediately realises that the silage making part of the method disclosed in this document can be universally extended to round bales of different vegetal varieties. The process of making silage from "hay" (i.e. cut herbage) is well known. The technique of wrapping round bales of crop to form silage is also well known (document D2). The application of this technique to "hay" bales only represents the use of a known technique in a closely analogous situation. In respect of this application of known measures no inventive step can be recognised in the sole fact that hay is taken, instead of cereals, as a starting material for making silage.

6.1.6 As explained above, the features of the group (a) and feature (b) as defined in section 6.1.2 above can be derived in an obvious way from the prior art.

Since moreover no mutual relationship between these features can be recognised, the subject-matter of Claim 1 does not involve an inventive step within the meaning of Article 56 EPC. Since Claim 1 is unallowable (Article 52 EPC) the main request has to be rejected.

6.2 Auxiliary request I

Claim 1 according to this request has the same wording as Claim 1 according to the main request. The considerations made in section 6.1 for the main request also apply for auxiliary request I which request has therefore to be rejected.

6.3 Auxiliary request II

Claim 1 according to this request differs from Claim 1 according to the main request in that the step of rotating the bale support is defined as continuously rotating, in that the sheet of film material is defined as being elongate and in that the overlapping close fitting fashion of the wrapping is defined as being continuous.

Since all these added features can be found in document D3 (column 2, lines 7 to 24) as well as in document D1 (page 9, lines 15 to 23), no inventive step can be acknowledged in Claim 1 according to this request which request has therefore to be rejected.

6.4 Auxiliary request III

Claim 4 according to auxiliary request III is directed to the use of an apparatus to perform a method of treating hay for silage-making.

Document D2 discloses the use of an apparatus to perform a method of treating crop for silage-making, in which a round bale of crop with a moisture content capable of forming silage is wrapped by applying sheets of impervious self-adhering plastic film material to said bale and applying the sheets to become wrapped around the bale in an overlapping close-fitting fashion so as thereby to form an air-tight package completely enveloping the bale, and then leaving the wrapped bale substantially sealed from the atmosphere for a sufficient period of time to allow the formation of silage within the package to occur, the apparatus including rotatable support means for rotating the bale about a substantially horizontal axis, and means for supplying sheets of plastic film to the bale, whereby the sheets become wrapped round the bale in an overlapping close-fitting manner (cf. above section 6.1.1).

The subject-matter of Claim 4 differs from this prior art in that:

- (c) the crop to be treated is "hay";
- (d) the bale is wrapped by applying an elongate sheet of film material by continuously rotating the bale about two axes simultaneously, whereby the film material becomes wrapped around the bale in a continuous overlapping position;
- (e) the apparatus includes a turntable for rotatably supporting a bale, the turntable being additionally rotatable about a substantially vertical axis.

Feature (c) above corresponds to feature (b) as defined in section 6.1.2. The features of the groups (d) and (e) substantially correspond to the features of the group (a) as defined in section 6.1.2. Since there is no functional interrelationship between the feature (c) on the one hand and the features of the groups (d) and (e) on the other hand, these features must be taken separately in considering whether the subject-matter of Claim 4 involves an inventive step (see section 6.1.3 above).

The features of the groups (d) and (e) can be found either in document D3 (see column 2, lines 7 to 24; Figures 1A to 1G) or in document D1 (see page 2, line 1 to page 4, line 11; page 9, lines 15 to 23; Figures 1, 2 and 9). As explained in section 6.1.4 above, it would be obvious for a skilled person to combine the teaching of either document D3 or document D1 with the prior art according to document D2 and to use such a modified apparatus to perform the method of treating crop for silage making as disclosed in document D2. A skilled person in the technical field of agriculture using that modified apparatus to perform the method of treating crop for silage making would also be guided by his common knowledge to use that apparatus to make silage starting from hay, particularly since these starting materials (hay or cereals) were commonly known as alternatives in silage making (cf. above section 6.1.5) and since there are no known prejudices which would make the use of that apparatus in relation with hay impossible or doubtful.

Therefore, the subject-matter of Claim 4 does not involve an inventive step within the meaning of Article 56 EPC.

Since Claim 4 is unallowable (cf. Article 52 EPC) auxiliary request III has to be rejected.

6.5 Since each of the requests made by the Appellant includes an independent claim which does not meet the requirements of Article 52 EPC, none of these requests represents a basis on which a patent may be granted.

Order

For these reasons, it is decided that:

The appeal is dismissed.

The Registrar:



N. Maslin

The Chairman:



C. Andries

JPS