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Bezeichnung der Erfindung:
Title of invention:
Titre de l'invention : A web of a plurality of interconnected bags, a bag obtained from this web and a method of manufacturing said web and apparatus for executing said method

Klassifikation / Classification / Classement : B65D 30/20, B31B 37/64

ENTSCHEIDUNG / DECISION

vom / of / du 11 December 1990

Anmelder / Applicant / Demandeur :

Patentinhaber / Proprietor of the patent /
Titulaire du brevet : WAVIN B.V.

Einsprechender / Opponent / Opposant :
01 Windmöller & Hölscher
02 Bischof + Klein Verpackungswerke GmbH & Co
03 Fardem B.V.
04 "Fix" Peter Steimel GmbH & Co KG

Stichwort / Headword / Référence :

EPÜ / EPC / CBE Articles 76, 100(c) and 123(2)

Schlagwort / Keyword / Mot clé : "Patent derived from divisional application - extension of subject-matter beyond content of parent application (yes)"

Leitsatz / Headnote / Sommaire

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Case Number : T 527/88 - 3.2.1

D E C I S I O N
of the Technical Board of Appeal 3.2.1
of 11 December 1990

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Decision under appeal :	**Decision of Opposition Division of the European Patent Office dated** 19 April 1988 **and posted** 20 July 1988, **revoking European patent No.** 0 064 321 **pursuant to Article 102(1) EPC.**

Composition of the Board :

Chairman : F. Gumbel

Members : S. Crane

F. Benussi

Summary of Facts and Submissions

I. European patent No. 0 064 321 was granted with effect from 18 September 1985 on the basis of European patent application No. 82 200 578.1 this being a divisional application from European patent application No. 80 200 429.1 filed on 8 May 1980 and claiming priority from Netherlands application No. 7 903 733 dated 11 May 1979.

II. The patent was opposed by the Respondents (Opponents 01 to 04, Opponent 04 having intervened in the opposition proceedings in accordance with Article 105 EPC) on the basis that its subject-matter lacked inventive step (Article 100(a) EPC) and extended beyond the content of the earlier (parent) application No. 80 200 429.1 as filed (Article 100(c) EPC).

III. The patent was revoked by the Opposition Division by a decision given at the oral proceedings on 19 April 1988 and communicated in writing to the parties on 20 July 1988.

According to the decision the subject-matter of the then valid product claims was not open to objection under Article 100(c) EPC, since it was not possible to identify in the finished product whether the transverse bottom seal had been formed in two stages as required by the parent application so that a limitation of the product claims in this respect would be meaningless. However, the subject-matter of these product claims did not involve an inventive step with regard to the cited state of the art.

As for the then valid method claims it was held that the absence of the features relating to the two-stage formation of the transverse bottom seal constituted an

extension of the subject-matter of the patent beyond the content of the parent application so that Article 100(c) EPC was prejudicial to maintenance of the patent in this respect.

IV. The Appellants (proprietors of the patent) lodged an appeal against this decision on 20 September 1988, the appeal fee being paid on the same day. The Statement of Grounds of Appeal, accompanied by amended documents, was received on 18 November 1988.

V. In a communication dated 4 July 1990 pursuant to Article 11(2) of the Rules of Procedure of the Boards of Appeal, in preparation for the oral proceedings requested by the Appellants and one of the Respondents, the Board expressed its concern that the ground of opposition under Article 100(c) EPC might apply not only to the method claims then on file but also to the product claims. Certain formal issues concerning the clarity and two-part form of these claims were also raised.

VI. In response to this communication the Appellants filed with a letter dated 23 November 1990, received on 27 November 1990, a new set of claims and correspondingly amended pages of the description.

Independent Claim 1 of these claims is worded as follows:

"A web of a plurality of interconnected rectangular plastics bags (27) from which at one end open bags can be separated with a gusset fold at both sides of each bag each gusset fold comprising a central (4,4a) and two outer longitudinal gusset fold edges (2,3,2a,3a) which bound a first (5,5a) and a second (6,6a) gusset fold part, the web being formed from a tubular plastic foil, each bag (27) of said web comprising

(a) a transverse bottom seal (12) extending substantially over the complete width of the web
(b) two first fold part seals (8,9; 10,11) at both sides of the web foil, which first fold part seals always connect an outer foil layer (1a,1b) with an opposite gusset fold part (6a,5a; 6,5), said first fold part seals extending between the central (4,4a) and outer longitudinal fold edges (2,3; 2a,3a) in the region of said transverse bottom seal (12) and diverging from said bottom seal (12) to the outer fold edges (2,2a; 3,3a);
(c) two second fold part seals (13,14; 15,16) at both sides of the web foil which second foil part seals always connect an outer foil layer (1a,1b) with an opposite gusset fold part (6a,5a,6,5) said second fold part seals extending between the central (4,4a) and outer longitudinal fold edges (2,3,2a,3a) at the end of the bag remote from the transverse seal of this bag, said second fold part seals converging from the outer longitudinal fold edges (2,3; 2a,3a) to the transverse seal (12) of a subsequent bag (27)
the pockets defined by the second fold part seals (13,14 respectively 15,16) and the outer fold edges (2,3 respectively 2a,3a) being open in the direction of the filling opening (28) starting from said second fold part seals
characterized in that at both sides of a bag an additional seal (30) extends substantially parallel to the fold edges and in the region between inner and outer fold edges, said additional seals (30)
interconnecting the first fold part seals (8,9,10,11) and the second fold part seals (13,14,15,16), and that the additional seals (30) extend adjacent the inner fold edges (4,4a)."

Dependent Claims 2 and 3 relate to preferred features of the web according to Claim 1.

Claim 4 relates to a bag obtained from a web according to Claims 1 to 3.

Independent Claim 5 is worded as follows:

"A method of producing a web of a plurality of interconnected rectangular plastic bags (27) from which at one end open bags can be separated with a gusset fold at both sides of each bag, each gusset fold comprising a central (4,4a) and two outer longitudinal gusset fold edges (2,3,2a,3a) which bound a first (5,5a) and a second (6,6a) gusset fold part by providing a stepwise supplied tubular plastics foil by heatsealing with
(a) two first fold part seals (8,9,10,11) at both sides of the web foil, which first fold part seals always connect an outer foil layer (1a,1b) with an opposite gusset fold part (6a,5a; 6,5) said first fold part seals extending between the central (4,4a) and outer longitudinal fold edges (2,3,2a,3a) in the region of a transverse bottom seal (12) to be formed in another sealing position and diverging from said bottom seal (12) to the outer fold edges (2,2a,3,3a);
(b) at a predetermined distance from said first fold part seals with two second fold part seals (13,14,15,16) at both sides of the tubular foil which second fold part seals always connect an outer foil layer (1a,1b) with an opposite gusset fold part (6a,5a,6,5) said second fold part seals extending between the central (4,4a) and outer longitudinal fold edges (2,3,2a,3a) at the end of the bag remote from the transverse seal of this bag, said second fold part seals converging from the outer longitudinal fold edges (2,3; 2a,3a) to the transverse seal (12) of a subsequent bag (27); and
(c) subsequently moving the tubular foil as thus obtained over a predetermined distance and immediately after having

reached another sealing position forming said transverse bottom seal (12) extending substantially over the complete width of the web,
the pockets defined by the second fold part seals (13,14 respectively 15,16) and the outer fold edges (2,3 respectively 2a,3a) being open in the direction of the filling opening (28) starting from said second fold part seals
characterized in that an additional seal (30) is formed at both sides of a bag in the region between the inner (4,4a) and outer (2,3; 2a,3a) fold edges each additional seal interconnecting the first fold part seals (8,9,10,11) and the second fold part seals (13,14,15,16) and that the additional seals extend adjacent the inner fold edges."

Dependent Claims 6 and 7 relate to preferred features of the method according to Claim 5.

VII. These documents formed the basis for discussion at the oral proceedings held on 11 December 1990 at which the parties presented arguments solely with respect to the ground of opposition under Article 100(c) EPC.

VIII. The arguments of the Appellants in this regard can be summarised as follows:

The skilled man, on reading the parent application, would immediately recognise that it related to two independent inventions, the first of which was claimed and the second not. The first invention was concerned with improving the quality and speed of production of the transverse bottom seal by performing the sealing operation in two stages. This two-stage operation, as described with reference to Figures 1 to 5, was an essential feature of that first invention as witnessed by the statement of problem and solution and the corresponding claims. The second

invention was portrayed in Figure 6 and was concerned with the problem of simplifying filling of a bag, the solution proposed being the provision of additional longitudinal seals between the diagonal gusset fold part seals. It would be clear to the skilled man that the provision of these additional seals to simplify filling could have nothing to do with improving the transverse bottom seal since these were wholly divergent considerations and the bag would be filled at a time long after the transverse bottom seal was formed. Accordingly he would associate the use of such additional seals not only with a bag having a transverse bottom seal formed in two stages, as particularly described, but also with a bag in which the transverse bottom seal is formed in one stage, as described in the statement of prior art present in the introductory description of the parent application.

That Figure 6 indeed related to a second invention was clear from the facts that in the short description of the drawings on page 4, Figure 6 is stated to show a variant of the web during formation, and not a variant of the method shown in Figures 1 to 5, and that on page 7, Figure 6 is introduced as showing "another embodiment of the seals to be applied" and not another embodiment of the method according to the invention. For the performance of the second invention the formation of the transverse bottom seal in two stages was inessential.

There was therefore a direct and unambiguous basis for the currently valid claims in the original disclosure of the parent application, as well as for the amendments made to the description and drawings of the contested patent in pre-grant proceedings which had the effect of removing all reference to the formation of the transverse bottom seal in two stages.

As for the question of whether it was possible to determine in the finished product whether the transverse bottom seal had been formed in two stages, which was in any case denied, this was in no way decisive on the issue of whether these features should appear in the main product claim, since the parent application in effect contained a clear disclosure of a web according to Claim 1 in which the transverse bottom seal was formed in one stage.

The application of the novelty test as proposed in Decision T 17/86 (OJ EPO 1989, 297) would show that the subject-matter of the currently valid claims was anticipated by the content of the parent application as filed, so that these claims were unobjectionable.

There was furthermore no provision of the European Patent Convention that prevented the filing of a divisional application for an embodiment that was clearly independent of and isolatable from the subject-matter of the parent application, even if this embodiment had not been the subject of claims in that earlier application.

The Appellants therefore requested that the decision under appeal be set aside and the patent be maintained in amended form on the basis of Claims 1 to 7 and the description as filed on 27 November 1990, together with the drawings of the patent specification.

As an auxiliary request they proposed deleting the method Claims 5 to 7 and amending the description accordingly.

IX. In reply the Respondents put forward in essence the following arguments:

It was apparent that the whole weight of the parent application lies in the question of how to improve the quality of the transverse bottom seam while at the same time allowing an increase in production speed of the web. When reaching the description of Figure 6 after having read the introductory description and the detailed description of the method according to Figures 1 to 5 the skilled man would consider this solely in the terms of a modification of that method in which additional seals are provided. The statement of the advantage in providing these seals is of such a vague and general character that the skilled man would attach no independent significance to it.

If, as the Appellants argued, the original disclosure of the parent application provided a clear basis for the currently valid claims of the contested patent, it was difficult to see why the originally filed description and drawings had been amended to eliminate reference to the formation of the transverse bottom seal in two stages. These amendments clearly generated subject-matter that went beyond the content of the parent application as filed.

The Decision T 17/86 referred to by the Appellants could be of no assistance to them since that case was concerned with the addition of features to a claim from the description and not with the deletion of features.

Furthermore, it could be readily established by way of appropriate tests or examination whether the transverse bottom seal had been formed in two stages or not. Even if this were not the case this feature would not be out of

place in a product claim since the method of production could determine whether an alleged infringement fell within the ambit of a claim.

The point was also forcibly advanced by one of the Respondents (Opponent 01) that in the interests of legal certainty it should be possible only in exceptional circumstances to file a divisional application for subject-matter that had not been claimed in the parent application. This followed from a consideration of the co-terminous use of the concepts "subject-matter" and "matter" in Articles 76(1) and 84 EPC as well as from the requirement of Article 78(1)(c) EPC that an application include claims. Thus in the present case even if, which was not admitted, the last paragraph of the description of the parent application could be seen as an implicit disclosure of a web in which the transverse bottom seals were formed in one operation instead of two as now covered by the claims of the contested patent, a divisional application to this subject-matter should not as a matter of principle be allowable.

The Respondents therefore requested dismissal of the appeal.

Reasons for the Decision

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

2. The outcome of the present appeal hinges on the question of whether or not the subject-matter of the contested patent extends beyond the content of the earlier (parent) application as filed, that is whether or not the ground of opposition under Article 100(c) EPC is a bar to maintenance of the patent.

In view of the fact that Article 76(1) EPC, which deals with the admissible subject-matter of a divisional application, Article 100(c) EPC, and Article 123(2) EPC, which deals generally with the issue of inadmissible extension, are worded equivalently in this respect, the Board shares the opinion expressed in Decision T 514/88 of 10 October 1989 that the case law developed by the Boards of Appeal of the EPO concerning infringements of Article 123(2) EPC is also relevant to the relationship between a divisional application, or a patent deriving from that application, and the earlier (parent) application.

2.1 In the Decision T 514/88 mentioned above a detailed analysis is made of several earlier decisions concerning the question of whether amendment by omission or deletion of a feature can lead to an objectionable addition of subject-matter. In particular the various tests and indicia that are suggested as appropriate tools for analysing specific cases, such as "essentiality" (Decision T 260/85, OJ EPO 1989, 105), "inessentiality" (Decision T 331/87, to be published), the "novelty test" (Decision T 201/83, OJ EPO 1984, 481, point 3) and the "novelty test applied to generalisations" (Decision T 194/84, OJ EPO 1990, 59) are compared and contrasted. This Board concurs with the conclusion reached there that these considerations are not necessarily contradictory but in fact can be subsumed under the common principle that the subject-matter of the amended application or of the patent must be directly and unambiguously derivable from, and consistent with, the original disclosure. The basis for the amendment, or as in the case in hand for the subject-matter of the divisional application or the patent deriving therefrom, need not be presented in express terms in the original disclosure but it must be sufficiently clear to a person skilled in the art to be directly and

unambiguously recognisable as such and not of a vague and general character.

2.2 Independent Claim 5 of the contested patent, the main method claim, does not include the feature of the only independent (method) claim of the parent application, that the transverse bottom seal is formed in two stages. Independent Claim 1, the main product claim, also contains no indication that the transverse bottom seal has been formed in two stages. It is, therefore, apparent that present Claims 1 and 5 include within their scope a web of interconnected bags and a method for making such a web wherein the transverse bottom seal is formed across the whole width of web in one stage. The description and drawings of the contested patent were furthermore amended during pre-grant proceedings to delete all reference to the two stage formation of this seal.

2.3 In order to decide whether the contested patent, in particular with respect to Claims 1 and 5, contains subject-matter extending beyond the content of the parent application as filed, it is necessary to consider in detail what this document discloses to the skilled man when read as a whole.

2.4 The introductory paragraphs of the parent application set out problems arising in the prior art when a transverse bottom seal is formed in one stage across the entire width of a web of interconnected bags with longitudinal gusset folds. These problems are due to the fact that in the region of the gusset folds four layers of foil have to be united together whereas in the central region of the web only two such layers are involved.

This is followed by a statement that the present invention aims to provide a method overcoming these disadvantages

and a consistory clause which repeats the wording of Claim 1. According to this the gusset folds are provided in a first step with bottom fold part seals and in a second step the central region of the web and the previously formed bottom fold part seals are heat-sealed together, thereby completing the transverse bottom seal.

The advantages of forming the seal in this way are then elucidated. Since in both sealing steps it is always only necessary to heat seal two layers with each other the quality of the seal is improved. Furthermore, it is possible to speed up production as the residual heat from the first step can be utilised to reduce the heating time in the second step.

The introductory description is completed by a second consistory clause corresponding in its terms to dependent Claim 2 and relating to the provision of diagonal seals in the gusset folds in a manner known per se.

The invention is then illustrated with reference to the drawings wherein Figure 1 shows a completed web, Figure 2 shows a member for forming seals in the gussets, Figures 3 to 5 show the web during its formation and Figure 6 shows a variant of the web during its formation.

The description of Figures 1 to 5 extends from page 4, line 17 to page 7, line 16 of the parent application. This is followed by a short six line description of Figure 6, which is stated here to show another embodiment of the seals to be applied, and which relates to the provision of an additional seal at each side of the web interconnecting the diagonal fold part seals of adjacent bags. This description does not mention the bottom fold part seals but they are in fact clearly shown and referenced in the

Figure. Finally, it is stated that an additional seal of this type "may simplify the filling of a bag".

2.5 The Board cannot accept the arguments of the Appellants that the unbiased skilled reader of the above detailed parent application would be directly and unambiguously led to the conclusion that Figure 6 concerned an independent concept unrelated to the method particularly described with reference to Figures 1 to 5. Taking into consideration that the whole thrust of the parent application is in the direction of a method in which the transverse bottom seals are necessarily formed in two stages, he would instead, in the light of what he has absorbed by the time he comes to the description of Figure 6, interpret this solely as being a modification of that particular method in which, furthermore, additional longitudinal seals are formed. The statement that these seals "may simplify filling of a bag" without any indication of how this is achieved is of a purely incidental nature and could not encourage the skilled man to conclude that these seals were of such significance in their own right that they should be considered as constituting a second distinct inventive concept independent of how the transverse bottom seals are formed.

This view is confirmed by a detailed comparison of what is actually shown in Figure 6 with what is shown in Figures 3 and 5. The latter illustrate the web being formed at two different stages of its production. In Figure 3 the diagonal gusset fold part seals and the bottom fold part seals have been formed in one heat sealing operation. At the next stage shown in Figure 5 the transverse bottom seal has been completed across the whole width of the web. These two stages have, apparently for convenience of drafting, been incorporated into Figure 6. In the bottom

half of the Figure, the diagonal fold part seals, the bottom fold part seals and the additional longitudinal seals are all shown, presumably because they are formed together in one heat sealing operation as suggested with respect to Figure 3. In the top half of the Figure the transverse bottom seal has been completed by a second heat sealing operation. From this it becomes clear that there is in fact, in contradiction to what is asserted by the Appellants, a technical inter-relationship between the bottom fold part seals and the additional longitudinal seals since they are evidently both formed by common heat-sealing members.

The fact that Figure 6 is described on page 4 as showing a variant of the web during its production and not a variant of the method of the invention cannot assist the Appellants since Figure 1 is also said to show a web "according to the invention", it being however clear that this invention lies in a method and not the web per se. Furthermore, the statement on page 7 that Figure 6 "shows another embodiment of the seals to be applied", which is also prayed in aid by the Appellants is simply an accurate statement of what is actually shown in Figure 6, the method elucidated with respect to Figures 3 and 5 being modified by the incorporation of the additional longitudinal seals.

2.6 A consideration of the Decision T 17/86 cited by the Appellants cannot lead to a different conclusion since that decision was concerned with a different set of circumstances, namely the incorporation into a claim of a feature isolated from a disclosed combination, and not, as in the present case, with the omission of an essential feature from a claim.

2.7 In the view of the Board, and as conceded by the Appellants, the issue of whether it can be established in the finished product if the transverse bottom seal was formed in two stages is not decisive to the question to be answered in this appeal. In any case the Respondents put forward convincing arguments during the oral proceedings that it would indeed be possible to establish how the transverse bottom seal had been formed. Thus, since a transverse bottom seal formed in two stages was of better quality than one formed in a single stage, the tearing behaviour of the two seals would be different. Furthermore, in a two-stage operation the heat sealing members for forming the bottom fold part seals would leave imprints that would not be totally obscured when in the second stage the full width seal is established. These imprints could be determined by detailed optical examination.

There is therefore no reason to consider the feature of two-stage formation of the transverse bottom seal as being wholly irrelevant in the context of the product claims.

2.8 Having regard to the above the Board comes to the conclusion that the web of interconnected bags and the method of making it as described and claimed in the contested patent, insofar as the transverse bottom seals are formed in one stage, extend beyond the content of the parent application as filed since they are not directly and unambiguously derivable therefrom. The ground of opposition under Article 100(c) EPC is therefore prejudicial to the maintenance of the patent in both the form corresponding to the main request and that corresponding to the auxiliary request. In view of this finding it would be superfluous to consider here the wider issues concerning the filing of divisional applications as put forward by one of the Respondents (Opponents 01).

Order

For these reasons, it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

S. Fabiani F. Gumbel