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D E C I S I O N
of 30 January 2003

Case Number: T 0172/01 - 3.2.7

Application Number: 93905360.9

Publication Number: 0630337

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Language of the proceedings: EN

Title of invention:
Method for packaging of bulk goods into a unit-load package and a unit-load package for bulk goods

Patentee:
UPM-Kymmene Oy

Opponent:
Boots, Gerardus Anthonius Maria

Headword:
-

Relevant legal provisions:
EPC Art. 54, 56

Keyword:
"Novelty (no)"
"Inventive step (no)"

Decisions cited:
-

Catchword:
-

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Case Number: T 0172/01 - 3.2.7

D E C I S I O N
of the Technical Board of Appeal 3.2.7
of 30 January 2003

Appellant: (Opponent)
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Decision under appeal: **Interlocutory decision of the Opposition Division of the European Patent Office posted 8 December 2000 concerning maintenance of European patent No. 0 630 337 in amended form.**

Composition of the Board:

Chairman: A. Burkhart
Members: H. E. Felgenhauer
J. H. P. Willems

Summary of Facts and Submissions

I. The appellant (opponent) filed an appeal against the interlocutory decision of the Opposition Division maintaining the European patent No. 0 630 337 in amended form.

The opposition has been filed against the patent as a whole based on the grounds of opposition according to Article 100(a) EPC (lack of novelty and inventive step).

The Opposition Division held that the grounds for opposition did not prejudice the maintenance of the patent in its amended form.

In addition to documents

D5: EP-A-0 401 934 and

ED1: EP-A-0 122 864

relied upon in the opposition proceedings, within the appeal proceedings an alleged prior public use according to

D11...Telefax by Mr Erkki Koskinen, dated 8 January 1992 (document 11.1) with attached telefax copy of a brochure sheet having the title "EXIM's Q-bag" (document D11.2), copy of this sheet of the brochure (D11.3) and an enlargement of a figure of this sheet (D11.4),

and as evidence for general technical knowledge

D12..."FLEXIBLE INTERMEDIATE BULK CONTAINERS/BAGS"; Loadstar Publications, London, 1988; table of contents and pages 45 to 64

have been considered.

II. Oral proceedings before the Board of Appeal were held on 30 January 2003.

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

(ii) The respondent (patent proprietor) requested that the appeal be dismissed (main request), and as first and second auxiliary request that the patent be maintained in amended form with claims 1 to 14 or claims 1 to 13 respectively filed 29 January 2003.

Claim 1 according to the main request and the first auxiliary request reads as follows:

"1. Method for packaging bulk goods into a unit-load package, wherein

(a) a single inner package (11) made of a resilient material and provided with a reinforcement structure (19a, 19b, 19c, 19d, 19e, 19f, 19g, 19h) is placed on a base (13),

(b) the inner package (11) is then filled with bulk goods, whereby, during the filling, the inner package (11) substantially obtains the form of a parallelepiped, characterised in that

(c) the inner package (11) and the base (13) are then surrounded with an outer package (16, 16a, 16b, 16c) of plastic foil material, whereby a stable transportation package is formed."

Claim 15 according to the main request reads as follows:

"15. A unit-load package for bulk goods, which package consists of an inner package (11) and an outer package (16, 16a, 16b, 16c), wherein the inner package (11) is a single inner sack made of a flexible material and provided with a reinforcement structure (19a, 19b, 19c, 19d, 19e, 19f, 19g, 19h), which sack has been placed on a base (13) for the time of filling with bulk goods, preferably by suspending or supporting it above the base (13), characterised in that the outer package is an outer package which is made of plastic foil material and which surrounds the inner package and the base tightly and gives it adequate stability, wherein the base (13) in the form of a pallet is for lifting the unit-load package from below.

Claim 1 according to the second auxiliary request reads as follows:

"1. Method for packaging bulk goods into a unit-load package, wherein

(a) a single inner package (11) made of a resilient material and provided with a reinforcement structure (19a, 19b, 19c, 19d, 19e, 19f, 19g, 19h) is placed on a base (13),

(b) the inner package (11) is then filled with bulk

goods, whereby, during the filling, the inner package (11) substantially obtains the form of a parallelepiped, characterised in that

(c) the inner package (11) and the base (13) are then surrounded with an outer package (16, 16a, 16b, 16c) of plastic foil material, whereby a stable transportation package is formed,

(d) the inner package (11) filled with bulk goods is subjected to negative pressure, whereby the inner package (11) is pressed tightly around the bulk goods, and

(e) the inner package (11) that has been filled with bulk goods and subjected to negative pressure is surrounded with an outer package (16, 16a, 16b, 16c) of plastic material."

III. The appellant argued essentially as follows:

(i) The package according to claim 15 (main request) lacks novelty with respect to the document D11.2, since this publication discloses all of the structural features of claim 15 and since the method feature of this claim, according to which the "sack has been placed on a base for the time of filling with bulk goods", cannot be considered in assessing the novelty of the package according to claim 15.

(ii) Concerning the method of claim 1 (according to the main request and the auxiliary request) the document D11.2 constitutes the closest prior art. As it is the case with respect to the

package according to claim 15, the structural features of claim 1, relating to the inner package, the outer package and the base, are known from the document D11.2. Claim 1 thus is distinguished from this prior art only with respect to the features defining method steps and their sequential order.

In case it being desired that an inner package, like the Q-bag referred to in the document D11.2, is to be placed on a pallet as shown in this document, then it is obvious that the method of filling such an inner sack and of applying an outer package comprises the method steps defined by claim 1, these steps likewise being performed in the sequential order defined by this claim.

The method according to claim 1 thus does not involve an inventive step.

(iii) The method according to claim 1 of the second auxiliary request comprises, in addition to claim 1 of the main and of the first auxiliary request, features according to which the inner package filled with bulk goods is subjected to negative pressure, whereby the inner package is pressed tightly around the bulk goods, whereupon the inner package is surrounded with an outer package of plastic material.

Since the inner package obtains its shape during filling due to the provision of a reinforcement structure and since such an inner package is stable, provision of negative pressure, to

further enhance stability of the inner package, is normally not required. If, under particular conditions, it is evidenced that the form stability is insufficient, then it will be apparent that reducing the pressure within the inner package will increase its stability, since such an effect that negative pressure has on resilient packages filled with bulk goods is well known and within the general technical knowledge as represented e.g. by document D12.

Therefore the method according to claim 1 of the second auxiliary request also does not involve an inventive step.

IV. The respondent argued essentially as follows:

(i) Although it remains undisputed, that the document D11.2 belongs to the prior art and thus has to be considered, the package according to claim 15 (main request) is novel with respect to this prior art. The reason being that within claim 15 the inner package is referred to as being a "single" inner sack, whereas the Q-bag referred to in publication D11 constitutes an inner package being made of two sacks.

(ii) Having regard to the subject-matters of claim 15 and of claims 1 (according to the main request, the first auxiliary request and the second auxiliary request) and considering the document D11.2 as constituting the closest prior art, it needs to be taken into account that the inner package referred to in these claims and the one disclosed in the document D11.2 are of a

different structure. According to the document D11.2 the inner package is a bag, which has sufficient strength by itself, such that it can be lifted via the shown lifting loops. This inner package is additionally provided with an outer package in order to provide, together with a pallet as a base, a stable transportation package. According to the patent in suit the inner package need not be provided with lifting loops and thus it does not have to be of a strength which enables it to sustain the forces which arise when a package is lifted via its lifting loops. Consequently the inner package referred to in the claims of the patent in suit differs from the known inner package in that it does not have to be as strong as the one according to the document D11.2.

Furthermore, with respect to the method according to claim 1, it needs to be considered that the known Q-bag, disclosed in the document D11.2 as inner package, is not required to be placed on a base for filling since it is provided with lifting loops by means of which it can be held during filling. Consequently the package disclosed in the document D11.2 neither leads to a package as defined by the structural features of claim 1 nor to the method steps defined therein.

(iii) This applies the more with respect to claim 1 according to the second auxiliary request since neither document D11.2 nor any other of the cited documents suggests that, if the stability of the inner package proves to be inadequate

with regard to it being surrounded by the outer package, the stability of the inner package will be increased by subjecting the inner package filled with bulk goods to negative pressure. This approach of increasing the stability of the inner package filled with bulk goods by subjecting the interior of the inner package to negative pressure must not be confused with the application of negative pressure according to document D12 since this document mainly concerns the application of a negative pressure to improve, in a well known manner, the conditions under which a sack is filled with bulk goods. Consideration of the teaching of document ED1, according to which for a flexible sack filled with bulk goods the form stability can be increased by its interior being subjected to negative pressure, likewise does not lead to the subject-matter of claim 1 since no indication is given to apply this teaching under the particular conditions of the method according to claim 1, according to which an inner package is subjected to an inner pressure in order to further stabilise it for the subsequent step, within which the inner package is surrounded with an outer package.

Reasons for the Decision

1. *Amended claims*

The Board considers in line with the decision of the opposition division (cf. paragraph 10.4) that in the light of the description the amendments according to

which the expression "a single inner sack" replaces the expression "an inner sack" or, respectively, the expression "a single inner package" replaces the expression "an inner package" within claim 15 of the main request and within claims 1 of the main request and the two auxiliary requests, repectively, are to be understood as relating to the number of sacks constituting an inner package and not, as alleged by the respondent, to the structure of an inner sack. The interpretation relied upon by the respondent, according to which the expression "a single inner package" defines a single-layered inner package, as compared to an inner package having a multilayer structure, cannot be adopted since such an interpretation lacks any basis in the decription and the drawings of the patent in suit.

The amended expressions are thus, in line with the description and the drawings of the patent in suit, considered as having the meaning that the inner package is comprised of only one inner sack or one package, e.g. as compared to an inner package which on the contrary is composed of a number of stacked inner sacks or packages.

Based on these interpretations of the expressions indicated above the amended claims are, which has not been disputed, admissable with respect to Articles 84 and 123(2) and (3) EPC.

2. *Main request*

2.1 Novelty

Lack of novelty has been alleged only with respect to

claim 15 (of the main request).

It remains undisputed that document D11.2 (in the following: EXIM brochure), constitutes the closest prior art. It is further undisputed that this EXIM brochure discloses, with respect to the subject-matter of claim 15 of the main request, a unit-load package for bulk goods, which package consists of an inner package (cf. the figures and the description relating to a Q-bag) and an outer package, wherein the inner package is an inner sack made of a flexible material and provided with a reinforcement structure, and wherein the outer package is made of plastic foil material and surrounds the inner package and the base tightly (cf. the photograph showing a package comprising a Q-bag as an inner package, a pallet as a base and a plastic foil material surrounding the inner package and the base tightly) and gives it adequate stability, wherein the base in the form of a pallet is for lifting the unit-load package from below.

It also remains undisputed that the feature of claim 15 defining that the sack has been placed on a base for the time of filling with bulk goods, preferably by suspending or supporting it above the base, is a feature relating to a method step which, since it is no longer detectable on the package defined by claim 15, cannot be considered in the examination with respect to novelty of claim 15.

According to the respondent a feature distinguishing the package according to claim 15 of the main request from the package according to the EXIM brochure results from an interpretation of the expression "single inner sack", which deviates from the one adopted by the Board

as indicated in section 1 above. According to the interpretation relied upon by the respondent, the expression "single inner sack" has to be seen as defining an inner sack being of a single-layered structure. In contrast the inner sack known from the EXIM brochure is of a different structure, in that it is double-layered.

Following the meaning of the expression "single inner sack" adopted by the Board (cf. section 1 above) results in claim 15 lacking a feature distinguishing the inner sack by its structure from the one according to the EXIM brochure. Furthermore it follows that the feature according to which "the inner package (11) is a single inner sack" cannot be considered as a distinguishing feature, since the inner package according to the EXIM brochure is likewise a single inner sack. In other words: as it is the case for the package according to claim 15 the package according to the EXIM brochure comprises only one inner sack and not a number of stacked sacks .

The argument of the respondent, according to which a further feature distinguishing the package according to claim 15 from the known package resides in the fact that according to the description of the patent in suit (cf. column 3, lines 27 to 34) the inner sack, as referred to in claim 15, does not have to be of a strength enabling it to be carried by itself via lifting loops, while on the contrary the known Q-bag is shown with such lifting loops and thus has to be of higher strength, cannot be considered since claim 15 does not comprise a corresponding feature. In this connection it needs also to be considered that, according to a feature of claim 15 and according to

claims 8 and 9 of the patent in suit, the inner sack can be suspended or supported above the base while it is filled, which likewise requires an adequate strength of the inner sack.

Therefore claim 15 thus lacks novelty (Article 54 EPC) since all of its structural features are known from the package disclosed by the EXIM brochure.

Consequently, the main request is not allowable.

3. *First auxiliary request*

3.1 Inventive step

3.1.1 Closest prior art

It is undisputed that the EXIM brochure also constitutes the closest prior art concerning the method claims.

With respect to claim 1 according to the first auxiliary request the EXIM brochure discloses a package having the structural features of the package defined in claim 1 (cf. section 2 above). Within this brochure the method step of filling the inner package is not referred to in detail and the method step performed to apply the outer package is not referred to at all. The method of claim 1 is thus distinguished from the disclosure of the EXIM brochure by the method features of claim 1, defining that

- a single inner package ... is placed on a base (part of feature (a)) ,

- the inner package is then filled with bulk goods, whereby, during the filling, the inner package substantially obtains the form of a parallelepiped (feature (b)), and that

- the inner package and the base are then surrounded with an outer package of plastic foil material (part of feature (c)).

3.1.2 Problem

The distinguishing features indicated above essentially define, that the inner package is placed on a base and thereafter filled and that after having been filled, and thus having obtained its form as parallelepiped, the inner package and the base are surrounded with an outer package.

With respect to the EXIM brochure, the problem underlying claim 1 can thus be seen in providing a method which leads to the package filled with bulk goods as disclosed by this brochure.

3.1.3 Solution

Based on the structure of the package known from the EXIM brochure, which corresponds to the structure of the package defined by claim 1 of the patent in suit, this problem is solved by the method features of claim 1 identified above (cf. section 3.1).

3.1.4 Obviousness

The solution according to claim 1 is obvious to the person skilled in the art for the following reasons.

Starting from the package known from the EXIM brochure, in an attempt to package bulk goods in a manner resulting in the package disclosed in this brochure, the person skilled in the art has to decide on the location at which the inner package will be placed during filling and on the sequential order in which the outer package will be provided.

It is common practice to fill packages of resilient material while these packages are placed on a base. As evidence for this common practice document D12, page 46, is referred to, where according to the upper left and the upper right figure the package is placed on a pallet and a conveyor, respectively, as base.

Also for economic considerations it is apparent that handling operations with respect to inner packages are to be kept to a minimum, which in particular applies with respect to inner packages already filled. It is thus also for this reason an obvious choice to first place a - still empty - inner package, corresponding to parts of features (a) and (b) on a base, like the pallet shown in the photograph of the EXIM brochure, and thereafter to fill this inner package.

The method features relating to the location of the inner package during filling thus cannot contribute to inventive step being involved.

Since the known inner package in the form of a Q-bag is, like the inner package according to claim 1, made of a resilient material and provided with a reinforcement structure it will, corresponding to the inner package of claim 1, substantially obtain the form of a parallelepiped (cf. the figures relating to the

Q-bag within the EXIM brochure) during filling.

It is then obvious that, corresponding to feature (c), the inner package will - after having been filled - be surrounded by the outer package.

That the time sequence defined by features (b) and (c) is the natural choice can also be derived from the fact that, in case this sequence is reversed, the outer package would have to be provided with an opening allowing the filling of the inner package and the latter needs to be brought into its form of a parallelepiped prior to filling. It is not only apparent that such additional requirements would make the method of packaging bulk goods into a unit-load package less economical but also that by reversal of the steps of providing the outer package and of filling the inner package this disadvantage can be avoided.

The method of claim 1 is likewise suggested by the EXIM brochure considering the argument of the respondent according to which the inner package according to claim 1 differs from the known Q-bag with respect to the strength the inner pack is required to have in either case. According to this argument the Q-bag is provided with lifting loops and thus needs to have a strength adequate for it being lifted by itself via these lifting loops. As indicated in the description of the patent in suit (cf. column 3, lines 27 to 34) the inner package according to claim 1 can be of lower strength since such a lifting capacity is not required. Even if this argument is considered despite the fact that claim 1 does not comprise a corresponding feature and that according to claims 8, 9 or 7, 8 according to the main request and the first auxiliary request,

respectively, the inner package can be suspended or supported above the base, such an additional consideration cannot lead to inventive step being involved. The reason being that it depends only on the further use of the inner pack whether or not it will be provided with lifting loops and a strength sufficient to be handled by itself and without being supported by a base. Knowing from the EXIM brochure that an inner package is - together with a base - surrounded with an outer package even though the inner package has lifting loops and apparently a strength sufficient for it to be handled without a base being required the person skilled in the art will apply the known approach the more in case the inner package is of lower strength such that it cannot be handled without being supported on a base.

3.1.5 Therefore, the method of claim 1 of the first auxiliary request does not involve an inventive step, and consequently, the first auxiliary request is not allowable.

4. *Second auxiliary request*

Claim 1 according to the second auxiliary request differs from claim 1 according to first auxiliary request in that the method features are added, according to which

(d) the inner package filled with bulk goods is subjected to negative pressure, whereby the inner package is pressed tightly around the bulk goods, and

(e) the inner package that has been filled with the

bulk goods and subjected to negative pressure is surrounded with an outer package of plastic material.

These features likewise distinguish the method according to claim 1 from the method derivable from the EXIM brochure as indicated above (section 3.1.4).

According to the patent in suit (column 2, lines 41 to 57) during packaging of bulk goods of very low inner friction the inner package itself obtains the shape of a parallelepiped because of its reinforcement structure. In case the stability of the inner package alone remains inadequate in view of the subsequent step within which the inner package is surrounded by the outer package, the inner package is subjected to negative pressure after the filling and before it is closed. In such a case the inner package is pressed tightly around the bulk goods leading to the stability of the inner package being increased.

The problem to be solved with respect to the method derivable from the EXIM brochure can thus be seen in providing a method within which, in case it being required, the stability of the inner package is increased.

This problem is solved in that within the method derivable from the EXIM brochure the inner package is subjected to negative pressure according to features (d) and (e).

The approach of stabilising a package of resilient material filled with bulk material by subjecting its interior to a negative pressure is well comprised

within the general technical knowledge. It can, for example, be derived from document ED1. According to this document (cf. page 5, lines 30 to 37; page 6, lines 33 to 36) application of a negative pressure can serve two distinctive purposes, namely to conserve the material filled into a package and to stabilise the form of the package. That the application of a negative pressure for the last mentioned purpose is generally known can further be derived from the general technical knowledge given by document D12 (cf. page 48, left column, last paragraph), according to which compaction of material filled into a flexible package or removal of fluidising air at filling can be required for the stability of a package.

Thus, the features distinguishing the method according to claim 1 from the method derivable from the EXIM brochure are well known within the general technical knowledge. Thus, if within the known method the stability of the inner package is detected as being insufficient with respect to the inner package being surrounded by the outer package, which will be readily apparent, then for the person skilled in the art it is obvious that the stability of the inner package can be easily enhanced by subjecting the inner package to negative pressure.

Application of this well known approach is all the more obvious as it merely requires that negative pressure, which is known to be applied during filling of bulk material into flexible bags for the purpose of dust removal and to provide a seal (cf. D12, e.g. page 46, the paragraph briding the left and right column), needs only be further utilised for the likewise well-known

purpose of stabilising the flexible package (ED1: page 5, lines 30 to 37; page 6, lines 33 to 36; D12: page 48, left column, last paragraph).

Therefore, the method of claim1 of the second auxiliary request does not involve an inventive step, and consequently, the second auxiliary request is not allowable.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

D. Spigarelli A. Burkhart