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D E C I S I O N
of 13 May 1997

Case Number: T 0845/95 - 3.2.1

Application Number: 87102481.6

Publication Number: 0243598

IPC: B65D 5/06, B65D 5/74, B65D 5/40

Language of the proceedings: EN

Title of invention:
Blanks for packing containers

Patentee:
AB TETRA PAK

Opponent:
Elopak Systems AG

Headword:
-

Relevant legal provisions:
EPC Art. 56, 104

Keyword:
"Inventive step - (no)"
"Late submitted amendments - not considered"
"Award of costs - (no)"

Decisions cited:
T 0095/83, T 0153/85

Catchword:
-



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Boards of Appeal

Chambres de recours

Case Number: T 0845/95 - 3.2.1

D E C I S I O N
of the Technical Board of Appeal 3.2.1
of 13 May 1997

Appellant:
(Proprietor of the patent) AB TETRA PAK
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 22 September 1995
revoking European patent No. 0 243 598 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: F. Gumbel
Members: S. Crane
G. Davies

Summary of Facts and Submissions

- I. European patent No. 0 243 598 was granted on 15 December 1993 on the basis of European patent application No. 87 102 481.6.
- II. The granted patent was opposed by the present respondents on the basis that its subject-matter lacked novelty and/or inventive step (Article 100(a) EPC) having regard to the state of the art disclosed in the following documents:
- (E1) US-A-4 362 245
(E2) US-A-3 116 002
(E3) SE-B-315 243
- III. With its decision posted on 22 September 1995 the Opposition Division revoked the patent. The reason given for the decision was that the subject-matter of at least granted claim 1 lacked inventive step with respect to documents E1 and E2.
- IV. An appeal against this decision was filed on 10 October 1995 and the fee for appeal paid at the same time.

The statement of grounds of appeal was filed on 10 November 1995. With the statement of grounds the appellants (proprietors of the patent) submitted a new set of claims and replacement pages for part of the description.

The new claim 1 reads as follows:

"A blank for folding and sealing to form a container, which blank has at one end a transverse running edge zone (9) for folding and sealing to form a fin (10), within which edge zone (9) is provided a line of weakness (15p) running along the edge zone (9),

characterized in that

a seal inhibiting composition is provided on adjoining surfaces (17-20) of said edge zone (9) on the container interior side of the line of weakness (15p)."

V. Oral proceedings before the Board were held on 13 May 1995.

At the oral proceedings the appellants requested maintenance of the patent in amended form on the basis of claim 1 as filed on 10 November 1995, dependent claims 2 to 5 as granted, the amended description as filed on 10 November 1995 and the drawings as granted (main request). In the alternative they requested the maintenance of the patent in amended form on the basis of a claim 1 submitted at the oral proceedings (auxiliary request).

Claim 1 according to the auxiliary request reads as follows:

"A rectangular blank for folding and sealing to form a container, which blank has at one end a transverse running edge zone (9) for folding and sealing to form a fin (10), within which edge zone (9) is provided a line of weakness (15p) running along the edge zone (9),

characterized in that

said line of weakness (15p) is formed along a line between and parallel with a top line (10a) and a foot line (10b) of said fin (10), and

a seal inhibiting composition is provided on adjoining surfaces (17-20) of said edge zone (9) on the container interior side of the line of weakness (15p)."

The respondents requested that the appeal be dismissed. They also requested an apportionment of their costs for the appeal proceedings.

VI. The arguments put forward by the appellants can be summarised as follows:

The claimed invention was directed to the solution of a problem which had long been recognised in the art, namely the provision of a container made from a folded blank which container was both easy to open without any tools and also liquid and air-tight. It could be seen from documents E2 and E3, which had been published in 1963 and 1969 respectively, that the essential individual elements of the claimed invention, namely the provision of a line of weakness in the blank to facilitate tearing of the container in a particular way and the use of a seal inhibiting composition to facilitate separation of particular surfaces of the container to form a pouring spout, had both been known individually in the art for a considerable time. Yet up to the time the invention was made nobody had thought of combining these elements in the way claimed to give a simple and effective solution to the well-recognised technical problem involved. This was clearly indicative of an inventive step, especially as the packaging field was an extremely active one in which small technical improvements could bring large commercial gain.

The Opposition Division had argued that it would be obvious to use a seal inhibiting composition, as disclosed in document E2, to prevent sealing of certain areas of the blank disclosed in document E1. However, document E1 clearly taught that these areas should not be sealed at all, whereas it was clear from the patent specification that the seal inhibiting composition was only intended to reduce the degree of sealing but not to eliminate it completely. The person skilled in the art would therefore not have considered the use of such a composition as being compatible with what was required in document E1. Furthermore, in document E2 the areas provided with the seal inhibiting composition did not adjoin each other in order to leave areas in the region of the fold lines of the blank which would be sealed to each other in order to give the required liquid/air-tightness. These sealed areas, which made the container more difficult to open, were not present in the claimed invention.

In claim 1 of the auxiliary request it had been specified that the blank was "rectangular" and that there was only one line of weakness, which was parallel to the top line and foot line of the fin, thus distinguishing it further from what was disclosed in documents E1 and E3.

VII. In reply the respondents argued substantially as follows:

The term "line of weakness" as used in claim 1 was broad enough in its ambit to cover a scored fold line of a blank, since such a line weakened the material of the blank and encouraged a tear, once started, to follow it. In view of this the subject-matter of the claim lacked novelty with respect to document E2.

If novelty were however to be recognised then the proper starting point for evaluating inventive step was document E1. This taught how an easily opened container could be made by providing a tear line in the sealing fin of the container with the area of the fin below the tear line as far as possible not being sealed. Thus, once the top strip of the fin above the tear line had been torn off, the sides of the container could be readily separated from each other to form a spout. Document E1 did not indicate how the non-sealing of the relevant areas of the fin was to be achieved. In view of the technical practicalities involved it was obvious for the person skilled in the art to do this by applying a seal inhibiting composition, as well known *per se* from document E2 and the commercial realisation of that proposal.

The respondents were entitled to an apportionment of their costs since the appellants had introduced a completely new issue into the appeal proceedings, namely the benefits of a "reduced" seal, when these purported benefits were not mentioned in the patent specification and had not been advanced before the Opposition Division.

Reasons for the Decision

1. The appeal complies with the formal requirements of Articles 106 and 108 and Rules 1(1) and 64 EPC. It is therefore admissible.
2. *Background to the claimed invention; state of the art*
 - 2.1 Containers for liquid products which have been formed by folding and sealing together the edges of a paperboard blank are to be found on supermarket shelves

and in household larders everywhere. The paperboard blank is conventionally a laminate comprising inner and outer layers of polyethylene or the like. Under the application of appropriate temperatures and pressure two of these layers will form a mechanical bond which is also liquid-tight. This operation is known as "heat-sealing". The blanks for forming the containers are generally delivered to the packaging plant in a flat condition and are provided with fold lines along which the blank is folded and sealed to form the finished container. Initially the blank will be folded and sealed along a longitudinal seam to form a tube; bottom panels are then folded in and sealed to close the bottom of the tube; the partially formed container is then filled with the product to be packaged; finally top panels are folded together and sealed to close the container. The top closure end of the package is conventionally of gable-top form (with a ridge-roof-like configuration) or of the block type (with ears folded down over the sides of the container). In both cases the actual seal at the closure end of the container takes the form of a sealing fin. With a "gable-top" container the fin is the same width as the container and, as a result of the folded-in top sides of the blank, will generally be of four blank thicknesses. With a "block" container the sealing fin comprises only two blank thicknesses and after completion of the container lies substantially flat on its top surface and ears.

Most consumers will also have had experience of opening this type of container without the assistance of kitchen tools and also, perhaps, of spilling some of the contents while doing so. Three prior art proposals for facilitating the opening of a container of this type are found in documents E1 to E3, which are considered in more detail below.

- 2.2 Document E2, published in 1963, relates to a gable-top container in which certain areas of the edge zone of the blank which on forming the container will constitute its sealing fin are coated with a polysiloxane material that resists the formation of a permanent seal between these areas as the container is closed. This therefore facilitates the opening out of one end of the closure by opposed thumb pressure and then snapping out of the roof and end panels of the blank to form a pouring spout. According to the respondents containers of the type disclosed in document E2 are still in widespread use today.
- 2.3 Document E3, published in 1969, proposes a gable-top container in which the sealing fin is provided with a line of weakness along which it can be torn to remove an uppermost strip thereof which is preferably half as long as the fin. The fin is not heat-sealed over its whole area but only along a relatively narrow line which lies above the line of weakness. Once the strip has been torn off, it is easy to separate the top panels of the blank to form a spout in the manner described above in the reference to document E2.
- 2.4 Document E1, published in 1982, relates to a blank for a block-type container which has a line of weakness provided in the sealing fin extending across approximately half of its width. The facing areas of the fin-forming areas of the blank beneath the line of weakness remain substantially unsealed as the container is formed. After the corresponding ear of the container has been lifted, the upper strip of the fin above the line of weakness can be readily torn off to define a pouring spout.

3. *The claimed invention (main request)*

Claim 1 of the main request is in very general terms and extends to blanks for forming both "gable-top" and "block" type containers, amongst others. Indeed, although the finished forms of the closures are quite distinct, the general pattern of fold lines required in the respective blanks is virtually identical. This well-known pattern, which is not specified in the claim, includes longitudinal fold lines which effectively divide the transverse running, fin-forming, edge zone into a number of panels. In comparison with claim 1 as granted, claim 1 of the main request requires that a seal inhibiting composition is provided on "adjoining surfaces" of the edge zone. Taken by itself that statement is not particularly clear. However, in the light of the description, it can be understood as meaning that the seal inhibiting composition is provided on at least two surfaces of the edge zone which adjoin each other at a longitudinal fold line.

In the course of the appeal proceedings, the appellants have referred to the passage at lines 49 to 53, column 3, of the patent specification according to which pretreatment of appropriate portions of the blank "reduces" their "sealing capacity" and seek to have the term "seal inhibiting composition" as used in claim 1 understood in a corresponding way, i.e. as a "seal reducing" but not "seal preventing" composition. The Board cannot accept that proposition. As a matter of language the term "inhibiting" clearly extends to both preventing and reducing something. That view is supported by the patent specification itself at lines 1 to 5, column 4, where it is stated that the pretreatment may involve the covering of the plastics layer with a coating "inhibiting or weakening" the seal, consisting for example of a polysiloxane material

(i.e. the same as proposed in document E2).

4. *Novelty and inventive step (main request)*

4.1 In the opinion of the Board the fold lines in the fin-forming edge zone of the blank shown in figures 4 and 5 of document E2 cannot be equated to a "line of weakness" in the sense this is used in the contested patent, i.e. a line along which the material of the blank is weakened with the purpose of facilitating tearing of the blank. Thus the subject-matter of claim 1 according to the main request is novel with respect to the disclosure of document E2.

4.2 The most appropriate starting point for the evaluation of inventive step is the blank disclosed in document E1, since of the three cited prior art documents this is the only one which relates to a container having a sealing fin the layers of which, in a manner corresponding to the container described in the contested patent, are heat-sealed together over their whole extent except for the area lying below a line of weakness provided in the fin.

Document E1 does not disclose how in practical terms the heat-sealing of that area below the line of weakness is to be avoided. In view of the technical considerations involved, a modification of the heating means (hot air jets) conventionally used to heat the edge zone of the blank before closing jaws complete the seal would be very problematic. The person skilled in the art knows however from document E2 that heat-sealing in relatively precisely bounded areas of the blank can be achieved by applying a coating of a seal-inhibiting composition to those areas. It would therefore be obvious for him to apply such a coating to the whole of the area of the fin-forming edge zone of

the blank of document E1 which is not to be sealed. Since that area extends over two longitudinal fold lines of the blank, it is inevitable that the seal inhibiting composition would then be provided on "adjoining surfaces" of the blank as required by claim 1.

In support of their view that the subject-matter of claim 1 involves an inventive step, the appellants relied especially on the relative age of documents E2 and E3 and as a corollary thereto that the appellants had satisfied a long-felt need for a container which could be readily opened but was nevertheless fluid-tight. In the latter respect it would seem however that the proposal of document E2 is still being used commercially today, which would point against any urgent need for a replacement. Furthermore, as regards the age of the citations, it must be noted that the closest state of the art, document E1, was published only a relatively short time (less than four years) before the priority date of the contested patent.

Having regard to the above the Board has come to the conclusion that the subject-matter of claim 1 according to the main request lacks inventive step (Article 56 EPC).

5. *Auxiliary request*

It belongs to the established case law of the Boards of Appeal that the admission of amended claims into appeal proceedings, particularly when the amendments are first submitted at oral proceedings, is at the discretion of the Boards, see for example T 95/83 (OJ EPO 1985, 75) and T 153/85 (OJ EPO 1988, 1). The factors which need to be taken into account when exercising this discretion include whether the amended documents are clearly allowable, firstly in the sense of conforming

with the formal requirements of the EPC and secondly in the sense of having at least a reasonable prospect of removing the outstanding substantive objections against the documents previously on file.

In the present case a feature has been added to the preamble of the claim, namely that the blank is "rectangular", which is not clearly derivable from the original disclosure. It is indeed said there that the blank is "substantially rectangular" but since its bottom edge is not shown and particularly since it is well-known that this bottom edge may be formed with flaps etc. for facilitating forming the bottom closure, it is not clear that the blank is "rectangular" in the strict sense that the appellants intend. Furthermore, the feature added to the characterising clause of the claim that the line of weakness "is formed along a line between and parallel with a top line and a foot line of said fin" is also clearly disclosed in document E1, so that it is difficult to see how this feature could have any bearing on the evaluation of inventive step.

The Board therefore comes to the conclusion that the auxiliary request of the appellants is inadmissible and accordingly rejects it.

6. *Costs*

According to Article 104(1) EPC each party to the proceedings shall normally pay its own costs. A different apportionment of costs incurred during taking of evidence or in oral proceedings may be ordered for reasons of equity.

In the present case the respondents have based their request for costs on the fact that the appellants introduced for the first time at the appeal stage the aspect of the alleged "seal reducing" rather than "seal

preventing" nature of the seal inhibiting composition. That aspect made up however only a minor part of their written statement of grounds and addressing that question at the oral proceedings did not involve the respondents in any extra costs.

The Board can therefore see nothing in the circumstances of the present case which could justify an award of costs.

Order

For these reasons it is decided that:

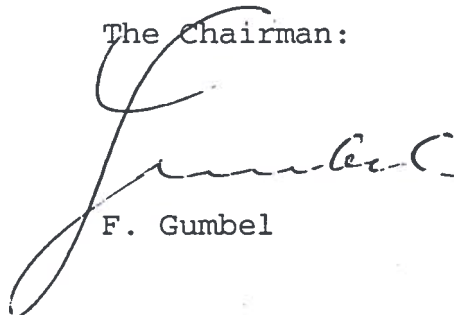
1. The appeal is dismissed.
2. The request of the respondents for the award of costs is rejected.

The Registrar:



S. Fabiani

The Chairman:



F. Gumbel