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D E C I S I O N
of 21 October 1997

Case Number: T 0144/96 - 3.2.1

Application Number: 90307642.0

Publication Number: 0408364

IPC: B65D 41/34

Language of the proceedings: EN

Title of invention:
Closures for containers

Patentee:
MCG Closures Limited

Opponent:
Crown Cork AG

Headword:
-

Relevant legal provisions:
EPC Art. 104(1), 123(2)

Keyword:
"Addition of subject-matter (yes)"
"Apportionment of costs (no)"

Decisions cited:
T 0169/83, T 0689/90

Catchword:
-



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Boards of Appeal

Chambres de recours

Case Number: T 0144/96 - 3.2.1

D E C I S I O N
of the Technical Board of Appeal 3.2.1
of 21 October 1997

Appellant:
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Respondent:
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 2 January 1996
revoking European patent No. 0 408 364 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: F. Gumbel
Members: S. Crane
J. Van Moer

Summary of Facts and Submissions

- I. European patent No. 0 408 364 was granted on 24 March 1993 on the basis of European patent application No. 90 307 642.0.
- II. The granted patent was opposed by the present respondents on the grounds that its subject-matter lacked novelty and/or inventive step (Article 100(a) EPC). The prior art documents specifically referred to in the notice of opposition were:
- (E4) EP-A-0 154 603
- (E5) DE-A-2 802 126
- (E6) EP-A-0 371 920.
- III. With a letter filed on 21 May 1994 the appellants (proprietors of the patent) submitted a set of amended claims and argued that their subject-matter was adequately distinguished from the cited prior art.
- IV. On 4 December 1995, eight days before the date appointed for oral proceedings before the Opposition Division, the respondents made a new submission (copied directly to the appellants) which referred to a further document, EP-B-0 299 017 (E8).

One day later the appellants filed a letter in which they argued that they would have insufficient time to familiarise themselves with the contents of this new document and requested that it be disregarded. In the alternative they requested that the oral proceedings be postponed and that their extra costs should be borne by the respondents.

- V. In the event, the oral proceedings took place as planned. At the end of the oral proceedings the Opposition Division announced its decision to revoke the patent. The decision in writing was posted on 2 January 1996.

The reasons given for the decision were that claim 1 as filed on 21 May 1994 offended against Article 84 EPC (lack of clarity) and Article 123(2) EPC (added subject-matter). The subsidiary remark was also made that even if the claim were to be amended to meet these objections then its subject-matter would lack novelty with respect to document E5. As far as document E8 was concerned the comment was made that this was comparable to document E5 and therefore not relevant for the decision.

- VI. An appeal against this decision was filed on 15 February 1996, the fee for appeal having been paid one day earlier. The statement of grounds of appeal was received on 19 April 1996.

- VII. On 11 August 1997 the appellants filed four new sets of amended claims according to a main and first to third auxiliary requests.

- VIII. Oral proceedings before the Board were held on 21 October 1997.

At the oral proceedings the appellants abandoned their previous main, first and second auxiliary requests and requested maintenance of the patent in amended form on the basis of the claims according to the third auxiliary request of 11 August 1997.

Claim 1 of this sole remaining request reads as follows:

"A container closure moulded from a plastics material and comprising a top (10) and an annular skirt (11) depending from the top and formed with a screw thread (12) on its internal surface and a tamper evident ring (13) connected to the end of the skirt remote from the top by a series of frangible bridges (15) extending across an axial gap between the ring and the skirt or by a band of the material with a circumferential line of weakening therein, said band spaced along its inner surface a plurality of radially inwardly projecting protrusions (16) each having an end abutment surface (17) generally facing towards the top in a radially inward direction and an inwardly facing cam surface (18) inclined away from the top, said tamper evident band having a generally uniform thickness less than the maximum radially depth of each protrusion disposed thereupon; characterised in that the protrusion (16) are uniformly disposed about the central axis of the closure in an odd number such that no two protrusions are diametrically opposite each other in any sense, whereby the circumferential extent of each protrusion (16) is just less than the circumferential extent of a diametrically opposite gap between the protrusions."

Dependent claim 2 relates to a preferred embodiment of the closure according to claim 1.

The appellants also requested apportionment of their costs for the appeal proceedings.

The respondents requested that the appeal be dismissed and the request for costs rejected.

IX. The relevant arguments of the appellants in support of their requests can be summarised as follows:

In claim 1 of the original application it had been stated that the protrusions were so disposed about the central axis of the closure that no two of the protrusions were diametrically opposite each other. In the light of the description the intended meaning of that statement was clear, namely that on the diametrically opposite side of the tamper evident band from any and each protrusion there was an area where no protrusion was to be found. In the course of the opposition proceedings the respondents had pointed out that the statement in question was not as restrictive as intended and covered situations where although the protrusions as a whole were not diametrically opposite each other, nevertheless a circumferential edge region of one of the protrusions was diametrically opposite a circumferential edge region of another protrusion. Since that situation was indeed known in the state of the art claim 1 had been clarified to exclude this possibility by requiring that the protrusions were not opposite each other "in any sense".

It was furthermore clear from Figures 3 and 4 of the original application, with reference to which the fundamental principles on which the invention was based were explained, that the circumferential extent of each protrusion was just less than the circumferential extent of the diametrically opposite gap between the protrusions and there was no doubt that the person skilled in the art would recognise the importance of this feature for the functioning of the invention. This feature had therefore also been added to the characterising clause of claim 1 to provide a further distinction over the prior art. Through the addition of this feature the requirement that the protrusions were

not opposite each other "in any sense" had essentially become redundant, so that if that term were held to be unclear, as contended by the respondents, it could be deleted.

The preamble of claim 1 was based on the appellants' own prior application EP-A-0 306 259 (E1), which had been referred to in the original application. The last feature of the preamble, which required that the tamper evident band have a generally uniform thickness less than the maximum radial depth of each protrusion, was not only clearly disclosed in document E1 but was also apparent from the figures of the present originally filed application. It was the combination of a tamper evident band of this form with the disposition of protrusions as defined in the characterising clause of the claim which was not envisaged in the state of the art and which led to significant advantages.

It had been intended to draft the preamble of present claim in such a way that it included all of the features of the preamble of granted claim. If the appellants had not been successful in this they were of course prepared to introduce any missing features so as to meet the requirement of Article 123(3) EPC.

Through the late submission of document E8 in the opposition proceedings the appellants had been deprived of any proper opportunity to take this into account. If they had had more time in this respect they would have been able to draft claims which would have been acceptable to the Opposition Division and the present appeal would have been unnecessary. They were therefore entitled to be awarded the costs of it, or at least a part of them.

X. In reply the respondents argued substantially as follows:

The only clear teachings in the original application as to the arrangement of the protrusions on the tamper evident band were that there was an odd number of them and that there were uniformly disposed, so that diametrically opposite each protrusion there was a gap between two protrusions. There was nothing in the original application which indicated that it was important for the circumferential length of each protrusion to be "just less" than that of the gaps. This requirement "just less" was in any case unclear and whatever it might mean could not be recognised in the figures relied upon by the appellants in this respect.

The addition to the preamble of the claim of the features concerning the uniform thickness of the tamper band and the relative depth of the protrusion also offended against Article 123(2) EPC. It was true that document E1 was referred to in the original application but the reference was not of a form which made it admissible to assimilate features disclosed there into the subject-matter of claim 1. There was no clear disclosure in the original application, even when account was taken of the figures, of the tamper band having a uniform thickness. Certainly there was no indication there that this feature could be of significance.

The appellants' request for apportionment of costs was misconceived since the revocation of the patent by the Opposition Division had not been based in any way upon the document E8.

Reasons for the Decision

1. The appeal complies with the formal requirements of Articles 106 to 108 and Rules 1(1) and 64 EPC. It is therefore admissible.
2. *Article 123(2) EPC*

Claim 1 of the original application, which corresponds in essence to claim 1 of the granted patent, contains a definition in general terms of a "tamper evident" container closure, that is a closure having a ring or band which when the closure is unscrewed from the container neck is separated from the closure and retained under a shoulder formed on the container neck. To this end the tamper evident ring is provided with inwardly projecting protrusions each having an inclined lower cam surface, which engages the shoulder to widen the ring as the closure is being applied to the container neck, and an upper abutment surface which engages under the shoulder once the protrusions have passed by it and the ring returns elastically to its original diameter. All this is well-known. The claim then states that the protrusions are so disposed about the central axis of the closure that no two of the protrusions are diametrically opposite each other. Original claim 2 states that the protrusions are uniformly disposed about the ring and are provided in an odd number.

That feature of original claim 2 has now been incorporated into the characterising clause of present claim 1 and this causes no problem. Claim 1 however also includes the requirements that the protrusions are not diametrically opposite each other "in any sense"

and that the circumferential extent of each protrusion is "just less" than the circumferential extent of a diametrically opposite gap between the protrusions.

In fact, from a simple consideration of the geometry involved it is apparent that with a uniformly distributed odd number of protrusions which are shorter than the gaps between the protrusions, then no two protrusions can be diametrically opposite each other "in any sense", which the Board understands as meaning that no part of any protrusion is diametrically opposite any part of any other protrusion. Accordingly, as indeed recognised by the appellants, the first of the contentious additions to the characterising clause of claim 1 - the "in any sense" requirement - is redundant and since the appellants offered to delete it there is no need to consider it further. What does need to be investigated is the "just less" requirement.

The appellants see the basis for this amendment in Figures 2 and 4 of the original application and the relevant part of the description at lines 12 to 34 of page 3. Figure 2 is an underneath plan of the closure and shows seven uniformly disposed protrusions. Figure 4 is a similar view showing how the tamper evident ring becomes deformed during application of the closure, it being explained in the description that the areas of the ring in the gaps between the protrusions tend to flatten as the protrusions are splayed outwardly. It is then stated at the bottom of page 3 that

"Since the protrusions are provided in an odd number, seven in this instance, there is diametrically opposite the middle of each protrusion a gap between two protrusions. This reduces the amount by which the ring is required to expand during application of the closure

and also permits the ring to wriggle or shift about diametrically to a small extent as it moves over the shoulder during application."

Although the original application does not contain a specific statement of the technical problem to be solved and its solution, it is apparent in the context that the passage quoted above embodies the underlying idea on which the claimed invention is based. The appellants now argue that the person skilled in the art would recognise from Figures 2 and 4 that the circumferential extent of each protrusion is "just less" than that of the gaps between the protrusions and acknowledge that this played a role in allowing the invention to achieve its aims.

It belongs to the established case law of the Boards of Appeal, see decision T 169/83 (OJ EPO 1985, 193), that it is possible to incorporate a feature shown in the original drawings into a claim if this feature is clearly, unmistakably and fully derivable from the drawings in terms of structure and function by a person skilled in the art. These requirements are not met in the present case. Firstly, as correctly noted by the respondents, the circumferential extent of each protrusion varies considerably over its radial depth so that a comparison of this circumferential extent with that of the gap, which also varies in an inverse way, will lead to widely different results depending at which point these circumferential extents are measured. Thus, if the comparison were made at the radially inner surface of the protrusion then the gap would be longer than the protrusion to a very significant degree. Furthermore, and perhaps more importantly, the person skilled in the art would have no reason to believe, either on the basis of text of the original application or on his common general knowledge, that any particular

ratio of the extents of the protrusions and gaps, let alone the requirement that the former be "just less" than the latter, could have any functional effect on the success of the claimed invention. All the application makes clear in this respect is that there should be a gap diametrically opposite the middle of each protrusion and from a technical point of view that is all that is required, over a wide range of gap lengths, to make the claimed invention work.

The Board therefore comes to the conclusion that the addition to claim 1 of the requirement that the circumferential extent of each protrusion is just less than that of the diametrically opposite gap offends against Article 123(2) EPC. The claim can therefore not be allowed.

In view of that finding it is not strictly necessary to address the contentious features added to the preamble of claim 1 that the tamper evident "band" (for terminological consistency with the rest of the patent specification this should read "ring") has a generally uniform thickness less than the maximum radial depth of each protrusion. However, for completeness, the Board will make the following comments.

It is not accepted that document E1, which was referred to in the original application, can provide a basis for this feature, since the reference involved is cursory and concerned only with a sequence of operations during moulding of the closure, cf. decision T 689/90 (OJ EPO 1993, 616). That being the case it would therefore be necessary to turn again to the drawings of the original application to look for the necessary support.

In this respect the Board can accept that Figure 10 shows an embodiment, having a form of protrusion different to that of Figures 1 to 4, in which the tamper evident ring has a generally uniform thickness, but it is not clear that this thickness is less than the maximum radial depth of the protrusions. That latter feature would be recognisable for the person skilled in the art from Figures 2 to 4 and 8. However in Figure 8 the thickness of the tamper evident ring is quite clearly not uniform and Figures 2 to 4 are not drawn in such a way as to allow any clear conclusion on this aspect, although given that Figure 8 appears to relate to a step in the method of making a closure according to Figures 1 to 4 it would seem more likely that the thickness of the tamper evident ring of the latter should taper downwardly as in the former.

Summing up, the Board is therefore also of the opinion that the relevant added features of the preamble of claim 1 are not disclosed in combination in the original application.

3. *Costs*

For the request of the appellants for apportionment of the costs for their appeal to have any chance of success it would be necessary for them to demonstrate a causal connection between the late submission of document E8 by the respondents and the filing of the appeal. They have failed to do so. The reasons given for the contested decision concern the lack of clarity and infringement of Article 123(2) EPC of claims filed by the appellants well before document E8 was submitted. From the decision it is apparent that the Opposition Division considered this document no more relevant than document E5. Furthermore, even if the appellants had had more time at that stage to amend the

claims to take account of document E8, it is not clear to the Board why they would have been any more successful at avoiding the objection under Article 123(2) EPC than they have been on appeal.

Order

For these reasons it is decided that:

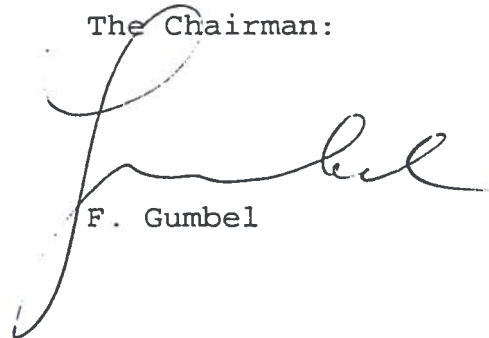
1. The appeal is dismissed.
2. The request for apportionment of costs is rejected.

The Registrar:



S. Fabiani

The Chairman:



F. Gumbel

