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File Number: T 193/91 - 3.2.1

Application No.: 83 304 187.4

Publication No.: 0 099 754

Title of invention: Two-part liquid container with breakable partition

Classification: B65D 81/32

D E C I S I O N  
of 21 May 1992

Proprietor of the patent: Kao Soap Company Ltd.

Opponents: L'Oreal  
Henkel KGaA

Headword:

EPC Article 56

Keyword: "Inventive step (yes)"

Headnote



Case Number : T 193/91 - 3.2.1

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.1  
of 21 May 1992

**Appellant :**  
(Proprietor of the patent)

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**Decision under appeal :**

Decision of Opposition Division of the European  
Patent Office dated 26 November 1990 with written  
reasons posted on 7 January 1991 revoking  
European patent No. 0 099 754 pursuant to  
Article 102(2) EPC.

**Composition of the Board :**

**Chairman :** F. Pröls  
**Members :** M. Ceyte  
J.-C De Preter

**Summary of Facts and Submissions**

I. The Appellant is the Proprietor of the European patent No. 0 099 754 (patent application No. 83 304 187.4) which was granted on 14 October 1987.

II. The patent was opposed by the Respondents on the grounds that its subject-matter does not involve an inventive step. In support of their request, they submitted inter alia the following prior art documents:

D1: FR-A-2 453 793

D2: FR-A-2 289 407

III. By decision delivered orally on 26 November 1990 with written reasons posted on 7 January 1991, the Opposition Division revoked the patent.

IV. The Appellant (Patent proprietor) appealed against this decision on 4 March 1991 paying the appropriate fee the same day. A Statement of Grounds of Appeal was filed on 30 April 1991.

V. In a communication pursuant to Article 110(2) EPC dispatched on 10 January 1992, the Board pointed out that the prior art document

D3: DE-A-2 638 561

although not expressly submitted by the Respondents is also to be considered in the present appeal proceedings. The Board referred to the decision T 536/88 "Staubdichte Faltschachtel" of 14 January 1991 (to be published) stating that a document cited and discussed in an European patent as the closest prior art is to be regarded as

automatically forming part of the opposition (appeal) proceedings.

VI. The Respondents requested that the Appeal be dismissed and the patent be revoked in its entirety.

In his written statement the Respondent II also raised objections to admissibility of the Appeal. These objections were withdrawn at the oral proceedings.

The Respondents' arguments set forth in their written and oral statements can be summarised as follows:

Document D1 relates to the same kind of container for separately storing two components and for enabling mixing of these components prior to dispensing thereof. The second half container is sealed by a cup whose bottom is connected by a thinned frangible portion to the peripheral wall. The cutting member is inside the sealing cup and is made integral with the bottom thereof.

Starting from document D1 the problem underlying the patent in suit cannot be seen in realising a less expensive device, since the use in document D1 of a frangible wall and a cutting member as an integral component reduces the cost of the known device.

Document D2 discloses in the same specialised field a container sealed by a frangible sheet and a cutting member located inside the liquid-containing interior of the container.

For a skilled person confronted with the problem of modifying the known device of document D1, so that the sealing cup does not fulfill the double function (frangible sheet and support of the cutting member) it

would be obvious to apply the teaching of document D2 and thus arrive at the claimed device.

The location of the cutting member inside the container is nothing more than an obvious modification which in fact would not confer any advantage: the space between the two frangible sheets cannot be substantially reduced and the bulkiness of the whole system remains in essence unchanged.

In the Figure 5 embodiment of document D3, one container is received in the second one. The bottom of the internal container is sealed by a frangible sheet and the cutting member for breaking the frangible sheet is located inside the liquid-containing interior of the external container. It would also be obvious to combine this teaching with that of document D1 to arrive at the subject-matter of Claim 1.

VII. The Appellant contested this view. He requested that the decision under appeal be cancelled and the patent be maintained on the basis of the drawings as granted and the description and the claims filed during the oral proceedings held on 21 May 1992 (main request).

VIII. Claim 1 reads as follows:

- "1. A liquid container with a breakable partition comprising:
- (a) a first half container (1) sealed by a sheet (8) at a neck portion (6) thereof and containing a first liquid;
  - (b) an intermediate cylindrical member (3) connecting a cylindrical sealing piece (22) through a collapsible piece (21) at the lower end thereof, the lower half part of the intermediate

cylindrical member (3) spirally engaging the outer periphery of the neck portion of the first half container;

- (c) a second half container (2), containing a second liquid, having a cutting member (12) for cutting the sheet (8) which seals said first half container (1), a lower part of the second half container (2) engaging an upper part of the said intermediate member (3) in a manner inhibiting relative rotation therebetween;
- (d) a sealing member (24) for sealing an upper opening (11) of the said second half container;  
wherein:
- (e) the said second half container (2) is sealed by a sheet (10) at a bottom opening thereof which has an internal diameter which is greater than the external diameter of the rim of the neck portion (6) of said first half container (1);
- (f) the said cutting member (12) extends within the liquid-containing interior of the said second half container (2) to a position which is in the vicinity of the bottom thereof and which is on the interior side of the sheet (10) of the said second half container (2),
- (g) the liquid container further comprises a sheet collapsing and breaking portion at the opening of the neck portion (6) of said first half container (1), for collapsing or breaking the sheet (10) of the said second half container (2)".

#### Reasons for the Decision

1. The Appeal complies with Article 106 to 108 and Rule 64 EPC. It also complies with Rule 64(b) which stipulates that the notice of appeal shall identify the extent to

which amendment or cancellation of the impugned decision is requested.

Reference is made in this respect to the following passage of the notice of appeal (page 4, second paragraph):

"Thus contrary to paragraph 6 of the official reasons given, it is submitted that the present Claim 1 does meet the requirements of Article 52(1) EPC in conjunction with Article 56 EPC and that, should the Appeal Board be of a different opinion, then at least the attached amended Claim 1 fulfills those requirements".

It is evident from the above quoted statement that the Appellant requests that the decision be set aside to the extent that it affects Claim 1. Moreover, the content of the impugned decision is purely and simply the revocation of the patent as amended. The formulation "to file an appeal" against the decision is therefore to be interpreted as meaning the setting aside of a decision in its entirety and the maintenance of the European patent on the basis of the amended claims filed together with the notice of appeal (cf. e.g. decision T 7/81 OJ EPO 1983, 98).

The appeal is therefore admissible.

2. Article 123

There are no objections under Article 123(2) to the present claims, since they are adequately supported by the original disclosure.

The features of present Claim 1 are disclosed in original Claims 1, 4 and 6 in connection with the figures.

Present Claim 1 contains all the features of granted Claim 1. The present claims thus also comply with Article 123(3) EPC.

3. Novelty

After examination of the cited prior art the Board is satisfied that the subject-matter of Claim 1 is novel. Since this has never been disputed, there is no need for further detailed substantiation of this matter.

4. Problem and Solution

4.1 The Board agrees with the parties that the nearest prior art is represented by the container according to document D1 for separately storing two components which need to be mixed immediately prior to use.

Such a device comprises a first half container (7) whose neck portion is sealed by a frangible sheet (13) and an intermediate cylindrical member (4) which is fixed to the first half container by a screwed flange. The first half container is also provided with a sealed discharge spout. A second half container (1) which is assembled to the first one by means of the intermediate cylindrical member is equipped with a cutting or piercing member for breaking the frangible sheet of the first half container. The second half container is received in the intermediate cylindrical member so as to prevent relative rotation therebetween.

4.2 The first half container (7) is in essence located in the neck portion of the second half container and is therefore clearly smaller. The known container is equipped with a complex double seal construction: in addition to the frangible sheet (13) which seals the first half container,

there is provided a cup (4) and (5) which seals the second half container and which is made integral with the intermediate cylindrical member. The bottom (5) of the sealing cup is connected by a thinned frangible portion (5a) to the peripheral wall; the cutting member is confined in the sealing cup and is formed on the bottom thereof. The thinned frangible portion is strong enough to enable the cutting member to break the sealing sheet of the first half container whilst being sufficiently weak to break when further screwing the first half container into the second one takes place. Additionally a considerable space is provided between these two seal constructions for lodging the cutting member.

4.3 The problem underlying the patent in suit which results from the above drawbacks observed in the nearest prior art document D1, may be seen in providing the container of the type described with a simplified seal construction, said container permitting liquids respectively stored in the two half containers to be mixed by a short and smooth movement of screwing between the two half containers.

4.4 This problem is in essence solved to the Board's satisfaction by the following features stated in Claim 1:

(a) the first half container as well as the second one are sealed by a frangible sheet at the neck portion thereof.

(b) the cutting member for breaking the frangible sheet of the first half container extends within the liquid-containing interior of the second half container to a position which is in the vicinity of the sealed bottom thereof.

Since the cutting member is confined in the second half container, the space between the two frangible sheets can be reduced to a minimum, thereby minimising the screwing stroke required for breaking the two frangible sheets and mixing the contents of the two half containers. Moreover, the reliability of the operation is improved since the cutting member is no longer carried by a frangible wall.

5. Inventive step

5.1 The subject-matter of document D2 is a container whose cavity is divided into two compartments by a single frangible membrane. The end wall of the upper compartment may be moved resiliently by the pressure of a finger towards the frangible membrane and carries a piercing or cutting member which punches holes in the frangible membrane when the resilient end wall is moved inward the compartment, thereby permitting the contents of the two compartments to be mixed.

5.2 It is true that the location of a cutting member for breaking a frangible sheet inside the cavity of a container is disclosed in document D2. However the function of the moveable cutting member according to document D2 is to break the frangible sheet which seals the compartment in which the cutting member is located. In contrast, the function of the cutting member according to the invention is to break the frangible sheet of the other associated compartment or half container, i.e. the one in which the cutting member is not located. Hence the function of the known cutting member is not the same as in the present case.

In addition, the arrangement of the cutting member within the liquid containing interior of the upper compartment is not to reduce the space between two frangible sheets or

shorten the screwing stroke necessary for breaking the two frangible sheets and thereby mixing the two components. The reason why the cutting member of document D2 is confined in the upper compartment is that the depressible resilient end wall serves to move the cutting member towards the frangible sheet. The cutting member must therefore be interposed between the depressible resilient end wall and the frangible sheet of the upper compartment, i.e. confined in the upper compartment. In other words the arrangement of the cutting member within the interior of the upper compartment is imposed by the nature of the system.

Thus, since the respective problems to be solved with the arrangement of the cutting member in document D2 and in the claimed container are not comparable, this prior art did not give any indication for applying this arrangement in the present case. Reference is made in this respect to the earlier decision T 39/82 OJ EPO 1982, 419, where it was decided that the respective problems to be solved with a known measure in the known case and in the case to be decided must be taken into account. According to this decision, if the problems differed fundamentally from one another as is here the case, it could not be considered obvious for the skilled person to use this known measure in a different context.

- 5.3 In addition document D2 is wholly silent with respect to the further distinguishing feature (a) above, i.e. the provision of a double frangible sheet construction, which is necessary to solve the technical problem suggested in the patent in suit. Therefore without an ex post facto analysis a skilled person by applying the teaching given there to the known container according to document D1 would not have arrived at the teaching of Claim 1.

5.4 In the Board's view, the arrangement of the cutting member within the second half container cannot be considered as a mandatory or logical step, in order to overcome the disadvantages of having a cutting member supported by a frangible and relatively rigid wall, since there are different known solutions. According to one proposal illustrated in Figures 3 and 4 of FR-A-2 294 937, cited by the Appellant during the appeal proceedings, the intermediate cylindrical member carries the cutting member which is lodged in the space between the two containers.

According to another proposal put forward in the Figure 3 embodiment of document D3, it is the rim around the opening of the first half container which carries the cutting member.

5.5 In the Figure 5 embodiment of document D3, one container is received in the second one. The bottom of the internal container is constituted by a frangible sheet and the bottom of the external container carries on its internal side a cutting member.

There is also no disclosure or suggestion of the double frangible sheet construction of the claimed device, where the neck opening of each half container is sealed by a frangible sheet.

5.6 The combination of the teachings of documents D1 to D3 cannot lead in any way to the solution of Claim 1, since none of them either suggests or discloses the double frangible sheet construction combined with the internal arrangement of the cutting member for solving the technical problem suggested in the patent in suit.

5.7 Therefore, in the Board's judgement the subject-matter of Claim 1 involves an inventive step (Article 56 EPC).

6. Dependent Claims 2 to 12 which concern a particular embodiment of the invention claimed in Claim 1 are likewise allowable.
7. The description and the drawings take account of the requirements of the EPC.
8. The Board is thus of the opinion that the grounds for opposition do not prejudice the maintenance of the patent in the present amended form.

Order

For these reasons, it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to maintain the patent with the documents stated in point VII above.

The Registrar:



S. Fabiani

The Chairman:



F. Pröls