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Datasheet for the decision of 3 July 2015

Case Number: T 1156/11 - 3.2.07

Application Number: 03737381.8

Publication Number: 1472153

IPC: B65D51/20

Language of the proceedings: EN

Title of invention:
CONTAINER CLOSURE

Patent Proprietor:
Selig Sealing Products, Inc.

Opponent:
Alfelder Kunststoffwerke Herm. Meyer GmbH

Headword:

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - (no)

Decisions cited:

Catchword:

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Case Number: T 1156/11 - 3.2.07

D E C I S I O N
of Technical Board of Appeal 3.2.07
of 3 July 2015

Appellant: (Patent Proprietor)	Selig Sealing Products, Inc. 342 East Wabash Street Forrest, IL 61741 (US)
Representative:	Jones, Helen M.M. Gill Jennings & Every LLP The Broadgate Tower 20 Primrose Street London EC2A 2ES (GB)
Respondent: (Opponent)	Alfelder Kunststoffwerke Herm. Meyer GmbH Hildesheimer Strasse 78 31061 Alfeld/ Leine (DE)
Representative:	Einsel, Martin Patentanwälte Einsel & Kollegen Jasperallee 1a 38102 Braunschweig (DE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 7 April 2011 concerning maintenance of the European Patent No. 1472153 in amended form.**

Composition of the Board:

Chairman	G. Patton
Members:	V. Bevilacqua
	R. Cramer

Summary of Facts and Submissions

I. The appellant (patent proprietor) lodged an appeal against the interlocutory decision of the opposition division maintaining patent EP-B-1 472 153 in amended form.

II. The following grounds of opposition were raised:
-Article 100(a) EPC (lack of novelty, lack of inventive step);
-Article 100(b) EPC; and
-Article 100(c) EPC.

III. The Opposition Division referred to the following documents in its decision:

D1: DE 199 20 572 A;
D2: DE 91 08 868 U1;

and held that only the ground of Article 100(a) EPC prejudiced the maintenance of the patent as granted because the subject-matter of claim 1 of the patent as granted lacked inventive step in view of the disclosure of document D1.

IV. The appellant requests that the decision under appeal be set aside and the patent be maintained as granted.

V. The respondent (opponent) requests that the appeal be dismissed.

VI. Oral Proceedings took place on 3 July 2015, during which the question whether claim 1 of the patent as granted met the requirements of Articles 54 and 56 EPC in the light of document D1 was discussed. The present decision was announced at the end of oral proceedings.

VII. The wording of the independent claim 1 of the patent as granted reads as follows:

"An one-component seal and liner (1) for a screw cap including a seal (3) having lower layers (4, 5) forming an induction heating sealable system for attaching the seal (3) to the neck of the container, a seal substrate (7) attached to the uppermost layer (5) of the induction heating sealable system wherein the seal substrate (7) includes a free tab (50) which lies wholly within the circumference of the seal (3), a layer of liner (2) and an attachment means (10, 11, 12) including a release layer (11) for attaching the seal substrate (7) including the tab (50) to the liner (2)

characterised in that the seal (3) and liner (2) release from one another at the release layer in a direction perpendicular to each other with a peel strength in the range from 20 to 90 g at a rate of 1500 mm/min on a sample strip 25 mm wide".

VIII. Insofar as relevant to the present decision the appellant argued essentially as follows.

D1 discloses only the features of the preamble of claim 1 of the patent as granted, because from this document it is not possible to derive any information on the force required to separate the seal and the liner.

Based on the description of the patent in suit, the technical effect achieved by the features of the characterizing portion of claim 1 of the patent as granted is to prevent de-lamination during industrial processing while allowing easy removal by the end user.

The problem to be solved is to provide a robust container closure sealing system which at the same time allows for the release of the sealing and liner components from one another during removal of the cap by the end user and enables to avoid de-lamination between the sealing and liner components during processing.

Inventive step should be acknowledged, because even if the skilled person is not prevented, in principle, to use a peel strength falling within the claimed range to solve this problem, there are no reasons why he would specifically select such a value of peel strength to do that. In particular, D1 does not contain a pointer towards this solution and the skilled person has a plurality of other possible available solutions at his disposal.

IX. Insofar as relevant to the present decision the respondent argued as follows.

The subject-matter of granted claim 1 lacks novelty over D1 because the features of its characterizing portion, namely the range of peel strength, is implicitly disclosed therein.

The features of the characterizing portion of claim 1, even if considered novel, still cannot contribute to inventive step.

The problem to be solved by them is to provide the one component seal and liner of D1 fulfilling the requirements for its functioning and manufacturing.

The skilled person would have no difficulty to select for these fulfillments the appropriate value of peel strength by trial and error.

By doing that he would arrive, without the need of an inventive step, at the subject-matter of claim 1 of the patent as granted.

Reasons for the Decision

1. *Content of the disclosure of D1*

D1 discloses :

a seal (21, 22, 23, see figure 1) and a liner (24) for a screw cap (43) whereby seal and liner are bonded together, as explained at column 3, lines 53-57, so as to form a single component before the first opening.

The seal has a sealing layer (21) bonded to a layer which can be heated by induction (22, called "Induktionsschicht", see column 3, from line 29) thereby forming an induction heating sealable system for attaching the seal (21, 22, 23) to the neck of the container (12).

There is a seal substrate (23) attached (as it is clearly shown in figure 1) to the uppermost layer of the induction heating sealable system wherein the seal substrate (23) includes a free tab (also visible in figure 1, see also column 3, lines 41-43) which lies wholly within the circumference of the seal (as explained at column 3, lines 45-47), a layer of liner (24, called "Resealteil", see column 3, line 50) and an

attachment means (the adhesive layers described at column 3) including a release layer (it is the weak adhesive layer connecting layers 23 and 24 described at column 3, lines 54-55) for attaching the seal substrate (23) including the tab to the liner (24).

D1 also discloses that the seal (21, 22, 23) and liner (24) release from one another at the release layer (see column 4 lines 30-43) by applying a relatively low peel strength, such that in use the attachment means (41) keep the liner in the screw cap while the seal is peeled away.

2. *Novelty*

2.1 D1 does not mention the features of the characterizing portion of claim 1 of the patent as granted, namely that the adhesive force to be overcome in order to peel liner and seal apart in a direction perpendicular to each other, is "in the range from 20 to 90 g at a rate of 1500 mm/min on a sample strip 25 mm wide".

2.2 The respondent argues that this feature is implicitly disclosed in D1, as this seal-liner combination could only work as described therein if the peel strength falls within the claimed range.

2.3 The Board disagrees, because the adhesive forces needed to achieve the effect described in D1 cannot be univocally derived from D1, as this document only explains that these forces should not be as high as to overcome the effect of the ribs 41 to retain the liner within the cap (column 4, lines 30-43).

As the shape, material and dimensions of the ribs and of the liner are not specifically described, no

conclusion on these retention forces, and therefore on the (upper limit of) the peel strength, can be derived from D1 alone.

As D1 does not give precise information on how the one-component seal and liner is produced and inserted into the screw cap, it is also not possible to know from this document which is the weakest possible level of adhesive strength to avoid delamination during processing.

The subject matter of claim 1 is therefore novel over the disclosure of D1.

3. *Inventive step*

3.1 Effect - problem to be solved

The appellant submits, by referring to the effect mentioned in paragraph [0018] of the patent in suit, that the problem to be solved is how to provide a robust container closure sealing system which, at the same time, allows for the release of the sealing and liner components from one another during removal of the cap by the end user and enables to avoid de-lamination between sealing and liner components during processing.

The Board does not see any reason to deviate from this formulation of the problem.

3.2 Obviousness

3.2.1 The appellant argues that Dl does not contain any specific information relating to the materials used for the liner and for the release layer. There would therefore be no guidance provided for the skilled

person to come to a peel strength within the claimed range.

This would be particularly true in view of the lack of proof on file that materials suitable for achieving the claimed peel strength range (and the claimed peel strength itself) were part of the common general knowledge at the time of filing the patent in suit.

The appellant also argues that the skilled person has many options at his disposal in order to solve the above formulated technical problem: D2, for example teaches using wax (layer 9) as an adhesive material (see claims 10 and 11) between a liquid absorbing cardboard layer (8) and a polymer layer (15). During processing the wax provides a high strength to the bond, while after induction melting to seal onto the container the strength decreases, the wax having been absorbed by the adjacent layers.

D1 also discloses (column 1, line 66) to bond the seal and liner components with the upper layer of the seal being folded over. The peel strength of these disclosed options would clearly fall outside the claimed range.

Inventive step should therefore be acknowledged because, while the skilled person **could** possibly select the solution suggested by the present invention, there is no reason why he **would** do so.

3.2.2 The Board disagrees and takes the position put forward by the respondent that the skilled person can easily and straightforwardly solve the problem defined above, because setting the peeling strength for a particular need of the one component seal and liner disclosed in D1 is a matter of trial and error.

The upper limit of the range would be easily determined experimentally and without the need of an inventive step, because it has to be lower than the forces retaining the liner in the cap of D1 (see the rib 41).

The lower limit could also be easily determined without inventive skills, but simply by experimental tests, as it should be enough to prevent unwanted separation between liner and seal during processing.

In addition to that, as put forward by the respondent during the oral proceedings, and contrary to the view of the appellant, the Board considers that D1 contains a pointer to the solution.

There is indeed a clear indication at column 3, line 57, that adapting the bond strength, i.e. the peel strength, is envisaged ("hinsichtlich ihre Klebkraft gut steuerbare Verbindung").

The Board disagrees also with the argumentation that inventive step should be acknowledged because the skilled person would have other options at his disposal to solve this problem.

As a matter of fact, the mere selection of an obvious solution, through the application of usual trial and error in the present case, among other available solutions does not render the obvious solution inventive.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

S. Sánchez Chiquero G. Patton

Decision electronically authenticated