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Datasheet for the decision of 21 April 2015

Case Number: T 0199/13 - 3.2.07

Application Number: 08755571.0

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Title of invention:
LIGHTWEIGHT PLASTIC CONTAINER AND PREFORM

Applicant:
Plastipak Packaging, Inc.

Headword:

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - (no)

Decisions cited:

Catchword:

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Case Number: T 0199/13 - 3.2.07

D E C I S I O N
of Technical Board of Appeal 3.2.07
of 21 April 2015

Appellant: (Applicant)	Plastipak Packaging, Inc. 41605 Ann Arbor Road Plymouth, MI 48170 (US)
Representative:	Weiss, Peter Dr. Weiss & Arat Partnerschaftsgesellschaft Zeppelinstrasse 4 78234 Engen (DE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 21 August 2012 refusing European patent application No. 08755571.0 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	H. Meinders
Members:	K. Poalas
	C. Brandt

Summary of Facts and Submissions

I. The appellant (applicant) lodged an appeal against the decision of the examining division refusing European patent application 08 755 571.0.

II. In its decision, the examining division held *inter alia* that the subject-matter of claim 1 of the set of claims filed with letter dated 29 July 2011 does not involve an inventive step. In its appeal, the appellant maintained that request.

III. In its communication pursuant to Article 15(1) RPBA annexed to the summons to oral proceedings the Board gave reasons as to why it considered that the subject-matter of claim 1 of that request does not involve an inventive step.

IV. During the oral proceedings before the Board, held on 21 April 2015, the appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of that request, being the sole request.

V. Claim 1 according to that request reads as follows:

"A plastic container, comprising:
a hollow body portion including a lower supporting base portion (12);
a sidewall portion (14) extending upwardly from the base portion (12); and
a neck portion (16) extending upwardly from the sidewall portion (14), the neck portion (16) including a support flange (18) having an upper (20) and lower (22) surface;
a tamper-evident formation (28) having an upper and

lower surface; and a dispensing opening (24) at the top of the neck portion (16), the dispensing opening (24) having an inner diameter that is at least 22 mm; wherein the vertical distance (X) from the top of the dispensing opening (24) to the lower surface (22) of the support flange (18) is 14,732 mm (0.580 inches) or less".

Reasons for the Decision

1. *Claim 1 – inventive step, Article 56 EPC*

1.1 In points 1.1 to 1.11 of the annex to the summons to oral proceedings the Board gave the following reasoning as to why it considers that the subject-matter of claim 1 does not involve an inventive step:

"*1.1 The Board cannot see why the examining division was wrong arguing under point 2 of its decision lack of inventive step of the subject-matter of claim 1 over the disclosure of D1 (FR 2 846 946 A1) in combination with the general technical knowledge of the person skilled in the art.*

1.2 On page 5, lines 22 to 24 of D1 it is stated that the tubular neck portion has an inner diameter of preferably 25,1 mm. Therefore, the feature of claim 1 according to which the dispensing opening at the top of the neck portion has an inner diameter of at least 22 mm is also known from D1.

1.3 Thus the question at stake is whether the feature of claim 1 that the vertical distance X from the top of the dispensing opening to the lower surface of the support flange is 14,732 mm or less, involves an inventive step.

1.4 It cannot be disputed that the container known from D1 may have a vertical distance H from the top of the dispensing opening to the lower surface of the support flange of 15,4 mm up to 16,2 mm, see page 6, lines 1 to 3 of D1.

1.5 The mere reduction of the value of said vertical distance from 15,4 mm to 14,732 mm automatically reduces the amount of material needed for producing the neck portion of the container and thus also the weight of the neck portion.

1.6 Accordingly, the problem to be solved can be seen in the (further) reduction of the amount of material needed for producing the neck portion ("bague filetée") of the container.

1.7 As stated in the impugned decision, see page 3, second paragraph, D1 already deals with the above mentioned problem, see page 2, lines 20 to 22, page 3, lines 17 to 32 and page 12, lines 17 to 21, and proposes, by keeping the standardised dispensing opening diameter dimensions in order to comply with a standardised 30/25 cap, a reduction of the different vertical distances H1 to H6 of the different parts of said neck portion and as a result thereof also a reduction of the sum (H) of said heights, see page 5, line 4 to page 6, line 3.

1.8 The person skilled in the art seeking to solve the problem mentioned under point 1.6 above and also having in mind the above-mentioned teaching of D1 concerning the correlation between the reduction of the total vertical distance H and the reduction of the amount of material needed for producing the neck portion would, depending on the circumstances, reduce further the

vertical distance H from 15,4 mm to 14,732 mm without the exercise of an inventive skill. This consideration applies all the more to the present case, since in the application as filed the vertical distance of 14,732 mm is not referred to as a specific value providing a surprising effect going further than a proportional reduction of the weight of the neck portion. The Board notes in this respect further that the presence of a screw thread nor of an inner diameter of 25 mm is required by claim 1, so any limitations to the extent to which H can be reduced, possibly imposed by a 30/25 cap (D1) are not applicable. In any case, a plastic container with a dispensing opening having an inner diameter of 25 mm and having a vertical distance from the top of the dispensing opening to the lower surface of the supporting flange of 12,4 mm is known from D4 (WO 98/29314 A1), see figure 2a.

1.9 The reduction of the vertical distance H brings with it a reduction of the weight of the neck portion, and also a reduction of the total height of the container over the container known from D1. This results in lowering the centre of gravity of the container and thus inherently leads to an increased stability of the container.
The Board notes in this respect that according to established jurisprudence of the Boards of Appeal, an additional effect achieved inevitably by the skilled person on the basis of an obvious measure without any effort on his part simply represents a bonus effect, which cannot substantiate inventive step, even as a surprising effect, see Case Law of the Boards of Appeal, 7th edition 2013, I.D.10.8, second paragraph, last sentence.

1.10 The appellant's argument that "[i]f it was that

easy to do, people would have been doing it (to save material and costs)" is not a valid argument in the assessment of inventive step in the present case, since the fact that people have been trying this since a long time is already evidenced by D1".

1.2 The appellant's counterargument presented during the oral proceedings against the above-mentioned Board's argumentation concerning lack of inventive step of the subject-matter of claim 1 over the disclosure of D1 in combination with the general technical knowledge of the person skilled in the art was that D1 is mainly concerned with the reduction of the thickness of the neck portion wall parts, but not with the reduction of the vertical distance from the top of the dispensing opening to the lower surface of the support flange of the neck portion (hereafter referred to as "neck portion height") and that the neck portion height was deliberately chosen in D1 to be no less than 15,4 mm, which was the absolute minimum.

1.3 The Board cannot follow these arguments for the following reasons:

On page 5, line 4 to page 6, line 23 of D1, see especially feature i), it is explicitly stated that the desired **weight reduction** is achieved via a neck portion height being between 15,4 and 16,2 mm. In the first place, this shows that in this field of technology the skilled person is striving at weight reduction of the containers, more in particular has envisaged already that reducing the neck portion height is a feasible option. Second, it is clear from the above-mentioned passage of D1 that said neck portion height range is one seen as a preferred range. Parallel to that, there is nothing in D1 denying the feasibility of sorter neck

portions, nor stating that a neck portion height of 15,4 mm is the shortest possible to be chosen by the person skilled in the art, as argued by the appellant.

1.4 The appellant argued further that due to the existence of the following alleged technical obstacles or prejudices the skilled person would have refrained from further reducing the neck portion height of the bottle known from D1 to the claimed 14,732 mm or less:

1.4.1 During the manufacturing process of a plastic bottle via injection molding of the preform and blow molding of the bottle, the neck portion of the bottle would deform more readily if the neck portion height were reduced to 14,732 mm.

1.4.2 A container inverted (in its final form or as a preform) onto a transporting spindle would have an increased tilting- and rolling-over tendency when the neck portion height is 14,732 mm or less.

1.4.3 A neck portion height of 14,732 mm or less has the disadvantage that the user's fingers and mouth come into contact with the tamper-evident ring of the cap, which remains on the bottle below the tamper-evident formation, thus generating an unpleasant feeling.

1.4.4 In case of a reusable plastic bottle a neck portion height of 14,732 mm or less increases the possibility that the user's fingers and mouth would come into contact with the support flange contaminating thereby said flange, such contamination being undesirable in reusable plastic bottles.

1.4.5 A bottle's neck portion height of 14,732 mm or less offers less protection against an unintentional liquid

outflow when filling the bottle.

1.4.6 A reduction of the neck portion height to 14,732 mm or less would mean that manufacturing and filling machines would have to be adapted to the new neck portion dimensions, something the skilled person would tend to avoid.

1.5 For the existence of a prejudice, it is normally required some supporting evidence. The Board notes that for the present application no such evidence was presented by the appellant. Further, none of these technical obstacles/prejudices are mentioned in the application as having been overcome, or that they presented the problems that needed to be solved in the invention. The Board therefore cannot accept said alleged technical obstacles/prejudices.

1.5.1 Furthermore, there is no comparative material evidencing that a bottle known from D1 having the specific dimensions explicitly described in said document would, due to a reduction of the neck portion height to 14,732 mm or less, inevitably suffer from the technical obstacles described in points 1.4.1 to 1.4.6 above.

1.5.2 The features concerning the kind of plastic material used for the bottle, the wall thicknesses of the different parts of the neck portion and the dimensions of the sidewall portion of the bottle are decisive for the bottle's behaviour during its manufacturing and handling process, see points 1.4.1 and 1.4.2 above. The form and consistency of the tamper-evident ring is decisive for the question whether it contacts the user's hands and mouth and/or generates an unpleasant feeling, see point 1.4.3 above. The kind of plastic

material used for the bottle is decisive for the possibility of reusing the bottle, see point 1.4.4 above. The level of liquid in the bottle is decisive for the question of an unintentional liquid outflow, see point 1.4.5 above.

However, none of the above features are present in claim 1. The Board therefore in addition considers that an evaluation of whether said alleged technical obstacles/prejudices actually exist in respect of the plastic container according to claim 1 cannot be carried out.

1.5.3 As far as it concerns the argument that one would have to adapt the manufacturing/filling machine to bottles with a neck portion height of 14,732 mm or less, see point 1.4.6 above, the Board notes that such an adaptation would be the result of the cost-benefit evaluation the person skilled in the art would perform when considering a further weight reduction for the bottle. This is what the skilled person also did according to D1 when reducing the neck portion height of normally 16,8 mm for the bottles with a standardised 30/25 cap, see page 3, lines 4 to 8, to 15,4 mm for the bottles according to D1, see page 12, lines 17 to 20. Thus, the required adaptation of the manufacturing/ filling machine to the new neck portion height cannot be seen as a technical obstacle or prejudice either.

1.5.4 For the above-mentioned reasons the relevant appellant's arguments cannot be taken into consideration by the Board for the evaluation of inventive step.

1.6 In view of the above and the fact that in D1 there is sufficient indication that important savings on the

weight of the container can be achieved by reducing the neck portion height and that there is no indication that 15,4 mm is the "bottom-line" achievable, the Board considers that the skilled person would continue to reduce the bottle weight further by reducing that height further. Thus he would arrive at 14.732 mm or less.

In this consideration two point are noted:
- the application does not mention anything critical about the claimed value;
- D1 starts from a 30/25 mm cap; the claim is for a smaller, 22 mm cap (14% less); therefore a (proportional) reduction in the neck portion height is one of the first considerations the skilled person will have.

1.7 In a further line of arguments the appellant found that the following achieved unexpected effects should be regarded as an indication of inventive step.

1.7.1 When a plurality of preforms is piled up into boxes, high pressure on the bottom preforms results. In that case, it is less probable for preforms having a neck portion height of 14,732 mm or less to undergo deformation in that area.

1.7.2 Jamming of the preforms is avoided when they are individualised for further processing, when they have a neck portion height of 14,732 mm or less.

1.7.3 Bottles having a neck portion height of 14,732 mm or less can be transported hanging between rails with a reduced inclination.

1.8 The Board notes in respect with the above "unexpected effects" that according to the established jurisprudence of the Boards of Appeal, an additional effect achieved inevitably on the basis of a measure obvious to the skilled person simply represents a bonus effect, which cannot substantiate inventive step, even as a surprising effect, see Case Law of the Boards of Appeal, 7th edition 2013, I.D.10.8, second paragraph, last sentence. The "unexpected effects" argued by the appellant are seen as such "bonus effects".

1.9 Under these circumstances, the Board having taken into consideration all the relevant aspects concerning the issue of inventive step, sees no reason to deviate from its finding as already expressed in its above-mentioned annex to the summons and considers that the subject-matter of claim 1 does not involve an inventive step.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

G. Nachtigall H. Meinders

Decision electronically authenticated