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Datasheet for the decision of 11 December 2012

Case Number: T 0551/09 - 3.2.07

Application Number: 03706339.3

Publication Number: 1483163

IPC: B65D 43/02, B65D 43/26, B65D 55/02

Language of the proceedings: EN

Title of invention:
A container; a packaging made therefrom; and a moulding tool and a method of manufacturing the container

Patentee:
Superfos a/s

Opponent:
Firma Saier Verpackungstechnik GmbH & Co. KG

Headword:
-

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step - no, all requests; application of problem solution approach - no hindsight involved; could-would test - skilled person would arrive at the claimed subject-matter by combined consideration of the closest prior art and his common technical knowledge (points 6 and 7)"

Decisions cited:
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Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0551/09 - 3.2.07

D E C I S I O N
of the Technical Board of Appeal 3.2.07
of 11 December 2012

Appellant: (Opponent)
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Decision under appeal:
Interlocutory decision of the Opposition Division of the European Patent Office posted 8 January 2009 concerning maintenance of European patent No. 1483163 in amended form.

Composition of the Board:

Chairman: H. Meinders
Members: H.-P. Felgenhauer
I. Beckedorf
K. Poalas
E. Kossonakou

Summary of Facts and Submissions

I. The opponent (appellant) has filed an appeal against the decision of the opposition division maintaining European patent No. 1 483 163 as amended.

The appellant requested that the decision under appeal be set aside and that the European patent be revoked.

The respondent (patent proprietor) requested that the appeal be dismissed or, alternatively, that in setting aside the decision under appeal the patent be maintained in amended form on the basis of one of the sets of claims filed as second to fifth auxiliary requests with letter of 31 August 2009.

II. Claim 1 of the present main request (as maintained according to the impugned decision) reads as follows:

"A container (1) of plastics and comprising:
- a bottom;
- an annular sidewall (10) with an annular engagement area (15) arranged opposite the bottom, and configured for being able to cooperate with a lid;
- a skirt (20) arranged on the sidewall (10) along the engagement area (15);
- a flap (30) configured for being manually turnable around a turning connection (8) which is covered by the lid and which is arranged in proximity of said engagement area (15), from a first position, in which the flap (30) extends in parallel with or approximately in parallel with the side wall (10), and upwards to a second position in which the flap (30) is able to lift the lid out of engagement with at least a part of the

engagement area (15), the flap has a different colour than that of the skirt (20), characterised in that the flap (30) is manufactured from a plastics material having different colour than that of the skirt (20)."

Claim 1 according to the second auxiliary request reads as follows (there is no first auxiliary request):

"A molded container (1) of plastics, said molded container comprising:
- a bottom;
- an annular sidewall (10) with an annular engagement area (15) arranged opposite the bottom, and configured for being able to cooperate with a lid;
- a skirt (20) arranged on the sidewall (10) along the engagement area (15);
- a flap (30) moulded as an integral part of said container and configured for being manually turnable around a turning connection (8) which is covered by the lid and which is arranged in proximity of said engagement area (15), from a first position, in which the flap (30) extends in parallel with or approximately in parallel with the side wall (10), and upwards to a second position in which the flap (30) is able to lift the lid out of engagement with at least a part of the engagement area (15), characterised in said flap (30) being molded from a plastics material having different colour than that of the skirt (20)."

Claim 1 according to the third auxiliary request reads as follows:

"A molded container (1) of plastics, said moulded container comprising:

- a bottom;
- an annular sidewall (10) with an annular engagement area (15) arranged opposite the bottom, and configured for being able to cooperate with a lid;
- a skirt (20) arranged on the sidewall (10) along the engagement area (15);
- a flap (30) configured for being manually turnable by means of a film hinge turning connection (8) which is covered by the lid and which is arranged in proximity of said engagement area (15), from a first position, in which the flap (30) extends in parallel with or approximately in parallel with the side wall (10), and upwards to a second position in which the flap (30) is able to lift the lid out of engagement with at least a part of the engagement area (15), characterised in said flap (30) being molded from a plastics material having different colour than that of the skirt (20)."

Claim 1 according to the fourth auxiliary request reads as follows:

"An injection moulding tool (50) for manufacturing a container (1), said container comprising:
- a bottom;
- an annular sidewall (10) with an annular engagement area (15) arranged opposite the bottom, and configured for being able to cooperate with a lid;
- a skirt (20) arranged on the sidewall (10) along the engagement area (15);
- a flap (30) which has a different colour than that of the skirt (20) and which is configured for being manually turnable around a turning connection (8) which is covered by the lid and which is arranged in proximity of said engagement area (15), from a first

position, in which the flap (30) extends in parallel with or approximately in parallel with the side wall (10), and upwards to a second position in which the flap (30) is able to lift the lid out of engagement with at least a part of the engagement area (15), said injection moulding tool (50) defining a mould cavity (52) for forming the container (1), characterised in that the injection moulding tool has a first (60) and a second (65) supply conduit for plastics material; that the one supply conduit (65) debouches in the area (53) of the mould cavity (52) in which the flap (30) is formed; and that the first (60) and the second (65) supply conduit are connected to a source for a respective plastics material, the source supplying plastics material to said area (53) in which the flap (53) is formed supplying plastics material of a colour different from said other plastics material."

Claim 1 according to the fifth auxiliary request reads as follows:

"An injection moulding tool (50) for manufacturing a container, said container comprising:
- a bottom;
- an annular sidewall (10) with an annular engagement area (15) arranged opposite the bottom, and configured for being able to cooperate with a lid;
- a skirt (20) arranged on the sidewall (10) along the engagement area (15);
- a flap (30) which is moulded as an integral part of the container, which has a different colour than that of the skirt (20) and which is configured for being manually turnable around a turning connection (8) which is covered by the lid and which is arranged in

proximity of the engagement area (15), from a first position, in which the flap (30) extends in parallel with or approximately parallel with the sidewall (10), and upwards to a second position in which the flap (30) is able to lift the lid out of engagement with at least part of the engagement area (15), said injection moulding tool (50) defining a mould cavity (52) for forming the container (1), characterised in that the injection moulding tool has a first (60) and a second (65) supply conduit for plastics material; that the one supply conduit (65) debouches in the area (53) of the mould cavity (52) in which the flap (53) is formed; and that the first (60) and the second (65) supply conduit are connected to a source for a respective plastics material, the source supplying plastics material to said area (53) in which the flap (53) is formed supplying plastics material of a colour different from said other plastics material."

III. The following prior art documents are referred to

A1 EP-A-0 565 967

A7 EP-A-1 052 183

A8 EP-A-0 924 044

A10 US-A-3 861 840

A12 Article "Mehr Farben - Mehr Materialien - Mehrkomponenten-Spritzgießtechnik, Fachtagung des Süddeutschen Kunststoff-Zentrums Würzburg vom 06. und 07. Mai 1992"

IV. Impugned decision

Claim 1 as granted, which differs from claim 1 according to the present main request in that it does not comprise the feature that the flap is manufactured from a plastics material having a colour different from that of the skirt, has been considered as lacking inventive step.

Starting from the container of A1 or A7 as closest prior art this feature of present claim 1 has been found to be the only distinguishing feature (reasons, point 5.3).

The effect of this feature has been seen in that a colour contrast is achieved between the flap - which has to be activated to open the container - and the skirt surrounding the flap. According to the impugned decision this colour contrast makes the flap easily recognizable.

Based on this effect the problem has been formulated as "how to improve visibility of the opening flap, thereby avoiding the risk of damaging the container by incorrectly opening it" (reasons, point 5.4).

The solution to this problem in claim 1 as granted, namely to provide the container with a flap which has a colour different from that of the skirt has been considered as not involving an inventive step, since the skilled person starting from the container of A1 (or A7), being faced with that problem, would immediately try to improve the visibility of the flap

by giving it a colour different from the one of the skirt (reasons, point 5.4).

In this respect it has also been indicated that the possibility to improve the visibility of an activating element by giving it a colour different from its surroundings clearly belongs to the common technical knowledge (reasons, point 5.5).

As an example of a method to obtain a differently coloured flap reference has been made to painting of the flap (reasons, point 5.4).

The subject-matter of the claim 1 of the present main request (then: auxiliary request), on the contrary has been considered as involving an inventive step.

The features that the flap has a different colour than that of the skirt and that it is manufactured from a plastics material having that different colour were considered as the distinguishing features over A7.

Based on these distinguishing features the objective technical problem has been formulated as: how to improve visibility of the opening flap (reasons, point 6.2.2).

According to the impugned decision it needs to be considered that even if the common general knowledge gives a clear suggestion towards changing the colour of the flap, there is no prior art or common general knowledge providing this suggestion **together** with the specific teaching that this should be done by manufacturing it from a plastics material having a

different colour than that of the skirt (marking in bold added).

In this respect it has further been indicated that the objective technical problem cannot be formulated as two completely separated partial problems, which can be solved by applying first common general knowledge, showing how to improve visibility of the flap, and then the teachings of another piece of prior art, for example A12, disclosing how a container can be produced from two different plastic materials.

According to the impugned decision there is clearly a functional interaction between the two distinguishing features: the flap has a different colour as compared to the skirt since it is manufactured from a plastics material having a different colour than that of the skirt (reasons, point 6.2.2).

V. The submissions of the appellant can be summarized as follows:

(a) Two features of claim 1 according to the main request are relevant for the examination of inventive step. According to the first one the flap has a different colour than the skirt and according to the second one the flap is manufactured from a plastics material having a different colour than the skirt.

(b) It is the effect of the first feature that the visibility of the flap is enhanced. The effect of the second feature relates to the manner in which a flap according to the first feature is obtained.

(c) The first and second problems associated with these two effects are thus to provide a container having a flap with improved visibility and to provide a method by which the flap having improved visibility can be manufactured.

(d) No further effect can be considered with respect to the first feature concerning the proper use of the flap in case the lid is to be removed from the container. There simply is not one resulting from a flap having a different colour as defined by the first feature. Thus the effect cannot be taken into account that the lid is removed without the use of a tool which furthermore prevents that the engagement area is damaged such that ultimately the lifespan of the container is extended. These effects do not result solely from the visibility of the flap being enhanced but require additionally proper use of the flap in the manner foreseen by the manufacturer. The way in which a lid is actually removed does not depend, however, on the manner foreseen but rather on the behaviour of a user. In other words the container according to claim 1 does not comprise any feature which prevents a user from using a tool for lifting off the lid.

(e) Concerning the examination of inventive step the issue of whether other, obvious, possibilities exist to enhance the visibility of the flap is of no concern since the question to be examined is whether the claimed approach to increase the visibility of the flap is obvious or not.

Furthermore, in the examination of inventive step only technical effects but not those which relate purely to economic considerations can be taken into account.

(f) It is not only obvious to enhance the visibility by giving the flap a colour different from the one of the skirt but also to manufacture it from a different plastic material, as can be derived from A12.

(g) The first and the second problem are only related insofar as the latter concerns the provision of a method by which a flap solving the first problem can be manufactured. The impugned decision incorrectly assumes that these two problems cannot be formulated as two separate problems.

(h) Concerning the examination of inventive step the impugned decision is correct in its finding that the solution according to claim 1 as granted, namely a container having a flap according to the first feature, is obvious in view of A1 or A7 and common knowledge.

(i) Concerning the consideration of the "could / would" question it has to be taken into account that the first and the second problem to be considered are derived from the effects obtainable for a container having a flap according to the first and second feature. Starting from the closest prior art according to A1 or A7 it thus needs to be examined what the skilled person would have done, and not only hypothetically could have

done, to arrive at a container which shows these effects. Since the result of the examination of inventive step following the problem-solution approach is that the skilled person would have arrived at the claimed approach in an obvious manner in an attempt to solve the two problems starting from the closest prior art this result moreover cannot be disqualified by considering it as based on hindsight.

(j) The subject-matters of the claims 1 according to the second to fifth auxiliary requests do not involve an inventive step either. For the container according to the claims 1 of the second and third auxiliary requests this is because the moulding of a container having the flap as an integral part of the container is evident in view of the prior art according to A7. For the moulding tool according to the claims 1 of the fourth and fifth auxiliary requests it is evident to use such a tool to manufacture containers of the kind concerned as can be derived e.g. from A12.

VI. The submissions of the respondent can be summarized as follows:

(a) Concerning the examination of inventive step two features are relevant, which both concern the flap. According to the first feature the flap has a colour different from that of the skirt and according to the second feature the flap is manufactured from a plastics material having a different colour than the skirt.

(b) Although it is an effect of the first feature that the visibility of the flap is enhanced the formulation of a problem based only on this effect would, however, be tainted by hindsight since such a problem comprises already a pointer to the solution.

(c) The proper problem for the examination of inventive step takes the further more general effect into account which, through the enhanced visibility of the flap, results in that the flap is properly lifted in the foreseen manner, namely without any tools being required and employed. This leads ultimately to the still further effect that the container can be better sealed and opened again since the engagement area remains undamaged. The problem to be considered is thus how to improve the container such that its lifespan is extended.

(d) Formulating the problem in this manner without using knowledge of the claimed invention avoids the use of hindsight. The question is then what the skilled person would have undertaken to increase the lifespan of the container, for which the following needs to be taken into consideration. Firstly a container comprising the first feature cannot be considered an obvious solution to this problem. The reason is that other, obvious, possibilities exist for the skilled person to enhance the visibility of the flap, like placing a marker with text and/or a picture on the flap. Focussing the problem on an enhancement of the visibility of the flap by giving it a different

colour therefore must be based on hindsight. Secondly it needs to be taken into account that in this technical field, which relates to the mass production of containers, the skilled person is minded to look for low cost containers. He is thus aware of the extra costs which would arise in case the flap and the skirt are of different colours and would for that reason not even think of the costlier possibility as defined by claim 1.

(e) Concerning the problem relating to the first feature and the one relating to the second feature, which concerns the manufacturing of a flap defined by the first feature, the impugned decision correctly assumes that these two problems cannot be formulated as two completely separate problems and that the solution according to claim 1 is not rendered obvious by the available prior art.

(f) In this respect it also needs to be considered that even if it is concluded that the skilled person "could" arrive at a container having a flap which is of a colour different from that of the skirt there is no suggestion in the prior art in this direction. Therefore it cannot be concluded that he "would" have done so.

(g) Concerning the subject-matters of the claims 1 according to the second to fifth auxiliary requests it needs to be considered that these claims explicitly or implicitly define that the flap is an integral part of the container. All of these claims thus require that the flap is moulded simultaneously with the remainder of the container,

which requires an elaborate and costly production for which the prior art given e.g. by A12 does not give any indication.

(h) It further needs to be taken into consideration that simultaneous moulding of the flap and the container requires a moulding tool having two cavities connected together and that the injection of two different types of plastic material poses problems, i.a. concerning the area where these materials meet, and that the prior art does not propose a method allowing such a moulded part to be formed.

VII. In the annex to the summons for oral proceedings the Board referred i.a. to the effects of the features that the flap has a colour different from that of the skirt and that the flap is manufactured from a plastics material having that different colour, which both distinguish the subject-matter of claim 1 (main request) over the container disclosed by A7. Two problems were derivable therefrom, the first one concerning an improvement of the visibility of the flap and the second one concerning the manner in which a container having a flap solving the first problem as defined in claim 1 is manufactured. With respect to the examination of inventive step it indicated that contrary to the conclusion of the impugned decision it appears that in a first step it can be examined whether the solution to the first problem is obvious or not and in a second step whether the manner in which a flap solving the first problem is manufactured is obvious or not.

VIII. Oral proceedings before the Board took place on 11 December 2012.

Reasons for the Decision

1. *Subject-matter of claim 1 (main request / as maintained)*

1.1 Claim 1 is directed to

(a) a container of plastics

comprising a bottom, an annular sidewall with an annular engagement area arranged opposite the bottom and configured for being able to cooperate with a lid.

The container comprises furthermore

(b) a flap configured for being manually turnable around a turning connection which is covered by the lid and which is arranged in proximity of the engagement area, from

(c) a first position, in which the flap extends in parallel with or approximately in parallel with the side wall, and upwards

(d) to a second position in which the flap is able to lift the lid out of engagement with at least a part of the engagement area.

Concerning the flap it is further defined that

(e) the flap has a different colour than that of the skirt and that

(f) the flap is manufactured from a plastics material having different colour than that of the skirt.

2. *Closest prior art*

2.1 It is common ground that the plastic container of either A7 or A1 can be considered as closest prior art in the examination of inventive step. As the discussion during the oral proceedings concentrated on A7 the Board takes A7 as closest prior art.

2.2 It remained undisputed that A7 discloses a plastics container (feature (a)) which has a bottom, an annular sidewall, a skirt arranged on the sidewall and a flap (referred to as bracket 20) which is configured by the features (b) - (d) (cf. A7, paragraph [0018]; figures 1 - 7: container 1, skirt 10, flap 20).

2.3 Concerning the material of the container and the manner in which it is manufactured A7 (paragraph [0027]) states "The present container is preferably manufactured in a moulded plastics material. Depending on the method of manufacturing, different material could be used for the different parts of the container as well as for the lid.". There is no mention of the colour of the container nor of its elements in A7.

3. *Consideration of "common technical knowledge"*

In the impugned decision (reasons, point 5.5) "common technical knowledge" has been considered as further prior art. It states: "The possibility to improve visibility of an activating element by giving to it a

colour different from the colour of its surroundings therefore clearly belonged to the common knowledge of the general public before the priority date of the patent in suit ...".

This common technical knowledge was considered in the examination of inventive step during the oral proceedings before the Board. No objections were raised by the respondent in this respect.

4. *Features distinguishing the container of claim 1 from the one of A7*

It is common ground between the parties and the Board that the finding of the impugned decision (reasons, point 5.3) is correct that the container according to claim 1 is distinguished from the one of A7 by features (e) and (f).

5. *Effects of the distinguishing features*

5.1 It is also common ground between the parties and the Board that feature (f) defines how the flap having a colour different from that of the skirt as defined by feature (e) is manufactured. Beyond that feature (f) does not give any further definition of how the container and the flap are manufactured.

5.2 The parties are of divided opinion with regard to the effect(s) of distinguishing feature (e) that the flap has a colour different from that of the skirt.

5.2.1 It remains common ground that this feature has the first technical effect that the appearance of the flap,

as compared to that of the skirt, is a different one. Thus as correctly indicated in the impugned decision (reasons, point 5.4) "a colour contrast is achieved between the element which has to be activated to open the container (the flap) and the part of the container surrounding said element (the skirt) ...".

5.2.2 According to the respondent feature (e) has, corresponding to the impugned decision (reasons, point 5.4) a second effect, in that "this colour contrast makes the flap easily recognizable". The appellant did not raise any objection against the consideration of this effect. As can be derived from the following, this has been considered in the formulation of the problem based on the first and the second effect of feature (e). Consideration of the second effect in combination with the first appears to be justified since it directly relates the first, technical, effect to the use of the container in that it draws the attention of a user of the container to the flap as a particular element with a specific function, namely to facilitate the lifting of the lid as defined by features (b) – (d).

5.2.3 The respondent expressed the opinion that for feature (e) a still further, third effect, needs to be considered. According to this third effect the different colour of the flap prevents the lid from being lifted without use of the flap. According to features (b) – (d) the flap is able to lift the lid out of engagement with at least a part of the engagement area. The respondent asserted that this third effect prevented damage to the engagement area which is, as indicated in the patent in suit (paragraph [0004]),

otherwise likely to occur. This damage would be to the engagement area of the sidewall as a result of a forcible insertion of a tool (like a screw driver) between the engagement area and the lid and the subsequent use of such a tool as a lever to lift the lid.

5.2.4 The Board, in line with the appellant, accepts that such damage can occur in case the lid is lifted without the flap being moved from its first to its second position as defined by features (b) – (d). It does, however, again in line with the appellant, not accept that this third effect has to be considered when it comes to the formulation of the problem which is solved by the container of claim 1 having a flap according to feature (e). The reason is that this third effect cannot be considered caused by feature (e). As indicated by the Board during the oral proceedings, the fact that the flap has a different colour only draws the attention of a user of such a container to the flap and its **potential** utilisation for lifting the lid. The different colour of the flap, however, does not necessarily **prevent** the user from lifting the lid by other means. Feature (e) does not have any effect on the structure of the flap or the container such that lifting of the lid is **only** possible according to features (b) – (d).

6. *Problems to be formulated based on the effects of the distinguishing features*

6.1 Considering the first and second effect of feature (e) as referred to above (cf. points 5.2.1, 5.2.2) the Board, like the appellant, concurs with the impugned

decision that the first technical problem is to be formulated as: how to improve the appearance / visibility of the flap such that it is easily recognizable (reasons, points 5.4 and 6.2.2).

6.1.1 This first problem is, as indicated by the Board during the oral proceedings, in line with the one stated in the patent in suit (cf. paragraph [0004]) according to which "It is a problem with the prior art containers that the consumer tends to overlook the flap ...".

6.1.2 According to the respondent this formulation of the first problem is not correct since it contains already a pointer to the solution provided by feature (e), which means it is based on hindsight. Instead consideration of a more general problem based on the earlier discussed third effect of feature (e) would be appropriate. Such a problem could be formulated as: how to increase the useful lifespan of a container.

This proposed problem comes close to another one referred to in the patent in suit; in that the consumer tends to overlook the flap "and thus to try to remove the lid in an unintentional manner by means of a sharp tool that he/she attempts to introduce underneath the edge of the lid. Such behaviour will, in all events, involve that the consumer feels uncomfortable using the container and thus possibly avoids buying the product in question at a later point in time." (paragraph [0004]).

As can be derived from the above considerations (cf. point 5.2.4), such a problem cannot be considered as it

is based on a technical effect which is not exclusively caused by feature (e).

6.1.3 Also the argument that the above formulation of the first problem in any case contains a pointer to the solution cannot be followed.

As outlined above this first problem is formulated considering the first and second effect of distinguishing feature (e) and thus follows the approach constantly relied upon by the boards of appeal in the application of the problem-solution approach for the examination of inventive step. In any case, this problem does not comprise a pointer to the solution since the solution that the flap has a colour as defined by feature (e) is simply not mentioned therein.

6.1.4 For a similar reason the objection of the respondent cannot hold that the formulation of the first problem is based on hindsight because it is formulated with knowledge of the invention. The point in the examination at which knowledge of the subject-matter of claim 1 is, necessarily, taken into account is when in the comparison of the container of claim 1 and the one according to the closest prior art A7 the distinguishing features of the claimed container are established (cf. point 4 above). From that point on the technical effects of the distinguishing features have been considered in the formulation of the first problem which is to be solved starting from the container according to the closest prior art, presently A7.

These considerations have been discussed during the oral proceedings. The respondent was invited to specify

its arguments concerning the inadmissible application of hindsight in the formulation of the problem. It failed, however, to give any particular reason linked to the formulation of the first problem.

Its further argument that the examination of inventive step was in general based on hindsight will be discussed further on (cf. point 7.2.6).

6.2 It remained undisputed that based on the effect of distinguishing feature (f) a second objective technical problem needs to be formulated as: how to manufacture a flap as defined by features (b) - (e).

6.3 Although the finding of the impugned decision (reasons, point 6.2.2) "that the objective technical problem cannot be formulated as two completely separated partial problems" appears to be correct it has to be taken into account that, as indicated by the appellant, the first and the second problem are only related insofar as the second problem concerns the manner in which a flap solving the first problem is actually manufactured.

For that reason it is justified to carry out the examination of inventive step in two steps, one for the solution to the first problem and one for the solution to the second problem (see also the combined consideration of these two steps referred to in point 7.4 below).

7. *Obviousness*

7.1 *Solution of the first problem*

7.1.1 As already established (cf. point 3 above), it is common technical knowledge that the visibility of an activating element can be improved by giving it a colour different from its surroundings. The Board considers that, as argued by the appellant, starting from the container of A7 and taking that common technical knowledge into account in an attempt to solve the first problem, it is straightforward and thus obvious to provide the flap known for the container of A7 with a colour which differs from the one of the surrounding skirt as defined by feature (e). This result corresponds to that given in the impugned decision with respect to claim 1 as granted (cf. point IV above).

The solution as defined by claim 1 to the first problem thus does not involve an inventive step (Article 56 EPC).

7.1.2 The above result is, as indicated during the oral proceedings and as can be derived from the preceding as well as the following, the result of the application of the commonly employed problem-solution approach in the examination of inventive step.

7.2 The above result also holds true considering the following arguments of the respondent.

7.2.1 According to a first argument the solution to the first problem cannot be considered obvious starting from the

container of A7 since a number of different possibilities to solve the first problem are available. These include e.g. placing a label on the flap or forming the flap such that it is easily distinguishable from the skirt.

7.2.2 According to a second argument the container of claim 1 involves inventive step over A7 since no pointer is given in this document towards a container having a flap as defined by feature (e). In this respect it has also been argued that although the skilled person "could" apply the common technical knowledge to solve the first problem he "would" not have been prompted by the state of the art to do so.

7.2.3 According to a third argument applying the problem-solution approach, in contradiction to the first and second argument, is inadmissibly based on hindsight.

7.2.4 Concerning the first argument it is, as indicated by the Board during the oral proceedings, not a question of whether other (obvious) possibilities exist. In the present examination of inventive step of the solution defined by claim 1 it is of relevance only whether **this** solution involves inventive step or not in view of the relevant prior art given by **A7** and the **common technical knowledge**.

7.2.5 Concerning the second argument the following applies.

As indicated in point 2.3 above A7 discloses with respect to the material of the container that "The present container is preferably manufactured in a

moulded plastics material." without any reference to the colour of the container or its flap.

Reducing this container of A7 into practice thus involves in any case choices concerning the plastics material to be used and its colour(s).

Concerning the **further development** of the container of A7 **such that the first problem is solved**, it is clear that the necessary choice of the colour of the container will be made such that the flap is distinguishable from the remainder of the container, i.e. by giving it a different colour as defined by feature (e).

The "missing pointer", which has not been further elaborated by the respondent, can be seen as given by the common technical knowledge (cf. point 3 above). This gives the clear suggestion to improve the visibility of an activating element like the flap according to features (b) - (d) by giving it a colour different from the one of the skirt.

If there is such a clear suggestion, this answers also the "could-would" question.

7.2.6 The third argument that the Board's application of the problem-solution approach is based on hindsight does not hold either.

As indicated above (cf. point 7.1.2) the examination of inventive step has been carried out following the well established problem-solution approach in all its

details. This approach and the steps applied have also been explained by the Board during the oral proceedings.

The individual steps of the problem-solution approach and the conclusion reached for each of these steps are, as explained above, not tainted by hindsight. The Board therefore does not see a basis for the general unspecified allegation that the examination of inventive step is affected by such an objection.

7.3 *Solution of the second problem*

7.3.1 Starting from the container of A7 and considering the manufacturing method disclosed therein (moulding plastics material) the skilled person, having to decide on a method to manufacture a flap according to features (b) - (e) will follow the guidance given by A7 and will manufacture, corresponding to feature (a), the container with the flap of a plastic material. A clear indication or pointer that the flap, which according to feature (e) has a colour different from that of the skirt, can be made of a plastics material like that of the container is given by the statement of A7: "Depending on the method of manufacturing, different material could be used for the different parts of the container as well as for the lid" (paragraph [0027]).

A container of plastics comprising a flap manufactured from plastics material is thus obvious in view of A7. This applies also in case the flap has a different colour as defined by feature (e).

The solution defined by claim 1 to the second problem thus does not involve an inventive step (Article 56 EPC).

7.3.2 This holds true considering the arguments brought forward by the respondent which correspond to the ones brought forward against the first problem and its solution. In this respect the reasoning given above (cf. points 7.2.4 - 7.2.6) applies correspondingly.

Concerning the "could-would" question the Board referred during the oral proceedings to the pointer given in A7 itself (cf. point 7.3.1 above), according to which the container is preferably manufactured in a moulded plastics material, wherein different material could be used for the different parts of the container.

7.4 *Combined consideration of the solutions of the first and second problem*

Combined consideration of the first and the second problem and their respective solutions is not appropriate, due to the fact that the solutions of the first and the second problems are not in a functional relationship leading to a combined, or synergistic, effect going beyond the sum of the first and the second effects. They are, as indicated above (point 6.3) only functionally related in so far as the solution to the second problem concerns the manner in which the flap of the container solving the first problem is actually manufactured.

7.5 The above result holds true considering the following arguments of the respondent.

7.5.1 The respondent argued that the container defined by claim 1 involves inventive step because already the solution to the first problem involves inventive step. It based its reasoning on the assumption that only sales personnel and not the skilled person gets to know the problem that customers overlook the flap and thus try to open the container in a way not intended by the producer(cf. paragraph [0004]).

If this assumption is correct this means, however, that the passing on by sales personnel of this kind of information would be going beyond normal communication. The Board, in line with the understanding of the appellant as expressed during the oral proceedings, cannot accept this. Under normal circumstances such problems will be reported by the sales personnel and will be considered in connection with the formulation of container specifications.

7.5.2 According to another argument already minor improvements in the technical field concerned involve inventive step. Further the solution according to claim 1 is more costly than alternative solutions such as the flap being provided with a label to improve its visibility.

As to the first of these arguments: proper application of the problem-solution approach as referred to above (cf. point 7.1.2) and proper definition of the closest prior art and of the common technical knowledge which can be attributed to the skilled person takes care of this. The common technical knowledge (cf. point 3) of the skilled person was not subject to discussion.

Concerning the higher production costs the Board is of the opinion as expressed during the oral proceedings that apart from the fact that no evidence has been provided in this respect, it needs to be taken into account that higher costs alone need not necessarily lead to a technically available approach (as the one disclosed by A7) being discarded. As referred to during the oral proceedings, costs of a container need to be seen in relation to the value of its content in the sense that a high value content might justify a more expensive container. It is in any case a question which lies outside the examination of inventive step according to the problem-solution approach, namely of finding a balance between alternative solutions to the same problem considering their price as well as their acceptance by customers.

7.6 Thus the container according to claim 1 does not involve an inventive step (Article 56 EPC).

Claims 1 according to the second and third auxiliary request

8. The above considerations given with respect to claim 1 of the main request apply correspondingly with respect to the features of the claims 1 of the second and third requests for the features they have in common with claim 1 according to the main request.

9. *Additional features*

9.1 The claims 1 according to the second and third auxiliary request comprise both in addition to the features of claim 1 of the main request the features

that the container is a molded container of plastics and that the flap is molded from a plastics material.

9.2 Both claims 1 furthermore comprise an amended feature (b). This feature reads according to claim 1 of the second auxiliary request

(b') "a flap (30) moulded as an integral part of said container"

and according to claim 1 of the third auxiliary request

(b'') "a flap (30) for being manually turnable by means of a film hinge turning connection".

10. *Disclosure of A7 concerning the manufacturing of containers*

According to the disclosure of A7 the container is preferably manufactured by moulding plastics material and depending on the method of manufacturing employed different material can be used for different parts of the container as well as for the lid. A7 also discloses, as argued by the appellant, that the flap is integral with the container. This is derivable from figures 5 to 7, which by the hatching used show that the material of the container is contiguous with the material of the flap. In A7 the flap is manually turnable by means of a film hinge 23 (cf. paragraph [0022 and figures 5 - 7]). This is confirmed by column 4, lines 5 to 7, which state that the indicator member is formed integrally with the container. In figures 5 to 7 this indicator member 30 has the same hatching as the container 3 and flap 20.

11. *Effect of the additional / amended features on the examination of inventive step*

For inventive step the question to be answered is whether there are particular problems requiring inventive skills to produce the flap of A7 which is integral with the container by a connection in the form of a film hinge, in a plastics material of a different colour. This relates to feature (e) and the second problem (cf. point 6.2 above). It has been accepted by the appellant that, as referred to by the respondent, these features have the effect that the manufacturing of the container and the flap is facilitated.

The problem to be formulated with respect to this effect can thus be seen as how to simplify the manufacture of the container.

12. *Disclosure of A12, A8 and A10*

Documents A12, A8 and A10 have been referred to during the oral proceedings as further prior art with respect to the subject-matters of the claims 1 of the auxiliary requests.

12.1 A12 discloses that items of plastics material can be moulded in one step with multiple combinations of colours (Mehrfarbenspritzguß); see the introduction on page 8 and the reference to moulding processes concerning two, three and multiple colours in figure 1. Furthermore, according to the method referred to on page 12 ("Biinjektionsspritzgiessen") two different plastics materials are led via separate supply conduits

simultaneously into a common mould cavity, in which they melt together.

12.2 A8 and correspondingly A10 disclose a bucket or container with a handle wherein both parts are integrally formed in the same mould using different materials (cf. e.g. A8, column 4, line 40 - column 5, line 1; A10, title, column 1, lines 24 - 39).

13. *Obviousness*

13.1 To answer the question whether the flap and the container of A7 can actually be moulded together, the skilled person will find the answer in A12. That this technology is not something unknown for containers is obvious by A8 and A10. The simultaneous injection moulding of the container and the flap using different coloured plastics is therefore an obvious design option. In that case the subject-matters of the claims 1 of the second and third auxiliary requests do not involve an inventive step (Article 56 EPC).

13.2 The above result also holds considering the argument of the respondent that according to A8 and A10 two injection moulding steps following each other in a timed sequence are performed whereas according to the claims 1 concerned the injection moulding is performed simultaneously in one step.

It is, however, evident that the sequential moulding of the container and the bail in A8 or A10 is due to the functional relationship foreseen for the container and the bail. It is likewise evident that considering the teaching of A10 such a sequential moulding is not

required in case elements to be moulded, like presently the container with its flap, have to be formed as integral parts, for which A12 "Biinjektionsspritz-gießen" provides the solution.

Claims 1 according to the fourth and fifth auxiliary request

14. The above considerations given with respect to claim 1 of the main request and the second auxiliary request apply correspondingly with respect to the features of claim 1 of the fourth and fifth requests for the features they have in common.

15. *Amended claims 1*

15.1 The claims 1 according to the fourth and fifth auxiliary request are directed to an injection moulding tool for manufacturing a container comprising the features of the container of the claims 1 of the main request and the second auxiliary request, respectively. These features of the containers cannot be considered as contributing to subject-matter involving inventive step, for the reasons given above in this respect.

15.2 Claim 1 according to the fourth auxiliary request is directed to an injection moulding tool for manufacturing a container, the injection moulding tool having a mould cavity for the container. The injection moulding tool has a first and a second supply conduit for plastics material, one debouching in the area of the mould cavity in which the flap is formed, implying that in the rest the container is formed. The first and the second supply conduit are connected to a source for a respective plastics material, the source supplying

plastics material to said area in which the flap is formed supplying plastics material of a colour different from said other plastics material.

15.3 Claim 1 according to the fifth auxiliary request differs from claim 1 of the fourth auxiliary request in that the container comprises, corresponding to the container of claim 1 of the second auxiliary request, a flap which is defined as being moulded as an integral part of the container (cf. point 9.2 above: feature (b')).

16. *Effect of the features relating to the definition of an injection moulding tool / resulting problem*

The features relating to the injection moulding tool have the effect to provide a tool by which the moulding referred to by claims 1 of the main and the second auxiliary request can be performed.

The problem solved by these features can thus be seen in how to find a moulding tool by which the container as defined by these claims 1 can be manufactured.

17. *Obviousness*

17.1 It is evident that, as discussed during the oral proceedings, manufacturing of a container of the kind concerned by injection moulding requires an injection moulding tool for all parts of the container to be moulded.

17.2 As concluded concerning the moulded containers of claim 1 according to the second auxiliary request it is

obvious to mould the flap as an integral part of the container with the projection moulding process as suggested by A12. Consequently the injection moulding tool is required to have a single moulding cavity for the container and the flap. Each part of this moulding cavity has to be supplied with the appropriate plastics material which, for the containers concerned have to be of different colour (features (e) and (f)). The evidently required tool for such moulding is an injection moulding tool.

17.3 According to the respondent inventive step is involved in providing a single mould cavity for forming the container which comprises an area in which the flap is formed.

17.4 The Board finds the argument of the appellant to be more convincing that for a moulded item comprising more than one element, it depends on the relationship foreseen for these elements whether or not they are formed in separate cavities or in one cavity. A further advantage of the single cavity is that it allows elements to be integrally connected as a result of the injection moulding.

This advantage is the result of the approach proposed by A12 (cf. page 12: "Biinjektionsspritzen), the application of which did not involve inventive step as discussed for the second auxiliary request.

17.5 The subject-matter of claim 1 of the fifth auxiliary request thus cannot be considered as involving inventive step (Article 56 EPC). As this subject-matter is more limited (by the "integral flap") than that of

the otherwise identical claim 1 of the fourth auxiliary request, the same result applies to the fourth auxiliary request.

17.6 The above result also holds considering the argument of the respondent that using the method of A12 it cannot be excluded that the simultaneous moulding according to the "Biinjektionsspritzgiessen" of A12 can lead to a disadvantageous seam at the area at which the two injected different plastics materials meet in the cavity.

17.6.1 In this respect, as indicated during the oral proceedings, it needs to be taken into consideration that the claims 1 concerned do not comprise a feature providing that the mould cavity is such that where the two materials meet a clear and undisturbed area is created and - as also counts for the description - relate only in a general manner to the injection moulding tool.

17.6.2 Furthermore, in the view of the Board the person skilled in the art can, within the framework of the general technical practice as illustrated by A12, choose the method and the arrangement of cavities best suited for a particular situation depending i.a. on the size of the container and the flap. This practice concerns e.g. the structure and shape of the mould cavity, the structure of the area of the cavity in which the flap is formed as well as of the boundary region between this area and the remainder of the mould cavity, the shape (including the cross section) of the first and second supply conduit and the location at which each one of these debouches into the mould cavity.

It is that same general technical knowledge which required for the reduction to practice of the claimed injection moulding tools.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

G. Nachtigall H. Meinders