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# Datasheet for the decision of 3 June 2015

**Case Number:** T 2043/11 - 3.2.07

**Application Number:** 06704239.0

**Publication Number:** 1848648

**IPC:** B65D83/16, B65D83/26

**Language of the proceedings:** EN

**Title of invention:**
SEAL ASSEMBLY FOR A PRESSURISED CONTAINER

**Patent Proprietor:**
Reckitt Benckiser (UK) Limited

**Opponent:**
S.C. Johnson & Son, Inc.,

**Headword:**

**Relevant legal provisions:**
EPC Art. 56
RPBA Art. 13(1)

**Keyword:**
Inventive step - (no)
Late-filed request - request clearly allowable (no)

**Decisions cited:**

**Catchword:**

Europäisches Patentamt
European Patent Office
Office européen des brevets

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**Case Number: T 2043/11 - 3.2.07**

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

| | |
|---|---|
| **Appellant:** (Opponent) | S.C. Johnson & Son, Inc.,<br>1525 Howe Street<br>Racine WI 53403 (US) |
| **Representative:** | Madgwick, Paul Roland<br>Ruschke Madgwick Seide & Kollegen<br>Postfach 86 06 29<br>81633 München (DE) |
| **Respondent:** (Patent Proprietor) | Reckitt Benckiser (UK) Limited<br>103-105 Bath Road<br>Slough,<br>Berkshire SL1 3UH (GB) |
| **Representative:** | Holmes, Jeremy Mark<br>Reckitt Benckiser<br>Corporate Services Limited<br>Legal Department - Patents Group<br>Dansom Lane<br>Hull HU8 7DS (GB) |
| **Decision under appeal:** | **Interlocutory decision of the Opposition Division of the European Patent Office posted on 7 July 2011 concerning maintenance of the European Patent No. 1848648 in amended form.** |

**Composition of the Board:**

| | |
|---|---|
| **Chairman** | H. Meinders |
| **Members:** | V. Bevilacqua |
| | R. Cramer |

## Summary of Facts and Submissions

I. The appellant (opponent) lodged an appeal against the interlocutory decision of the opposition division maintaining European patent 1 848 648 in amended form.

II. The following grounds of opposition had been raised:
-Article 100(a) EPC (lack of novelty, lack of inventive step);
-Article 100(c) EPC (not allowable amendments).

III. The following documents of the opposition proceedings are taken into consideration in the present decision:

D9: US 3 250 444
D14: WO 01/55009
D15: US 5 447 273

IV. The appellant requests that the decision under appeal be set aside and that the European patent No. 1 848 648 be revoked.

V. The respondent (patent proprietor) requests that the appeal be dismissed, or alternatively that the decision under appeal be set aside and the patent be maintained in amended form on the basis of the first auxiliary request filed at the start of the oral proceedings.

VI. The wording of independent **claim 1 of the main request** reads as follows:

A seal assembly for sealing between a switching section (10) and the valve stems (12) of a pressurized container, the seal assembly comprising a first seal portion (20, 116); and a second seal portion (18, 118); wherein the first seal portion is adapted to form a

seal with an end face of an output section of the pressurized container, and the second seal portion is adapted to form a seal with a sidewall of the output section characterized in that
the first and second seals are separate pieces, and the two seals provide redundancy in sealing function.

The wording of independent **claim 12 of the main request** reads as follows:

A pressurized container comprising a housing, an aerosol canister having a valve stem, and a valve arrangements wherein a seal assembly is provided to form a seal between the valve stem and the valve arrangement, the seal assembly comprising a first seal portion (20, 116) and a second seal portion (18, US), the first seal portion is adapted to form a seal with an output section of the pressurized container and an end face thereof, and the second seal portion is adapted to form a seal with a side wall of the output section characterized in that the first and second seals are separate pieces, and the two seals provide redundancy in sealing function.

The wording of independent **claim 1 of the only auxiliary request** reads as follows (the features added with respect to the main request are in bold, emphasis added by the Board):

A seal assembly for sealing between a switching section (10) and the valve stems (12) of a pressurized container, the seal assembly comprising a first seal portion (20, 116); and a second seal portion (18, 118); wherein the first seal portion is adapted to form a seal with an end face of an output section of the pressurized container, and the second seal portion is

adapted to form a seal with a sidewall of the output section characterized in that
the first and second seals are separate pieces **and wherein the first seal portion comprises a flat gasket**, and the two seals provide redundancy in sealing function.

The wording of independent **claim 12 of the only auxiliary request** reads as follows (the features added with respect to the main request are in bold, emphasis added by the Board):

A pressurized container comprising a housing, an aerosol canister having a valve stem, and a valve arrangements wherein a seal assembly is provided to form a seal between the valve stem and the valve arrangement, the seal assembly comprising a first seal portion (20, 116) and a second seal portion (18, US), the first seal portion is adapted to form a seal with an output section of the pressurized container and an end face thereof, and the second seal portion is adapted to form a seal with a side wall of the output section

characterized in that the first and second seals are separate pieces **and wherein the first seal portion comprises a flat gasket** and the two seals provide redundancy in sealing function.

VII. The appellant argues, insofar as relevant for the present decision, essentially as follows.

D14 shows a seal assembly which is an appropriate starting point for discussing inventive step.

The following differences of the subject-matter of independent claims 1 and 12 of the main request over the assembly of D14 may be identified: a second seal portion adapted to form a seal with a sidewall of the output section whereby the first and second seals are separate pieces, and the two seals provide redundancy in sealing function.

The problem to be solved by these differences is "how to prevent leakage when the valve is not correctly inserted".

Inventive step should not be acknowledged, because D15 shows a seal portion adapted to form a seal with a sidewall of the output section, and the skilled person, by applying this teaching to the assembly of D14 would inevitably come to an assembly in which the first and second seals are separate pieces, and the two seals provide redundancy in sealing function.

The auxiliary request should not be admitted into the proceedings because it is late filed and because it is not clearly allowable, as a flat gasket is a well known alternative to the O-ring shown in D14.

VIII. The respondent argues, insofar as relevant for the present decision, essentially as follows.

Starting from the assembly of D14 the skilled person would not come to the subject-matter of the claims of the patent in suit because this document already contains suggestions for preventing leakage when the valve stem is not correctly inserted.

The skilled person combining the teachings of D14 and D15 would simply remove the first (upper) sealing

element (30) shown in D14, and replace it with the second (lateral) sealing element as taught by D15.

The problem of "improving the assembly" as formulated by the appellant in his objection starting from D14 is artificial. There are further no reasons to switch from "single seal" assemblies as those shown in D14 and D15 to an assembly with two redundant seals.

The auxiliary request should be admitted because the only amendment contained therein is that the additional features of dependent claim 4 have been added to the subject-matter of the independent claims of the main request.

## Reasons for the Decision

1. *Main request*

1.1 D14

D14 relates to the field of spray dispensers and discloses a spray dispenser comprising a housing (104, see figure 6) and an aerosol canister (14) which is operated by means of a switching section acting on the valve stem (17) of said container (see figures 1A, 1B and pages 10-12).

D14 discloses a seal assembly for sealing between a thermally activated switching section (12, see page 12 lines 17-22) and the valve stems (17) of a pressurized container, the seal assembly comprising an O-ring (see page 10, lines 27-28, and figure 1).

This O-ring 30 corresponds to the first seal portion of claim 1 of this request, because it is adapted to form

a seal with an end face of an output section (17) of the pressurized container.

The appellant argues that D14 discloses also another seal portion, corresponding to the second seal of claims 1 and 12 of this request, because the aperture 29, by being tightly fitted with the sidewall of the valve stem 17 ("snugly fits" as explained at page 10, line 25), also prevents leakage.

The Board disagrees because a snug fit (i.e. with negative clearance) does not necessarily prevent leakage because this effect is only reliably achieved if the cross section of the nozzle 17 and of the contour of aperture 29 have corresponding shapes. For example, it would not occur if this negative clearance is obtained with internal ribs disposed between the nozzle and the aperture wall.

The Board therefore comes to the conclusion that there is no second seal portion in D14, and considers this document, belonging to the same technical field of the patent in suit, and disclosing most of the features of the independent claims of this request, is an appropriate starting point for the discussion of inventive step.

1.2 Differences

As discussed above, the following differences, for both independent claims, can be identified:

- a second seal portion adapted to form a seal with a sidewall of the output section (stem),
- the first and second seals are separate pieces,
- the two seals provide redundancy in sealing function.

1.3 Effects and problem to be solved

By using a second seal, the output section (valve stem 17) can be snugly fitted into the aperture (29) in an easy and reliable way, without the need of strict dimensional tolerances of these two pieces (see paragraph [0023] of the patent in suit) and without the risk of damaging the output section during assembly (see paragraph [0005]).

This additional seal also clearly achieves a further barrier against leaking fluid without interfering with the functioning and structure of the first seal portion (see paragraph [0011]).

Based on these effects, the problem to be solved may therefore be formulated as: how to simplify production of this known seal assembly by increasing, or at least without compromising, its safety against leakages (see paragraph [0004]).

1.4 Obviousness

The solution to this problem as proposed in the independent claims 1 and 12 of this request is not considered to involve an inventive step for the following reasons.

D15 also relates to the field of spray dispensers and discloses a spray dispenser comprising an aerosol canister (16) which is operated by means of a switching section (2) acting on the valve stem (16) of said container (see figures 1-4, and the description, column 4, lines 33-59).

D15 shows a seal assembly (see in particular figures 1 and 2) where, exactly like in D14, a rigid element (4 in D15, 29 in D14) carries an aperture receiving the tubular nozzle (stem) of the aerosol container (16 in D15, 17 in D14).

D15 explains that although it is possible, exactly like in D14, to tightly fit the nozzle (see column 4, lines 29-30; there must be a tight fit to limit leakage) inside element 4, it is preferable ("in a preferred embodiment") to use a sealing element (O-ring 19) to guarantee that the fluid contained in the aerosol container is not lost to the environment.

This sealing element acts in D15 as a seal portion adapted to form a seal with a sidewall of the output section/stem.

Moreover, D15 also explains that this seal portion, corresponding to the claimed second seal portion, facilitates assembly.

The O-ring 19 assists in positioning the lower body part 4 on pressurized container (see column 4, lines 35-37) and therefore the "snug fit" between nozzle and receiving member is no longer necessary.

The skilled person starting from the assembly of D14 and aiming at avoiding the problems encountered when the output section of the pressurised container is snugly fitted in aperture 29 of D14 would immediately recognize, by looking at D15, that this document teaches a straightforward solution to this problem.

D15 clearly explains that using a separate sealing element is better than simply snugly fitting the nozzle

into aperture 29 of D14, and that this can be done in a simple and straightforward way, without requiring extensive modifications of the known device.

The skilled person would also immediately recognize that an additional measure against leakage would automatically result.

The skilled person following this teaching would therefore add to the seal assembly (and also to the container) shown in D14 such a second seal portion adapted to form a seal with a sidewall of the output section, whereby the first and second seals are separate pieces. The two seals would provide redundancy in sealing function. Thereby he would arrive at the subject-matter of claims 1 and 12 of the patent in suit.

The argumentation of the respondent, according to which the skilled person combining the teachings of D14 and D15 would remove the first (upper) sealing element (30) shown in D14, and replace it with the second (lateral) sealing element as taught by D15 cannot be followed by the Board.

This is because D15 does not teach that a front seal should be replaced by a lateral seal, but rather that it is preferred (see column 4, lines 29-37), instead of tightly inserting the nozzle in an opening, to use an additional, separate sealing element.

2. *Auxiliary Request*

2.1 Admissibility

In order to justify the late filing of the auxiliary request at the beginning of the oral proceedings the respondent states that the only amendment contained therein is the addition of the features of granted claim 4 (relating to a flat gasket) to the subject-matter of the independent claims of the main request, and that a flat gasket is neither mentioned in D14, nor in D15.

In accordance with the jurisprudence of the Boards (see Case Law of the Boards of Appeal, 7th edition 2013, IV.E.4.4.2) the Boards normally refuse to consider late-filed auxiliary requests if they are directed to subject-matter which is not clearly allowable, in the sense that it is not immediately apparent that they successfully address the outstanding issues, without giving rise to new ones.

The independent claims of the auxiliary request do not satisfy this requirement.

The additional difference starting from D14 is that the first seal portion now comprises a flat gasket instead of an O-ring.

The Board cannot recognize any synergy between this feature and the differing features already discussed above in relation to the main request and considers, also in regard of figures 1 and 2 of D9 (see the annular seal 28), that a flat gasket is, in this technical field, a known alternative to the O-ring

shown in D14, especially when a seal between two flat surfaces (as in figure 1a of D14) needs to be realized.

Based on that it is not apparent to the Board how simply replacing the O-ring of D14 with a flat gasket could contribute to inventive step.

For these reasons the Board comes to the conclusion that the independent claims of the auxiliary request are not clearly allowable for lack of inventive step. This late-filed auxiliary request is therefore not admitted in the proceedings.

## Order

## For these reasons it is decided that:

The decision under appeal is set aside.

The patent is revoked.

The Registrar: The Chairman:

S. Sánchez Chiquero H. Meinders

Decision electronically authenticated