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Beschwerdekammern | Boards of Appeal | Chambres de recours

T 121

Case Number: T 46 / 83

DECISION

of the Technical Board of Appeal 3.2.1

of 10 January 1984

Appellant: Ing. Rossi & Catelli di Catelli & C. s.n.c.
Via Zarotto, 114
Parma (IT)

Representative: Bonfreschi, Mario
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Decision under appeal: Decision of Examining Division 080 of the European Patent Office dated 14 October 1982 refusing European patent application No 81 830 027.9 pursuant to Article 97(1) EPC

Composition of the Board:

Chairman: G. Andersson

Member: M. Huttner

Member: P. Ford

SUMMARY OF FACTS AND SUBMISSIONS

I. European Patent application No. 81 830 027.9, filed on 25 February 1981 published under publication No. 0 036 393 and claiming priority of a previous application filed in Italy, was refused by a decision of Examining Division 080 of the European Patent Office dated 14 October 1982. The decision was based on the original claims 1 to 8.

II. The reason given for the refusal was that in view of the prior art disclosed by US-A-2 817 463 and DE-B-1 017 454, the subject matter of the Claim 1 did not involve an inventive step within the meaning of Article 56 EPC and hence this claim was not allowable under Article 52(1) EPC. Objections were also raised to the non-compliance with the two-part form requirement of Rule 29 (1) EPC and the lack of acknowledgement of the most pertinent prior art cited in the search report as required by Rule 27(1)(c) EPC.

III. On 16 December 1982 the appellants lodged an appeal against the decision. The statement of grounds was received on 15 February 1983 and the appeal fee was duly paid.

With the Statement of Grounds the appellants also submitted a revised description and new claims 1 to 7 and argued that the disclosure of the most pertinent citation had been interpreted too widely. They requested that the impugned decision be set aside and a European patent be granted on the basis of these newly submitted documents.

IV. As a result of various objections raised by the Board of Appeal during the procedure before the Board, on 21 September 1983 the appellants submitted a revised description and a new set of claims 1 to 7.

Claim 1 now reads as follows:

Feeding device for pre-sterilised objects contained in internally-sterile receptacles, for packaging plant, of the type comprising:

- a space designed to isolate the link-up area between a packaging plant sterile-enclosure and a receptacle (10) containing pre-sterilised objects, from the surrounding atmosphere;

- first means by which to create a sterile-gas atmosphere within said space slightly pressurised with respect to the surrounding atmosphere;

- locking means by which to secure the receptacle fast against said space;

- second means by which to remove the lid of said receptacle once the latter is held fast by said locking means;

- close/open component (4) affording association with said sterile enclosure;
characterised

- in that said space is defined by a chamber (1) located between said receptacle (10) and said sterile enclosure (5) and furnished with two apertures, the

first (2) of which affording association with said sterile enclosure by way of said open/close component (4) operated from a point in the surrounding atmosphere, the second (3) embodied in such a way as will permit the mouth (10a) of said receptacle (10) to be offered thereto and made fast therewith by said locking means (12) thus effecting its complete closure, said first and second apertures being set apart to a degree which will ensure that the mouth of said receptacle remains at a suitable distance from said first aperture (2) once made fast to said second aperture (3) at all events, a distance such as to make no contact therewith.

- and in that said second means comprise gripping means (16 and 17) located within said chamber between said first and second apertures and operated from a control (24) in contact with the surrounding atmosphere and designed to lay a firm hold on the lid (10b) of said receptacle; and actuator means (34) designed to bring about the reciprocal drawing together-and-apart of said gripping means (15-16-17) and said receptacle (10) in such a way that said gripping means remain and move within said chamber and between said first and second apertures;

- and in that it comprises baffle means (15-20-21-23) positioned between said first and second apertures designed to create a marked reduction in section at mid-chamber when said second aperature is vacant, this in order to reduce the flow of gas from chamber (2) to the surrounding atmosphere and to maintain total sterility within said chamber (1),

and designed to occupy only a part of the chamber mid-section whenever said second aperture is fully occupied by the mouth (10a) of said receptacle.

V. For the original claims, description and drawings, reference should be made to publicaton No. 0 036 393.

REASONS FOR THE DECISION

1. The appeal complies with Article 106 to 108 EPC and Rule 64(a) EPC. In the notice of appeal the appellants do not explicitly state the extent to which amendment or cancellation of the impugned decision is requested. However since according to the decision the application was refused in its entirety, it is clear that the appellants are requesting cancellation of the decision in full.

Therefore, the appeal can be considered as complying with the provisions of Rule 64 (b) EPC (cf. Decision T 07/81, EPO OJ 3/1983, 98).

2.1 The functional attribute added to the close/open component now introduced in the preamble of Claim 1 is admissible since it can be derived from page 6, line 10 of the description. Likewise it represents a more appropriate general term capable of covering said component common to both the prior art and the invention. The same is true of the wider term "space", replacing the previously used more specific expression "chamber" throughout the preamble (cf. Decision T 52/82 EPO OJ 10/1983, 416).

Further, the features of the first part of the Claim 1 are, in combination part of the prior art as represented by DE-B-1 017 454 and thus Claim 1 meets the requirements of Rule 29 (1) (a) EPC.

2.2 The further added functional attribute now in the wording of the characterising clause to the effect that the baffle means are designed to create a reduced flow of gas that passes from the chamber to the surrounding atmosphere can also be readily derived from the description page 8, lines 20-26 and page 11, lines 8-14. The said attribute is essential to clearly define the subject matter of the Claim 1 in order to understand the solution to the problem expressly stated in the introductory portion of the description. Hence, the subject matter of the Claim 1 does not extend beyond the content of the application as filed and the amendments are therefore allowable under the terms of Article 123 (2) EPC. It is also sufficiently supported by the description and likewise fulfills the requirements of Article 84 EPC.

3. According to the characterising portion, the subject matter of the Claim 1 differs from the device of DE-B-1 017 454 acknowledged as the closest prior art by the features stated therein.

As US-A-2 817 463 pertains to a valve arrangement for the discharge into free ambient air of loose material from a vessel maintained below or above atmospheric pressure and providing an air-lock to prevent air exchange with the vessel and DE-A-2 811 652 relates to a charge and discharge device for fire extinguishers, these citations are even more remote from the invention claimed than DE-B-1 017 454. Hence the subject matter of the Claim 1 is novel with respect to the prior art dealt with in the proceedings. Therefore Claim 1 meets the requirements of Article 54 EPC.

4. In a device for sterile sealing of liquids in packaging objects known from DE-B-1 017 454 there is a space temporarily formed between the receptacle containing pre-sterilised objects and the sterile enclosure when they are being linked together for the tranfer of the said objects, whereby the line-up area is isolated from the surrounding atmosphere and thereupon hot gas is introduced into said space for sterilisation of the receptacles' head piece fitted with a cover because prior to the link-up of the receptacle the walls subsequently forming the space are exposed to external air and are therefore contaminated. However, despite the hot gas sterilisation being effected following each successive receptacle link-up and thus requiring much time and effort, the danger of possible contamination of the sterile enclosure still exists. The appellants consider this as disadvantageous.

5. Therefore, according to the appellants, the problem to be solved by the present application resides in the provision of a compact simple feeding device which affords the transfer of the pre-sterilised objects from the interior of the receptacle to the sterile enclosure in aseptic conditions, which is also easily adaptable to an existing sterile packaging line.

6. The problem underlying the application is solved by the features of Claim 1 and is based on the idea of placing a chamber between the receptacle to be discharged and the opening of the sterile environment and maintaining said chamber internally sterile at all stages of operation, the chamber being capable of making a permanent restricted outward flow of sterile gas possible.

7. It remains to be examined whether the subject matter of the Claim 1 involves an inventive step and the question now arises whether the publications cited would give the skilled person any directives, indications or hints for modifying a feeding device according to DE-B-1 017 454 so as to operate under completely sterile conditions.

7.1 In the device of DE-B-1 017 454 a receptacle containing the objects to be sealed is directly linked up to a wall opening of a sterile enclosure provided with a swingable flap for closing said opening. Thereupon a temporary external hot gas barrier is established in a space around the head of the receptacle prior to the opening of the flap.

To permit the transfer of the objects, the flap is swung away into the interior of the enclosure thereby clearing the opening. Upon interruption of the hot gas supply to the space, the latter is charged with gas entering from the enclosure and maintained at slight superatmospheric pressure in order to inhibit access of unsterile air which may enter through possibly accidental leakages at the sealing provided at the link-up area. Upon termination of the object transfer the flap is caused to close the opening of the enclosure so that no sterile gas escape can occur and the container is then replaced by another one successively to be discharged.

This operating procedure clearly indicates that in this prior art device no escape of sterile gas from the enclosure is envisaged.

There is, as now may be clearly seen, no indication or hint in DE-B-1 017 454 to teach the skilled person to provide a chamber between the receptacle and the sterile

enclosure permanently secured to the latter and through which the objects are to be transferred while being maintained sterile at all times during the operation by a sterile fluid flow passing through said chamber to the surrounding atmosphere around a baffle means fitted therein for restricting the escaping of the flow irrespective of whether the receptacle receiving aperture is vacant or a container to be discharged is linked up. Thus the skilled person reading this publication would have no reason to be induced to mount such a non prefigured chamber between the receptacle and the sterile enclosure of the device according to DE-B-1 017 454, in view of its teachings running counter to those of the invention.

7.2 In the valve arrangement relating to the discharge of loose material from a space maintained at a different pressure according to US-A-2 187 463 having a housing with two apertures at opposite ends, one communicating with the vessel to which it is connected and from which material is to be discharged while the other communicates with the free atmosphere, there are two valves provided within the housing opened in alternation but each being closed before the other opens. Thus the arrangement acts as a so called "air-lock"and any gas flow past said valves is clearly inhibited. This citation likewise running counter to the teachings of the invention can, consequently, be of no guidance whatsoever for resolving the appellants' sterilising problem.

7.3 If despite this fact the skilled person were to make the unrealistic attempt to modify the device of DE-B-1 017 454 in a effort to solve the problem solved by at the invention by following the teachings of US-A-2 817 463

it would immediately become apparent that such modification could also not yield the desired results because, if the valve housing referred to above were mounted between the receptacle and the sterile enclosure of DE-B-1 017 454 at its opening, no sterile air could pass through the air-locked chamber at any time and thus no sterilising effect according to the invention could be attained.

For this reason, it is most unlikely that a skilled person would seriously consider the combination of the valve housing as shown in US-A-2 817 463 with the device of DE-B-1 017 454 without having prior knowledge of the teachings of the present invention.

8. Consequently, the information in these publications, whether considered separately or in combination, would not lead the skilled person to proceed in the manner set forth in Claim 1 of the application.

9. For all these reasons, the technical problem of the application as set forth in the introductory portion of the description is solved by the features of Claim 1 in a non-obvious manner, thus involving an inventive step as required by Article 56 EPC. Claim 1 is therefore allowable under the terms of Article 52(1) EPC.

10 Claims 2 to 7 constitute particular embodiments of the invention claimed in Claim 1 and are thus likewise allowable.

11. The current description, having a revised introductory portion to reflect the closest background art in conjunction with the reformulated problem, has been brought

into conformity with the amended Claim 1. The other parts have been corrected for clear representation of the invention, as requested by the Board. Therefore, no formal objections can be raised regarding the description and it thus meets with the formal requirements of the Convention.

12. No application has been made for reimbursement of the appeal fee in pursuance of Rule 67 EPC and it is not considered that the circumstances of the case would justify the reimbursement.

Order

For these reasons,

it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the Examining Division with the order to grant a European Patent on the basis of Claims 1 to 7 and description submitted on 21 September 1983 and the original drawings.

The Registrar: The Chairman: