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D E C I S I O N
of 20 January 2004

Case Number: T 1273/01 - 3.2.7

Application Number: 92311407.8

Publication Number: 0547861

IPC: B65G 69/18

Language of the proceedings: EN

Title of invention:

Apparatus and system for the transfer of flowable material
without contamination between containers

Patentee:

MATCON (R & D) LIMITED

Opponent:

ANAG A. Nussbaumer AG

Headword:

-

Relevant legal provisions:

EPC Art. 54, 56, 100(c), 114(2)

Keyword:

"Added subject-matter - (no)"
"Novelty - (yes)"
"Inventive step - (yes)"

Decisions cited:

T 0287/86, T 0637/92

Catchword:

-



Case Number: T 1273/01 - 3.2.7

D E C I S I O N
of the Technical Board of Appeal 3.2.7
of 20 January 2004

Appellant: ANAG A. Nussbaumer AG
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 11 October 2001
rejecting the opposition filed against European
patent No. 0547861 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: A. Burkhart
Members: P. A. O'Reilly
E. Lachacinski

Summary of Facts and Submissions

- I. The appellant (opponent) filed an appeal against the decision of the Opposition Division to reject the opposition against the European Patent No. 0 547 861.
- II. Opposition was filed against the patent as a whole and based on lack of novelty and lack of inventive step (Article 100(a) EPC), insufficiency (Article 100(b) EPC) and extension of content (Article 100(c) EPC).

The Opposition Division held that the subject-matter of claim 1 of the main request (maintenance as granted) did not contravene Article 123(2) EPC, was novel and involved an inventive step, and that the description sufficiently disclosed the invention.

The most relevant prior art documents for the present decision are:

D3: DE-A-1 188 882

D4: EP-A-0 297 494

D6: EP-A-0 340 488

D7: DE-A-3 305 452

D8: EP-A-0 380 255

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

The respondent requested that the appeal be dismissed.

IV. The independent claim of the patent as granted reads as follows:

"1. Apparatus for handling flowable material (2) comprising a container (1) for flowable material (2) which is adapted for passing said material (2) to a charging aperture (19) of a receptacle (3) via an outlet (4), obturating means (7) for the outlet (4) which is reciprocable by means of actuating means (8, 9), and a device (5) adapted for removing and placing a closure (6) of the receptacle (3), characterised in that the device (5) is mounted internally of the obturating means (7) which is raisable to open the outlet (4) and to raise the closure (6) by means of the device (5) clear of the charging aperture (19) for delivery of product thereto."

V. The appellant argued in written and oral submissions essentially as follows:

(i) Claim 1 of the application as filed was generally drafted. Claim 2 was directed to the use of vacuum, and claim 3, which depended from claim 2, stated that the device was internal of the obturating means. Figure 7 of the patent shows that there is a seal in the form of a skirt around the obturating means. This seal ensures that the flowable material cannot be sucked in by the vacuum if the vacuum device does not fit to the closure correctly. The device is arranged internally of the obturating means because it is a vacuum device. The separate references to the features of claims 2 and 3 in the introduction to

the description do not mean that the features of those claims may be provided separately. It is just that the separate advantages are mentioned. The whole of the description of the embodiments is directed to a vacuum embodiment which confirms that only a vacuum embodiment is disclosed and can be claimed.

- (ii) The subject-matter of claim 1 lacks novelty over each of documents D4, D6 and D7. Document D4 discloses all the features of the preamble of claim 1. In addition, the closure of the receptacle mentioned in document D4 is removed and replaced and the obturating means are raised in this operation so that also the characterising features of the claims are disclosed. Also, document D6 discloses all the features of claim 1. The document is directed to a workroom, i.e. a container, which is used to hold fuel elements, fuel rods or other radioactive material. It is well known to the skilled person that radioactive material can be in the form of powder or dust. Powder and dust are flowable. Therefore, the container disclosed in document D6 is suitable for the purpose of the apparatus as stated in claim 1 of the patent in suit. Document D6 also discloses all the remaining features of claim 1. The apparatus disclosed in document D7 is suitable for the purpose stated in claim 1. This document is concerned with radioactive waste. Radioactive waste is a flowable material so that the apparatus disclosed in this document is also suitable for the purpose set out in claim 1 of the patent in

suit. Document D7 also discloses all the remaining features of claim 1.

(iii) Starting from document D8 the subject-matter of claim 1 is obvious in view of documents D3 or D4. Document D8 discloses a receptacle 25 in the sense of claim 1. From document D4 the skilled person learns to raise and lower the closure by means of a device 46 which is arranged internally of the obturating means. Also in document D3 the closure is removed and replaced by means of the obturating means for the outlet of a container for powder material. Therefore, the subject-matter of claim 1 is obvious in view of this combination of documents D8 with either of D3 or D4.

(iv) The ground of insufficiency, which was mentioned in the appeal grounds, is no longer maintained.

VI. The respondent argued in written and oral submissions essentially as follows:

(i) Claim 1 of the application as filed did not mention vacuum so that there was no limitation to vacuum operation. In the introduction to the description there were two separate paragraphs dealing with the features of claims 2 and 3 respectively. In these paragraphs the advantages of the features of the respective claims are indicated. Each paragraph states that the device (for removing and placing the closure) "may" have the respective feature. This makes it clear that each of the features is individually optional. In particular, the feature that the device is mounted

internally of the obturating means may be provided independently of whether the device is vacuum operable.

(ii) The subject-matter of claim 1 is novel. Document D4 does not disclose that the device for raising and placing the closure is internal of the obturating means. The spring 79 is part of this device and is not internal of the obturating means. Neither of the documents D6 or D7 discloses an apparatus suitable for use with flowable material. There is no mention of such use in the documents and the construction of the apparatus disclosed therein is not suitable for such a use.

(iii) The subject-matter of claim 1 involves an inventive step. The invention relates to a unitary apparatus. The apparatus disclosed in document D8 is not a unitary device. There is a transportable station and a discharge station which provides a chute into a receptacle. There is no disclosure of a closure for the receptacle and no device for removing and replacing such a closure. Also in document D4 the device for removing and replacing the disclosure is separate to the container. Therefore the skilled person would not arrive at the characterising features of claim 1. Documents D6 and D7 relate to a different technical field to the invention and hence are not relevant.

Reasons for the Decision

1. *Article 100(c) EPC*

- 1.1 Claim 1 as originally filed was a broad claim directed to an apparatus having a container which had a device for removing and replacing a closure of a receptacle to be filled with material flowing from the container. Claim 2 as originally filed was dependent on claim 1 and specified that the device was vacuum operated. Claim 3 as originally filed was dependent on claim 2 and specified that the device was mounted internally of a means for obturating an outlet of the container. In the patent as granted the subject-matter of original claim 3 has been incorporated into claim 1 but not the subject-matter of original claim 2. The appellant considers that because the subject-matter of original claim 2 was not also incorporated in claim 1 Article 123(2) EPC has been contravened. As pointed out by the appellant the description of the embodiments refers only to a vacuum device for raising the closure of the aperture. However, in the introductory part of the description of the application as filed there are two particular separate paragraphs, cf. column 1, lines 29 to 35 of the A publication. In the first paragraph the feature of claim 2 is mentioned with the indication that this feature provides a simple way of operating the device. The second paragraph mentions the feature of claim 3 with the indication that this feature provides a neat, compact structure. In the opinion of the Board these paragraphs indicate to the skilled reader that the features of claims 2 and 3 were not features which had to be provided in combination but could be provided independently. The appellant has

argued that the skilled person would understand that the device is mounted internally of the obturating means because it is a vacuum device and has to be protected from the flowable material. The Board cannot agree with this argument. There is nothing in the application as filed to indicate that this is the reason for positioning the device internally of the obturating means. The seal appears to be intended to keep the flowable material flowing past the raised closure. Without the seal the material could settle on the top the closure, irrespective of the nature of the removal device. The skilled person is also aware that that there are other raising devices equivalent to a vacuum device, e.g. an electromagnet or a mechanical connection. The skilled person would realise that such equivalent devices could suitably be provided internally of the obturating means and would acquire whatever advantage is gained by that choice of position.

1.2 The Board therefore concludes that the disputed amendments made to the application before grant do not contravene Article 123(2) EPC so that the ground under Article 100(c) EPC does not succeed.

2. *Novelty*

2.1 The appellant cited each of documents D4, D6 and D7 as taking away the novelty of claim 1.

2.2 Document D4 is the basis for the preamble of claim 1 and the Board agrees that this document discloses all the features of the preamble. The respondent has not disputed this point of view. In the apparatus according to this document a closure for an aperture in a

receptacle is provided such that the closure has to be pushed downwards against the action of a spring in order to open the aperture. The pushing action is effected by a cross-strut 46 in a cone 41 on a member 34 which is part of an obturating means for the container for the flowable material. The member is moved downwards to effect the pushing action. Claim 1 requires that the obturating means is raisable to raise the closure clear of the aperture. This feature is not to be found in the disclosure of document D4. The corresponding action in the apparatus disclosed in document D4 is that the closure is pushed down, i.e. lowered, against a spring force.

- 2.3 Document D6 is directed to a docking apparatus for connecting a transport and storage receptacle to a workroom or hot cell. The material to be transported is described as fuel elements, fuel rods or other radioactive material. The document does not describe the workroom apart from indicating that there is an outlet in the floor 71 of the workroom. An apparatus is disclosed for raising the closure of a receptacle which is moved beneath the outlet and for raising an obturating means of the outlet. The appellant has argued that the workroom must be considered to be a container in the sense of claim 1, in particular in view of the fact that radioactive material can be in the form of powder or dust which is a flowable material.

The Board however cannot agree with the arguments of the appellant in this respect. Claim 1 specifies that the apparatus is "for handling flowable material (2)". Furthermore, the claim specifies that the apparatus comprises "a container (1) for flowable material (2)

which is adapted for passing said material (2) to a charging aperture (19) of a receptacle". According to the description of the patent flowable material includes "powder ... liquid, slurry or similar" (column 1, lines 7 to 10). In accordance with the constant jurisprudence of the Boards of Appeal the statement of the purpose of an apparatus must be so interpreted that the apparatus is suitable for the stated purpose, see for instance Decisions T 287/86 (point 2.2 of reasons) and T 637/92 (point 4.5 of reasons). It is therefore necessary to consider whether the apparatus disclosed in document D6 is suitable for the purpose stated in claim 1. The Board interprets the claim as meaning that the apparatus must be so arranged that flowable material within the container, e.g. a liquid, reaches the outlet of the container to pass to the charging aperture of a receptacle. As already indicated above the sole information regarding the workroom disclosed in document D6 is that it is for fuel elements or fuel rods or other radioactive matter. With regard to the reference to radioactive material there is no indication as to what form this material could take. The allegation of the appellant that radioactive material can be in the form of a powder is not relevant since it is not indicated in document D6 that the radioactive material actually is a powder. There is no disclosure or information in document D6 which would lead the skilled reader to understand that the apparatus disclosed therein is suitable for the purpose stated in claim 1. In the absence of any relevant disclosure it cannot be concluded that the function specified in claim 1 would be fulfilled by the apparatus disclosed in document D6.

2.4 For document D7 the situation is essentially the same as for document D6. In document D7 there is disclosed a preparation room for accepting radioactive nuclear fuel from a nuclear reactor. A transfer arrangement is provided in the floor of the room for transferring the fuel. In document D7 there is no disclosure or information which would lead the skilled reader to understand that the apparatus disclosed therein is suitable for the purpose stated in claim 1. In this respect there is a complete absence of information so that cannot be concluded that the stated function would be fulfilled by the apparatus disclosed in document D7.

2.5 Therefore, the subject-matter of claim 1 is novel in the sense of Article 54 EPC.

3. *Inventive step*

3.1 Closest prior art

In the opinion of the Board the closest prior art is represented by document D4 which discloses an apparatus comprising the features of the preamble of claim 1. Document D4 furthermore discloses that the device for moving the closure of the receptacle clear of the charging aperture is mounted internally of the obturating means. This device is formed by the cross-strut 46 which is internally mounted of the means for obturating the container 1.

3.2 Problem to be solved

According to the description of the patent the problem to be solved with respect to document D4 is to prevent

contamination of the external surfaces. The respondent however was unable to identify which of the surfaces disclosed in document D4 could be contaminated. Moreover, claim 1 does not contain features which would ensure that this problem is overcome. The Board therefore concludes that the problem stated in the description cannot be the objective problem. The Board has not been able to identify a further specific problem to be overcome. The Board concludes that the objective problem to be solved is to provide an alternative solution to the solution disclosed in document D4 to the problem of opening and closing the charging aperture of a receptacle into which material should flow from a container arranged above the receptacle.

3.3 Solution to the problem

The solution to the problem is that the device for both removing and placing the closure is mounted internally of the obturating means of the container and that the obturating means raises the closure clear of the aperture by means of the device.

3.4 The solution to the problem is not obvious for the following reasons:

- 3.4.1 In document D4 the obturating means moves downward towards the closure 80 of the receptacle 72 which is positioned underneath. The closure is held in place by an upwards force exerted by a spring 79. To open the aperture of the receptacle a cross-strut 46 of the obturating means pushes downwardly on the closure to move it clear of the aperture against the force exerted

by the spring. The force of the spring is chosen to provide suitable sealing of the receptacle in transport (column 10, lines 3 to 7). In the view of the Board therefore in document D4 the part of the device which places the closure in the aperture, i.e. the spring, is not mounted internally of the obturating means. Also the obturating means, although raisable (from its extended position), is not raisable to raise the closure clear of the aperture, since in the apparatus of document D4 the closure must be lowered clear of the aperture.

- 3.4.2 There is no apparent reason for the skilled person to choose to redesign the apparatus known from document D4 in the manner set out in claim 1. Such a redesign involves more than simply changing the closure of the receptacle to open outwards and arranging the obturating means then to raise this closure clear of the aperture. In document D4 the outlet of the container is formed as an annular channel which feeds into a broadened circular outlet. The obturating means block the exit from the channel to the circular outlet and by means of a second member block the outlet by means of a frusto-conical shaped member. In order to arrange the obturating means to be raisable to raise the closure clear of the aperture the construction of the outlet area of the container of document D4 would have to be completely redesigned so that a raising movement opens the outlet rather than a lowering motion. Given the diameter difference between the channel outlet and the broadened portion this is not necessarily a simple task. The Board therefore concludes that the skilled person wishing to solve the problem would not be lead from the teaching of document

D4 and his general knowledge to modify the apparatus known from document D4 in such a way as to arrive at the apparatus as specified in claim 1.

3.4.3 Document D8 relates to the opening of apertures to allow discharge of flowable material. In this document a discharge station is provided with a chute or hopper which has a closure 20 at its upper inlet which is raised upwards by means of a bellows provided below it. The closure also acts upon the obturating means of the container to raise these and allow material to flow out of the container into the chute. The bellows forms the device which raises the closure, but it is not mounted internally of the obturating means. Also, the obturating means is not raisable to raise the closure clear of the aperture. It is the inverse which occurs. The skilled person considering document D8 would thus find a solution which results in the raising of the closure but not in the manner set out in claim 1. The skilled person when considering document D8 would not be lead to the features of the characterising portion of claim 1.

3.4.4 Documents D6 and D7, as already explained with respect to novelty, do not deal with the problems of transferring flowable material. The skilled person would not therefore consider the documents when considering a problem concerned with flowable material.

3.4.5 The appellant also argued starting from document D8 and considering documents D3 or D4. However, as already explained above with respect to novelty the skilled person considering document D4 would not find the features set out in the characterising portion of

claim 1. Document D3 discloses an apparatus for raising a closure of a receptacle which is in the form of a flat cover 4. The cover is made of, or includes, magnetic material. There is a flat obturating means 3 for an outlet of a container 1 which can contain powder, i.e. flowable, material. The obturating means is arranged above the closure when transfer of material is desired. The obturating means is formed of non-magnetic material. A magnet may be lowered down inside the container to attract the closure and then raise both the obturating means and the closure. The magnet thus forms the device for removing and placing the closure. This means that the device for removing and placing the closure is not mounted internally of the obturating means. Also the obturating means is not raisable to raise the closure, but rather the closure is raised to raise the obturating means. Moreover, the magnet could not be arranged to be mounted internally of the obturating means. The obturating means is flat and hence has no interior. The magnet would no longer be movable which would require the provision of some other mechanism inside the container to raise both the obturating means and closure. There is however no reason why the skilled person should make such changes. In particular, this would change the relatively simple construction disclosed in document D3 into a complicated structure. The Board can see no reason why the skilled person should undertake such a reconstruction.

3.5 Therefore, the subject-matter of claim 1 of the patent as granted involves an inventive step in the sense of Article 56 EPC.

4. *Late file documents*

During the oral proceedings before the Board the appellant requested to introduce two new documents into the proceedings. The first document was a European patent (EP-B-684 928) belonging to the respondent. The appellant argued that this document showed that the skilled person at the priority date of the patent in suit would consider the treatment of radioactive material to be in the same technical area as the patent in suit. The document however has a priority date which is more than a year later than the priority date of the patent in suit. The document cannot therefore provide reliable evidence as to the situation at the priority date of the patent in suit. The Board therefore exercises its power under Article 114(2) EPC to disregard this document. The second document is a dictionary definition of a German word which was considered to be equivalent to the term container. The Board did not see this as relevant to the discussion, since the meaning of the term container was not as such in dispute. The Board therefore exercises its power under Article 114(2) EPC to disregard this document also.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

D. Spigarelli

A. Burkhart