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D E C I S I O N
of 22 February 2005

Case Number: T 0846/03 - 3.2.4

Application Number: 99106655.6

Publication Number: 0933097

IPC: A62C 31/05

Language of the proceedings: EN

Title of invention:
Fire fighting equipment

Applicant:
Marioff Corporation Oy

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 54, 76(1), 84, 123(2)
EPC R. 71(2)

Keyword:
"Non appearance at oral proceedings"
"No comments on the objections raised in the Board's communication"
"Clarity (no)"
"Novelty (no)"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0846/03 - 3.2.4

D E C I S I O N
of the Technical Board of Appeal 3.2.4
of 22 February 2005

Appellant: Marioff Corporation Oy
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 3 March 2003 refusing European application No. 99106655.6 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: M. Ceyte
Members: C. Scheibling
T. Bokor

Summary of Facts and Submissions

I. By its decision dated 3 March 2003, the Examining Division refused the patent application, because the subject-matter of claim 1 was considered to be unclear and to lack novelty with respect to D1: DE-A-34 40 901 and D2: US-A-2 726 897.

On 28 April 2003 the Appellant (applicant) filed an appeal and paid the appeal fee simultaneously. The statement setting out the grounds of appeal was received on 30 June 2003.

II. With his statement setting out the grounds of appeal the Appellant filed a new claim 1 (see section 1 of the Board's communication).

He requested that the decision under appeal be set aside and that a patent be granted on the basis of the new claims filed with the statement setting out the grounds of appeal.

III. In a communication dated 2 November 2004, annexed to the summons for oral proceedings, the Board substantiated in detail why the revised set of claims was apparently not allowable. The content of its communication was as follows:

1. Claim 1 as filed with the statement setting out the grounds of appeal reads as follows:

"1. A fire fighting equipment, comprising at least one spray head with a number of nozzles directed

obliquely sideways, to the outside, for spraying fog-like extinguishing liquid, characterized in that the nozzles are capable to operate under high pressure, and
that the distance between the nozzles (3), the direction of the nozzles, the spread angle of the nozzles, the liquid pressure and the initial droplet size are mutually adapted in such a manner, and
that the nozzles are arranged so close to each other that the fog formation areas of the individual nozzles intensify the fog flows and provide a suction causing the fog formation areas to be compressed into a continuous directional fog spray, thereby effecting a concentration of the individual fog sprays into a fog spray having a strong penetration power."

2. The following documents were cited in the proceedings:

D1: DE-A-34 40 901
D2: US-A-2 726 897

3. Article 76(1) and Article 123(2) EPC

3.1 The newly filed claim 1 appears to comply with the requirements of said Articles.

3.2 Besides claim 1, solely claim 9 has been modified, to render it clearly dependent on claim 3. This modification is not objectionable under Article 123(2) EPC and overcomes the objection

under Article 82 EPC raised by the Examining division.

4. Clarity of claim 1

In order to be clear in the meaning of Article 84 EPC, an independent claim should clearly specify all the essential features of the invention, i.e. all the features necessary for solving the technical problem and this, according to Rule 29(1) EPC has to be done "in terms of the technical features of the invention". Although it is not always necessary for a claim to identify the technical features in full detail, they must at least define the borders of the invention by defining the structural limits of the claimed object.

In the present case, the features are defined with respect to the result to be obtained rather than by their structural limits and therefore, the requirement of clarity is not met.

5. Technical meaning of the features of claim 1

5.1 Claim 1 comprises inter alia the following features:
The nozzles are capable to operate under high pressure, and
the distance between the nozzles, the nozzles are arranged so close to each other the direction of the nozzles, the spread angle of the nozzles, the liquid pressure and the initial droplet size are mutually adapted in such a manner, that

the fog formation areas of the individual nozzles intensify the fog flows and
provide a suction causing the fog formation areas to be compressed into a continuous directional fog spray,
thereby effecting a concentration of the individual fog sprays into a fog spray having a strong penetration power.

5.2 "High pressure": page 2, line 34 to page 3, line 1 it is indicated: "The spray head is preferably intended to be operated by a high liquid pressure of e.g. 100 bars or more to provide the so-called fog formation". Thus, in the meaning of the patent application "high pressure" is the pressure necessary to obtain a fog formation.

5.3 "The distance between the nozzles, the direction of the nozzles, the spread angle of the nozzles": page 1, lines 25 to 33 it is indicated "Getting the fog spray concentrated as desired depends on several parameters, such as individual spread angles and mutual main directions of each nozzle as well as on the drop size; a large individual spread angle facilitates contact with the fog screen of adjacent nozzles and thus the total concentration by means of suction from outside. The resulting fog flow pattern has a resemblance to a sponge with a relatively round head." Furthermore, page 2, lines 13 to 20, it is indicated "With the concentration of the different fog sprays, the drops therein will collide with one another and split into smaller ones, which improves the extinction effect. The initial size

of the fog drops shall not be too big, because the fog sprays of the different nozzles then risk losing the mutual contact necessary for the common fog spray."

Thus, the necessary drop size is obtained when drops collide with one another and split into smaller ones which are not too big. Furthermore, the distance, direction and angle of the nozzles as claimed are correct in the meaning of the patent application when the fog screens of adjacent nozzles are such as to contact and when suction occurs.

5.4 "Provide a suction causing the fog formation areas to be compressed into a continuous directional fog spray" Page 2, lines 5 to 12 it is indicated "In order to secure necessary suction from outside and above, if the spray head is mounted on a ceiling, a certain space of e.g. a couple of centimetres shall preferably exist between the ceiling and the openings of the nozzles. Flue gases generated by the fire will be sucked into the extinguishing fog and will thereby be cooled and at least partially purified."

Thus suction is a result of the openings of the nozzles being spaced from the ceiling by a couple of centimetres.

5.5 Furthermore, according to claim 1, when water pressure is "high" and the nozzle disposition is respected in terms of the distance, direction and angle of the nozzles and the distance from the

ceiling, then, a concentration of the individual fog sprays into a fog spray having a strong penetration power occurs.

6. Novelty

From D1 (the page numbers referred to in the following quotations are the renumbered page numbers) there is known a fire fighting equipment (page 2, lines 4 to 6), comprising:

- at least one spray head with a number of nozzles directed obliquely sideways, to the outside, for spraying fog-like extinguishing liquid (Figure 1),

- wherein the nozzles are capable to operate under high pressure (page 2, lines 18 to 21; page 3, lines 7 and 8; page 5, lines 9 and 10; see also section 5.2 above), and

- wherein the distance between the nozzles, the direction of the nozzles, the spread angle of the nozzles, the liquid pressure and the initial droplet size are mutually adapted in such a manner, and that the nozzles are arranged so close to each other that the fog formation areas of the individual nozzles intensify the fog flows and provide a suction causing the fog formation areas to be compressed into a continuous directional fog spray (in D1 the equipment is spaced from the ceiling, see Figure 1 and therefore suction occurs, see section 5.4 above and the fog screens of

adjacent nozzles contact, see Figure 1 and section 5.3 above),

– thereby effecting a concentration of the individual fog sprays into a fog spray having a strong penetration power (must be given, since it is a consequence of the presence of the pressure, direction, orientation and distance parameters as claimed).

Thus, the subject-matter of claim 1 does not appear to be novel with respect to D1.

The Appellant objected that the equipment of D1 is intended to fight dust fires. However there is no such limitation throughout the description and the abstract only indicates that in case of dust fire the equipment according to D1 can prevent a dust explosion, but does not state that the use of the equipment is specially intended for fighting dust fires. He furthermore objects that claim 1 of D1 makes clear that the spray head is designed to send spray into the entire distribution zone of the fire. In fact when reading claim 1 in the light of the description page 3, lines 6 to 10, it becomes clear that what is meant in claim 1 of D1 is that the spray head is designed to send spray into the entire distribution zone of the spray head.

Finally it is unclear why a "gushing diffusion of mist inside spaces" should exclude a strong penetration power, all the more that there is no

clear definition in the patent application of the term "strong penetration power".

IV. Oral proceedings took place on 22 February 2005.

The Appellant informed the Board by a letter dated 24 January 2005 that he will not attend the scheduled oral proceeding and not file written submissions in response to the Board's communication.

According to the provisions of Rule 71 2) EPC the proceedings were continued without him.

Reasons for the Decision

1. The appeal is admissible.

2. In the above cited communication pursuant to Article 11(1) of the Rules of Procedure of the Boards of Appeal, the Board fully explained why it was of the opinion that

- claim 1 did not meet the requirement of clarity of Article 84 EPC,

- the subject-matter of claim 1 was not novel with respect to D1: DE-A-34 40 901.

3. By not attending the oral proceedings and not filing any written submission in response, the Appellant has not availed himself of the opportunity to reply to the Board's communication.

Having considered the reasons which were advanced therein and which are unchallenged by the Appellant, the Board sees no reason to depart from them.

Consequently, for the reasons set out in the above communication, the request of the Appellant that the decision be set aside and a patent be granted on the basis of the set of claims filed with the statement setting out the grounds of appeal is not allowable. This request must therefore fail.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

G. Magouliotis M. Ceyte