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D E C I S I O N
of 17 February 2003

Case Number: T 0266/00 - 3.3.5

Application Number: 95119240.0

Publication Number: 0715883

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Language of the proceedings: EN

Title of invention:

Fluid mixing device, particularly for industrial inks or paints

Patentee:

DROMONT S.r.l.

Opponent:

Fluid Management Europe C.V.

Headword:

-

Relevant legal provisions:

EPC Art. 56

Keyword:

"Inventive step (yes)"
"Exclusion of hindsight"

Decisions cited:

-

Catchword:

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Boards of Appeal

Chambres de recours

Case Number: T 0266/00 - 3.3.5

D E C I S I O N
of the Technical Board of Appeal 3.3.5
of 17 February 2003

Appellant: DROMONT S.r.l.
(Proprietor of the patent) Via Borzone, 42
I-12060 Grinzane Cavour (IT)

Representative: Franzolin, Luigi
STUDIO TORTA S.r.l.
Via Viotti 9
I-10121 Torino (IT)

Respondent: Fluid Management Europe C.V.
(Opponent) Hub van Doorneweg 31
NL-2171 KZ Sassenheim (NL)

Representative: Ahme, Johannes, Dr.
Uexküll & Stolberg
Patentanwälte
Beselerstrasse 4
D-22607 Hamburg (DE)

Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 31 January 2000
revoking European patent No. 0 715 883 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: R. K. Spangenberg
Members: A. T. Liu
J. H. Van Moer

Summary of Facts and Submissions

- I. European patent No. 0 715 883 was granted with a set of 12 claims, with claim 1 being directed to a fluid mixing device and claims 2 to 12 depending thereon.
- II. A notice of opposition was filed against the patent on the grounds of Article 100(a) EPC. The following documents, *inter alia*, were submitted during the opposition proceedings:
- D1: GB-A-2 151 362
- Exhibits 9, 10, 12 and 15 concerning the mixing and dosing station FV 1409-K32
- III. The appeal was from the decision of the Opposition Division to revoke the patent on the ground of lack of inventive step with regard to D1 and the mixing and dosing station FV 1409-K32 (herein referred to as "K32").
- IV. With his statement of the grounds of appeal dated 31 May 2000, the appellant filed 4 sets of claims as basis for a main request and 3 auxiliary requests. Photos of the device "K32" and a data sheet relating to that device were also submitted in annex to the statement (Annex 6 and Annex 8, respectively).
- V. The respondent submitted his reply to the appeal by letter of 6 December 2000. Although duly summoned, he did not attend the oral proceedings which took place on 17 February 2003.
- VI. At the oral proceedings, the appellant filed a new amended claim 1 which read as follows:

"A fluid mixing device, in particular for industrial inks and paints, comprising:

- a number of valves (24) presenting at least a fluid inlet connectable to a fluid supply (36) and an outlet nozzle (31);

- each valve (24) being a normal-closed type and presenting a control member (33, 101) for at least partially opening it;

- supporting means (9) for supporting said valves (24); and

- selecting means (96) presenting a single gripping member (96b) for singly engaging a said control member (33, 101) to open the valve;

characterised in that said number of valves (24) consist of first valves (24) angularly spaced along a first circumference (C1), and second valves (24) angularly spaced along a second circumference (C2) concentric with and inside the first circumference (C1);

said first valves and their control members of the first circumference being angularly spaced in relation to the corresponding valves and their control members of the second circumference;

said gripping member (96b) being movable angularly by first drive means (80), and, when set to a number of first positions, engaging the control member (33, 101) of a first valve (24) to open the valve (24) itself;

said gripping member (96b), when set to a number of second positions, engaging the control member (33, 101) of a second valve (24) to open the valve (24) itself;

said first and second positions being angularly spaced in relation to each other."

VII. The appellant's arguments may be summarised as follows:

- The closest prior art was represented by D1
- D1 disclosed a device with a circular architecture for mixing fluids with high accuracy.
- K32 on the other hand was a machine with a linear architecture, used for dosing oil with poor accuracy.
- There was no reason to arbitrarily combine certain features of D1 with others of K32 to arrive at the claimed device. The conclusion of the opposition division was therefore based on an *ex post facto* analysis.

VIII. The respondent's submissions were essentially:

- The problem to be solved with regard to D1 was the provision of a compact mixing device.
- The bulkiness of individual actuators was already recognised in D1. The skilled person would therefore turn to K32 and substitute the individual actuators of D1 with a single gripping member as in "K32" to overcome the existing technical problem.

IX. At the end of the oral proceedings, the requests were as follows:

- The appellant requested that the decision under appeal be set aside and that the patent be maintained on the basis of the amended claim 1 submitted at the oral proceedings (Main request) or, in the alternative, on the basis of any of the auxiliary requests 1 to 3 filed with the letter dated 31 May 2000.

- The respondent requested that the appeal be dismissed.

Reasons for the Decision

Main request

1. *Amendments*

Claim 1 is now directed to "a fluid mixing device" as in the original claims. The objection raised by the respondent in his letter of 6 December 2000 concerning the basis for the amendment to "an industrial fluid mixing device" is therefore obsolete. The Board is also satisfied that claim 1 as amended does not contravene Article 123(2) and (3) EPC.

2. *Novelty*

The Board notes that lack of novelty is not an issue at the present stage of the proceedings (see also decision under appeal, item 3a). The reason therefor will clearly arise from the following discussion on inventive step.

3. *Inventive step*

Except for the removal of the word "industrial", the present claim 1 corresponds to claim 1 as submitted with the statement of the grounds of appeal, which is the same as claim 1 of the main request discussed at the oral proceedings of 18 November 1999. For the purpose of inventive step discussions, the arguments submitted by the respondent in writing can therefore be taken into consideration in full.

3.1 The subject-matter of claim 1 is a fluid mixing device suitable for mixing industrial inks and paints. In this device, the valves are angularly spaced along two separate concentric circumferences, whereby the valves in one circumference are also angularly spaced in relation to those of the other circumference. Each of these valves presents a control member for at least partially opening it.

3.2 The Board can accept the view of the parties and consider D1 as representing the closest prior art. It is also undisputed that this document discloses a compact device for mixing printing ink and including a number of dispensing valves in the same angular disposition as those of claim 1 (abstract; page 2, lines 7 to 24 and Figure 1).

3.3 In D1, the valves are each controlled by a respective actuator. Due to their bulkiness, these actuators are arranged radially outward from the valves, around a circle of larger diameter (page 1, line 122 to page 2, line 7). Against this background, the Board can see the technical problem to be solved in the provision of a more compact device for mixing fluids.

- 3.4 The solution to the above indicated technical problem, as proposed in claim 1, is a device which essentially includes a single gripping member being movable angularly for singly engaging a control member and opening each valve separately.
- 3.5 The advantages of the claimed device, in particular its compactness, are indicated in the patent in suit and have never been queried (see column 5, lines 25 to 40). It is thus immediately apparent that the stated technical problem has been solved.
- 3.6 The only question is therefore whether the proposed solution is suggested by the available prior art. More specifically, the question is whether it is obvious, with respect to D1 in combination with "K32", to provide a mixing device with a single gripping member ("actuator") for activating valves which are angularly spaced along two separate concentric circumferences.
- 3.6.1 The Board notes that, although D1 already acknowledges the bulkiness of the actuators, it does not suggest any solution other than putting these actuators around a circle having a much greater pitch circle diameter to accommodate the greater size of the actuators.
- 3.6.2 As is explained by the appellant, there are two distinct types of machines which could be used for mixing fluids:
- (i) the linear type, presenting rows of valves, such as in "KV32" and
 - (ii) the circular type, presenting valves arranged in arcs or circumferences, such as D1.

The above fact was established at the oral proceedings before the opposition division and not contested by the respondent (see Minutes of the oral proceedings of 18 November 1999, second item 13.3, pages 2 and 3). As is also advanced by the appellant, these machines have existed side by side on the market for a long time (see also letter dated 31 May 2000, page 3, last paragraph). Thus, it is plausible to the Board that both these types of mixing devices have their separate respective advantages. In the Board's judgment, there is prima facie no reason for combining certain features of one type of machines with those of another. The respondent has not argued and the Board cannot find that any of the prior art documents on file contains a particular suggestion for any such combination.

3.6.3 In the introductory part of D1, reference is made to a mixing device presenting a single dispensing manifold containing a number of dispensing valves, these valves being arranged in a line along the manifold (page 1, lines 28 to 35). The system is, however, said to be difficult to use and to automate (page 1, lines 46 to 48). Thus, when reading D1, the skilled person would be discouraged rather than induced to apply a single dispensing manifold known with linear types of mixing devices to the circular type of mixing devices such as disclosed in D1.

3.6.4 Concerning the specific device "K32" cited by the respondent, the Board notes that this is a large assembly used for dosing oil into drums. It is highly questionable whether this assembly is indeed suitable for mixing inks or paints, where higher accuracy in dosing is certainly needed to reproduce a desired tint or colour. As can be seen from the pictures submitted by both parties, the assembly is anything but compact (see Exhibit 10 and Annex 6 with explanations in the appellant's letter dated 15 January 2003). The Board

therefore considers that there was absolutely no reason for the skilled person to turn to this particular machine when looking for a way to make the device according to D1 more compact.

- 3.6.5 As corollary of the above, the Board holds that, without the benefit of hindsight, the skilled person would not combine D1 with any of the available prior art documents in such a way as to arrive at the subject-matter of claim 1.

The dependent claims 2 to 12 are directed to preferred embodiments of the device according to claim 1. The subject-matter of these claims is also new and involves an inventive step. The patent can thus be maintained with the claims of the main request.

Order

For these reasons it is decided that:

The decision under appeal is set aside.

The case is remitted to the first instance with the order to maintain the patent with the following documents:

- claim 1 as submitted at the oral proceedings,
- claims 2 to 12, description and drawings as granted.

The Registrar:

The Chairman:

U. Bultmann

R. Spangenberg