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D E C I S I O N
of 9 September 1999

Case Number: T 1158/97 - 3.2.1
Application Number: 92830405.4
Publication Number: 0559998
IPC: F16K 11/074, F16K 39/04

Language of the proceedings: EN

Title of invention:

Mixer valve for hot and cold water incorporating a pressure balancer

Patentee:

SOL S.p.A.

Opponent:

Hansa Metallwerke AG

Headword:

-

Relevant legal provisions:

EPC Art. 54, 56

Keyword:

"Novelty (yes)"
"Inventive step (yes)"

Decisions cited:

-

Catchword:

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Boards of Appeal

Chambres de recours

Case Number: T 1158/97 - 3.2.1

D E C I S I O N
of the Technical Board of Appeal 3.2.1
of 9 September 1999

Appellant: SOL S.p.A.
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Respondent: Hansa Metallwerke AG
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Representative: Ostertag, Ulrich
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 2 October 1997
revoking European patent No. 0 559 998 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: F. A. Gumbel
Members: P. Alting van Geusau
J. H. van Moer

Summary of Facts and Submissions

- I. The mention of the grant of European patent No. 0 559 998 in respect of European patent application No. 92 830 405.4, filed on 22 July 1992 was published on 7 February 1996.

The independent claim 1 of the patent reads as follows:

"1. A mixer valve for hot and cold water having a cartridge-type body (10) with a base (11) and a lid, said body holding a mixer unit made up from two plates, one (13) of which is fixed to the base of the body and the other (14) movable through a control lever on and in respect to the fixed one, the fixed plate having two holes for the separate inlet of hot and cold water supplied through two conduits joined to the base and having a hole for the outlet of water from the valve towards the delivery mouth of a tap, characterised in that said body (10) has a raised portion (16) which is integral with its base (11), and in that said raised portion has a chamber (17) for holding a pressure balancer (18), said chamber having passages for the inlet of water to the balancer towards the plate-type mixer unit inside said body, the water coming out of the mixer unit towards the delivery mouth passing on the outside around said chamber."

- II. Notice of opposition was filed by the respondent (opponent) on 5 November 1996. In respect of an alleged lack of novelty and inventive step the opposition was supported by the following prior art documents:

D1: DE-C-3 435 411

D2: US-A-3 921 659.

- III. By a decision announced on 17 September 1997 during oral proceedings and posted on 2 October 1997, the Opposition Division revoked the patent.

The Opposition Division was of the opinion that the mixer valve according to claim 1 of the granted patent was novel but lacked an inventive step having regard to the combined teachings of D1 and D2.

- IV. On 1 December 1997 notice of appeal was filed against that decision, the appeal fee having been paid on 27 November 1997.

Together with the statement of grounds of appeal, which was filed on 2 February 1997, the appellant filed a new claim 1 in accordance with an auxiliary request.

- V. In a communication issued in preparation for oral proceedings the Board expressed the provisional opinion that the respondent's arguments according to which the claimed subject-matter lacked novelty could not be followed.

Furthermore, since neither D1 nor D2 disclosed a cartridge body with a base and a lid an important issue to be discussed during the oral proceedings was the question for what reason the skilled person would be led to adapt the base of the cartridge body known from the prior art disclosed in FR-A-2 642 133 (D3) mentioned in the patent so as to hold a pressure balancer of the form as known from D1.

In respect of the appellant's auxiliary request the Board raised formal objections to the new claim 1.

- VI. In its response dated 29 July 1999 to the communication the respondent introduced two further prior art documents

D4: DE-C-3 534 692 and

D5: DE-A-2 401 648.

- VII. Oral proceedings took place on 9 September 1999.

The appellant requested that the decision under appeal be set aside and that the patent be maintained as granted or, alternatively, be maintained in amended form on the basis of claim 1 filed with the statement of grounds of appeal.

The respondent requested that the appeal be dismissed.

- VII. In support of its requests the appellant essentially relied on the following submissions:

The subject-matter of claim 1 was novel because the available prior art did not disclose a mixer unit having a mixer valve and pressure balancer contained in a cartridge type body and to be fitted as a single unit into a valve body having the required water supply out- and inlets.

Furthermore, since the available prior art disclosed only separate mixer valve and pressure balancer units mounted in a tap housing it neither suggested their

combination in a single exchangeable cartridge nor the resulting simpler and more practical arrangement.

VIII. The respondent disputed the appellant's view and its submissions can be summarised as follows:

The subject-matter of claim 1 was not novel when interpreting the disclosures of D1 together with those of D2. In the present case such a direct implication of the teaching of D2 was permissible because of the reference in D1 to this specific prior art document. In fact the mixer valve defined in claim 1 concerned nothing more than a combination of the valve- and pressure balancer units shown in D1 to be integrated in one cartridge unit as was shown in D2. Therefore even if the Board considered that novelty was present, such combination lacked an inventive step because of the clear teachings given in D2 as to the combination of the valve and pressure balancer in one cartridge unit. Anyhow, the selection of the number of different parts to be combined into a mixer valve did not involve technical issues because the parts remained functionally the same. Such combination merely concerned marketing considerations which could not substantiate an inventive step.

Reasons for the Decision

1. The appeal is admissible.
2. *Novelty*

- 2.1 Novelty of the subject-matter of the granted claim 1 already follows from the fact that none of the cited prior art documents discloses a mixer valve for hot and cold water having a cartridge body with a base and a lid in which the cartridge holds, in combination, a valve- and a pressure balancer unit.
- 2.2 In this respect, contrary to the opinion held by the respondent, no disclosure or suggestion is derivable from D1 that would suggest the presence of a cartridge unit comprising both the mixer valve and pressure balancer units.

Indeed reference is made in D1 to the mixer valve in D2 but this reference in column 1, lines 34 to 38 explicitly relates to the features mentioned in the generic portion of claim 1 of D1 and not to the specific construction of the valve according to D2. In fact the subject-matter of D1 is a valve in which the mixer- and pressure valve arrangements are directly mounted in a tap housing, thus without using a further cartridge body for holding the valve- and pressure balancer unit.

In this respect the respondent considered that the skilled person would imply the housing shown in D2 to be a cartridge body. However, in the Board's opinion such interpretation goes against the disclosure of D2. The passages of the description referred to by the respondent show nothing more than that the part named cartridge in D2 does not have a body of its own with a lid and base but is designed to mate directly with a valve body (see column 2, lines 51 to 58 of D2).

Furthermore, the respondent's allegation, according to which the valve body and cartridge should be considered to form a cartridge to be inserted in a separate water tap body, is in contradiction to the information given in column 2, lines 37 to 40 and column 6, lines 2 and 3 of D2. These passages of the description explicitly indicate that the inlet and outlet adapters of the valve body are directly connected to their supply and outlet piping by means of screw threaded connections.

3. *Inventive step*

3.1 According to the patent description the precharacterising portion of claim 1 is based on the prior art disclosed in D3.

The Board also considers D3 to be the closest prior art because it discloses a self-contained cartridge having a cartridge-type body with a base and a lid. Neither D1 nor D2 disclose such specific cartridge-type bodies.

In this respect the respondent did not allege at the oral proceedings that the late cited D4 and D5 were more relevant than D3.

Document D4 is quite similar to D3 and does not disclose further features to be taken into account for a proper delimitation. D5, considered by the respondent to disclose a cartridge incorporating both a valve- and pressure balancer, does neither indicate nor suggest that the arrangement shown in Figure 1 is intended to form a self contained cartridge having a cartridge body, a base and a lid. Therefore, D5 does not indicate more than what is already known from, for example, D1.

3.2 It has been proposed to add to a mixer valve a pressure balancer (see for example D1 and D2) but the application of such combination requires the availability of a suitable casing to fit to the body of the valve and which is also designed additionally to hold the balancer (column 1, lines 28 to 31 of the patent in suit).

Therefore the underlying problem to be solved by the patent in suit relates to the provision of a mixer valve with a body which is shaped to render the fitting of the balancer simpler and more practical (see column 1, lines 32 to 34 of the patent).

3.3 Such problem is solved by the mixer valve defined in claim 1 of the patent in suit, and in particular by the provision of a raised portion which is integral with the base of the cartridge-type body and in that the raised portion has a chamber for holding a pressure balancer.

3.4 Considering the prior art disclosed in D1 and D2 which show water taps having both a mixer valve and a pressure balancer, these conventional arrangements either use separate valve and pressure balancer units (D1) or a combination of a valve and pressure balancer unit (D2). Neither of these or any of the other cited documents discloses or suggests the incorporation of a further function to the cartridge type body, let alone to a raised portion integral with the base of the body, for providing a chamber for holding the pressure balancer.

3.5 The respondent questioned whether the granted claim 1

clearly specified that the chamber was provided in the base portion of the cartridge itself. It was submitted that claim 1 also embraced a solution in which standard valve- and pressure balancer units, such as known from D1, were merely put together in a cartridge type body.

In the Board's view it is sufficiently clear from the definition of the characterising features according to which the raised portion has a chamber, that the chamber is in the form of a recess in the raised portion of the base itself. It therefore is self-evident that the construction is not only simplified and limited in height but also more practical for use in different tap housings (see also column 1, lines 35 to 40 of the patent in suit) when considering the further characterising features, according to which the chamber has passages for the inlet of water to the balancer and passages for the outlet of water from the balancer towards the plate type mixer.

- 3.6 The respondent further submitted that the mixer valve according to claim 1 of the patent in suit lacked an inventive step for the reason that the integration of different functions in a cartridge was well known in itself. Since the application of a cartridge depended mainly on marketing and not on technical considerations, the skilled person merely would decide the number of different functions to be included in a cartridge based on considerations of probable acceptance by the clients on the one hand and simplified maintenance on the other. Moreover, since the appellant's representative had not attributed any particular importance to the further features of claim 1 these features could be ignored.

However, such argumentation does not apply in the present case. As was also submitted by the appellant, the claimed mixer valve does not relate to simply the sum of known features but, as follows from the above, includes additional subject-matter concerning simplification of the structure when combining valve and pressure balancer units, in particular by using a raised portion of the cartridge body base as a housing for the pressure balancer and including therein passages for the water flow to the balancer and valve unit. The description of the patent contains sufficient details for understanding the technical effects of simplification and more practical use of the claimed mixer valve.

Such teaching for simplification of known mixer valve constructions is not suggested by any of the cited documents and in this respect the respondent failed to present any reasons why the skilled person would adapt the base part of the cartridge housing for holding the pressure balancer when faced with the underlying problem to be solved by the patent in suit.

- 3.7 Summarising, in the Board's judgment, the proposed solution to the technical problem underlying the patent in suit defined in independent claim 1 is inventive over the available prior art and therefore this claim as well as its dependent claims 2 and 3 relating to particular embodiments of the invention in accordance with Rule 29(3) EPC, can be maintained.
4. Since the appellant's main request is allowable there is no need to consider the auxiliary request.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is maintained as granted.

The Registrar:

The Chairman:

S. Fabiani

F. Gumbel