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**D E C I S I O N**  
**of 7 January 2003**

**Case Number:** T 0128/00 - 3.2.3

**Application Number:** 95934765.9

**Publication Number:** 0738356

**IPC:** E03C 1/05

**Language of the proceedings:** EN

**Title of invention:**  
Sanitary tap for automatic water delivery

**Patentee:**  
AMERICAN STANDARD INC.

**Opponent:**  
Hansa Metallwerke AG

**Headword:**  
-

**Relevant legal provisions:**  
EPC Art. 54, 56

**Keyword:**  
"Novelty (yes)"  
"Inventive step (yes)"

**Decisions cited:**  
-

**Catchword:**  
-



Case Number: T 0128/00 - 3.2.3

**D E C I S I O N**  
**of the Technical Board of Appeal 3.2.3**  
**of 7 January 2003**

**Appellant:** AMERICAN STANDARD INC.  
(Proprietor of the patent) One Centennial Avenue  
P.O. Box 6820  
Piscataway, New Jersey 08855-6820 (US)

**Representative:** Corradini, Corrado  
Studio Ing. C. CORRADINI & C. S.r.l.  
4, Via Dante Alighieri  
I-42100 Reggio Emilia (IT)

**Respondent:** Hansa Metallwerke AG  
(Opponent) Sigmaringer Strasse 107  
D-70567 Stuttgart (DE)

**Representative:** Ostertag, Ulrich, Dr  
Patentanwälte  
Dr Ulrich Ostertag  
Dr Reinhard Ostertag  
Eibenweg 10  
D-70597 Stuttgart (DE)

**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 17 December 1999  
revoking European patent No. 0 738 356 pursuant  
to Article 102(1) EPC.

**Composition of the Board:**

**Chairman:** C. T. Wilson  
**Members:** J. B. F. Kollar  
J. P. B. Seitz

## Summary of Facts and Submissions

I. European patent No. 0 738 356 was granted on 25 March 1998 on the basis of application No. 95 934 765.9 filed on 31 October 1995.

Claim 1 of this patent reads:

"1. Sanitary tap for automatic delivery of water of a desired temperature responsive to a proximity sensor of the user's hands under the tap, characterised by further comprising:

- a single sensor (20), positioned close to the water delivery port (11), for determining the distance below the port (11 ) between the tap and the user's hands (3);
- means (40) for regulating the temperature of the water fed to the delivery port (11) of the tap; and
- means (30) for processing the distance values provided by the single sensor (20) and for consequently controlling the water temperature regulating means (40) such that the temperature of the water delivered by the port (11 ) differs on the basis of the differing distance of the user's hands (3) from the tap."

II. An opposition was filed requesting the revocation of the patent in accordance with Article 100(a) EPC on the grounds of lack of novelty (Article 54 EPC) and inventive step (Article 56 EPC).

In the course of the opposition proceedings the following documents were cited:

D1: DE-C-2 735 942,

D2: DE-U-8 512 039,

D3: DE-A-1 609 216,

D4: JP Abstracts 93-287 785.

The patentee requested the rejection of the opposition.

- III. By a decision dispatched on 17 December 1999 the Opposition Division revoked the patent for lack of inventive step.
- IV. Notice of appeal was lodged against this decision on 3 February 2000 and the appeal fee was paid on 8 February 2000. The Statement of Grounds of Appeal was received on 12 April 2000.
- V. The appellant's (patentee's) arguments can be summarised as follows:

Document D1 discloses a device responsive to the position of the user's hand in a determined spacial region or sector, independently from the distance of the user's hand from the tap. The tap outlet is not shown in D1. According to the embodiment of Figure 4 of D1 the user needs to move the hands from one position to another position in order to achieve the desired temperature, thereby taking the hands away from the stream of water. According to the embodiment of Figure 1 of D1 the tap is positioned aligned with the

nosepiece in the vertical plane so that when the user's hands are kept in the water stream the temperature will continuously increase or decrease and thus cannot be controlled. Furthermore, the embodiment of Figure 4 of D1 does not disclose means for processing the distance values between the tap delivery port and the user's hands in order to control the water temperature depending from said distance. The skilled man would therefore disregard the teaching of D1 for maintaining the water temperature at a given value.

Document D4 describes a water tap with a single sensor which delivers different water flow rates in response to the position of the user's hands under the tap. However, a given water temperature corresponding to a given distance of the user's hands from the tap cannot be obtained by the device of D4.

The concept of using a single sensor claimed in claim 1 of the patent in suit is not addressed by the documents D2 and D3 which thus give no hint at the direction of the discussed invention.

VI. The respondent's (opponent's) counter-arguments can be summarised as follows:

Document D1 destroys the novelty of the subject-matter of claim 1. This document discloses a sanitary device all functions of which, i.e. on/off, temperature and volume flow, can be controlled without being touched by the user's hands. The technical feature of positioning the sensor close to the water delivery port is given according to column 3, lines 27 to 37 of D1. The disclosure of D1 has to be interpreted in its broadest sense, such that any function of temperature variation

with the distance of the user's hands from the tap has to be understood.

Document D4 concerns the control of the flow rate instead of the temperature as a function of the user's hands under the tap. Since it is well known to the skilled man that the flow rate and the temperature can be controlled by a tap - cf. D1 - the combination of documents D4 and D1 leads to the subject-matter of claim 1 and takes away its inventive step.

VII. In the communication pursuant to Article 11(2) of the rules of procedures of the Boards of Appeal the Board set out its provisional opinion that document D2 would appear to form the closest prior art and that the subject-matter of the independent claim as granted would appear to be novel and inventive with respect to the available prior art.

VIII. The appellant requests to set aside the impugned decision and to maintain the patent as granted.

The respondent requests to dismiss the appeal.

### **Reasons for the Decision**

1. The appeal is admissible.

2. *Closest prior art*

2.1 The patent specification as a whole teaches that the invention relates to a sanitary tap for automatic water delivery of a desired temperature.

In the prior art taps were known which delivered water at only a single predetermined temperature when the user positioned his hands close to the tap. It was however not possible to adjust the temperature other than by manually adjusting the control members.

- 2.2 According to the introductory part of the patent specification, c. f. page 2, lines 11 to 26, prior control systems for a tap utilised several electronic sensors positioned adjacent to each other on the body of the wash - basin or on the built-in case thereof. The sensors were arranged in a linear array or a two-dimensional matrix and the effective axes intersected at a common point. Each common point monitored a zone assigned to it and lay in the outlet range of the tap. Each monitoring point had an absolute value for the temperature required and a value for the quantity of flow required so that when the user's hands were sensed in its range these values of temperature and flow were set automatically and immediately. The signals were used to control hot and cold water mix and for volume flow. Such systems had as a result that the water temperature was dependent on the water volume flow, or vice versa.

According to the patent specification typical of such a prior system is the one illustrated in D2 which provides the basis for the prior art portion of claim 1.

- 2.3 According to the contested decision the prior art part of claim 1 is known from document D1.
- 2.4 The Board, however, considers document D2 to be the closest state of the art in accordance with the patent

specification; it is the only document available which comprises all features of the preamble of claim 1 and which basically takes into consideration the aspect of proximity sensing of the user's hands under the tap in comparison with D1 which is concerned rather with a device responsive to the position of the user's hand in a determined spacial region or sector, independently of the distance of the user's hand from the tap; the device of D1 consequently does not include means for processing the distance value. Moreover, the positioning of the sensor close to the water delivery port is also not disclosed by D1. Since the combination of features of claim 1 is not disclosed in any of the cited documents the subject-matter of the main claim is novel.

3. *Inventive step*

3.1 Starting from D2 the objective technical problem faced by the inventor was to provide a sanitary tap able to deliver water at the desired temperature without contact being required between the hands (or other part of the body) of the user and a part of the tap and without influencing the water flow volume.

3.2 The Board is satisfied that the problem is solved by the combination of features which distinguish the present invention from D2 and which are set out in the characterising portion of claim 1.

These features make the use of the tap more comfortable, more rapid and more hygienic.



The respondent's main argument is based on the assumption that document D1 destroys novelty of the subject-matter of claim 1 or on the assertion that, since it is well known to the skilled man that the flow rate and the temperature can be controlled by a tap - cf. document D1 - the combination of documents D4 and D1 leads to the subject-matter of claim 1. It is, however, the Board's view that this assertion is based on hindsight in the light of the invention according to the patent and that none of references D1, D3 and D4 relied on in the impugned decision, destroy alone or in combination either with each other or with document D2 the patentability of claim 1 as granted.

- 3.3 Document D1 describes a baseplate the dimension of which is such that it replaces one or more tiles of the tiled wall. The plate is divided into a plus sector and a minus sector and comprises a separate nosepiece which projects outwards from the wall. The nosepiece carries 2 sensors. The position of a mixer tap outlet is not shown in D1. When the user's hands are placed under the nose piece, the temperature of the water will either keep increasing or decreasing depending on in which of said two sectors of the plate the hands have been monitored by said sensors (see column 4, lines 47 to 54). The device of D1 thus requires that for the selection and maintenance of a specific water temperature at the desired level for an intentional long duration the hands must be removed from under the sensor. The consequence of this is that if the sensor is positioned close to the water delivery part, the user has to move his hands out of the water stream or accept that the temperature would continually vary. This makes the teaching of D1 unsuitable for combination with other prior art to arise at the

teaching of the present invention.

Document D4 describes a water tap with a single sensor which delivers different water flow rates in response to the position of the user's hands in one of three spacial regions under the tap. D4 is thus not concerned with a deliver of water at the desired temperature.

The concept of a single sensor according to the patent in suit is not addressed by document D3 which describes a complicated arrangement of a plurality of proximity sensors commanding a plurality of valves adapted to control the delivery of water at a desired temperature.

4. In view of the above, the Board concludes that the subject-matter of claim 1 as granted is novel and involves an inventive step within the meaning of Article 52(1) EPC.
5. As claim 1 is allowable the same applies to the dependent claims 2 and 3, which are directed to preferred embodiments of the tap according to claim 1.

**Order**

**For these reasons it is decided that:**

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

The Registrar:

The Chairman:

A. Counillon

C. T. Wilson