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**Datasheet for the decision
of 28 April 2011**

Case Number: T 0050/09 - 3.2.03

Application Number: 04075888.0

Publication Number: 1460186

IPC: E03C 1/22

Language of the proceedings: EN

Title of invention:
Triangular drainage

Patentee:
Easy Sanitary Solutions B.V.

Opponent:
Blücher Metal A/S

Headword:

-

Relevant legal provisions:
EPC Art. 84, 54, 56

Relevant legal provisions (EPC 1973):

-

Keyword:
"Clarity of amendments (yes)"
"Novelty and inventive step (yes)"

Decisions cited:

-

Catchword:

-



Case Number: T 0050/09 - 3.2.03

D E C I S I O N
of the Technical Board of Appeal 3.2.03
of 28 April 2011

Appellant: Blücher Metal A/S
(Opponent) Pøgdalvej 1
DK-7480 Vildbjerg (DK)

Representative: Nielsen, Leif
Patrade A/S
Fredens Torv 3A
DK-8000 Aarhus C (DK)

Respondent: Easy Sanitary Solutions B.V.
(Patent Proprietor) Braakstraat 17-19
NL-7581 EZ Losser (NL)

Representative: Pierce, Christopher James
Hoyng Monegier LLP
Rembrandt Tower
31st Floor
Amstelplein 1
NL-1096 HA Amsterdam (NL)

Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
10 November 2008 concerning maintenance of
European patent No. 1460186 in amended form
pursuant to Article 101(3)(a) EPC.

Composition of the Board:

Chairman: U. Krause
Members: E. Frank
K. Garnett

Summary of Facts and Submissions

- I. The appeal lies from the decision of the Opposition Division, dated 10 October 2008 and posted on 10 November 2008, to maintain the European patent No. 1 460 186 in amended form according to the then sole request as filed during the oral proceedings pursuant to Article 101(3)(a) EPC.
- II. The Appellant (Opponent) filed a notice of Appeal on 7 January 2009, paying the appeal fee on the same day. The statement of grounds of appeal was submitted on 10 March 2009.
- III. A communication pursuant to Article 15(1) RPBA was issued after a summons to attend oral proceedings, which were duly held on 28 April 2011.
- IV. The Appellant requested that the decision under appeal be set aside and the patent be revoked.

The Respondent requested that the appeal be dismissed.

- V. The wording of claims 1 and 3, as maintained by the Opposition Division, reads as follows:

"1. Method for placing and finishing a drain (5) in a tile floor (4) which is enclosed by at least two walls adjoining each other at an angle, which drain comprises a container (6) open at the top for collecting a liquid and a drain pipe connection (8) which debouches into the open container (6), wherein the container (6) has, at least in top view, a substantially triangular form, which method comprises the steps of:

- arranging the triangular drain (5) in the floor (4) in the corner against the two walls, wherein two sides (9, 10) of the triangular form run substantially parallel to the at least two walls;
- providing a slope in the floor (4), which slope runs substantially perpendicularly of the third side (11) of the triangular form of the drain (5)."

"3. Drain (5) for a tile floor (4) which is enclosed by at least two walls adjoining each other at a substantially 90° angle, which drain (5) comprises a container (6) open at the top for collecting a liquid and a drain pipe connection (8) which debouches into the open container (6), wherein the container (6) has, at least in top view, a substantially triangular form, characterised in that the vertex of the triangular form is substantially 90°."

VI. The following evidence has been considered for the purposes of the present decision:

- D2 = JP-2-125690
- D3 = English translation of D2
- D4 = JP-59-156964
- D5 = English translation of D4
- D9 = WO 98/51202

VII. The parties submitted the following arguments:

VII.1 Clarity

- (a) The Appellant argued that product claim 3 did not include any features of a drain which were specifically suitable for a tiled floor. The patent, in particular

figures 2 and 3, also gave no clue to this. Thus, claim 3 lacked clarity in that it could not be determined what kind of drains were incorporated into a tiled floor or were excluded therefrom. Moreover, method claim 1 did not indicate whether a floor had to be tiled before or after placing and finishing the drain in the floor, thus rendering the scope of protection unclear. In addition, the Appellant raised clarity objections which did not arise out of the insertion of the word "tile", eg, whether the "at least two walls" of claim 3 were part of the drain or not. In writing, the Appellant also argued that the patent did not clearly explain whether the claims were directed to a tiled floor, or a tiled floor of a shower tray, or whether certain types of shower trays, such as prefabricated ones, were excluded. See paragraphs [0007], [0002], and [0011] to [0014] of the patent.

- (b) The Respondent argued that the wording "for a tiled floor" had to be understood as a functional feature. Thus, the drain of claim 3 was a stand-alone drain which had to be suitable for a tiled floor. Although this was a limitation, since product claim 3 could not be read onto a drain which was not suitable for a tiled floor, the drain could, of course, be used for other floors as well. Furthermore, claim 1 inherently included the method step of tiling, but did not cover a method whereby a drain was placed and finished in an already tiled floor. This was also clear from the steps of the claim itself, since a slope could not be provided after the floor had been tiled. Moreover, a "shower tray" basically was a place where water fell into an enclosed environment. The patent however referred to "constructed", ie in-situ shower trays, and

not manufactured, ie prefabricated ones, cf. patent, paragraphs [0002], [0013] and figure 2. Thus, claims 1 and 3 were also supported by the description, and clear in that a floor (without rims) or a shower tray floor, both tiled in situ, were addressed.

VII.2 Novelty

- (a) The Appellant argued that features following the word "for", ie "being suitable for", did not limit claim 3 and had to be disregarded. Thus, product claim 3 only encompassed a triangular shaped container of a drain, and their connection to a drain pipe. Since neither a beginning nor an end of the container was defined, the container could be formed immediately after the drain outlet. Hence, figure 3 of D4/D5 disclosed a triangular container immediately after the drain outlet "1", which also had to have a drainpipe connection. Further, it was derivable from D5 on page 3 (handwritten), last paragraph, that the wash place of D4/D5 with its "mortar shaped" floor surface did not need to be integrally formed as a bathroom unit, ie, the drain could be put in afterwards, irrespective of whether the wash place was prefabricated in a factory or not. Therefore, a stand-alone drain according to claim 3 was disclosed by D4/D5. Moreover, D4/D5 also provided a floor slope for the wash place, as indicated by the "mortar shaped" gradient direction, cf. page 2 (handwritten) of D5, and figure 3 of D4/D5. Given that the wash place of D4/D5 was suitable for both tiled or non-tiled floors, it was common practice that its floor would be tiled, simply depending on the requirements. Therefore, D4/D5 deprived novelty of method claim 1 as well.

Furthermore, the drain trap container "5" as shown in the cross sectional view in figure 2 of D2/D3 was triangular, since it was formed underneath a triangular shaped drain outlet, cf. figure 5 of D2/D3. Although figure 2 showed a pre-moulded item, in a moulding process the wash place surface "1" had to be demoulded prior to fixing the container "5" to the wash place surface "1" because of their very different shape. Thus, the floor and drain of figure 2 could not be made integrally. A flow pattern towards the drain, and thus a floor slope, was indicated in figure 5, and since the protrusions "2", which were to be equated with the patent's generic term "tiles", were later added separately to the plain surface "1" of the wash place, claims 3 and 1 also lacked novelty over D2/D3.

- (b) The Respondent argued that the technical impact of a requirement for suitability for tiles cannot be ignored, that is, according to claim 3 not any drain would be suited for a tiled floor. Moreover, claim 3 described a separate drain, as opposed to larger entities including a drain. The drain was firstly put in place in-situ, such that then the tiles of a floor provided with a slope were connected properly to the drain. These drains were also used in the construction of in-situ shower trays, cf. patent, paragraph [0002]. Thus, claim 3 did not address prefabricated shower trays, but rather a non-integrated, stand-alone drain. As to claim 1, it was clearly restricted to the making of a tiled floor. With respect to D4/D5, firstly the "mortar shape" of its floor surface was not made of mortar. On the contrary, the difficulty of manufacture as described related to the prefabrication of a kind of

plastic resin, which was unsuitable for tiling, since such a floor surface was flexible. Moreover, page 3 (handwritten) of D5, 2nd paragraph, described a drainage structure of a wash place. The drain outlet "1" was integrated in this wash place unit, cf. D4/D5, page 2 (handwritten), point 2, and the drawings. The wording "When it is integrally formed..." on page 3 (handwritten) of D5, last paragraph, referred to a "bathroom unit", that is, as is common in Japan, the entire bathroom was placed on a floor, ie the wash place area together with bathtub "2". The wash place of D4/D5, however, invariably was one integrated item, and thus it could not be derived from D4/D5 that its drain outlet "1" was separate therefrom, and was suitable for a tiled floor. Apart from that, a triangular container was not disclosed by D4/D5, since its drain outlet "1" presumably was directly connected to the bath tub "2" without any container therebetween. Therefore, claims 3 and 1 were novel over D4/D5.

Furthermore, D2/D3 described a floor pan which was integrally formed by a synthetic resin, eg, fibre-reinforced plastic (FRP), without any need for special moulds, cf. D2/D3, page 6 (handwritten), second last paragraph. This floor pan included walls, the wash place surface "1", the drain trap "5", and its outlet, cf. figure 2 of D2/D3. Moreover, the described non-slip protrusions "2" were also integrally formed with the wash place surface "1", and therefore no tiling of the floor was derivable from D2/D3, cf. page 6 (handwritten), last paragraph. Finally, based on D2/D3's figures, a certain shape of the drain trap "5" was not disclosed. Thus, D2/D3 merely described integrated units ready for use without a tiled floor,

and therefore was irrelevant in respect of the subject-matter of claims 3 and 1.

VII.3 Inventive step

- (a) The Appellant firstly argued that, starting from the wash place described in the introduction of the patent, that is, rectangular drains built into corners of tiled floors having a slope in two directions, the subject-matter of claim 3 differed therefrom in that a triangular drain, ie, a triangular container including a grating, was used. See patent, paragraph [0003], and figure 1. Moreover, D4/D5 described a drain of a wash place as well, and as was derivable from D5 on page 3 (handwritten), penultimate sentence, the drain could be used for a wash place in-situ, or in a bathroom unit. Just as with the admitted prior art, the drain was placed in a corner of the wash place to obtain a higher level of comfort, cf. D5, page 3 (handwritten), last three lines. Most notably, however, D4/D5 addressed the difficult manufacture of multiple gradients of a wash place's floor surface, cf. D5, page 2 (handwritten), last sentence, and suggested one single flowing gradient together with a triangular drain to overcome this problem, cf. D5, page 3 (handwritten), second paragraph, and figure 3 of D4/D5. Therefore, a skilled person in the field of bathrooms, who needed to create a simplified gradient of the admitted prior art's tiled floor, would both take into consideration and apply the triangular drain outlet "1" of D4/D5 so as to arrive at the subject-matter of product claim 3. Since, based on the patent's admitted prior art and D4/D5, finishing of such a triangular drain after having been placed in a

tiled floor was known to the skilled person, method claim 1 was also obvious and therefore not inventive.

Secondly, if D4/D5 was considered the starting point, the problem of creating a simpler floor slope of a bathroom drain, together with its more comfortable use, was already solved by placing the triangular drain outlet "1" at a corner of D4/D5's wash place. Thus, claims 3 and 1 merely differed from D4/D5 in that the triangular drain was suitable for a tiled floor, and that the floor surface had to be tiled, respectively. The remaining problem to be overcome could be seen in the provision of a nicer floor surface. Tiles had been known for decades, and therefore it was a matter of simple routine to put tiles on the floor if the appearance of a bathroom's floor had to be improved. This was also hinted at in D9, where tiling of a floor in a shower tray was described. Thus, drains of D4/D5 would be used for tiled floors, and therefore claims 3 and 1 were also not inventive in the light of D4/D5 and common general knowledge, or D4/D5 and D9. In writing, the Appellant further argued that claims 3 and 1 also lacked an inventive step over the admitted prior art of the patent and the triangular drain of D2/D3.

- (b) The Respondent argued that claims 3 and 1 concerned a stand-alone drain used in-situ. Each in-situ floor was different from other floors, and the floor layer had to carefully measure the slopes, so that the tiler could fix tiles thereon afterwards. According to the patent, it was known to place circular or rectangular drains in the corner of a tiled floor. However, problems with creating matching slopes and subsequent tiling remained. Notwithstanding that these problems of in-situ tiled

wet rooms and walk-in showers had been known for a very long time, nobody had put a triangular drain onto the market, thus to take advantage of the provision of only a single slope, which connected more easily to the drain and lead to less cutting of tiles.

D4/D5 and D2/D3, on the contrary, was not addressed to builders or tilers, since only prefabricated shower units were described therein, thus relating to an alternative type of washroom. Thousands of these prefabricated cabins were normally moulded at a time in a factory, bought and ultimately built in place on an existing floor.

Thus, the closest prior art constituted the admitted prior art of the patent. Moreover, since factory prefabricated units of D4/D5 or D2/D3 did not suffer the problems of an in-situ tiled stand-alone drain, they could not contribute to the solution according to claims 3 and 1, and therefore would not be considered by the skilled person. Even if, however, the skilled person looked at the teaching of D4/D5 or D2/D3, these documents at most would suggest that the need for builders and tilers with all their problems could be obviated by simply buying an integrated unit, without the expensive laying of a specially designed wet room floor. Finally, the shower module of D9 would also not be considered by the person skilled in art and, again, could merely hint at alternatively buying a prefabricated unit. Apart from that, D9 suggested a tiled circular drain positioned in the middle of the floor. Therefore claims 3 and 1 involved an inventive step.

Reasons for the Decision

1. The appeal is admissible.

2. *Clarity of Amendments*
 - 2.1 According to Rule 43(1) EPC the claims must be drafted in terms of the "*technical features of the invention*". However, it is not necessary that a feature has to be expressed only in terms of an explicit structural limitation involving specific technical effects known to the person skilled in the art. Functional features may also be added to define generic technical terms more precisely, if the skilled person would have no difficulty in choosing the means for performing this function without exercising inventive skill. In the present case, the "drain" of product claim 3 has been further restricted by the purpose of its intended use for "tiled" floors, which has implications for the drain's structure.

 - 2.2 As argued by the Respondent, the functional feature "*for a tile floor*" clearly limits claim 3 to a stand-alone, ie separate, drain which has to be suitable for integration into a tiled floor. In the view of the Board, a builder or tiler would readily recognize that a particular subclass of drains is intended, namely those drains that are adapted to be suitably connected to a floor slope prior to laying tiles abutting such drains. The Board notes that this is also supported by the description, where in an embodiment the third side "11" of the triangular drain "5" is simply provided with a recess, which helps the builder determining the correct depth of the drain in a cement floor, such that

- a tiled floor to be placed later connects onto the drain at the proper height. See patent, paragraph [0014], last two sentences, and figures 3a and 3b.
- 2.3 Moreover, contrary to the Appellant's view, the only meaningful interpretation of method claim 1 is the placing of a triangular drain in a floor prior to the step of tiling the floor previously provided with a slope. Placing and finishing a drain in an already tiled floor, ie the provision of slope after the floor has been tiled, is neither technically sensible for a builder or tiler, nor does the description provide any support for such method steps. See patent, paragraphs [0006],[0007] and [0014].
- 2.4 As to the construction of a "shower tray" of paragraph [0002], the patent consistently describes floors or shower tray floors that may be tiled. See patent, paragraphs [0003],[0004],[0007] and [0014]. Thus, in the Board's view, claims 3 and 1, which address tiled floors in general, do not contradict shower trays constructed of tiles.
- 2.5 The clarity objections brought forward by the Appellant which do not refer to amendments made to the patent during the opposition or appeal proceedings, are not admissible. See Case Law of the Boards of Appeal, 6th edition, VII.D.4.2.
- 2.6 Therefore claims 3 and 1 comply with Article 84 EPC.

3. Novelty
(Article 54 EPC)

Claim 3

3.1 The document D4/D5 relates to a drainage structure of a wash place, comprising a triangular drain outlet "1" provided at a corner of the wash place. As argued by the Appellant, the Board accepts that a triangular shaped container, at least in top view, immediately formed below the triangular drain outlet "1" is implicitly disclosed by D4/D5 (cf. figure 3). Moreover, the gradient surface is formed as a substantially straight smooth surface using a one-direction flowing gradient, which results in an easy manufacture of the wash place (cf. D5, page 2 (handwritten), point 2, and page 3 (handwritten), second and third paragraphs; and figure 3 of D4/D5).

3.2 However, as argued by the Respondent, a gradient system in the form of a "mortar shape" (cf. D5, page 2 (handwritten), last paragraph) defines a shape rather than a material or method of producing the floor, and, therefore, does not imply a cemented or tiled floor. Moreover, the wording "*When it is integrally formed as a bathroom unit,...*" on page 3 (handwritten) of D5, last paragraph, refers to the advantageous shape of the entire wash place, in the event that reinforcement is needed to form (part of) a bathroom unit, but no particular information about its drain outlet "1" (and container) is derivable therefrom.

3.3 Therefore, although in D4/D5 the shape of a wash place's floor surface is addressed, no disclosure can be found as to the kind of material used for the floor,

or the manner of production of the wash place, be it in-situ or in a factory. D4/D5 invariably describes or shows its wash place as an entity with an already integrated drain, the latter thus not being suitable to be used separately for a tiled floor.

3.4 As regards the wash place of D2/D3, the Board agrees with the Respondent's view that the prefabricated floor pan "A" together with its non-slip protrusions "2" are integrally formed as one single element by a synthetic resin (cf. D3, page 6 (handwritten), last two paragraphs; and the figures). Hence, even if the drain trap "5" was considered to be a triangular container, no disclosure whatsoever is derivable from D2/D3 that the entirely integrated drain "5" may be detached from the resin-made floor pan "A" having non-slip protrusions "2", and then would be suitable for a tiled floor (cf. in particular figure 2 of D2/D3).

3.5 Therefore, the subject-matter of product claim 3 differs from the disclosure of D4/D5 and D2/D3, respectively, in that a non-integrated, standalone, drain for a tiled floor is addressed.

Claim 1

3.6 Since neither D4/D5 nor D2/D3 disclose tiling after the drain is placed and a floor slope has been provided, method claim 1 is also novel in respect of these documents.

3.7 Novelty of claims 3 and 1 over the remaining prior art was not disputed by the Appellant, and is also acknowledged by the Board. Therefore the subject-matter of claims 3 and 1 meets the requirements of novelty.

4. Inventive step
(Article 56 EPC)

4.1 The Board agrees with the parties' view that the admitted prior art according to paragraph [0003] of the patent (as published) can be considered the closest prior art, since it represents the most suitable starting point for the purpose claimed by the invention, ie it corresponds to the intended use of a separate drain in a floor to be tiled by a builder or tiler.

4.2 The known prior art drains described in the patent are usually rectangular, so that they can be easily fitted in between the tiles. Although circular drains may also be used, they do not, however, properly connect onto the usual rectangular tiles. Even if a rectangular drain is placed in the corner of the wet room's floor, this still requires the creation of a slope in two directions, something which is difficult for the builder or tiler. Since there is moreover a trend toward laying tiles diagonally, a correct connection to the drain is made even more difficult. See patent, paragraphs [0003] and [0004]. The parties agreed that the subject-matter of claim 3 and 1 differs from the disclosure of this admitted prior art in that a triangular drain for a tiled floor is suggested (claim 3), and in that after such a triangular drain has been arranged in the corner of the floor, a slope which runs substantially perpendicularly to the third side of the drain is provided, and the floor is finally tiled and finished (claim 1).

- 4.3 In the Board's view, the problem underlying these distinguishing features can be seen in making easier the tiling of a wet room's floor comprising a separate drain.
- 4.4 Although the Board acknowledges that the wash place units of D4/D5 or D2/D3 feature triangular drains, thus making the manufacture of a slope towards the integrated drain outlet in only one direction easier, these documents do not concern stand-alone drains being suitable for a tiled floor, let alone in-situ tiling after such drains have been placed in the floor. Thus, starting from the prior art admitted in the patent, a tiler would not consider D4/D5 or D2/D3 in order to solve the problem stated above, since no problems in context with tiling of separate drains are addressed or hinted at therein. Contrary to the Appellant's view, these documents therefore also cannot constitute the closest prior art for the assessment of inventive step.
- 4.5 Document D9, describing a pre-moulded prefabricated shower module and having an integrated circular drain in the middle of a tiled module floor, again does not concern in-situ tiling of a stand-alone drain (cf. D9, abstract, and figures). For this reason, the shower module of D9 would also not be considered by the skilled person, and moreover leads away from a triangular drain connected to a single floor slope.
- 4.6 The subject-matter of claims 3 and 1 therefore complies with the requirements of inventive step.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar

The Chairman

D.Sauter

U. Krause