

Internal distribution code:

- (A) [-] Publication in OJ
- (B) [-] To Chairmen and Members
- (C) [-] To Chairmen
- (D) [X] No distribution

**Datasheet for the decision
of 28 November 2018**

Case Number: T 1408/14 - 3.2.07

Application Number: 10184142.7

Publication Number: 2292379

IPC: B24B7/18, B24B1/00, A47L13/16,
B24D11/00, B24D13/14

Language of the proceedings: EN

Title of invention:

A method for cleaning a polished hard floor surface of stone
or stone-like material

Patent Proprietor:

Twister Cleaning Technology AB

Opponent:

3M Innovative Properties Co.

Headword:

Relevant legal provisions:

EPC Art. 100 (b), 100 (c), 54, 56

Keyword:

Grounds for opposition - insufficiency of disclosure (no) -
subject-matter extends beyond content of earlier application
(no)

Novelty - (yes)

Inventive step - (yes)

Decisions cited:

T 1337/09

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 1408/14 - 3.2.07

D E C I S I O N
of Technical Board of Appeal 3.2.07
of 28 November 2018

Appellant: Twister Cleaning Technology AB
(Patent Proprietor) Klevvägen 8
614 92 Söderköping (SE)

Representative: AWA Sweden AB
Junkersgatan 1
582 35 Linköping (SE)

Respondent: 3M Innovative Properties Co.
(Opponent) P.O. Box 33427
St. Paul, MN 55133-3427 (US)

Representative: Herzog, Fiesser & Partner Patentanwälte PartG
mbH
Isartorplatz 1
80331 München (DE)

Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 13 May 2014
revoking European patent No. 2292379 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman C. Brandt
Members: K. Poalas
A. Pieracci

Summary of Facts and Submissions

- I. The patent proprietor (appellant) lodged an appeal in the prescribed form and within the prescribed time limit against the decision of the opposition division revoking European patent No. 2 292 379.
- II. Opposition had been filed against the patent as a whole based on Articles 100(a) EPC (lack of novelty and inventive step), 100(b) EPC (insufficient disclosure) and 100(c) EPC (unallowable amendments).
- III. The opposition division found that the grounds for opposition according to Articles 100(b) and (c) EPC do not hold against the patent as granted and that the subject-matter of claim 1 of the patent as granted (main request) is not novel over the disclosure of D1 (WO 95/23593 A). Furthermore, the opposition division found all the patent proprietor's auxiliary requests filed during the opposition proceedings to be either not allowable or not admissible.
- IV. In order to prepare the oral proceedings scheduled for 28 November 2018 the Board communicated its preliminary assessment of the case to the parties by means of a communication pursuant to Article 15(1) RPBA. It considered therein, *inter alia*, that at least the ground for opposition according to Article 100(b) EPC does not hold against the patent as granted.
- V. Oral proceedings before the Board took place on 28 November 2018.

The patent proprietor requested that

the decision under appeal be set aside and that

the patent be maintained as granted (main request) or, in the alternative, that, when setting aside the decision under appeal, the patent be maintained in amended form according to one of the sets of claims filed as auxiliary requests 1 to 4 by letter dated 26 October 2018.

The opponent requests that

the appeal be dismissed.

For further details from the oral proceedings, reference is made to the minutes.

The decision was given at the end of the oral proceedings.

VI. The following documents are also referred to in the present decision:

D3: US 2 958 593 A,

D5: EP 562 919 A1,

E1: WO 2006/097141 A (parent application).

VII. Independent claim 1 according to the main request, i.e. according to the patent as granted reads as follows:

"A method for cleaning a polished hard floor surface of stone or stone-like material, the method comprising: treatment of the surface with a flexible pad (1) comprising an open, lofty, three dimensional non-woven web of fibers, in the presence of abrasive particles, bonded to the pad, on a contact surface between the pad (1) and the hard surface, wherein: the treatment is performed in the absence of crystallization agent on the contact surface,

characterised in that
the abrasive particles comprise diamond particles of an
average diameter of 0.1 to 30 μm ".

VIII. The patent proprietor's arguments in the appeal
proceedings can be summarised as follows:

*Main request - sufficient disclosure, Article 100(b)
EPC*

Regarding the patent proprietor's arguments concerning
the sufficient disclosure issue presented in writing,
reference is made to the submissions dated
26 June 2015, chapter 3.3.

*Main request - amendments, Article 100(c) EPC in
combination with Article 76(1) EPC*

Claim 1

A method for cleaning a polished hard floor surface of
stone or stone-like material according to claim 1 is
directly and unambiguously derivable from claims 20,
27, 29 and 31 of E1 in combination with the passages on
page 1, lines 5 to 8, page 6, lines 13 to 20 and on
page 11, line 32 to page 12 line 6 of E1.

Claims 3, 13 and 14

The additional features of claims 3, 13 and 14 are
directly and unambiguously derivable from claims 22 and
23 of E1 and the passages on page 11, line 32 to page
12, line 6, page 6, lines 16 to 20 and page 22, lines
14 to 20 of E1.

Claim 1 of the main request - Novelty, Article 54 EPC

D1 does not disclose the use of diamond particles of an average diameter of 0.1 to 30 μm on any floor surface and especially not for the treatment via a flexible pad comprising an open, lofty, three-dimensional non-woven web of fibers of stone or stone-like floor surfaces.

Claim 1 of the main request - Inventive step, Article 56 EPC

Combination of the teachings of D3 and D5

D5 teaches a method which is conceptually very different from the ones taught in D3.

D5 contains no discussion on the merits of different abrasives, and for this reason provides no incentive for the skilled person to investigate any abrasives other than the ones already used in the examples of D3.

In any case, there is no teaching in D5 for the use of a non-woven carrier for the diamonds.

IX. The opponent's arguments in the appeal proceedings can be summarised as follows:

Main request - sufficient disclosure, Article 100(b) EPC

Regarding the opponent's arguments concerning the sufficient disclosure issue presented in writing, reference is made to the submissions dated 26 January 2015, chapter III.1.2 and the submissions dated 12 July 2016, chapter III.3.

Main request - amendments, Article 100(c) EPC in combination with Article 76(1) EPC

Claim 1

There is no disclosure in E1 for "a method for cleaning a polished hard floor surface of stone and stone-like material" in combination with the remaining features of claim 1.

Claims 3, 13 and 14

E1 does not provide any basis for the features "in the presence of water and optionally a cleaning agent", "the treatment is an everyday cleaning/maintenance operation" and "the treatment is a simultaneous cleaning and polishing action, causing a gloss value of the floor surface to increase", as disclosed in claims 3, 13 and 14, respectively.

Claim 1 of the main request - Novelty, Article 54 EPC

On page 13, lines 2 to 3 of D1, reference is made to the use of non-woven articles for maintaining hard surfaces as floors. In line 21 on the same page, reference is made to marble.

On page 14, lines 17 to 19 of D1, abrasive particles of an average diameter of 1 to 30 μm are disclosed.

Abrasive particles "useful in the invention" are mentioned on pages 25 to 27 of D1. It is emphasized therein that the microabrasive particles have a Mohs hardness most preferably "greater than about 9" (see page 26, lines 9 to 11) and "diamond" is explicitly disclosed in this context on page 26, line 18. On the

Mohs scale, which is the only scale recited in D1, silicon carbide (Mohs hardness of 9.6) and diamond (Mohs hardness of 10) are actually similar and the skilled person would consider diamond as an alternative for silicon carbide as disclosed on page 5.

Thus, the subject-matter of claim 1 is not novel over the disclosure of D1.

Claim 1 of the main request - Inventive step, Article 56 EPC

Combination of the teachings of D3 and D5

The method according to claim 1 differs from the method(s) known from D3 in that the abrasive particles comprise diamonds of an average diameter of 0.1 to 30 μm .

When starting from the disclosure of D3, the objective technical problem of the present invention is the provision of alternative abrasive particles in the pad.

D5 - which is directed to the treatment of calcium carbonate containing floor surfaces with abrasive containing non-woven articles - teaches in its introductory part in reference to the prior art that gloss is produced on a marble floor with an abrasive article attached to a conventional rotary floor machine and "mechanical polishing with increasingly finer grades of diamond abrasives will ultimately yield a very high gloss" on marble floors, see page 2, lines 23 to 32.

Therefore, the use of diamonds for improving the gloss of surfaces is already known from the prior art (see

also point 6.4 of T 1337/09, not published in OJ EPO). Since D5 is directed to the same technical field as the patent in suit, there is no obstacle for combining the teachings of D3 and D5.

Given that D5 refers to a diameter range of 0.1 to 30 μm for the abrasive particles (see page 4, lines 8 and 13), it follows that D5 also proposes the use of diamond particles (see page 2, lines 31 to 32) having an average diameter of 0.1 to 30 μm .

Accordingly, by combining the teachings of D3 and D5 the skilled person would arrive at the subject-matter of claim 1 without the exercise of an inventive activity.

Reasons for the Decision

1. *Main request - sufficiency of disclosure, Article 100(b) EPC*

1.1 The opposition division had decided that the ground for opposition according to Article 100(b) EPC does not hold against the patent as granted (see Reasons 3.2 of the impugned decision).

1.2 Under section 4 of its communication pursuant to Article 15(1) RPBA, the Board stated the following:

"...the Board is inclined at the moment to agree with the patent proprietor's arguments under item 3.3 of its submissions dated 26 June 2015 that the ground for opposition according to Article 100(b) EPC does not hold against the patent as granted."

- 1.3 The above-mentioned preliminary finding of the Board has not been commented on or contested by the opponent during the appeal proceedings (see first indent on page 3 of the minutes of the oral proceedings).
- 1.4 Under these circumstances, the Board - having once again taken into consideration all the relevant aspects concerning said issue - sees no reason to deviate from its above-mentioned finding.
- 1.5 As a consequence, the ground for opposition according to Article 100(b) EPC does not hold against the patent as granted.
2. *Main request - amendments, Article 100(c) EPC in combination with Article 76(1) EPC*

Claim 1

- 2.1 Claim 1 is based on a combination of claims 20, 27, 29 and 31 of E1, wherein it has been specified that "maintaining a hard surface comprising a stone or stone-like material" is "cleaning a polished hard floor surface of stone or stone-like material".
- 2.2 Lines 5 to 8 on page 1 of E1 specify further that the invention relates to a method for maintenance of "a polished hard surface" on a regular basis, and the "Summary of the Invention" (page 6, lines 13 to 20) states that "a method of polishing, cleaning or otherwise maintaining hard, smooth and preferably glossy surfaces, in particular floor surfaces" is provided. Furthermore, the expression "daily maintenance/cleaning operations" in the paragraph bridging pages 11 and 12 of E1 makes it clear that the terms maintenance and cleaning are considered in E1 as

having an equivalent meaning and that they can be used in an interchangeable way.

- 2.3 Based on the above information disclosed in E1, the Board concludes that in E1 the term cleaning is considered as a (specific) equivalent form of maintaining a floor surface, especially when treating a polished hard floor surface. The amendment leading to claim 1 is therefore clearly and unambiguously derivable from E1.

Claims 3, 13 and 14

- 2.4 Under point III.1.3 of its reply to appeal, the opponent presented the general statement that E1 does not provide any basis for the additional features of claims 3, 13 and 14.
- 2.5 Under points 3.4.2 to 3.4.4 of its submission dated 26 June 2015, the patent proprietor pointed out the parts of E1 which provide basis for the additional features of claims 3, 13 and 14.
- 2.6 During the oral proceedings, both parties referred to their written submissions.
- 2.7 In the absence of any counterarguments from the opponent, the Board follows the patent proprietor's arguments and considers that:

Claim 3 corresponds to claims 22 and 23 of E1 reformulated with the feature of claim 23 as an optional feature.

The passage on page 11, line 32 to page 12, line 6 of E1 provides a clear and unambiguous basis for claim 13.

Page 6, lines 16 to 20 in combination with page 22, lines 14 to 20 of E1 provide a clear and unambiguous basis for claim 14.

2.8 As a consequence, the ground for opposition according to Article 100(c) EPC in combination with Article 76(1) EPC does not hold against the patent as granted.

3. *Claim 1 of the main request - Novelty, Article 54 EPC*

3.1 D1 discloses various types of work pieces, including floors (page 2, lines 24 to 25), wooden objects (page 2, lines 28 to 30), printed circuit boards (page 3, lines 7 to 8) and metal castings (page 3, lines 9-10).

3.2 D1 also provides, on page 5, lines 16 to 19, a preferred list of abrasives for increasing gloss of, *inter alia*, a marble surface, which does not include diamond but which does include aluminum oxide.

3.3 Furthermore, D1 provides at least four different types of abrasive structures, including non-wovens (page 6, lines 21 to 22), tufts (page 7, lines 1 to 2), brushes (page 7, lines 15 to 16) and hub brushes (page 7, lines 25 to 29).

3.4 The use of diamond particles is disclosed in D1 only once within a large list of suitable abrasive particles on page 26, lines 8 to 22, where it is indicated that the abrasives are considered to be equal (page 26, line 8: "any known abrasive material"). The argument of the opponent that the indication in the above-mentioned section that the abrasive particles "most preferably" have a hardness greater than about 9 Mohs would lead the skilled person to diamonds cannot be accepted

since, as stated by the patent proprietor and not contested by the opponent, other particles mentioned in this list also have a hardness of greater than about 9 Mohs, for example, silicon carbide (9-9.5 Mohs), aluminum oxide (9-9.5), cubic boron nitrate (9.5-10).

3.5 Accordingly, the list of abrasive particles mentioned under point 3.2 above and disclosed on page 5, lines 16 to 19 of D1, which contains abrasive particles of the type used in the section with the examples on pages 46 to 50 of D1 (aluminum oxide abrasive grains dispersed in polyester), has thus to be understood as a list of preferred examples, while the list mentioned under point 3.4 above and disclosed on page 26, lines 8 to 22 of D1 appears to be a general list.

3.6 The section "Use of non-woven Microabrasive-Filled Abrasive Articles" on pages 13 to 15 of D1 does not disclose diamond particles as abrasive particles, nor **stone or stone-like material** as the polished hard **floor** surface, but only that non-woven articles "may be used for polishing metals, glass, plastics, marble, and the like" (see page 13, lines 19 to 21). In particular, the latter includes metals and glass as examples. Thus, it is not apparent that these materials refer to floors but may instead be a surface material of any object.

3.7 D1 contains no guidance on how to handle floor surfaces of a specific material, i.e. floor surfaces of stone or stone-like material.

3.8 The opponent has not provided any indication of what features are considered to be disclosed in combination in D1, nor any reasoning showing that the skilled person would seriously contemplate any embodiment in which the features of claim 1 are disclosed in

combination.

3.9 In holding claim 1 not novel over D1, the opposition division ignored both the fact that there was a preferred list of abrasives on page 5, lines 16 to 19 of D1 and that the teaching of the examples 15 to 20 of D1 referred to non-woven webs. The opposition division's statement that "The only selection to be made is the selection of diamonds" is not correct. The only way of arriving at the subject-matter of claim 1 is to combine elements from various parts of the disclosure of D1 without due regard to their respective context.

3.10 Thus, D1 does not disclose the use of diamond particles of an average diameter of 0.1 to 30 μm on any floor surface and especially not for the treatment via a flexible pad comprising an open, lofty, three-dimensional non-woven web of fibers of stone or stone-like floor surfaces. The disclosure of marble in D1 is not in the context of floors, and the floor surfaces that are disclosed in D1 are all coated with an acrylic or urethane.

3.11 For the above-mentioned reasons, the subject-matter of claim 1 is novel over the disclosure of D1.

4. *Claim 1 of the main request - Inventive step, Article 56 EPC*

Combination of the teachings of D3 and D5

4.1 It is undisputed that D3 does not disclose at least the use of diamonds as abrasive particles, nor the size of the particles of 0.1 to 30 μm .

- 4.2 D3 discloses two separate methods for treating floors: one ("Example I") in column 5, line 23 to column 8, line 75; and one ("Example II") in column 9, line 1 to column 10, line 60.
- 4.3 The method of Example I is a stripping or scouring method, which is intended to strip (i.e. remove) a wax coating off a floor without affecting the floor surface as such (see column 8, lines 18 to 22). This method is not intended to have any effect on the floor surface as such but only on the coating, and it makes use of 180 grit (about 80 μm) silicon carbide abrasive particles.
- 4.4 The method of Example II is a polishing method wherein an already applied wax coating is polished to achieve gloss. Because of the wax coating, this method is also not intended to have any effect on the floor surface as such, but only on the coating, and it uses 180 grit and finer flint fines, i.e. a softer type of abrasives than in Example I.
- 4.5 Starting from D3 as the closest prior art and following the corresponding opponent's argument, the objective technical problem may be formulated as one of providing alternative abrasive particles for the floor maintenance method(s) known from D3.
- 4.6 Therefore, the question at stake is whether the skilled person starting from one of the methods of D3 and seeking to provide alternative abrasive particles for this method would take into consideration the teaching of D5 and if it would, whether it would arrive at the subject-matter of claim 1.
- 4.7 The invention of D5 teaches a method of treating a calcium carbonate containing floor, which requires the

use of a crystallization agent to achieve gloss. D5 teaches, therefore, a method which is conceptually very different from the ones taught in D3 since contrary to the methods of D3, a crystallization method is intended to operate on the actual floor surface and chemically modify it. The crystallization method thus replaces the use of a floor wax on a stone floor as known from D3.

- 4.8 Therefore, the skilled person seeking to provide alternative abrasive particles for the methods known from D3 would not consider the teaching of D5, which relates to treating surfaces including calcium carbonate, such as marble floors, but explicitly including a crystallization agent, thus teaching away from the present invention.
- 4.9 The opponent intends to link the disclosure of diamond particles on page 2, lines 31 to 32 of D5 to the disclosure of particle size on page 4, lines 9 to 13 of D5 and alleges that D5 provides the skilled person with the incentive to use diamonds for the abrasive particles disclosed in D3.
- 4.10 However, while the discussion of diamonds in D5 relates to the general discussion of the prior art without any reference to the art of the carrier for the diamonds, when used as abrasive particles, the discussion on particle sizes relates to the invention claimed in D5. In other words, the opponent combines, in a way which is not allowable, the background section of D5 with the section describing the invention claimed therein.
- 4.11 On a proper construction of D5, the skilled person would understand the background section of D5 to discuss methods for providing a smooth surface on a

marble floor and the rest of D5 as disclosing a method of modifying the surface thus rendered smooth to make it harder and glossy. That is, the methods of the background section and of the invention claimed in D5 are to be used in a sequence. The background section of D5 discloses methods intended to be used prior to the method which is disclosed as the invention in D5.

- 4.12 Even when consulting D5, the skilled person would not find any discussion on the merits of different abrasives, and in particular no discussion indicating diamond abrasives as being associated with any particularly advantageous effect when combined with a non-woven pad type carrier and when having a diameter range of 0.1 to 30 μm .
- 4.13 With regard to T 1337/09 of 11 November 2010, not published in OJ EPO, the Board notes that none of the claims decided upon in said decision disclosed the diameter range for the diamonds claimed in claim 1 of the patent in suit. Accordingly, the findings in the above-mentioned decision do not have any limiting/binding effect for the present case. The Board agrees with the finding under point 6.4 of said decision stating, that according to the disclosure in lines 29 to 33 on page 2 of D5 (cited as D12 in T 1337/09), the use of diamonds as a polishing abrasive is known from the general prior art. On the other hand, the Board considers that there is no teaching in the above-mentioned passage for the use of a non-woven carrier for diamonds having the claimed average diameter, when used as abrasive particles for a hard floor surface of stone or stone-like material. Hence, the skilled person would not understand the teachings of the background section of D5 as an indication to incorporate diamond particles of an average diameter of 0.1 to 30 μm into

the pad of D3 as argued by the opponent.

- 4.14 It is to be noted further, that due to the softness of the surface coating of Example II of D3, the desire not to affect the actual floor surface in Example I of D3, and the fact that D5 does not contain any discussion on the merits of different abrasives in connection with the hardness of the floor surface to be cleaned, the skilled person is not provided with any incentive whatsoever to replace the abrasive particles already used in D3 by more expensive and harder abrasive particles in the form of diamonds having an average diameter within the claimed range.
- 4.15 For the above-mentioned reasons, the subject-matter of claim 1 involves an inventive step.

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:



G. Nachtigall

C. Brandt

Decision electronically authenticated