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D E C I S I O N
of 6 December 2001

Case Number: T 0144/99 - 3.2.4

Application Number: 97118223.3

Publication Number: 0842631

IPC: A47L 11/34

Language of the proceedings: EN

Title of invention:
Steam-cleaning appliance

Applicant:
Ariete S.p.A.

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 54, 56, 123(2)

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

Decisions cited:
-

Catchword:
-



Case Number: T 0144/99 - 3.2.4

D E C I S I O N
of the Technical Board of Appeal 3.2.4
of 6 December 2001

Appellant: Ariete S.p.A.
Via Baldanzese 35
I-50040 Settimello di Calenzano
(Firenze) (IT)

Representative: Porsia, Attilio, Dr.
c/o Succ. Ing. Fischetti & Weber
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I-16124 Genova (IT)

Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 9 December 1998
refusing European patent application
No. 97 118 223.3 pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: C. A. J. Andries
Members: R. E. Gryc
C. Holtz

Summary of Facts and Submissions

- I. The appellant lodged an appeal, received at the EPO on 8 January 1999, against the decision of the Examining Division notified by post on 9 December 1998, refusing European patent application No. 97 118 223.3.

The fee for appeal was paid and the written statement setting out the grounds of appeal was filed on the same date.

- II. The Examining Division held that the subject-matter of Claim 1 submitted to examination did not involve an inventive step (Article 56 EPC) having regard merely to the state of the art disclosed in:

D1: DE-A-3031263 and

D2: US-A-3755850

all cited in the search report.

In the report, the following other documents were also cited:

D3: EP-A-0458542 and

D4: US-A-4696074.

- III. In his statement of grounds for the appeal the appellant pointed out that, in order to obtain from D1 the apparatus according to the invention, it would be necessary to eliminate the projecting scraping blades and to provide the base of the device with a cloth. In his opinion, such an adaptation would entrain a

substantial structural modification of the device, in absence of which it could not act as a floor cleaning appliance.

The appellant pointed also out that, in D1, the steam was not only used for cleaning purposes.

According to the appellant, the device of D1 may in a certain sense be compared to a steam jet iron, by means of which instead of a "smoothing" action, a "raising" action of the piles of a textile (a carpet) is achieved by the combined action of the steam and of the scraping blades. In connection therewith, the appellant was of the opinion that D1 did not taught that it could be possible to use for cleaning purposes an apparatus comprising steam delivering means without the provision of means for the concurrent suction of the condensate together with the dirt.

According to the appellant, this is confirmed by D2 which show a floor cleaning device in which the mechanical action of a rotating brush and a suction for the condensate and for the dirt solved by the steam were associated to the action of the steam. The appellant concluded thus that the person skilled in the art did consider as indispensable that a steam cleaning device be provided, in combination with the steam dispensing means, with at least means for the suction of the condensate and the dirt.

For the appellant, the simplicity of the solution proposed in the present application in respect of the known devices, as that described in D2, should be considered as indicative of inventive step. Moreover, the time factor between the prior art of D2 and the

priority date of the present application can be regarded as an additional indication of inventiveness.

The appellant was therefore of the opinion that to arrive at the invention one would need to take a series of steps from the prior art which would only be possible with hindsight and against a general opinion of the persons skilled in the art who assumed as necessary that a cleaning appliance be also provided with means for the suction of the condensate and the dirt.

IV. During the appeal proceedings, the following new documents were submitted under Article 115 EPC:

D5: JP-U- 63-83160 and

D6: Catalogue "La Redoute, automne-hiver 91-92",
page 1093.

As regards D5, the appellant contended that the apparatus disclosed therein was a carpet cleaning device having a head mounted on four wheels so that it would be very problematic to attach to the head of the device of D5 a removable cleaning cloth without eliminating the four wheels of the known device and without considerably reducing the length of the head of said device.

The appellant pointed out that such modifications which requested a drastic reorganisation of the related parts of the prior art device were inventive; moreover, the feature of the invention according to which the steam generating device was a boiler was missing in D5.

Regarding D6, the appellant draw the attention of the Board to the fact that the known cleaning device was of a completely different conception as that of the appellant's device since the steam was produced in a boiler separated from the cleaning head and was conveyed to said head by means of a pipe.

V. With his letter dated 7 september 2001 the appellant filed a new set of four amended claims and an adapted description and requested that a patent be granted on the basis of this amended application.

VI. Claim 1 reads as follows:

"1. Household steam cleaning appliance comprising a steam producing means (2) fitted with heating means (3), steam dispensing manifold (4, 104) connected to said steam producing means and provided with holes (8), and a hand operated cleaning tool comprising a head (1) provided with a base (301) having a surface facing the floor to be cleaned and a cavity therein having an open face towards said floor surrounded by said surface, said steam producing means being located in said head and said manifold being housed in said cavity characterised in that said steam producing means is a boiler (2) fitted with heating means and said steam dispensing means (4, 104) are located in said head (1), that solely the surface of the base that faces the floor and surrounding the open face of the cavity is provided with a cloth (401) for removing the dirt on the floor, that the appliance is solely supported on the floor by said surface of the base resting on the cloth which rests on the floor and that said cloth being removably attached thereto by means of suitable attachment means (321)."

Reasons for the Decision

1. *Admissibility of the appeal*

The appeal is admissible.

2. *Modifications to the application (Article 123(2) EPC)*

2.1 Modifications to Claim 1

In comparison with Claim 1 of the application as originally filed, the protection conferred by the last submitted Claim 1 has been considerably reduced by the incorporation therein of the following new features, each having a counterpart in the application as originally filed:

- (a) the appliance is a household appliance
(counterpart in page 1, lines 6 to 7);
- (b) the appliance comprises a steam dispensing manifold connected to said steam producing means and provided with holes (counterpart in claim 2);
- (c) the cleaning tool is hand operated (counterpart in page 2, lines 27 to 31);
- (d) the cleaning tool is provided with a base
(counterpart in claim 3 and on Figures 2 and 3); a surface facing the floor to be cleaned
(counterpart in page 3, lines 5 and 6);
- (f) the base has a cavity in said surface (counterpart

in claim 3 and on Figures 2 and 3);

- (g) the cavity has an open face towards said floor surrounded by said surface (counterpart on Figures 2 and 3);
- (h) the manifold is housed in the cavity (counterpart in claim 3);
- (i) solely the surface of the base that faces the floor and surrounds the open face of the cavity is provided with a cloth (counterpart on Figures 2 and 3);
- (j) the cloth is for removing the dirt on the floor (counterpart in page 4, lines 20 to 22);
- (k) the appliance is solely supported on the floor by said surface of the base resting on the cloth which rests on the floor (counterpart on Figures 1 to 3);
- (l) the cloth is removably attached to said surface of the base by means of suitable attachment means (counterpart in claim 4).

Every feature having a counterpart in the application as filed originally, no new matter has been added to Claim 1.

2.2 Modifications to the description

The last submitted description has been completed with relevant states of the art in application to Rule 27(1) b) EPC and adapted to the modified Claim 1 to comply

with the requirements of Rule 27(1) c) EPC. No objection can be raised against these modifications.

2.3 Therefore, the afore-mentioned modifications are allowable (Article 123 EPC).

3. Novelty (Article 54 EPC)

As pointed out by the appellant, D1 is not concerned with a cleaning appliance as according to the invention but with a device for raising the piles of a textile, in particular of a carpet (see D1: page 3, last paragraph).

Normally D2 is not concerned with a household steam cleaning appliance as according to the invention but with an "industrial" machine for cleaning "surfaces in and around automobile service stations, shopping center parking lots and other large areas of paved surfaces".

Also D3 is not concerned with a steam cleaning device but with a simple cleaning device which utilises a sheet of vapour wipe material and comprises neither a steam producing means nor a steam dispensing manifold.

The household steam cleaning appliance disclosed by D4 does not comprise a boiler as according to the invention but a steam generator of the type comprising two metal plates and electric resistors incorporated to one of the plates.

The cleaning machine described in D5 is supported on the floor by supporting wheels and not by the surface of the base resting on a wiping cloth.

Also, the complete appliance of D6 , including the boiler, is not supported on the floor by the surface of the base resting on a cloth as according to the invention.

From the afore-mentioned findings, it is clear that, at the priority date, none of the cited documents D1 to D6 disclosed a cleaning appliance comprising all the features claimed in combination in Claim 1 so that the subject-matter of Claim 1 is new in the meaning of Article 54 EPC.

4. The state of the art closest to the invention

The Board is of the opinion that the "conventional" state of the art shown on Figure 4 of D5 is more relevant than the state of the art described in all the documents D1 to D4 and D6. This known "conventional" household steam cleaning appliance is thus considered to be the state of the art closest to the invention at the priority date of the patent application.

The appliance according to the invention differs from this closest state of the art by the features of the characterising portion of Claim 1.

5. *Problem and solution*

When starting from the "conventional" cleaning appliance shown on Figure 4 of D5 and taking into account the above-mentioned differences, the problem to be solved by the person skilled in the art appears to be to improve said known device in order to get a compact steam-cleaning appliance that is easy to manoeuvre and simple to use (see the patent application as originally

filed: page 1, lines 24 to 27).

The Board is satisfied that the invention as claimed in Claim 1 brings actually a solution to this problem.

6. *Inventive step (Article 56 EPC)*

6.1 When examining whether the modification of the conventional household steam cleaning appliance shown on Figure 4 of D5 along the lines of the solution claimed in Claim 1 involves an inventive step, it should first be investigated whether each of the combined essential features for carrying out the invention was already known per se, and could have been identified unequivocally in D1 to D4 and D6 by structure and function. Then, it should additionally be investigated whether D1 to D4 and D6 would prompt the skilled person to use the known essential elements in combination with the already combined elements of the conventional appliance of D5 in expectation of the improvement for which the skilled person was searching.

6.2 Since D1 is concerned rather with raising the piles of a textile than cleaning the textile itself, the skilled person aiming to improve a cleaning device, in particular the cleaning device of D5, would have a priori no reason for consulting D1. Even if he would do so, since the device of D1 comprises no manifold, no base provided with a cavity having an open face towards the floor and no cloth for removing the dirt on the floor, the skilled person would not arrive at the invention just by transferring the features of the device of D1 directly, i.e. without any substantial modification, on the device of D5. On the contrary, not only a substantial adaptation of the features of D1

(which does not follow plainly and logically from D1 or D5) would be necessary but also not all the components claimed in Claim 1 would be present in that combination, in particular no cleaning cloth would be removably attached to the base since neither D5 nor D1 teaches the use of such a cloth.

- 6.3 Since the steam cleaning machine disclosed in D2 looks more bulky and more complicated than the cleaning device of D5, the skilled person wishing to render the latter more compact and easier to use would not be inclined to consult D2. And even if he would do so and if he would combine the features of D2 and D5, the skilled person would not arrive at an appliance according to Claim 1 since neither D2 nor D5 teaches either to use a cleaning cloth removably attached to the base of the devices or to suppress the supporting wheels used on both machines so that they be supported on the floor by their bases resting on the cloth.
- 6.4 The cleaning tool of D3 being not a steam cleaning tool but a device of a completely different conception as the device according to D5, the skilled person looking for improving the device of D5 would have a priori no reason to consult this document. And even if the skilled person would try to apply the teaching of D3 to the cleaning device of D5 and would replace accordingly the supporting wheels of said device by a cloth removably attached to the base of the device, he would still not arrive at the claimed invention since the cloth would cover totally the undersurface of the base and not solely the surface surrounding the recess housing the steam dispensing means. Moreover, since neither D3 nor D5 teaches the use of a boiler, there is a priori no reason for the skilled person to replace

the control valve (4) and the vaporisation chamber (1) of the conventional machine of D5 by a boiler.

6.5 D4 discloses a cleaning appliance of the same conception as the conventional device shown on Figure 4 of D5 i.e. a device supported by wheels comprising neither a boiler nor a cloth for removing the dirt. Therefore, even if the skilled person would unlikely combine the teachings of these two documents, such a combination could not result in a device according to the invention i.e. a device having a boiler and resting on a cloth which rests on the floor as claimed in Claim 1 and, without hindsight, there is no reason for the skilled person to make such substantial transformations.

6.6 D6 discloses a hand operated household steam cleaning appliance comprising a head provided with a base having a surface facing the floor to be cleaned and said surface is provided with a cloth removably attached thereto. However, the appliance of D6 being of a quite different conception as the steam cleaning device according to D5, the skilled person searching to improve the latter would unlikely consult D6. Even if he would do so, he would not learn from D6 to cover with the cloth solely the surface of the base of the device of D5 surrounding the recess provided in it, so that the steam cleaning action would not apply directly against the floor as according to the appliance claimed in Claim 1 and the cleaning result could not be exactly the same.

6.7 For all the foregoing reasons, the Board is convinced that the achievement of an improved household steam cleaning appliance according to the teaching of Claim 1

does not follow plainly and logically from the prior art but implies an inventive step within the meaning of Article 56 EPC.

7. Therefore a patent can be granted on the basis of the new version of the application filed with the appellant's letter of 7 September 2001.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to grant a patent based on the following documents:

Description: pages 1 to 6 filed with letter of 7 September 2001,

Claims: claims 1 to 4 filed with letter of 7 September 2001,

Drawings: Figures 1 to 3 of the application as originally filed.

The Registrar:

The Chairman:

G. Magouliotis

C. Andries