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D E C I S I O N
of 29 March 2004

Case Number: T 0503/02 - 3.2.1

Application Number: 96931824.5

Publication Number: 0792780

IPC: B60S 1/48

Language of the proceedings: EN

Title of invention:
Filter for electro-pumps of windscreen washers of motor vehicles

Applicant:
FICO TRANSPAR, S.A.

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step (no)"

Decisions cited:
T 0021/81, T 0708/95

Catchword:
-

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Case Number: T 0503/02 - 3.2.1

D E C I S I O N
of the Technical Board of Appeal 3.2.1
of 29 March 2004

Appellant: FICO TRANSPAR, S.A.
Gran Viá Carlos III, 98
ES-Barcelona 08028 (ES)

Representative: SUGRANES - VERDONCES - FERREGÜELA
Calle Provenza, 304
ES-08008 Barcelona (ES)

Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 23 August 2001 refusing European application No. 96931824.5 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: S. Crane
Members: J. Osborne
G. E. Weiss

Summary of Facts and Submissions

I. The appeal is directed against the decision by the Examining Division refusing European patent application No. 96 93 1824.5.

II. The following prior art was cited in the search report:

D1: EP-A-0 284 662, published 5 October 1988

D2: DE-A-37 30 567, published 23 March 1989.

The Examining Division came to the conclusion that the subject-matter of claim 1 filed with a letter dated 5 July 2000 lacked inventive step in the light of the disclosure of D1 in combination with the knowledge of the skilled person.

III. The appellant requested that the decision under appeal be set aside and that the case be remitted to the Examining Division. In a communication pursuant to Article 110(2) EPC the Board indicated its provisional opinion that the subject-matter of the claim lacked inventive step in the light of a combination of D1 and D2 and that, moreover, the finding of T 708/95 (not published in OJ EPO), which the appellant had cited in support of its arguments, was not applicable to the present case. With a letter in reply to the Board's communication the appellant contested the Board's view but made no amendments to the claim. No request for oral proceedings has been filed.

IV. Claim 1 according to the appellant's request reads:

"Filter (1) for electric pumps of automobile vehicle windscreen washers which can be coupled to electric pumps (2), said filter being made from a sole piece of elastic material, having a generally hollow cylindrical shape open at its rear end (13), provided with means (14) for the leak tight coupling of the electric pump (2) with the cleaning liquid reservoir (3), and also having a front end (21) which is closed, said filter body having at a side a plurality of through orifices (20) arranged forming two regular reticula diametrically opposed with respect to each other, and having at a front a plurality of through orifices (22) forming a regular reticulum, characterized in that, to the interior, said filter (1) forms two coaxial cylindrical portions of different diameter linked to each other, rear (16) and front (17) portions respectively, in which, when the filter (1) is coupled to the axial tubular aspiration extension (9), the rear portion (16), which is of smaller diameter, presses by elastic reaction on the axial tubular aspiration extension (9), while on the front portion (17), which is of larger diameter, is arranged the free end of the axial tubular aspiration extension (9) forming an intermediate chamber (13) into which said first mentioned through orifices (20) and said further through orifices (22) emerge."

V. The appellant's arguments can be summarised as follows:

The subject-matter of claim 1 differs from the disclosure of D1 in that the filter is made of a sole piece of elastic material. The problem solved by this

differentiating feature is to simplify the filter whilst maintaining and if possible improving its performance. The rigid material of the D1 filter places a limit on the maximum number of filter orifices because of the need to withstand the pressure gradient across the filter, with a consequent reduction in through-flow of liquid. Moreover, the respective materials of the seal and filter of D1 must fulfil contradicting requirements, namely elasticity to provide sealing and rigidity to maintain the filter spaced from the lower end of the inlet pipe. Comparative tests show that the filter according to the present application performs better than the filter known from D1.

The filter according to D2 is of a different type in as far as it is intended to be coupled to the pump casing rather than to the pump inlet and, since it does not present the problems which are overcome by the present invention, the skilled person would not combine its teaching with that of D1. Moreover, D2 does not disclose either elastic material or manufacture of the filter as a single piece. According to decision T 708/95, *supra*, it was found that in a very active technical field manufacture of a component as a single part was inventive because it was first proposed 8 years after disclosure of the component in two pieces. The present technical field of automotive components is similarly active and D1 was published 9 years before filing of the present application; the finding of T708/95 therefore applies to this case and shows that the subject-matter of claim 1 does involve an inventive step.

Reasons for the Decision

1. The filter according to claim 1 is intended to cover the inlet pipe (in claim 1 "axial tubular aspiration extension") at the base of a pump for a vehicle screen washer. Such a pump typically is mounted above an upper, horizontal wall of a reservoir from which it draws the washer fluid and the filter provides a seal both to the upper end of the inlet pipe and to the reservoir.

2. D1 discloses a filter for use as described above, which comprises a body of a "suitable" plastics material incorporating plastics or metal filter elements both at the end face ("front end" in present claim 1) and in the adjacent side wall. The filter element is mounted in the wall of the fluid reservoir by means of a sealing element which envelops the upper end ("rear end" in present claim 1) of the filter body to locate the filter body and to provide a seal both to the fluid reservoir externally of the seal body and to the inlet pipe internally of the seal body. The sealing element additionally has an outwardly extending collar portion which locates the pump assembly on the wall of the fluid reservoir. The filter body itself has a constant internal diameter greater than the external diameter of the inlet pipe on which it is located. The sealing element bridges the gap between the upper end of the filter body and the upper end of the inlet pipe, leaving a chamber within the lower end of the filter body which fluid flowing through the filter elements can enter.

2.1 As accepted by the appellant, the subject-matter of present claim 1 differs from that of D1 in that the filter provided with means for the leaktight coupling of the electric pump with the cleaning liquid reservoir is:

– made from a sole piece of elastic material.

The differentiating feature solves the problem of simplifying and reducing the cost of the filter.

3. D2 relates to a pump arrangement for use in a vehicle screen wash system which includes a filter body located over the lower end of the pump inlet pipe in an opening in the fluid reservoir. It is explained in D2 that it was previously known to employ a sealing element between the inlet pipe and the opening in the fluid reservoir. However, D2 teaches that it is preferable to manufacture the filter body as a one piece injection moulding with a retaining flange to locate and seal the pump against the fluid reservoir (column 3, lines 20 to 29 and 50 to 60). In this way the filter body itself can be manufactured at low cost and, in addition, it is possible to dispense with a separate sealing element (column 2, lines 42 to 44 and column 3, lines 59, 60). Because of a lack of available space in the radial direction the filter body provides a flow area around the lower end of the inlet pipe by means of, in the preferred embodiment, a series of ribs which cause the filter body to expand slightly upon insertion of the inlet pipe. Both the function of the filter body as a sealing element and the expansion of the filter body are a clear teaching of the use of elastic material.

4. The teaching of D2 to the skilled person that the filter arrangement may be both simplified and manufactured more cheaply is directly applicable to the filter arrangement of D1 and he would transfer that teaching without exercising inventive effort. In so doing he would arrive at the subject-matter of claim 1.

4.1 The appellant argues on the basis of test results that the filter according to the present application provides a greater flow of liquid than the filter according to D1. The appellant explains that the need for the rigid filter body of D1 to withstand a sufficient pressure differential limits the number of orifices which can be provided. The Board is unable to accept these arguments as an indication of the presence of inventive step. Firstly, D1 does not specify that the material of the filter body should be rigid but merely states that it should be of "suitable" plastics whilst the filter inserts themselves may be of plastics or metal. Secondly, any performance improvement which may arise is apparently due not to the elastic material itself but to a difference in the number of orifices which the appellant has not disclosed and which is not derivable from the claim. Finally, any additional benefit which may result from the features included in the claim would be merely a bonus effect resulting from the obvious combination of D1 and D2 (see T 21/81, OJ EPO 1983, 15).

4.2 The Board also cannot accept the appellant's arguments that conflicting requirements as regards the choice of materials provide support for the notion of inventive step in the subject-matter of claim 1. There is no statement in D1 to the effect that the filter body need

be of a more rigid material than the sealing element, both of which may be of plastics material. Moreover, in the event that elastic material were to provide insufficient rigidity for the lower end of the filter body, a solution to that problem is already known from D2 in which the inlet pipe provides support for the filter body.

4.3 In T 708/95, *supra*, it was found that, in the technical field of sensors the idea of manufacturing two parts as a single component was "only apparently straightforward" for the skilled person and did involve an inventive step. The Board in that case based its conclusion on the facts that the subject-matter related to a technically active field and that the idea had first been proposed in the patent eight years after publication of the closest prior art. However, in the present case the facts are different. The solution to the problem was first proposed not at the time of filing the present application but upon publication of D2, merely five months after publication of the closest prior art D1. The finding of T 708/95 therefore is not applicable to this case.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:	The Chairman:
S. Fabiani	S. Crane