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Datasheet for the decision of 31 July 2013

Case Number: T 0148/12 - 3.3.06

Application Number: 04757746.5

Publication Number: 1603656

IPC: B01D53/02, F02M35/00

Language of the proceedings: EN

Title of invention:
Evaporative hydrocarbon emissions filter

Patent Proprietor:
FRAM Group IP LLC

Opponent:
Kleimann, Tobias

Headword:
Evaporative emissions filter/FRAM

Relevant legal provisions:
EPC Art. 52(1), 54(1), 54(2), 123(2)

Keyword:
Novelty - Main request (no) - Auxiliary request 1 (no)
Subject-matter extending beyond the content of the application as filed - Auxiliary request 1 and 2 (yes)

Decisions cited:

Catchword:

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Boards of Appeal
Chambres de recours

European Patent Office
D-80298 MUNICH
GERMANY
Tel. +49 (0) 89 2399-0
Fax +49 (0) 89 2399-4465

Case Number: T 0148/12 - 3.3.06

D E C I S I O N
of Technical Board of Appeal 3.3.06
of 31 July 2013

Appellant: (Patent Proprietor)	FRAM Group IP LLC 39 Old Ridgebury Road Danbury, CT 06810-5109 (US)
Representative:	Smee, Anthony James Michael Gill Jennings & Every LLP The Broadgate Tower 20 Primrose Street London EC2A 2ES (GB)
Respondent: (Opponent)	Kleimann, Tobias Horn Kleimann Waitzhofer Elsenheimerstr. 65 80687 München (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 22 November 2011 revoking European patent No. 1603656 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman: B. Czech
Members: E. Bendl
J. Geschwind

Summary of Facts and Submissions

I. The appeal lies from the decision of the opposition division to revoke European patent 1 603 656.

II. Claim 1 of the patent as granted reads as follows:

"*1. An air induction system (12) for an internal combustion engine, the air induction system comprising:*

a housing (14) having an air inlet and an air outlet defining therebetween a direct airflow path (P), and having a flat inner surface;
an air filter contained in the housing and which is positioned so as to define, in use, a dirty air side of the housing (D) on the air inlet side thereof, and a clean air side of the housing (C) on the air outlet side thereof; and
an evaporative emissions filter (10) comprising a hydrocarbon vapour-adsorbent member (22), located opposite the air filter and substantially outside of the direct air flow path,

wherein hydrocarbon vapours present in the air induction system after engine shut-down are substantially retained in the adsorbent member until air flows through the air induction system after the engine starts,
characterised in that the evaporative emissions filter is mounted by a fastener and mounted off the flat inner surface of the clean air side of the housing, in order to maximise the amount of the adsorbent member exposed to the evaporative emissions."

III. In the contested decision the opposition division concluded that neither claim 1 as granted nor amended

claim 1 according to the auxiliary request then on file met the requirement of novelty in view of the disclosure of document

M1: JP 2001-263177 A (with English translation).

IV. Under cover of its statement of grounds of appeal dated 29 March 2012, the appellant (patent proprietor) filed three sets of amended claims as first to third auxiliary requests. It also filed two sheets of modified drawings labelled "annex 1" and "annex 2", which allegedly showed the air flow path (in the sense of the patent) in the device of figure 1 of the patent in suit (annex 1) and in a device according to document M1 (annex 2).
The appellant held *inter alia* that the subject-matter of the claims as granted and of the amended claims according to all auxiliary requests were novel, and it indicated passages of the patent in suit allegedly constituting a basis for the amendments in the claims according to the auxiliary requests.

V. Claim 1 according to the first auxiliary request differs from the wording of claim 1 of the main request (see point II) in that the term "*substantially*" was deleted from the expression "*... member (22), located opposite the air filter and substantially outside of the direct air flow path...*".

Claim 1 according to the second auxiliary request differs from claim 1 according to the main request by the appended features "*wherein said evaporative emissions filter is positioned such that a surface of said evaporative emissions filter is in a facing spaced relationship with respect to the inner surface of said housing and another surface of said evaporative*

emissions filter is in a facing spaced relationship with respect to the air filter".

Claim 1 according to the third auxiliary request differs from claim 1 as granted in that its characterising part reads as follows:
"*characterised in that the evaporative emissions filter is mounted by a fastener on a flat inner upper surface on the clean air side of the housing and mounted off, and parallel to, the flat inner upper surface in order to maximise the amount of the adsorbent member exposed to the evaporative emissions*".

VI. The respondent/opponent *inter alia* raised objections as to lack of novelty with regard to all requests and argued, with regard to the auxiliary requests, that the amendments to the claims were not allowable under Article 123(2) EPC.

VII. Oral proceedings were held on 31 July 2013. As announced in its letter of 1 July 2013, the appellant did not attend these oral proceedings.
The debate during the oral proceedings focused on the issues of claim interpretation (meaning of the expression "*direct air flow path*"), novelty over document M1 (main and first auxiliary request) and allowability of some of the amendments under Article 123(2) EPC (second and third auxiliary request).

VIII. The appellant requested in writing that the decision under appeal be set aside and the patent be maintained as granted (main request) or, alternatively, that the patent be maintained on the basis of one of the auxiliary requests 1 to 3, submitted with its statement of grounds of appeal.
In the event that the issue of inventive step were to

be considered, remittal of the case to the department of first instance was requested.

The respondent requested that the appeal be dismissed.

IX. As relevant here, the arguments of the **appellant** as submitted in writing can be summarised as follows:

Main request - Novelty

- The direct air flow path (in the sense of the patent in suit) through the housing of the device illustrated by figures 1 and 2 of document M1 was shown in annex 2, filed with the statement setting out the grounds of appeal. The claimed subject-matter was novel since in the air induction system shown in M1 the evaporative emissions filter was positioned at least to some extent inside said direct air flow path through the housing.

First auxiliary request - Novelty

- Claim 1 of the first auxiliary request inherently required that any evaporative emissions filter be strictly outside the direct air flow path. This was clearly not the case in the devices disclosed in document M1. Novelty of the subject-matter of this claim was thus also given.

Second auxiliary request - Article 123(2) EPC

- Reference to the original disclosure corresponding to paragraph [0015] of the patent as granted was made in order to show the support for the feature "*facing spaced relationship*".

Third auxiliary request - Article 123(2) EPC

- Basis for the amended feature defining the relative positioning of the evaporative emissions filter

within the housing could be found in figure 1 of the patent in suit. Paragraph [0015] of the granted patent made it clear that the filter was mounted on the upper inner surface of the housing by a mechanism 24 that included a suitable fastener.

X. The **respondent** argued essentially as follows:

Main request - Novelty

- The expression "*direct air flow path*" was not clearly defined and could therefore be interpreted in several ways. Figures 1 to 4 of document M1 showed, that the fuel vapour adsorbing sheets 20 were substantially outside the direct flow path when applying a "geometrical approach", i.e. when construing the expression "*direct air flow path*" as referring to an interpolation from the flowpath through the air inlet duct to the flowpath through the air outlet duct. Therefore novelty of the claimed subject-matter was destroyed by M1.

First auxiliary request - novelty

- The reasoning made with respect to the main request also applied to claim 1 according to the first auxiliary request. Document M1 was novelty-destroying.

Second auxiliary request - Article 123(2) EPC

- The application as filed (text and figures) contained no information concerning the shape or relative positioning of a "*surface*" of the evaporative emissions filter, or concerning any "*facing spaced relationship*" of the elements of the said filter with regard to the inner surface of the housing surface and to the air filter. Therefore this amendment went beyond the original disclosure.

Third auxiliary request - Article 123(2) EPC

- The application as filed (text and figures) did not directly and unambiguously disclose an air induction system with all the features of the characterising part of the claim. Claim 1 as amended represented an undue generalisation of the device described in paragraph [0014] of the patent in suit, which generalisation moreover contradicted the disclosure of Figure 1. In particular, an evaporative emissions filter "*mounted off, and parallel to the flat inner upper surface*" of the housing was not disclosed in the application as filed. Therefore, claim 1 according to this request was also objectionable under Article 123(2) EPC.

Reasons for the Decision

Main request

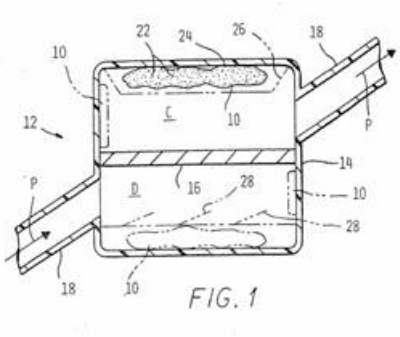
1. Interpretation of claim 1

1.1 Claim 1 as granted relates to an "*air induction system [...] comprising [...]* ***an*** *evaporative emissions filter [...] located [...] substantially outside of the* ***direct air flow path***" (emphasis added).

1.2 According to the patent in suit (see figure 1 and paragraph [0019]), several evaporative emission filters 10 may by mounted at various positions within the housing. The board observes, however, that the wording of claim 1 merely requires that "*an*", i.e. at least **one** evaporative emissions filter, lies outside the direct air flow path. Hence, claim 1 does not exclude embodiments comprising a plurality of evaporative

emissions filters, wherein one or more of said filters may be located within said flow path, as long as at least one of them is located outside said flow path.

1.3 As pointed out by the respondent, the expression "*direct air flow path*" is not explained in more detail in the description of the patent in suit. Said direct air flow path (P) is only schematically illustrated by two arrows drawn within the in- and outlet ducts (18) of the airbox (14) shown in figure 1 of the patent in suit:

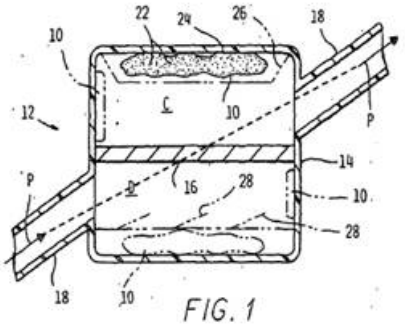


F1: Figure 1 of the patent in suit

Thus, the patent as granted contains no element of information expressly defining the shape of said direct air flow path **within and across** the housing/airbox 14.

1.4 The appellant and the respondent adopted differing interpretations of the expression "*direct air flow path*":

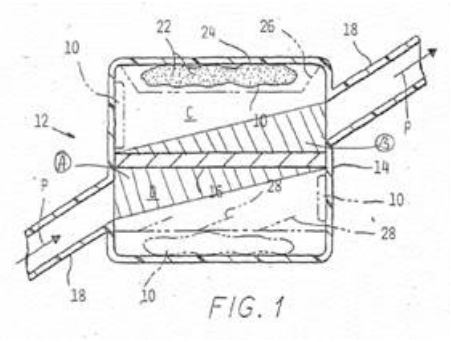
1.4.1 More particularly, the respondent held that several different, but technically sensible interpretations of this expression were possible. One of them is best illustrated by the modified figure 1 submitted and labelled "geometrical approach" by the respondent:



F2: Respondent's interpretation (referred to as "geometrical approach") of the "*direct air flow path*" as applicable to the device according to figure 1 of the patent in suit

The respondent argued that according to this approach, the direct air flow path could be defined as the **interpolation** of the path from the air inlet to the air outlet symbolised by the added dotted line linking the two arrows P.

1.4.2 The appellant argued that said "*direct air flow path*" was not and could not be, a single straight line, but rather was "a region of flow within which the vast majority of the airflow occurs". Accordingly "some airflow will exist outside those regions". The appellant illustrated its understanding of the expression "*direct air flow path*" by the following, modified figure 1 of the patent in suit, taken from annex 1, and wherein the hatched area is supposed to represent the said direct air flow path:



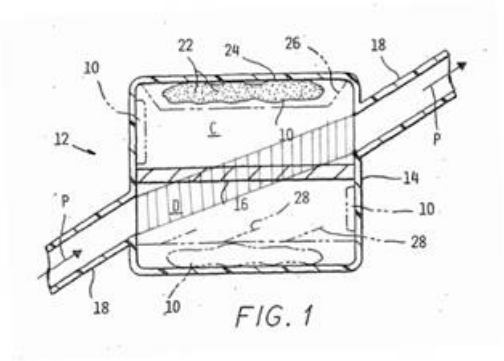
F3: Figure 1 of annex 1: appellant's interpretation of the "*direct air flow path*" in the device according to figure 1 of the patent in suit

1.5 The board observes that the appellant's and the respondent's respective interpretations of claim 1 have in common that the "*direct air flow path*" enters the housing 14 through the air inlet opening and follows a direct line to air outlet opening. The only difference between the two approaches are the boundaries or the volume of the air flow path surrounding this "direct line".

1.5.1 The board accepts the argument of the appellant that a flow path in the form of a one dimensional line does not, technically speaking, make much sense. However, as the expression "*direct air flow path*" per se is not more precisely defined in the patent in suit, the interpretation (see figure F3 above) suggested by the appellant is only one among several possible ones. More particularly, the literal definition of this flow path as provided by the appellant (point 1.4.2 above) is not precise since it only means that there will be some air flow through the entire inner volume of the air induction system. In this connection, the appellant also invoked paragraphs [0005] and [0026] of the patent in suit. Said paragraphs refer, respectively, to undesirable flow restrictions in prior art hydrocarbon adsorbing filters arranged "*within the direct air flow*

path", and to the "*lower flow areas*" located "*outside of the direct flow path P*". These passages are, however, so vague that they cannot possibly justify the appellant's quite narrow interpretation of where the "vast majority of the airflow occurs" in the device shown in Figure 1 of the patent in suit (see figure F3).

1.6 The board considers that in the light of the above reasoning the respondent's interpretation of the "*direct air flow path*" can reasonably be illustrated by the following amended figure 1:

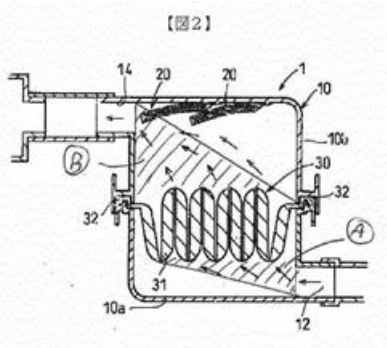


F4: Illustration of the direct flow path according to the "*geometrical approach*" through the device according to figure 1 of the patent in suit

This interpretation is based on the "geometrical approach" submitted by the appellant and addressed at the oral proceedings, according to which the flow path through the ducts is interpolated in terms of its direction and cross-sectional area. It is technically sensible and in no way inconsistent with the description of the patent in suit. The board thus finds it appropriate to adopt this interpretation in the following assessment of novelty over the disclosure of document D1.

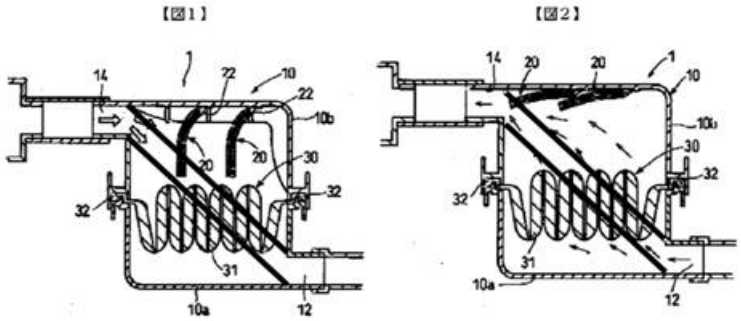
2. Novelty - Claim 1

2.1 Figures 1 and 2 of document M1 show an air induction system which, according to the appellant, differs from the claimed one in that even in the air intake mode at least the left hand evaporative emission filter 20 extends substantially into the direct air flow path (hatched area). The appellant's view is illustrated by the following figure included in annex 2:



F5: Figure 2 of annex 2: appellant's understanding of the "direct air flow path" through the device shown in figure 2 of M1

2.2 However, applying the interpretation of the expression "*direct air flow path*" set out under point 1.6 above to the air induction system shown in figures 1 and 2 of document M1, the interpolation of the path from the air inlet to the air outlet can be considered to be represented by the area between the bold lines in the following amended figures:



F6: Figures 1 and 2 of M1 showing the direct air path according to the "geometrical approach"

2.3 It is to be noted that in both figures, corresponding to two operating modes of the system, the **right-hand** evaporative emissions filter 20 lies strictly **outside** the direct air flow path. Moreover, it is expressly mentioned in M1 (see paragraphs [0013] and [0014]) that the adsorbing filter (sheets) 20 hardly offer any resistance to the flow of intake air.

As mentioned above, claim 1 according to the main request only requires that at least **one** evaporative emissions filter lies outside of the direct air flow path. This requirement is met by the device according to figures 1 and 2 of M1, irrespective of its operating mode.

2.4 Therefore, the subject-matter of claim 1 of the main request lacks novelty (Articles 52(1) and 54(1)(2) EPC).

3. The appellant's main request is thus not allowable.

First auxiliary request - Novelty

4. Compared to the wording of claim 1 of the main request the term "*substantially*" was deleted (from the expression "*substantially outside of the direct flow*

path") in claim 1 according to the first auxiliary request.

5. The deletion of this term has no bearing on the interpretation of the feature "*direct flow path*".

6. At least the right-hand evaporative emissions filter 20 shown in figures 1 and 2 of document M1 is always (i.e. in both operating modes shown in these figures) entirely outside the "*direct air flow path*" as construed by the board.

The subject-matter of claim 1 according to the first auxiliary request thus also lacks novelty (Articles 52(1) and 54 (1)(2) EPC).

7. The appellant's first auxiliary request is thus not allowable.

Second auxiliary request - Article 123(2) EPC

8. Claim 1 according to the second auxiliary request requires that the evaporative emissions filter 10 is "*mounted off the flat inner surface of the clean air side of the housing*" and that it is "*positioned such that a* ***surface of said evaporative emissions filter*** *is in a* ***facing spaced relationship with respect to the inner surface of said housing*** *and another surface of said evaporative emissions filter is in a* ***facing spaced relationship with respect to the air filter***" (emphasis added).

9. The board observes that the only "*surface*" literally mentioned in the application as filed is the inner surface of the housing and that the term "*facing*" is not used in the application as filed either. The text

of the application as filed contains no general indications concerning the outer shape, surface geometry or orientation of the surface of the evaporative emissions filter. The appellant has not pointed out passages of the description which could be considered to form a basis for the inclusion of these features.

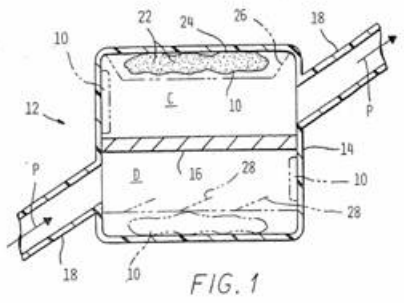
9.1 The appellant's understanding of the expression "*facing relationship*" can be gathered from its statement setting out the grounds of appeal. With regard to figure 2 of M1 the appellant states (page 7, second half of the second paragraph): "whilst parts of the filter may be in a facing relationship with the inner wall of the housing, parts of the filter are clearly not in such a facing relationship. The same applies with regard to the facing relationship to the air filter, as parts of the filter [...] are facing the filter 31, but over half of the filter is **angled** and **therefore not in a facing relationship**" (emphasis added).

9.1.1 The appellant thus considers that the wording of claim 1 implies that the filter 10 must **not** be in an angled relationship to the inner surface of the housing and to the air filter. In other words, the "*facing*" surfaces in question have to be parallel to the inner surface of the housing and to the air filter.

9.1.2 Moreover, according to the appellant, it is **not** sufficient that only a (minor) part of the surface of the evaporative emissions filter is in such a relationship.

9.2 In figure 1 of the patent in suit, a cross-sectional view of an air induction system, no distinction is made

between the "*evaporative emissions filter 10*" and the "*hydrocarbon vapour adsorbent member 22*". Both reference signs point to the same dotted area having an **irregular** cross-sectional **shape.**



F7: Figure 1 of the patent in suit

9.3 From the analysis under points 9 to 9.2 above two conclusions can be drawn:

(a) Since according to the appellant even the filter sheets 20 of figure 2 of M1, which have even, almost planar surfaces and are oriented roughly in parallel to the upper inner part of the housing and to the filter 31 do not show a "facing relationship" within the meaning of claim 1, the same must be true for filter 10 shown in figure 1 of the patent in suit, because of the irregular cross-section of the surface of the evaporative emissions filter, of which the major part is **not strictly parallel** to the inner surface of the housing 14 to the air filter.

(b) As figure 1 of the patent in suit only shows a cross sectional view, no conclusions can be drawn therefrom concerning the **extension** and bulk surface shape (flat or curved) of the evaporative emissions filter and, consequently, concerning the

two surfaces of the evaporative emissions filter referred to in claim 1.

9.4 Thus, the features additionally incorporated into claim 1 cannot be directly and unambiguously derived from figure 1 of the application as filed either.

9.5 The board concludes that claim 1 defines subject-matter going beyond the disclosure of the application as filed, contrary to the requirements of Article 123(2) EPC.

10. Consequently, the appellant's second auxiliary request is not allowable.

Third auxiliary request - Article 123(2) EPC

11. Claim 1 of this request defines that the evaporative emissions filter is "*mounted off, and **parallel** to, the flat inner upper surface*" of the housing (emphasis added).

12. As already mentioned, the term "*parallel*" is not to be found in the text of the application as filed. Moreover, figure 1 of the application as filed merely shows a cross-sectional view of a specific embodiment with an evaporative emissions filter 10 apparently having an irregular surface shape. Hence, taking into account the considerations under points 9.2 and 9.3 above, figure 1 does not, in the board's judgement constitute a proper basis for the amendment consisting of the insertion into claim 1 of the more generic features quoted under point 11 above.

Therefore, also claim 1 according to the third auxiliary request does not meet the requirement of Article 123(2) EPC.

13. Consequently, the appellant's third auxiliary request is not allowable either.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

D. Magliano B. Czech

Decision electronically authenticated