BESCHWERDEKAMMERN DES EUROPÄISCHEN PATENTAMTS

BOARDS OF APPEAL OF THE EUROPEAN PATENT OFFICE

CHAMBRES DE RECOURS DE L'OFFICE EUROPEEN DES BREVETS

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File Number: T 852/90 - 3.3.1

Application No.: 83 102 377.5

Publication No.: 0 088 453

Title of invention: Lubricating composition

Classification: C10M 107/02

D E C I S I O N
of 2 June 1992

Proprietor of the patent: UNIROYAL CHEMICAL COMPANY, Inc.

Opponent: 01 Mobil Oil Corporation
02 Exxon Chemical Patents Inc.

Headword: Lubricants/Uniroyal

EPC Articles 54, 56 and 111(1)

Keyword: "Novelty - prior use - analysability/availability left undecided"
"Late file evidence admitted as relevant but not of such a character as to raise fresh case on appeal thereby justifying referral back (Article 111(1) EPC). T 97/90 distinguished".
"Inventive step (denied)"

Headnote

Europäisches Patentamt | European Patent Office | Office européen des brevets

Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number : T 852/90 - 3.3.1

D E C I S I O N
of the Technical Board of Appeal 3.3.1
of 2 June 1992

Appellant : (Opponent 01)
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Decision under appeal : Decision of the Opposition Division of the European Patent Office dated 2 July 1990, with written reasons issued on 28 August 1990, concerning maintenance of European patent No. 0 088 453 in amended form.

Composition of the Board :

Chairman : R.W. Andrews
Members : R. Spangenberg
J.A. Stephens-Ofner

Summary of Facts and Submissions

I European patent No. 0 088 453 in respect of European patent application No. 83 102 377.5 which was filed on 10 March 1983, was granted on 13 May 1987 (cf. Bulletin 87/20).

II. Notices of opposition, which were filed on 11 and 12 February 1988, requested the revocation of the patent on the grounds of insufficiency and lack of novelty and inventive step. The oppositions were supported, inter alia, by the following documents:

(1) Lubrication Fundamentals, J. George Wills, pages 75 to 87, 1980,

(3) "Synthetic Engine Oils - A New Concept", B.J. Miller et al, paper presented at the Automotive Engineering Congress, Detroit, Mich., 25 February to 1 March 1974

(4) "New Developments in Synthetic Lubricants", L.W. Manley and R.M. Jublot, paper presented at The Tenth World Petroleum Congress, Bucharest, Romania, 8 to 14 September 1979 and

(10) GB-A-1 264 981

In addition, the prior use of three compositions falling within the terms of Claim 1 of the disputed patent was alleged. This allegation was supported by a number of affidavits.

III. By a decision delivered orally on 2 July 1990, with the corresponding interlocutory decision being issued on

28 August 1990, the Opposition Division maintained the patent on the basis of Claims 1 to 3 filed on 24 November 1988.

The only independent claim of this set of claims reads as follows:

"A lubricating composition comprising:

(A) a polyalphaolefin having a viscosity of 40-1000 mm^2/s at 100°C,
(B) a synthetic hydrocarbon having a viscosity of 1-10 mm^2/s at 100°C,
(C) an ester having a viscosity of 1-10 mm^2/s at 100°C, and
(D) an additive package comprising at least one additive selected from the group consisting essentially of dispersants, oxidation inhibitors, corrosion inhibitors, anti-wear agents, pour point depressants, anti-rust agents, foam inhibitors and extreme pressure agents".

The Opposition Division held that the amended claims were admissible with respect to Article 123 EPC, and that the disclosure of the disputed patent was sufficient.

The Opposition Division also decided that the subject-matter of these claims was novel both with regard to the alleged prior use and the combined disclosure of documents (3) and (4).

The Opposition Division further held that it was not obvious to substitute the mineral oil in the composition disclosed in the closest prior art as represented by document (10) with a mixture of a low viscosity polymer and an organic ester. Moreover, the advantageous effects,

in particular, the improvement in viscosity index (VI), was regarded as surprising.

IV. An appeal was lodged against this decision on 24 October 1990 with payment of the prescribed fee. In his Statement of Grounds of Appeal filed on 7 January 1991, as well as a further submission filed on 4 May 1992, and during the oral proceedings held on 2 June 1992, the Appellant contended that the claimed subject-matter had been made available to the public before the priority date of the disputed patent by the sale by the Mobil Oil Corporation of three products of the Mobil SHC 600 series.

To support his contention that the claimed subject-matter did not involve an inventive step, the Appellant filed, on 5 May 1992, a letter from an employee of Uniroyal Chemical to an employee of Mobil Oil Corporation with Uniroyal Chemical sales literature relating to Uniroyal PAO fluids attached thereto. The Appellant considered that the combination of this disclosure with that of document (1) rendered the subject-matter of the disputed patent obvious.

V. The Respondent denied that the sale of the said Mobil Oil Corporation products had made the subject-matter of the disputed patent available to the public.

The Respondent also argued that the present compositions represented a clear advance over available lubricating compositions with respect to their high viscosity indices, low sludge values and the possibility of using a wider variety of components in the additive package. The Respondent did not dispute that the sales literature belonged to the state of the art, but argued that it only disclosed the blending of two different PAO's and did not

contain any suggestion with regard to using esters in this blend. The Appellant also alleged that the addition of the esters not only provided seal swell but also enhanced viscosity index and storage stability at low temperatures.

VI. The Appellant requested that the decision under appeal be set aside and that the patent be revoked. The Respondent requested that the appeal be dismissed. Alternatively, as an auxiliary request, the Respondent requested that the patent be maintained with Claim 1 as the sole claim in response to an objection of the Board concerning Claims 2 and 3 and Rules 57(1) and 58(2) EPC.

VII. At the conclusion of the oral proceedings, the Board's decision to revoke the patent was announced.

Reasons for the Decision

1. The appeal is admissible.

2. The Appellant's main request that the appeal be dismissed (i.e. that the patent be maintained on the basis of Claims 1 to 3 allowed by the Opposition Division) must be refused on the basis that Claims 2 and 3 of that set of claims have no counterpart in the claims of the granted patent.

In decision T 295/87 of this Board (OJ EPO 1990, 470) it was held that amendments to the text of a granted patent during opposition proceedings should only be considered as appropriate and necessary in the sense of Rules 57(1) and 58(2) EPC and, therefore, admissible, if they could be fairly said to arise from the grounds of opposition. In particular, opposition proceedings are not an opportunity

for the Patentee to include new subject-matter in the claims which may have adequate support in the original description, but has not previously been claimed as such.

In the present case, Claims 2 and 3 were directed to preferred compositions in accordance with granted Claim 1. In the Board's judgment, the addition of such claims, which had no counterpart in the granted version of the claims of the patent in suit, cannot be regarded as an attempt to respond to an objection under Article 100 EPC. They represent, in effect, amendments which go beyond the objection to validity actually raised and are not, therefore, either necessary or appropriate within Rules 57 and 58 EPC.

2.1 There are no objections under Article 123 EPC to the only claim in accordance with the Respondent's auxiliary request since it corresponds to Claim 1 as filed and granted.

3. In response to a request from the Appellant at the beginning of the oral proceedings, the Board informed the parties that, in view of the relevance of certain Uniroyal Chemical sales literature, it had decided to admit this literature into the appeal proceedings.

4. Having admitted this late filed evidence, the Board has to consider whether it would be appropriate to remit the case to the Opposition Division in order to have this evidence examined by two instances.

The Boards' jurisprudence on this important subject was comprehensively reviewed in a decision of this Board (cf. T 97/90 of 13 November 1991; not intended for publication in OJ EPO). The immutability of the legal requirement that appeals should remain appeals, despite the investigative

powers conferred upon the Boards by Article 114(1) EPC, is quite clear, as is the principle that appeals under the EPC are judicial proceedings, whose task is to decide whether an appealed decision was right on its merits: see T 326/87, (Headnote published in OJ EPO 1991, 9) T 52/88 of 5 September 1989 and T 270/90 of 21 March 1991 (both not intended for publication in OJ EPO), T 26/88 (OJ EPO 1991, 30); T 611/90 of 21 February 1991 (Headnote published in OJ EPO 1992, 3) and T 34/90 of 15 October 1991 (to be published). It follows that where a case on appeal turns out to be neither the same nor a similar one to that decided by the first instance, it should be remitted back pursuant to Article 111(1) EPC.

The facts in T 97/90 afforded an extreme illustration of this principle because the Appellant there had introduced a totally new ground of objection at the appeal stage itself. In the present case the late-filed evidence, relevant though it is, amounts to no more than an amplification -albeit a significant one - of the case already canvassed before the Opposition Division. In other words, the evidence does not make the case so dissimilar from the one decided by the Opposition Division as to make a referral back to them necessary, pursuant to Article 111(1) EPC.

Accordingly the Board has decided to deal with this evidence within the framework of this appeal.

5. The patent in suit relates to lubricating compositions having high viscosity indices which are resistant to oxidative degradation and viscosity losses caused by permanent or temporary shear (cf. patent specification page 2, lines 3 to 5).

5.1 The Uniroyal Chemical sales literature in the form of sales pamphlets, which, from the date (9 January 1978) on R.A. Stengard's letter was clearly made available to the public before the claimed priority date (10 March 1982) of the disputed patent, concerns Uniroyal's PAO fluids. These pamphlets disclose that Uniroyal's PAO fluids are polyalphaolefins which are excellent viscosity builders in lubricant blends and which are completely compatible with a wide range of synthetic fluids and mineral oils. They also disclose that Uniroyal's PAO fluids are especially useful for thickening low viscosity fluids while maintaining good viscosity index and shear stability and that their outstanding low temperature properties and excellent thermal stability make them suited for a wide range of lubricant application. The pamphlets also include the information that a proprietary antioxidant system is available for use in Uniroyal's PAO fluids and a table comparing the stability vis à vis viscosity change of stabilised Uniroyal's PAO fluid and a commercial premium motor oil. Finally, there is a blend chart for PAO-10 and PAO-40, which are polyalphaolefins having viscosities at 100°C of 10 and 40 mm^2/s (cSt) respectively.

In the light of this disclosure of a blend of two polyalphaolefins with viscosities of 10 and 40 mm^2/s respectively, the technical problem underlying the patent in suit can be seen in preparing from this blend a fully formulated lubricating composition having a high viscosity index which is resistant to oxidative degradation and which, at the same time, exhibits good shear stability.

The Appellant acknowledged that, if this blend of PAO-10 and PAO-40 was considered to represent the closest state of the art, this definition of the technical problem was correct.

5.2 According to the disputed patent this technical problem is solved by a lubricating composition comprising a blend of a high viscosity polyalphaolefin, a low viscosity synthetic hydrocarbon, a low viscosity ester and an additive package.

In the light of Examples 1 to 6 and 11 of the disputed patent the Board is satisfied that the technical problem has been solved.

6. After examination of the published prior art documents, the Board has concluded that the claimed subject-matter is novel. In the Board's judgment, it is not possible to derive directly and unambiguously from document (3) when read in conjunction with document (4), that the New Concept Engine Oils 1, 2 and 3 referred to in document (3) (cf. Table 4 on page 4) fall within the terms of the present Claim 1. In any case, it should be pointed out that, according to Table III of document (4), polyalphaolefin B has a viscosity of 39 mm^2/s at 100°C; i.e. below the lower limit for the viscosity of component A of the present compositions.

6.1 With respect to the allegation of prior use the Board is of the opinion that any decision on this issue would centre on the question of whether the Mobile Oil Corporation products SHC 624, SHC 626 and SHC 629 could have been analysed before the priority date of the disputed patent. However, it is in dispute between the parties whether such an analysis was in fact possible at this date (cf. the Affidavits from Sharon Edwards filed on 20 June 1990 and Dr. Stanley J. Gedansky filed on 24 November 1989). In these circumstances and in the light of the finding with respect to inventive step, the Board considers that it is unnecessary to reach a decision on this issue.

7. In respect to the question as to whether the claimed subject-matter involves an inventive step, the following has to be considered.

The skilled person faced with the problem of producing a fully formulated lubricating composition on the basis of the blend of PAO-10 and PAO-40 disclosed in the above-mentioned sales literature would be aware from document (1) that polyalphaolefins do not cause any softening or swelling of typical seal materials (cf. page 79, lines 8 to 10). Therefore, for applications where swelling of the seal is desirable to keep them tight and prevent leakage, the skilled person would immediately consider the addition of components to this known blend of polyalphaolefins to provide the necessary seal swelling capability. The skilled person would be further encouraged to adopt this approach by the disclosure of documents (3) and (4). In document (3) it is disclosed that from an evaluation of synthesised hydrocarbon fluids with respect to rubber seal swelling capability, it was determined that additional seal swelling would be necessary (cf. left-hand column of page 4, lines 4 to 7). By comparing Table 2 on page 3 of this document with Table III of document (4), it is clear that the synthesised hydrocarbon fluids referred to in document (3) are the polyalphaolefins A and B.

Thus, having decided that it is necessary to increase the seal swelling capability of this known blend, the skilled person had to choose the actual seal swelling agent to incorporate into the blend. From document (1) the skilled person knows that dibasic acid esters cause seal swelling (cf. lines 7 and 8 of the third paragraph on page 82). A further incentive for the inclusion of esters to provide seal swelling capability is the statement in document (4) that in the early 1970's a automotive engine oil

introduced into Europe was based on an optimised mixture of synthesised hydrocarbon and organic ester (cf. page 4, first four lines in the right-hand column).

Therefore, in the Board's judgment, the skilled person faced with the problem of preparing a fully formulated lubricating composition starting from the blend of polyalphaolefins disclosed in the sales literature referred to above would, in the light of the combined teaching of document (1), (3) and (4), immediately consider the addition of an organic ester. This finding is further confirmed by the indisputable fact that the Appellant, in a similar situation, took the same action. Namely, although with respect to the alleged prior use it is not clear whether the viscosities of the PAO's used could be said to have been made available to the public, it was not disputed that the lubricants of the Mobil SHC 600 series contained a PAO and an ester satisfying the requirement of the claim under consideration.

7.1 In the absence of any evidence to the contrary, the Board accepts the Appellant's statement that the organic esters known to be used in lubricating compositions all have viscosities falling within the range specified in the present claim. Therefore, the organic ester added by the skilled person would automatically have a viscosity within the required range. This finding is in agreement with the fact that all the esters mentioned in the tables on pages 12 to 15 and 17 of the patent specification correspond to those referred to on page 82 of document (1).

7.2 According to the Respondent, the addition of the low viscosity ester to the blend of high and low viscosity polyalpaolefins improves its fluidity and storage

stability at low temperatures (cf. also disputed patent, page 10, lines 7 to 9). However, these advantages, which are not supported by experimental evidence, are an inevitable result of an obvious measure, and therefore cannot render the claimed subject-matter inventive.

7.3 It is also true that the addition of a low viscosity ester to a high viscosity polyalphaolefin results in an enhancement of the viscosity index (cf. Example 9). However, the addition of a low viscosity ester to the known blend of high and low viscosity polyalphaolefins has no effect on viscosity index (cf. Composition B, C and D of Example 1A). Therefore, the Respondent's argument that the existence of unexpected technical effect supports the presence of an inventive step must fail.

7.4 With respect to the low sludge values, this has only been demonstrated for blends of low viscosity and high viscosity polyalphaolefins (cf. Example 7). Therefore, this advantage is an inherent property of the known blend of polyalphaolefins and cannot, therefore, serve to render the claimed subject-matter inventive.

7.5 It is, and was at the relevant time, common general knowledge in the lubricant art that, in order to satisfy the demands placed upon lubricants in modern engines and machines, it is necessary to include in the lubricating composition an additive package. Therefore, it would be well within the competence of the skilled person faced with the present technical problem to devise an additive package suitable with respect to compatibility with the other components of the lubricating composition and the proposed use of the fully formulated lubricant.

7.6 Therefore, in the Board's judgment, the proposed solution to the above-defined technical problem is obvious in the

light of the Uniroyal Chemical sales literature combined with documents (1), (3) and (4) and common general knowledge.

8. Furthermore, the same conclusion would be reached even if document (10) were taken to represent the closest prior art.

This document discloses an oil composition resistant to shear stress degradation comprising a mixture of a hydrorefined mineral oil and an oligomerisation product produced by the polymerisation of olefins having 7 to 20 carbon atoms, for example 1-nonene, 1-decene, 1-dodecene and 1-tetradecene, and having a viscosity at 37.8°C of from 20 to 20,000 mm^2/s, for example 49.5 and 63.1 mm^2/s at 98.9°C (cf. Claim 1 in combination with page 2, lines 39 to 47 and Table II on page 3). These compositions may also contain conventional additives such as for example, antioxidants and viscosity index improvers (cf. page 2, lines 95 to 101).

Although it was possible to obtain lubricating compositions (in the absence of viscosity index improvers) with viscosity indices of up to 142 (cf. Oil No. 19 Table II, page 3), in order to produce very broadly graded lubricants, blends having even higher viscosity indices are necessary.

Therefore, in the light of document (10), the technical problem underlying the disputed patent is to provide lubricating compositions which not only exhibit permanent and temporary shear stability but also show an improvement in viscosity indices over those of these prior art compositions.

One possible solution to the technical problem would be to add high molecular weight, polymeric viscosity index improvers to these prior art compositions. However, in view of known disadvantage associated with their use, for example, their sensitivity to oxidation and shear, the skilled person would discount this possibility.

From document (1) the skilled person is aware of the disadvantages associated with mineral oils and the advantages to be gained from synthetic lubricant base stocks (cf. paragraph bridging pages 75 to 76 and first complete paragraph on page 76). In the light of this knowledge, the skilled person would, as a matter of course, immediately consider replacing the mineral oil of the prior art composition by a synthetic product. The Uniroyal Chemical sales literature, which emphasises the excellent properties of polyalphaolefins referred to above and, in particular, the statement that Uniroyal PAO-IV is an excellent base for various lubricants, would provide him with the incentive to carry out the replacement of the mineral oil base with the expectation that the resulting compositions would be resistant to oxidative degradation and viscosity losses due to permanent and temporary shear and also exhibit high viscosity indices.

For the reasons given above in paragraph 7, the skilled worker would also, of necessity, have to include an ester in the blend of polyalphaolefins in order to compensate for the loss of seal swelling caused by the replacement of the mineral oil by the PAO.

Therefore, the solution to the technical problem defined using document (10) as the closest prior art is also obvious.

Order

For these reasons, it is decided that:

1. The appeal is allowed.

2. The patent is revoked.

The Registrar: The Chairman:

E.Görgmaier R.W. Andrews