

The opinion in support of the decision being entered today (1) was not written for publication and is not binding precedent of the Board.

Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAVID R. GENTRY, MARK P. STEHLIN
and JERRY J. WEERS

Appeal No. 2000-2079
Application 08/883,634

ON BRIEF

Before OWENS, DELMENDO and MOORE, *Administrative Patent Judges*.
OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal is from the final rejection of claims 1-5, 8-11, 14-23 and 26-32, and refusal to allow claims 12, 13, 24 and 25 as amended after final rejection. Claims 6 and 7, which are all of the other claims in the application, stand objected to as being dependent upon a rejected base claim, but allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims.

THE INVENTION

The appellants claim a low sulfur diesel fuel or spark ignition fuel composition containing a specified lubricity aid, and claim a method for improving the lubricity of a low sulfur diesel fuel or spark ignition fuel by adding the lubricity aid to the fuel. Claim 1, directed toward the fuel composition, is illustrative:

1. A fuel composition of improved lubricity comprising a lubricity-increasing amount of a lubricity aid dissolved in a poor lubricity fuel selected from the group consisting of low sulfur diesel fuel and spark ignition fuels, the lubricity aid being selected from the group consisting of alkanolamides of fatty acids, alkanolamides of modified fatty acids and mixtures thereof, provided that if the lubricity aid is other than an alkanolamide of an aryl-substituted fatty acid, the composition further necessarily comprises a haze-inhibiting amount of a dehazer.

THE REFERENCES

Smith	2,456,569	Dec. 14, 1948
Malec	4,204,481	May 27, 1980
Shubkin	4,243,538	Jan. 6, 1981
Zimmerman et al. (Zimmerman)	4,836,829	Jun. 6, 1989
Caprotti et al. (Caprotti) (PCT application)	WO 94/17160	Aug. 4, 1994

THE REJECTION

Claims 1-5 and 8-32 stand rejected under 35 U.S.C. § 103 as being unpatentable over Zimmerman in view of Shubkin, Smith, Malec and Caprotti.

OPINION

The aforementioned rejection is affirmed as to claims 1 and 14-32, and reversed as to claims 2-5 and 8-13. Because our rationale regarding the affirmed rejection differs substantially from that of the examiner, we denominate the affirmance as involving a new ground of rejection under 37 CFR § 1.196(b).

The appellants state that the claims stand or fall in the following groups: 1) claims 1, 31 and 32; 2) claims 2 and 10-12, 3) claims 3-5; 4) claims 6 and 7; 5) claims 8 and 9; 6) claim 13; 7) claims 14, 15 and 22-25; 8) claims 16-18; 9) claims 19 and 20; 10) claim 21; 11) claims 26-28; 12) claims 29 and 30 (brief, pages 7-9). We therefore limit our discussion of the claims for which the rejection is affirmed to one claim in each relevant group, i.e., claims 1, 14, 16, 19, 21, 26 and 29. See *In re Ochiai*, 71 F.3d 1565, 1566 n.2, 37 USPQ2d 1127, 1129 n.2 (Fed. Cir. 1995); 37 CFR § 1.192(c)(7) (1997).

Claims 1, 14, 16, 19 and 29

Shubkin discloses a fuel composition comprising a lubricity increasing amount of an N-hydroxymethyl C₁₂₋₃₆ aliphatic hydrocarbylamide which can be N,N-bis(hydroxymethyl)stearylamide (col. 1, lines 33-35; col. 2, line 1). The fuel can be diesel fuel or gasoline used to operate internal combustion engines

(col. 4, lines 26-26).

Shubkin does not state that the fuel is low sulfur fuel. However, the teaching that diesel fuel can be used would have fairly suggested, to one of ordinary skill in the art, use of any of the known diesel fuels, and the appellants acknowledge that low sulfur diesel fuels were known in the art (specification, page 1, line 11 - page 2, line 13).¹ Moreover, Caprotti teaches that the process of preparing low sulfur diesel fuel reduces the ability of the fuel to lubricate the injection system of an engine (page 1, line 28 - page 2, line 2). This teaching would have led one of ordinary skill in the art to add Shubkin's lubricity aid to a low sulfur diesel fuel to compensate for this loss of lubricity.

Shubkin does not disclose that the fuel contains a dehazer. However, the reference teaches that the fuel can contain any of the conventional additives (col. 4, lines 29-30), and the appellants acknowledge that dehazers were well known in the art as demulsifiers for fuels (specification, page 7, lines 32-35).

¹It is axiomatic that our consideration of the prior art must, of necessity, include consideration of the admitted prior art. See *In re Hedges*, 783 F.2d 1038, 1039-40, 228 USPQ 685, 686 (Fed. Cir. 1986); *In re Davis*, 305 F.2d 501, 503, 134 USPQ 256, 258 (CCPA 1962).

Hence, it would have been *prima facie* obvious to one of ordinary skill in the art to add a dehazer to Shubkin's fuel.

Malec discloses that engine wear caused by deficient lubricity of a diesel engine fuel can be reduced by adding a wear inhibiting amount of a fatty acid amide of diethanolamine to the fuel (col. 1, lines 15-18 and 41-47; col. 2, lines 32-40). The preferred fatty acids include stearic acid (col. 3, lines 7-11). Malec teaches that other additives which may be included in the fuel include demulsifying agents (col. 4, lines 59-61), i.e., dehazers. Malec does not disclose that the diesel fuel is low sulfur diesel fuel. However, given the known need for increased lubricity of low sulfur diesel fuels as discussed above, it would have been *prima facie* obvious to one of ordinary skill in the art to add Malec's fatty acid amide of diethanolamine to a low sulfur diesel fuel to increase its lubricity.

The appellants argue that as indicated by page 7, lines 13-33 of their specification, dehazers have been found to provide surprisingly superior water tolerance to their alkanolamides of aryl-substituted fatty acids (brief, page 12). This argument is not persuasive as to claims 1, 14, 16, 19 and 29 because the alkanolamides of fatty acids in these claims are not limited to alkanolamides of aryl-substituted fatty acids. Also, the

argument is not convincing because the portion of the specification relied upon by the appellants does not provide a comparison of the claimed invention with the closest prior art. See *In re Baxter Travenol Labs.*, 952 F.2d 388, 392, 21 USPQ2d 1281, 1285 (Fed. Cir. 1991).

For the above reasons we conclude that the fuel composition claimed in the appellants' claims 1, 14, 16, 19 and 29 would have been obvious to one of ordinary skill in the art over the applied prior art.

Claim 21

The appellants acknowledge that the dehazers recited in their claim 21 were well known in the art (specification, page 7, line 34 - page 8, line 7).² Consequently, it would have been *prima facie* obvious to one of ordinary skill in the art to use them as the demulsifier in the fuels of Shubkin and Malec. For this reason and because the appellants do not direct any argument to claim 21, we conclude that the fuel composition recited in this claim would have been obvious to one of ordinary skill in the art over the applied prior art.

² Zimmerman also indicates that acylated polyglycols were known demulsifying agents (col. 6, lines 59-61).

Claim 26

The amounts of lubricity aid disclosed by Shubkin (col. 4, lines 27-28) and Malec (col. 4, lines 47-48) are, respectively, about 0.001-0.25 wt% (10-2,500 ppm) and about 0.01-2.0 wt% (100-20,000 ppm). Shubkin and Malec do not disclose an amount of dehazer and, therefore, do not disclose a ratio of lubricity aid to dehazer. However, the appellants state that "[t]he optimal amount and type of dehazer depend on the water emulsifying properties of the fuel to which the lubricity aid is added, as will be readily understood to those of ordinary skill in the art of fuel treatment, particularly demulsification" (specification, page 8, lines 19-23). This statement indicates that the proper amount of demulsifier in the fuels of Shubkin and Malec would have been determinable by one of ordinary skill in the art through no more than routine experimentation. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980); *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). The appellants indicate that haze inhibiting amounts of dehazer generally are about 1 to about 50 ppm based on the weight of the fuel (specification, page 9, lines 3-5). Also, the amount of demulsifying agent used by Zimmerman in a gasoline composition is about 1 to about 12 ppm (col. 5, lines 53-54). Hence, in view of

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the amounts of lubricity aid disclosed by Shubkin and Malec as set forth above, it reasonably appears that the ratios of lubricity aid to dehazer obtained when one of ordinary skill in the art determined the amount of dehazer in the fuels of Shubkin and Malec through routine experimentation would include ratios of about 9 to about 20 as recited in the appellants' claim 26.

The appellants state that none of the applied references teach or suggest the lubricity aid to dehazer ratio recited in the appellants' claim 26 (brief, pages 13-14), but provide no supporting explanation. Hence, we are not convinced that this ratio would have been unobvious to one of ordinary skill in the art.

Claims 2-5 and 8-13

The appellants' claim 2 and claims 3-5 and 8-13 which depend directly or indirectly therefrom require that the lubricity aid is an alkanolamide of an aryl-substituted fatty acid, or a combination of such alkanolamides. The examiner does not point out where the applied prior art discloses such an alkanolamide, or explain how the applied prior art would have fairly suggested such an alkanolamide to one of ordinary skill in the art. The examiner, therefore, has not carried the burden of establishing a *prima facie* case of obviousness of the invention recited in the

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appellants' claims 2-5 and 8-13.

DECISION

The rejection of claims 1-5 and 8-32 under 35 U.S.C. § 103 over Zimmerman in view of Shubkin, Smith, Malec and Caprotti is affirmed as to claims 1 and 14-32, and reversed as to claims 2-5 and 8-13. The affirmance is denominated as involving a new ground of rejection under 37 CFR § 1.196(b).

This decision contains new grounds of rejection pursuant to 37 CFR § 1.196(b) (amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53,131, 53,197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. & Trademark Office 63,122 (Oct. 21, 1997)). 37 CFR § 1.196(b) provides that "[a] new ground of rejection shall not be considered final for purposes of judicial review."

37 CFR § 1.196(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new grounds of rejection to avoid termination of proceedings (37 CFR § 1.197(c)) as to the rejected claims:

- (1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .

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(2) Request that the application be reheard under
§ 1.197(b) by the Board of Patent Appeals and
Interferences upon the same record. . . .

No time period for taking any subsequent action in
connection with this appeal may be extended under 37 CFR
§ 1.136(a).

AFFIRMED-IN-PART; 37 CFR § 1.196(b)

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TERRY J. OWENS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
ROMULO H. DELMENDO)	
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