

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SUSAN P. COOK, JAMES J. SCHWIND, BERNARD CONSTANS AND
HENRI BOURGOGNON

Appeal No. 1997-3770
Application No. 08/451,888

ON BRIEF

Before PAK, WALTZ, and LIEBERMAN, Administrative Patent Judges.

LIEBERMAN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the examiner's refusal to allow claims 1 and 3 through 42 which are all the claims remaining in the application.

THE INVENTION

The invention is directed to a lubricating composition containing a major amount of a lubricating oil, and the combination of a group of additives to improve the antiwear properties of the lubricating composition.

THE CLAIMS

Claim 1 is illustrative of appellants' invention and is reproduced below.

1. A lubricating composition comprising a major amount of an oil of lubricating viscosity

and

(A) an antiwear improving amount of at least one molybdenum containing composition, and

(B) at least one member selected from the group consisting of

(i) at least one borated overbased metal salt of an acidic organic compound, provided that (A) and (Bi) are not the same,

(ii) a combination of (a) at least one organic polysulfide or at least one ashless dithiocarbamate containing composition and (b) at least one component selected from the group consisting of a metal thiophosphate, a phosphoric acid ester or salt thereof, a phosphorus-containing carboxylic acid, ester, ether, or amide, a borated dispersant, an alkali metal borate, a borated fatty amine, a borated phospholipid, a borate ester, and mixtures thereof, and

(iii) a combination of (i) and (ii) provided that when (A) is a molybdenum dithiophosphate, then (A) is present in an amount to provide from about 125 to about 900 ppm molybdenum to the lubricating composition.

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THE REFERENCES OF RECORD

As evidence of obviousness, the examiner relies upon the following references.

Le Suer	3,541,014	Nov. 17, 1970
Froeschmann et al. (Froeschmann)	3,840,463	Oct. 8, 1974
Butke	4,758,362	Jul. 19, 1988
Schwind et al. (Schwind)	4,792,410	Dec. 20, 1988
Gallo et al. (Gallo)	5,143,633	Sep. 01, 1992

THE REJECTIONS

Claims 1, 3 through 5, 10 through 28, 33 through 39 and 42 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Le Suer in combination with Schwind and Butke.

Claims 1, 6, 7, 25, 29, 30, 38 and 42 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gallo in combination with Schwind and Butke.

Claims 1, 8, 9, 25, 31, 32, 38, and 40 through 42 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Froeschmann in combination with Schwind and Butke.

OPINION

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We have carefully considered all of the arguments advanced by appellants and the examiner and agree with the examiner that the aforementioned rejections under 35 U.S.C. § 103(a) are well founded. Accordingly, we will sustain these rejections.

The Rejections under Section 103

As an initial matter, appellants request that the claims be considered separately. See Brief, page 4. However, no separate argument is presented with respect to any of the claims. Accordingly, we limit our consideration to claim 1, an independent composition claim, as representative of the claimed subject matter. 37 CFR § 1.192(c)(7) (1995).

Appellants argue that there is no ***prima facie*** case of obviousness as there is no teaching, suggestion or incentive in the prior art to combine the references. See Brief, page 5. We disagree.

We find that Le Suer discloses a lubricant composition having extreme pressure and antiwear characteristics resulting from the presence of molybdenum containing organic complexes. See Abstract, column 1, lines 28-30 and lines 48 to column 2, line 20. We find that antiwear additives may be added to the lubricant including an organic polysulfide and a metal thiophosphate as required by the claimed subject matter. See column 1, lines 55-63 and particularly, column 20, lines 39-58 which provides for the addition of benzyl

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polysulfides, alkyl polysulfides and zinc diorganothiophosphates. The patentee discloses therein that,

It has been determined that the extreme pressure capabilities and anti-wear properties of the present molybdenum-containing complexes are especially effective in combination with one or more known, conventional E.P. or anti-wear additives.

We further find that Le Suer suggests that the antiwear additives may be used in combinations as they appear to co-act synergistically. See column 20, lines 39-59. Accordingly, the person having ordinary skill in the art, following the express teachings of Le Suer would have been motivated to prepare a composition containing a molybdenum additive in combination with a polysulfide and a metal thiophosphate as required by the claimed subject matter. Based upon these findings, we conclude that the disclosure of Le Suer in and of itself is sufficient to establish a *prima facie* case of obviousness with respect to the claimed subject matter.

Furthermore, it is reasonable to conclude that the specific suggestion in Le Suer for the combination with one or more anti-wear lubricant additives provides sufficient motivation to include the additives of Butke which imparts improved extreme pressure and anti-wear properties to lubricant compositions. See Butke, abstract, column 1, lines 64-67, column 2, lines 3-7, 35-46, column 6, lines 12-22, 42-50 and 63-67.

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Finally, it is reasonable to conclude that the teaching in Le Suer for the addition of lubricant additives to molybdenum containing complexes, column 20, lines 60-62, provides sufficient motivation for the addition of both the borated overbased metal salt of Schwind which is useful to assist in the frictional properties, Schwind, column 3, lines 10-11 and the friction modifiers of Schwind.

Based upon these findings, we conclude that the disclosures of Le Suer combined with Butke and Schwind are sufficient to establish a *prima facie* case of obviousness with respect to the claimed subject matter.

We turn next to the rejection of the claimed subject matter over Gallo in view of Schwind and Butke. We find that Gallo discloses a lubricant formulation containing an overbased additive for lubricant oil containing an organic molybdenum complex. The additive has antiwear, friction reducing and antioxidant properties in the lubricant formulations. See Abstract, column 1, lines 10-12 and column 2, lines 1-7. The additive contains between 0.1 and 10% by weight molybdenum. See column 6, lines 56-57. Moreover, we find that the lubricant composition may contain other additives, "having an antiwear, dispersant and antioxidant effect." See column 6, lines 63-66. It is reasonable to conclude that the specific suggestion in Gallo for the combination with one or more anti-wear lubricant additives provides sufficient motivation to include the additives of Butke which impart improved extreme pressure and anti-wear properties to lubricant

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compositions. See Butke, abstract, column 1, lines 64-67, column 2, lines 3-7, 35-46, column 6, lines 12-22, 42-50 and 63-67.

Furthermore, it is reasonable to conclude that the teaching in Gallo for the addition of lubricant additives to molybdenum containing complexes, column 6, lines 63-66, provides sufficient motivation for both the addition of the borated overbased metal salt of Schwind which is useful to assist in the frictional properties, column 3, lines 10-11 and the friction modifiers of Schwind.

Based upon these findings, we conclude that the disclosures of Gallo combined with Butke and Schwind are sufficient to establish a *prima facie* case of obviousness with respect to the claimed subject matter.

As to the rejection of the claimed subject matter over Froeschmann, we find that Froeschmann discloses the preparation of a lubricant containing molybdenum dithiophosphates and molybdenum dithiocarbamates corresponding to component (A) of the claimed subject matter. See Abstract, and column 2, lines 1-67. Examples 1 and 9 exemplify the utilization of a molybdenum compound within the scope of the claimed subject matter. We find that Froeschmann discloses a synergistic mixture of metal organic compounds and compounds free from heavy metal and containing sulfur and phosphorous. See column 1, lines 34-36 and column 3, lines 13-39. We find that these compounds include polysulfides which are obtained by sulfurization of organic substances. *Id.*

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Moreover, we find that the compounds include metallic thiophosphates wherein sulfur has been replaced by a metal, i.e., tellurium. *Id.* We find it reasonable to conclude that it would have been obvious to the person having ordinary skill in the art to prepare mixture of these compounds including polysulfides and metallic thiophosphates, particularly as Froeschmann repeatedly stresses synergistic mixtures, commercial mixtures and compounds plural. See column 3, lines 13-16, 17-21 and column 1, lines 34-36 respectively. The combination of organic polysulfide and metallic thiophosphate corresponds to (B)ii of the claimed subject matter.

Based upon these findings, we conclude that the disclosure of Froeschmann in and of itself is sufficient to establish a *prima facie* case of obviousness with respect to the claimed subject matter.

Appellants argue that the claims are limited to lubricating compositions where the molybdenum is present in an amount to provide from about 125 to about 900 ppm. See Brief, page 10. However, our construction of the claimed subject matter is that the proviso, “when (A) is a molybdenum dithiophosphate, then (A) is present in an amount to provide from about 125 to about 900 ppm molybdenum to the lubricating composition,” applies if and only if molybdenum dithiophosphate is the (A) component. When the (A) component is other than molybdenum dithiophosphate, there is no limitation as to the amount of molybdenum that may be present. Since none of Le Suer, Gallo or

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Froeschmann is limited to molybdenum dithiophosphate, the limitation of "125 to 900 ppm" is not relevant to any of the rejections before us. Moreover, appellants later interpretation of the quantitative limitation is in accord with our view. See Brief, page 16, lines 2-6.

As a rebuttal to the *prima facie* case of obviousness, appellants rely on the Declaration of Bernard Constans. See Brief, page 11. Appellants assert that the combination of additives provides unexpectedly good protection from wear compared to combination of other known additives. See Brief, page 13. Having reviewed the data present, we conclude that appellants have not met their burden of showing unexpected results. *In re Klosak*, 455 F.2d 1077, 1080, 173 USPQ 14, 16 (CCPA 1972). It is not sufficient to assert that the results obtained are unusual or unexpected. The burden of showing unexpected results rests on a party who asserts them.

Appellants have asserted that there is a showing of criticality in the Constans Declaration as examples containing molybdenum within the scope of the claimed subject matter require much greater than 20,000 cycles to complete wear. See Brief, page 12. In comparison the prior art in the absence of molybdenum compounds does not exceed more than 8,000 cycles to complete wear. This argument, however, is not persuasive because each of the primary references of record clearly discloses examples directed to the addition of a molybdenum compound or complex for the express purpose of providing

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antiwear capabilities. See Le Suer, column 1, lines 29-31, Gallo, abstract and Froeschmann, Example I. Accordingly, the improved results obtained by appellants are merely those that would be expected from the addition of a molybdenum compound. Hence, in our view, they are expected beneficial results which are evidence of obviousness, just as unexpected results are evidence of unobviousness. *In re Gershon*, 372 F.2d 535, 537, 152 USPQ 602, 604 (CCPA 1967).

Moreover, each of the primary references discloses a lubricant composition already containing a molybdenum compound or complex as an antiwear agent.

Hence, the comparative examples which fail to include that component, do not reflect the closest prior art relied upon in our opinion. *In re Baxter Travenol Labs.*, 952 F.2d 388, 392, 21 USPQ2d 1281, 1285 (Fed. Cir. 1991); *In re De Blauwe*, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984).

Furthermore, we conclude that the showing in the Constans Declaration is not commensurate in scope with the degree of protection sought by the claimed subject matter. *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 778 (Fed. Cir. 1983); *In re Tiffin*, 448 F.2d 791, 792, 171 USPQ 294, 294 (CCPA 1971).

The data present in the Declaration is drawn to examples which contain only a single reference oil, page 2, paragraph 6, although each of the requisite compounds required by the claimed subject matter are generic to substantial numbers of compounds and polymers

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in unlimited proportions. Similarly the molybdenum compounds used are present in amount from 125ppm to 0.5 %. In comparison the claimed subject matter is unlimited as to the amount of molybdenum present.

Accordingly, on the record before us, we conclude that the results demonstrated in the specification are not based on the closest prior art or commensurate in scope with the appealed claims and, are entitled to little, if any, weight with respect to the patentability of the claimed subject matter over the teachings of record.

Based on our consideration of the totality of the record before us, and having evaluated the *prima facie* case of obviousness in view of appellants' arguments and evidence, we conclude that the preponderance of evidence weighs in favor of obviousness of the claimed subject matter within the meaning of § 103(a). See *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

DECISION

The rejection of claims 1, 3 through 5, 10 through 28, 33 through 39 and 42 under 35 U.S.C. § 103(a) as being unpatentable over Le Suer in combination with Schwind and Butke is affirmed.

The rejection of claims 1, 6, 7, 25, 29, 30, 38 and 42 under 35 U.S.C. § 103(a) as being unpatentable over Gallo in combination with Schwind and Butke is affirmed.

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The rejection of claims 1, 8, 9, 25, 31, 32, 38, and 40 through 42 under 35 U.S.C. § 103(a) as being unpatentable over Froeschmann in combination with Schwind and Butke is affirmed.

The decision of the examiner is affirmed.

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

AFFIRMED

CHUNG PAK)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
THOMAS WALTZ)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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PAUL LIEBERMAN)	

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