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**IN THE MATTER OF THE APPLICATION OF ROBERT EUGENE
SCHAUB, KAREL FRANCIS BERNADY and MARTIN JOSEPH WEISS**

Patent Appeal No. 76-593

UNITED STATES COURT OF CUSTOMS AND PATENT APPEALS

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June 30, 1976, Decided.

PRIOR HISTORY: [**1] Serial No. 240,814.

LexisNexis(R) Headnotes

OPINIONBY:

RICH

OPINION: [*509]

RICH, Judge.

This appeal is from a decision of the Patent and Trademark Office Board of Appeals ("board") affirming the rejection, under 35 USC 102(a), of claim 11 in application serial No. 240,814, entitled "3-Alkyl-2-(6-Carboxyhexyl) Cyclopentanones and Esters and Salts Thereof," filed April 3, 1972, as a continuation-in-part of application serial No. 225,680, filed February 11, 1972. The remaining claims in the application have been allowed or indicated as allowable. We reverse.

The invention relates to substituted 9-oxoprostanic acids n1 [*] and the esters and cationic salts thereof, said to be useful as antimicrobial agents, hypotensive agents, anti-ulcer agents, or intermediates. Claim 11 to the generic invention reads:

n1 "Prostanic acid" is not a systematic name, but a trivial name denoting the compound from which the natural prostaglandins, a family of pharmacologically important compounds, are

considered to be derived.

11. A compound selected from the group consisting of those of the formula:

[Graphic omitted. See illustration in original.]

wherein R(1) is selected from the group consisting of [**2] hydrogen and lower alkyl; R(2) is a straight chain alkyl group having from 1 to 10 carbon atoms, inclusive; and Z is a divalent radical selected from the group consisting of

[Graphic omitted. See illustration in original.]

wherein m is an interger from 4 to 8, inclusive, q is an integer from 3 to 5, inclusive, R(3) is lower alkyl, and R(4) is selected from the group consisting of fluoro and lower alkyl; the stereoisomers thereof; and the cationic salts thereof when R(1) is hydrogen. [*510]

The reference primarily relied on to support the rejection is a published article by Finch et al.: "Cyclopentenone Synthesis by Directed Cyclization," The Journal of Organic Chemistry, Vol. 36, No. 21, 1971, pages 3191-6 ("Finch"). It is conceded that it discloses 2-methyl-5-oxo-1-cyclopentanehexanoic acid, which has the structure of compound (II) below. Appellants have never disputed the § 102(a) anticipation of claim 11 by the reference if it is prior art; they have, however, sought to antedate the reference by affidavits filed under 37 CFR 1.131 (Rule 131). The examiner conceded that the affidavits establish appellants' actual reduction to practice, prior to Finch, of two other [**3] species of the generic invention of claim 11: ethyl 2-methyl-5-oxo-1-cyclopentanepentanoate, compound (I)

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below, and 2-methyl-5-oxo-1-cyclopentaneheptanoic acid, compound (III) below.

[Graphic omitted. See illustration in original.]

[*511]

The examiner, the board, and the solicitor have not disputed these facts but only their legal sufficiency to antedate Finch.

The Board's Decision

The board supported its decision in part by reference to our opinion in *In re Clarke*, 53 CCPA 954, 356 F.2d 987, 148 USPQ 665 (1966):

In commenting on a situation very similar to the one herein, the court in *In re Clark* * * * stated that a cited reference may be antedated if the facts:

"... offered [sic] in a rule 131 affidavit in support of a general allegation of conception and reduction to practice of the invention, would persuade one of ordinary skill in the art to a reasonable certainty that the applicant possessed so much of the invention as to encompass the reference disclosure"

On the basis of the above cited Clarke language, the board held Clarke to apply as follows:

Accordingly, if the only reasonable interpretation of the facts contained in the noted affidavits [*4] is that appellants viewed their invention as embracing a series of homologous acids, we would be constrained to agree that they had antedated the Finch et al. reference compound.

So applying Clarke, the board expressed its view as follows:

However, we do not agree that there is only one reasonable conclusion that a worker of routine skill in this field would reach, based upon the available facts.

The board noted that appellants' compounds (I) and (III) had the same empirical formula, a fact to which the board gave great significance:

It will be appreciated that said compounds may be characterized as isomers. Hence, from the evidence, we believe that the skilled worker would be persuaded, to a reasonable certainty, that appellants envisioned their generic invention to concern isomeric norprostanoid acid compounds having thirteen carbon atoms. Such isomers would not encompass the reference disclosure.

The board stated that "still another interpretation" was suggested by a publication of M. Hamberg, "Metabolism of Prostaglandins in Rat Liver Mitochondria," *European Journal of Biochemistry*, 6, 1968, pp. 135-46 (hereafter "Hamberg"):

Said item indicates that prostaglandins [*5] are

subject to betaoxidation in rat liver mitochondria. In vitro experiments showed that the carboxyl side chain of said acid is degraded by one or two C(2) units. Therefore, since the compounds having an even number of carbon atoms in the side chain would seem to approximate naturally occurring compounds in the body, the preparation and testing of such compounds having an even number of carbon atoms in the chain does not, in itself, prove that appellants contemplated all homologous compounds, including those with an odd number of carbon atoms.

Appellants' Arguments

Appellants argue that the disposition of this case should be governed by the following proposition:

In an appropriate case an applicant should not be prevented from obtaining a [*512] patent to an invention where a compound described in a reference would have been obvious to one of ordinary skill in the art in view of what the affiant proves was completed with respect to the invention prior to the effective date of the reference.

Like the board, appellants also found their argument on *In re Clarke*, from which the above proposition is a direct quotation.

Appellants contend that the reference compound [*6] (compound II) is obvious in view of compounds I and III, which they reduced to practice before the date of the Finch reference. They state that they have "bracketed" the reference compound with its two adjacent homologs, n2 thus raising a "presumption of obviousness vis-a-vis the reference compound," citing *In re Hass*, 31 CCPA 895, 141 F.2d 122, 60 USPQ 544 (1944); *In re Henze*, 37 CCPA 1009, 181 F.2d 196, 85 USPQ 261 (1950); *In re Mills*, 47 CCPA 1185, 281 F.2d 218, 126 USPQ 513 (1960); and *In re Stemniski*, 58 CCPA 1410, 444 F.2d 581, 170 USPQ 343 (1971), so that "one of ordinary skill in the art would be persuaded to a reasonable certainty that Appellants possessed so much of the invention as to encompass the reference disclosure."

n2 Appellants recognize that one of their two compounds, compound I, being an ester, is not precisely an adjacent homolog of the reference compound, which is an acid. They argue, however, that the difference between their ester and its acid (which would be an adjacent homolog of the reference compound) is not significant because the acid is "trivially obvious" from the ester. Their argument is an inference from the statement in *Ex parte Korten*, 71 USPQ 173 (*Bd. App.* 1945), that "an ester is ordinarily unpatentable over the alcohol from which it is

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derived." [**7]

OPINION

Appellants' arguments are well founded. If it was not apparent from *In re Clarke* that appellants' proposition applies here, it was made apparent thereafter in *In re Rainer*, 55 CCPA 853, 855-56, 390 F.2d 771, 773-74, 156 USPQ 334, 336-37 (1968):

It is settled, of course, that anticipatory disclosure, not a statutory bar, may be removed as a reference against a generic claim by a rule 131 affidavit showing prior reduction to practice of as much of the claimed invention as the reference shows. *In re Stempel*, 44 CCPA 820, 241 F.2d 755, 113 USPQ 77 (1957). (See further explanation of *Stempel* in *In re Tanczyn*, 52 CCPA 1630, 347 F.2d 832, 146 USPQ 298.) The Patent Office Board of Appeals, in that case, had held such a showing insufficient, requiring, rather, proof of prior "possession of the generic invention." We held that this involved too literal a reading of Rule 131 and that "all the applicant can be required to show is priority with respect to so much of the claimed invention as the reference happens to show." And this priority need not always be shown directly. When that species of the generic invention which has been completed prior to the effective date of the reference [**8] would make obvious to one of ordinary skill in the art the species disclosed in the reference, the reference may be said to have been "indirectly antedated." *In re Clarke*, 53 CCPA 954, 356 F.2d 987, 148 USPQ 665 (1966); 34 G.W.L.Rev. 507, 525 (1966). [Final emphasis ours; footnote quoting Rule 131(a) omitted.]

The board thus gave insufficient consideration to appellants' affidavits when it considered only whether they contained facts showing that "appellants viewed their invention as embracing a series of homologous acids." Such a showing is unnecessary when it is otherwise established that the facts set out in the affidavits are such as "would persuade one of ordinary

skill in the art to a reasonable certainty that the applicant possessed so much of the invention as to encompass the reference disclosure." We find such "reasonable certainty" here in the "bracketing" of the reference compound. To our mind it is much more reasonable than the unsupported speculations of the board's arguments which the solicitor's brief makes no effort to support.

Appellants have made a prima facie case that the compound of the reference is obvious from the compounds which they made [**513] [**9] prior to the date of the reference. Appellants' compound III is the next higher homolog of the reference compound II, that is, the two compounds differ by just one CH(2) group in the carboxyl side chain. In both compounds, the carboxyl side chain is a chain of several CH(2) groups terminating in a COOH group. The two compounds are thus adjacent homologs in the classic sense of differing by only one CH(2) group in a hydrocarbon chain. Under these circumstances, compound III is itself sufficient to render the reference compound prima facie obvious, *In re Henze*, supra; *In re Mills*, supra. The closeness of appellants' compound I lends further support to the obviousness of the reference compound in view of their compound III. To this prima facie showing, the board replied that one of ordinary skill in the art would have concluded that appellants envisioned their invention as a group of compounds isomeric to their compounds I and III. The board pointed to nothing in the record to support its conclusion. The Hamberg publication contains nothing to show that the reference compound would not be obvious from appellants' compounds. Hamberg does not discuss the reference compound at all, [**10] and nothing in the record has been pointed to as establishing any relationship between Hamberg and the reference compound.

The decision of the board is reversed.

REVERSED