

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LESLIE R. RUDNICK and CARLETON N. ROWE

Appeal No. 95-1640
Application 07/752,138¹

ON BRIEF

Before SOFOCLEOUS, DOWNEY and JOHN D. SMITH, Administrative Patent Judges.

DOWNEY, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the final rejection of claims 31, 34-35, 38-42, all the pending claims in the application.

¹ Application for patent filed August 29, 1991.

Appeal No. 95-1640
Application 07/752,138

The claims are directed to a process for the preparation of a high-temperature stable monoalkylated lubricant fluid or lubricant additive and also to the lubricant fluid.

Claim 31 is illustrative of the subject matter on appeal and reads as follows:

31. A process for the preparation of a high-temperature stable monoalkylated lubricant fluid or lubricant additive comprising catalytically reacting in the presence of a zeolite catalyst selected from the group consisting of zeolite beta, zeolite Y, ZSM-12 and MCM-22 (1) a hydrocarbyl substituent precursor, having at least one olefinic group and optionally containing S, N, O, P, F, or mixtures thereof, and (2) a thianthrene and wherein said hydrocarbyl substituent is selected from the group consisting of alkyl, alkenyl, alkynyl, arylalkyl, or aryl, cyclic or linear containing from 3 to about 500 carbons wherein the reaction temperature varies from ambient to about 350°C, the molar ratio of said hydrocarbyl substituent precursor to thianthrene varies from 1:1 about 10:1 and the amount of catalyst varies from 5 to about 100 grams of catalyst to about 1 mole of thianthrene.

The reference relied upon by the examiner is:

Forbus et al. (Forbus) 5,171,915 Dec. 15, 1992

Claims 31, 34, 35, and 38-42 stand rejected under 35 U.S.C. § 102(e) as anticipated by and under 35 U.S.C. § 103 as unpatentable over Forbus. We reverse both rejections.

Opinion

Appeal No. 95-1640
Application 07/752,138

Forbus is directed to the preparation of alkylaromatic hydrocarbons, suitable as lubricant basestocks and additives, by reacting at least one alkylatable aromatic compound and C₁₂-C₄₀ mono-olefin in an alkylation zone in the presence of an acidic alkylation catalyst under alkylation conditions. Forbus describes the alkylatable aromatic compounds as substituted benzene, naphthalene and anthracene derivatives, and the acid alkylation catalyst as a zeolite catalyst.

The examiner recognizes that Forbus does not specifically disclose thianthrene as a reactant, and yet he alleges that the expression "similarly substituted naphthalenes and anthracenes" at column 5, lines 40-47, anticipates a thianthrene reactant. Thianthrene a heterocyclic structure and not a polynuclear aromatic compound as are the naphthalenes and anthracenes. Accordingly, the 35 U.S.C. § 102 rejection cannot be sustained. Anticipation within 35 U.S.C. § 102 is established only when a single prior art reference discloses, expressly, or under the principles of inherency, each and every element of a claimed invention. RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). Note also W.L.

Appeal No. 95-1640
Application 07/752,138

Gore and Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983); and Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983).

The examiner also alleges that this same expression "similarly substituted naphthalenes and anthracenes" would have rendered obvious to one of ordinary skill in the art the use of a thianthrene reactant.

It is true that when chemical compounds have "very close" structural similarities and similar utilities, without more a prima facie case may be made. See for example In re Wilder, 563 F.2d 457, 460, 195 USPQ 426, 429 (CCPA 1977) (adjacent homologues and structural isomers); In re May, 574 F.2d 1082, 1090, 197 USPQ 601, 607 (CCPA 1978) (stereoisomers); In re Hoch, 428 F.2d 1341, 1342, 166 USPQ 406, 408 (CCPA 1970) (acid and ethyl ester). However, where as here Forbus is directed to polynuclear aromatic compounds and applicants' thianthrene is a heterocyclic ring structure, there must be adequate support in the prior art for the equivalence between the aromatic naphthalene and anthracene and heterocyclic thianthrene in order to establish a prima facie case and shift

Appeal No. 95-1640
Application 07/752,138

the burden of going forward to applicants. The examiner has not provided any such evidence. The examiner's reliance upon the expression "similarly substituted naphthalenes and anthracenes" as suggestive of thianthrene is misplaced. Forbus at column 5, line 40 describes a number of exemplary substituted benzene compounds useful in the Forbus invention. The expression "similarly substituted naphthalenes and anthracenes" is suggestive of similarly substituted compounds based on naphthalene and anthracene as the exemplified benzene derivatives. Accordingly on this record, the examiner has not established anticipation nor a prima facie case of obviousness

Appeal No. 95-1640
Application 07/752,138

and the rejections are thereby reversed.

REVERSED

MICHAEL SOFOCLEOUS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
MARY F. DOWNEY))
Administrative Patent Judge)	APPEALS AND
)	
)	INTERFERENCES
)	
JOHN D. SMITH)	
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Appeal No. 95-1640
Application 07/752,138

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