

Ex parte Jennings et al.

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Ex parte REX A. JENNINGS,  
DON R. JOHNSON,  
RONALD E. SEAMANS  
and JAMES R. ZELLER

MAILED

APR 24 1997

Appeal No. 94-2551  
Application 07/846,509<sup>1</sup>

PAT.&T.M. OFFICE  
BOARD OF PATENT APPEALS  
AND INTERFERENCES

HEARD: March 3, 1997

Before WINTERS, WILLIAM F. SMITH and WEIMAR, Administrative Patent Judges.

WEIMAR, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the examiner's decision finally rejecting claims 49-52.

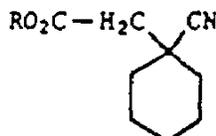
<sup>1</sup> Application for patent filed March 6, 1992. According to appellants, the application is a division of Application 07/564,623, filed August 10, 1990, now U.S. Patent No. 5,132,451, issued July 21, 1992, which is a continuation-in-part of Application 07/399,056, filed August 25, 1989, now abandoned.

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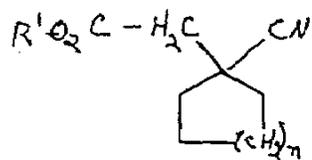
Claims 49 and 51 are illustrative of the claimed subject matter and read as follows:

49. A compound of the formula



wherein R is alkyl of from one to twelve carbon atoms.

51. A compound of the formula



wherein R<sup>1</sup> is hydrogen, an alkali metal selected from the group consisting of lithium, sodium and potassium, and alkaline-earth metal selected from the group consisting of calcium, barium, strontium, and magnesium, ammonium, or an amine cation formed from an amine capable of forming a salt with a carboxylic acid, said amine selected from the group consisting of triethylamine and pyridine and n is an integer of one to three.

The single reference relied upon by the examiner is:

Schaefer,<sup>2</sup> Liebigs Ann. Chem., Volume 688, pages 113-121 (1965).

Claims 49-52 stand rejected under 35 U.S.C. § 103 over Schaefer. We reverse this rejection.

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<sup>2</sup> Our understanding of this reference is based on an English translation supplied by appellants.



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DISCUSSION

Claims 49-52 stand rejected under 35 U.S.C. § 103 over Schaefer.

The Examiner relies on a compound disclosed on the tenth page of the English translation of Schaefer as compound (2d), which is 3-cyano-3,3-tetramethylene propionic acid methyl ester, to reject the claimed compounds as structurally obvious homologs of compound (2d). The rejection states that compound (2d) "is a homolog of the claimed compounds or a simple ester analogs [sic] of the claimed acids." See page 3 of the Examiner's Answer. The structures are stated to be so closely related "as to be structurally obvious therefrom in the absence of any unobvious properties, especially since one of ordinary skill in the art would expect compounds having such a close structurally [sic] relationship would have the same or virtually the same properties. Also, the reference would suggest the acid as note compound 3 on the first page of the translation." See page 3 of the Examiner's Answer.

We reverse this rejection. A prima facie case of obviousness under 35 U.S.C. § 103 is not found. As clearly stated in

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In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992):

the examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability.

"Structural obviousness" based on similarity in structure alone fails to consider the subject matter as a whole, which is required by 35 U.S.C. § 103. Circumstances prohibiting a finding of obviousness despite a structural similarity between a claimed compound and a prior art compound include a failure of the prior art to recognize any usefulness for an illustrated compound. In In re Stemniski, 444 F.2d 581, 586, 170 USPQ 343, 347 (CCPA 1971), the CCPA asked the rhetorical questions:

For example, what on this record - other than abstract, theoretical or academic considerations - would lead one of ordinary skill to change the structure of the reference compounds to obtain the claimed compounds? Certainly no practical considerations which promote the progress of useful arts or are of use to society are manifest. How can there be obviousness of structure, or particularly of the subject matter as a whole, when no apparent purpose or result is to be achieved, no reason or motivation to be satisfied, upon modifying the reference compounds' structure? Where the prior art reference neither discloses nor suggests a utility for certain described compounds, why should it be said that a reference makes obvious to one of ordinary skill in the art an isomer, homolog or analog of related structure, when that mythical, but intensely practical, person knows of no "practical" reason to make the reference compounds, much less any structurally related compounds? In short, of what significance is it to a determination of obviousness that it

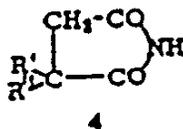
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is reasonable to assume or expect the compounds of the prior art and of the claims to possess similarities in significant properties or uses, if in fact no one prior to appellant's entry into the field knew what any of those properties or uses are?

The conclusion reached in Stemniski was that obviousness of the subject matter as a whole could not exist when the prior art was not aware of any usefulness for the compounds it describes. To the extent that they hold otherwise, the CCPA overruled In re Henze, 181 F.2d 196, 85 USPQ 261 (CCPA 1950) and In re Riden, 318 F.2d 761, 138 USPQ 112 (CCPA 1963).

The dispositive issue for this appeal is whether the prior art discloses or suggests a utility for the compound (2d) of Schaefer, which is presented in the rejection as the compound that renders the claimed compounds obvious.

Schaefer discloses  $\alpha,\alpha$ -disubstituted succinimides of the following formula and their preparation from correspondingly substituted succinodinitriles:



The succinimide compounds are disclosed as having anti-convulsant properties. An alcoholic solution of a succinodinitrile compound is saturated with hydrogen chloride at 0°-10° to form the desired

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succinimides in a one-step process. The reference discloses that the succinimides do not form via an imido ester. See the scheme on the first page of the English translation of Schaefer. The Examiner refers to the same scheme and the accompanying statement that "2a prepared by another method, when treated with hydrogen chloride and ethanol, yielded only a little 4a, which probably formed by ring closure of the saponification product 3a." See the first page of the English translation of Schaefer. This statement is the only basis asserted by the Examiner to indicate prior art knowledge of a use for the reference compounds designated by Formula 2 in Schaefer. The Examiner's conclusion appears to be that compound (2d) would follow the same reaction scheme as indicated for (2a) and thus produce a corresponding (4d) succinimide, which would be a useful product. The reaction scheme in Schaefer that indicates preparation of compound 4 from compound 2 is limited to 4a being produced from 2a. There is no further suggestion or teaching that other imido esters would form the succinimide of Formula 4 in the same manner as compound 2a.

It has not been established on this record that compound (2d) would yield any succinimide having a structure that falls within the genus of the disclosed, anti-convulsant succinimide

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compounds of formula 4 of Schaefer. The Examiner has not presented any reason or other evidence to establish why one of ordinary skill in the art would possess a reasonable expectation of such reactivity. Mere structural similarity is considered inadequate given these facts.

Appellants argue that Schaefer clearly teaches away from the use of an imido ester pathway, such as the (2a) to (4a) pathway discussed above, as a practical means of producing the disclosed  $\alpha,\alpha$ -disubstituted succinimide compounds, due to the clear difference in yield. The facts and conclusions reached by the court in In re Stempniski, do not address an impractical or less preferred use for a described compound, but rather only the lack of any known use.

Here we conclude that no use has been established for the (2d) compound, therefore it cannot form the basis of a sound rejection under 35 U.S.C. § 103 of the claimed compounds.

#### CONCLUSION

We do not sustain the rejection of claims 49-52 under 35 U.S.C. § 103 over Schaefer.

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Accordingly, the examiner's decision refusing to allow  
claims 49-52 is reversed.

REVERSED

<i>Sherman D. Winters</i>	)	
SHERMAN D. WINTERS	)	
Administrative Patent Judge	)	
	)	
<i>William F. Smith</i>	)	BOARD OF PATENT
WILLIAM F. SMITH	)	
Administrative Patent Judge	)	APPEALS AND
	)	
<i>Elizabeth C. Weimar</i>	)	INTERFERENCES
ELIZABETH C. WEIMAR	)	
Administrative Patent Judge	)	

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