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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 29

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HANS-JERG KLEINER, DIETER REGNAT
and GERHARD PFAHLER

Appeal No. 96-3412
Application No. 08/293,577[1]

ON BRIEF

Before KIMLIN, JOHN D. SMITH and LIEBERMAN, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

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[1] Application for patent filed August 22, 1994. According to appellants, this application is a continuation of Application No. 08/071,174, filed June 2, 1993, now abandoned.

This is an appeal from the final rejection of claims 15-26, all the claims remaining in the present application. A copy of illustrative claim 15 is appended to this decision.

The examiner relies upon the following references as evidence of obviousness:

Abolins et al. (Abolins)	4,504,613	Mar. 12, 1985
Meyer et al. (Meyer)	5,162,406	Nov. 10, 1992

Appellants' claimed invention is directed to a process for preparing hydrolysis-stable trivalent phosphorous compounds of the recited formula. Trivalent phosphorous containing compounds of the type claimed were known in the art as stabilizers for thermoplastic materials but, according to appellants, "they break down under conditions as mild as normal atmospheric humidity by hydrolysis" (page 2 of Brief). Accordingly, appellants treat the trivalent phosphorous compounds with an oxide, hydroxide, carbonate, bicarbonate or a carboxylate of a metal of groups 1a, 2a, 2b, and 7b of the periodic table.

Appealed claims 15-26 stand rejected under 35 U.S.C. § 103 as being unpatentable over Meyer in view of Abolins.

We have thoroughly reviewed the respective positions advanced by appellants and the examiner. In so doing, we find

ourselves in agreement with appellants that the applied prior art fails to establish a prima facie case of obviousness for the claimed subject matter. Accordingly, we will not sustain the examiner's rejection for essentially those reasons expressed by appellants in their Brief, and we add the following primarily for emphasis.

Independent claim 15 defines a process which requires treating a trivalent phosphorous compound with the stabilizing metal compound, whereas independent claims 25 and 26 define a process of admixing a molten trivalent phosphorous compound with the stabilizing metal compound, followed by cooling the melt and ultimately isolating the solid product. Neither of the references cited by the examiner teaches nor suggests either the treatment of claim 15 or the process of claims 25 and 26 to form a solid product. Each of the references discloses the addition of the phosphorous compounds to thermoplastic materials for the purpose of stabilizing them, wherein the thermoplastic compositions of the references also include one of the presently claimed metal compounds. Meyer teaches calcium carbonate as a filler whereas Abolins employs metal oxides as co-stabilizers. However, we

agree with appellants that the coexistence of the phosphorous compounds and metal compounds in the thermoplastic compositions of the references does not meet the claim requirement for treating the phosphorous compound with one of the recited metal compounds. The examiner has not established on this record that the presence of both the phosphorous compounds and the metal compounds in a thermoplastic composition is equivalent to the claimed process for treating the phosphorous compounds and, manifestly, the references fail to suggest the process of forming a solid product defined in claims 25 and 26. Also, for the same reasons, we find that the cited references, taken singularly or
in combination, fail to teach or suggest the method of claim 20 of stabilizing a thermoplastic material by incorporating therein the treated phosphorous compound of claim 15. Likewise, the examiner has not established the equivalency of the thermoplastic compositions of the cited references and the thermoplastic composition of appealed claim 24.

In conclusion, based on the foregoing, the examiner's decision rejecting the appealed claims is reversed.

REVERSED

EDWARD C. KIMLIN Administrative Patent Judge	)
JOHN D. SMITH Administrative Patent Judge	) BOARD OF PATENT) APPEALS AND) INTERFERENCES
PAUL LIEBERMAN Administrative Patent Judge	)

clm

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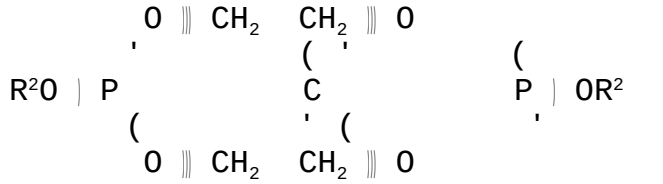
APPENDIX

Claim 15. A process for the preparation of hydrolysis-stable trivalent phosphorous compounds of the formula I

$$P(OR^1)_3 \qquad (I)$$

of the formula II



(II)

or the formula III

$$R^3\text{-}[P(OR^2)_2]_n \qquad (III)$$

wherein

n is 1 or 2

R^1 is a phenyl radical, which can be substituted by one or more linear or branched C_1-C_8-alkyl radicals or by C_5-C_8-cycloalkyl,
C_6-C_{10}-aryl or C_7-C_{10}-aralkyl radicals,

R^2 is a linear or branched C_8-C_{20}-alkyl radical or a phenyl radical, which can be substituted by one or more linear or branched C_1-C_8-alkyl radicals or by C_5-C_8-cycloalkyl, C_6-C_{10}-aryl or C_7-C_{10} aralkyl radicals,

R^3, if n=1, is a phenyl or benzyl radical, which can carry 1 to 3 substituents, an "-methylbenzyl, ","-dimethylbenzyl, or naphthyl radical or a naphthyl radical which carries 1 to 5 substituents, in which the substituents are identical or

different and are a linear or branched C_1-C_8-alkyl radical, a C_1-C_8-alkoxy radical, a C_1-C_{12}-alkylthio radical, a C_1-C_8-dialkylamino radical, a C_6-C_{10}-aryloxy radical or halogen having an atomic number of 9 to 35 and

R^3, if n=2, is a phenylene radical, a biphenylene radical, a naphthylene radical or a diphenylene oxide radical, which are unsubstituted or carry 1 to 4 linear or branched C_1-C_8-alkyl radicals,

which comprises the steps of:

treating the compounds of the formula I, II, or III in a solvent or a suspending agent with 0.005 to 5% by weight of an oxide, a hydroxide, a carbonate, a bicarbonate, or a carboxylate of a metal of groups 1a, 2a, 2d, or 7b of the periodic table of the elements,

stirring the solution or suspension, and

isolating the phosphorous compound.