

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board

Paper No. 23

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KLAUS STOLL,
ANDREUS THUERMER
and RAINER WOLF

Appeal No. 2000-0459
Application No. 08/838,584

ON BRIEF

Before WINTERS, KRATZ and PAWLIKOWSKI, Administrative Patent Judges.

PAWLIKOWSKI, Administrative Patent Judge.

DECISION ON APPEAL

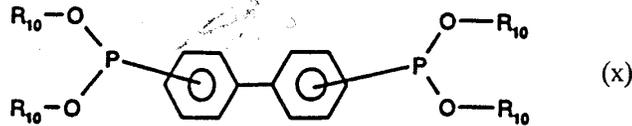
This is a decision on appeal from the examiner's refusal to allow claims 2, 18, 24-37, 39-41 and 43. Claims 1, 3, 5-7, 14-17, 21-23 and 38 have been canceled. Claims 4, 8-13, 19, 20 and 42 have been withdrawn from consideration as being directed to a non-elected invention.

The subject matter on appeal is represented by claims 29 and 24, set forth below:

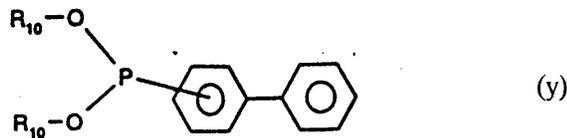
29. A stabilizer composition comprising

a) a mixture of

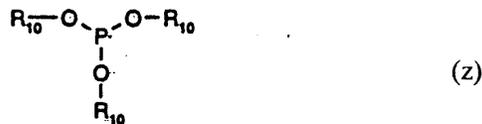
i) 50-80% of a diphosponite of the formula (x)



ii) 5-25% of a monophosponite of the formula (y)



iii) 5-25% of a phosphite of formula (z)

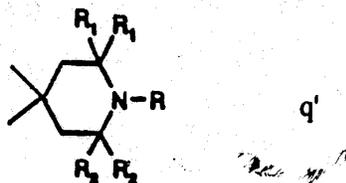
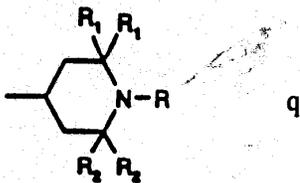


wherein each R₁₀ is 2,4-di-tertiary butylphenyl and wherein the percentages are weight percentages based on the sum of the weight percentages of the compounds of formulae (x), (y) and (z) being 100%,

b) at least one acid scavenger selected from the group consisting of sodium stearate, magnesium stearate, zinc stearate; magnesium or magnesium/zinc hydrotalcites, optionally coated with 5 to 50% of metal stearate; zinc oxide, zinc hydroxide, calcium oxide, calcium hydroxide, magnesium oxide and magnesium hydroxide and

(c) at least one UV stabilizer selected from compounds containing at least one 2,2,6,6-tetraalkylpiperidinyl group.

24. A composition according to claim 29 wherein, in component c), the 2,2,6,6-tetraalkyl-piperidiny group is of the formula q or q'



in which

R is hydrogen, oxygen, -OH, C₁₋₂₄alkyl, -O-C₁₋₂₄alkyl, -O-CO-C₁₋₂₄alkyl, -O-CO-phenyl, phenyl, O-phenyl or -COR₅,

each R₁, independently, is -CH₃ or -CH₂(C₁₋₄alkyl) or both groups R₁ form a group -(CH₂)₅-

each R₂, independently, is -CH₃ or -CH₂(C₁₋₄alkyl) or both groups R₂ form a group -(CH₂)₅-

R₃ is hydrogen or C₁₋₄alkyl,

R₅ is -C(R₃)=CH₂, C₁₋₆alkyl, phenyl, CO-C₁₋₂₄alkyl, -CO-phenyl, -NR₇R₈, -CH₂-C₆H₅,

-CO-OC₁₋₁₂alkyl, or -COOH,

R₇ is hydrogen, C₁₋₁₂alkyl, C₅₋₆cycloalkyl, phenyl, phenyl-C₁₋₄alkyl or C₁₋₁₂alkylphenyl and

R₈ is C₁₋₁₂alkyl or hydrogen.

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

Seltzer et al. (Seltzer)	4,590,231	May 20, 1986
Caselli et al. (Caselli)	5,158,992	Oct. 27, 1992
Bohshar et al. (Bohshar)	5,298,541	Mar. 29, 1994

Claims 2, 18, 24-37, 39-41, and 43 stand rejected under 35 U.S.C. § 103 as being unpatentable over Caselli and Seltzer in combination with Bohshar.

Claim 24 stands rejected under 35 U.S.C. § 112, second paragraph.

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On page 6 of the brief, appellants state "for each ground of rejection which applies to more than one claim it is not argued that the claims within the group subject to that rejection are separately patentable." We understand this to mean that appellants submit that the claims stand or fall together. On page 3 of the answer, the examiner states that the claims stand or fall together because appellants' brief does not include a statement that this grouping of claims do not stand or fall together and reasons in support thereof. Hence, we consider claim 29 in this appeal.¹ We also consider claim 24 because this claim is rejected under 35 U.S.C. § 112, second paragraph. 37 CFR § 1.192(c)(7) (1999).

OPINION

I. The Prima Facie Case of Obviousness

As a preliminary matter, we note that on page 4 of the answer, the examiner refers to the Office Action of Paper No. 7 regarding the prior art rejection. On page 5 of Paper No. 7, the examiner expresses the rejection as "Caselli and Seltzer alone or together in combination with Bohshar."

We have carefully considered all of the applied references in connection with the prior art rejection. Based upon this review, we determine that the examiner has not established why a person of ordinary skill in the art would have reason, suggestion, or motivation to select appellants' combination of components as set forth in claim 29 in view of the teachings of Seltzer and Bohshar. For example, Seltzer sets forth a laundry list of a variety of components (columns 3-19) useful in a

¹ Appellants also argue claim 43 based upon the same arguments with respect to claim 29. Hence, no additional arguments supporting separate patentability have been provided. Therefore, we need only consider claim 29, the broadest claim on appeal.

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polyolefin composition. The examiner has not established why the skilled artisan would have selected from this laundry list, the combination of components set forth in claim 29, especially when Seltzer's use of stearates is not required (column 16, lines 54-60). More importantly, the examiner has not explained why one of ordinary skill in the art would have selected the disclosed stearates in conjunction with the other components recited in claim 29. Absent appellants' disclosure, we are unable to find the required reason, suggestion or motivation that would lead the skilled artisan to select appellants' combination of components from Seltzer or Bohshar, or to modify Caselli in view of Seltzer or Bohshar.

Therefore, we determine the examiner has not made out a prima facie case with respect to the teachings of Seltzer and Bohshar.

We only find a prima face case to the extent the examiner relies upon Caselli, for the reasons set forth below.

Appellants admit that the SANDOSTAB P-EPQ stabilizer of Caselli is within the definition of component a) recited in claim 29. (brief, page 8). Appellants also admit that the HALS compound disclosed in Caselli corresponds to their claimed component c). (brief, page 8). With respect to appellants' claimed component b), appellants argue that the sodium stearate disclosed in Caselli is merely optional and is "added before or after rather than as part of the stabilizer composition" of Caselli, and appellants refer to column 8, lines 44-53 of Caselli. (brief, page 9). Appellants also argue that Caselli teaches that calcium stearate, which is outside the definition of their component b), may be used in place of sodium stearate. (brief, page 9).

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Appellants further argue that examples 8 and 9 of Caselli are the only examples in which compounds corresponding to components a) and c) of their claims are employed together. Appellants state that example 3 employs compounds corresponding to their claimed components a) and b), and that example 6 employs compounds corresponding to component a) and a synthetic hydrotalcite, and states that neither of these examples employs appellants' component c). (brief, page 9).

On page 6 of the answer, the examiner states that example 3 of Caselli teaches SANDOSTAB P-EPQ (component a) of claim 29), and sodium stearate (component b) of claim 29). The examiner also states that examples 8 and 9 add a stabilizer (component c) of claim 29).

We find that example 9 of Caselli employs all three compounds together: **1)** SANDOSTAB P-EPQ, **2)** calcium stearate, and **3)** the stabilizer of formula XI (which is the HALS compound depicted at the bottom of column 6 of Caselli, which corresponds to appellants' component c)).

Furthermore, Caselli's disclosure at column 8, beginning at line 44, teaches that calcium and sodium stearates are art recognized equivalents. Hence, to substitute the calcium stearate of example 9 with the art recognized equivalent of sodium stearate, would have been obvious to one of ordinary skill in the art.

In summary, we find that Caselli provides sufficient guidance to one of ordinary skill in the art to combine component b) sodium stearate, in view of the art recognized equivalence of sodium stearate and calcium stearate, with appellants' components a) and c).

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Therefore, we determine the examiner has set forth a prima facie case of obviousness.

II. Rebuttal Evidence

a. The Specification Data

Beginning on page 10 of the brief, appellants discuss Example 1, as well as other examples, found in their specification. Example 1 is described, beginning on page 26 of appellants' specification. Upon our review of Example 1, we make the following findings.

The table at the top of page 27 of appellants' specification compares formulations A, B, C, and D. The components of each formulation are outlined as follows.

Formulation A comprises IRG-168, calcium stearate, and HALS for components A, B, and C, respectively.

Formulation B comprises SANDOSTAB P-EPQ, calcium stearate, and HALS, for components A, B, and C, respectively.

Formulation C comprises I-168, sodium stearate, and HALS, for components A, B, and C, respectively.

Formulation D comprises a SANDOSTAB P-EPQ, sodium stearate, and a HALS, for components A, B, and C, respectively.²

Appellants state that a comparison of formulation B (which utilizes calcium stearate for component b)) with formulation D (which replaces the calcium stearate with sodium stearate for component b)) shows that formulation D is superior to formulation B. (brief, page 11).

On page 7 of the answer, the examiner is unconvinced by the data as presented above. The examiner argues that the

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representative examples do not contain the same proportions of phosphonite and phosphite compounds of claim 29, and that, therefore, the data is not commensurate in scope with the claims.

It is necessary that in order to establish unexpected results for a claimed invention, objective evidence of non-obviousness must be commensurate in scope with the claims which the evidence is offered to support. In re Clemens, 622 F.2d 1029, 1035, 206 USPQ 289, 296 (CCPA 1980); In re Greenfield, 571 F.2d 1185, 1189, 197 USPQ 227, 230 (CCPA 1978); In re Lindner, 457 F.2d 506, 508, 173 USPQ 356, 358 (CCPA 1972); In re Tiffin, 448 F.2d 791, 792, 171 USPQ 294, 294 (CCPA 1971).

However, on page 3 of the reply brief, appellants correctly point out that the only proportions specified in claim 29 are the proportions of the compounds of formulas (x), (y), and (z) of component a). Appellants state that component a) is SANDOSTAB P-EPQ, which is a stabilizer that comprises the compounds of formula (x), (y), and (z). Appellant state that it is not seen how the stated proportions on pages 7-8 of the specification are outside of the percentage ranges specified in claim 29. We agree for the following reasons.

Pages 7 and 8 of appellants' specification set forth the components of SANDOSTAB P-EPQ. Component a) of appellants' claim 29 comprises the compounds of formula (x), (y), and (z). These compounds are set forth on pages 7 and 8 of appellants' specification and fall within the percentages recited therein. The examiner has not explained how component a) of claim 29 is not SANDOSTAB P-EPQ as defined on pages 7 and 8 of the specification. Hence, the examiner has not shown that SANDOSTAB P-EPQ of Example 1 is not representative of component a) of claim

² Formulation D is representative of appellants' invention.

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29. On these facts, we find that SANDOSTAB P-EPQ is adequately representative of component a) of claim 29.

The examiner also states that the exemplified compositions are not run side-by-side with the compositions of the cited prior art and do not demonstrate unexpected results over the compositions of the cited prior art. (answer, page 7).

We note that rebuttal evidence can be in the form of direct or indirect comparative testing between the claimed invention and the closest prior art. In re Merchant, 575 F.2d 865m 869, 197 USPQ 785, 788 (CCPA 1978); In re Blondel, 499 F.2d 1311, 1317, 182 USPQ 294, 298 (CCPA 1974); In re Swentzel, 42 CCPA 757, 763, 219 F.2d 216, 220, 104 USPQ 343, 346 (1955).

The data presented by appellants compares formulation B with formulation D, wherein components a) and c) are the same in both kind and amount, but component b) is different.³ We find that such a comparison convincingly shows that, when combined with components a) and c), calcium stearate is not an art recognized equivalent of sodium stearate for appellants' purposes, and that sodium stearate in combination with components a) and c), achieves unexpectedly superior results. Such a comparison is relevant to the case at hand for the following reasons.

To the extent that Caselli makes obvious appellants' claimed invention, i.e., Caselli indicates that calcium stearate is an art recognized equivalent of sodium stearate, appellants' data successfully rebuts the prima facie case. That is, one skilled in the art would not have expected that sodium stearate would perform better than calcium stearate when combined with components a) and c), in view of Caselli.

³ Formulation B contains calcium stearate for component b), whereas formulation D contains sodium stearate for component b).

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Therefore, we determine that appellants' data successfully rebuts the prima facie case of obviousness.

Therefore, we reverse this rejection.

b. *Response to Dissent*

We have carefully reviewed our dissenting colleague's comments on the rebuttal evidence, and provide the following comments.

As pointed out by our colleague, the question as to whether unexpected advantages have been demonstrated is a factual question. In re Johnson, 747 F.2d 1456, 1460, 223 USPQ 1260, 1263 (Fed. Cir. 1984). The determination is therefore made on a case-by-case basis. For example, in the case of In re Kollman, appellants argued that the showing of unexpected results for certain proportions of diphenyl ether and FENAC fully supported patentability of the claimed range of proportions. The court determined that the showing was adequate and stated that unobviousness of a broader claimed range can, in certain instances, be proven by a narrower range of data. In re Kollman, 595 F.2d 48, 56, 201 USPQ 193, 199 (CCPA 1979). See also, Ex parte Winters, 11 USPQ 1387, 1388 (Bd. Pat. App. & Int. 1989) (patentability is established by a showing of unexpected superiority for *representative* compounds within the scope of the appealed claims). Compare In re Saunders, 444 F.2d 599, 604 n.6, 170 USPQ 213, 218 n.6 (CCPA 1971).

It is axiomatic that objective evidence of non-obviousness must be commensurate in scope with the claims which the evidence is offered to support. It is enough, however, that the showing is representative of the claimed subject matter.

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For the reasons discussed in section II a., supra, we find that appellants' showing is representative of the claimed subject matter. We find that to the extent Caselli makes obvious appellants' claimed subject matter, appellants' showing adequately rebuts this prima facie case.

Our dissenting colleague does not address the "reach" of the prior art. Where, as here, the examiner established a prima facie case of obviousness based on the teachings of Caselli, but not Seltzer or Bohshar, appellants need only supply rebuttal evidence sufficient to rebut that prima facie case. In this regard, our dissenting colleague's analysis of the rebuttal evidence is incomplete. Also, our dissenting colleague does not deny that appellants' rebuttal evidence compares against the closest prior art and addresses the thrust of the rejection.

III. 35 U.S.C. § 112, second paragraph (indefiniteness)

The examiner rejects claim 24 for including "oxygen" in the definition of the terminal group R. The examiner asserts that this is unclear as written because an oxygen atom by itself cannot be a terminal group. The examiner states it must be bound to another atom. (Paper No. 7, page 4).

On pages 7-8 of the brief, appellants refer to several references in an attempt to show that the substitution claimed by appellants is appropriate and is well understood by those skilled in the art. Appellants assert that the examiner has merely argued that such compounds are only theoretically possible and that the oxyl radical would likely be bound to another group when it is in the appellants' composition.

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On pages 4-5 of the answer, the examiner asserts that appellants are claiming an oxygen atom singly bound to nitrogen atom in a tetra alkyl piperidinyl group. The examiner states the valence of the oxygen atom depicted in claim 24 is improper. The examiner further states the definition of R in claim 24 does not include a charged species or radical. The examiner states that the references discussed by appellants in the brief are not relevant to a determination of whether claim 24 is indefinite because the references do not teach a non-charged oxygen atom singly bound to a nitrogen atom, and do not teach an oxyl radical in appellants' claimed composition.

In the reply brief, on page 2, appellants state that the references are relevant because they teach oxyl as a substitute on the same ring of a nitrogen containing compound corresponding to component c) of appellants' claimed composition. Appellants further state that the fact that oxyl-substituted components c) are not exemplified does not negate the fact that such compounds are suitable for the claimed compositions.

We note that the initial burden of presenting a prima facie case of unpatentability on any ground rests with the examiner. See In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Additionally, if the scope of the invention sought to be patented can be determined from the language of the claims with a reasonable degree of certainty, then the claims fulfill the requirements of 35 U.S.C. 112, second paragraph. In re Wiggins, 488 F.2d 538, 541-2, 179 USPQ 421, 423 (CCPA 1973).

Here, the examiner does recognize that the "oxygen" should be a radical, for example, an oxyl. The references discussed by

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appellants on pages 7 and 8 of the brief also makes this self-evident.

We note that the specification is directed to one of ordinary skill in the art, carrying with him/her, the knowledge (as reflected, for example, in the references discussed by appellants) that it is well known in the art that it is understood that such a formula as in claim 24 includes an oxyl group. Given this general knowledge, we determine that one of ordinary skill in the art would find that the only plausible interpretation of claim 24 is that the "oxygen" is an oxyl group, and this would be understood to be as such to one skilled in the art. Just as the examiner has recognized this interpretation, so too would one of ordinary skill in the art.

We therefore determine that one having ordinary skill in the art would not be speculative in concluding that the specific type of formula in claim 24 includes an oxyl.

We therefore reverse the 35 U.S.C. § 112, second paragraph, rejection of claim 24.

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CONCLUSION

The 35 U.S.C. § 103 rejection is reversed.

The 35 U.S.C. § 112, second paragraph rejection, is reversed.

REVERSED

Sherman D. Winters)
Administrative Patent Judge)
)
)
) BOARD OF PATENT
) APPEALS AND
) INTERFERENCES
Beverly A. Pawlikowski)
Administrative Patent Judge)

BAP/cam/dem

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KRATZ, Administrative Patent Judge, concurring-in-part and dissenting-in-part.

I concur with the majority's reversal of the examiner's § 112, second paragraph rejection of claim 24. Moreover, I concur with the majority's determination that the examiner has made out a prima facie case of obviousness pursuant to the provisions of 35 U.S.C. § 103 with respect to all of the appealed claims. However, I respectfully disagree with the majority's decision to reverse the examiner's § 103 rejection based on the examiner's additional reliance on the teachings of Seltzer and Bohshar in combination with Caselli and to the extent based on the evidence in rebuttal furnished by appellants in their specification.

As the majority has noted, Caselli alone suggests the claimed stabilizer composition. Caselli discloses that other stabilizers and additive can be used in their composition, including synthetic hydrotalcites and metal stearates, with calcium and sodium stearates being listed as exemplary stearates. See page 8, lines 44-53 of Caselli.

In addition, Bohshar lists a variety of additional co-stabilizers for a stabilizer composition similar to that of Caselli, including zinc stearate, magnesium stearate, calcium oxide, magnesium oxide and zinc oxide, which are all within the scope of appellants' component b. Also, Seltzer (column 16, lines 54-60) discloses that zinc stearate may be employed as an additive to a polyolefin stabilizer composition. Thus, both Seltzer and Bohshar bolster the prima facie case of obviousness supplied by Caselli in that they each describe other stabilizers that may be employed in combination with the stabilizers of the

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type disclosed by Caselli, which other stabilizers are within the scope of component b of appellants' composition.

The question as to whether unexpected advantages have been demonstrated is a factual question. In re Johnson, 747 F.2d 1456, 1460, 223 USPQ 1260, 1263 (Fed. Cir. 1984). Thus, it is incumbent upon appellants to supply the factual basis to rebut the prima facie case of obviousness established by the examiner. See, e.g., In re Klosak, 455 F.2d 1077, 1080, 173 USPQ 14, 16 (CCPA 1972). Appellants, however, do not provide an adequate factual showing in their specification, as referred to in the briefs, to support a conclusion of unexpected advantages for the claimed invention.

As suggested by the examiner (answer, page 7), appellants have not furnished test results that are reasonably commensurate in scope with the subject matter embraced by representative claim 29. For example, that representative claim 29 is not limited to the combinations of the particular diphosphonite mixture(s), phosphites and acid scavengers, as well as the relative amounts thereof as employed in the specification examples. Thus, it is apparent that the appellants' evidence is considerably more narrow in scope than the appealed claims. In addition, appellants have not satisfied their burden by explaining how the limited examples furnished in the specification can be extrapolated so as to reasonably establish unexpected results for compositions co-extensive in scope with the claimed invention. In other words, appellants have not shown that the examples furnished in the specification are truly representative of the claimed subject matter given the reach thereof. It is well established that the evidence relied on to establish unobviousness must be commensurate in scope with the claimed subject matter. See In re

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Kerkhoven, 626 F.2d 846, 851, 205 USPQ 1069, 1072-73 (CCPA 1980);
In re Clemens, 622 F.2d 1029, 1035, 206 USPQ 289, 296 (CCPA 1980)
and In re Dill, 604 F.2d 1356, 1361, 202 USPQ 805, 808 (CCPA
1979).

Appellants have not established that the limited examples furnished in the specification represent the closest prior art. For example, appellants have not established what effect other exemplified composition ingredients, such as IRGANOX 1010, had on the reported results, if any. See page 26 of the specification. Nor have appellants explained how the specification comparison examples can be considered as closer to the invention, as claimed, than representative examples of the applied references' teachings, such as example 3 of Caselli. It is not insignificant that appellants' specification does not characterize the different results reported for the examples set forth therein as unexpected differences. Thus, on this record, appellants' evidence has simply not been shown to rebut the examiner's rejection.

Under the circumstances recounted above, the evidence of record, on balance, weighs most heavily in favor of an obviousness conclusion.

Accordingly, I would affirm the examiner's § 103 rejection of claims 2, 18, 24-37, 39-41 and 43.

PETER F. KRATZ) BOARD OF PATENT
Administrative Patent Judge) APPEALS
) AND
) INTERFERENCES

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