

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

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte STEFAN FOKKEN and WALTHER REITH

Appeal 2007-1565
Application 10/682,951
Technology Center 1700

DECIDED: May 16, 2007

Before TONI R. SCHEINER, ERIC GRIMES, and
RICHARD M. LEBOVITZ, *Administrative Patent Judges*.

LEBOVITZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1-5. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

STATEMENT OF CASE

The claimed invention relates to a composition for stabilizing halogen containing polymers (Specification 3). Claims 1-5, all the pending claims, stand rejected over prior art (Br. 1). The Examiner relies on the following evidence of unpatentability:

Drewes	US 5,519,077	May 21, 1996
Reith	CA 2,329,303 A1	Nov. 27, 1987
Sugawara	JP 62273243A	Nov.27, 1987
Yuichi	JP 2000273259A	Oct. 03, 2000

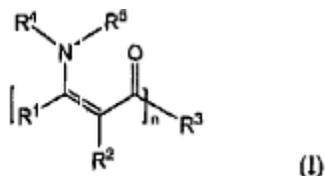
Claims 1-5 stand rejected under 35 U.S.C. § 103(a) as obvious over Drewes (Answer 3).

Claims 1-5 stand rejected under 35 U.S.C. § 103(a) as obvious over Reith in view of Sugawara or Yuichi (Answer 5).¹

Claims 1-5 stand rejected under 35 U.S.C. § 103(a) as obvious over Sugawara or Yuichi in view of Drewes or Reith (Answer 6).

Within each rejection, the claims stand or fall together because separate arguments for patentability were not provided for any individual claims. 37 C.F.R. § 41.37(c)(1)(vii). We select claim 1, the broadest claim on appeal, to decide all the rejections. Claim 1 reads as follows:

1. A stabiliser composition comprising at least one amino alcohol, at least one halogen-containing salt of an oxy acid and at least one compound having a structural element of the general formula I:



¹ In a paper dated Jan. 7, 2007, the Examiner provided translations of the JP publications upon which the Sugawara and Yuichi abstracts were based. However, both the Examiner and Appellants continue to rely on the abstracts in this proceeding. Accordingly, we base our decision on only the disclosure in the abstract.

wherein n is a number from 1 to 100,000, the radicals R^4 , R^5 , R^1 and R^2 are each independently hydrogen, an unsubstituted or substituted linear or branched, saturated or unsaturated aliphatic alkyl radical having from 1 to 44 carbon atoms, an unsubstituted or substituted saturated or unsaturated cycloalkyl radical having from 6 to 44 carbon atoms, an unsubstituted or substituted aryl radical having from 6 to 44 carbon atoms or an unsubstituted or substituted aralkyl radical having from 7 to 44 carbon atoms, or the radical R^1 is an unsubstituted or substituted acyl radical having from 2 to 44 carbon atoms or the radicals R^1 and R^2 are linked to form an aromatic or heterocyclic system and wherein the radical R^3 is hydrogen, an unsubstituted or substituted, linear or branched, saturated or unsaturated aliphatic alkyl or alkylene radical or oxyalkyl or oxyalkylene radical or mercaptoalkyl or mercaptoalkylene radical or aminoalkyl or aminoalkylene radical having from 1 to 44 carbon atoms, an unsubstituted or substituted saturated or unsaturated cycloalkyl or cycloalkylene radical or oxycycloalkyl or oxycycloalkylene radical or mercaptocycloalkyl or mercaptocycloalkylene radical or aminocycloalkyl or aminocycloalkylene radical having from 6 to 44 carbon atoms or an unsubstituted or substituted aryl or arylene radical having from 6 to 44 carbon atoms or an ether or thioether radical having from 1 to 20 O or S atoms or O and S atoms, or is a polymer that is bonded to the structural element in brackets by way of O, S, NH, NR^4 or $CH_2C(O)$, or the radical R^3 is so linked to the radical R^1 that in total an unsubstituted or substituted, saturated or unsaturated heterocyclic ring system having from 4 to 24 carbon atoms is formed, wherein the stabiliser composition is zinc-free.

OBVIOUSNESS OVER DREWES

Claims 1-5 stand rejected under 35 U.S.C. § 103(a) as obvious over Drewes (Answer 3).

Findings of Fact

1. Drewes teaches polyvinyl chloride (PVC) compositions which have been stabilized by epoxide compounds, perchlorates, and antioxidants (Drewes, col. 1, ll. 3-5).
2. Example 33 (Drewes, col. 25, l. 55 to col. 26, l. 20 (Table IX)) describes a composition containing NaClO₄ (sodium perchlorate), Irgastab A 70 (aminocrotonate), and THEIC (tris-hydroxyethyl isocyanurate).
3. Sodium perchlorate is a halogen-containing salt of an oxy acid (Specification 8-9).
4. Irgastab A 70 (aminocrotonate) is a compound of general formula I recited in instant claim 1.
5. THEIC is an amino alcohol. (Specification 7-8, 33).
6. The PVC stabilized composition can include further additives, such as metal soaps (Drewes, col. 11, ll. 3-5).
7. “Metal soaps are principally metal carboxylates” (Drewes, col. 12, l. 60). “Customary examples are stearates” (Drewes, col. 12, l. 62). “Preference is given to calcium, magnesium, and zinc carboxylates” (Drewes, col. 13, 35-37).
8. The composition described in Example 33 (Drewes, col. 25, l. 55 to col. 26, l. 20 (Table IX)) comprises zinc stearate (Drewes, col. 26, l. 6). We refer to this composition as “composition 33.”
9. Drewes describes PVC stabilized compositions which contain zinc stearate (Drewes, col. 24, ll. 35-47, Examples 19-22 in Table VI).
10. Drewes describes PVC stabilized compositions which do not contain zinc stearate, including Examples 16-18 (Drewes, col. 24, ll. 20-25 (Table

V)) and Example 23 (Drewes, col. 24, l. 60 to col. 25, l. 14 (Table VII); Answer 7-8).

11. Based on the data in Table VIII, which includes compositions containing zinc, Drewes states that the “addition of polyol [THEIC, an amino alcohol] has a particularly favourable effect” (Drewes, col. 25, ll. 50-55).

12. From the data in Table IX, which includes compositions containing zinc stearate, Drewes concludes that the epoxide, antioxidant, perchlorate (the halogen-containing oxy acid salt) and the polyol (THEIC, an amino alcohol) “give particularly good stabilization” (Drewes, col. 26, ll. 22-23).

13. Based on the evidence as set forth in FF (Findings of Fact) 9-12, the person of skill in the art would not have considered zinc as an essential component of Drewes’s stabilizer composition.

Discussion

The issue in this rejection is whether it would have been obvious to the person of skill in the art to have formulated a stabilizer composition as recited in claim 1 comprising a halogen-containing salt of an oxy acid, a compound of general formula I, and an amino alcohol, but which does not contain zinc.

Appellants do not dispute the Examiner’s findings (Answer 4) that Drewes describes a composition 33 for stabilizing PVC (Drewes, col. 25, l. 55 to col. 26, l. 20 (Table IX) (FF 1-5)) containing sodium perchlorate, aminocrotonate, and THEIC, meeting the limitations of claim 1 for a halogen containing salt of an oxy acid, a compound of general formula I, and

an amino alcohol, respectively. However, Drewes's composition 33 also contains a zinc stearate. Appellants challenge the Examiner's finding that it would have been obvious to have prepared composition 33, but without zinc (Br. 6).

An obviousness determination requires consideration of the entirety of the disclosure for what it fairly suggests to the person of ordinary skill in the art. *In re Hedges*, 783 F.2d 1038, 1039, 228 USPQ 685, 687 (Fed. Cir. 1986); *In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 146-47 (CCPA 1976).

In this case, Drewes describes metal soaps as an optional additive to its stabilizer compositions (Drewes, col. 11, ll. 3-5; col. 12, ll. 60 and 62; col. 13, 35-37 (FF 6, 7)). Zinc stearate is an example of a metal soap (Drewes, col. 12, l. 62; col. 13, 35-37; col. 26, l. 6 (FF 7, 8)). Both compositions which contain zinc stearate (col. 24, ll. 35-47, Examples 19-22 (FF 9)) and which do not contain it (Drewes, col. 24, ll. 35-47; col. 24, l. 60 to col. 25, l. 14 (FF 10)) are disclosed by Drewes. Neither a metal soap, not zinc stearate in particular, is described by Drewes as essential to stabilize PVC. For example, for composition 33 which contains all three required components of claim 1, and in addition zinc stearate, Drewes concludes that perchlorate (the halogen-containing oxy acid salt) and the polyol (THEIC, an amino alcohol) "give particularly good stabilization" (Drewes, col. 26, (ll. 22-23 (FF 12))). Drewes also states that the "addition of polyol [THEIC, an amino alcohol] has a particularly favourable effect" (Drewes, col. 25, ll. 50-55 (FF 11)). Zinc stearate is not characterized in these examples as essential or as contributing to the composition's stabilizer properties.

Based on this evidence, we agree with the Examiner's finding that the disclosure of Drewes, when considered in its entirety, would have reasonably suggested to a person of skill in the art stabilizer compositions without zinc (Answer 8), including composition 33 without zinc stearate. Accordingly, we conclude that the Examiner has set forth sufficient evidence to establish prima facie obviousness of claim 1.

Appellants contend that Drewes teaches "zinc-containing compounds are preferred for use in its composition. As such, one of skill in the art, when considering . . . [Drewes] as a whole would clearly be motivated to use zinc-containing compounds in the compositions taught therein." (Br. 7.)

They also argue that Drewes

discloses a general composition and then provides an exhaustive list of thousands of possible compounds that could be optional ingredients. To arrive at the presently claimed invention, the Examiner must pick and choose from the exhaustive list of optional ingredients at least one amino alcohol and at least one compound having a structural element according to the general formula I, all the while specifically ensuring the composition is free of zinc.

(Br. 9.)

Appellants' arguments fail to take into account that Drewes describes a composition which contains all three components required by the stabilizer composition of claim 1. Picking and choosing is not required to arrive at this composition because it is expressly disclosed by Drewes. The only issue is whether it would have been obvious to have omitted the non-essential and optional ingredient, zinc stearate. We do not find support for Appellants' contention that the skilled worker would have been motivated to have selected zinc containing compounds. To the contrary, compositions

without zinc are explicitly disclosed (Drewes, col. 24, ll. 20-25 (Table V)); col. 24, l. 60 to col. 25, l. 14 (Table VII) (FF 10); Answer 7-8). Zinc is not described anywhere in the reference as essential. Moreover, other metal soaps are also described as preferred, including calcium and magnesium carboxylates (Drewes, col. 13, ll. 36-41(FF 7)). Thus, even were a metal soap to be incorporated into the composition, Drewes describes calcium and magnesium carboxylates as preferred alternatives.

For the foregoing reasons, we affirm the rejection of claim 1. Claims 2-5 fall with claim 1 because separate reasons for their patentability were not provided.

OBVIOUSNESS OVER REITH IN VIEW OF SUGAWARA OR YUICHI

Claims 1-5 stand rejected under 35 U.S.C. § 103(a) as obvious over Reith in view of Sugawara or Yuichi (Answer 5).

Findings of Fact

1. Reith describes a stabilizer composition for halogen-containing thermoplastic resins comprising “(a) calcium hydroxide and/or calcium oxide” and “(b) a hydroxyl group-containing isocyanurate” (Reith, p. 3).
2. A “particularly preferred” isocyanurate is THEIC (Reith, p. 4).
3. THEIC is an amino alcohol (Specification 7-8).
4. In addition to the calcium compound and the isocyanurate, the stabilizer “may contain at least one further component . . . selected from” a list of thirteen classes of compounds (Reith, p. 4-7).
5. Aminocrotonic acid is one of the listed thirteen components (Reith, p. 6).

6. Aminocrotonic acid is a compound of general formula I recited in instant claim 1.
7. Perchlorate compounds are one of the listed thirteen classes of components (Reith, p. 7).
8. Perchlorate (ClO_4) compounds are halogen-containing salts of oxy acids (Specification 8-9).
9. Examples A (Reith, p. 8) and B (Reith, p. 10) show compositions containing THEIC, an amino alcohol, but not with a compound of general formula I or a halogen-containing salt of an oxy acid.
10. The Sugawara and Yuichi abstracts each “teach stabilizing compositions for PVC polymers that comprise in part: 1) B[eta]-aminocrotonate compounds, 2) tris(hydroxyethyl) isocyanurate, 3) lubricants, and 4) other optional adjuvants” (Answer 6).
11. Beta-aminocrotonate is a compound of general formula I recited in instant claim 1.
12. Tris(2-hydroxyethyl) isocyanurate is THEIC which is an amino alcohol. (Specification 7-8).
13. The abstracts do not describe zinc in the stabilized PVC compositions.

Discussion

The Examiner bears the initial burden of showing unpatentability. *See, e.g., In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). The Examiner contends that “[i]t would have been obvious to one having ordinary skill in the art to use the broad disclosure of Reith et al as strong motivation to actually make a stabilizing composition that comprises

all of applicant's claimed components since all of these components are directly disclosed . . . as being useful" in a stabilizer composition (Answer 5). The secondary references are cited for their teaching of different beta-aminocrotonates as PVC stabilizers (Answer 6).

Here, the Examiner has relied upon hindsight to arrive at the determination of obviousness. "It is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious." *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992). "One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988). Reith describes an amino alcohol as a PVC stabilizer, but lists the general formula I compound and the halogen-containing oxy acid salt required by claim 1 in a list of 13 optional classes of additional components. Sugawara and Yuichi describe a composition which contains an amino alcohol and formula I compound (Answer 6 (FF 10-12)), but does not disclose or suggest a halogen-containing oxy acid salt. To establish obviousness, there must be "an apparent reason to combine the known elements in the fashion" recited in the claims. *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, ___, 82 USPQ2d 1385, 1396 (2007). The Examiner does not identify any reason in Reith, Sugawara, or Yuichi which would have led the skilled worker to pick all three components required by claim 1, and exclude zinc, to have produced the claimed composition. Consequently, we reverse the rejection of claim 1-5.

OBVIOUSNESS OVER SUGAWARA OR YUICHI
IN VIEW OF DREWES OR REITH

Claims 1-5 stand rejected under 35 U.S.C. § 103(a) as obvious over Sugawara or Yuichi in view of Drewes or Reith (Answer 6).²

The Examiner states that Sugawara and Yuichi teach “compositions for PVC polymers that comprise in part 1) B[eta]-aminocrotonate compounds [and] 2) tris(hydroxyethyl) isocyanurate” (Answer 6). These correspond to the general formula I compound and the amino alcohol, respectively, of instant claim 1. The Examiner contends that

[i]t would have been obvious to one having ordinary skill in the art to use the disclosure of . . . [Drewes or Reith] as strong motivation to actually add a perchlorate salt as an additional components [sic] to the stabilizers compositions taught by [Sugawara or Yuichi] . . . for the well known stabilizing enhancements properties that perchlorate compounds give such composition in their use as stabilizers for PVC polymers.

(Answer 7.)

Appellants argue:

If the Examiner wishes to use [Drewes] and [Reith] to allegedly show motivation to include a halogen-containing salt of an oxy acid in a polymer stabilizing composition, the Office must also admit the disclosed teaching in each reference of stabilizing compositions including zinc. Such zinc-containing compositions clearly lead away from the presently claimed zinc-free compositions. Moreover, the Examiner has in no way provided any evidence of suggestion or motivation . . . to pick

² The Examiner relied on either Drewes or Reith as a secondary reference. In reaching our decision, we consider only Drewes.

and choose all of the requisite components necessary to arrive at the claimed composition while still remaining zinc-free.

(Br. 12.)

The Examiner has the better argument. Drewes already has been cited for its teaching of a composition having three of the positively recited components. Each of Sugawara and Yuichi teach compositions with two of these components – a compound of general formula I and an amino alcohol – but which do not contain zinc. These references thus reinforce what the Examiner already concluded about Drewes: that zinc stearate is an optional, non-essential ingredient. As found by the Examiner, Drewes also teaches the benefit of perchlorate (e.g., Drewes, Abstract; col. 25, l. 23; col. 26, line 22) for PVC stabilization, providing a reason to have added it to the compositions of Sugawara and Yuichi. Obviousness does not require “precise teachings directed to the specific subject matter” of the claimed invention. *KSR*, 82 USPQ2d at 1396. In view of our affirmance of the rejection of claims 1-5 over Drewes alone, we agree with the Examiner that there would have been reason for the person of skill in the art to have further combined Sugawara or Yuichi with Drewes to have arrived at the claimed invention. We affirm the rejection of claims 1-5 as obvious over Sugawara or Yuichi in view of Drewes.

Appeal 2007-1565
Application 10/682,951

TIME PERIOD

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

dm

MCANDREWS HELD & MALLOY, LTD
500 WEST MADISON STREET
SUITE 3400
CHICAGO IL 60661