

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. 26

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAMES A. DAVIS,
WILLIAM F. BARHAM, JR. And
GREGORY A. BRANDT

Appeal No. 2002-0693
Application No. 09/073,686

HEARD: FEBRUARY 11, 2003

Before WALTZ, PAWLIKOWSKI and MOORE, Administrative Patent Judges.
MOORE, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the final rejection of claims 1-7, 9-12, 14-16, 18-21, 23 and 24, which are all of the claims pending in this application. Claims 8, 13, 17 and 22 have been cancelled.

REPRESENTATIVE CLAIM

Although the appellants have stated that claims 1-7, 9-12, 23 and 24 are separately patentable from claims 14-16 and 18-21, no separate argument for any claim has been provided in the appeal brief or the reply brief. Claims must be argued separately on

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appeal or they stand or fall together. In re Dance, 160 F.3d 1339, 1340, 48 USPQ2d 1635, 1636 (Fed. Cir. 1998). Accordingly, we designate claim 1, the broadest independent product claim, to represent the claims on appeal.

Claim 1 reads as follows:

1. A fire retardant roof sheeting membrane for sloped roofs having an incline of at least 1 inch per linear foot, formed from a composition comprising:

a base polymer containing at least one ethylene-propylene diene terpolymer, said base polymer having up to about 2 percent by weight crystallinity;

from about 85 to about 175 parts by weight of at least one non-combustible mineral filler per 100 parts of said base polymer;

from about 30 to about 50 parts by weight of a processing material, per 100 parts of said base polymer;

from about 50 to about 80 parts by weight of at least one fire retardant additive, per 100 parts of said base polymer, wherein said fire retardant additive includes at least a bromine-containing additive and antimony trioxide (Sb_2O_3); and

from about 1.5 to about 10 parts by weight of a cure package per 100 parts of said base polymer, the sheeting membrane composition containing at least 40 percent non-combustible materials, being calenderable for use on a roof, having a limiting oxygen index (LOI) of at least 40 percent oxygen when tested in accordance with ASTM D2863-91, and capable of passing the UL-790 Test for Fire Resistance of Roof Covering Materials for sloped roofs having an incline of at least one inch per linear foot.

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The References

In rejecting the claims under 35 U.S.C. § 103(a), the examiner relies upon the following references:

Valaitis et al. (Valaitis)	5,260,111	Nov. 9, 1993
Davis et al. (Davis)	5,468,550	Nov. 21, 1995

The Rejection

Claims 1-7, 9-12, 14-16, 18-21, 23 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Valaitis and Davis.

The Invention

The present invention on appeal relates to a fire-retardant roofing sheeting membrane for sloped roofs having an incline of at least one inch per linear foot (so-called "high slope roofs"). The membrane is calenderable from a composition as claimed in claim 1, and has various properties also recited in claim 1.

Discussion

The examiner has found that the sole difference between the roofing composition of Davis and the instant claims is the absence of a halohydrocarbon/antimony trioxide flameproofing additive package. The examiner has further found that the only reasons for the exclusion of this compound were cost and environmental considerations. Finally, the examiner has found that Valaitis teaches it is highly conventional to incorporate flame retardants

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along with fillers in preparing EPDM roofing coverings. Thus, the examiner concludes that it would have been obvious to have used the Valaitis flameproofing composition (already acceptable to Davis but for cost and environmental considerations) in Davis. (Paper #3, pages 1-2).

The appellants' first position on appeal is that Davis is expressly devoid of the flame proofing additive package found in the instant claims, and consequently teaches away from the present invention. (Appeal Brief, page 7, lines 3-12).

This first argument is unpersuasive. This teaching relied upon by the appellants cannot be taken in isolation. Davis includes teachings of a limited capacity for fillers in thermoplastic membranes (column 2, lines 5-8), a savings in labor and material costs (column 2, lines 16-17), and environmental benefits (column 13, lines 48-52) by avoiding the known anti-flame additives. However, Davis also teaches the suitability of antimony trioxide and brominated compounds as normally incorporated into roofing membrane compositions (column 1, line 64 - column 2, line 8).

We find that, considering the reference as a whole, on balance, Davis teaches that the inclusion of the flame-retardant compositions, in reduced amounts, is acceptable and desirable.

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See In re Gurley, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994); In re Mills, 470 F.2d 649, 651, 176 USPQ 196, 198 (CCPA 1972); In re Azorlosa, 241 F.2d 939, 941, 113 USPQ 156, 158 (CCPA 1957), (it is proper for the court and necessarily, the board, to consider everything that a reference discloses).

We make the following additional findings of fact and conclusions of law. We find that Davis teaches the use of:

- EPDM terpolymers having less than 2 weight percent crystallinity (column 4, lines 18-20) which are more calenderable (column 4, lines 21-41) in 100 parts by weight (column 5, lines 16-17);

- fillers including clay (a non-combustible material) (column 5, lines 23-25) in the range of 25 - 110 or 125 phr (column 5, lines 38 - 48)

- 20 - 105 phr of a processing oil (column 7, lines 54 - 56)

- a sulfur containing cure package in the amount of from about 2 to about 6 phr (column 7, line 63 - column 8, line 21).

- flame retardants including "normally included" antimony trioxide, decabromo diphenyl oxide, and brominated paraffins. (column 1, line 64 - column 2, line 16).¹

¹ The appellants state that "conventional amounts of a flame retardant package would amount to less than 50 phr." (Declaration of Davis, paragraph 11, lines 2-3). Less than 50 phr abuts the claimed range of "about 50." The Examiner has not provided us with evidence to establish a higher range is conventional.

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The ranges of the disclosed elements, including the non-combustible percentage, appear to overlap or abut those as are claimed. Thus, on balance, we conclude that the claimed ranges are obvious. See, e.g., In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (concluding that a claimed invention was rendered obvious by a prior art reference whose disclosed range ("about 1-5%" carbon monoxide) abutted the claimed range ("more than 5% to about 25%" carbon monoxide)).

Therefore, we conclude that the disclosure of Davis alone renders the claimed invention obvious. The burden of proving the prior art (less than 50 parts per hundred polymer of fire retardant additives) did not have the claimed characteristics properly shifted to the appellants. Further, if the claimed ranges of the appellants are to be designated as critical, the appellants bear that burden as well, generally by showing that the claimed range achieves unexpected results relative to the prior art range. Woodruff, 919 F.2d at 1578, 16 USPQ2d at 1936.

In contesting the prima facie case of obviousness, the appellants have placed into the record the declaration of one James A. Davis (paper #11), who is an inventor in common with the cited reference and the instantly claimed invention. While being five pages in length, it is generally devoid of useful evidence.

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While we accept that Mr. Davis is of skill in the art (paragraphs 2 and 3) and that he is familiar with the subject matter of the prior art and the instant claims (paragraphs 5 and 6) we do not accept his legal conclusion regarding the teachings of Davis as "expressly excluding all fire retardant packages" (paragraph 7) for the reasons noted above.

We first question the final sentence of paragraph 6 of the declaration which states that the "preferred composition of Davis '550 was initially employed on high sloped roofs, but did not pass the UL 790 burn test." Where in Davis is this stated? If this is not stated in Davis, where is the evidence supporting this factual statement?

Paragraph 7 makes a persuasive conclusion - "In the compositions produced by Davis '550, simply adding a flame retardant package did not produce the desired results." However, the conclusion lacks any objective evidence to support it.

Paragraph 8 is likewise flawed. Although it states "Any composition produced as set forth in Davis '550 (or Valaitis) would not pass the UL 790 burn test for sloped roofs of greater than one inch per linear foot and would not provide the necessary LOI rating of 40 percent oxygen" we are again left without the evidence upon which this conclusion is founded.

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Paragraph 9 states that a current premium product (unidentified, either by trade name or composition) contains a flame-retardant package but does not have 40 percent non-combustibles and therefore has an LOI of 27-30 percent oxygen. We give this statement very little weight for the same reasons as paragraphs 6, 7, and 8.

Paragraphs 10, 11, and 12 similarly conclude that adding flame retardants into Davis or Valaitis would give a composition which would not be calenderable, or would not contain 40 percent non combustibles, or would not pass a UL 790 burn test, or would not yield a 40 % LOI (all statements are again made without pointing to any evidence in the record).

We therefore conclude that this declaration is insufficient to overcome the prima facie case of obviousness.

The appellants contend in their brief that the examiner has incorrectly disregarded the LOI ratings (burn resistivity measurements) as demonstrating any patentable distinction between the roofing covering composition of Davis and the fire retardant roof sheeting membrane of the appellants. (Appeal Brief, page 7, lines 13 - 16).

While we note that the difference in performance between flat, low slope and high slope roofs may be critical to the

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functioning of a flame-proofed EPDM sheeting, there is simply no evidence of record to support the appellants' position that the prior art did not function in the manner as instantly claimed. As noted above, given the nearly identical nature of the prior art with that instantly claimed, the burden shifts to the appellants to prove otherwise.

The appellants note that relatively high levels of non-combustible mineral fillers, relatively low process oil loading, and the presence of a flame retardant package give the claimed results, i.e. steep roof flame resistance (Appeal Brief, page 13, lines 8-20). The appellants also note that the addition of a flame retardant filler to Davis, without other modifications including processing oil, is improper as those of skill in the art know that the addition of processing oil is necessary when additional filler is added. (Appeal Brief, page 13, lines 21-32).

These arguments lack persuasiveness due to the broad ranges claimed instantly. The ranges of the prior art are the same, or abut, the instantly claimed ranges and consequently the instant ranges are found to have been obvious in view of the prior art. It then is up to the appellants to show that the prior art could not act as instantly claimed (being "capable of" passing the test, calenderable, or would fail a high slope test). This would

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require real, experimental comparative evidence, not conjecture and attorney argument.

Consequently, we agree that there is a prima facie case of obviousness. We shall sustain this rejection, but note that the reasoning underlying the rejection by us differs substantially from that used by the examiner. Accordingly to that extent we denominate this a new ground of rejection pursuant to the provisions of 37 CFR § 1.196(b).

Summary

The rejection of claims 1-7, 9-12, 14-16, 18-21, 23 and 24 under 35 U.S.C. § 103(a) as being unpatentable over Valaitis and Davis is sustained.

This decision contains a new ground of rejection pursuant to 37 CFR § 1.196(b)(amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53,131, 53,197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. & Trademark Office 63, 122 (Oct. 21, 1997)). 37 CFR § 1.196(b) provides that, "A new ground of rejection shall not be considered final for purposes of judicial review."

37 CFR § 1.196(b) also provides that the appellants, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (§ 1.197(c)) as to the rejected claims:

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(1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .

(2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

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

AFFIRMED

37 C.F.R. §196(b)

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Administrative Patent Judge)	
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BEVERLY A. PAWLIKOWSKI)	
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