

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT A. FOLLENSBEE
and ERIC G. LARSON

Appeal No. 1996-3942
Application No. 08/095,306

ON BRIEF

Before OWENS, LIEBERMAN, and KRATZ, Administrative Patent Judges.

KRATZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 through 20, which are all of the claims pending in this application.

BACKGROUND

Appellants' invention relates to an abrasive article including a backing layer, make coat, a plurality of abrasive grains, size coat and optionally a barrier layer. In one

embodiment, the backing layer is treated with a saturant consisting essentially of 100% solids radiation curable resin of one or more vinyl ether monomers and/or oligomers. In other embodiments one or more of the size coat, make coat, or optional barrier layer consists essentially of 100% solids radiation curable resin of one or more vinyl ether monomers and/or oligomers. An understanding of the invention can be derived from a reading of exemplary claims 1 and 14, which are reproduced below.

1. An abrasive article comprising in sequential order: a backing material treated with a saturant consisting essentially of a water resistant 100% solids radiation-cured resin of one or more vinyl ether monomers and/or oligomers, a make coat, a plurality of abrasive grains, and a size coat.

14. An abrasive article comprising a backing material, a make coat consisting essentially of 100% solids radiation curable resin of one or more vinyl ether monomers and/or oligomers, a plurality of abrasive grains and a size coat.

The prior art references¹ of record relied upon by the examiner in rejecting the appealed claims are:

Rinker et al. (Rinker)	3,619,150	Nov.
09, 1971		

¹ The examiner occasionally refers to Palazzotto as US-101, Tumey as US-832 and Rinker as US-150.

Tumey et al. (Tumey) 06, 1989	4,836,832	Jun.
Palazzotto et al. (Palazzotto) 02, 1993	5,191,101	Mar.

Claims 1-20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Tumey in view of Palazzotto. Claims 1-20 stand

rejected under 35 U.S.C. § 103 as being unpatentable over the combined disclosures of Tumey and Rinker.

OPINION

We have carefully reviewed the respective positions presented by appellants and the examiner. In so doing, we find ourselves in agreement with appellants' conclusion that the examiner has failed to establish the *prima facie* obviousness of the claimed subject matter. Accordingly, we will not sustain the examiner's rejections.

Tumey discloses an abrasive article including a backing material and abrasive grains, a make coat and size coat (column 2, lines 14-35). Tumey further discloses the use of a radiation curable composition including a resin portion having ethylenically unsaturated groups and 1,2-epoxide groups for use in forming at least one of the coats (column 2, line 36

through column 3, line 23). The examiner acknowledges that Tumey does not disclose the specific 100% solids radiation curable resin of one or more vinyl ether monomers and/or oligomers used as a coat and/or backing material saturant in an abrasive article as claimed herein.

Rejection over Tumey in view of Palazzotto

With respect to the first stated rejection, the examiner notes that Palazzotto is not directed to making an abrasive article. Nonetheless, the examiner is of the opinion that Palazzotto does teach vinyl ethers as part of an energy curable composition and "...suggests utilities of the resulting composition as impregnating and coating compounds which embraces the instant saturant material" (answer, page 3). In the examiner's view (answer, page 3),

... it would have been obvious and fully within the purview of one having ordinary skill in the art to use the specific vinyl ethers disclosed in US-101 in place of the generic ether group-containing ethylenically unsaturated compounds in US-832 motivated by the reasonable expectation of success since both references are related to the analogous art of radiation curable compositions.

Of course, it is the examiner who has the burden of establishing that one of ordinary skill in the art would have found the requisite motivation and reasonable expectation of success for the proposed modification from the applied prior art teachings. See *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991); *In re O'Farrell*, 853 F.2d 894, 902, 7 USPQ2d 1673, 1680 (Fed. Cir. 1988). This the examiner has not done.

In particular, we observe that Tumey discloses that not all radiation curable resins are effective in providing good adhesion of abrasives to a backing (column 1, line 51 to column 2, line 10). While Tumey (column 3, lines 65-67) notes that "[o]xygen and nitrogen atoms are generally present in ether, ester, urethane, amide, and urea groups" in discussing the ethylenically unsaturated compounds that may be used in the disclosed polymerizable mixture, Tumey does not point to or suggest appellants' specified 100% solids radiation curable resin of one or more vinyl ether monomers and/or oligomers vinyl ether. Palazzotto discloses vinyl ethers as one of many cationically polymerizable materials that may be cured by the compounds Palazzotto asserts as inventive (column 15, line

50 to column 17, line 51). Moreover, Palazzotto does not teach any particular utility for polymerizable vinyl ethers but rather generally indicates that the large variety of polymerizable compositions discussed therein may possess particular specified utilities among those disclosed "...depending on the particular cationically-sensitive monomer and ionic organometallic complex used" (column 18, lines 14-26). Hence, in our view, the examiner has not established why the combined references teachings would have led one skilled in the art to modify Tumey so as to arrive at the claimed invention with a reasonable expectation of success as argued by the examiner. Accordingly, we will not sustain the stated rejection.

Rejection over Tumey taken with Rinker

From our perspective, the examiner's second stated rejection also falls short of establishing the *prima facie* obviousness of the claimed abrasive article since Rinker, like Palazzotto above, does not remedy the deficiencies of Tumey.

Rinker teaches that a resin composition including a formaldehyde containing thermosetting resin and a compatible elastomeric or thermoplastic resin may be used as part of a

nonloading coating for sandpaper (column 2, lines 25-30). The nonloading coating also includes soap, solvent and filler (column 1, line 61 to column 2, line 14). Among the choices for a compatible resin that may be used in conjunction with the thermosetting resin, Rinker lists thermoplastic resins made from vinyl ethers. The examiner reasons, in effect, that since Rinker and Tumey are from the same field of endeavor, it would have been obvious for one of ordinary skill in the art to use the vinyl ethers of Rinker in Tumey "... in place of the generic ether group-containing ethylenic compounds of US-832 ... with the expectation of producing an improved coated abrasive article as taught in US-150" (answer, page 4).

Manifestly, the examiner's stated rejection falls short of presenting a *prima facie* case of obviousness. The mere fact that the prior art could be modified as proposed by the examiner is not sufficient to establish a *prima facie* case. See *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992). The suggestion for the proposed modification must be in the prior art, and not in the

applicant's disclosure. *In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988).

In the case before us, the examiner has simply failed to provide acceptable reasons, based on the applied prior art or on the basis of knowledge generally available to one of ordinary skill in the art for the proposed modification. This is so since the examiner has not convincingly explained why the combined references would have fairly suggested to one of ordinary skill in the art the selection of one of several possible choices for a co-resin in a nonloading coating of Rinker as a substitute radiation curable resin for use as a coat or saturant in the abrasive product of Tumey.

For the above reasons, we find that the examiner has not established that the combined teachings of Tumey and Rinker provide a factual basis which is sufficient for supporting a conclusion of obviousness of the invention recited in any of appellants' claims. Consequently, we will not sustain the rejection under 35 U.S.C. § 103 over these references.

CONCLUSION

The decision of the examiner to reject claims 1-20 under 35 U.S.C. § 103 as being unpatentable over Tumey in view of Palazzotto and claims 1-20 under 35 U.S.C. § 103 as being unpatentable over the combined disclosures of Tumey and Rinker is reversed.

REVERSED

TERRY J. OWENS)	
Administrative Patent Judge)	
)	
)	
)	
)	BOARD OF PATENT
PAUL LIEBERMAN)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
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)	
PETER F. KRATZ)	
Administrative Patent Judge)	

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APPEAL NO. - JUDGE KRATZ
APPLICATION NO.

APJ KRATZ

APJ LIEBERMAN

APJ OWENS

DECISION: **REVERSED**

Prepared By: TINA

DRAFT TYPED: 31 Oct 00

FINAL TYPED: