

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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 MICHAEL A. COSMAN and
ADRIAN BALLADARES

Appeal No. 2006-2484
Application No. 10/837,337

ON BRIEF

Before KRATZ, JEFFREY T. SMITH, and FRANKLIN, Administrative Patent Judges.

KRATZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's refusal to allow claims 1-29, which are all of the claims pending in this application. We have jurisdiction pursuant to 35 U.S.C. § 134.

BACKGROUND

Appellants' invention relates to a preformed composition comprising at least one sulfur-containing polymer, an electrically conductive filler and a curing agent and a method of sealing an aperture with such a composition. The composition shields EMI/RFI radiation. An understanding of the invention can be derived from a reading of exemplary claims 1 and 28, which are reproduced below.

1. A preformed composition in shaped-form comprising:
a base composition comprising at least one sulfur-containing polymer, and at least one electrically conductive filler; and
a curing agent composition;
wherein the preformed composition is capable of shielding EMI/RFI radiation.

28. The preformed composition of Claim 1, wherein the sulfur-containing polymer has a number average molecular weight ranging from 500 to 8,000 grams per mole.

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

Smith et al. (Smith)	3,659,896	May 02, 1972
DeMoss et al. (DeMoss)	6,372,849	Apr. 16, 2002

Claims 1-29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over DeMoss or Smith.¹

¹ Claims 28 and 29 were omitted from the statement of rejection set forth in the final office action. Appellants make note of that omission at page 2 of the brief. The examiner includes claims 28 and 29 in the statement of rejection set forth in the answer. Appellants have not asserted that a new ground of rejection is involved in the answer by filing a timely petition. Rather, appellants have indicated that all of claims 1-29 were rejected and are appealed, as noted at

We refer to the brief and reply brief and to the answer for a complete exposition of the opposing viewpoints expressed by appellants and the examiner concerning the issues before us on this appeal.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. In so doing, appellants have not persuaded us of reversible error on the part of the examiner. Accordingly, we

the top of page 2 of the brief. Also, appellants treat claims 28 and 29 as being among the claims rejected over DeMoss or Smith in the final rejection. See arguments at page 5 of the appeal brief. On this record, we regard the examiner's inadvertent omission of claims 28 and 29 from the statement of rejection in the final office action as a harmless error that was recognized as such by appellants and corrected in the answer by the examiner.

affirm the examiner's rejection of the appealed claims for substantially the reasons set forth in the answer. We add the following for emphasis.

Claims 1-27

Appellants argue claims 1-27 together with the exception that an argument with respect to non-analogous art respecting the Smith patent is treated separately as a separate argument as to claim 24 to the extent that claim is separately argued in the brief (page 4). Thus, we select claim 1 as representative of rejected claims 1-27 with the exception that we will consider claim 24 separately as to the application of Smith thereto to the extent separately argued in the briefs.

Appellants do not dispute the examiner's determination that each of Smith and DeMoss discloses or suggests a sealing composition including at least one sulfur-containing polymer, a curing agent and a filler that can be conductive, as called for in representative claim 1.

Like appellants, DeMoss discloses sealant and potting formulations including, *inter alia*, sulfur-containing polymers, such a polythioethers, fillers, and one or more curing agents.²

² Appellants (paragraph bridging pages 7 and 8 of their specification) disclose that polythioethers, such as disclosed by DeMoss (U.S. Patent No. 6,372,849) are useful in appellants'

The fillers of DeMoss are selected from fillers useful in aerospace applications including, *inter alia*, carbon black. See, e.g., column 6, lines 37-61 and column 8, lines 3-35 of DeMoss. DeMoss (column 9, lines 43-52) teaches a sealant formulation disclosed therein can be used for aerospace sealing applications and for encapsulating electrical and electronic components.

Given the above commonalities between the claimed composition and that of DeMoss and for reason set forth in the answer, we agree with the examiner that aerospace sealant composition(s) taught or suggested by DeMoss would have obviously been expected to have EMI/RFI radiation shielding properties corresponding to the requirements of representative claim 1. When the appellants' product and that of the prior art appear to be substantially identical, the burden shifts to appellants to

composition as the sulfur-containing polymer. Moreover, appellants (paragraph bridging pages 11 and 12 of their specification) disclose that carbon black is a known useful electrically conductive filler for their composition.

provide evidence that the prior art product does not necessarily or inherently possess the relied-upon characteristics of the appellants' claimed product. See In re Fitzgerald, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980); In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977); In re Fessmann, 489 F.2d 742, 745, 180 USPQ 324, 326 (CCPA 1974). The reason is that the Patent and Trademark Office is not able to manufacture and compare products. See Best, 562 F.2d at 1255, 195 USPQ at 434.

In further regard to this matter, we note that representative claim 1 does not require any particular degree of EMI/RFI shielding capability for the recited composition. Nor have appellants presented evidence to establish that the composition of DeMoss has no EMI/RFI shielding capability when used as a sealant.

Thus, appellants' argument that the claimed EMI/RFI shielding characteristic is not taught or suggested by DeMoss is unpersuasive on this record.

Appellants argue that DeMoss does not teach or suggest a preformed composition in shaped form as representative claim 1 requires. However, DeMoss teaches that their formulation can be extruded and used as a sealant. Thus, DeMoss would have

reasonably led one of ordinary skill in the art to make a shaped form of the product composition of DeMoss.

Concerning Smith, appellants do not contest the examiner's determination (answer, page 4) that Smith teaches or suggests that the sealing strip composition thereof can include a sulfur-containing polymer, curing agent and conductive filler, as required by representative claim 1. Rather, appellants argue that Smith is silent as to EMI/RFI shielding capability. However, given the commonalities between the polysulfide polymer containing sealing composition of Smith and the composition called for in representative claim 1, it is reasonable to expect that the composition of Smith would be characterized by some EMI/RFI shielding capability. As noted above, representative claim 1 does not require that the claimed composition possess any particular degree of EMI/RFI shielding. Nor have appellants furnished any evidence to establish that the sealing composition of Smith would be devoid of any EMI/RFI shielding capability.

Appellants argue that Smith is directed to a composition that is useful for sealing and adhering an automobile windshield and that Smith discloses a number of ingredients that would not be useful for aerospace applications. Thus, appellants maintain that Smith represents non-analogous art. We disagree.

Appellants have not substantiated their argument with persuasive evidence to show that any required ingredients of Smith's composition would render that composition unsuitable as an aerospace sealant. Moreover, the test for non-analogous art is first whether the art is within the field of the inventor's endeavor and, if not, whether it is reasonably pertinent to the problem with which the inventor was involved. In re Wood, 599 F.2d 1032, 1036, 202 USPQ 171, 174 (CCPA 1979). A reference is reasonably pertinent if, even though it may be in a different field of endeavor, it logically would have commended itself to an inventor's attention in considering his problem because of the matter with which it deals. In re Clay, 966 F.2d 656, 659, 23 USPQ2d 1058, 1061 (Fed. Cir. 1992). Representative claim 1 is drawn to a composition in shaped form and is not limited to an aerospace application of a sealant. Thus, appellants arguments respecting Smith representing non-analogous art are generally misplaced.

In so far as appellants' reference to dependent claim 24 at page 4 of the brief may be considered a separate non-analogous art argument respecting that dependent claim, we note that one of ordinary skill in the art would not limit the sealant strip composition of Smith to automobile windshield applications, as

argued. Indeed, Smith discloses that the product sealing strip disclosed therein can be used in other applications, including in applications for vehicles designed for air uses (aerospace application), as would be understood by one of ordinary skill in the art. See column 15, lines 49-58 of Smith. Thus, Smith is directed to substantially the same field of endeavor. In sum, the record reflects that the teachings of Smith would have logically commended themselves to one of ordinary skill in the art seeking sealants in general, as well as sealants for aerospace uses.³

Claims 28 and 29

Appellants argue these claims as a group. Thus, we select claim 28 as representative of this claim grouping.

³ Appellants do not furnish any other separate arguments pertaining to claim 24 or separate arguments pertaining to other individual appealed claims among the claims in the grouping of claims 1-27. See 37 CFR § 41.37(c)(1)(vii).

In addition to the arguments advanced with respect to independent claim 1, appellants maintain that a sulfur-containing polymer corresponding to the polymer having a number-average molecular weight range specified in representative dependent claim 28 is not taught by the applied references. We disagree for reasons expressed by the examiner in the answer (pages 3, 4 and 6). See, e.g., column 4, lines 30-35 of DeMoss for a teaching of using polymers with a number average molecular weight corresponding to that claimed by appellants. It is well settled that when ranges recited in a claim overlap with and/or touch ranges disclosed in the prior art, a prima facie case of obviousness typically exists and the burden of proof is shifted to the applicants to show that the claimed invention would not have been obvious. In re Peterson, 315 F.3d 1325, 1329-30, 65 USPQ2d 1379, 1382-83 (Fed. Cir. 2003); In re Geisler, 116 F.3d 1465, 1469, 43 USPQ2d 1362, 1365 (Fed. Cir. 1997); In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990). As for the Smith reference, we note that the lower limit of the molecular weight of "about 8,000" (column 3, lines 54-65) and the additional disclosure at column 6, lines 1-13 reasonably suggest that polymers with a number average molecular weight of at or near 8,000 would be suitable as at least one polymer.

ingredient in the sealing strip formulation of Smith. In cases involving adjacent ranges, our reviewing Court have consistently held that a prima facie case of obvious exists when the claimed range and the prior art range do not overlap but are close enough such that one skilled in the art would have expected them to have the same properties. Titanium Metals Corp. of Am. v. Banner, 778 F.2d 775, 783, 227 USPQ 773, 779 (Fed. Cir. 1985). Consequently, a prima facie case of obviousness has been made out in this case that has not been persuasively refuted in the briefs.

CONCLUSION

The decision of the examiner to reject claims 1-29 under 35 U.S.C. § 103(a) as being unpatentable over DeMoss or Smith is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a) (1) (iv) (2004).

AFFIRMED

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