

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. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAVID JEROME COMO
and BARRY MARK KETOLA

Appeal No. 2000-0994
Application 09/097,123

ON BRIEF

Before KIMLIN, WARREN and OWENS, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

Decision on Appeal

This is an appeal under 35 U.S.C. § 134 from the decision of the examiner finally rejecting claims 1 through 5 and 8 through 11, and refusing to allow claims 6 and 7 as amended subsequent to the final rejection. These are all of the claims in the application. Claim 1 is illustrative of the claims on appeal:

1. A dielectric lubricant comprising:

(A) a phenyl-methyl siloxane having an average general formula $\text{Me}_3\text{SiO}-(\text{Me}_2\text{SiO})_x-(\text{MePhSiO})_y-\text{SiMe}_3$, wherein each Me represents a methyl group, each Ph represents a phenyl group, x has a value from zero to about 0.25 and $x + y = 1$;

said phenyl-methyl siloxane having a viscosity at 25°C from about 500 to about 10,000 centipoise;

(B) a polytetrafluoroethylene powdered solid; and

component (A) being present in an amount of 50 to 80 parts by weight and compound (B) being present in an amount of 20 to 50 parts, by weight, per 100 parts by weight of the combined weights of (A) and (B).

The appealed claims, as represented by claim 1, are drawn to a dielectric lubricant composition comprising at least a phenyl-methyl siloxane having the average general formula and viscosity specified in the claim, and a polytetrafluoroethylene powdered solid, the two specified components being present in the specified amounts. Claim 8 specifies a silicone rubber spark plug boot having a dielectric lubricant disposed in the boot cavity, wherein the dielectric lubricant is defined in the same manner as in claim 1. Claim 9 specifies a method of lubricating a spark plug boot by disposing on the walls of the cavity thereof a lubricant comprising the stated parts of a phenyl-methyl siloxane having the average general formula as specified in claim 1 and of a polytetrafluoroethylene powdered solid. According to appellants, the lubricant composition as specified in claim 1 and as encompassed by claim 9 withstands high temperatures and prevents the spark plug boot from bonding to the spark plug (specification, e.g., page 2).

The references relied on by the examiner are:

Lontz	2,644,802	Jul. 7, 1953
Wright	3,671,429	Jun. 20, 1972

The examiner has rejected appealed claims 1 through 11 under 35 U.S.C. § 103(a) as being unpatentable over Lontz or Wright, considered separately.

Appellants, in the brief (page 3), have presented three groups of claims: claims 1-7; claim 8; and claims 9-11. We decide this appeal based on appealed claims 1, 8 and 9. 37 CFR § 1.192(c)(7) (1997).

We affirm the ground of rejection with respect to appealed claims 1 through 7 and reverse with respect to appealed claims 8 through 11.

Rather than reiterate the respective positions advanced by the examiner and appellants, we refer to the examiner's answer and to appellants' brief for a complete exposition thereof.

Opinion

As an initial matter, we find that, when considered in light of the written description in the specification as interpreted by one of ordinary skill in this art, *see, e.g., In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997), the plain language of appealed

claim 1 requires that the composition claimed therein comprises at least “50 to 80 parts by weight” of a phenyl-methyl siloxane having the average general formula and viscosity specified in the claim, and 20 to 50 parts of a polytetrafluoroethylene powdered solid, the two specified components being present in the specified amounts “per 100 parts by weight of the combined weights of (A) and (B).” We determine that the transitional term “comprising” opens the claimed compositions to compositions which contain other ingredients in addition to the two specified ingredients. *See Exxon Chemical Patents Inc. v. Lubrizol Corp.*, 64 F.3d 1553, 1555, 35 USPQ2d 1801, 1802 (Fed. Cir. 1995) (“The claimed composition is defined as comprising - meaning containing at least - five specific ingredients.”); *In re Baxter*, 656 F.2d 679, 686-87, 210 USPQ 795, 802-03 (CCPA 1981) (“As long as one of the monomers in the reaction is propylene, any other monomer may be present, because the term ‘comprises’ permits the *inclusion* of other steps, elements, or materials.”). However, the term “dielectric lubricant” in the preamble of claim 1 limits the claimed compositions to those ingredients in such amounts which do not preclude the composition from exhibiting dielectric properties. *See generally, Corning Glass Works v. Sumitomo Elect. U.S.A., Inc.*, 868 F.2d 1251, 1257, 9 USPQ2d 1962, 1966 (Fed. Cir. 1989); *In re Stencel*, 828 F.2d 751, 754-55, 4 USPQ2d 1071, 1073 (Fed. Cir. 1987).

We have carefully reviewed the record on this appeal and based thereon find ourselves in agreement with the supported position advanced by the examiner (answer, pages 3-5) that, *prima facie*, one of ordinary skill in this art routinely following the teachings of each of Lontz and Wright would have combined a phenyl-methyl siloxane having the average general formula and viscosity specified in appealed claim 1 and a polytetrafluoroethylene powdered solid specified in appealed claim 1 in amounts falling within the range specified in this claim, in the reasonable expectation of obtaining a composition falling within the teaching of the reference. *See generally, Merck & Co., Inc. v. Biocraft Labs., Inc.*, 874 F.2d 804, 807, 10 USPQ2d 1843, 1845-46 (Fed. Cir. 1989) (“That the ‘813 patent discloses a multitude of effective combinations does not render any particular formulation less obvious.”); *In re Lemin*, 332 F.2d 839, 841, 141 USPQ 814, 815-16 (CCPA 1964) (“Generally speaking there is nothing unobvious in choosing ‘some’ among ‘many’ indiscriminately.”). Indeed, appealed claim 1, as we have interpreted this claim above, encompasses compositions that contain finely divided zinc oxide in the amount shown by

Wright, because of the transitional term “comprising.” We note that Wright teaches that the compositions have “excellent dielectric properties” (col. 6, line 71), as pointed out by the examiner. The compositions of Lontz contain only the two ingredients.

Accordingly, *prima facie*, one of ordinary skill in this art routinely following the teachings of each of the references would have arrived at claimed compositions encompassed by appealed claim 1. Indeed, as pointed out by the examiner (answer, pages 5 and 6), the claimed viscosity ranges and amounts of the two ingredients are encompassed by or overlap with the ranges for the same parameters set forth in appealed claim 1. It is well settled that where the claimed ranges are encompassed by or overlap with the ranges for the same parameters disclosed in the applied prior art, the claimed ranges will not patentably distinguish the claimed invention from the prior art unless the claimed ranges are shown to be critical, such as by a showing of a new or unexpected result, thus shifting the burden to appellants to establish the criticality of the claimed ranges. *See generally, In re Geisler*, 116 F.3d 1465, 1470, 43 USPQ2d 1362, 1365 (Fed. Cir. 1997), and cases cited therein; *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980).

Accordingly, since a *prima facie* case of obviousness of appealed claim 1 has been established over each of Lontz and Wright, we have again evaluated all of the evidence of obviousness and nonobviousness based on the record as a whole, giving due consideration to the weight of appellants’ arguments. *See generally, In re Johnson*, 747 F.2d 1456, 1460, 223 USPQ 1260, 1263 (Fed. Cir. 1984); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

We have carefully considered all of appellants’ arguments in the brief. Appellants submit that it would require undue experimentation to select the phenyl-methyl siloxanes and polytetrafluoroethylene powdered solid falling within the parameters specified for the claimed dielectric compositions from the teachings of Lontz because the reference exemplifies a viscosity for the polyorganosiloxane less than that required by appealed claim 1, does not specifically point to phenyl-methyl siloxane or polytetrafluoroethylene powdered solids, and teaches that the composition cannot contain more than 50% of polyorganosiloxane (brief, pages 4-6). With respect to Wright, appellants argue that the reference teaches away from the claimed composition

because one of ordinary skill in the art would not be motivated to remove zinc oxide taught by Wright to be necessary to the composition, and it would require undue experimentation to arrive at the claimed viscosity range for the phenyl-methyl siloxane (*id.*, pages 8-9). We cannot agree.

The issue here is whether each of Lontz and Wright would have reasonably suggested the claimed composition to one of ordinary skill in this art. *See generally, Merck v. Biocraft, supra; Lemin, supra.* Thus, the selection of ingredients made by this person must be considered based on the teachings of the reference, and not whether the selection would be made based on appellants' invention. *See generally, See In re Kronig*, 539 F.2d 1300, 1304, 190 USPQ 425, 428, (CCPA 1976) (“[I]t is sufficient here that [the reference] clearly suggests doing what appellants have done.”). In this respect, the selection of ingredients that can be made by one of ordinary skill in this art within the teachings of the reference is not limited to exemplified ingredients. *See generally, Merck v. Biocraft*, 874 F.2d at 807, 10 USPQ2d at 1846, quoting *In re Lamberti*, 545 F.2d 747, 750, 192 USPQ 278, 280 (CCPA 1976) (“But in a section 103 inquiry, ‘the fact that a specific [embodiment] is taught to be preferred is not controlling, since all disclosures of the prior art, including unpreferred embodiments, must be considered.’”). The fact that the reference discloses a range for a parameter that is different from the range claimed for the same parameter does not patentably distinguish the claimed invention where the claimed range overlaps with or is encompassed by the range disclosed in the reference in the absence of a showing of the criticality of the claimed range. *See generally, Geisler, supra; Boesch, supra; see also In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990) (“The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. [Citations omitted.] These cases have consistently held that in such a situation, the applicant must show that the particular range is *critical*, generally by showing that the claimed range achieves unexpected results relative to the prior art range. [Citations omitted.]”).

There is no dispute that Lontz and Wright each disclose the phenyl-methyl siloxane and polytetrafluoroethylene ingredients of the claimed composition, even if these components are not disclosed therein to be preferred. We point out here that compositions encompassing zinc oxide are encompassed by appealed claim 1 as we discussed above. Therefore, we cannot agree that

Wright teaches away from the claimed compositions, and indeed, the reference shows that compositions containing this ingredient have dielectric properties as we found above.¹ Thus, the issue reduces to whether there is in the record evidence that the ranges with respect to the viscosity of the phenyl-methyl siloxane ingredient and the amounts of the ingredients present in the claimed compositions are critical vis-à-vis the ranges disclosed for the same ingredients in Lontz and Wright which encompass or overlap with the claimed ranges. The appellants do not allege such evidence and we find none.

Accordingly, based on our consideration of the totality of the record before us, we have weighed the evidence of obviousness found in each of Lontz and Wright with appellants' countervailing evidence of and argument for nonobviousness and conclude that the claimed invention encompassed by appealed claims 1 through 7 would have been obvious as a matter of law under 35 U.S.C. § 103(a).

We cannot reach the same result with respect to appealed claims 8 and 9 which are drawn to a silicone rubber spark plug boot having the claimed dielectric lubricant disposed in the boot cavity thereof, and a method of lubricating a spark plug boot by disposing the claimed dielectric lubricant on the walls of the cavity, respectively. The examiner admits that neither Lontz nor Wright teaches the use of the compositions disclosed therein in connection with lubricating the cavity of a sparkplug boot, but maintains with respect to Lontz that one of ordinary skill in the art would mold the composition "onto various articles such as spark plugs [sic, sparkplug boot]" to take advantage of the properties of the compositions (answer, pages 4 and 6). We observe that even if this was so, Lontz teaches that the polyorganosiloxane lubricant is removed from the composition at some point in forming the molded article (see, e.g., col. 3, lines 53-58, and col. 8, lines 65-71). The examiner does not even submit such an explanation for Wright, alleging only

¹ See *In re Gurley*, 27 F.3d 551, 552-53, 31 USPQ2d 1130, 1131-32 (Fed. Cir. 1994) ("A reference may be said to teach away when a person of ordinary skill, upon reading the reference would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant. The degree of teaching away will of course depend on the particular facts; in general, a reference will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant. [Citations omitted.]").

that “[t]he Examiner is of the position that appellants [sic] claimed invention is clearly taught by Wright” (answer, page 5). Thus, we agree with the position advanced by appellants (brief, pages 6-7 and 9-10). Therefore, it is clear that the examiner has resorted to hindsight gained from appellants’ specification and claims in order to reach the conclusion that the claimed invention was *prima facie* obviousness over each of Lontz and Wright which is an inappropriate standard of obviousness under 35 U.S.C. § 103(a). *See generally, In re Rouffet*, 149 F.3d 1350, 1358, 47 USPQ2d 1453, 1458 (Fed. Cir. 1998) (“hindsight” is inferred when the specific understanding or principal within the knowledge of one of ordinary skill in the art leading to the modification of the prior art in order to arrive at appellant’s claimed invention has not been explained); *W.L. Gore & Associates v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983) (“To imbue one of ordinary skill in the art with knowledge of the invention . . . when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to . . . hindsight . . . wherein that which only the inventor taught is used against its teacher.”).

Accordingly, we reverse the grounds of rejection with respect to appealed claims 8 through 11.

The examiner’s decision is affirmed-in-part.

Appeal No. 2000-0994
Application 09/097,123

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

AFFIRMED-IN-PART

EDWARD C. KIMLIN)	
Administrative Patent Judge)	
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CHARLES F. WARREN)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
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Appeal No. 2000-0994
Application 09/097,123

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