THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper 46

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

GREGORY J. YUREK and JOHN B. VANDERSANDE,
Junior Party,
(Patent 5,189,009),

v.

YUTAKA YAMADA, SATORU MURASE, HISASHI YOSHINO,
NOBURU FUKUSHIMA, HIROMI NIU, SHIGEO NAKAYAMA
and MISAO KOIZUMI,
Senior Party,
(Application 08/320,785).

Patent Interference No. 104,627

Before: SCHAFER, TORCZON and MEDLEY, Administrative Patent Judges.

SCHAFER, Administrative Patent Judge.

DECISION ON YAMADA'S PRELIMINARY MOTION AND FINAL JUDGMENT

A. Introduction

This interference is between Patent 5,189,009 issued to Yurek et al. and Yamada et al's application 08/320,785. The declaration accorded Yurek an earliest effective filing date of

March 27, 1987. Yamada was accorded an earliest effective filing date of March 13, 1987, making Yamada the senior party. Paper 1, pp. 3-4. Preliminary statements and preliminary motions were due June 8, 2001. Paper 25, p. 7. No preliminary statement or preliminary motions were filed by Yurek. In a telephone conversation with paralegal specialist Sonja Despertt on June 14, 2001, counsel for Yurek stated that no preliminary statement or any other papers would be filed. Ordinarily this circumstance would result in an immediate judgment on priority in favor of Yamada because Yurek would be restricted to its effective filing date (37 CFR § 1.629(c)) which is subsequent to Yamada's date. However, Yamada has filed a preliminary motion asserting that there is no interference-in-fact between any of Yurek's or Yamada's claim. This motion raises a threshold issue challenging the existence of this interference. Accordingly, before we may issue a judgment we must decide Yamada's motion.

B. Yamada's Preliminary Motion of no interference-in-fact

Yamada has filed a preliminary motion asserting that no interference-in-fact exists between any of the parties respective claims. Notwithstanding that Yurek does not appear to oppose, we deny the motion.

An interference-in-fact exists when at least one claim of a party and one claim of an opponent are directed to the same patentable invention. A party's claim is directed to the same patentable invention as an opponent's claim if it is anticipated or obvious from the opponent's claim assuming the opponent's claim to be prior art. 37 CFR § 1.601(n). The test for interference-in-fact is a two- way test. Winter v. Fujita, 53 USPQ2d 1234, 1243 (Bd. Pat. App. & Int. 1999). An interference-in-fact exists if a claim of a party and a claim of the opponent satisfy the two-way test. On the other hand, for a party to show no interference-in-fact, patentable distinctness need only be shown one way. As with all preliminary motions, Yamada has the burden of proof. 37 CFR § 1.637(a). In order to meet this burden Yamada must demonstrate that an interference-in-fact does not exist between any of Yamada's and all of Yurek's claims.

1. The subject matter of the Interference

This interference relates to superconducting wires and other superconducting products. More particularly, it relates to superconducting products having a continuous superconducting

oxide phase combined with a noble metal such as silver (Ag). The count is

> A superconducting composite according to Claim 55 of Yamada application 08/320,785
> or
> a superconducting composite according to Claim 1 Yurek Patent 5,189,009.

Yamada's Claim 55 and Yurek's Claim 1 provide:

> 55. A superconducting wire having:
> an Ag matrix; and
> a continuous oxide superconductor formed in said matrix.
>
> 1. A superconducting composite comprising
> a continuous copper containing superconducting oxide phase in intimate contact with a noble metal phase to provide said superconducting composite with improved mechanical properties.

2. Claim construction

Yamada's position depends on a broad construction of Yurek's claims. Yamada argues that Yurek's claim 1 embraces a wide variety of superconducting composites while Yamada's claims are directed only to a single one of these species. Yamada states:

> Claim 1 of the Yurek patent embraces a very large number of species of superconducting composites. The recitation in [Yurek's Claim 1] that the "superconducting oxide phase [is] in intimate contact with a noble metal phase" includes any composition in which there is no separation between the superconducting oxide phase and the noble metal phase-- i.e., in which the superconducting oxide phase and the noble metal phase are in direct contact.

Paper 27, p. 10, (1st brackets added, 2nd original, exhibit citations deleted). Yamada relies upon the opinion testimony of Alexander Otto as support. Yamada Ex. 1005, ¶ 23.

We do not agree with Yamada's claim construction. In construing the claims we must examine the patent's specification and prosecution history to determine whether the patentee has given the claim terms a particular meaning. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582, 39 USPQ2d 1573, 1577 (Fed. Cir. 1996) (holding that "it is always necessary to review the specification to determine whether the inventor has used any terms in a manner inconsistent with their ordinary meaning [because the specification] acts as a dictionary when it expressly defines

terms

. . . or when it defines terms by implication" (emphasis added)). In our view, Yurek has given the phrase "superconducting oxide phase in intimate contact with a noble metal phase" a more limited scope than asserted by Yamada. Based upon Yurek's written description, as we explain further below, we interpret Yurek's claimed superconducting composites as having a continuous copper containing superconducting oxide mixed with a noble metal. We do not credit Otto's opinion testimony because it does not appear to consider the meaning of the claim language in light of Yurek's written description.

a. "Superconducting composite comprising a continuous copper containing superconducting oxide phase in intimate contact with a noble metal phase"

Yurek's specification, in the part titled "Summary of the Invention," describes a number of aspects or embodiments, only one of which is described as a composite. Thus, Yurek describes forming superconducting oxides in various shapes (Yamada Ex. 1002, col. 1, lines 32-50); as a thick coating on a metal substrate (Yamada Ex. 1002, col. 1, lines 51-63); as a thin film on a metallic, insulating or semiconductor substrate (Yamada Ex. 1002, col. 1, line 64 - col. 2, line 2) and as a superconducting oxide "composite" (Yamada Ex. 1002, col. 2, lines 3-27). Yurek uses "composite" to describe products which include a continuous superconducting metal phase in intimate admixture with an noble metal. This mixture of superconducting oxide and noble metal are said to provide improved mechanical properties. The mixture may be formed from an alloy of the metallic elements of the superconducting oxide and a noble metal. The alloy is subject to oxidizing conditions which convert the metallic elements of the superconductor to a superconducting oxide but do not oxidize the noble metal. Thus, Yurek states:

> In another aspect the invention features a superconducting oxide-metal composite in which a noble metal phase (noble in the sense that its oxide is thermodynamically unstable under the reaction conditions employed relative to the superconducting oxide that forms) is intimately mixed with a superconducting oxide phase to achieve desired mechanical properties. In preferred embodiments, the noble metal is present initially as an alloying element with the metallic elements of the oxide; the alloy is then oxidized under conditions that convert the metallic elements of the oxide to the superconducting oxide without oxidizing the noble metal. The latter precipitates as a finely divided, substantially pure metal phase (rather than

> as a second oxide phase) that is intimately mixed with the superconducting oxide in the final composite, the oxide phase being continuous (or nearly so) throughout the composite. The noble metal may be a metallic element different from the metallic elements of the oxide, e.g., Au, Pt, Pd, or Ag, but may also be an excess amount (stoichiometrically) of one of the metallic elements of the oxide, e.g., Cu. The superconducting oxide-metal composites exhibit improved mechanical properties (strength, ductility, etc.) because these properties are dominated by the metallic phase, rather than by the brittle oxide phase.

Yamada Ex. 1002, col. 2, lines 3-27. Thus, Yurek's written description uses "composite" to describe an architecture or microstructure which is mixture of a continuous superconducting oxide phase and a noble metal phase.

Yurek's Examples, support this interpretation. Example 1 describes the formation of a superconducting oxide by forming a molten alloy of the metallic elements of the oxide into a ribbon, followed by an oxidation treatment which converts the metal into a superconducting oxide. Yamada Ex. 1002, col. 2, line 59 - col. 3, line 7. Examples 2 and 3 are directed to the formation of "composites." The composites are said to have a metal skeleton which gives the product improved strength and ductility over the inherently brittle oxides. Example 2 provides:

> A superconducting oxide-metal composite, in which the oxide phase is an oxide of La, Ba, and Cu, and the metallic phase is a noble metal such as Ag, is prepared following the procedure describe in Example 1 [is] except that Ag metal is melted together with La, Ba, and Cu to form the alloy, the initial oxidation step is at 400°C., and the maximum oxidation temperature is less than the melting point of Ag metal (960° C.). During oxidation Ag is not oxidized, but rather precipitates out as a separate phase of substantially pure Ag. The metal phase, by being intimately mixed with the oxide phase, acts as a "skeleton" in the composite, resulting in improved ductility and strength.

Yamada Ex. 1002, col. 3, lines 8-22 (emphasis added). Example 3 is said to be the same but substitutes excess copper for the silver in Example 2.

Considering the portions of Yurek's written description referred to above, as well as the remainder of Yurek's written description, we hold that the phrase "superconducting composite comprising a continuous copper containing superconducting oxide phase in intimate contact with a noble metal phase" has been given a special meaning by Yurek's specification. It refers to superconducting products having a continuous superconducting oxide phase in admixture with

noble metal. Thus, we do not agree with Yamada's argument that Yurek's claims include "any composition in which there is no separation between the superconducting oxide phase and the noble metal phase" (Paper 27, p. 10) and "do not specify any architecture for the superconducting composite . . ." (Paper 27, p. 17).

b. "To provide said superconducting composite with improved mechanical properties"

Yurek's specification says that the "superconducting oxide-metal composites exhibit improved mechanical properties (strength, ductility, etc.) because these properties are dominated by the metallic phase, rather than by the brittle oxide phase." Yamada Ex. 1002, col. 2, lines 23-27. The only other reference to mechanical properties is in Yurek's Example 2 which states: "The metal phase, by being intimately mixed with the oxide phase, acts as a skeleton' in the composite, resulting in improved ductility and strength." Yamada Ex. 1002, col. 3, lines 19-22.

In our view "superconducting composite with improved mechanical properties" when read in light of the written description refers to superconducting composites having a noble metal phase which acts as a "skeleton" and dominates the mechanical properties of the composite.

c. "Noble Metal"

The phrase noble metal is expressly defined in Yurek's specification as: "a metallic element different from the metallic elements of the oxide, e.g., Au, Pt, Pd, or Ag, but may also be an excess amount (stoichiometrically) of one of the metallic elements of the oxide, e.g., Cu." Yamada Ex. 1002, col. 2, lines 19-23.

3. Interference-in-fact

As we stated above an interference-in-fact exists if any claim of a party anticipates or renders obvious a claim of an opponent and vice versa. If the test fails in either direction there is no interference-in-fact. Yamada argues that the subject matter of Yurek's claims 1-12 do not anticipate or render obvious any of Yamada's claims. In light of our construction of claim 1, we can not agree. In evaluating interference-in-fact we will compare Yurek's claim 10 with Yamada's claim 55. We will start with Yurek's Claim 10 as presumed prior art. 37 CFR § 1.601(n). Yurek's Claim 10 depends from Claim 9 which depends from claim 1. These claims are reproduced below:

Yurek Claim 1.	A superconducting composite comprising a continuous copper containing superconducting oxide phase in intimate contact with a noble metal phase to provide said superconducting composite with improved mechanical properties.
Yurek Claim 9.	The composite of claim 1 wherein said composite is in the form of a shaped article.
Yurek Claim 10.	The composite of claim 9 wherein said shaped article comprises a wire, ribbon, rod, or ring.
Yamada Claim 55	A superconducting wire having: an Ag matrix; and a continuous oxide superconductor formed in said matrix.

Yurek Claim 10 expressly describes a superconducting wire having a continuous copper containing superconducting oxide phase. Yurek claim 10 does not recite that the superconducting oxide is in an Ag matrix. Rather, Yurek's claims specify that the superconducting oxide is in "intimate contact with a noble metal phase to provide said superconducting composite with improved mechanical properties." The phrase "noble metal" is described in Yamada's specification as including Ag, Pt, Pd, or Au. Thus, Ag is described by the phrase "noble metal." The only remaining question is whether the Yurek Claim 10 describes the metal phase as a matrix. We construed Yamada's claimed superconducting composites to require mechanical properties dominated by a noble metal phase which acts as a "skeleton." But is Claim 10's skeleton a "matrix" as used in Yamada's claim 55? Looking to Yamada's specification (of record as Yamada Ex. 1003), Yamada describes several embodiments but only one describes a wire having an Ag matrix. Yamada's specification states:

> A method of manufacturing the second superconducting wire according to the present invention comprises the steps of: molding an Ag alloy containing a metal for constituting an oxide superconductor into a linear shape; and performing a heat treatment of the linear Ag alloy in an oxidizing atmosphere to form an oxide superconductor in an Ag matrix.

Yamada Ex. 1003, p. 3, lines 11-17. See also Yamada Ex. 1003, p. 20, line 3 - p. 21, line 12. This method is essentially the same method used by Yurek to form superconducting composites. Cf. Yamada Ex. 1002, col. 2, lines 9-19. Thus, we can perceive no difference between Yurek's

"skeleton" and Yamada's "matrix." We find that Yurek's Claim 10 describes every element of Yamada's Claim 55 and anticipates that claim.

Now we will use Yamada's Claim 55 as presumed prior art and determine if it anticipates or renders obvious the subject matter of Yurek's Claim 10.

Yamada's claim 55 describes a superconducting wire. This description meets the superconducting wire limitation of Yurek's claim 10. Yamada's claim 55 also describes a continuous oxide superconductor. This meets the continuous superconducting oxide phase of Yurek's claim 10. All of Yamada's described superconducting oxides include copper. The phrase superconducting oxide in Yamada's claim 55 thus describes copper containing superconducting oxide as specified in Yurek's claims. Yamada's Claim 55 further describes an Ag matrix. We held above that, that we could see no difference in subject matter between Yamada's matrix and the noble metal skeleton which is implicitly required by Yurek's claims. Lastly, Yurek's Claim 10 is not limited to Ag, but specifies a noble metal. However, as we noted above, Ag is a noble metal. Thus, Yamada's claim 55 meets every limitation of Yurek's Claim 10 and anticipates that claim.

Since Yurek's Claim 10 anticipates Yamada's Claim 55 and vice-versa, the two-way test for interference-in-fact has been met.

Yamada argues that Yamada's Claims 55-59 and 102 would not have been obvious from Yurek's Claims 1-12. Paper 27, pp. 18-22. It is unnecessary for us to address the obviousness argument in light of our interpretation of Yurek's claims and our finding that Yurek's Claim 10 and Yamada's Claim 55 are anticipated.

Yamada's preliminary motion asserting no interference-in-fact between the parties involved claims is Denied.

C. FINAL JUDGMENT

Since Yurek did not file a preliminary statement, Yurek is restricted to its effective filing date of March 27, 1987. 37 CFR 1.629(c). As this date is subsequent to Yamada's effective filing date of March 13, 1987, Yamada is presumptively the first to invent the subject matter of the count. 37 CFR 1.657(a). Because it did not file a preliminary statement, Yurek is not permitted to prove that it made the invention prior to its filing date (37 CFR § 1.629(c)(2)(i)) or

to present a case-in-chief (37 CFR § 1.651(c)(2)). Since Yurek filed no preliminary motions and is precluded from proving a date of invention earlier than Yamada's filing date, under the particular facts of this case, the issuance of an order to show cause (37 CFR §1.640(d)(2)) is unnecessary and entry of a final judgment at this time is appropriate.

Yamada has filed an additional preliminary motion requesting the benefit of the March 13, 1987, filing date of Japanese Application 56856/87. Paper 36. No opposition has been filed, and, since Yurek has stated no further papers would be filed, the motion stands unopposed. Since Yamada's motion for benefit will not have any impact on the outcome of this interference, we decline to decide Yamada's preliminary motion.

Accordingly, it is

ORDERED that judgment on priority as to Count 1, the sole count in this interference, is awarded against junior party GREGORY J. YUREK and JOHN B. VANDERSANDE;

FURTHER ORDERED that junior party GREGORY J. YUREK and JOHN B. VANDERSANDE, is not entitled to a patent containing claims 1-12 (corresponding to Count 1) of U.S. Patent 5,189,009;

FURTHER ORDERED that if there is a settlement agreement and it has not already been filed, attention is directed to 35 U.S.C. § 135(c) and 37 CFR § 1.661; and

FURTHER ORDERED that a copy of this decision be given an appropriate paper number and entered into the file records of U.S. Patent 5,189,009 and Application 08/320,785.

RICHARD E. SCHAFER Administrative Patent Judge	)	
RICHARD TORCZON Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
SALLY C. MEDLEY Administrative Patent Judge	)	