THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today was not written for publication in a law journal and is not binding precedent of the Board.

Paper No. 31

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RANDY W. SIMON, CHRISTINE E. PLATT,
ALFRED E. LEE and GREGORY S. LEE

Appeal No. 1997-2063
Application No. 08/433,818

HEARD: August 16, 2000

Before KIMLIN, WALTZ and TIMM, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 13-17, 19, 22, 23, 25, 26 and 28-31. Claims 11 and 12, the other claims remaining in the present application, stand withdrawn from consideration. Claims 13 and 16 are illustrative:

13. A superconductor device comprising:

(a) a substrate of crystalline lanthanum aluminate; and

(b) at least one film of a crystalline superconductor deposited on the substrate wherein said crystalline substrate and

crystalline film are chemically compatible so that there is substantially no chemical interaction between the superconductor and the substrate.

16. The superconductor device of claim 13, wherein the superconductor is a layered perovskite oxide compound comprised of metallic elements selected from the group consisting of yttrium, erbium, lanthanum, neodymium, samarium, europium, gadolinium, dysprosium, holmium, thulium, ytterbium, lutetium, and thallium.

In the rejection of the appealed claims, the examiner does not rely upon prior art.

Appellants' claimed invention is directed to a superconductor device comprising a crystalline lanthanum aluminate substrate and a film of a crystalline superconductor deposited thereon. According to appellants' specification, the lanthanum aluminate substrate is superior to the strontium titanate substrate of the prior art with respect to dielectric constant at superconductive temperatures.

Appealed claims 13-17, 19, 22, 23, 25 and 28-31 stand rejected under 35 U.S.C. § 112, first paragraph, as being based upon a non-enabling disclosure. Claims 16, 25 and 30 stand rejected under 35 U.S.C. § 112, first paragraph, as being based upon a specification that does not contain a written description of the claimed subject matter. In addition, appealed claims 13-17, 19, 22, 23, 25, 26 and 28-31 stand rejected under the judicially created doctrine of obviousness-type double patenting over U.S. Patent No. 5,523,282.

We have thoroughly reviewed the respective positions advanced by appellants and the examiner. In so doing, we will sustain the examiner's rejection under the judicially created doctrine of obviousness-type double patenting. However, for essentially those reasons presented by appellants, we will not sustain either of the examiner's rejections under 35 U.S.C. § 112, first paragraph.

Regarding the double patenting rejection, appellants do not contest this rejection in the paragraph bridging pages 28 and 29 of the principal brief. Appellants state that they intend "to file a terminal disclaimer to overcome the obviousness-type double patenting rejection." Accordingly, we will summarily affirm the rejection.

We now turn to the examiner's rejection under 35 U.S.C. § 112, first paragraph, on the basis that the specification is non-enabling for the breadth of protection sought by the appealed claims. In essence, it is the examiner's position that at the time of filing the parent application to the present application, the field of superconductivity was too unpredictable to enable one of ordinary skill in the art to practice the claimed invention of forming a superconductor device comprising any crystalline superconductor on a substrate of crystalline lanthanum aluminate. According to the examiner, appellants' claims should be limited to the particular superconductor

materials disclosed in the present specification. However, as properly argued by appellants, unpredictability is but one of eight factors to be considered in determining the enabling qualities of a specification. Another criteria to be considered is whether the specification provides sufficient guidance for one of ordinary skill in the art to practice the invention within the scope of the claims without undue experimentation. On this point, appellants have submitted into evidence a Declaration by Dr. Stuart A. Wolf, an expert in the field of superconductive materials. In relevant part, the Declaration provides expert testimony that "only about 2-3 man days of experimentation" would be required of one of ordinary skill in the art to determine which superconductive materials would be suitable for use in the present invention (see page 4 of Declaration). Dr. Wolf bases this testimony on the fact that appellants' specification teaches that suitable superconductive materials "have a structure, lattice constants, and coefficient of thermal expansion that closely match those of $LaAlO_3$ and are chemically compatible with $LaAlO_3$" (page 4 of Declaration). While the examiner is not persuaded by the Declaration because, according to the examiner, the Declaration is only relevant to specific superconductive materials, Dr. Wolf states that appellants' specification "also teaches how to select other perovskite superconductors suitable for deposition, without undue or extensive experimentation"

(page 4 of Declaration). To the extent that the examiner's criticism is based upon a concern that the breadth of the claims embraces inoperable, i.e., non-superconductive materials, it must be borne in mind that it is not the function of the claims to specifically exclude possible inoperable substances. In re Dinh-Nguyen, 492 F.2d 856, 858-59, 181 USPQ 46, 48 (CCPA 1974); In re Anderson, 471 F.2d 1237, 1242, 176 USPQ 331, 334-35 (CCPA 1973). See also In re Kamal, 398 F.2d 867, 872, 158 USPQ 320, 324 (CCPA 1968). Indeed, since the claims require a "superconductor" deposited on a particular substrate, it stands to reason that a non-superconductive material would not be within the scope of the appealed claims.

Concerning the examiner's rejection of claims 16, 25 and 30 under § 112, first paragraph, as being based upon a specification that does not provide descriptive support for the layered perovskite oxide compound comprised of the recited metallic elements, we cannot agree with the examiner that "[i]t is unclear where the superconductor language of claims 16, 25 and 30 is in the original specification" (page 5 of Answer). In assessing the adequacy of the descriptive nature of a specification, it must be determined whether the original specification reasonably conveys to one of ordinary skill in the art that the inventors had in their possession, as of the filing date of the application, the subject matter encompassed by the claim language at issue.

Vas-Cath Inc. v. Mahurkar, 935 F.2d 1555, 1563, 19 USPQ2d 1111, 1116 (Fed. Cir. 1991). In the present case, our review of appellants' specification as a whole, including the discussion provided in the BACKGROUND OF THE INVENTION, leads us to conclude that appellants had in their possession, at the time of filing the parent application, the superconductive materials recited in claims 16, 25 and 30. In particular, the paragraph bridging pages 1 and 2 of the present specification discusses newer superconductive compounds containing four metallic elements, including bismuth or thallium instead of a rare earth element. In the second paragraph at page 1 of the specification the known superconductive materials, $R_1Ba_2Cu_3O_7$, are discussed. In our view, the specification describes appellants' invention as replacing a strontium titanate substrate with one of lanthanum aluminate for such known superconductive materials. Hence, we find that the superconductive materials defined by claims 16, 25 and 30 are fairly described in appellants' specification within the meaning of 35 U.S.C. § 112, first paragraph.

In conclusion, the examiner's rejections under 35 U.S.C. § 112, first paragraph, are reversed. Since we have sustained the examiner's rejection of all the appealed claims under the judicially created doctrine of obviousness-type double patenting, the examiner's decision rejecting the appealed claims is affirmed.

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

AFFIRMED

EDWARD C. KIMLIN Administrative Patent Judge	)	
THOMAS A. WALTZ Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
CATHERINE TIMM Administrative Patent Judge	)	

ECK:clm

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