

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte HANS HANSSEN, HANS DE BOER, and JOS VAN OORSCHOT

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Appeal No. 1997-3254  
Application No. 08/495,330

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ON BRIEF<sup>1</sup>

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Before THOMAS, KRASS, and BLANKENSHIP, Administrative Patent Judges. BLANKENSHIP,  
Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of  
Claims 1-15.

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<sup>1</sup>Appellants waived oral hearing. See fax communication filed June 28, 2000 (Paper No. 23).

We affirm-in-part.

### BACKGROUND

The invention is directed to a coaxial cable having an outer conductor formed of an electroconductive lacquer. Claim 1 is reproduced below.

1. A coaxial cable comprising  
a central conductor;  
an outer conductor, said outer conductor being an electroconductive lacquer conductor;  
an electrically insulating layer separating said central and said outer conductor.

The examiner relies on the following references:

Berends	3,569,611	Mar. 9, 1971
Sherman	4,199,408	Apr. 22, 1980
Sato	4,847,448	Jul. 11, 1989

Claims 1-3 and 12 stand rejected under 35 U.S.C. § 102 as anticipated by Berends.

Claims 4-6, 8, 9, and 13 stand rejected under 35 U.S.C. § 103 as unpatentable over Berends.

Claims 7, 10, 14, and 15 stand rejected under 35 U.S.C. § 103 as unpatentable over Berends and Sato.

Claim 11 stands rejected under 35 U.S.C. § 103 as unpatentable over Berends and Sherman.

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We refer to the Final Rejection (Paper No. 8), the Examiner's Answer (Paper No. 14), and the Supplemental Examiner's Answer (Paper No. 20) for a statement of the examiner's position and to the Brief (Paper No. 12) and the Reply Brief (Paper No. 19) for appellants' position.

### OPINION

#### Section 102 rejection over Berends

The examiner has rejected Claims 1-3 and 12 as anticipated by Berends. Berends discloses a high voltage cable comprised of an insulating pipe 2 that is coated on its inner surface with a conductive layer of lacquer 3. An internal conductor 5 is coaxially mounted in the pipe and is supported within a core of synthetic resin 4.

Appellants have not submitted arguments contending separate patentability of any of Claims 1-3 and 12. Accordingly, we select Claim 1 as representative of the subject matter. See 37 CFR § 1.192(c)(7).

Appellants submit several arguments to show that the rejection in error. The arguments are all based, to some extent, on the premise that the high voltage cable is not a "coaxial" cable. The basis is most explicit in the Reply Brief, and in the expert's declaration that accompanied the Reply Brief. There thus appears to be controversy related to interpretation of the claims.

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Claims are to be given their broadest reasonable interpretation during prosecution, and the scope of a claim cannot be narrowed by reading disclosed limitations into the claim. See In re Morris, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989); In re Prater, 415 F.2d 1393, 1404, 162 USPQ 541, 550 (CCPA 1969). A simple and complete definition of coaxial cable is “[a] cable containing one or more coaxial lines.” IEEE Standard Dictionary of Electrical and Electronics Terms, 1972. While appellants disclose particular embodiments of coaxial cable, the specification does not redefine the term as anything narrower than the dictionary meaning. Appellants’ description of the background and field of the invention is consistent with the dictionary definition. (See specification, pages 1 and 2.)

Thus, even if the Claim 1 preamble recitation of a “coaxial cable” is to be considered as representing more than an environment of intended use, the high voltage cable disclosed by Berends is also a “coaxial cable,” in accordance with the broadest reasonable interpretation of the term in light of appellants’ specification. The cable has a least a line 5 and a line 3, which are coaxially arranged within the cable. Note also the use of the term "coaxial" in the abstract of Berends.

Careful review of the expert’s declaration, filed pursuant to 37 CFR § 1.132 and accompanying the Reply Brief, does not convince us that our interpretation is in error. The facts alleged in the declaration concern, for the most part, intended use -- that is, function -- of the cable. Claim 1, however, is an apparatus claim. It does not contain even a statement of intended use commensurate

with the functions listed in the declaration, such as “low-voltage, high-frequency” applications.

Additionally, while the declaration may refer to one or more recognized definitions associated with the term “coaxial cable” -- such as, on page 2 of the declaration, “the outer conductor is an electromagnetic shield and must be designed to provide the required shielding effectiveness or surface transfer impedance” -- the definitions are narrower than the broadest reasonable definition of the term, as evidenced supra by the dictionary definition of the term.

Appellants submit a related argument, appearing principally on pages 7 through 9 of the Brief. Appellants refer to column 1, lines 48 through 50 of Berends (see Brief, page 7), and argue that since the reference discloses that “internal conductor 5 is conductively connected to the conductive layer of lacquer 3 (not shown),” there is but a single conductor in the reference, contrary to the Claim 1 requirement of a “central conductor” and an “outer conductor.” However, upon consideration of the actual requirements of Claim 1, we view the argument as untenable.

Claim 1 requires “an electrically insulating layer separating [the] central and [the] outer conductor.” Berends discloses an electrically insulating layer 4 separating the central conductor 5 and the outer conductor 3. The claim does not distinguish over central conductor 5 and outer conductor 3 being “conductively connected,” as disclosed by Berends. We decline to read disclosed limitations into the claim. We also decline to read intended use from the specification into the claim. Suppose, for example, a section of the cable disclosed by Berends was cut away from the portion of the cable

wherein the “not shown” conductive connection is made. The section of cable would then become a “coaxial cable,” even using appellants’ implied definition that the inner and outer conductors are to be electrically isolated from each other.

Contrary to the explicit disclosure in Berends of an internal conductor and a separate conductive layer, appellants provide a dictionary definition of “conductor” in support of the argument that since the separate conductors are connected, there is but one “conductor.” (See Brief, page 8.) Notwithstanding the fact that appellants have not selected the broadest definition, but only one of nine given for “conductor” -- contrary to the guidelines for claim interpretation during patent prosecution -- we fail to see how the selected definition might tend to show that the separate conductive materials disclosed in Berends must be viewed as a single “conductor.”

Finally, although our finding that the subject matter of Claim 1 is anticipated by Berends does not rest on it, we note a portion of the Berends disclosure that appellants do not address. Column 1, lines 62 through 71 of Berends discloses that there may be “two or more mutually insulated internal conductors in the core of foamed material.” One of the internal conductors “is conductively connected to the conductive layer of lacquer.” By implication, one (or more) of the internal conductors are not connected to the conductive layer of lacquer. Such arrangement also meets the limitations of appellants’ Claim 1, even if one were to read the urged limitation into the claim that the inner and the outer conductor are “conductively isolated” from each other.

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For the foregoing reasons, we sustain the Section 102 rejection of Claims 1-3 and 12 over Berends.

Section 103 rejection over Berends

The examiner has rejected Claims 4-6, 8, 9, and 13 as obvious over Berends. (See Answer, page 6.) With regard to the limitations of Claims 4-6, requiring that the thickness of the electroconductive lacquer conductor be less than 200 micrometers, the examiner notes that Berends discloses that the lacquer layer is “thin but not a specific thickness,” and that a suitable thickness would have been found “since discovering an optimum value of a result effective variable involves only routine skill in the art.” (Id.)

Appellants’ position is set forth on pages 11 and 12 of the Brief. Appellants do not dispute that the thickness is a “result effective variable,” but appear to argue that such would only be recognized if one were to recognize that the lacquer serves as a conductor in a “coaxial cable.” However, as we have previously determined, Claims 1-3 (from which Claims 4-6 depend) do not distinguish over the cable disclosed by Berends.

Berends gives an example of provision of the conductive layer -- wetting the inside of the pipe with a silver solution. See Berends, column 2, lines 8 through 16. Berends also suggests that the layer should be relatively “thin,” to ensure proper operation. See id. at column 1, lines 48 through 55. We therefore find that the reference would have suggested to the artisan at least to attempt minimizing thickness of the conductive layer.

It therefore appears reasonable that the artisan would have been motivated to minimize thickness of the conductive layer such that the thickness fell somewhere in the range of slightly more than zero micrometers to slightly less than 200 micrometers. Since appellants have failed to rebut a reasonable case of prima facie obviousness of the invention set out by the examiner, we sustain the rejection of Claims 4-6 under Section 103 over Berends.

We are in agreement with appellants, however, that the reference does not support a prima facie rejection of the subject matter of method Claim 8. For at least the reasons pointed out on page 5 of the Reply Brief, the Berends disclosure teaches away from passing the insulated central conductor through a solution of electroconductive lacquer. We therefore reverse the rejection of Claims 8, 9, and 13 over Berends.

Section 103 rejection over Berends and Sato

According to the examiner, the references of Berends and Sato provide evidence that the subject matter as a whole, including the dependent claim limitations concerning a thin metal outer layer over the electroconductive lacquer conductor, would have been obvious to the artisan. Sato discloses a coaxial cable comprising two separate outer conductor layers, and teaches addition of a second layer “for improving the shielding characteristics as taught by Sato....” (Answer, page 7.)

However, when considering whether to combine teachings of the two references, the purpose (i.e., intended use) of the cables becomes pertinent, unlike the previous inquiry regarding anticipation. It is not apparent why an artisan would seek to improve “shielding characteristics” of the cable disclosed by Berends, since Berends discloses cable for delivery of high voltage to an apparatus such as an X-ray tube, and the cable disclosed by Sato is for use with high-frequency devices such as ultrasonic diagnostic equipment. Sato is concerned with decreasing crosstalk; see Figure 4 and column 3, lines 3 through 16. A purpose of the arrangement of the second outer conductor in Sato is to enhance strength with flexibility; see, for example, column 1, lines 10 through 46 of the reference. The cable of Berends, in contradistinction, is comprised of a rigid pipe as the outer insulator.

As pointed out by appellants on page 15 of the Brief, Berends teaches that the inner conductive element carries substantially all the current. While appellants’ observation is consistent with our conclusion (supra) that the subject matter of Claims 4-6 would have been obvious in view of Berends,

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we agree that the teaching of Berends goes against the proposition of adding a thin metal layer over the electroconductive layer.

We conclude that the references fail to support a prima facie case for the subject matter of Claims 7, 10, 14, and 15, and do not sustain the rejection of the claims over Berends and Sato.

#### Section 103 rejection over Berends and Sherman

The examiner has rejected Claim 11 over Berends and Sherman. Sherman is applied to the claim as a teaching for electrodeposition. (See Answer, page 8.) The rejection is defective on its face, since Claim 11 includes the limitations of Claim 10 (the addition of a thin metal layer, for which Sato was applied in a previous rejection). In any event, Claim 11 depends from Claim 8, and we have previously determined that the subject matter of Claim 8 is nonobvious over Berends. The Sherman reference does not remedy the deficiencies of Berends. We therefore do not sustain the rejection of Claim 11 over Berends and Sherman.

#### CONCLUSION

The rejection of Claims 1-3 and 12 under 35 U.S.C. § 102 as anticipated by Berends is affirmed.

The rejection of Claims 4-6 under 35 U.S.C. § 103 as unpatentable over Berends is affirmed.

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The rejection of Claims 8, 9, and 13 under 35 U.S.C. § 103 as unpatentable over Berends is reversed.

The rejection of Claims 7, 10, 14, and 15 under 35 U.S.C. § 103 as unpatentable over Berends and Sato is reversed.

The rejection of Claim 11 under 35 U.S.C. § 103 as unpatentable over Berends and Sherman is reversed.

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

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JAMES D. THOMAS	)	
Administrative Patent Judge	)	
	)	
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	)	
	)	BOARD OF PATENT
ERROL A. KRASS	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
	)	
	)	
HOWARD B. BLANKENSHIP	)	
Administrative Patent Judge	)	

HBB/RK

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Lee, Mann, Smith, McWilliams, Sweeney & Ohlson  
P.O. Box 2786  
Chicago, IL 60690-2786