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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ROBERT C. O'BRIEN

Appeal 2010-006274
Application 10/969,397
Technology Center 3700

Before LINDA E. HORNER, BRADFORD E. KILE, and
ADAM V. FLOYD, *Administrative Patent Judges*.

HORNER, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Robert C. O'Brien (Appellant) seeks our review under 35 U.S.C. § 134 of the Examiner's decision rejecting claims 1, 4-8, 11-17, and 20-24. Claims 2, 3, 9, 10, 18, 19, 26, and 27 are cancelled, and claims 25 and 28-32 are withdrawn from consideration. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

THE INVENTION

Appellant's claimed invention relates to implantable electrical lead wires and to a solution to compatibility problems of lead wires with the materials used to insulate them. Spec. 1. Claims 1, 8, and 17 are independent. Claim 1, reproduced below, is illustrative of the subject matter on appeal.

> 1. A deformable substrate, which comprises:
>
> a) the substrate comprised of an alloy including at least one of cobalt, molybdenum, and chromium;
>
> b) an elastomeric material at least partially covering the substrate; and
>
> c) an intermediate coating of a carbonaceous material provided on at least a portion of the substrate between the substrate alloy and the elastomeric material, wherein the carbonaceous material is coated on the substrate to a thickness of about 10 nm to about 50 nm before completion of an island coalescence phase with islands of the carbonaceous material adhering to the alloy, but not to each other and wherein the intermediate carbonaceous material prevents interaction of the at least one of cobalt, molybdenum, and chromium of the substrate alloy with the elastomeric material.

THE EVIDENCE

The Examiner relies upon the following evidence:

Lessar	US 5,040,544	Aug. 20, 1991
Vallana	US 5,084,151	Jan. 28, 1992
Cohen	US 5,330,521	Jul. 19, 1994
Jalisi	US 6,203,505 B1	Mar. 20, 2001

THE REJECTIONS

Appellant seeks review of the following rejections:

1. Claims 1, 5-8, 12-17, and 21-24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lessar and Cohen.[1]
2. Claims 4, 11, and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lessar, Cohen, and Vallana.
3. Claims 1, 5-8, 12-17, and 21-24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lessar, Jalisi, and Cohen.[2]
4. Claims 4, 11, and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lessar, Jalisi, and Vallana.

ISSUES

Appellant argues the claims subject to the first ground of rejection as a group. App. Br. 15. We select claim 1 as representative, and claims 5-8, 12-17, and 21-24 stand or fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2011). For the second ground of rejection based on Lessar, Cohen, and Vallana, Appellant argues only that dependent claims 4, 11, and 20 "are patentable as hinging from allowable base claims." App. Br. 15. As such, the outcome of our review of the first and second grounds of rejection turns on our analysis of the rejection of claim 1 based on Lessar and Cohen.

With regard to the first ground of rejection, the Examiner determined that Lessar discloses the substrate of claim 1 except for the intermediate

[1] The Examiner mistakenly included canceled claims 3, 10, and 19 in this ground of rejection. Ans. 3.
[2] The Examiner mistakenly included canceled claims 3, 10, and 19 in this ground of rejection. Ans. 6.

coating being "of a carbonaceous material." Ans. 3-5.[3] The Examiner relied on Cohen "to [show] that it was well known in the art to substitute one conductive material, such as titanium, for another, such as carbon (e.g. Col. 6, line[s] 2-3)." Ans. 9-10. *See also* Ans. 5. The Examiner concluded that it would have been obvious to replace the metallic inert material of Lessar with the carbon coating material of Cohen at the same thickness of Lessar as a simple substitution of one well known material for another. Ans. 5, 9-10.

Appellant argues that "given the different fundamental structures of the two prior art leads, i.e., one built of conductors coiled in direct intimate contact with each other, the other of 'mutually isolated conductors', one skilled in the art wouldn't have any reason to combine the teachings of these two patents together." App. Br. 13. Appellant further argues that Lessar's solution to use an inert metallic layer between the conductor and the polyurethane coating functioned in an acceptable manner, and thus "there

[3] The Examiner construed the limitation in claim 1 calling for the intermediate coating to be coated on the substrate to a thickness of about 10 nm to about 50 nm "before completion of an island coalescence phase" to be a product-by-process phrase that does not further limit the structure of the substrate. Ans. 4. Appellant does not appear to challenge this claim interpretation. *See* App. Br. 14-15 (agreeing with the Examiner's interpretation, and arguing that the claimed thickness range distinguishes Appellant's intermediate coating from the coating of Lessar, and the claimed carbonaceous material distinguishes Appellant's intermediate coating from the coating of Cohen). These arguments are not convincing, because they attack the references individually, rather than as combined by the Examiner. Nonobviousness cannot be established by attacking the references individually when the rejection is predicated upon a combination of prior art disclosures. *See In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

wouldn't have been a need to substitute carbon for one of the noble metals comprising its inert coating 34." App. Br. 18. Appellant also posits that if one of ordinary skill in the art were to substitute Cohen's carbonaceous intermediate layer for Lessar's noble metal inert layer, one would have used the increased thicknesses as disclosed in Cohen. App. Br. 19; Reply Br. 2.

The issue presented by this appeal is whether the claimed deformable substrate comprising an intermediate coating of a carbonaceous material would have been obvious to one of ordinary skill in the art at the time of Appellant's invention in light of Lessar and Cohen.

PRINCIPLES OF LAW

"When a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result." *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 416 (2007) (citing *United States v. Adams*, 383 U.S. 39, 50-51 (1966)).

ANALYSIS

We agree with the Examiner that Cohen shows by a preponderance of the evidence that it was well known in the art of implantable electrical leads at the time of Appellant's invention to use carbon as an alternative material in place of a noble metal, such as platinum, for an intermediate layer between a wire conductor substrate and an elastomeric covering. Ans. 5; Cohen, col. 3, ll. 15-25, col. 5, ll. 32-41, and col. 6, ll. 2-5. The Examiner found (Ans. 5) and Appellant does not dispute that carbon is an inert material. As such, we find reasonable the Examiner's view that one of

ordinary skill in the art would have predicted that an intermediate layer made of carbon would prevent oxidation degradation of the insulative flexible polymer sheath caused by contact with the conventional core material in the same manner as the platinum layer of Lessar. We further find reasonable the Examiner's view that one of ordinary skill in the art would have been led by the teachings of Lessar to use the thickness of the coating as disclosed in Lessar. Ans. 9-10. For example, Lessar teaches that extremely thin coatings are advantageous because they do not alter the mechanical characteristics of the basic materials used in lead conductor wires. Lessar, col. 2, ll. 11-24. Based on this teaching, we are not persuaded by Appellant that one of ordinary skill in the art would have been led to use the relatively thicker intermediate coating of Cohen in the electrical lead of Lessar.

To the extent Appellant's arguments are directed to a proposed modification of Cohen to use a carbon coating having the reduced thickness disclosed in Lessar (*see*, *e.g.*, App. Br. 13), such arguments are not responsive to the Examiner's rejection, which proposes modifying the lead of Lessar with the teaching of Cohen. For these reasons, we affirm the rejection of claims 1, 5-8, 12-17, and 21-24 under 35 U.S.C. § 103(a) as being unpatentable over Lessar and Cohen. We likewise affirm the rejection of claims 4, 11, and 20 as unpatentable over Lessar, Cohn, and Vallana for the same reasons provided *supra* in our analysis of claim 1.

As our affirmance of the first two grounds of rejection is dispositive as to all the claims on appeal, we need not reach the third and fourth grounds of rejection.

CONCLUSION

The claimed deformable substrate comprising an intermediate coating of a carbonaceous material would have been obvious to one of ordinary skill in the art at the time of Appellant's invention in light of Lessar and Cohen.

DECISION

We AFFIRM the decision of the Examiner to reject claims 1, 4-8, 11-17, and 20-24.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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