

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. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GONZALO MARTINEZ,
CATHERINE TAYLOR, KEN KEENEY
and MARKUS HALLER

Appeal No. 2002-2249
Application 09/340,441

ON BRIEF

Before WARREN, DELMENDO and MOORE, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

Decision on Appeal and Opinion

We have carefully considered the record in this appeal under 35 U.S.C. § 134, including the opposing views of the examiner, in the answer, and appellants, in the brief, and based on our review, find that on this record we cannot sustain grounds of rejections advanced on appeal: appealed claims 1, 3, 4, 10, 12 through 14, 17, 18 and 20 stand rejected under 35 U.S.C. § 102(b) as anticipated by Loh et al. (Loh); appealed claims 15 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Stewart et al (Stewart); and appealed claims 5, 7, 11 and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ovshinsky et al. (Ovshinsky)

in view of Loh.¹ We dismiss the appeal with respect to pending claims 6 and 9 because these claims are not included in any ground of rejection advanced in the answer or maintained in the final rejection mailed May 21, 2001 (Paper No. 7).² We refer to the examiner's answer and to appellants' brief for a complete exposition of the opposing views of the parties.

Appellants state in their brief (page 8) that the appealed claims "are grouped together for purposes of this appeal." Thus, we decide this appeal based on appealed claims 1, 5 and 15 as respectively representative of the three grounds of rejection. 37 CFR § 1.192(c)(7) (2002).

In order to review the grounds of rejection advanced on appeal with respect to appealed claims 1, 4, 7, 8, 12, 16 and 17, we first 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 Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000); *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997), *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989), the plain language of appealed claim 1 specifies a method for coating a surface of an implantable device comprising at least the steps of plasma pretreating at least one surface of the device with an inert gas, "providing the implantable device to a plasma chamber," and in a single coating step, plasma treating the at least one surface with a single reactant monomer while creating a glow discharge of the monomer by "using a power of about 30 watts to about 100 watts for a time period of about 10 minutes or less." The transitional term "comprising" opens the claim to include methods which contain additional steps and conditions, such as the application of additional coatings to the coated surface by glow discharge polymerization, chemical vapor deposition or other methods. *See 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.").

We interpret the last clause of the claim to require that in the single coating step, the glow discharge is created by using the specified power for the specified period of time. In other words, and contrary to appellants' arguments in the brief, the specified period of time is the time that the

¹ Answer, pages 3-8.

specified power is applied, and not the total time that can be taken to perform the single coating step in its entirety. Furthermore, we interpret the terms “a surface” in the preamble and “at least one surface” in the body of the claim to include coating of any portion of a surface of an implantable device. Appealed claim 5 requires that the method of appealed claim 1 include an inert gas with the monomer in the single coating step and appealed claim 15 requires that the method of appealed claim 1 include adding a bio-active compound to the coated surface. Appealed claims 18 through 20 are styled in product-by-process format and thus are product claims. *See generally, In re Thorpe*, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985).

Turning now to the grounds of rejection under § 102(b), it is well settled that the examiner has the burden of making out a *prima facie* case of anticipation in the first instance by pointing out where each and every element of the claimed invention, arranged as required by the claim, is described identically in the reference, either expressly or under the principles of inherency. *See generally, In re Spada*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990); *In re King*, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986). We must agree with appellants that the examiner has not established a *prima facie* case of anticipation with respect to appealed claim 1. We find that Loh discloses that in the glow discharge polymerization coating step of the two coating step process disclosed therein,

[t]he plasma polymerization process continues until the desired polymer coating thickness has been obtained. During the last few minutes of the plasma process, the power level to the polymerization chamber 20 is gradually reduced so that the crosslinking density of the polymer coating decreases. The plasma is allowed to self-extinguish, whereupon the power and the gas flow are shut off. [Col. 8, lines 54-61.]

Thus, Loh teaches that the radio frequency power used to create glow discharge of the reactant monomer is gradually reduced during the last few minutes of the glow discharge polymerization coating step until the plasma self-extinguishes. Applying this teaching to Loh Example 1, it is apparent that the single glow discharge polymerization coating step includes the total time that the radio frequency power is continually applied, that is, at 80 watts for ten minutes, *and* then reduced in a linear manner from 80 to 0 watts for 5 minutes, the latter being the plasma self-extinguishing period (col. 9, line 56, to col. 10, line 1).

² The rejected claims and claims 6 and 9 are all of the claims pending in the application. See the

Thus, it is clear that the power necessary for the glow discharge polymerization in Loh Example 1 is applied for a period of time that exceeds the about 10 minutes specified in appealed claim 1 as appellants point out in the brief. Accordingly, Loh does not describe the claimed method encompassed by appealed claim 1 within the meaning of § 102(b), and therefore, we reverse the ground of rejection of appealed claims 1, 3, 4, 10, 12 through 14, 17, 18 and 20 under § 102(b) as anticipated by Loh.

In order to establish a *prima facie* case of obviousness under § 103(a), the examiner must show that some objective teaching, suggestion or motivation in the applied prior art taken as a whole and/or knowledge generally available to one of ordinary skill in this art would have led that person to the claimed invention as a whole, including each and every limitation of the claims, without recourse to the teachings in appellants' disclosure. *See generally, In re Rouffet*, 149 F.3d 1350, 1358, 47 USPQ2d 1453, 1458 (Fed. Cir. 1998); *Pro-Mold and Tool Co. v. Great Lakes Plastics Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1629-30 (Fed. Cir. 1996); *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Fine*, 837 F.2d 1071, 1074-76, 5 USPQ2d 1596, 1598-1600 (Fed. Cir. 1988); *In re Dow Chem. Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531-32 (Fed. Cir. 1988).

The issues in the ground of rejection under § 103(a) based on Stewart are briefed by the parties on this record on the basis that the claimed glow discharge polymerization coating step involves coating the entire surface of an implantable device in a single step, and in this respect, have settled on Stewart teaching and exemplifying coating a 5 foot length of tubing in a time of 20 minutes based on a rate of advance of 3.2 inches/min at a power level of 8 watts at a pulse width of four milliseconds, as the coating step conditions for purposes of determining whether Stewart would have reasonably suggested the claimed method to one of ordinary skill in this art (answer, pages 4-5 and 10-11; brief, e.g., pages 13 and 15-16). Thus, the examiner states that Stewart differs from the claimed invention in failing "to teach that the time period for plasma polymerization of the implantable medical device is ten minutes or less" and concludes that it would have been obvious to coat the 5 foot in less than twenty minutes at a higher power level and to coat a tube length of less than 5 feet (answer, pages 4-5). Appellants replies that the total

appendix to the brief.

treatment time for the 5 foot length exceeds the time limit of ten minutes in appealed claim 15 and thus the claimed invention encompassed by this claim is nonobvious, noting that the different “zones” of the apparatus of Stewart “sequentially . . . [treat] sections of polymeric tubing” (pages 13, 15 and 16). The examiner responds that a “duration of 10 minutes would allow coating of an implantable device having dimensions of 32 inches” because Stewart shows “that 3.2 inches of tubing are coated for 1 minute” (answer, pages 10-11; emphasis in original deleted).

We find that Stewart teaches coating of the OD and/or ID surface of implantable tubing, which contains a further bio-reactive agent applied over the coating. The method of Stewart encompasses tubing advancing from reel **30** to and through a glass tube **'69**, that can be 6 to 18 inches in length, in the monomer deposition zone **66** of the apparatus shown in Stewart **FIGs. 1** and **4**, with continuous or pulsed application of power at between 0 watts and 300 watts over the entire run of the length of tubing being treating (e.g., col. 3, line 9, to col. 4, line 42; col. 7, lines 38-67; col. 9, lines 25-34; and col. 11, lines 8-31). Stewart discloses no time period or other conditions in which to treat an entire length of tubing in the apparatus and indeed, there is no range of lengths of tubing disclosed for the method. In this respect, Stewart teaches that the “method . . . is preferably performed continuously meaning that tubing is fed from a spool of 1000+ feet of tubing” (col. 5, lines 61-63), and states that “[i]n any given instance, it can be readily determined empirically by varying discharge conditions and time of exposure to discharge as to what treatment results are obtained and adjusting the conditions to obtain the desired result” (col. 3, lines 35-38). In the Stewart Examples, “[c]onventional silicone tubing . . . was loaded in an upper chamber, shown as **38**, of an apparatus as shown in **FIG. 1**,” which chamber **38** holds reel **30**, that is, a “spool” of tubing (col. 15, lines 42-45), and “[t]he monomer deposition zone was run . . . [as set forth in Table 2] for 20 minutes so that about 5 feet of tubing had monomer deposited on the outer surface” (col. 16, lines 27-30). On this evidence, it appears that the five foot length is only part of a run of tubing from a reel or spool of tubing. Thus, while it is apparent that the process of Stewart can be performed with shorter lengths of tubing than 1000 feet, there is no evidence in the record that the method and apparatus of the reference would be reasonably applied to a length as short as 5 feet, except for test purposes, and the adjustment with

respect to glow polymerization conditions or treatment, including time or rate of advance, would be made with respect to the entire run.

In comparing the teachings of Stewart with the method of appealed claim 15, we note here the interpretation we gave the term “a surface” in the preamble of appealed claim 1 and the language “at least one surface” in the body of that claim to include coating of any portion of a surface of an implantable device (*see above* pp. 2-3), which applies to appealed claim 15 dependent thereon. In stating the ground of rejection here and in responding thereto, neither the examiner nor appellants focused on whether the appealed claims encompass methods that continuously treat a part of the surface of an implantable device as it travels through a monomer deposition zone for about 10 minutes or less at the specific power level for the thus treated part of the surface, or are limited to a batch treatment of a part of that surface in such zone. Indeed, the examiner recognizes that the methods of Stewart treat 3.2 inches of tubing a minute in a continuous manner but bases the case for *prima facie* obviousness on treating the entire length of tubing for about 10 minutes or less. In somewhat similar manner, the appellants consider that the method of Stewart “sequentially treats sections of polymeric tubing,” apparently sort of mini-batching the tube run into sections which are separately so treated in the monomer deposition zone, and base the case for nonobviousness on treating the entire length of tubing for about 10 minutes or less.

Accordingly, upon carefully considering the record now before us, we must conclude on this basis that the examiner has failed to establish that the claimed method as encompassed by appealed claim 15 is *prima facie* obvious over Stewart, and accordingly reverse the ground of rejection of appealed claims 15 and 16 under § 103(a) as being unpatentable over Stewart.

The examiner focuses the principal issues in the ground of rejection of claim 5 under § 103(a) over the combined teachings of Ovshinsky and Loh as whether one of ordinary skill in this art would have modified the teachings of Ovshinsky by increasing the power level used to coat lenses from glass and plastic optical substrates with a mixture of a hydrocarbon as a single reactant monomer and inert gas using glow discharge polymerization at from 0.25 to 5 watts/per square inch of lens (col. 6, lines 12 and 64-67) to between 30-100 watts, such as by increasing the treated surface area of the substrate; and by employing a coating time of about 10 minutes or

less, because in the Loh Example implantable substrates are coated with organosilane monomers as a single reactant monomer for 10 minutes at a power of 80 watts (answer, pages 6-8). In this respect, appellants point out that Ovshinsky and Loh are directed to different substrates, with Ovshinsky disclosing non-implantable substrates, and different coating conditions (brief, pages 18-24). The examiner responds that one of ordinary skill in this art would have understood from Loh that that increasing the power to 80 watts would permit forming a desired coating by the process of Ovshinsky in less than 10 minutes (answer, page 12).

We, like appellants, find no objective teaching, suggestion or motivation in Ovshinsky, alone or in combination with Loh, which would have led one of ordinary skill in this art to even consider experimentation, routine or not, at the power level range specified in appealed claim 5 for any purpose. *See In re Sebek*, 465 F.2d 904, 907, 175 USPQ 93, 95 (CCPA 1972) (“Where, as here, the prior art disclosure suggests the outer limits of the range of suitable values, and that the optimum resides within that range, and where there are indications elsewhere that in fact the optimum should be sought within that range, the determination of optimum values outside that range may not be obvious.”). Indeed, on this record, it appears that the method of Loh, from substrate to single reactant monomer, is indeed different from that of Ovshinsky such that evidence or scientific explanation is required to establish that one of ordinary skill in this art would have combined these teachings and on that basis, would have modified the power level in the methods of Ovshinsky to that taught by Loh. *See In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992) (“The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification.”); *cf. Ex parte Levengood*, 28 USPQ2d 1300, 1301-02 (Bd. Pat. App. & Int. 1993) (“At best, the examiner’s comments regarding obviousness amount to an assertion that one of ordinary skill in the relevant art would have been able to arrive at appellant’s invention because he had the necessary skills to carry out the requisite process steps. This is an inappropriate standard for obviousness. . . . That which is within the capabilities of one skilled in the art is not synonymous with obviousness. *Ex parte Gerlach*, 212 USPQ 471 (Bd. App. 1980).”).

Accordingly, we must conclude that the examiner has failed to establish that the claimed method as encompassed by appealed claim 5 is *prima facie* obvious over combined teachings of Ovshinsky and Loh, and therefore reverse the ground of rejection of appealed claims 5, 7, 11 and 19 under § 103(a) as being unpatentable over Ovshinsky in view of Loh.

The examiner's decision is reversed.

Other Issues

We decline to exercise our authority under 37 CFR § 1.196(b) and enter on the record new grounds of rejection of the appealed claims with respect to following matters, and instead suggest that the examiner consider the following upon any further prosecution of the appealed claims subsequent to the termination of this appeal.

We noted above that claims 6 and 9 have not been included in any of the grounds of rejection advanced on appeal and thus suggest that the patentability of these claims over prior art be considered.

The application of the teachings of Loh to the appealed claims under § 103(a) stands on a different footing than applying the reference to the same appealed claims under § 102(b). *See In re Wiggins*, 488 F.2d 538, 543, 179 USPQ 421, 425 (CCPA 1973) (a reference that does not anticipate the claimed invention under § 102(b) can still be applied thereto "as evidence of obviousness under § 103 for all it fairly suggests to one of ordinary skill in the art"). Accordingly, we suggest that the examiner consider the application of Loh to the claimed method encompassed by at least claims 1, 3, 4, 10, 12 through 14 and 17, leaving it to the examiner to apply any other applicable prior art developed in this respect.

In view of our determination with respect to appealed claims 15 and 16 under § 103(a) as being unpatentable over Stewart above (*see p. 6*), we suggest that the examiner consider whether these claims encompass methods which continuously treat a part of the surface of an implantable device as it travels through a monomer deposition zone for about 10 minutes or less at the specific power level for the thus treated part of the surface, or are limited to a batch treatment of a part of that surface in such zone, and accordingly apply Stewart and any other applicable prior art developed in this respect to at least claim 15 and 16.

With respect to the combined teachings of Loh and Ovshinsky, we suggest that the examiner consider whether one of ordinary skill in this art would have modified Loh, as applied by the examiner under § 103(a) to at least claims 1, 3, 4, 10, 12 through 14 and 17, by using an inert gas to modify the effect of the single reactant monomer as suggested by Ovshinsky (e.g., cols. 3 and 5) and any other applicable prior art developed by the examiner, and thus would have arrived at the claimed method encompassed by claims 5, 7 and 11 under § 103(a).

The application of any reference to appealed claims 18 through 20 must be on the basis that these claims encompass products. *See generally, Thorpe, supra; In re Wertheim*, 541 F.2d 257, 271, 191 USPQ 90, 103-04 (CCPA 1976) (“These claims are cast in product-by-process form. Although appellants argue, successfully we have found, that the [reference] disclosure does not suggest . . . appellants’ process, the patentability of the products defined by the claims, rather than the processes for making them, is what we must gauge in light of the prior art.”).

Reversed

CHARLES F. WARREN)	
Administrative Patent Judge)	
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ROMULO H. DELMENDO)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
)	
)	
JAMES T. MOORE)	
Administrative Patent Judge)	

Appeal No. 2002-2249
Application 09/340,441

Medtronic, Inc.
710 Medtronic Parkway NE
MS-LC340
Minneapolis, MN 55432-5604