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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOHN E. PAPP[1]

Appeal 2015-006776
Application 12/535,556
Technology Center 1700

Before BRADLEY R. GARRIS, TERRY J. OWENS, and JEFFREY R. SNAY, *Administrative Patent Judges*.

GARRIS, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134, Appellant appeals from the Examiner's rejections under 35 U.S.C. § 103(a) of claims 1–7 and 9–13 as unpatentable over Chappa (US 2007/0101933 A1, published May 10, 2007) in view of Fifer (US 2006/0149365 A1, published Jul. 6, 2006) and of claims 8, 14–16, 18–21, 29, and 30 over these references in combination with Pacetti (US

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[1] Abbott Cardiovascular Systems, Inc. is identified as the real party in interest. App. Br. 1.

6,695,920 B1, issued Feb. 24, 2004). We have jurisdiction under 35 U.S.C. § 6.

We AFFIRM.

Appellant claims a method of coating a stent that comprises spraying the stent with a first coating while rotating the stent in a first direction and spraying with a second coating while rotating in a second opposite direction, wherein a greater amount of the first coating is on a first side surface of a stent strut and a greater amount of the second coating is on a second side surface of the strut (independent claims 1, 9, and 15) thereby balancing the distribution of the coatings over the first and second side surfaces (independent claim 15) such that the mean thickness profile of the combined coatings is the same or substantially the same over the first and second side surfaces (dependent claim 16, 29, and 30).

A copy of representative claims 1, 15, and 16, taken from the Claims Appendix of the Appeal Brief, appears below.

> 1. A method of coating a stent, the method comprising:
>
> discharging from a dispenser a first coating substance onto the stent while simultaneously rotating the stent around a longitudinal axis of the stent in a first rotation direction and while simultaneously moving the dispenser across the longitudinal length of the stent; followed by
>
> discharging from the dispenser a second coating substance onto the first coating substance on the stent while simultaneously rotating the stent around the longitudinal axis of the stent in a second rotation direction and while simultaneously moving the dispenser across the longitudinal length of the stent, the second rotation direction being the reverse of the first rotation direction,
>
> wherein the discharging from the dispenser of the first coating substance forms a coating layer having a greater amount of the first coating substance on a first side surface of a

stent strut as compared to a second side surface of the stent strut, the first side surface facing in the first rotation direction, the second side surface facing in the second rotation direction; and

the discharging from the dispenser of the second coating substance forms a coating layer having a greater amount of the second coating substance on the second side surface as compared to the first side surface.

15. A method of coating a stent, the method comprising:

performing at least two process cycles, each process cycle including distributing a sprayed coating substance onto or into a stent while simultaneously rotating the stent, the stent including a plurality of struts, each strut having a first side surface facing a first rotation direction and a second side surface facing in a second rotation direction opposite the first rotation direction,

wherein performing the at least two process cycles includes balancing the distribution of the coating substance over the first and second side surfaces of the struts, by rotating the stent during at least one of the process cycles in the first rotation direction that is opposite of the second rotation direction of at least one other of the process cycles,

wherein the balancing of the distribution over the first and second side surfaces of the struts includes:

forming a first coating layer around the struts during the at least one of the process cycles, the first coating layer having an average thickness over the first side surfaces that is substantially greater than that on the second side surfaces; and

forming a second coating layer around the first coating during the at least one other of the process cycles, the second coating layer having an average thickness over the second side surfaces that is substantially greater than that on the first side surfaces.

16. The method of claim 15, wherein the first coating layer and the second coating layer in combination form a coating around each of the struts, and the coating has a mean thickness profile over the first side surfaces that is the same or

> substantially the same as a mean thickness profile over the second side surfaces.

Appellant presents arguments directed to claims 1, 9, 15, 16, 29, and 30 but does not present separate arguments specifically directed to the other (dependent) claims on appeal (App. Br. 7–17). Therefore, these other claims will stand or fall with the claims from which they depend.

We sustain the Examiner's rejections for the reasons expressed in the Final Action (dated 30 April 2014), the Answer, and below.

In rejecting independent claims 1 and 9 over Chappa and Fifer, the Examiner finds that Chappa's coating method does not include the claimed feature wherein coatings are sprayed while rotating the stent in opposite directions but that Fifer discloses spraying a stent while rotating it in opposite directions (Final Action 3 (citing Fifer ¶¶ 35–38)). The Examiner concludes that it would have been obvious "to rotate the stents of Chappa in the manner described by Fifer in order to gain the coating profile of Fifer on the stents of Chappa" (*id.*). Further, the Examiner determines that "as the stent rotates in one direction, coating material would tend to increase on [the] tangential moving face of the stent struts with relation to the opposite facing side of the same strut, effectively meeting the limitations of the current claims" (*id.*). The Examiner relies on a corresponding rationale in rejecting claims 15, 16, 29, and 30 over Chappa, Fifer, and Pacetti (*id.* at 5).

Appellant contests the Examiner's proposed combination of Chappa and Fifer by arguing "there is no teaching in Fifer that rotation in both forward and reverse directions is needed or desired to achieve the coating profiles illustrated in Fifer[, and] [t]hus it would not have been obvious to

modify Chappa to rotate the stent simultaneously with spraying, and to perform rotation in both forward and reverse directions" (App. Br. 9).

Appellant's argument is not persuasive. There is no dispute that Fifer expressly teaches "[t]he stent **210** can be rotated . . . in alternating directions to achieve coating characteristics as desired" (Fifer ¶ 38). In light of this teaching, it would have been obvious for an artisan to spray Chappa's stent while rotating it in alternating directions in order to predictably use the known coating technique of Fifer according to its established function of achieving desired coating characteristics. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007) (In assessing the obviousness of claims to a combination of prior art elements, the question to be asked is "whether the improvement is more than the predictable use of prior art elements according to their established functions.").

Appellant correctly indicates that the Examiner is presenting an inherency theory in the above determination that the claimed greater amount of coating on a side surface necessarily will occur on the side of Chappa's strut facing the spray during stent rotation (App. Br. 9–10). Appellant argues (1) that such greater amount would not occur (*id.* at 10), (2) that other factors could predominate whereby a greater amount would not necessarily be deposited (*id.* at 11), and (3) that the presence of any such greater amount would not be recognized by a person of ordinary skill (*id.* at 11–12).

Regarding argument (3), contrary to Appellant's belief, a determination of inherency does not require that a person of ordinary skill in the art would have recognized the inherent disclosure. *See Schering Corp. v. Geneva Pharm., Inc.*, 339 F.3d 1373, 1377 (Fed. Cir. 2003).

However, "in order to rely on inherency to establish the existence of the claim limitation in the prior art in an obviousness analysis[,] the

limitation at issue necessarily must be present, or the natural result of the combination of elements explicitly disclosed by the prior art." *Par Pharm., Inc. v. TWi Pharm., Inc.*, 773 F.3d 1186, 1195–96 (Fed. Cir. 2014). In this regard, Appellant's argument (1) that their greater amount limitation would not occur in the Chappa/Fifer combination is contradicted by their own Specification disclosure explaining why leading and trailing stent surfaces tend to receive greater and lesser amounts of coating (Spec. ¶ 78). *See In re Kao*, 639 F.3d 1057, 1070 (Fed. Cir. 2011) (agreeing with the Board's finding that the specification confirmed the claimed property was inherent in the prior art).

We also are not convinced by Appellant's above argument (2) that other factors could predominate whereby a greater amount would not necessarily be deposited. "[T]he prior art need only meet the inherently disclosed limitation to the extent the patented method does." *King Pharm., Inc. v. Eon Labs, Inc.*, 616 F.3d 1267, 1276 (Fed. Cir. 2010). Here, the record reflects that the Chappa/Fifer combination inherently and necessarily would result in the greater amount limitation to the extent Appellant's claimed method results in a greater amount. As noted by the Examiner, "[A]ppellant does not disclose any reason[] why it [i.e., the claimed greater amount] occurs in their procedure but . . . would not occur in [the corresponding method] of the prior art [i.e., the combination of Chappa and Fifer]" (Ans. 2).

Regarding claims 15, 16, 29, and 30, Appellant additionally contends:

> Without any recognition that the direction of rotation simultaneous with spraying could have an effect on the distribution of a coating substance on side surfaces of stent struts, it would not have been obvious for a person of ordinary skill in the art to balance the distribution of the coating

> substance over the side surfaces of the stent struts by rotating the stent in opposite directions.
> (App. Br. 16; *see also id.* at 16–17).

The deficiency of Appellant's contention is that it does not explain why the claimed balancing would not occur inherently and necessarily in the Chappa/Fifer combination proposed by the Examiner. In this regard, we emphasize that independent claim 15 recites "balancing the distribution of the coating substance over the first and second side surfaces of the struts, by rotating the stent during at least one of the process cycles in the first rotation direction that is opposite that of the second rotation direction of at least one other of the process cycles." Thus, by its express language, claim 15 states that the required balancing is achieved by the step of rotating the stent in first and second opposite directions. This same rotating step would occur in the Chappa/Fifer combination as previously discussed and, therefore, inherently would produce the claimed balancing. For analogous reasons, the ultimate coating of the Chappa/Fifer combination necessarily would have the mean thickness profile required by dependent claims 16, 29, and 30.

In summary, Appellant fails to show error in the obviousness conclusions and inherency determinations expressed by the Examiner in the rejections advanced in this appeal.

DECISION

The decision of the Examiner is affirmed.

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

AFFIRMED