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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte THOMAS M. DIMAURO, MOHAMED ATTAWIA,
CHANTAL HOLY, SEAN LILIENFELD, and JEFFREY K. SUTTON

Appeal 2019-006644
Application 15/367,338
Patent US 8,900,284 B2
Technology Center 3900

Before DANIEL S. SONG, MICHELLE R. OSINSKI, and
CYNTHIA L. MURPHY, *Administrative Patent Judges*.

OSINSKI, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant¹ appeals from the Examiner's decision rejecting claims 1–13 under 35 U.S.C. § 251. An oral hearing was held on November 18, 2019.² We have jurisdiction over the appeal under 35 U.S.C. §§ 6(b) and 134.

We AFFIRM.

¹ We use the term “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as DePuy Synthes Products, Inc. Appeal Br. 1.

² The record includes a transcript of the oral hearing (“Tr.”).

BACKGROUND

The application on appeal (Reissue Application) seeks a broadened reissue of U.S. Patent 8,900,284 B2 (Issued Patent) which matured from U.S. Patent Application 11/761,708 (Patent Application). Claims 1–12 issued in the Issued Patent (Issued Claims) matured from claims 1–10 initially filed with the Patent Application (As-Filed Claims), with claim 1 being the sole independent claim. Claim Listing (June 12, 2007). As-Filed Claim 1 is reproduced below.

1. A method of treating a patient having a neurodegenerative disease, comprising the steps of:
 - a) implanting a device comprising an antenna and a light emitting diode (LED) in a brain of the patient,
 - b) transcutaneously transmitting Rf energy to the antenna in an amount sufficient to power the LED, and
 - c) irradiating the patient's brain with an effective amount of light from the powered LED.

Id.

The Issued Claims recite a “method of treating a patient having a neurodegenerative disease” including the step of “irradiating a patient’s brain with an effective amount of red or infrared light from [a] powered LED wherein irradiation of the brain is carried out with [an energy density] between about 0.2 J/cm² and 50 J/cm² energy and for a duration on the order of minutes” and also having a particular irradiation intensity of “between 1/3 mW/cm²] and 625 mW/cm².” Issued Patent 9:24–36, 10:16–29. The Issued Claims include independent claims 1 and 9. *Id.* The Issued Claims also include claims 2–8 and 12 depending from independent claim 1, and claims 10 and 11 depending from independent claim 9. *Id.*

The Reissue Application contains claims 1–13 (Reissue Claims). Reissue Claims 1, 5, 9, and 13 are independent. Reissue Claim 1 is reproduced below with deletions from Issued Claim 1 appearing in double brackets and additions relative to Issued Claim 1 appearing underlined.

1. A method of treating a patient having a neurodegenerative disease, comprising the steps of:

a) implanting a device comprising [[an antenna and]] a light emitting diode (LED) in a brain of the patient,

b) [[transcutaneously transmitting Rf energy to the antenna in an amount sufficient to power]] powering the LED, and

c) irradiating a patient's brain with an effective amount of red or infrared light from the powered LED,

[[wherein irradiation of the brain is carried out with between about 0.2 J/cm² and 50 J/cm² energy and for a duration on the order of minutes,]]

wherein irradiation onto the substantia nigra is carried out at an intensity of between 1/3 mW/cm² and 625 mW/cm².

Appeal Br. (Claims App.). Of particular note, the Reissue Claims omit the recitations of a particular energy density (i.e. “between about 0.2 J/cm² and 50 J/cm² energy”) and a particular duration (i.e., “on the order of minutes”) in their entirety, but recite that irradiation of the substantia nigra (a particular part of the brain) is carried out at the same particular irradiation intensity as recited in the Issued Claims. *Id.*

Reissue Claim 5 omits the same density and duration recitations, but recites that irradiation is onto the substantia nigra and includes the additional recitation (from original dependent claim 5) that “the irradiation is effective to increase cytochrome oxidase activity in the brain.” *Id.*

Reissue Claim 9 omits the same density and duration recitations, but recites that irradiation is onto the substantia nigra and also provides for “[a] method of treating a patient having Parkinson’s Disease.” *Id.*

Reissue Claim 13 omits the same density and duration recitations, but recites that irradiation is onto the substantia nigra and both that the irradiation is effective to increase cytochrome oxidase activity in the brain and that the method is one of “treating a patient having Parkinson’s Disease.” *Id.*

REJECTION

The Examiner rejects Reissue Claims 1–13 under 35 U.S.C. § 251 as attempting to recapture subject matter surrendered during prosecution of the Issued Patent. Final Act. 3–5.

PRINCIPLES OF LAW

The Reissue Application seeks a reissue, and more particularly a broadened reissue, of the Issued Patent. The Reissue Statute allows a patentee to broaden claims in its issued patent within two years if the patentee can show “error.” 35 U.S.C. § 251.³ Yet “[n]ot every” circumstance “that might be labeled ‘error’ is correctable by reissue.” *Hester Indus., Inc. v. Stein, Inc.*, 142 F.3d 1472, 1479 (Fed. Cir. 1998). One circumstance “that does not satisfy the ‘error’ requirement” of the Reissue Statute “is embodied by the recapture rule.” *In re Youman*, 679 F.3d 1335, 1343 (Fed. Cir. 2012). “The recapture rule bars a patentee from recapturing

³ The Issued Patent issued on December 2, 2014, and the Reissue Application was filed on December 2, 2016, which is within the two-year window required by the Reissue Statute.

subject matter, through reissue, that the patentee intentionally surrendered during the original prosecution in order to overcome prior art and obtain a valid patent.” *Id.*

The determination as to whether reissue claims violate the recapture rule involves a three-step analysis. *Id.* “Under the first step, we determine whether and in what aspect the reissue claims are broader than the patent claims.” *Id.* (internal quotations omitted). Under the second step, we “determine whether the broader aspects of the reissue claims relate to surrendered subject matter.” *Id.* (internal quotations omitted). If the reissue claims are broader relative to the patented claims in a manner related to surrendered subject matter, then under the third step, we “determine whether the surrendered subject matter has crept into the reissue claim.” *Id.* at 1344 (internal quotations omitted). Satisfaction of these steps, and thus, violation of the recapture rule, may be avoided if “the [reissue] claims are materially narrowed in a way that avoids substantial or whole recapture of the surrendered subject matter.” *Id.* at 1344–1345. The materially narrowing analysis is conducted on a limitation-by-limitation basis and the frame of reference is the original claim--the claim prior to the surrendering amendment or cancelation. *Id.* at 1345, 1346; *see also id.* at 1347 (“[I]f the patentee modifies the added limitation such that it is broader than the patented claim yet still materially narrows relative to the original claim, the recapture rule does not bar reissue.”). “[A] limitation that is added during prosecution to overcome prior art cannot be entirely eliminated on reissue because doing so would constitute recapture of the surrendered subject matter.” *In re Mostafazadeh*, 643 F.3d 1353, 1359 (Fed. Cir. 2011).

ANALYSIS

With respect to the first step of the recapture rule analysis, there is no dispute between the Examiner and Appellant that independent Reissue Claims 1, 5, 9, and 13 are broader than the independent Issued Claims 1 and 9 because they omit the language that “the irradiation of the brain is carried out with between about 0.2 [J]/cm² and 50 J/cm².” Appeal Br. 5. Independent Reissue Claims 1, 5, 9, and 13 are also broader than the independent Issued Claims 1 and 9 because they omit the language that the irradiation is carried out “for a duration on the order of minutes.” *See, e.g., id.* at 8 (acknowledging that “the specific value range for energy levels *and duration* has been removed and the claim is broader”) (emphasis added).

The Examiner and Appellant, however, disagree as to the results of the second and third steps of the recapture rule analysis. More particularly, with respect to the second step of the analysis, Appellant argues that the Amendment in which Appellant added the now-omitted language pertaining to the energy density and the duration (RCE (Sept. 2, 2009)) “did not result in the allowance of claim 1 (or any other claim).” Appeal Br. 6–7. Appellant asserts that this particular “amendment and argument did not distinguish [applied prior art] [d]eCharms at all.” *Id.* at 7. Appellant argues that it was only after it amended the claims to set forth a particular energy intensity range (which remains in the Reissue Claims) that Appellant was able to successfully distinguish deCharms. *Id.* at 8. According to the Appellant, “Applicant acquiesced to the Examiner’s position that the amendment [regarding the energy density and the duration] did not distinguish over [d]eCharms, and made a further amendment that did.” *Id.*

Appellant considers its surrendered subject matter to be only the limitation relating to energy intensity in particular “that was actually used to distinguish [d]eCharms.” *Id.* at 10.

The Examiner asserts that Appellant amended the claims in the RCE of September 2, 2009 “in order to overcome the prior art rejection” such that Appellant “surrendered this subject matter during prosecution of the original application.” Final Act. 5. The Examiner explains that “[a] patent owner (reissue applicant) is bound by the argument that applicant relied upon to overcome an art rejection in the original application for the patent to be reissued, regardless of whether the Office adopted the argument in allowing the claims.” *Id.* at 6 (emphasis omitted) (citing *Greenliant Sys., Inc. v. Xicor LLC*, 692 F.3d 1261 (Fed. Cir. 2012)). The Examiner maintains that “it is clear that [Appellant] argued that the limitation ‘ . . . for a duration on the order of minutes’ distinguished over the prior art” and that “Patent [O]wner is bound by these arguments regardless of whether the limitation rendered the claims allowable or not.” Ans. 6.

Appellant argues that *Greenliant* is distinguishable from the instant case because “[t]he argument and amendment relied upon in the rejection *did not overcome an art rejection.*” Appeal Br. 9 (boldface omitted). Appellant argues that “[i]n this case, if one looks to the entire file history, one sees that Applicant made an amendment, that the amendment did not result in distinguishing the prior art, and that Applicant acquiesced in this result and went on to make a different amendment that did result in the allowance.” *Id.* at 9–10.

Either an amendment or an argument or both may result in surrender. *See Kim v. ConAgra Foods, Inc.*, 465 F.3d 1312, 1323 (Fed. Cir. 2006) (“It is clear that in determining whether ‘surrender’ of subject matter has occurred, the proper inquiry is whether an objective observer viewing the prosecution history would conclude that the purpose of the patentee’s amendment or argument was to overcome prior art and secure the patent.”). The question before us is whether an objective observer viewing the prosecution history would conclude that the purpose of Appellant’s amendment and argument during prosecution was to overcome the prior art and secure a patent, such that Appellant surrendered a method of treating a patient in which the energy density and the duration are not limited to being within any particular ranges. An objective observer looking at the prosecution history would see that Appellant (i) amended the original prosecution claims to add the limitation of the energy density and the duration being within particular ranges and (ii) argued that the newly recited limitation overcame the prior art because deCharms “teaches away from applying a dose of between about 0.2 J/cm² and 50 J/cm² over a duration ‘on the order of minutes.’” RCE (Sept. 2, 2009), 7. More specifically, Appellant argued that “[d]eCharms was concerned with essentially an instantaneous delivery of a dose of light in the 0.2 – 10 J/cm² fluence range” and “discourages irradiations lasting longer than 1 second,” such that deCharms teaches away from the newly added energy density and the duration limitations. *Id.* at 6–7. Moreover, Appellant acknowledged that the amendment was made for the purpose of trying to overcome the prior art. Tr. 9:13–15.

It is clear that the purpose of Appellant's amendment and corresponding argument in the RCE of September 2, 2009 was to overcome prior art in order to obtain a patent. Appellant is bound by the arguments that it made before the Examiner regardless of whether the Examiner specifically adopted a certain argument as the reason for allowance. *See Greenliant*, 692 F.3d at 1271. Specifically, "[i]t does not matter whether the examiner or the Board adopted a certain argument for allowance; the sole question is whether the argument was made." *Id.* (citing *Springs Window Fashions LP v. Novo Indus. L.P.*, 323 F.3d 989, 995 (Fed. Cir. 2003)) (holding that though "it is not clear from the record why the examiner allowed the claims," the examiner's reasons for allowance "do not negate the effect of the applicant's disclaimer").

Even if Appellant now concedes that the limitation reciting irradiation being carried out with an energy density between about 0.2 J/cm² and 50 J/cm² and for a duration on the order of minutes did not distinguish over the prior art (and instead it was only the energy intensity limitation that distinguished over the prior art) (*see* Tr. 9:22–10:6 (asserting that "there has to be some kind of agreement that the amendment does, in fact, distinguish the reference" and instead it was the "subsequent amendment that actually did distinguish the prior art")), "[t]he public's reliance interest provides a justification for the recapture rule that is independent of the likelihood that the surrendered territory was already covered by prior art or otherwise unpatentable." *MBO Labs., Inc. v. Becton, Dickinson & Co.*, 474 F.3d 1323, 1332 (Fed. Cir. 2007). The rationale underlying the recapture rule is that the amendment of the original claim "made in an effort to overcome a prior art

rejection” is a deliberate action that necessarily excludes the inadvertence or mistake contemplated by the statute’s error requirement. *Medtronic, Inc. v. Guidant Corp.*, 465 F.3d 1360, 1372–73 (Fed. Cir. 2006); *see also In re Clement*, 131 F.3d 1464, 1468 (Fed. Cir. 1997) (“The recapture rule . . . prevents a patentee from regaining through reissue the subject matter that he surrendered in an effort to obtain allowance of the original claims.”).

We determine that Appellant surrendered a method of treatment in which the energy density and the duration of the irradiation are not limited to being within a particular range. Because the Reissue Claims omit any recitation of the energy density or the duration, the Reissue Claims are broader relative to the Issued Claims in a manner related to the surrendered subject matter such that the second step of the recapture rule analysis is satisfied.

In short, the Appellant’s argument (i.e., that surrendered subject matter can only stem from an amendment that was actually successful in obtaining allowance of the Issued Patent) is not aligned with controlling case law.

We now turn to the third step of the recapture analysis where we “determine whether the surrendered subject matter has crept into the reissue claim.” *Youman*, 679 F.3d at 1344 (internal quotations omitted). “Unless the claims are materially narrowed in a way that avoids substantial or whole recapture of the surrendered subject matter, the surrendered subject matter has crept into the reissue claims and they are barred under the recapture rule.” *Id.* at 1344–45 (citing *In re Mostafazadeh*, 643 F.3d 1353, 1361 (Fed. Cir. 2011)). Here, there is no dispute that the recitation of the irradiation

being carried out at a particular energy density and a duration has been removed from the Reissue Claims. The Examiner and Appellant disagree, however, as to whether the additional limitations added by Appellant result in a material narrowing that avoids substantial recapture of the surrendered subject matter.

With respect to the third step of the recapture analysis, the Examiner takes the position that “[t]he narrowing limitations, ‘wherein irradiation onto the substantia nigra’, in claims 1, 9 and 13 and ‘wherein the radiation is effective to increase cytochrome oxidase activity in the brain’ in claims 5 and 13 are not related to the cancelled subject matter.” Final Act. 5. *See Pannu v. Storz Instruments Inc.*, 258 F.3d 1366, 1371–72 (Fed. Cir. 2001) (holding that the elimination of a surrender generating limitation in its entirety is impermissible recapture even if it is accompanied by other limitations making the reissue claim narrower than the patent claim in other unrelated aspects). As to the narrowing limitation that provides “[a] method of treating a patient having Parkinson’s Disease” in claims 9 and 13, the Examiner takes the position that “[t]he claims are not even limited to treating Parkinson’s Disease at all because it only recites treating a patient having Parkinson’s Disease.” Final Act. 7.

Appellant argues that “the claims are substantially narrowed with respect to the deleted claim limitation [in] such a way that substantial recapture cannot be said to take place.” Appeal Br. 12. More particularly, Appellant argues that the Specification “clearly ties irradiation carried out between about 0.2 J/cm² and 50 J/cm² for a duration on the order of minutes (the recitation deleted in the claims) with an increase in cytochrome oxidase

activity around and in the substantia nigra.” *Id.* Appellant continues that “the purpose for the formerly recited energy levels and duration is to increase cytochrome oxidase activity in and around the substantia nigra.” *Id.* Appellant, thus, asserts that the narrowing limitations “materially narrow the claims in a way that is directly tied to the numerical recitations that have been deleted.” *Id.* According to Appellant, “the [S]pecification gives every reason to believe that the scope [of the Reissue Claims relative to the Issued Claims] has remained significantly similar.” *Id.* at 13. With respect to the last narrowing limitation, Appellant asserts that “the [S]pecification provides scientific literature that explains the criticality of irradiation on the substantia nigra for therapeutic treatment of Parkinson’s Disease” “[a]nd again, this expressly ties the scope of claims 9 and 13 (which include the recitation of treating Parkinson’s patients) with the prior scope of the claims before amendment.” *Id.*

With respect to the newly added limitation reciting the specific location in the brain being irradiated, the Examiner responds that “[c]hange in the location is just that: a narrowing of the location and has nothing to do with the energy level [and] a duration of the irradiation.” Ans. 7. With respect to the newly added limitation reciting that the irradiation is effective to increase cytochrome oxidase activity in the brain, the Examiner responds that “[t]here is nothing in the claims to limit the claims to a[] [cytochrome oxidase] activity amount effective to treat a patient with Parkinson’s Disease.”). With respect to the newly added limitation reciting that the treated patient has Parkinson’s Disease, the Examiner responds that “the

claims are not even limited to treating Parkinson's Disease at all because [they] only recite[] treating a patient having Parkinson's Disease.”).

“Properly applied, the material narrowing must relate to the surrendered subject matter to prevent the recapture rule from applying.” *Youman*, 679 F.3d at 1347 (citing *Mostafazadeh*, 643 F.3d at 1359); *see also id.* at 1347–48 (citing *North American Container, Inc. v. Plastipak Packaging, Inc.*, 415 F.3d 1335, 1350 (Fed. Cir. 2005) (“If the narrowing is unrelated to the surrendered subject matter, it is irrelevant for the purposes of the analysis even if it renders the reissue claim as a whole intermediate in scope relative to the patented and original claims.”)). Here, the record does not establish adequately how (i) the specific location in the brain being irradiated, (ii) the irradiation being effective to increase cytochrome oxidase activity in the brain, or (iii) a treated patient having Parkinson's Disease, is related to irradiation of the brain being carried out with an energy density between about 0.2 J/cm² and 50 J/cm² energy and for a duration on the order of minutes. *See Pannu*, 258 F.3d at 1371–72 (determining that added limitations relating to the size and position of “haptics” (i.e., two or more elements for positioning and securing a round lens in the eye) did not materially narrow relative to surrendered subject matter, which instead related to the shape of the haptics, despite the argument that the added limitations “relate to the configuration of the haptics, and therefore, what is gained by the elimination of one limitation is given up by the addition of the other limitations”).

More specifically, in this case, the record does not evidence how an added limitation relating to the location of irradiation narrows relative to the

surrendered subject matter related to energy density level and the duration of irradiation. That is, even if application of energy at a particular energy density is appropriate for treating the substantia nigra (Tr. 4:11–16), merely reciting the location of treatment as the substantia nigra in the Reissue Claims provides no restriction as to the energy density and/or the duration of irradiation.

Next, the record does not evidence how an added limitation relating to the irradiation being effective to increase cytochrome oxidase activity in the brain narrows relative to the surrendered subject matter related to energy density level and the duration of irradiation. Even if column 5 of the Issued Patent “specifically link[s]” cytochrome oxidase activity “to the energy density or total energy per unit area limitation that [Appellant] seek[s] to remove” (*id.*), merely reciting the irradiation being effective to increase cytochrome oxidase activity in the Reissue Claims provides no restriction as to the energy density and even more significantly, no restriction as to the duration of irradiation. As acknowledged by Appellant, “a certain amount of energy [must] be delivered” to increase cytochrome oxidase activity “and there are lots of different ways to deliver that energy.” *Id.* at 12:8–10. Accordingly, it appears that any duration of energy delivery could potentially increase cytochrome oxidase activity depending upon a number of other irradiation variables.

Finally, the record does not evidence how an added limitation relating to a treated patient having Parkinson’s Disease narrows relative to the surrendered subject matter related to the energy density level and the duration of irradiation. Even if the Specification describes “the criticality of

irradiation on the substantia nigra for therapeutic treatment of Parkinson’s Disease” (Appeal Br. 13), merely reciting that a patient being treated has Parkinson’s Disease provides no restriction as to the energy density and/or the duration of irradiation, especially considering that the claim merely recites that the patient has Parkinson’s Disease, not that the irradiation treatment itself is tailored and/or effective to treat Parkinson’s Disease.

For the foregoing reasons, we agree with the Examiner that Reissue Claims 1–13 of the Reissue Application constitute an attempt to recapture subject matter that Appellant intentionally surrendered during prosecution of the Issued Patent.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–13	251	Improper Recapture of Surrendered Subject Matter	1–13	

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