

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BTL INDUSTRIES, INC.,
Petitioner,

v.

INMODE LTD.,
Patent Owner.

IPR2024-00703
Patent 8,961,511 B2

Before MEREDITH C. PETRAVICK, BENJAMIN D. M. WOOD, and
HYUN J. JUNG, *Administrative Patent Judges*.

PETRAVICK, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining No Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

BTL Industries, Inc. (“Petitioner”) filed a Petition for an *inter partes* review of claims 1–58 of U.S. Patent No. 8,961,511 B2 (“the ’511 patent,” Ex. 1001). Paper 2 (“Pet.”). InMode Ltd. (“Patent Owner”) did not file a Preliminary Response, and, on October 2, 2024, we instituted this *inter partes* review as to all challenged claims and all grounds presented in the Petition. Paper 6 (“Dec.”).

After institution, Patent Owner filed a Response to the Petition. Paper 12 (“PO Resp.”). Petitioner filed a Reply (Paper 15, “Pet. Reply”), and Patent Owner filed a Sur-Reply (Paper 20, “PO Sur-Reply”). An oral hearing was held on July 8, 2025 and a transcript appears in the record (Paper 27, “Tr.”).

We have jurisdiction under 35 U.S.C. § 6. This is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of claims 1–58 of the ’511 patent. For the reasons discussed below, we determine Petitioner does not establish by a preponderance of the evidence that any of claims 1–58 are unpatentable.

A. Real Parties-in-Interest

Petitioner identifies itself, BTL Industries, Inc., as the real party-in-interest. Pet. 73.

Patent Owner identifies itself, InMode Ltd., as the real party-in-interest. Paper 4, 1. Patent Owner avers that it is the owner of the ’511 patent, as evidenced by the assignment accorded with the Office at Reel No. 064258, Frame No. 0525. *Id.*; *see also* Ex. 3001 (assignment history abstract).

B. Background and Related Proceedings

The '511 patent was previously challenged by ThermiGen, LLC and Thermiaesthetics, LLC in IPR2018-00088 and IPR2018-00089 (jointly, “the ThermiGen IPRs”). These cases were terminated shortly after institution at the request of Petitioner ThermiGen, and then-Patent Owner, Viveve, Inc. *See* IPR2018-00088, Papers 10 (Ex. 1009), 12; IPR2018-00089, Papers 11 (Ex. 1010), 12.

Coincident with the ThermiGen IPRs, the '511 patent was then at issue in *Viveve, Inc. v. ThermiGen, LLC et al.*, Civil Action No. 2:16-cv-1189-JRG (E.D. Tex.) (“Viveve”), which also settled. *See, e.g.*, Ex. 1009, 2.

According to the parties here, the '511 patent is now at issue in *InMode Ltd. v. BTL Industries, Inc.*, Case No. 2:23-cv-08583 (C.D. Cal.), filed October 11, 2023. *See* Pet. 74, Paper 4, 1.

C. The '511 Specification

The '511 patent issued from U.S. Application No. 11/704,067, filed February 7, 2007, and claims the benefit of Provisional Application No. 60/743,247, filed on February 7, 2006. Ex. 1001, codes (21), (22), (60).

The patent pertains to the use of radiant energy to “treat[] a loose vagina and introitus”^[1] via “corrective or restorative remodeling of the mucosal surfaces of the vagina, introitus, and vulva.” Ex. 1001, code (57), 1:13–15, 2:17–21.

¹ The Specification defines “introitus” as “the opening of the vagina” (Ex. 1001, 2:3–4, 3:51).

According to the Specification:

Embodiments of the invention include methods for remodeling a therapeutic zone of tissue within a target tissue of female genitalia. The target tissue lies immediately beneath the mucosal epithelium of genital tissues, and includes the lamina propria, a connective tissue that includes collagen in the extracellular space, and the muscularis, which includes smooth muscle. The target zone of embodiments of the invention does not include deeper tissue, such as endopelvic fascia.

Id. at 3:41–48.

The Specification describes “apparatus and methods for tightening tissue of the female genitalia by heating targeted connective tissue with radiant energy [typically radiofrequency (RF) energy], while cooling the mucosal epithelial surface over the target tissue to protect it from the heat.”

Id. at code (57), 4:4–13; *see also id.* at 2:25–28, 4:7–16, 13:16–19, claims 6, 33, 41, and 49 (“heating comprises delivering energy by any of: radiofrequency energy, microwave energy, or ultrasound energy”).

According to the Specification, such tightening may be an immediate or near-immediate consequence of thermally denaturing tissue collagen, and/or the result of a longer-term healing response involving the deposition of new collagen by cells in the connective tissue. *Id.* at code (57), 4:14–16, 4:63–5:11, 12:39–49.

D. Illustrative Claims

Petitioner challenges claims 1–58 in this proceeding, of which claims 1, 35, 43, and 51 (reproduced below) are independent. The independent

claims differ only with respect to the “wherein” clauses, shown below in italics.²

1. A method for remodeling a therapeutic zone within a target tissue, the target tissue comprising tissue underlying an epithelium of female genital tissue comprising at least one of vulva, introitus and vagina tissue, the method comprising:

heating the target tissue, and

remodeling the therapeutic zone of target tissue, wherein the heating includes *heating a portion of the vagina extending from the introitus inwardly to a location from 1 cm to 3.5 cm in from the introitus.*

35. A method for remodeling a therapeutic zone within a target tissue, the target tissue comprising tissue underlying an epithelium of female genital tissue comprising at least one of vulva, introitus and vagina tissue, the method comprising:

heating the target tissue, and

remodeling the therapeutic zone of target tissue, wherein the heating includes *heating a portion of the vagina circumferentially around its wall from 1 o'clock to 11 o'clock, wherein the aspect closest to the urethra is at 12 o'clock.*

43. A method for remodeling a therapeutic zone within a target tissue, the target tissue comprising tissue underlying an epithelium of female genital tissue comprising at least one of vulva, introitus and vagina tissue, the method comprising:

heating the target tissue, and

² The Petition applies a short-hand designation identifying elements of the independent claims. With respect to claim 1, for example, [1.P] refers to the preamble, [1.1] refers to the step of “heating the target tissue,” [1.2] refers to “remodeling the therapeutic zone of target tissue,” and [1.3] applies to the claim-specific “wherein” clause. See Pet. 25, 28, 32, 35.

remodeling the therapeutic zone of target tissue, wherein the heating includes *heating a portion radiating outward from the introitus to Hart's line*.^[3]

51. A method for remodeling a therapeutic zone within a target tissue, the target tissue comprising tissue underlying an epithelium of female genital tissue comprising at least one of vulva, introitus and vagina tissue, the method comprising:

heating the target tissue, and

remodeling the therapeutic zone of target tissue, wherein the heating includes *heating a mucosal surface of the labia minora*.

Ex. 1001, 15:47–55, 17:11–21, 17:42–49, 18:21–28 (emphasis added).

E. Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability (Pet. 12):

Ground	Claims	Basis	Reference(s)
1	1–58	§ 103	Edwards, ⁴ Mosher, ⁵ Ingle ⁶
2	43–58	§ 103	Edwards, Mosher, Ingle, Ollivier ⁷

³ The Specification defines “Hart’s line” as the portion of the vulva “where mucosal epithelium gives way to skin on the outer surface of the labia minora,” i.e., “the boundary where mucosal epithelium and labial skin meet” (*id.* at 3:49–54, 11:59–62).

⁴ US 6,463,331 B1, issued Oct. 8, 2002. Ex. 1005.

⁵ US 2004/0193238 A1, published Sept. 30, 2004. Ex. 1006.

⁶ US 6,216,704 B1, issued Apr. 17, 2001. Ex. 1007.

⁷ Ollivier, D., “Designer Vaginas,” Salon.com, accessed at <https://web.archive.org/web/20010124063400/http://www.salon.com/sex/feature/2000/11/14/vagina/print.html> (Nov. 14, 2000). Ex. 1008.

In support of its patentability challenges, Petitioner provides a Declaration of Dr. Joseph Berenholz, M.D. (Ex. 1003). In support of its arguments, Patent Owner provides a Declaration of Dr. Denise Poulos.

II. ANALYSIS

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). This burden of persuasion never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (discussing the burden of proof in *inter partes* review).

A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which that subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) objective evidence of non-obviousness, if present. *KSR*, 550 U.S. at 406.

“[W]hen a patent ‘simply arranges old elements with each performing the same function it had been known to perform’ and yields no more than one would expect from such an arrangement, the combination is obvious.” *Id.* at 417 (quoting *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273, 282 (1976)). But in analyzing the obviousness of a combination of prior art elements, it can also be important to identify a reason that would have prompted one of skill in the art “to combine . . . known elements in the fashion claimed by the patent at issue.” *Id.* at 418.

“[I]n considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.” *In re Preda*, 401 F.2d 825, 826 (CCPA 1968). Moreover, a precise teaching directed to the specific subject matter of a challenged claim is not necessary to establish obviousness. *KSR*, 550 U.S. at 418. Rather, “any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *Id.* at 420. Accordingly, a party that petitions the Board for a determination of unpatentability based on obviousness must show that “a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1381 (Fed. Cir. 2016) (quotations and citations omitted).

A. Person of Ordinary Skill in the Art

In determining the level of skill in the art, we consider the type of problems encountered in the art, the prior art solutions to those problems, the rapidity with which innovations are made, the sophistication of the technology, and the educational level of active workers in the field. *See Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986); *see also Orthopedic Equip. Co. v. U.S.*, 702 F.2d 1005, 1011 (Fed. Cir. 1983).

Petitioner proposes that a person of ordinary skill in the art (“POSA”) would be “a medical doctor . . . [with] at least three years of experience in the non-surgical treatment of uro-gynecological conditions and/or the non-surgical cosmetic treatment of female genital tissues.” Pet. 6.

In the ThermiGen IPRs, the Board preliminarily determined that a POSA in the field of the ’511 patent would have had “a medical degree plus at least two years of experience in a field such as gynecology, urogynecology, or plastic surgery involving female genital anatomy, with clinical experience in the application of radiant energy to female genital tissue.” Ex. 1009, 8–9; Ex. 1011, 8. Patent Owner, here, urges us to adopt this definition of a POSA because Petitioner’s proposed definition is an over-credentialed standard that few persons would satisfy at the relevant time. PO Resp. 12 (citing Ex. 2001 ¶¶ 35–39; Ex. 2005, 55:5–17, 57:17–58:19).

We apply Patent Owner’s proposed definition, as it appears consistent with the field of the ’511 patent and the prior art and is consistent with testimony of Dr. Poulos and the cross-examination testimony of Dr. Berenholz. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355, (Fed. Cir. 2001)

(the level of ordinary skill in the art may be reflected in the prior art itself); Ex. 2001 ¶¶ 35–39; Ex. 2005, 55:5–17, 57:17–58:19. In our view, however, Petitioner’s proposed definition is not so different that our decision would change if we were to apply Petitioner’s proposed definition.

B. Claim Construction

The Board interprets claim terms in an *inter partes* review using the same claim construction standard that is used to construe claims in a civil action in federal district court. *See* 37 C.F.R. § 42.100(b)). In construing claims, district courts give claims their ordinary and customary meaning, which is “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

With respect to the challenged claims, Petitioner asserts that “no claim term requires construction—all terms should receive their ordinary and customary meaning in view of the patent specification.” Pet. 7 (citing Ex. 1003 ¶ 61). Petitioner, however, does provide constructions of certain claim terms made by the Board in the ThermiGen IPRs and by the court in the Viveve litigation. Pet. 7–12.

Patent Owner provides explicit constructions for numerous claim terms. PO Resp. 13–22.

In order for us to reach a decision, only the claim limitations discussed below require explicit construction. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co. Matal*, 868 F.3d 1013, 1017 (Fed. 2017) (explaining that only those terms need be construed “that are in controversy, and only to the extent necessary to resolve the controversy.”).

1. “*heating a portion of the vagina extending from the introitus inwardly to a location from 1 cm to 3.5 cm in from the introitus*”

The “wherein” clause of independent claim 1 specifies that heating includes “heating a portion of the vagina extending from the introitus inwardly to a location from 1 cm to 3.5 cm in from the introitus.”⁸

Petitioner states: “A POSA would have understood this treatment area includes heating a portion of the vagina starting 1 cm from the opening and extending a further 2.5 cm back towards the cervix (i.e., 3.5 cm from the introitus).” Pet. 35. According to Petitioner, “[t]he ‘extending from the introitus inwardly’ language of claim 1 describes the location and direction from which the claimed range of 1 cm to 3.5 cm is measured.” Pet. Reply 16.

Patent Owner argues that the plain reading of the wherein clause requires the treating to begin at the introitus and extend at least the first centimeter into the vagina and up to 3.5 cm in from the introitus. PO Sur-Reply 6–7; see PO Resp. 30–31.

Petitioner responds that Patent Owner’s construction renders claim 26 superfluous. Pet. Reply 16. Claim 26 depends from claim 1 and recites “wherein remodeling comprises tightening the introitus.” Patent Owner counters: “Whether claim 1’s treatment area includes the introitus or instead begins immediately proximal to the introitus in the lower aspect of the vagina, claim 1 still requires treating at least the first centimeter into the vagina.” PO Sur-Reply 7.

⁸ The *Viveve* court did not construe this limitation. See generally Ex. 1024.

Patent Owner's argument are persuasive. We agree with Patent Owner that a plain reading of the wherein clause requires the treating to begin at the introitus and extend at least the first centimeter into the vagina and up to 3.5 cm in from the introitus. This construction is consistent with the '511 patent's Specification, which states:

In typical embodiments, the length of the energy delivery element is about 1 to about 3 cm in length, in other embodiments it may be as long as about 4 cm. This is a length well adapted to treating the lower aspects of the vagina, wherein treatment by the method comprises contacting the vaginal epithelium in a region that *extends from the introitus inward to a position about 3 to 4 cm inward from the introitus*. In some embodiments of the invention, the method can b[e] practiced with a single row of parallel contact sites immediately inside the introitus. In other embodiments, the method may include deeper rows, or rows that overlap an initial row, while keeping the contact sites within the lower portion of the vagina.

Ex. 1001, 3:28–40 (emphasis added); *see also id.* at 14:47–57. The '511 patent Specification also states: “the portion of the vagina to be treated is a region *between the introitus and a position located no further than about 3 to about 4 cm inward from the introitus*.” *Id.* at 11:48–51 (emphasis added).

Given the plain language of claim 1, consistent with the '511 patent's Specification, we construe “*heating a portion of the vagina extending from the introitus inwardly to a location from 1 cm to 3.5 cm in from the introitus*” to require heating a portion of the vagina beginning at the introitus and extending at least the first centimeter into the vagina and up to 3.5 cm in from the introitus.

2. “heating a portion of the vagina circumferentially around its wall from 1 o’clock to 11 o’clock”

The “wherein” clause of independent claim 35 specifies that “heating includes heating a portion of the vagina circumferentially around its wall from 1 o’clock to 11 o’clock.”⁹

In the ThermiGen IPRs, the Board noted that “[w]hether ‘heating a portion of the vagina circumferentially around its wall from 1 o’clock to 11 o’clock’ requires heating substantially *all* of the wall 1 o’clock to 11 o’clock, . . . is a close question.” Ex. 1009, 18. At institution, we preliminarily adopted the construction from the ThermiGen IPRs¹⁰, which is “heating at least one contact site in the 300 degree arc extending from 1 o’clock to 11 o’clock along the vaginal wall.” Paper 6, 14 (citing Ex. 1009, 18).

Petitioner asserts that the Board’s preliminary construction is correct. Reply 17–18. Petitioner argues that this construction is consistent with dependent claim 40, which recites “contacting the epithelium with a treatment tip at a [sic] one or more contact sites during a procedure.” Pet. 11 (citing *Littelfuse, Inc. v. Mersen USA EP Corp.*, 29 F.4th 1376, 1380 (Fed. Cir. 2022)) (“By definition, an independent claim is broader than a claim that depends from it, so if a dependent claim reads on a particular embodiment of the claimed invention, the corresponding independent claim must cover that

⁹ The *Viveve* court did not construe this limitation. *See generally* Ex. 1024.

¹⁰ The construction from the ThermiGen IPRs was made at the preliminary stage prior to institution using the broadest-reasonable-interpretation standard. Ex. 1009, 9, 16–18. Because the ThermiGen IPRs terminated due to settlement, the Board did not make a final construction based upon a full record developed during trial.

embodiment as well.”). We note that Petitioner fails to point to any disclosure in the ’511 patent that teaches heating circumferentially around the vagina’s wall by contacting one site. *See* Pet. 11.

Patent Owner argues that this clause should be construed to require “heating multiple, contiguous contact sites in the 300 degree arc extending from 1 o’clock to 11 o’clock along the vaginal wall.” PO Resp. 20. According to Patent Owner, in order to heat *circumferentially*, multiple sites need to be treated as contiguously as possible around the vaginal wall. *Id.* at 21 (citing Ex. 2001 ¶¶ 71–72; Ex. 2005, 117:9–118:1). Patent Owner states that “[c]ontiguous sites includes multiple sites adjacent to each other.” PO Resp. 21–22 (citing Ex. 2007, 250).

Patent Owner’s arguments are persuasive. The plain language of claim 35 requires heating a portion of the vagina *circumferentially around* its wall from 1 o’clock to 11 o’clock. In order to heat “circumferentially around” the wall from 1 o’clock to 11 o’clock, multiple sites, and not just one site, of the arc between 1 o’clock to 11 o’clock must be treated. Ex. 2001 ¶¶ 71–72.

This is consistent with the ’511 patent’s Specification, which discloses heating substantially the entire 300 degree arc of vaginal wall from 1 o’clock to 11 o’clock, as shown in the embodiment illustrated in Figures 9A and 9B, reproduced side-by-side below.

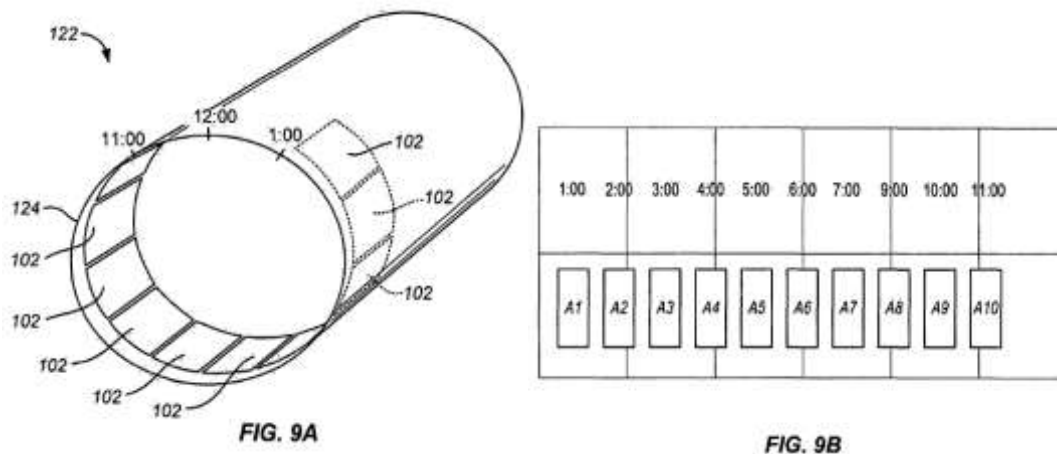


Figure 9A depicts a treatment area of a mucosal epithelium comprising multiple contact sites; Figure 9B is a representation of the treatment area as a mapping grid. Ex. 1001, 5:55–57. More particularly:

FIG.9A is a schematic representation of a vagina 122, with the introitus 124 forming the entrance to the vagina. In a typical procedure, the treatment tip would contact various contact sites in the lower vagina, just inside the introitus. As shown in FIG.9A, an accumulated set of contact sites 102 that have been treated by the treatment tip, and they collectively comprise a treatment area on the vaginal epithelium.

Id. at 14:46–53. As illustrated in Figure 9B,

the contact sites may be recorded on a grid 115, the completed grid thus being a mapped representation of the treatment area, which can be referred to during evaluation of the remodeling at some time point following the treatment. As shown, the treatment grid may contain reference points with respect to the circumferential location on the vagina, as provided, for example, by the clock dial scheme.

Id. at 14:62–15:3. The Specification explains:

The circumference of the lower portion of an unfolded vagina, gently stretched as it is during the practice of this method, is approximately 12 cm. Accordingly, with a treatment tip of about 1 cm in width, a series of about 10 contact sites allows completion of an [sic] 300 degree arc of the circumference,

between the 1 o'clock and 11 o'clock positions. These dimensional considerations underlie the rationale for an embodiment of the treatment wherein the surface of the energy delivery element has a curvature of about 30 degrees, each contact site accounting for about 10% of the 300 degree arc.

Id. at 14:35–45.

We acknowledge that dependent claim 40's recitation of "one or more contact sites" appears to conflict with our construction of claim 1. But, in this case, claim 40's recitation of *one* or more contacts sites conflicts with the plain language of claim 35 and would improperly read the requirement of heating circumferentially around the vagina's wall out of claim 35.

Given the plain language of claim 1, consistent with the '511 patent's Specification, we construe "*heating a portion of the vagina circumferentially around its wall from 1 o'clock to 11 o'clock*" to require heating multiple, contiguous contact sites in the 300 degree arc extending from 1 o'clock to 11 o'clock along the vaginal wall.

C. Overview of Asserted References

1. Overview of Edwards (Ex. 1005)

Edwards "provides a method and system for the curative treatment of female uro-genital disorders by application of radiofrequency (RF) energy to targeted tissues. Application of this energy is selectively applied so as to ablate, tighten, shrink or reshape the tissue and thereby correct an unwanted condition." Ex. 1005, 2:33–38. In targeting this energy, Edwards teaches that "[t]he physician determines optimal areas of treatment," and "create[s] a series of lesions in either the anterior vaginal wall, the posterior vaginal wall or both." *Id.* at 13:14–16, 13:38–42. According to Edwards, "[r]emodeling

of the anterior wall treats incontinence,” whereas “[r]emodeling both the anterior wall and posterior wall provide circumferential vaginal wall tightening, resulting [in] physical and psychological improvement in the area of sexual function.” Ex. 1005, 3:5–11, 13:14–23.

Edwards discloses system 400, reproduced below in Figure 4, for use in vaginal remodeling. *See id.* at 3:25–27, 7:14–8:5, 13:12–14:4.

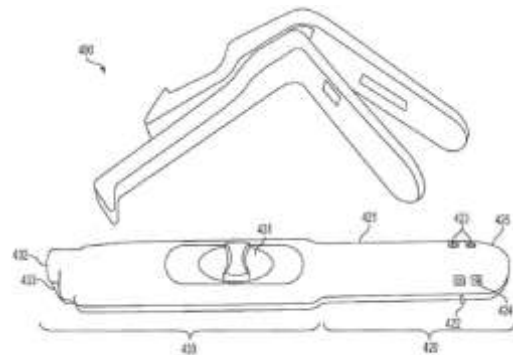


FIG. 4

Figure 4 shows system 400, including treatment element 410 (bottom portion, not labeled). Treatment element 410 includes blade 420 and handle 430. Ex. 1005, 7:18–28. The blade includes a plurality of electrodes 423, a plurality of irrigating fluid delivery pores 425 “disposed to deliver cooling liquids so as to minimize thermal damage,” and at least one thermocouple 424 to monitor temperature. *Id.* at 7:18–28, 7:51–55, 7:66–8:5, 13:43–53.

Figure 9A of Edwards, reproduced below, describes a method employing the device shown in Figure 4.

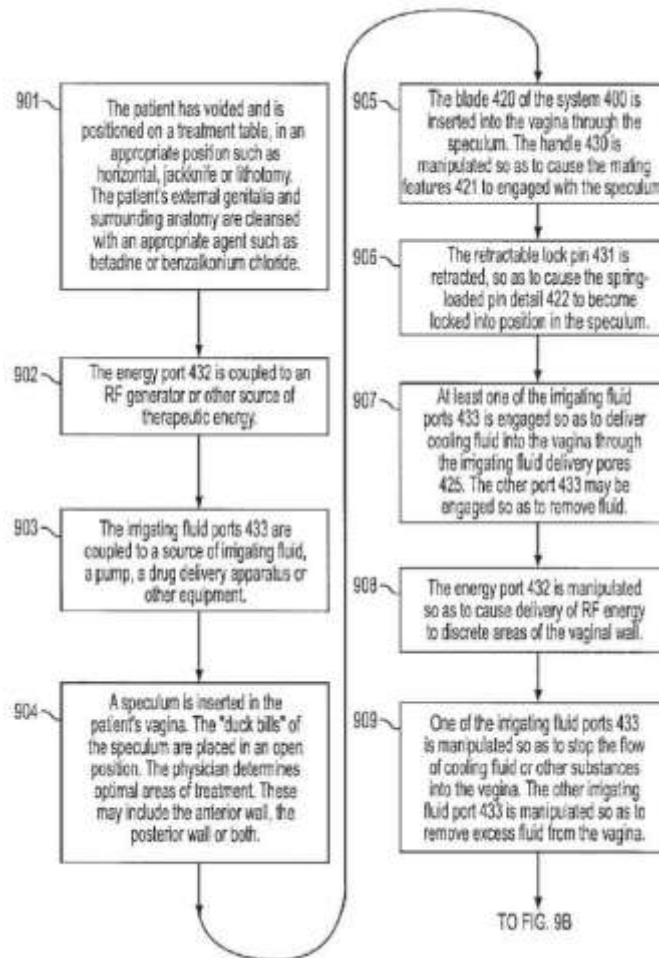


Figure 9A illustrates a method for vaginal remodeling. *Id.* at 3:38–39. According to Edwards, “[A] speculum is inserted in the patient’s vagina. The blades of the speculum are placed in an open position. The treatment element of system 400 is inserted into the vagina through the speculum.” *Id.* at 13:43–46; *see generally, id.* at 13:12–14:4. Cooling fluid is delivered into the vagina through irrigating fluid delivery pores 425, and RF energy is delivered “to discrete areas of the vaginal wall.” *Id.* at 13:54–56. “In a preferred embodiment, the blade 420 may be disengaged and relocked in

another position in the speculum, so as to deliv[er] energy to another area of the vagina.” *Id.* at 13:60–62.

2. Overview of Mosher (Ex. 1006)

Mosher discloses treatment of urinary incontinence by selectively heating and remodeling “collagenous tissues of the pelvic support tissue.” *See, e.g.*, Ex. 1006, Abstract, ¶¶ 9, 45. In this respect, Mosher discloses the introduction of a probe having “tissue-penetrating electrodes” into the vagina for “heating provided through . . . the vaginal wall.” *Id.* at ¶¶ 9, 24–25, 54, Figs. 4B, C.

Mosher discloses Figures 6 and 6a as “illustrative non-invasive vaginal probes and a method for non-invasively treating endopelvic fascia using cooled [RF] electrodes.” *Id.* ¶¶ 27, 58. In one embodiment, “[a] non-invasive cooled electrode probe similar to that shown in FIGS. 6 and 6A heats tissue until the temperature sensing needle at 4.5 mm depth reaches a set point of 75 °C. at 185 seconds.” *Id.* ¶ 85. In one embodiment

a laterally elongate treatment region of the endopelvic fascia will preferably be significantly wider (along the medial-lateral orientation) than its urethral length, ideally having a width of about 25 mm and a length of about 15 mm. Treatment depths will preferably be at least about 2 mm, optionally being as much as 6 mm.

Id. ¶ 74.

According to Mosher, “directing energy from a probe into collagenous tissues of the pelvic support system” may cause contraction of the collagenous tissue and/or structural stiffening related to scarring or healing. *Id.* ¶ 45. In addition to the treatment of urinary incontinence, Mosher teaches that such methods “will find applications in a wide variety of therapies,” and “may be directed to a variety of tissue structures [including]

. . . structures of the vagina,” such as the lamina propria, a “dense connective tissue layer just under the epithelium.” *Id.* ¶¶ 46, 48.

3. Overview of Ingle (Ex. 1007)

Ingle discloses devices and methods “for selectively heating and shrinking tissues, particularly for the noninvasive treatment of urinary incontinence and hernias, for cosmetic surgery, and the like.” Ex. 1007, 1:18–23. Ingle’s methods can “induc[e] controlled shrinkage or contraction of a support tissue of the body, typically being a collagenated tissue such as fascia, ligament, or the like” (*id.* at 11:8–11). “Tissue contraction results from controlled heating of the tissue by affecting the collagen molecules of the tissue.” *Id.* at 11:25–26. Ingle posits that “[c]ontraction occurs as a result of heat-induced uncoiling and repositioning of the collagen B-pleated structure.” *Id.* at 11:25–28.

Ingle teaches heating target tissues by application of RF or ultrasound energy. *See, e.g., id.* at 3:51–56, 5:10–13, 30–32, 8:53–65. This energy “heats fascia and other collagenated support tissues, causing them to contract without substantial necrosis of adjacent tissues.” *Id.* at 2:58–61. To avoid such tissue damage, the energy is “preferably . . . applied through a large, cooled electrode having a substantially flat electrode surface. Such a cooled plate electrode is capable of directing electrical energy through an intermediate tissue and into fascia, while the cooled electrode surface prevents injury to the intermediate tissue.” *Id.* at 2:61–67; *see id.* at 5:40–58.

Ingle provides guidance for times and temperatures suitable to achieve “significant tissue contraction . . . without substantial collateral tissue damage.” *Id.* at 11:25–31. In a preferred embodiment, “the target tissue will

be raised to a temperature of about 60 nC¹¹ or more, while the intermediate tissue remains at or below a maximum safe temperature of about 45 nC.” *Id.* at 8:41–44. Ingle further teaches that “[t]he temperature of the target tissue structure will . . . often be[] in the range from about 60 nC to 80 nC.” *Id.* at 11:33–37.

According to Ingle, selective, temperature-mediated shrinkage of fascia may be used to treat a wide variety of conditions, “and may even be used in cosmetic procedures . . . to remove wrinkles by shrinking the collagenated skin tissues, or to lift sagging breasts by shrinking their support ligaments.” *Id.* at 17:65–18:7. Exemplary target tissues, however, “include the urethral wall, the bladder neck, the bladder, the urethra, bladder suspension ligaments, the sphincter, pelvic ligaments, pelvic floor muscles, fascia, and the like.” *Id.* at 11:14–17. In some embodiments energy is applied “to fascia . . . within the vagina” via an energy transmitting element on the distal end of a probe introduced into the vagina. *Id.* at 3:36–43. Fig. 11. In this aspect,

The transmitting element is capable of transmitting sufficient heating energy through the vaginal wall to heat and contract the fascia. A cooling system is disposed adjacent to the transmitting element. The cooling system is capable of maintaining the vaginal wall adjacent the probe below a maximum safe temperature when the fascia is heated by the transmitting element.

¹¹ “nC” appears to be pervasive formatting error in Ingle, as published. We understand “nC” in Ingle to mean “°C”. See Ex. 1007, 15:31 (referring to body temperature as “approximately 37 nC”), 15:5–39 and Figures 3A–E (illustrating exemplary temperature ranges, in °C); Ex. 1003 ¶ 80.

Id. at 3:43–50; *see also id.* at 3:51–58 (“[I]ntermediate tissue is cooled with the probe to avoid injuring the intermediate tissue when the target tissue is heated by the probe.”), 4:4–10, 11:25–31, 15:65–16:4, 20:14–19.

4. Overview of Ollivier

Ollivier describes techniques for the cosmetic treatment of the vagina, vulva, and labia. *See generally* Ex. 1008. Ollivier describes, for example, the use of “Laser Vaginal Rejuvenation (LVR) to tighten [a patient’s] vagina and ‘enhance sexual gratification’ and Designer Laser Vaginoplasty (DLV) to ‘aesthetically modify’ her labia.” *Id.* at 1. Ollivier explains, “[b]y reconstructing the ‘optimum structural architecture’ of the vagina—namely, by reconstructing the outer third of the vagina: the orgasmic platform, internal and external vaginal diameter (introitus) and the perineal body— ... women not only are relieved of incontinence, but they also enjoy increased levels of sexual gratification.” *Id.* With reference to advances in remodeling technology, Ollivier states that surgery for vaginal and labial “deformities” has “been around for 30 years. Lasers have even fallen out in favor. We have more sophisticated tools that do the same thing these days.” *Id.* at 3.

D. Ground 1: Asserted Obviousness in view of Edwards, Ingle, and Mosher

Petitioner challenges claims 1–58 as obvious in view of Edwards, Ingle, and Mosher. Pet. 22–67.

1. Claim 1

Claim 1 recites, “wherein the heating includes heating a portion of the vagina extending from the introitus inwardly to a location from 1 cm to 3.5

cm in from the introitus.” We construed this limitation to require heating a portion of the vagina beginning at the introitus and extending at least the first centimeter into the vagina and up to 3.5 cm in from the introitus. *Supra* 12.

Petitioner contends and Patent Owner disputes that Edwards and Mosher teach this limitation. Pet. 35–36; Pet. Reply 14–17; PO Resp. 29–39; PO Sur-Reply 8–11.

Petitioner first point’s to Edwards’s fourth embodiment and asserts that a “POSA . . . would have understood Edwards’s teachings to include treatment near the opening of the vagina.” Pet. 35 (citing Ex. 1003 ¶ 122).

Patent Owner disagrees and responds that Edwards’s device is not suitable for treating the area near the introitus because Edwards uses a speculum to reach deeper into vagina to treat the bladder neck region. PO Resp. 30, 34–36.

Patent Owner’s argument is persuasive. Edwards’s fourth embodiment for vaginal remodeling is depicted in its Figure 9. Ex. 1005, 13:12–14:5, Fig. 9. According to Edwards’s “[r]emodeling both the anterior wall and the posterior wall provide circumferential vaginal wall tightening, resulting [in] physical and psychological improvement in the area of sexual function.” *Id.* at 13:19–22. The method includes inserting a speculum¹² into the vagina and the physician determining optimal treatment areas, that may include both the anterior wall or posterior wall of the vagina. *Id.* at 13:38–42, Fig. 9, step 904. In the fourth embodiment, the treatment blade is mated with the speculum. *Id.* at 13:43–49, Fig. 9, steps 905–906.

¹² A speculum in a device that dilates a vagina. Ex. 2001 ¶ 100.

Both parties' declarants agree that a treatment method that uses a speculum as in Edwards would likely be unsuitable for treating a portion of the vagina beginning at the introitus and extending at least the first centimeter into the vagina and up to 3.5 cm in from the introitus. *See* Ex. 2005, 137:12–138:1; Ex. 2001 ¶¶ 101–103. Both declarants also agree that a speculum would need to be inserted into the vagina at least a few centimeters beyond the introitus to secure the speculum in the vagina. Ex. 2005, 137:12–138:1; Ex. 2001 ¶ 101. Edwards's treatment blade is mounted on the speculum so that the electrodes extend beyond the end of the speculum and, thus, the electrodes are positioned about 2 cm deeper into the vagina than the tip of the speculum. Ex. 2005, 132:25–133:16, 140:14–17; Ex. 2001 ¶ 101. Thus, Edwards treatment area is deeper in the vagina than the claimed treatment area. *See* Ex. 2005, 137:12–138:1, 140:14–17; Ex. 2001 ¶¶ 101–103.

In its Reply, Petitioner argues that Edwards's treatment method uses a speculum is irrelevant because "POSAs 'would have understood that in treating areas of the vaginal wall closer to the introitus, a physician would be able to complete the treatment without a speculum.'" Pet. Reply 20–21 (citing Ex. 1003 ¶¶ 69, 159).

Petitioner's argument is misplaced because the issue is whether Edwards discloses the claimed heating of the vagina from the introitus inwardly to a location from 1 cm to 3.5 cm in from the introitus, not whether a POSA would have understood that Edwards's device could be used to meet this claim limitation.

Also in its Reply, Petitioner argues that Edwards teaches remodeling the anterior vaginal wall at area proximal and mid-urethra. Pet. Reply 14

(citing Ex. 1005, 13:14–23). Petitioner contends that “[t]reating the vaginal wall adjacent to the mid-urethra is within the claimed region of ‘from 1 cm to 3.5 cm in from the introitus.’” Pet. Reply 14 (citing Ex. 1032, 65:11–77:7).

With respect to the fourth embodiment, Edwards states: “Remodeling of the anterior wall treats incontinence based on bladder outlet hypermobility by increasing support for the bladder outlet, as well as the proximal and mid-urethra.” Ex. 1005, 13:16–19. As Patent Owner points out, this statement does not describe the treatment area but the result of the treatment. PO Sur-Reply 8–9 (citing Ex. 1032, 141:13–23). As we found above, Edwards’s fourth embodiment includes the use of a speculum, which would result in a treatment area outside the claimed treatment area.

The Petition next relies upon Mosher to teach focusing treatment near the opening of the vagina. Pet. 35–36 (citing Ex. 1006 ¶¶ 58, 74, 75, Figs. 6, 6a); *see also* Pet. Reply 14–16. Mosher teaches that in one embodiment

a laterally elongate treatment region of the endopelvic fascia will preferably be significantly wider (along the medial-lateral orientation) than its urethral length, ideally having a width of about 25 mm and a length of about 15 mm. Treatment depths will preferably be at least about 2 mm, optionally being as much as 6 mm.

Ex. 1006 ¶ 74. Petitioner asserts that “a POSITA would have understood that Mosher teaches treating a portion of the vagina extending from the introitus to 1.5 cm inwards, which falls within the claimed treatment area.” Pet. 36 (citing Ex. 1003 ¶ 124).

Patent Owner disagrees and argues that “Petitioner mistakenly reads the stated **size** of the treatment area to be a position of the treatment relative to the introitus.” PO Resp. 37. According to Patent Owner, Mosher does not

explicitly state the location of the treatment area and, contrary to Petitioner's argument, "with the limited treatment length, a POSA would readily understand that the introitus is not treated." *Id.* at 37–38 (citing Ex. 2001 ¶ 107).

Patent Owner's arguments is persuasive. The cited portion of Mosher does not explicitly state the location of the treatment area. Ex. 1006 ¶ 74.

In its Reply, Petitioner additionally points to paragraph 54 of Mosher, which states: "Preferably, the location of the treatment volume of endopelvic fascia will be disposed along a length of the urethra between the bladder neck and the external meatus so as to avoid injuring nerves." Pet. Reply 14 (quoting Ex. 1006 ¶ 54). Petitioner argues that "[t]reating the vaginal wall adjacent to the mid-urethral region is within the claimed region of 'from 1 cm to 3.5 cm in from the introitus.'" Pet. Reply 14–16. This, however, does not teach the claimed area beginning at the introitus and extending at least the first centimeter into the vagina and up to 3.5 cm in from the introitus.

The Petition fails to show that either Edwards or Mosher discloses heating a portion of the vagina beginning at the introitus and extending at least the first centimeter into the vagina and up to 3.5 cm in from the introitus.

In its Reply, Petitioner argues that it would have been obvious to modify Edwards to treat the area beginning at the introitus and extending at least the first centimeter into the vagina and up to 3.5 cm in from the introitus. *See, e.g.*, Pet. Reply 2–4, 16–17 (citing Pet. 35). The Petition's argument is unpersuasive because it is conclusory and does not adequately address Edwards's use of a speculum. Pet. 35. The Petition includes no

persuasive explanation as to why it would have been obvious to modify Edwards to use the treatment blade without the speculum. *See* Pet. 22–24, 35–36.

We determine that Petitioner fails to meet its burden to show by a preponderance of the evidence that claim 1 is unpatentable over Edwards, Ingle, and Mosher.

2. Claim 35

Claim 35 recites “wherein the heating includes a portion of the vagina circumferentially around its wall from 1 o’clock to 11 o’clock, wherein the aspect closest to the urethra is at 12 o’clock.” We construed this limitation to require heating multiple, contiguous contact sites in the 300 degree arc extending from 1 o’clock to 11 o’clock along the vaginal wall. *Supra* 14.

In the Petition, Petitioner first argues that Edwards expressly describes heating more than one contact site. Pet. 37–38 (citing Ex. 1005, 13:14–16, 13:38–42); *see also* Pet. Reply 18 (citing Ex. 1005, 3:5–13, 13:19–22).

Describing its fourth embodiment, Edwards states:

A method 900 is performed to create a series of lesions in either the anterior vaginal wall, the posterior vaginal wall or both. Remodeling of the anterior wall treats incontinence based on bladder outlet hypermobility by increasing support for the bladder outlet, as well as the proximal and mid-urethra. Remodeling both the anterior wall and the posterior wall provide circumferential vaginal tightening, resulting [in] physical and psychological improvement in the area of sexual function.

Ex. 1005, 13:14–22; *see also id.* at 3:5–13, 13:38–42.

As pointed out by Patent Owner and can be seen from the passage above, Edwards does not teach circumferentially heating the vaginal wall from 1 o’clock to 11 o’clock. PO Resp. 39–40, 42–43. Instead, as Patent

Owner further points out, it is likely that the “series of lesions” that Edwards discusses extend longitudinally because the lesions are caused by electrodes that extend along the length of the treatment blade. *Id.* at 42 (citing Ex. 1005, Fig. 4). In addition, Edwards’s treatment uses a speculum, and Edwards’s does not describe rotating the speculum. *See* Ex. 1005, 13:12–14:6; Ex. 2001 ¶¶ 114, 115, 117. The reference to circumferential vaginal tightening in the passage above is the result of creating a series lesions in the anterior vaginal wall and posterior vaginal wall. Ex. 1034, 141:3–23.

Petitioner next argues that “Based on Mosher’s teachings of distributing the treatment volume along a lateral orientation, a POSA would have been motivated to treat more locations around the circumference of the vagina to expand the treatment area.” Pet. 38 (referencing Ex. 1006 ¶ 74). Mosher states:

To avoid injury to nerves in the bladder neck region while providing sufficient treatment volume along the endopelvic fascia, it may be advantageous to distribute the treatment volume along the patient’s lateral orientation while limiting the length of treatment along the axis of the patient’s urethra. . . . Such a laterally elongate treatment region of the endopelvic fascia will preferably be significantly wider (along the medial-lateral orientation) than its urethral length, ideally having a width of about 25 mm and a length of about 15 mm.

Ex. 1006 ¶ 74.

As can be seen from the passage above, Mosher discloses a laterally elongate treatment region of about 25 mm (2.5 cm) and does not disclose heating multiple, contiguous contact sites in the 300 degree arc extending from 1 o’clock to 11 o’clock along the vaginal wall.

We determine that Petitioner fails to meet its burden to show by a preponderance of the evidence that claim 35 is unpatentable over Edwards, Ingle, and Mosher.

3. Claims 43 and 51

Claim 43 recites “wherein the heating includes heating a portion radiating outward from the introitus to Hart’s line.” Claim 51 recites “wherein the heating includes heating a mucosal surface of the labia minora.”

Petitioner acknowledges that none of Edwards, Mosher, and Ingle explicitly teaches heating a portion radiating outward from the introitus to Hart’s line or a mucosal surface of the labia minora. Pet. 40–43; *see also* Pet. Reply 19–20. Petitioner points to general teachings of Edwards, Mosher, and Ingle that disclose treating a variety of tissues and argues that “[a] POSA would have known that treating the vulva is often done for cosmetic purposes.” Pet. 41; *see also id.* at 42. Given this, Petitioner concludes that POSA would have been motivated to apply the treatments described in Edwards, Mosher, and Ingle to cosmetically enhance the areas recited in claims 43 and 51. Pet. 41 (citing Ex. 1003 ¶¶ 39–49, 91, 142), 42 (citing Ex. 1003 ¶¶ 91, 146, 136–143).

Patent Owner argues that Petitioner’s proposed combination is based on impermissible hindsight because Edwards, Mosher, and Ingle disclose treating internal female genital tissue and Petitioner does not adequately explain why a POSA would be motivated to modify Edwards to treat external female genital tissue. PO Resp. 46–51.

Patent Owner's arguments are persuasive. None of Edwards, Mosher, or Ingle disclose treating external female genital tissue. The Petition argues that a POSA would have been motivated to apply, and have a reasonable expectation of success in doing so, the treatments of Edwards, Mosher, and Ingle to cosmetically enhance the areas recited by claims 43 and 51. Pet. 41–42; *see also* Pet. Reply 19–20. Edwards, Mosher, and Ingle, however, are focused on treating internal female genital tissue and do not explicitly disclose treating external female genital tissue recited in claims 43 and 51. *See generally* Exs. 1005–1007. The Petition does not adequately address the differences between treating internal versus external female genital tissue. *See, e.g.*, Ex. 2005, 34:22–35:12 (testimony of Dr. Berenholz indicating differences in temperature settings); Ex. 2001 ¶ 130. For example, Edwards's treatment method includes mating its treatment blade with a speculum, which would be used only with treatment of internal female genital tissue. Ex. 1005, 13:38–40, Fig. 9, step 904; Ex. 1005, 13:43–46; Ex. 2001 ¶ 129. The Petition includes no persuasive explanation as to why a POSA would have been motivated to modify Edwards to use the treatment blade without the speculum, so as to treat external tissue. *See* Pet. 22–24, 35–36.

An obviousness analysis must focus on what a person having ordinary skill in the art would have been *motivated* to do, rather than merely what such a person would have been *able* to do. *Polaris Indus., Inc. v. Arctic Cat, Inc.*, 882 F.3d 1056, 1069 n.4 (Fed. Cir. 2018); *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015). We determine that Petitioner failed to meet its burden to show by a preponderance of the evidence that claims 43 and 51 are unpatentable over Edwards, Ingle, and Mosher.

4. Claims 2–34, 36–42, 44–50, and 52–58

We determine that Petitioner failed to meet its burden to show by a preponderance of the evidence that claims 2–34, 36–42, 44–50, and 52–58, which depend from claims 1, 35, 43, or 51 are unpatentable over Edwards, Ingle, and Mosher. *In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992) (“[D]ependent claims are nonobvious if the independent claims from which they depend are nonobvious.”).

E. Ground 2: Asserted Obviousness in view of Edwards, Ingle, Mosher, and Ollivier

Petitioner challenges claims 43–58 as obvious in view of Edwards, Ingle, and Mosher for the reasons set forth with respect to Ground 1, and further in view of Ollivier—“to the extent Patent Owner argues or the Board finds that [treatment of the vulval areas recited in the ‘whereas’ clauses of independent claims 43 and 51] was not within the general knowledge of a POSA.” Pet. 67–68.

Patent Owner argues that the Petition fails to demonstrate that Ollivier is a printed publication because the Petition does not sufficiently show that Ollivier was accessible to the interested public. PO Resp. 60–62; PO Sur-Reply 24–25.

“A reference is deemed publicly available if it has been ‘disseminated or otherwise made available to the extent that persons interested and ordinarily skill in the subject matter or art, exercising reasonable diligence, can locate it.’” *Telefonaktiebolaget LM Ericsson v. TCL Corp.*, 941 F.3d 1341, 1346 (Fed. Cir. 2019) (citing *Jazz Pharm., Inc. v. Amneal Pharm.*,

LLC, 895 F.3d 1347, 1355 (Fed. Cir. 2018)). Whether a reference is a “printed publication” is a “case-by-case inquiry into the facts and circumstances surrounding the reference’s disclosure to members of the public.” *In re Klopfenstein*, 380 F.3d 1345, 1350 (Fed. Cir. 2004). “If accessibility is proved, there is no requirement to show that particular members of the public actually received the information.” *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1569 (Fed. Cir. 1988).

The Petition contends that Ollivier is an article published on November 14, 2000 on Salon.com and that

Ollivier was publicly accessible on Salon.com at least by January 24, 2001, EX1008; EX1031, 1-2, 7-9, because interested persons would have known of or been able to locate Salon.com, EX1023 (2.6 million unique visitors in December 2000); EX1031, 1-2, 4-6, and would have been able to locate Ollivier on Salon.com using, e.g., Salon.com’s search functionality, EX1029, EX1030. Research aids confirm that Ollivier was publicly accessible before the ’511 patent’s critical date. EX1027, 3 (copyright 2003), 20-21 (citing Ollivier); EX1028, 2 (copyright 2002), 77 (citing Ollivier);

Pet. 12–13; *see also* Pet. Reply 22–23. Petitioner provides Exhibits 1023, 1027, 1028, 1029, 1030, and 1031 to supports its assertion of public accessibility.

Ollivier is an article from Salon.com, which was archived on the Internet Archive by the Wayback Machine. Ex. 1008; Ex. 1031. Exhibit 1023 is a Salon.com webpage that provides “Salon Traffic & Audience Profile” statistics, including that “[i]n December 2000 Salon registered 2.60 million unique visitors.” Ex. 1023, 1.

Salon.com is described as a “politically progressive and liberal news and opinion website” that provides “provocative (if predictably liberal)

political commentary and lots of sex” and is not a medical or technical publication. Ex. 2015. The 2.6 million unique visitors statistic does not sufficiently relate to whether Salon.com was accessible to an interested POSA, who is medical doctor.

That the Wayback Machine electronically archived Ollivier does not, by itself, mean that Ollivier was sufficiently indexed on the Salon.com website or the Internet Archive. Nor does it reveal anything about the search capabilities of the Internet Archive, or why one with ordinary skill in the art would have even visited the Internet Archive to find anything. Petitioner does not provide any other persuasive evidence to show that an interested POSA would have independently known of Salon.com.

Exhibit 1029 and 1030 are webpages from Salon.com, archived by the Wayback Machine. Exhibit 1029 depicts a search webpage used to search Salon.com, and Exhibit 1030 is an advanced version of the search webpage. Neither webpage depicts a particular search that results in the Ollivier article. Exs. 1029, 1030. Even if an interested POSA would have known of Salon.com, we are not persuaded by Exhibits 1029 and 1030 that an interested POSA could have found Ollivier using Salon.com’s search engine, for example, by entering a subject matter search.

Exhibit 1027 is an article titled “Venus Envy – Penis Envy: Aesthetic Autoplasty, Genital Reconstruction, and Erotic Embodiment” in a book titled “The EmBodyment of American Culture.” Exhibit 1028 is a book titled “The Hydra’s Tale: Imagining Disgust.” Petitioner asserts that the books are research aides and points to citations of Ollivier in the books. Pet. 13. The Federal Circuit has recognized that the presence of a research aid may establish public accessibility. *Blue Calypso, LLC v. Groupon, Inc.*, 815

F.3d 1331, 1350 (Fed. Cir. 2106). We are not persuaded, however, that the books are a research aid that is sufficient, without further explanation, to show public accessibility of Ollivier. The Petition merely asserts that “Research aids confirm that Ollivier was publicly accessible before the ’511 patent’s critical date” (Pet. 13), but does not persuasively explain how the books were themselves publicly accessible to an interested POSA. Pet. 13; *see also* Pet. Reply 22.

After considering all of Petitioner’s evidence, we determine Petitioner fails to meet its burden to show that Ollivier was accessible to the interested public and is a printed publication that qualifies as prior art. Petitioner, thus, fails to show that claims 43–58 would have been obvious over Edwards, Ingle, Mosher, and Ollivier.

III. CONCLUSION

We determine that Petitioner fails to establish by a preponderance of the evidence that claims 1–58 of the ’511 patent are unpatentable.

In summary:

Claims	35 U.S.C. §	Basis	Claims Shown Unpatentable	Claims Not shown Unpatentable
1–58	103	Edwards, Mosher, Ingle		1–58
43–58	103	Edwards, Mosher, Ingle, Ollivier		43–58
Overall Outcome				1–58

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–58 of the '511 patent have not been shown by a preponderance of the evidence to be unpatentable; and

FURTHER ORDERED that any party seeking judicial review must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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Patent 8,961,511 B2

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