

# United States Court of Appeals for the Federal Circuit

04-1220

THE GILLETTE COMPANY,

Plaintiff-Appellant,

v.

ENERGIZER HOLDINGS, INC.,

Defendant-Appellee.

John E. Nathan, Paul, Weiss, Rifkind, Wharton & Garrison LLP, of New York, New York, argued for plaintiff-appellant. With him on the brief were Lewis R. Clayton, Daniel J. Leffell, Steven C. Herzog, and Kerry L. Quinn. Of counsel on the brief were William L. Patton, Jane E. Willis, Dalila A. Wendlandt, and Levina Wong, Ropes & Gray LLP, of Boston, Massachusetts.

Randall G. Litton, Price, Heneveld, Cooper, Dewitt & Litton, of Grand Rapids, Michigan, argued for defendant-appellee. With him on the brief was Matthew J. Gipson. Of counsel on the brief were Richard D. Rochford, Jr. and Jason C. Kravitz, Nixon Peabody LLP, of Boston, Massachusetts, and Michael F. Orman, of Rochester, New York.

Appealed from: United States District Court for the District of Massachusetts

Judge Patti B. Saris

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v.

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DECIDED: April 29, 2005

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Before MICHEL, Chief Judge,\* ARCHER, Senior Circuit Judge, and RADER, Circuit Judge.

Opinion for the court filed by Circuit Judge RADER. Dissenting opinion filed by Senior Circuit Judge ARCHER.

RADER, Circuit Judge.

The Gillette Company (Gillette) owns U.S. Patent No. 6,212,777 (issued April 10, 2001) (the '777 patent) for wet-shave safety razors with multiple blades. Gillette sued Energizer Holdings, Inc. (Energizer) in the United States District Court for the District of Massachusetts alleging Energizer's QUATTRO®, a four-bladed wet-shave safety razor, infringes certain claims of the '777 patent. The district court denied Gillette's motion for a preliminary injunction because it found that the claims of the '777 patent covered only a three-bladed razor, and, consequently, Gillette did not show a reasonable likelihood of success on its claim of literal infringement by Energizer's four-bladed razor. The Gillette

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\* Paul R. Michel assumed the position of Chief Judge on December 25, 2004.

Co. v. Energizer Holdings, Inc., No. 03-11514-PBS (D. Mass. Jan. 15, 2004). Because the district court erred in construing the claims of the '777 patent to cover only three-bladed safety razors, this court vacates and remands.

I.

The '777 patent claims a disposable safety razor with a group of blades, each blade placed in a particular geometric position relative to the other blades of the group. Prior art razors with multiple blades shaved closer to the skin than two-bladed razors but had “a serious detrimental influence on other blade unit characteristics, most notably the drag forces experienced when the blade unit is moved over the skin, with the consequence that the overall performance of the blade unit [was] markedly inferior [compared to two-bladed razors] despite a closer shave being obtained.” '777 patent, col. 1, ll. 24-29.

The inventive contributions of the '777 patent are varying progressively the exposure and spacing parameters of the blades to overcome the undesired drag forces produced by razors with multiple blades, not simply limiting the number of blades to three. “The blade exposure is defined to be the perpendicular distance or height of the blade edge measured with respect to a plane tangential to the skin contacting surfaces of the blade unit elements next in front of and next behind the edge.” Id. at col. 1, ll. 50-59. Specifically, the blade closest to the guard (leading blade) is positioned with a negative exposure to (i.e. recessed below) its tangential plane. Id. The blade closest to the cap (trailing blade) is positioned with a positive exposure to (i.e., extending above) its tangential plane. Id. A blade in between the leading and trailing blades is positioned with an exposure with respect to its tangential plane in between the exposures of the

leading and trailing blades with respect to their respective tangential planes. Id. at col. 2, ll. 28-40. The result is a generally “progressive exposure” of the blades with each of the identified blades shaving closer to the skin than the preceding blade. This blade configuration reduces the drag forces produced by the blades and equalizes the work performed by each successive blade. Id. at col. 1, ll. 63-66. Additionally, the span marks the distance between successive blades. A progressive span would involve gradually increasing the spacing between the guard and the leading blade, each successive blade, and the trailing blade and the cap. See, e.g., id. at col. 2, ll. 16-20. The progression of the blade span likewise reduces frictional drag, leading to a close and comfortable shave.

Claim 1 of the '777 patent shows this progressive exposure innovation in shaving technology:

1. A safety razor blade unit comprising a guard, a cap, and a group of first, second, and third blades with parallel sharpened edges located between the guard and cap, the first blade defining a blade edge nearest the guard having a negative exposure not less than -0.2 mm, and the third blade defining a blade edge nearest the cap having a positive exposure of not greater than +0.2 mm, said second blade defining a blade edge having an exposure not less than the exposure of the first blade and not greater than the exposure of the third blade.

'777 patent, col. 4, ll. 5-14.

The Energizer QUATTRO® razor is the accused infringing device. The QUATTRO® employs a cartridge with a guard, a cap, and four blades. The leading blade has a negative exposure of not less than -0.2 mm; the trailing blade has a positive exposure of not greater than +0.2 mm. The QUATTRO® further has two middle blades with essentially the same exposure, which is greater than that of the leading blade and less than that of the trailing blade. In anticipation of Energizer's launch of the

QUATTRO®, Gillette filed a patent infringement suit asserting that the QUATTRO® infringed the claims of the '777 patent. Shortly thereafter, Gillette moved for a preliminary injunction to enjoin Energizer from making and selling the QUATTRO®.

Following a two-day hearing, the district court denied Gillette's motion, finding that Gillette had not shown a reasonable likelihood of success on its claim of literal infringement. Gillette, slip op. at 1. The trial court primarily based its decision on the conclusion that the terms "first," "second," and "third" of claim 1 limited the scope of that claim to a razor having solely three blades. Id., slip op. at 11. Gillette now appeals, and this court has jurisdiction under 28 U.S.C. § 1292(c)(1).

## II

The grant of a preliminary injunction under 35 U.S.C. § 283 is within the discretion of the district court. This court reviews a preliminary injunction decision for an abuse of discretion. Novo Nordisk of N. Am., Inc. v. Genentech, Inc., 77 F.3d 1364, 1367 (Fed. Cir. 1996). "An abuse of discretion may be established by showing that the court made a clear error of judgment in weighing relevant factors or exercised its discretion based upon an error of law or clearly erroneous factual findings." Id.

As the moving party, Gillette is entitled to a preliminary injunction if it shows: (1) a reasonable likelihood of success on the merits of its claims; (2) irreparable harm if an injunction is not granted; (3) a balance of hardships tipping in its favor; and (4) the injunction's favorable impact on the public interest. Reebok Int'l Ltd. v. J. Baker, Inc., 32 F.3d 1552, 1555 (Fed. Cir. 1994). In order to demonstrate a likelihood of success on the merits, Gillette has to show that, in light of the presumptions and burdens that will inhere at trial on the merits, (1) Energizer likely infringes the '777 patent, and (2) the

claims of the '777 patent will likely withstand Energizer's challenges to validity. Amazon.com, Inc. v. Barnesandnoble.com, Inc., 239 F.3d 1343, 1350 (Fed. Cir. 2001). While Energizer raised issues of validity in opposition to Gillette's motion for a preliminary injunction, the district court held that Gillette did not demonstrate a reasonable likelihood of success on the threshold issue of literal infringement. Therefore, the trial court did not address the validity issues. Accordingly, the validity of the '777 patent is not before this court on appeal.

To review Gillette's likelihood of success on its literal infringement claim, this court, as the trial court before it, must first determine the meaning and the scope of the claims on this preliminary record. See Oakley, Inc. v. Sunglass Hut Int'l, 316 F.3d 1331, 1339 (Fed. Cir. 2003) ("An assessment of the likelihood of infringement, like a determination of patent infringement at a later stage in litigation, requires a two-step analysis. First, the court determines the scope and meaning of the patent claims asserted. Second[], the properly construed claims are compared to the allegedly infringing device.") (internal quotations, alterations, and citations omitted). "In construing claims, the analytical focus must begin and remain centered on the language of the claims themselves, for it is that language that the patentee chose to use to particularly point out and distinctly claim the subject matter which the patentee regards as his invention." Interactive Gift Express, Inc. v. CompuServe, Inc., 256 F.3d 1323, 1331 (Fed. Cir. 2001) (quoting 35 U.S.C. § 112, ¶ 2); see also SRI Int'l v. Matsushita Elec. Corp., 775 F.2d 1107, 1121 n.14 (Fed. Cir. 1985) (en banc) ("Specifications teach. Claims claim.").

Claim construction requires this court to place the claim language in its proper technological and temporal context. The best tools for this enterprise are the various forms of intrinsic evidence and, when appropriate, extrinsic evidence. See Vitronics, Corp. v. Conceptoronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996). The intrinsic evidence, “i.e., the patent itself, including the claims, the specification and, if in evidence, the prosecution history . . . is the most significant source of the legally operative meaning of disputed claim language.” Id. (internal citation omitted); see also United States v. Adams, 383 U.S. 39, 49 (1966) (“[I]t is fundamental that claims are to be construed in the light of the specifications and both are to be read with a view to ascertaining the invention.”); Astrazeneca v. Mutual Pharm. Co., Inc., 384 F.3d 1333, 1336-37 (Fed. Cir. 2004) (“[E]vidence intrinsic to the patent – particularly the patent’s specification, including the inventors’ statutorily-required written description of the invention – is the primary source for determining claim meaning.” (citing Bell Atl. Network Servs., Inc. v. Covad Communications Group, Inc., 262 F.3d 1258, 1268 (Fed. Cir. 2001); Vitronics, 90 F.3d at 1582)).

Applying this case law, this court must determine, on this preliminary record, whether the language “comprising . . . a group of first, second, and third blades” in the ’777 patent can encompass four-bladed safety razors (such as the QUATTRO®) or is limited to solely three-bladed safety razors. As explained below, this court discerns that claim 1 uses the “open” claim terms “comprising” and “group of,” in addition to other language, to encompass subject matter beyond a razor with only three blades. Moreover, the specification’s focus on blade exposures and express reference to “blade

units with a plurality of blades,” ’777 patent, col. 1, ll. 3-6, shows as well that this invention covers razors with more than three blades.

The objective of the invention of the ’777 patent is to reduce drag forces in safety razors with more than two blades. See id. at col. 1, ll. 24-37. The ’777 patent accomplishes this objective by progressively increasing the blade exposure and the blade span. Id. at col. 1, ll. 37-59. Indeed, the specification specifically acknowledges that it is not the three blades themselves which solve the prior art problem of detrimental drag forces, but instead the arrangement of three blades in a particular spatial configuration, stating “the novel aspects of the present invention residing in the provision of three blades set in the blade unit set in particular dispositions with respect to each other and the guard and the cap.” Id. at col. 3, ll. 16-19 (emphasis added). The written description likewise discusses these parameters with respect to the relative positioning of each of the three blades at length at column 1, line 60 through column 2, line 40. These principles of progressive blade exposure and progressive blade span could apply equally to four or five blades. Such a geometric arrangement of three, four, or even more blades will achieve a closer shave and, at the same time, minimize excess drag. It may be that a four-bladed safety razor is a less preferred embodiment. A four-bladed razor costs more to build, requires more parts, and adds more frictional drag compared to the three-bladed version. Nevertheless, a patentee typically claims broadly enough to cover less preferred embodiments as well as more preferred embodiments, precisely to block competitors from marketing less than optimal versions of the claimed invention.

Indeed, the language of claim 1 of the '777 patent encompasses more than only three-bladed razors. At the outset, the open language of claim 1 embraces technology that may add features to devices otherwise within the claim definition. Moleculon Research Corp. v. CBS, Inc., 793 F.2d 1261, 1271 (Fed. Cir. 1986). The claim uses two terms to show this open-ended meaning. The word “comprising” transitioning from the preamble to the body signals that the entire claim is presumptively open-ended. Crystal Semiconductor Corp. v. TriTech Microelectronics Int'l, Inc., 246 F.3d 1336, 1347 (Fed. Cir. 2001); Innovad Inc. v. Microsoft Corp., 260 F.3d 1326, 1333 (Fed. Cir. 2001). Because the patentee invoked this open-ended treatment in claim 1 of the '777 patent, the scope of claim 1 encompasses all safety razors satisfying the elements set forth in claim 1. The addition of elements not recited in the claim cannot defeat infringement. See Crystal Semiconductor, 246 F.3d at 1348 (“[T]he transition ‘comprising’ creates a presumption that the recited elements are only a part of the device, that the claim does not exclude additional, unrecited elements. KCJ Corp. v. Kinetic Concepts, Inc., 223 F.3d 1351, 1356 (Fed. Cir. 2002).”).

The claim element identifying the blades likewise uses another presumptively “open” claim term – “group of.” '777 patent, col. 4, l. 6. At the outset, the language “group of” does not place any limits or closed implications on the elements following this broad designation. Claim drafters often use the term “group of” to signal a Markush group. A Markush group lists specified alternatives in a patent claim, typically in the form: a member selected from the group consisting of A, B, and C. See Manual of Patent Examining Procedure § 803.2 (2004). A Markush group by its nature is closed. If an applicant tries to claim a Markush group without the word “consisting,” the PTO will

insist upon the addition of this word to ensure a closed meaning. Thus, in order to “close” a Markush group, the PTO insists on the transition phrase “group consisting of.” See Abbott Labs. v. Baxter Pharm. Prods., Inc., 334 F.3d 1274, 1280 (Fed. Cir. 2003). Without the word “consisting” the simple phrase “group of” is presumptively open. If intending to limit the claimed invention to a three-bladed razor, the patent drafter would not have used the words “group of.” Rather, the drafter would have used the words “group consisting of,” or the simple formulation “and first, second, and third blades.” Because the drafter chose to use the open term “group of,” additional members in the element “group of . . . blades” will not defeat infringement. In other words, a razor with two “second blades,” as in the QUATTRO®, will still fall within the literal language of the claim.

The element at issue requires:

a group of first, second, and third blades with parallel sharpened edges located between the guard and cap, the first blade defining a blade edge nearest the guard having a negative exposure not less than -0.2 mm, and the third blade defining a blade edge nearest the cap having a positive exposure of not greater than +0.2 mm, said second blade defining a blade edge having an exposure not less than the exposure of the first blade and not greater than the exposure of the third blade.

'777 patent, col. 4, ll. 5-14 (emphases added). This element clearly defines a “group of blades” as a subset of the total number of blades in the razor, and specifically identifies which blades of the razor are the “first, second, and third” blades of the subset. The first blade in the group is the blade “nearest the guard,” or leading blade. The third blade in the group is the blade “nearest the cap,” or trailing blade. The second blade is defined by its exposure, and must “hav[e] an exposure not less than the exposure of the first blade and not greater than the exposure of the third blade.” Given that the first and third

blades must be the leading and trailing blades, respectively, and in light of the specification's discussion of a progressive blade exposure, the second blade must also be located between the first and third blades. See id. col. 1, l. 60 – col. 2, l. 40 (discussing a progressive blade exposure from a first blade to a second and third blades). Thus, any blade in between the first and third blades and with an exposure greater than that of the first blade and less than that of the third blade is a “second” blade in the claimed subset of blades. The accused QUATTRO® device, in fact, has two “second blades” because both of the middle blades in the accused device meet the definition of the “second blade” set forth in the claim. Any subset of three blades in a blade unit meeting these definitions is a “group of blades” as defined by the clear language of the claim. This claim is not ambiguous. In fact, the patentee underscored this open-ended claim meaning by using both the open-ended transition phrase “comprising” for all elements of claim 1 as discussed above, and the open-ended claim term “group of” for each part of this element.

The language of the claims depending from claim 1 also support reading “comprising” and “group of” as open terms. Claim 2, which depends from claim 1, adds the limitation that “the span between the first blade edge and the guard is substantially smaller than a span between the edges of the first and second blades and the span between the edges of the second and third blades.” Id. at col. 4, ll. 17-20 (emphases added). The patent drafter's use of “a span” between the first and second blades recognizes that more than one such span may exist. On the other hand, the drafter's

use of “the span” to identify the span between the guard and first blade recognizes that only one such span is possible.<sup>1</sup>

The terms “first, second, and third” are terms to distinguish different elements of the claim, not terms supplying a numerical limit. Thus, the “first,” “second,” and “third” blades need not necessarily appear in that order or necessarily limit the blade unit to only three blades. Instead, these ordinal terms designate different blades within the “unit” according to their location and elevation. The claim itself makes this distinction. The claim defines both the “first” and “third” blades in terms of their location relative to the guard and cap, respectively, and further specifies their respective elevations. The second blade is defined solely by its elevation and location between the leading and trailing blades. None of the blades in the “group” are defined by their consecutive order relative to the other blades.

To make it abundantly clear that the reference to “first,” “second,” and “third” blades was not a serial or numerical limitation, the claim does not follow a consecutive order (i.e., it does not discuss the second blade after the first). The claim is thus clearly not using the ordinals — first, second, third — to show a consecutive numerical limit but only to distinguish or identify the various members of the group. The case law of this court supports this reading of the claim language “first, second, and third.” See 3M Innovative Props. Co. v. Avery Dennison Corp., 350 F.3d 1365, 1371 (Fed. Cir. 2003) (“use of the terms ‘first’ and ‘second’ is common patent-law convention to distinguish

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<sup>1</sup> Dependent claims 9 and 10 use “the span” and “the exposure,” respectively, to refer to the span and exposure of the second blade. ’777 patent, col. 4, ll. 41-45. This definitive recitation of a single span and exposure likely limits these dependent claims to a single second blade, i.e., a three-bladed embodiment of the invention.

between repeated instances of an element” and should not necessarily be interpreted to impose a serial limitation on a claim).

The specification provides further support for interpreting claim 1 to encompass razors with more than three blades. The first sentence of the written description of the invention teaches that “the invention . . . relates in particular to safety razors having blade units with a plurality of blades.” ’777 patent, col. 1, ll. 3-5 (emphasis added). This reference defines the “invention” to encompass “a plurality of blades,” thus eschewing any numerical limit on the number of blades. The written description buttresses this statement of the invention through its use of the same open-ended “group of” language used in claim 1. Id. at col. 1, ll. 37-40 (“Thus, in accordance with the present invention there is provided a safety razor blade unit comprising a guard, cap and a group of three blades . . . .”) (emphasis added). The specification makes numerous references to a preferred embodiment of the invention with three blades, see, e.g., id. at col. 2, ll. 50-53 and col. 4, ll. 2-3, but that narrower embodiment does not impose a limit on the broader claim language as elucidated by the reference to “the invention” as embracing a “plurality of blades.” See Comark Communications v. Harris Corp., 156 F.3d 1182, 1186 (Fed. Cir. 1998) (refusing to import limitations from the specification to the claims); Sjolund v. Musland, 847 F.2d 1573, 1581 (Fed. Cir. 1988) (same); Texas Instruments, Inc. v. U.S. Int’l Trade Comm’n, 805 F.2d 1558, 1563 (Fed. Cir. 1986) (“This court has cautioned against limiting the claimed invention to preferred embodiments or specific examples in the specification.”).

The prosecution of patents related to the ’777 patent also supports reading claim 1 as an open claim. The defendant itself endorsed an open interpretation of

“comprising” when it argued to the European Patent Office (EPO) that a virtually identical claim in Gillette’s European counterpart to the ’777 patent would not exclude an arrangement with four or more blades. This blatant admission by this same defendant before the EPO clearly supports this court’s holding that those skilled in the art would construe the claims of the ’777 patent to encompass razors with more than three blades.

The district court adopted Energizer’s argument that the numerous (approximately thirty) references to “three,” “third” and “tertiary” in the specification limit the scope of the claims. Gillette, slip op. at 14. However, “words or expressions of manifest exclusion” or “explicit” disclaimers in the specification are necessary to disavow claim scope. Housey Pharms., Inc. v. Astrazeneca UK Ltd., 366 F.3d 1348, 1352 (Fed. Cir. 2004); Liebel-Flarsheim v. Medrad, Inc., 358 F.3d 898, 906 (Fed. Cir. 2004). Despite the numerous cites to three-bladed razors plucked from the written description, no statement in the patent surrenders or excludes a four-bladed razor. Neither the district court nor Energizer refers to the “manifest” or “explicit” exclusion test. This patent and its prosecution record fall far short of any kind of disclaimer or disavowal. Not only did the patentee claim the invention with two open-ended terms (“comprising” and “group of”), but the specification expressly teaches that the invention encompasses a “plurality of blades.” This court declines to import limitations to the claims from the specification absent a “manifest” or “explicit” exclusion. Id. The patentee did not disclaim razors with more than three blades at all, let alone “manifestly,” or “explicitly.” Rather the patentee opened its teachings of the invention in the specification with an express statement that the “invention” covers “blade units with

a plurality of blades.” ’777 patent, col. 1, ll. 3-6. The applicant did not “manifestly” or “explicitly” disclaim blade units with a plurality of blades by expressly defining the invention in those exact terms. More important, the language of the claim itself, with its open transition phrases and use of ordinals to distinguish but not limit claim elements, shows that the invention embraces “a plurality of blades.”

### III

Based on the preliminary record before this court, the district court erred in limiting the claims of the ’777 patent to encompass safety razors with solely three blades. Accordingly, this court vacates the district court’s denial of a preliminary injunction on the grounds of Gillette’s failure to show a likelihood of success on the merits of its claim. However, because the claim construction set forth in this opinion is preliminary and based upon an incomplete record, the district court will have every opportunity to review and revisit this claim construction during development of a full record. Indeed, this court recognizes the difficulty imposed on a trial court to construe claim terms based upon a preliminary “likelihood” record. See, e.g., CVI/Beta Ventures, Inc. v. Tura, LP, 112 F.3d 1146, 1160 n.7 (Fed. Cir. 1997) (reversing its own earlier “likelihood” claim construction of terms that were appealed after a complete record); Bayer AG v. Biovail Corp., 279 F.3d 1340, 1349 (Fed. Cir. 2002) (holding that it was premature for this court to engage in its own claim construction where the district court had not performed a comprehensive claim construction based on a complete record); Metaullics Sys. Co. v. Cooper, 100 F.3d 938 (Fed. Cir. 1996) (declining to construe patent claims on appeal from a denial of a preliminary injunction).

In light of the foregoing analysis, the decision of the district court is vacated and remanded for further proceedings consistent with this opinion, including analysis of Energizer's invalidity defenses raised in opposition to Gillette's motion for a preliminary injunction.

COSTS

Each party shall bear its own costs.

VACATED and REMANDED

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Defendant-Appellee.

ARCHER, Senior Circuit Judge, dissenting.

Because the majority exalts form over substance in reaching its conclusion, specifically elevating claiming conventions over the clear teachings of the specification of U.S. Patent No. 6,212,777 (“the ‘777 patent”), I dissent.

I

In construing a claim, we first look to the words of the claims, and these words are generally given their ordinary and customary meaning. See Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996). Our search for the proper meaning of claim terms does not stop there, however, because a patentee may choose to “use terms in a manner other than their ordinary meaning.” Id. Such a redefinition or limitation of a claim term need not be explicit. “In other words, the specification may define claim terms ‘by implication’ such that the meaning may be ‘found in or ascertained by a reading of the patent documents.’” Bell Atl. Network Servs., Inc. v. Covad Communications Group, Inc., 262 F.3d 1258, 1268 (Fed. Cir. 2001) (quoting Vitronics, 90 F.3d at 1582); see Astrazeneca v. Mutual Pharm. Co., Inc., 384 F.3d 1333,

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1340 (Fed. Cir. 2004) (explaining that a patent applicant need not expressly state “my invention does not include X” to indicate his exclusion of X from the scope of his patent). Thus, “the specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” Vitronics, 90 F.3d at 1582 (emphasis added). The majority eschews this teaching in our case law, instead focusing primarily on the ordinary and customary meaning of the claim terms.

The construction of claim 1 of the ‘777 patent hinges on how the terms “comprising” and “group of” are construed. The majority follows claiming conventions and ascribes an open meaning to these terms. In doing this, the majority ignores the overwhelming teaching of the specification that the invention of the ‘777 patent is a razor limited to three blades arranged in the described claim configuration.<sup>1</sup>

Claim 1 reads “comprising a guard, a cap, and a group of first, second, and third blades”; it does not read “a group of blades comprising first, second, and third blades.” In this claim, the transition term “comprising” refers only to the total number of elements in the complete razor, allowing for a razor with additional elements besides the guard, the cap, and the three blade unit. See Spectrum Int’l, Inc. v. Sterilite Corp., 164 F.3d 1372, 1379 (Fed. Cir. 1998); Moleculon Research Corp. v. CBS, Inc., 793 F.2d 1261, 1271 (Fed. Cir. 1986) (holding that a step which recites engaging “eight cube pieces as a composite cube” does not read on a step which engages more than eight cube pieces, despite the use of the transitional term “comprising”). For example, claim 1 could include a safety razor with an additional guard or cap or some other element

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<sup>1</sup> The blade configuration refers to the described progressive and variable blade spans and blade exposures and the three blades’ location relative to each other.

altogether. Because the transition term “[c]omprising’ is not a weasel word with which to abrogate claim limitations,” Spectrum Int’l, 164 F.3d at 1379-80, or to impermissibly expand a claim’s scope, claim 1 should not be construed as permitting a group with more than three blades simply because claim 1 contains the open transition term “comprising” in its preamble when the entire specification points to the invention as being only a three-bladed razor with progressive blade exposure and span.

The dependent claims themselves demonstrate that the blade unit of the invention contains only three blades – including a single second blade. Specifically, whenever the second blade is referred to individually, it is referred to singularly (“the edge of the second blade,” claim 6, ll. 2-3, claim 7, line 2; “the exposure of the second blade,” claim 10, line 2). Similarly, the dependent claims’ use of the term “span” (singular) whenever the distance between the first and second blades and second and third blades is mentioned evidences that there can only be a single second blade: “a span between the edges of the first and second blades,” claim 5, line 2 (emphasis added); “a span between the edge of the third blade and the edge of the second blade,” claim 6, ll. 2-3 (emphasis added); “a span between the edge of the second blade and the edge of the first blade,” claim 7, ll. 2-3 (emphasis added); “a span between the edges of the first and second blades and between the edges of the second and third blades,” claim 8, ll. 2-3 (emphasis added); and “the span between edges of the second and third blades,” claim 9, line 2 (emphasis added). A blade unit including more than one second blade would contain “spans” (plural) between “the second blade” and the first or third blade – one between the first or third blade and the first second blade and one between that same first or third blade and the second second blade. There simply

could not be a single span between a first or third blade and two second blades. The majority states that the use of “a span” for describing the distance between the edges of the first and second blades and that between the edges of the second and third blades suggests that there can be more than one span for each. In other words, there can be a first span between the edge of the first blade and the edge of the first second blade and a second span between the edge of the first blade and the edge of the second second blade. Such an interpretation of “a span” is not consistent with the remainder of the claim language, however. Claims 5 and 8 state that this span is “substantially equal to 1.5 mm.” In a razor having two second blades as proposed by the majority, the first and second blades would have to be virtually in the same spot to satisfy this claim language (a configuration the majority does not even claim the specification supports), as the edge of each second blade would have to be substantially 1.5 mm from the edge of the first blade.<sup>2</sup> Thus, there can only be a single span between the edge of the first blade and the edge of the second blade and a single span between the edge of the third blade and the edge of the second blade. The majority’s claim construction effectively replaces “span” with “spans”; this is not what is claimed.

The specification similarly limits the invention to a blade unit having only three blades. The written description begins with an explanation of how two-bladed safety razors have dominated the wet shaving industry. “Safety razors having blade units with two blades have in recent years been sold in very large numbers and are generally acknowledged to give a better quality shave, especially in terms of closeness, than single bladed razors.” ‘777 patent, col. 1, ll. 34-37. The specification then explains that

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<sup>2</sup> The same analysis applies to the distance between the edges of the third and second blades as described in claim 8.

a blade unit with more than two blades can provide a closer shave but notes that such a multi-bladed razor is not desirable for other reasons:

Closeness of a shave obtained is only one parameter by which razor users judge the performance of a razor. Adding extra blades can have a serious detrimental influence on other blade unit characteristics, most notably the drag forces experienced when the blade unit is moved over the skin, with the consequence that the overall performance of the blade unit can be markedly inferior despite a closer shave being obtainable.

Id. at col. 1, ll. 24-29. The specification then discloses that the inventors have discovered a particular blade geometry for a three-bladed razor so as to overcome the traditional shortcomings of razors having more than two blades. Specifically, the inventors found that adding a third blade positioned between the other two blades in a particular configuration improved closeness while adding only minimal drag:

It has been found that with a blade unit comprising three blades, the frictional drag forces can be kept at an acceptable level while allowing an improved shaving efficiency, by setting the blades relative to each other and to guard and cap surfaces positioned in front of and behind the blade edges, according to a particular geometrical disposition.

Id. at col. 1, ll. 32-37. As such, with the exception of the three-bladed razor having the claimed geometry, the specification actually discourages, or teaches away from, razors that have more than two blades. In this regard, the specification expressly cautions that “[a]dding extra blades [more than two] can have a serious detrimental influence on . . . blade unit characteristics.” Id. at col. 1, ll. 25-27. The general summary or description of the invention thus describes a three-bladed razor with a certain blade configuration and criticizes other blade units having more than two blades.

We have construed claims to be limited to one type of device where the written description has emphasized features of that device and criticized other similar devices.

See Astrazeneca, 384 F.3d at 1340 (citing SciMed Life Sys., Inc. v. Advanced

Cardiovascular Sys., Inc., 242 F.3d 1337, 1340-45 (Fed. Cir. 2001) (construing claims to be limited to catheters with coaxial lumens where written description emphasized coaxial lumens as a feature of the invention and criticized catheters using other types of lumens)). Here, the inventors expressly state that using more than two blades in a safety razor is problematic. '777 patent, col. 1, ll. 24-31. They then explain that these problems are overcome by a three-bladed razor having blades arranged with progressive blade spans and blade exposures. Id. at col. 1, ll. 32-37. This discussion, which expressly emphasizes certain features of the invention (a three-blade unit with the blades arranged in the described geometry) and impliedly criticizes other similar devices (blade units having more than two blades not having the same features), suggests the claims should be narrowly construed.

In my view, therefore, the term “comprising” should not be read as encompassing a blade unit having more than three blades. This is made clear by the claims themselves and by the written description as described below. The traditional open claiming term “comprising” thus applies to the limitations of the razor as a whole, that is, the cap, the guard, and the blade unit and permits other elements included in the razor. However, it does not permit the expansion of the number of blades in the blade unit itself.

Turning to the term “group of,” the written description makes clear that this term is not used as an open claiming term as Gillette argues. The term “group of” occurs only once in the written description when the patentee is describing the invention as a whole in the background section of the patent. The group is specifically described as three blades:

Thus, in accordance with the present invention there is provided a safety razor blade unit comprising a guard, a cap and a group of three blades with parallel sharpened edges located between the guard and cap, the first blade defining the edge nearest the guard having an exposure not greater than zero, and the third blade defining the blade nearest the cap having an exposure not less than zero.

'777 patent, col. 1, ll. 37-44 (emphasis added).

While not referring again to the “group of” blades, the patentee consistently and frequently refers to his invention as a three-bladed safety razor.<sup>3</sup> For example, when the written description speaks of the “blade unit” of the invention,<sup>4</sup> the only type of blade unit identified is one having three blades: “blade unit comprising . . . a group of three blades,” ‘777 patent, col. 1, ll. 39-40; “three-bladed blade unit,” id. at col. 1, line 54; “three bladed safety razor blade unit,” id. at col. 2, line 50; and “three blades set in the blade unit,” id. at col. 3, ll. 17-18. When explaining the basic structure of the invention, the specification discloses “the novel aspects of the present invention resid[e] in the provision of three blades set in the blade unit set in particular dispositions with respect to each other and the guard and cap.” (id. at col. 3, ll. 16-19) (emphasis added). By stating that the unit (group) of three blades (disposed in the described manner) confers novelty to the invention disclosed in the ‘777 patent, the patentee clearly shows that he

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<sup>3</sup> It was represented to the district court, and noted in its opinion, that the word “three,” “third,” or “tertiary” is used in thirty different places in the mere three-column-long specification of the ‘777 patent. Gillette, No. 03-11514-PBS, slip op. at 14. Additionally, nowhere in the specification is the possibility of a four-bladed razor even suggested. This supports a finding that the claims should be interpreted as limited to razors having only three blades. See Microsoft Corp. v. Multi-Tech Sys., Inc., 357 F.3d 1340, 1348 (Fed. Cir. 2004) (noting that the specification referred to transmitting data over a phone line roughly two dozen times and never suggested transmitting data through the use of a packet switched network).

<sup>4</sup> The patentee uses the term “blade unit” to describe the carrier of the blades of the invention. See ‘777 patent, col. 2, ll. 63-64 and representation thereof in Figs. 1 and 2.

regards the invention to be a safety razor with a blade unit having exactly three blades with progressive exposure and span.

The majority contends that a three-bladed razor is merely a preferred embodiment of the invention of the '777 patent, as opposed to the invention. However, the specification is replete with instances where the patentee described the invention as a razor having three blades with the described blade geometry. To this end, the specification states “[w]ith a three-bladed safety razor blade unit having the blades disposed as specified herein we have found an enhanced overall shaving performance in comparison to a two-bladed razor,” (id. at col. 2, ll. 50-53) (emphasis added) (located immediately prior to the patentee’s statement that “some specific embodiments of the invention are described below”); “it is ensured that an enhanced shaving efficiency is secured due to there being three sharpened blades,” (id. at col. 4, ll. 2-3) (emphasis added) (the final sentence of the written description which explains that “[w]ith the embodiments of the invention” this result is reached); “in accordance with the present invention there is provided a safety razor blade unit comprising a guard, a cap and a group of three blades,” id. at col. 1, ll. 37-40 (emphasis added) (located in the background section of the patent). These statements are directed to the invention as a whole and suggest that three blades is a part of the invention, not merely a preferred embodiment. We have held that a claim term was properly construed in accordance with a limitation that was “repeatedly and consistently” described in the specification where “[t]hose statements, some of which [were] found in the ‘Summary of the Invention’ portion of the specification, [were] not limited to describing a preferred embodiment, but more broadly describe the overall inventions of [the] patent[ ].”

Microsoft Corp. v. Multi-Tech Sys., Inc., 357 F.3d at 1346-48 (stating “the claims must be interpreted in light of the specification . . . which repeatedly and consistently describes the local and remote systems of the claimed inventions as communicating directly over a telephone line” and holding that communications were restricted to being over a telephone line and excluded the use of a packet-switched network). Such is the case here.

That a three-bladed razor is not merely a preferred embodiment of the invention of the ‘777 patent is further evidenced by the fact that the specification addresses only changes in the blade exposure and blade span, not the number of blades. Specifically, the ‘777 patent states:

A steadily increasing blade exposure has been found most effective. Therefore, the value of the exposure of the secondary blade is ideally approximately half way between the exposure values for the primary and tertiary blades, and very satisfactory test results have been obtained with all three blade edges lying in a common plane. In most embodiments a secondary blade exposure substantially equal to zero will be very satisfactory. We recommend that the tertiary blade exposure be a positive value equal in magnitude to the negative exposure of the primary blade.

...  
The span  $S_1$  of the primary blade 11 is from 0.5 to 1.5 mm and is preferably substantially equal to 0.70 mm. The span  $S_2$  of the secondary blade 12 and the span  $S_3$  of the tertiary blade 13 have the values in the range of 1.0 to 2.0 mm. They are shown [in FIG. 1] equal with a value substantially equal to 1.50 mm. The edge of the tertiary blade is at a distance  $S_4$  substantially equal to 1.80 mm in front of the cap.

Id. at col. 2, ll. 30-40, col. 3, ll. 25-32. (emphases added). Likewise, when describing “the preferred embodiment of the invention,” id. at col. 2, ll. 61-62, the specification describes the blade exposures of the primary and tertiary blades as being the variant

factor,<sup>5</sup> with the exposure of the primary blade being -0.04 mm and the exposure of the tertiary blade being +0.06 mm:

A more favourable blade arrangement is shown in FIG. 2. The spans S1, S2, S3 and S4 are the same as those mentioned above for FIG. 1. The primary blade in this embodiment has an exposure of -0.04 mm, the exposure of the secondary blade 12 is zero, the edges of all three blades lying in a common plane P as in FIG. 1, and the exposure of the tertiary blade 13 is +0.06 mm. Thus, there is a progressive increase in blade exposure from the leading blade 11 to the trailing blade 13.

Id. at col. 3, ll. 41-50 (emphases added). The consistent factor throughout these passages and the patent's drawings is the presence of three blades arranged with progressive blade exposures and blade spans. It is the value of the blade exposure and span that the inventors intended could vary, not number of blades in the configuration. Thus, a three-bladed razor is not merely a preferred embodiment of the invention; rather, it is the invention. Indeed, nowhere in the specification is the blade unit of the invention expressly described as having multiple blades in excess of three.

The majority discusses at length that the claim terms "first," "second," and "third" do not import a sequential or finite meaning, thus allowing for two "second" blades positioned between the first and third blades, with the blades arranged having the described blade exposures and blade spans. Such a premise, however, assumes that a razor with four blades arranged with one blade configured as the claimed "first blade," one blade configured as the claimed "third" blade, and the remaining two blades configured as the claimed "second" blade would achieve the same desirable results as a razor with only three blades (i.e., one "second blade") arranged in the described

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<sup>5</sup> In this embodiment the blade spans may also vary – i.e., within the same range as that describing the embodiment shown in FIG. 1 ("The spans S<sub>1</sub>, S<sub>2</sub>, S<sub>3</sub>, and S<sub>4</sub> are the same as those mentioned above for FIG. 1"). Id. at col. 3, ll. 43-44.

geometry. Contrary to the majority's implication,<sup>6</sup> there is absolutely no support in the specification for this assumption. Further, the inclusion of more than three blades is in direct conflict with the specification's repeated and consistent reference to the invention as containing three blades, e.g., "the three-bladed unit of the invention," "a three-bladed safety razor blade unit," "three blades," and "three sharpened blades."<sup>7</sup> Finally, the text of the claim itself and the specification suggest only one second blade (i.e., "said second blade," *id.* col. 4, line 11 (emphasis added), "the secondary blade," col. 3, lines 28, 46 (emphases added)). By using "the" and the singular form of "blade," the patentee showed his invention possessed only one second blade positioned between the blade closest to the cap and the blade closest to the guard. The patentee did not state "secondary blades," which would be the situation if the invention included two secondary blades. Further, in the introductory section of the patent, when the patentee is defining "blade exposure," he explains how to measure it in terms of "the three-bladed unit of the invention . . .," *id.* at col. 1, l. 54 (emphasis added).<sup>8</sup> The specification's prevalent references to a three-bladed razor and the claim's use of the singular "blade" show that there can only be one "first" blade, one "second" blade, and one "third" blade. Any other reading of the claim terms "first," "second," and "third" is counter to the very

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<sup>6</sup> See majority op. at 7.

<sup>7</sup> Indeed, given the majority's claim construction, which would allow for a second second blade, the district court on remand will now have to determine validity issues including that under 35 U.S.C. § 112 ¶1.

<sup>8</sup> See also *supra* at 6 (quoting the '777 patent at col. 2, ll. 50-53 and col. 4, ll. 2-3).

nature of the invention described and claimed in the '777 patent.<sup>9</sup>

In sum, the patent specification 1) repeatedly and consistently teaches that the safety razor of the invention is one having three blades; 2) teaches preferred embodiments which vary the configuration of the blades but in no way changes the number of blades of the invention; and 3) discourages the use of more than two blades in a blade unit except for the three-bladed blade unit having the claimed geometry. I believe these teachings together clearly demonstrate that the inventors did not regard a blade unit with four blades arranged in the described geometry as their invention. Therefore, "comprising" and "group of" should not be construed to include a safety razor having more than three blades.

The only support in the specification for the majority's position that "comprising" and "group of" should be given their conventional meaning is the following sentence: "This invention is concerned with safety razors, and relates in particular to safety razors having blade units with a plurality of blades defining parallel sharpened edges arranged to pass in turn over a skin surface being shaved." *Id.* at col. 1, ll. 3-6 (emphasis added). This single, broad statement, not repeated or endorsed elsewhere in the patent's written description, cannot be read to expand the invention beyond what is explicitly described throughout the specification. In particular, it cannot rewrite the statements that the novelty of the invention "resid[es] in the provision of three blades set in the blade unit,"

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<sup>9</sup> The majority is correct that the use of the terms "first," "second," and "third" in a claim does not necessarily impart a sequential meaning to the items being claimed. However, here the balance of the language in claim 1 clearly demonstrates that the inventor intended a sequential relationship by saying that the second blade is located between the first and third blades. '777 patent, col. 4, ll. 7-11 ("[T]he first blade defining a blade edge nearest the guard . . . and the third blade defining a blade edge nearest the cap.").

id. at col. 3, ll. 16-18, and that the goal of “an enhanced shaving efficiency is secured due to there being three sharpened blades,” id. at col. 4, ll. 2-3. The majority relies on this one instance of the use of the word “plurality” and conveniently ignores the repeated statements in the specification that the blade unit is composed of three blades.<sup>10</sup>

Finally, the majority’s claim construction ignores the notice function of the specification. As the Supreme Court stated almost two hundred years ago, an

object of the specification is, to put the public in possession of what the party claims as his own invention, so as to ascertain if he claim[s] any thing that is in common use, or is already known, and to guard against prejudice or injury from the use of an invention which the party may otherwise innocently suppose not to be patented. It is, therefore, for the purpose of warning an innocent purchaser or other person using a machine, of his infringement of the patent; and at the same time of taking from the inventor the means of practising upon the credulity or the fears of other persons, by pretending that his invention is more than what it really is, or different from its ostensible objects, that the patentee is required to distinguish his invention in his specification.

Evans v. Eaton, 20 U.S. 356, 434 (1822) (emphases added). Anyone reading the ‘777 patent would be left with the indelible impression that the patentee had invented a three-bladed, and only three-bladed, safety razor with blades having the described variable blade span and blade exposure. Only with a crystal ball could a competitor in the

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<sup>10</sup> Additionally, the fact that the terms “several blades,” “many blades,” and “extra blades” occur in the specification is irrelevant to the claim construction at issue here. These phrases are contained in a discussion of longstanding problems associated with multiple blades. As noted above, the specification states that the use of multiple blades has historically been problematic. The solution proposed in the ‘777 patent is the three-bladed blade unit of the invention with its three blades set in the blade unit in particular dispositions with respect to each other and the guard and the cap.

safety-razor industry have concluded that the '777 patent could cover a four-bladed razor.

II.

Certainly, claiming conventions demonstrate that claim terms such as “comprising” and “group of” are traditionally viewed as open claim terms. However, here, the specification makes abundantly clear that the invention of the '777 patent was a razor having three blades, no more, arranged in the described geometry. For this reason, I would affirm the district court’s claim construction and its denial of Gillette’s motion for a preliminary injunction.