

**UNITED STATES DISTRICT COURT
MIDDLE DISTRICT OF FLORIDA
TAMPA DIVISION**

STEVEN D. RITCHIE, et al.,

Plaintiff,

v.

CASE NO: 8:06-cv-2128-T-26TGW

VAST RESOURCES, INC.,

Defendant.

_____ /

AMENDED FINAL ORDER

This cause came before the Court for a non-jury trial from April 21, 2008 through April 23, 2008. Before the Court are the transcripts of those proceedings (Dkts.110-112), as well as the parties' exhibits (Dkts. 107-109). The parties have also submitted post-trial briefs (Dkts. 118, 120), rebuttal briefs (Dkts. 116, 118), and proposed findings of fact and conclusions of law (Dkts. 117, 121) for the Court's consideration in rendering this final order and judgment.

I. BACKGROUND FACTS

This is a civil action for patent infringement in violation of the United States Patent Act of 1952, as amended, 35 U.S.C. § 271, *et seq.*, brought by Plaintiffs, Steven D.

Ritchie (“Ritchie”) and H. David Reynard (“Reynard”), as trustee for The Harlie David Reynard, Jr. Revocable Trust (“the Trust”) under Agreement dated September 22, 1998. At issue is United States Patent No. Re 38,924 (“the ‘924 patent”), entitled “sex aid,” which was issued by the United States Patent and Trademark Office to Plaintiffs on December 20, 2005. (Dkt. 107, Ex. 1B) The ‘924 patent reissued on December 20, 2005 based upon an application filed on October 16, 2002. It is a reissue of earlier patent No. 6,132,366 (“the ‘366 patent”), which Plaintiffs filed on April 1, 1999. (*Id.*) Ritchie and Reynard are the named inventors of the ‘924 patent. Reynard assigned his ownership in the ‘924 patent to the Trust, Ritchie did not assign his rights, and thus, the Trust and Ritchie jointly own the ‘924 patent. Ritchie and Reynard are the sole shareholders of Know Mind Enterprises, Inc. (“KME”). KME is a Florida corporation, with its principal place of business in St. Petersburg, Florida, that sells sex aids. KME is not a party to this lawsuit.

Defendant Vast Resources, Inc., also makes and sells sex aids, doing business as Topco Sales (“Topco”), a California corporation, with its principal place of business in Chatsworth, California. As a defense to Plaintiffs’ patent infringement claims, Topco asserts in its Counterclaim (Dkt. 18) that the ‘924 patent is invalid, pursuant to 35 U.S.C. § 101, *et seq.*

II. PLAINTIFFS’ INFRINGEMENT CLAIMS

Plaintiffs allege that the following 11 Topco sex aid products infringe upon independent claims 2 or 8, or both, of the ‘924 patent:

Touch Me (Dkt. 109, Ex. 26):	claims 2, 8
Triple Pleaser (Dkt. 109, Ex. 28):	claims 2, 8
Heart's Delight (Dkt. 109, Ex. 30):	claims 2, 8
Spiral G (Dkt. 109, Ex. 31):	claims 2, 8
G-Spot Lover (Dkt. 109, Ex. 32):	claims 2, 8
Pink Indulgence (Dkt. 109, Ex. 33):	claims 2, 8
Pure Pleasure (Dkt. 109, Ex. 35):	claim 8
Spine (Dkt. 109, Ex. 36):	claims 2, 8
Petite Plug (Dkt. 107, Ex. 7H):	claim 8
Crystal Plug (Dkt. 109, Ex. 27):	claim 8
Confetti Curve (Dkt. 109, Ex. 29):	claims 2, 8

Plaintiffs also allege that the following devices infringe one or more dependent claims of the '924 patent.

Touch Me (Dkt. 109, Ex. 26):	claims 3, 11
Triple Pleaser (Dkt. 109, Ex. 28):	claims 6, 9, 11
Heart's Delight (Dkt. 109, Ex. 30):	claims 4, 11
G-Spot Lover (Dkt. 109, Ex. 32):	claims 3, 11
Pink Indulgence (Dkt. 109, Ex. 33):	claims 3, 11
Confetti Curve (Dkt. 109, Ex. 29):	claims 6, 9, 11

III. THE PATENT CLAIMS AT ISSUE

Independent claims 2 and 8 of the '924 patent read as follows:

2. A sexual aid comprising:

a solid rod having a length with a first end and a second end constituting a gripping area; and

a spherical enlargement integrally formed in the first end of the rod, the rod and enlargement being fabricated of a generally lubricious glass-based material containing an appreciable amount of an oxide of boron to render it lubricious and resistant to heat, chemicals, electricity and bacterial absorption, with the rod having a bend within its length between the gripping area and the first end having the spherical enlargement.

...

8. A method of using a sex aid to increase stimulation during sex acts comprising the steps of:

providing a rod having a length with a first end and a second end constituting a gripping area; and

providing an enlargement integrally formed in the first end of the rod, the rod and enlargement being fabricated of a generally lubricious glass-based material containing an appreciable amount of an oxide of boron to render it lubricious and resistant to heat, chemicals, electricity and bacterial absorption, and stimulating a user through the provided sex aid during anal and vaginal stimulation.

(Dkt. 107, Ex. 1B, Cols. 5–6.)

Dependent claims 3, 4, 6, 9, and 11 provide as follows:

3. The aid as set forth in claim 2 wherein there are plural enlargements.

4. The aid as set forth in claim 2 wherein the gripping area is a loop.

...

6. A sexual aid kit comprising the sexual aid as set forth in claim 2 and further including a water based lubricant used with the aid.

...

9. The method as set forth in claim 8 and further including the step of utilizing the sex aid with a water based lubricant.

...

11. The aid as set forth in claim 2 wherein the bend is an obtuse angle.

(Id.)

IV. CLAIMS CONSTRUCTION

On January 11, 2008, this Court held a Markman¹ hearing in order to construe the above claims. As a matter of law, this Court determined that:

- (1) “sexual aid” means “something used to enhance a sexual experience” (see Markman Hearing Transcript, Dkt. 71, 13:3-8);
- (2) “gripping area” means “area used for holding onto something” (see id. at 19:3);
- (3) “spherical” means, “rounded, like a globe or a ball” (see id. at 58:5);
- (4) “enlargement” means “a region that is larger than the immediately adjacent area” (see id. at 31:5);
- (5) “integrally formed” means “generally continuous with, part of” (see id. at 31:8);
- (6) “at the end of the rod” means “in the vicinity of the end” (see id. at 34:5-37:10);
- (7) “bend” means a “defined angle” (see id. at 67:14);
- (8) “plural enlargements” means “at least two enlargements” (see id. at 67:18);
- (9) “loop” means “generally or nearly closed form” (see id. at 67:20);

¹ Markman v. Westview Instruments, Inc., 517 U.S. 370 (1996).

(10) “obtuse angle” means “an angle greater than 90 degrees” (see id. at 87:22);

(11) “rod” and “solid rod” means “generally straight with an elongated appearance” (see id. at 80:13);

(12) “lubricious” means “slippery” (see id. at 58:3);

(13) “appreciable amount” is an amount “able to be measured or determined” (see id. at 49-53);

(14) “method” means “requiring one or more persons using the sex aid during a sex act” (see id. at 75:24);

(15) “providing” means “an element or thing to be carried out” (see id. at 80:9);

(16) “kit” means “pre-packaged;” (see id. at 73:20-74:21);

(17) “and” in the phrase “vaginal and anal stimulation” means “as well as, ” but does not mean “simultaneously” (see id. at 86:15); and

(18) “increased stimulation” means that the “method requires a stimulation during a sex act greater than a person normally would have without the sex aid.” (See id. at 76-77.)

V. DISCUSSION

A. Patent Invalidity and Unenforceability

Pursuant to 35 U.S.C. § 282, a patent is presumed to be valid. See Dennison Mfg. Co. v. Panduit Corp., 475 U.S. 809 (1986). In its Counterclaim, Topco asserts patent invalidity as its defense to Plaintiffs’ claims of patent infringement and it has the burden of proving each invalidity defense with clear and convincing evidence. See Pharmastem

Therapeutics, Inc. v. ViaCell, Inc., 491 F.3d 1342, 1360 (Fed. Cir. 2007) (clear and convincing evidence established obviousness). Topco raises the following grounds of patent invalidity and unenforceability:

1. Indefiniteness

Patent claims must “particularly point [] out and distinctly claim [] the subject matter which the applicant regards as his invention.” 35 U.S.C. § 112, ¶ 2. This requirement serves to ensure that the patentee adequately notifies the public of the scope of the invention. See Datamize, LLC v. Plumtree Software, Inc., 417 F.3d 1342, 1347 (Fed. Cir. 2005). Indefiniteness is a question of law. See Atmel Corp. v. Information Storage Devices, Inc., 198 F.3d 1374, 1378 (Fed. Cir. 1999). Compliance with the claim definiteness requirement occurs where a person skilled in the art “would understand the bounds of the claim when read in light of the specification ... [and] reasonably apprise those skilled in the art of the scope of the invention.” Solomon v. Kimberly-Clark Co., 216 F.3d 1372, 1378 (Fed. Cir. 2000). Definiteness does not demand “absolute clarity.” Datamize, 417 F.3d at 1347. Only those claims that are “not amenable to construction” or “insolubly ambiguous” are indefinite. Id. The fact that the claim element contains words of degree such as “substantially,” “about,” or “closely approximate” does not necessarily render the claim indefinite. See Verve LLC v. Crane Cams, Inc., 311 F.3d 1116, 1120 (Fed. Cir. 2002).

Topco argues that the patent should be declared invalid because the terms “appreciable amount,” (claims 2 and 8), “lubricious” (claims 1, 2 and 8) and “increase

stimulation” (claim 8) are indefinite for failing to provide a clear-cut indication of the scope of subject matter embraced by the claim. However, the Court has construed “appreciable amount” to mean “an amount that is measurable” and further, the claims state that the appreciable amount is the amount required to provide specific properties. One skilled in the art would certainly realize that the properties stated in the claims language are the measure of the amount of oxide of boron needed. Plaintiffs’ expert², Dr. Elliott Stern (“Stern”), who holds a Ph.D. in mechanical engineering, testified that a half percent of oxide of boron would have minimal effects on the physical properties of glass. (Trial Transcript, Volume 3, Dkt. 112, 71:18–19.)³ Thus, if the amount does not produce those properties and it is not measurable, then it is not covered within the scope of the claim. Absolute clarity is not a requirement.

As to the term “lubricious,” Topco asserts that the term is indefinite because “lubriciousness” is obviously dependent on the user’s perception and it will vary among users. Notwithstanding, the Court has construed the term “lubricious” to mean “slippery.” As Plaintiffs point out, the claims language does not claim that oxide of boron glass is more slippery than any other glass, only that it is “lubricious.” Stern testified as to the lubricity of oxide of boron by stating that it has a lower coefficient of friction. (Id. at 81:2-16.) David Sager, the glass blower hired by Plaintiffs to develop the

² It should be noted at the outset that Topco did not call any of its own witnesses to testify at trial.

³ Cites to the trial transcript will hereafter be signaled by “TT,” with the volume number being signaled by “V,” followed by the docket, page and line numbers.

prototype device, stated that all glass is slippery. (TT, V2, Dkt. 111, 21:20.) Reynard described using a borosilicate glass sex aid vaginally and rectally, and his testimony was that it was “very slippery.” (TT, V1, Dkt. 110, 51:16.) Topco failed to provide any evidence to the contrary or call any rebuttal witnesses to testify. Topco’s third issue as to the definiteness of the patent is without merit inasmuch as it is common sense that slipping an accused device into a rectum or a vagina would certainly “increase stimulation” or “cause a level of stimulation greater than just before the insertion.”

2. Lack of Enablement

Enablement requires that “one skilled in the art, after reading the specification, could practice the claimed invention without undue experimentation.” AK Steel Corp. v. Sollac, 344 F.3d 1234, 1244 (Fed. Cir. 2003). To satisfy the enablement requirement, the specification must set forth the “manner and process of making and using [the invention] in such full, clear, and concise exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same.” 35 U.S.C. § 112, ¶ 1. The purpose of the enablement provision is to ensure that “the public knowledge is enriched by the patent specification to a degree at least commensurate with the scope of the claims. The scope of the claims must be less than or equal to the scope of the enablement.” National Recovery Techs., Inc. v. Magnetic Separation Sys., Inc., 166 F.3d 1190, 1195-96 (Fed. Cir. 1999). Enablement is a question of law. See In re Vaeck, 947 F.2d 488, 495 (Fed. Cir. 1991). The Federal Circuit has noted, “[t]hat some experimentation may be required is not fatal; the issue is whether the

amount of experimentation required is ‘undue.’” Id. at 495. In determining what constitutes undue experimentation, courts should apply a reasonableness standard, taking into account: (1) the quantity of experimentation necessary; (2) the amount of direction or guidance presented; (3) the presence or absence of working examples; (4) the nature of the invention; (5) the state of the prior art; (6) the relative skill of those in the art; (7) the predictability or unpredictability of the art; and (8) the breadth of the claims. See In re Wands, 858 F.2d 731, 737 (Fed. Cir. 1988).

The ‘924 patent claims a sex aid “fabricated of a generally lubricious glass-based material containing an appreciable amount of an oxide of boron to render it lubricious and resistant to heat, chemicals, electricity and bacterial absorption.” (Dkt. 107, Ex. 1B, Col. 5, 6.) Topco maintains that the ‘924 patent fails to enable the terms “glass-based material containing . . .” because adding an oxide of boron does not render glass slippery or resistant to heat and electricity.

The Court observes that the ‘924 patent actually describes a solid cylindrical glass rod to which various other features are added. (Dkt. 107, Ex. 1B, Col. 3, l. 35.) Plaintiffs do not claim to have invented the glass rod, but rather they have included the terms in question in the ‘924 patent in order to specify that the starting point for the invention is not a rod composed of conventional or soda lime glass. Moving on, Stern testified that oxide of boron glass was commercially called borosilicate glass. (TT, V3, Dkt. 112, 11:7-12.) Stern also testified as to the lubricity of oxide of boron by stating that it has a lower coefficient of friction. (Id. at 81:2-16.) Topco did not presented any of its

own evidence on the issue of enablement. The seminal issue in an enablement analysis is what one skilled in the art, with some experimentation being acceptable, would be able to do with the patent disclosure. Sager testified that he had no problem making the device. (TT, V2, Dkt. 111, 17:9-25.) Furthermore, because the properties of resistance to heat, chemicals, electricity and bacterial absorption are inherent in borosilicate glass, or glass having an appreciable amount of oxide of boron, the use of such glass to make the device necessarily enables all the elements of the claims. Plaintiffs are not required to specify on a molecular level just how these are accomplished in order to satisfy enablement, as it seems Topco suggests. The Court finds that the '924 patent is sufficiently enabled.

3. Obviousness

Patent claims are presumed to be non-obvious. See Kahn v. General Motors Corp., 135 F.3d 1472, 1480 (Fed. Cir. 1998). However, the Supreme Court has held that a “patent for a combination which only unites old elements with no change in their respective functions ... obviously withdraws what is already known into the field of its monopoly and diminishes the resources available to skillful men. Great Atlantic & Pacific Tea Co. v. Supermarket Equip. Corp., 340 U.S. 147, 152 (1950). Topco contends that the '924 patent is invalid because the combination of borosilicate glass, which was well known in the art for the last 100 years, with a sex aid, to form the present device, yields expected results and is obvious to one skilled in the art.

In Graham v. John Deere Co., 383 U. S. 1, 17–18 (1966), the Supreme Court set forth the following analysis required to determine obviousness:

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.

....

Such considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.

The Court must consider the entire prior art patent, and not just one aspect of it. See In re Gurley, 27 F.3d 551 (Fed. Cir. 1994)). In considering the totality of a reference's teachings, the court may consider whether the prior art "teaches away" from the invention at issue, to wit, whether the reference suggests that the developments flowing from its disclosures are unlikely to produce the objective of the applicant's invention. Id. at 553. For purposes of this case, the level of ordinary skill in the art is a person who designs sex aids and knows borosilicate glass properties. (TT, V3, Dkt. 112, 98:6-11; 190:8-11.)

Topco urges that prior art teaches all of the claim elements and that the patent examiner overlooked the most important prior art patent, Patent No. 5,835,362 ("the Jacobs Patent"), which discloses an inerrable sex aid that can be made of glass and teaches the shapes that the '924 Patent claims. (Dkt. 108, Ex 526). Topco urges that the only difference between the Jacobs patent, or any prior art for that matter, and the invention claimed in claims 2 and 8 is the use of borosilicate glass and the patent's defined angles and spherical enlargements. However, the evidence shows that the '924 patent examiner reviewed the Jacobs Patent, as well as the following 12 other patents:

Patent No. 870,087	("the Dickens Patent)
Patent No. 1,944,926	("the Colbeth Patent")

Patent No. 2,700,109	(“the Argabrite Patent”)
Patent No. 3726,141	(“the Bremer Patent”)
Patent No. 3,968,690	(“the Blouin Patent”)
Patent No. 3,996,930	(“the Sekulich Patent”)
Patent No. 4,390,555	(“the Levinson Patent”)
Patent No. D272,649	(“the Bloch Patent”)
Patent No. 5,114,495	(“the Mainz Patent”)
Patent No. 5,387,179	(“the Crivellaro Patent”)
Patent No. 5,421,547	(“the Phillips Patent”)
Patent No. 5,690,603	(“the Kain Patent”)

Plaintiffs’ counsel argued the distinctions between the prior art and ‘924 device and the examiner was ultimately convinced, finding that the prior art does not teach or fairly suggest a solid glass based rod including the structure as claimed.

Topco now argues that because all of the elements in Plaintiffs’ device were present in some form in the prior art, Plaintiffs’ final product was predictable. The Court disagrees. The Jacobs Patent teaches a sex aid that may be made of a “class of materials that consists of wood, metal, plastic, rubber, wax, glass, and composite materials. (See Dkt.108, Ex. 526.) It also teaches a molding process, which takes days to cure, to make all embodiments, rather than the use of borosilicate glass. (See id.) Although the Dickens Patent teaches a glass pestle, it specifically teaches a straight shaft, whereas the structure claimed by Plaintiffs’ device requires a bend or handle. (See id. at Ex. 536.) Also, Dickens does not teach any of the properties of borosilicate glass. (See id.) The Bloch Patent teaches sex aids with multiple spherical enlargements along a rod. (See id. at Exs. 567, 569.) The specifications do not disclose the surface conditions, whether smooth or rough, or heat, electricity, and chemical resistant, which causes the Court to

make many assumptions about the device, all of which are unsupported by evidence or testimony. (See id.) The Kain Patent teaches an angled sex aid made of a rigid material that could be used for simultaneous vaginal and anal insertion for two persons. (See id. at Dkt. 564.) Kain teaches both smooth and slippery sex aids. (See id.) The Kain patent also suggests that sex aids may be constructed of “rather rigid material” or “more compressible or resilient material” depending on preferences. (See id.) These materials teach away from Plaintiffs’ invention and render the device inappropriate for consideration as prior art.

Topco offers up several other patents that it feels should have been considered as prior art during the ‘924 patent examination. However, they simply do not lend any support to Topco’s obviousness argument. The Stoy Patent, U.S. Patent No. 4,563,182, teaches freezing an anal insert with an enlargement to make it cold, hard, and slippery. (See id. at Ex. 588.) The Hawtof Patent, U.S. Patent No. 2,562,714, teaches a hollow tube that is preferably made of borosilicate glass and preferably contains a magnetic insert. (See id. at Ex. 553.) Thus, the patent teaches away from a solid rod of borosilicate glass. The Radford Patent, U.S. Patent No. 2,591,375, teaches a device that is a cylindrical Pyrex glass tube that can be submerged in a beverage for cooling and can function as a stirrer. (See id. at Ex. 554.) Radford and the invention claimed in claims 2 and 8 differ in that Radford is hollow tube to hold refrigerant. Because Radford teaches a hollow construct, it teaches away from the solid glass rod used in Plaintiffs’ invention and, thus, should not be considered pertinent prior art.

The Ayres Patent, U.S. Patent No. 3,481,375, teaches borosilicate glass for thermometers to be inserted into the rectum or other bodily orifice. (See id. at Ex. 555.) The prior art thermometer is hollow to perform its regular function and, thus, it teaches away from solid and should not be considered prior art. The Beall Patent, U.S. Patent No. 4,118,237, teaches a glass and ceramic combination for producing various articles. (See id. at 561.) And, while no testimony was offered to assist the Court in understanding the technical description contained in the patent, it is clear that the patented material was tested against Pyrex, a known borosilicate glass, as a comparison. (Id. at Col. 4.) Thus, the patentee thought that borosilicate glass was different from that for which he claimed protection.

Topco also relies on Reynard's admission to having used a glass martini stirrer as a sex aid with his girlfriend some 30 years before Ritchie and Reynard's alleged invention of the device in the '924 Patent. (TT, V3, Dkt. 112, 203:9–13.) Reynard admits that he purchased the stirrer from an antique shop. (Id. at 161:4–18). However, he testified that he did not know if the stirrer was made of glass or possibly some other material such as acrylic. (Id.) Topco offers no evidence to show otherwise and, thus, the stirrer in question should not be considered pertinent prior art.

Further, Topco challenges the examiner's failure to cite any prior art books mentioning glass sex aids, despite the fact that glass sex aids were used 2,000 years ago and that museums have glass phalluses from the Roman Empire. Topco points out the Kinsey Institute Library has a glass phallus from 1970. However, the patent examiner did

review an internet webpage for a business known as “TheOriginalGlassSexAid.com,” which touted the use of Pyrex to form sex aids since 1998. (See Dkt. 107, Ex. 1B, 1.) Ultimately, the examiner concluded that while “[t]he prior art discloses a large number of sex aids of known designs and configurations ... the sex aid according to the present invention substantially departs from the conventional concepts and designs of the prior art, and in doing so provides an apparatus primarily developed for the purpose of increasing stimulation during sex acts.” (See *id.* at Ex. 1B, Col. 1, ¶2.) The examiner went on to find that “it can be appreciated that there exists a continuing need for a new and improved sex aid which can be used for increasing stimulation during sex acts. In this regard, the present invention substantially fulfills this need. (See *id.*)

While familiar items may have obvious uses beyond their primary purposes, the Supreme Court has cautioned against the use of the pat hindsight-based solution that Topco suggests in this case. Specifically, the Court has held that:

... patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.

KSR Intern. Co. v. Teleflex, Inc., 127 S. Ct., 1727, 1741 (2007). It is clear to the Court that none of the prior art, including the glass phalluses mentioned in art books and found

in museums, teaches a solid rod with one or more spherical enlargements and a handle all fabricated of a generally lubricious glass-based material containing an appreciable amount of an oxide of boron to render it lubricious and resistant to heat, chemicals, and bacterial absorption. (See Dkt. 108, Exs. 570, 571, 572, 573.)

Borosilicate glass was invented in 1893 and has been used for a multitude of purposes, but Plaintiffs make a strong argument that no one before them had made the link between the use of such material and the manufacture of sex aids. Plaintiffs assert that it was only after their product was featured on an HBO television program called “Real Sex, Episode 27 ” that the product caught on and other similar sex aids made of borosilicate glass began to show up in the marketplace, including those manufactured by Topco. (TT, V1, Dkt. 110, 96:9-17; 99:7-100:15.) Topco offers no evidence to counter Plaintiffs’ assertion. As Plaintiffs point out, a Google search using the words “glass dildo” now creates more than 300,000 references. (Id. at 60:3.) Plaintiffs’ argument is only bolstered by the evidence of its own commercial success and Defendants’ records of sales of these particular sex aids. (Dkt. 107, Exs. 4, 22.) Plaintiffs’ use of borosilicate glass in its invention gave several properties to sex aids that were not present before, but for which there was, as we now know, a strong demand. Plaintiffs’ introduction of those properties in their invention appears to have been an improvement in the art. Stern even concluded that while “all those properties were well understood at the time, ... I did not find in my analysis that one of ordinary skill in the art recognized borosilicate glass as the means to deliver desirable features for a sex aid use.” (TT, V3, Dkt. 112, 101;2-6.)

Reynard testified that he saw the various shortcomings with products in the marketplace at the time of his invention and that the industry was not concerned with the problems inherent in the existing devices. (TT, V1, Dkt. 110, 135:6-17.)

To rely on commercial success to refute evidence of obviousness, a plaintiff must prove that any commercial success flows from the merits of the claimed invention, i.e., a nexus between the claimed invention and commercial success. See Sjaelland v. Musland, 847 F.2d 1573, 1582 (Fed. Cir. 1988). Alleged commercial success must be “due to the nature of the claimed invention, as opposed to other economic and commercial factors.” Cable Elec. Prods., Inc. v. Genmark, Inc., 770 F.2d 1015, 1027 (Fed. Cir. 1985). “A *prima facie* case of nexus for commercial success is generally made out when the patentee shows both that there is commercial success, and that the thing (product or method) that is commercially successful is the invention disclosed and claimed in the patent.” In re GPAC, 57 F.3d 1573, 1580 (Fed. Cir. 1995). Topco urges the Court to disregard as waived by Plaintiffs any evidence of commercial success to counter obviousness. In light of the evidence and other submissions from the parties, the Court disagrees with Topco.

A patent’s commercial success and the failure of competitors to develop equally successful inventions are important factors weighing in favor of the validity of patent. See Panduit, 475 U.S. at 810. Topco has not produced any evidence to demonstrate that the adult sex toy industry was considering the problems with sterilization, odor retention, surface smoothness, lubricity, or resistance to heat, chemicals, electricity, and bacterial

absorption or was even aware of such problems even existed. Ritchie, on the other hand, testified that he had identified the disadvantages of the existing prior art and that the use of borosilicate glass to make sexual aids addresses and solves these problems. Reynard testified that at one time he counted 33 manufacturers making borosilicate glass toys since the time of the '924 patent. (TT, V1, Dkt. 110, 166:23.) That number has not been disputed. In opening remarks, Topco conceded that it had sold \$700,000 worth of borosilicate glass product since the onset of this action. (Id. at 19:12.) Plaintiffs testified that they were compelled to lower their prices in order to compete with the products offered by others, including Topco. (Id. at 106:8.)

Evidence that those of ordinary skill could not solve the problem that the inventors solved may be evidence of non-obviousness. However, a showing that the inventors met a long-felt need requires evidence that those of ordinary skill recognized a persistent need. See Orthopedic Equip. Co. v. All Orthopedic Appliances, Inc., 707 F.2d 1376, 1381 (Fed. Cir. 1983). Plaintiffs did not introduce any evidence of this nature to counter Topco's obviousness arguments because one of their primary arguments throughout this case has been that while the tremendous commercial success of borosilicate glass sex aids after the airing of the H2O program reflects a strong demand for such devices, no one before Plaintiffs even recognized the need for the invention. For similar reasons, Plaintiffs have not sought to introduce evidence that others tried and failed to produce a non-infringing device in order to compete with their invention. The evidence in this case shows that no borosilicate glass sex toys appeared in the market place prior to Plaintiffs'

invention and that adult sex toy industry was not even considering remedying the problems with sterilization, odor retention, surface smoothness, lubricity, or resistance to heat, chemicals, electricity, and bacterial absorption. As Plaintiffs put it, failure of sex aids was the state of the art because it was perceived to equate to more sales and profits. However, the fact that the idea for glass sex aids is now being widely copied, producing a marketplace full of competitors, only seems to bolster Plaintiffs' argument that their invention was not obvious. See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd., 535 U.S. 722, 732 (2002); Troy Co. v. Products Research Co., 339 F.2d 364, 367 (9th Cir. 1964). In light of all the foregoing, the Court finds that patent claims are not invalid for obviousness.

4. New Matter Violation

Topco argues that claims 6 and 7 of the '924 patent are invalid because the inclusion of the kit concept is new matter. Pursuant to 35 U.S.C. § 132, "no amendment shall introduce new matter into the disclosure of the invention." Unless material added by amendment was inherently contained in the original application, the patent is invalid for introducing new matter. See Schering Corp. v. Amgen Inc., 222 F.3d 1347, 1352 (Fed. Cir. 2000). When an applicant introduces additional disclosure into a patent application, the original disclosure of the application must "reasonably convey to the artisan that the inventor had possession at that time of the later claimed subject matter." Vas-Cath, Inc. v. Mahurkar, 935 F.2d 1555, 1563 (Fed. Cir. 1991). Otherwise, the patent is invalid for adding new matter. Id.

Claims 6 and 7 claim, “a sexual aid kit” of the sex aid and a lubricant. A “kit” is “a pre-packaged container ...that contains a sexual aid with one or more objects.” (See Dkt. 71, 72:24–73:2.) The first mention of “kit” in the ‘924 patent came in plaintiffs’ December 17, 2004, amendment. (Dkt. 108, Ex. 546.) While the specification contained no mention of a “kit,” it did describe the use of the borosilicate glass sex aid along with a lubricant, in the same location, and in the same use. (Dkt. 107, Ex. 1B.) The patent examiner noted that:

The claims need to be written as kit claims. The examiner believes that the lubricant claimed is not provided on the sex aid or as part of the sex aid but merely an additional element used in conjunction with the sex aid further, new lubricant must be provided each time the device is used. Therefore the claims must be set forth as a kit claim.

(Dkt. 108, Ex. 590.) Plaintiffs responded by making the following revisions:

10. (Currently Amended) ~~The~~ A sexual aid kit comprising the sexual aid as set forth in Claim 2 and further including a water based lubricant used with the aid.

(Id. at Ex. 546.) The Court finds that a “kit” is simply a way of clarifying the description of the device as claimed before the use of the word “kit” and, as such, the inclusion of “kit” in claims 6 and 7 does not add any new matter or teaching.

5. Best Mode Violation

Topco urges that the ‘924 patent is invalid for failing to disclose using borosilicate glass and beginning fabrication with a solid borosilicate glass rod. A patent must “set forth the best mode contemplated by the inventor of carrying out his invention.” 35 U.S.C. § 112, ¶ 1. The two-part test for a proper “best mode” analysis is: (1) whether the

inventors “knew of a mode of practicing [their] claimed invention that [they] considered to be better than any other ...;” and (2) whether the inventors’ disclosure in the patent reflected what they knew—that is, whether their “disclosure [is] adequate to enable one skilled in the art to practice the best mode” Automotive Prods. plc v. Tilton Eng’g, Inc., 1994 WL 227967, at *3 (C.D. Cal. Feb. 28, 1994). Invalidity for violation of the best mode requires intentional concealment of a better mode than the patent discloses.

Topco argues that Plaintiffs knew, before they filed their patent application, to begin fabricating the device with available rods of borosilicate glass, but yet, the ‘924 patent does not use the term borosilicate glass and describes nothing about the manufacturing process. However, Plaintiffs do not claim to invent the process of making the glass rod. The patent actually describes a solid glass rod to which various other features are added. (Dkt. 107, Ex. 1B, Col. 3, l. 35.) David Sager, the glass blower hired by Plaintiffs to produce the invention prototype, testified that he had no problem making the device following the simple diagrams that were provided to him by Plaintiffs. (TT, V2, Dkt. 111, 17; 9-25.) Topco failed to present any evidence to the contrary. Thus, the Court finds that one skilled in a related field could make Plaintiffs’ invention following their disclosure and that the ‘924 patent is not invalid for violating the best mode.

6. Misjoinder of Inventors

35 U.S.C. § 102(f) requires a patent applicant to name the correct inventor or inventors as a condition of patentability. Failure to name them renders a patent invalid. See Pannu v. Iolab Corp., 155 F.3d 1344, 1350 (Fed. Cir. 1998). Topco asserts that

David Hack (“Hack”) and Charles Sidwell (“Sidwell”) are joint inventors of the claimed invention and that Plaintiffs’ failure to name them as such renders the ‘924 patent invalid. Topco points out that it was Hack or Sager, and not Plaintiffs, who knew how to make sex aids from borosilicate glass rods. (See TT, V3, Dkt. 112, 129:13–15.) Topco also argues that Plaintiffs’ attorney, Sidwell, drafted the patent application and came up with the language that an appreciable amount of an oxide of boron renders the glass lubricious. (See *id.* at 125:23–126:7.) However, Section 102(f) provides that “[a] person shall be entitled to a patent unless he did not himself invent the subject matter sought to be patented” Section 102(f) bars issuance of a valid patent to a person or person who derive the conception of the invention from any other source or person. 1 Donald S. Chisum, Chisum on Patents § 2.03, at 2-40 & nn.1-2 (2000). Topco fails to prove by clear and convincing evidence that the ‘924 patent claims are invalid under Section 102(f). Plaintiffs’ trial testimony was that they disclosed their conception of the invention to Sidwell, who in turn used what he felt was the best language available to describe the invention. (TT, V3, Dkt. 112, 125:23-126:7.) Topco fails to present any clear and convincing evidence to the contrary. Topco could have deposed Sidwell or called him as a trial witness, but it chose not to do so. Sager testified that he followed the drawings made by Plaintiffs, which were sufficient for him to construct the device. (TT, V2, Dkt. 111, 18:12-19:12 .) The Court agrees with Plaintiffs that when they reduced their devices to drawings, and provided the information regarding the materials to be use in making the devices to Sager and Sidwell, the invention was reduced to completeness.

7. Inequitable Conduct

Topco alleges that Plaintiffs engaged in inequitable conduct in the prosecution of their patent before the patent examiner. “[A] patent may be valid and yet be rendered unenforceable for ... inequitable conduct.” Gardco Mfg., Inc. v. Herst Lighting Co., 820 F.2d 1209, 1214 (Fed. Cir. 1987). In order to prevail in this defense, a defendant must establish by clear and convincing evidence that the patentees: (1) either made an affirmative misrepresentation of material fact or failed to disclose material information; and (2) intended to deceive the United States Patent and Trademark Office. See Cargill, Inc. v. Canbra Foods, Ltd., 476 F.3d 1359, 1363 (Fed. Cir. 2007). Topco has the burden to prove inequitable conduct with clear and convincing evidence. See Intirtool, Ltd. v. Texar Corp., 369 F.3d 1289, 1296 (Fed. Cir. 2004). (Fed. Cir. 2000).

Topco fails to meet its burden. Topco asserts that Ritchie, Reynard, and their patent attorneys breached their duty to act candidly with the Patent and Trademark Office through the following three acts: First, Topco argues that the attorney who wrote the patent made up the fact that the appreciable amount of oxide of boron made the glass sex aid lubricious, and resistant to heat, chemicals, electricity and bacterial absorption. Second, Topco argues that Reynard knew, while the patent was pending, that glass sex aids were 2,000 years old. Third, Topco argues the Reynard’s admitted sexual use of a glass martini stirrer with his girlfriend some 30 years ago should have been disclosed. Topco maintains that Reynard knew that borosilicate glass by itself was not slippery, but yet he and his attorney intentionally misled the examiner, who in turn allowed the patent

because of the false advantages of Plaintiffs' patent claims. Topco also urges that the patent examiner did not apply any prior art glass sex aids to the pending claims and that had he appreciated that glass sex aids were old, he would have had stronger grounds to conclude the obviousness of substituting borosilicate glass for conventional glass in sex aids. However, Topco fails to provide the Court with any clear and convincing evidence of any intent to deceive on the part of Plaintiffs. Reynard testified that he did not intend to conceal any information from the patent office. (TT, V3, Dkt. 112, 196:18.) Topco failed to present any evidence to the contrary.

As to the first act, Reynard's trial testimony was that Plaintiffs disclosed their invention to their attorney, Sidwell, who in turn used the language available to describe the invention. (TT, V3, Dkt. 112, 125:23-126:7.) Reynard testified that at that time he believed that lubricious meant "smooth or slippery," pursuant to the dictionary definition. (Id. at 126:22-23.) He also testified that dry glass could be slippery, depending on the interacting surface. (TT, V1, Dkt. 110, 136:15-25; V3, Dkt. 112, 130:1-24.) It is clear to this Court that in drafting the patent, Sidwell simply described the glass in terms of what gives it its properties and the amount of an oxide of boron that caused the glass to have the properties that Plaintiffs suggested. Nowhere in the patent do Plaintiffs claim that an oxide of boron makes glass more lubricious than soda lime glass.

With regard to the second and third acts, Reynard testified that he had heard from others that glass sex aids had been made 2,000 years ago, but that he had no first hand knowledge of the matter. (TT, V3, Dkt. 112, 157:2-7.) Topco failed to prove otherwise.

Furthermore, the Court is not convinced that the presence of a glass sex object in ancient Rome, without publication, amounts to prior art. As for the martini stirrer, Reynard testified that he had forgotten all about his use of the martini stirrer as a sex aid until this litigation arose. (Id. at 160:11.)

B. Patent Infringement

Plaintiffs assert that 11 Topco devices infringe one or more of the following claims 2, 3, 4, 6, 8, 9 and 11 of the '924 patent. As previously discussed, claims 2 and 8 are independent claims, whereas claims 3, 4, 6, 9, and 11 are dependent claims. Plaintiffs maintain that Topco's infringement of claim 8 is indirect. Plaintiffs do not assert that claims 1, 5, 7 and 10 have been infringed. Topco stipulated that all of the accused devices are made of borosilicate glass. (TT, V3, Dkt. 112, 191:22-23.)

The patent holder bears the burden of proving infringement by a preponderance of the evidence. See Centricut, LLC v. Esab Group, Inc., 390 F.3d 1361, 1367 (Fed. Cir. 2004). Circumstantial evidence is sufficient. See Moleculon Research Corp. v. CBS, Inc., 793 F.2d 1261, 1272 (Fed. Cir. 1986). The Patent Act addresses infringement in section 271, which establishes liability based on either of the following acts: (1) direct infringement; or (2) indirect infringement. 35 U.S.C. § 271. A person is liable for direct infringement if he "without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefore . . ." 35 U.S.C. § 271(a). An infringer's

intent is immaterial to the direct infringement analysis.⁴ Id. Indirect infringement, on the other hand, involves situations in which a person assists or supports another's direct infringement of a patented invention. See Dynacore Holding Corp. v. U.S. Philips Corp., 363 F.3d 1263, 1272 (Fed. Cir. 2004).

There exist two types of indirect infringement for which an individual may be liable: (1) inducement; and (2) contributory infringement. 35 U.S.C. §§ 271(b), (c). Only claims of direct infringement and inducement are raised in the instant case. A finding of inducement requires that a person "actively and knowingly aid[s] and abet[s] another's direct infringement." Water Techs. Corp. v. Calto, Ltd., 850 F.2d 660, 668 (Fed. Cir. 1988). Accordingly, the inducer must have actual or constructive knowledge of the patent. See Insituform Techs., Inc. v. Cat Contracting, Inc., 161 F.3d 688, 695 (Fed. Cir. 1998). Proof of intent to induce infringement may be shown by direct or circumstantial evidence. See Water Techs. Corp. v. Calto, Ltd., 850 F.2d 660, 668 (Fed. Cir. 1988).

An infringement analysis involves a two-step process: (1) determination of the

⁴ A separate cause of action does exist, however, for willful infringement. "[T]o establish willful infringement, a patentee must show by clear and convincing evidence that the infringer acted despite an objectively high likelihood that its actions constituted infringement of a valid patent." In re Seagate Tech., LLC, 497 F.3d 1360, 1371 (Fed. Cir. 2007) (*en banc*). "[T]he patentee must also demonstrate that this objectively-defined risk (determined by the record developed in the infringement proceeding) was either known or so obvious that it should have been known to the accused infringer." Id. Mere knowledge of the patent does not establish willful infringement. See Ajinomoto Co., Inc. v. Archer-Daniels-Midland Co., 228 F.3d 1338, 1351-52 (Fed. Cir. 2000). With a showing of willful infringement, a plaintiff may be entitled to enhanced damages. Plaintiffs in the case at bar have not presented any evidence of willful infringement and, therefore, the Court previously ruled that if Topco was found to have infringed on the '924 patent claims, it was not "willful." (See TT, V3, Dkt. 112, 119:2-8.)

scope and meaning of the patent claims in dispute and (2) comparison of the properly construed claims with the accused product or process. See Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1454 (Fed. Cir. 1998) (*en banc*). For Plaintiffs to successfully prove infringement, they must show that each accused device or process has every element of a particular claim. See Laitram Corp. v. Rexnord, 939 F.2d 1533, 1539 (Fed. Cir. 1991) (holding that one missing element avoids infringement).

1. Comparison of the Patent Claims at Issue to the Accused Devices

The Court has conducted an independent comparison of the accused devices (Dkt. 109, Exs. 26, 27, 28, 29, 30, 31, 32, 33, 35, 36, 7H) with the '924 patent's construed claims. The Court has also carefully considered all of the evidence presented in this case; to include the infringement testimony of Reynard and Stern, as well as Stern's expert report (Dkt. 107, Ex. 11).⁵ Having done so, the Court holds that the evidence supports a finding of infringement of some, but not all, of the claims of the '924 patent asserted by Plaintiffs. The Court finds as follows:

Topco's Touch Me infringes upon claim 8 in that it provides a solid rod having a length with a first end and a second end constituting a gripping area. (See Dkt. 109, Ex. 26; see also TT, V3, Dkt. 112, 24:10-26:5.) An enlargement is integrally formed with the

⁵ The Court acknowledges that it is not required to believe Stern's opinion that any devices infringe. See W.L. Gore & Assoc., Inc. v. Garlock, Inc., 842 F.2d 1275, 1280 (Fed. Cir. 1988) (holding that the factfinder not obligated to accept conclusionary infringement opinion of expert.). The Court also acknowledges that both Stern and Reynard admitted that they had not read the transcript of the Markman hearing in order to learn how the language of the patent claims is construed. (See TT, V1, Dkt. 110, 174:25-175-7; TT, V3, Dkt. 112, 20:7-10.)

first end, and both the enlargement and the rod are made of generally lubricious glass-based material⁶ that is resistant to heat, chemicals, electricity, and bacterial absorption. (See id.) The device comes with a package of water-based lubricant and provides a means for stimulating the user through the use of the sex aid for anal as well as vaginal stimulation. (See id.) The Court finds further evidence of infringement in the product's packaging, which describes "frictionless sensations," "a curved extension for additional clitoral or anal stimulation," and "unique sensuous feeling bringing your climax to amazing new heights." (See id.) The Touch Me device does not infringe upon independent claim 2, or claims 3 and 11, which are dependent upon claim 2, because it does not have the requisite "bend." (See id.)

Topco's Triple Pleaser only infringes upon claim 8 in that it provides a solid rod having a length with a first end and a second end constituting a gripping area. (See Dkt. 109, Ex. 28; see also TT, V3, Dkt. 112, 40:3-44:14.) An enlargement (or more specifically, "a region that is larger than the immediately adjacent area," as the term was defined at the Markman hearing) is integrally formed with the first end, and both the

⁶ As to lubricity, Reynard testified that his experience with using a borosilicate glass sex aid in such application was "very slippery." (TT, V1, Dkt. 110, 51:16.) On the subject of lubricity, Stern later testified as follows:

I don't know if the exact mechanism of why oxides of boron influence these properties of lubricity are well understood in glass science, but to my recollection, it is indicated that borosilicate glass, and adding an oxide of boron, have beneficial influence on reduced coefficient of friction along with other items that I had indicated before; porosity, face [phase] shift, grain size, and other issues.

(TT, V3, Dkt. 112, 81:10-18.) Topco failed to present any evidence to the contrary.

enlargement and the rod are made of generally lubricious glass-based material that is resistant to heat, chemicals, electricity, and bacterial absorption. (See id.) The device also provides a means for stimulating the user through the use of the sex aid for anal as well as vaginal stimulation. (See id.) The Court finds further evidence of infringement in the product's packaging, which describes "frictionless sensations," "unique multi-purpose design features G-Spot, clitoral, and erogenous massagers." (See id.) The device does not infringe independent claim 2, or dependent claims 6, 9, and 11, inasmuch as it does not have "a spherical enlargement integrally formed in the first end of the rod," does not include "a water-based lubricant to be used with the aid," and does not include "the step of utilizing the sex aid with a water-based lubricant." (See id.)

Topco's Heart's Delight infringes upon claims 2, 4, 8, and 11 in that it has a solid rod with a straight portion; a spherical enlargement integrally formed with a first end of the rod; a second end of the rod constituting a gripping area that is in the form of a loop; and a bend at an obtuse angle. (See Dkt. 109, Ex. 30; see also TT, V3, Dkt. 112, 26:6-28:21.) Also, the device is made entirely of generally lubricious glass-based material that is resistant to heat, chemicals, electricity, and bacterial absorption. (See id.) The device comes with a package of water-based lubricant and provides a means for stimulating the user during sex acts through the use of the sex aid for anal as well as vaginal stimulation. (See id.) The Court finds further evidence of infringement in the product's packaging, which describes use in terms of "frictionless sensations" and "sleek glass dildo has a smooth contour design, and "the smooth contour design stimulates your G-spot for

orgasmic thrills.” (See id.)

Topco’s Spiral G infringes upon claims 2, 3, 8, and 11 in that it has a solid rod with a straight portion; a spherical enlargement integrally formed with (or “generally continuous with, part of,” as the terms “integrally formed with” were construed at the Markman hearing) a first end of the rod; plural enlargements; a second end of the rod constituting a gripping area; and a bend at an obtuse angle. (See Dkt. 109, Ex. 31; see also TT, V3, Dkt. 112, 44:16-46:15.) Further, the device is made entirely of generally lubricious glass-based material that is resistant to heat, chemicals, electricity, and bacterial absorption. (See id.) The device comes with a package of water-based lubricant and provides a means for stimulating the user during sex acts through the use of the sex aid for anal as well as vaginal stimulation. (See id.) The Court finds additional evidence of infringement in the product’s packaging, which describes “sexy, slippery sensations, the unique sensuous feel of the E-glass brings your climax to amazing new heights.” (See id.)

Topco’s G-Spot Lover infringes upon claims 2, 3, 8, and 11, in that it has a solid rod with a straight portion; a spherical enlargement integrally formed with a first end of the rod; plural enlargements; a second end of the rod constituting a gripping area; and a bend at an obtuse angle. (See Dkt. 109, Ex. 32; see also TT, V3, Dkt. 112, 8:22-16:22.) Also, the device is made entirely of generally lubricious glass-based material that is resistant to heat, chemicals, electricity, and bacterial absorption. (See id.) The device comes with a package of water-based lubricant and provides a means for stimulating the

user during sex acts through the use of the sex aid for anal as well as vaginal stimulation. (See id.) The Court finds further evidence of infringement in the product's packaging, which describes the device in terms of providing "frictionless sensations," "maximum clit stimulation," having "the unique sensuous feel of E-Glass," that it "will bring your climax to amazing new heights," and having "an ultra-soft cockring with ticklers" included." (See id.)

Topco's Pink Indulgence infringes upon claim 8 in that it has a solid rod with a length; an enlargement integrally formed with a first end of the rod; and a second end of the rod constituting a gripping area. (See Dkt. 109, Ex. 33; see also TT, V3, Dkt. 112, 35:18-37:25.) Also, this device is made entirely of generally lubricious glass-based material that is resistant to heat, chemicals, electricity, and bacterial absorption. (See Dkt. 109, Ex. 33; see also TT, V3, Dkt. 112, 35:18-37:25.) The device further provides a means for stimulating the user during sex acts through the use of the sex aid for anal as well as vaginal stimulation. (See id.) The Court finds additional evidence of infringement in the product's packaging, which describes the product's use in terms of "100% frictionless⁷ sensations," "to ride your way to ecstasy with the Pink Indulgence, experience unparalleled pleasure with super slippery sensations, and the textured bumps

⁷ Topco asserts that most of its glass devices are packaged with lubricant and, thus, when it uses the description "frictionless," it is in only in the lubricant context. However, no lubricant is packaged with Topco's Pink Indulgence (see dkt. 107, Ex. 33), the Petite Plug (see id. at Ex. 7H), the Triple Pleaser (see id. at Ex. 28), or the G Spot Lover (see id. at Ex. 32), yet those products are described products are described with the term "frictionless."

and grooves for waves of pleasure” (See id.) The device does not infringe upon independent claim 2 or dependent claims 3 and 11 because an examination of this device actually shows that the first end of the device has a partial sphere that tapers into a cone. (See id.) This does not constitute a “spherical” enlargement inasmuch as that term was construed as “rounded, like a globe or ball” at the Markman hearing. (See Dkt. 71, 58:5.)

Topco’s Pure Pleasure infringes upon claim 8 in that it provides a solid rod having a length with a first end and a second end constituting a gripping area. (See Dkt. 109, Ex. 35; see also TT, V3, Dkt. 112, 46:17-47:13.) An enlargement is integrally formed with the first end, and both the enlargement and the rod are made of generally lubricious glass-based material that is resistant to heat, chemicals, electricity, and bacterial absorption. (See id.) The device comes with a package of water-based lubricant and provides a means for stimulating the user during sex acts through the use of the sex aid for anal as well as vaginal stimulation. (See id.) The Court finds further evidence of infringement in the product’s packaging, which describes its usage in terms of “frictionless sensations,” “sexy, slippery sensations, the unique sensuous feel of the E-glass will bring your climax to amazing new heights,” “features four pleasure balls for easy control and waves of pleasure,” and “ride your way to ecstasy with Pure Pleasure E-glass Massager.” (See id.)

Topco’s Spine infringes upon claim 8 in that it provides a solid rod having a length with a first end and a second end constituting a gripping area. (See Dkt. 109, Ex. 36; see also TT, V3, Dkt. 112, 16:23-24:8.) An enlargement is integrally formed with the first end, and both the enlargement and the rod are made of generally lubricious glass-based

material that is resistant to heat, chemicals, electricity, and bacterial absorption. (See id.) The device comes with a package of water-based lubricant and provides a means for stimulating the user during sex acts through the use of the sex aid for anal as well as vaginal stimulation. (See id.) The Court finds further evidence of infringement in the product's packaging, which describes its usage in terms of "sexy, slippery sensations, the unique, sensual feel of E-glass will bring your climax to amazing new heights." (See id.)

Topco's Petite Plug infringes upon claim 8 in that it provides a solid rod having a length with a first end and a second end constituting a gripping area. (Dkt. 107, Ex. 7H; see also TT, V3, Dkt. 112, 54:9-56:22.) An enlargement is integrally formed with the first end, and both the enlargement and the rod are made of generally lubricious glass-based material that is resistant to heat, chemicals, electricity, and bacterial absorption. (See id.) The device also provides a means for stimulating the user during sex acts through the use of the sex aid for anal as well as vaginal stimulation. (See id.) The Court finds further evidence of infringement in the product's packaging, which describes its usage in terms of "virtually frictionless sensations." (See id.)

Dr. Stern only testified as to 9 of the 11 Topco devices that are alleged to infringe, because the remaining two items were missing from either the pretrial statement, or the expert's report. Reynard testified as to the basis of Plaintiffs' infringement claims as to these two items. The Court finds as follows:

Topco's Crystal Plug infringes upon claim 8 in that it provides a solid rod having a length with a first end and a second end constituting a gripping area. (Dkt. 109, Ex. 27;

see also TT, V1, Dkt. 110, 67:18-69:11.) An enlargement is integrally formed with the first end, and both the enlargement and the rod are made of generally lubricious glass-based material that is resistant to heat, chemicals, electricity, and bacterial absorption. (See id.) The device comes with a package of water-based lubricant and provides a means for stimulating the user during sex acts through the use of the sex aid for anal as well as vaginal stimulation. (See id.) The Court finds further evidence of infringement in the product's packaging, which describes the device as featuring "a gently flared shaft, a wide base for safe, comfortable anal play." (See id.)

Topco's Confetti Curve does not infringe upon independent claims 2 and 8, or dependent claims 6, 9, and 11, because it is not comprised of a rod, as required by those claims. "Rod" has been defined to mean "generally straight with an elongated appearance." (Dkt. 71, 80:13.) Confetti Curve is curved in its entirety. (See Dkt. 109, Ex. 29).

2. Further Discussion of Method Claim 8

To infringe upon a method claim, "all of the steps of the process must be performed." See Monsanto Co. v. Syngenta Seeds, Inc., 503 F.3d 1352, 1359 (Fed. Cir. 2007). Method claim 8 has three steps for using a sex aid to increase stimulation during sex acts. Steps 1 and 2 are "providing" steps: (1) "providing a rod" with particular structure and (2) providing additional structure to the rod wherein it contains "an appreciable amount of an oxide of boron to render it lubricious, etc." (See Dkt. 107, Ex. 1B.) Step 3 then requires using the sex aid during anal as well as vaginal stimulation

(although not “simultaneously,” as Topco repeatedly urges in its briefs) to give greater stimulation. (See id.) As discussed above, the Court finds that the following Topco devices infringe upon all steps of claim 8, either directly or indirectly, through inducement: Touch Me, Heart’s Delight, Triple Pleaser, Spiral G, G Spot Lover, Pink Indulgence, Pure Pleasure, Spine Petite Plug, and Crystal Plug. (Dkt. 109, Exs. 26; 27; 28; 30; 31; 32; 33; 35; 36; 7H.)

With respect to step 3, the Court’s infringement determination is based upon Plaintiffs’ presentation of a preponderance of circumstantial evidence that Topco induces end users of the devices to infringe upon the patent claim. The advertising, viewed in conjunction with Topco’s admitted product sales, reveals that the devices have no non-infringing use and that infringing use is encouraged. Topco’s packaging, as discussed above, and pages from websites where Topco’s devices are sold (Dkt. 107, Composite Ex. 7), contain explicit language describing the devices in terms of their function and intended use. All of this advertising gives rise to a logical inference that Topco consumers use the devices during sex acts to achieve greater stimulation during anal, as well as vaginal stimulation, so as to infringe upon the language of claim 8.⁸ And, as

⁸ Plaintiffs also requested the court to take judicial notice of societal mores and sexual attitudes in determining infringement of step 3. Topco responds that courts can take notice of certain facts without formal proof, but only where the fact in question is “one not subject to reasonable dispute in that it is either: (1) generally known within the territorial jurisdiction of the trial court or (2) capable of accurate and ready determination by resort to sources whose accuracy cannot reasonably be questioned.” Shahar v. Bowes, 120 F.3d 211, 214 (11th Cir. 1997) (citations omitted). Topco may be correct in its assertion; however, the Court simply cannot put aside its own common sense and logic as to the intended use of these devices.

Plaintiffs point out, the devices at issue are not found in local shopping markets, and are limited to sale in adult-related, sexually oriented shops, vendors, and web sites. While Topco argues that there are other substantial, non-infringing uses for the products at issue, it did not present any evidence to show that its devices can be found in any other locations. Topco also cannot dispute the above-described advertising of its products. See Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc., 145 F.3d 1303, 1312 (Fed. Cir. 1998) (finding that alleged infringer's advertisements conceded the ability of the accused device to practice the claimed method, and encouraged such use); Moleculon Research Corp. v. CBS, Inc., 793 F.2d 1261, 1272 (Fed. Cir. 1986) (rejecting the argument that "proof of inducing infringement or direct infringement requires direct, as opposed to circumstantial evidence").

C. Remedies

1. Actual Damages/Lost Profits

Plaintiffs were not in the business of selling borosilicate glass sex aids and did not compete with Topco even if KME, of which they are the sole shareholders, competed with Topco. (TT, V3, Dkt. 112, 122:18–123:13.) Thus, Plaintiffs lack standing to obtain any lost profits suffered by KME, the corporation of which they are shareholders. See Poly-America, L.P. v. GSE Lining Tech., Inc., 383 F.3d 1303, 1311 (Fed. Cir. 2004) (holding that where one company held the patent and a related company made and sold the product, the patent owner could not recover the maker and seller's lost profits). In ruling on Topco's motion for judgment as a matter of law, pursuant to Rule 52(c), Federal

Rules of Civil Procedure, the Court found that the Poly-America case governs as to Plaintiffs' claim for actual damages and lost profits. (See TT, V3, Dkt. 112, 122:18-25;123:1-13.) Accordingly, Plaintiffs as individuals suffered no actual damages or lost profits and lack standing to recover such.

2. Royalty

Despite lacking standing or evidence to obtain lost profits, a plaintiff may recover a reasonable royalty if they prevail on liability. See 35 U.S.C. § 284. A reasonable royalty is the royalty that the patent holder and infringer would agree to during a hypothetical negotiation in which both parties are willing to negotiate. See Micro Chem., Inc. v. Lextron, Inc., 317 F.3d 1387, 1393 (Fed. Cir. 2003). The hypothetical negotiation occurs when infringement begins. See Hanson v. Alpine Valley Ski Area, Inc., 718 F.2d 1075, 1078 (Fed. Cir. 1983).

A patentee can collect a reasonable royalty for the infringer's sales. It cannot obtain royalties for all persons in the accused infringer's distribution chain. "In the usual course of events, the length of the accused manufacturer's distribution chain should have no impact on the patentee's ability to be made whole by the manufacturer. Indeed, in most cases damages assessed for indirect infringement will be equal to damages assessed for the underlying direct infringement." Glenayre Elecs., Inc. v. Jackson, 443 F.3d 851, 859 (Fed. Cir. 2006). A patentee may not recover damages against the infringer for its indirect infringement after the patent owner already obtained a judgment based on the infringer's direct infringement. Id.

Plaintiffs seek royalties in the amount of \$5.6 million. To arrive at this figure, they look first to Topco's counsel's opening statement that the evidence would show Topco's sales of about \$700,000 for all 14 products originally accused of infringement. (See TT, V1, Dkt. 110, 19:8-15.) Plaintiffs then multiply that figure by a 400% profit margin based upon there being a number of purchase and sale points (distributors, wholesalers, and retailers) between the manufacturer and the end user. However, Plaintiffs presented no evidence whatsoever as to Topco's supply chain or profit margins. Ritchie merely speculated on the profit margin based upon his experience working for Eckerd Drug. (See id. at 215:21-24.) Furthermore, to arrive at a final royalty demand of \$5.6 million, Plaintiffs had to multiply the \$700,000 in Topco sales by 800%, rather than 400%, but provided no explanation as to the 800% mark up.

Plaintiffs failed to introduce any evidence whatsoever of Topco's per item sales, dollars and units, or evidence of the sales of each accused device. Plaintiffs failed to present any evidence from an accountant, economist, or other expert on the subject of royalties. Further, Plaintiffs and KME failed to mark the patent number on devices they sold and such failure to mark precludes the award of damages unless an infringer was notified of its infringement and subsequently continued to infringe. See 35 U.S.C. § 287(a). Topco is not liable for damages for sales of any devices before plaintiffs actually notified Topco that the particular device infringed. See Amsted Indus. Inc., v. Buckeye Steel Castings Co., 24 F.3d 178, 187 (Fed. Cir. 1994). The filing of the Complaint in this action, in November 2006, served as Topcos' first notice of the '924 patent. Id. at 1112-

13. Plaintiffs royalty demand fails to take this factor into account.

Plaintiffs' royalty demand also fails to take into account the following factors:

(1) KME made no profit for every year except one from 2000 to 2007, when it made a small profit. (Dkt. 107, Ex. 4a-4i);

(2) Plaintiffs' license would have been non-exclusive because KME was selling its own products;

(3) Topco sells many other products;

(4) KME and Topco do not compete with each other. Topco sells through distributors, who in turn sell to retailer sex stores. KME limits its sales to the Internet and at sex conventions. and, thus, Topco's sales would not necessarily diminish KME's sales; and;

(5) One company responded after Plaintiffs mailed out about 100 letters to glass sex aid manufacturers, requesting that each manufacturer accept a license under the '924 patent. (TT, V2, 111, 96:18–21.) No one responded with a sincere offer. (Id. at 97:8–10.)

Though Plaintiffs may be entitled to a reasonable royalty, they have the burden to support the amount of the royalty with admissible evidence. See generally, Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 895 F.2d 1403,1407-08 (Fed. Cir. 1990); see also Devex Corp. v. General Motors Corp., 667 F.2d 347, 363 (3d Cir. 1981) (affirming award of zero damages for lack of evidence and stating: "The statute [35 U.S.C. § 284] requires the award of a reasonable royalty, but to argue that this requirement exists even in the absence of any evidence from which a court may derive a reasonable royalty goes beyond the possible meaning of the statute."). Because of Plaintiffs' failure to introduce such evidence, they are entitled to no reasonable royalty.

3. Injunctive Relief

In their Complaint, Plaintiffs seek injunctive relief in the form of:

Permanently enjoining Defendants and their principals, shareholders, officers, directors, employees, successors, assigns, suppliers, agents, servants, and attorneys, and all those persons in active concert, participation or privity with them, or any of them from making using selling offering for sale, or offering for others to use items that would constitute an infringement of the '924 patent.

Plaintiffs did not raise the issue of injunctive relief in their pretrial statement, trial brief, at trial, in their post-trial brief, rebuttal brief, or findings of fact and conclusions of law.

However, a court may enter a permanent injunction after a final judgment of infringement in accord with principals of equity. See 35 U.S.C. § 283. To obtain a permanent injunction, the plaintiff must satisfy a four-factor test, similar to the test used for preliminary injunctions. See eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388, 391 (2006). A plaintiff must show:

(1) that it suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction.

Id. In light of the Court's previous infringement analysis, it finds that the four-factor test has been met in this case and that Plaintiffs are entitled to the injunctive relief requested.

4. Attorney Fees

35 U.S.C. § 285 provides that the "court in exceptional cases may award reasonable attorney fees to the prevailing party." Bad faith litigation and inequitable

conduct may render a case exceptional. See Mahurkar v. C.R. Bard, Inc., 79 F.3d 1572, 1579 (Fed. Cir. 1996). Additionally, a finding of willful infringement may be sufficient grounds for an award of attorney fees. See Avia Group Int’l, Inc. v. L.A. Gear Cal., Inc., 853 F.2d 1557, 1567 (Fed. Cir. 1988). The circumstances which might render a case “exceptional” do not exist in this case and, thus, an award of fees is not appropriate.

ACCORDINGLY, it is ORDERED AND ADJUDGED:

1. As a matter of law, all claims of the ‘924 patent are valid and enforceable.
2. As a matter of law, the following Topco products infringe upon claims of the ‘924 patent:

Touch Me (Dkt. 109, Ex. 26):	claim 8
Triple Pleaser (Dkt. 109, Ex. 28):	claim 8
Heart’s Delight (Dkt. 109, Ex. 30):	claims 2, 4, 8, 11
Spiral G (Dkt. 109, Ex. 31):	claims 2, 3, 8, 11
G Spot Lover (Dkt. 109, Ex. 32):	claims 2, 3, 8, 11
Pink Indulgence (Dkt. 109, Ex. 33):	claim 8
Pure Pleasure (Dkt. 109, Ex. 35):	claim 8
Spine (Dkt. 109, Ex. 36):	claim 8
Petite Plug (Dkt. 107, Ex. 7H):	claim 8
Crystal Plug (Dkt. 109, Ex. 27):	claim 8

3. As a matter of law, Topco, its principals, shareholders, officers, directors, employees, successors, assigns, suppliers, agents, servants, and attorneys, and all those

persons in active concert, participation, or privity with them, or any of them, are permanently enjoined from making, using, selling, offering for sale, or offering for others to use the items listed above in paragraph 2, or items with no more than colorable differences from those items, as a remedy for the patent infringement.

4. As a matter of law, Plaintiffs lack standing to recover actual damages or lost profits damages.

5. As a matter of law, Plaintiffs are entitled to no reasonable royalty.

6. As a matter of law, Plaintiffs are not entitled to an award of attorney fees.

7. The Clerk is directed to enter an amended judgment for Plaintiffs and to close this case.

DONE AND ORDERED at Tampa, Florida, on July 24, 2008.

s/Richard A. Lazzara
RICHARD A. LAZZARA
UNITED STATES DISTRICT JUDGE

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Counsel of Record