

United States District Court,
D. Rhode Island.

Michael BOWLING,
Plaintiff.

v.

HASBRO, INC.,
Defendant.

C.A. No. 05-229 S

May 30, 2007.

Background: Patentee brought action against toy and game company for allegedly infringing patent for a random number generator for game playing. Parties sought construction of disputed claim terms, patentee moved for summary judgment on the inventorship issue, and defendant moved for partial summary judgment on marking issue.

Holdings: The District Court, Smith, J., held that:

- (1) "equal surface area," as used in patent claims, did not require the precision of gambling dice;
- (2) draftsman was not shown to be a joint inventor of invention; and
- (3) summary judgment in favor of alleged infringer was precluded on marking issue.

Plaintiff's motion granted; defendant's motion denied.

5,938,197. Construed.

Christine K. Bush, Craig M. Scott, Duffy Sweeney & Scott, Ltd., Providence, RI, Douglas J. Williams, Thomas J. Leach, Merchant & Gould P.C., Minneapolis, MN, for Plaintiff.

David K.S. Cornwell, Tracey-Gene G. Durkin, Sterne Kessler Goldstein & Fox P.L.L.C., Washington, DC, Jeffrey K. Techentin, Adler Pollock & Sheehan P.C., Providence, RI, for Defendant.

OPINION AND ORDER

SMITH, District Judge.

Plaintiff Michael Bowling ("Bowling") has filed this patent infringement action against Hasbro, Inc. ("Hasbro") for allegedly infringing Bowling's United States Patent Number 5,938,197 (the "'197 patent"). The '197 patent, entitled "RANDOM NUMBER GENERATOR FOR GAME PLAYING," describes several polyhedral dice, one of which, the six-sided die (known in the gaming world as a "D-6"), is the subject of this dispute. The parties have identified two claims that require construction. Additionally, Bowling has moved for summary judgment on Hasbro's earlier motion to correct inventorship, and Hasbro has moved for partial summary judgment on marking. After careful consideration, and for the reasons that follow, the Court

shall construe the disputed claims in the manner provided infra Part II.A, grant Bowling's Motion for Summary Judgment on the inventorship issue, and deny Hasbro's Motion for Partial Summary Judgment on the marking issue.

I. Background

Bowling, an engineer by training, is an aficionado of fantasy role-playing games, such as Dungeons & Dragons, FN1 and holds several domestic and international patents in dice design. His company, Crystal Caste, specializes in dice, miniatures, and gaming accessories, although the core feature of the enterprise is polyhedral dice, which are an essential component in role playing. The dice described in the ' 197 patent are of central importance to the business plan of Crystal Caste. These dice, ranging from a D-6 to a D-20, have extension member facets in the shape of opposing triangles. This unique shape is both functional and aesthetic. It allows the dice to have facets wide enough (at the triangle's base) to display readable indicia and, at the same time, resembles a crystal. Designing a polyhedral die in the shape of a crystal is a clever marketing ploy because, in fantasy circles, crystals are thought to be imbued with magical powers. FN2

FN1. Somewhat ironically, Dungeons & Dragons is a product of Wizards of the Coast, a subsidiary of Hasbro.

FN2. The interested reader might consider Wikipedia, The Free Encyclopedia, "Dungeons & Dragons: Dragonshard," at [http:// en. wikipedia. org/ wiki/ Dragon shard _ \(computer _ game\)](http://en.wikipedia.org/wiki/Dragon_shard_(computer_game)) (last visited May 14, 2007), as a primer.

At some point in 1999, Hasbro, a toy and game company, began selling "Monopoly, Millennium," an edition of the well-known commercial board game. FN3 The game included a die with characteristics similar to Bowling's patented die. In September 1999, Hasbro contacted Bowling by letter to discuss the possibility of using his die design. Bowling responded, in November 1999, by informing Hasbro that it was infringing the ' 197 patent, and demanding that Hasbro immediately cease its infringing activities. The parties thereafter exchanged a series of correspondence, but ultimately were unable to resolve the dispute. Bowling filed this infringement action in May 2005.

FN3. Hasbro markets Monopoly through its subsidiary, Parker Brothers.

II. Discussion

A. Claim Construction

Claim Terms	Bowling's proposed construction	Hasbro's proposed construction	The Court's construction
1. discrete facets being identically shaped and having equal surface areas	1. facets being identically shaped and having equal surface areas, without regard to any indented indicia	1. each extension member facet has the same or substantially the same shape, as defined by the outer perimeter of each such facet, and the same or substantially the same surface area, measured as the surface of a three-	1. discrete facets being identically shaped and having equal surface areas, without regard to negligible variances in surface area caused by indented indicia

		dimensional object	
17. extension member facets being equal in surface area	17. facets are of equal surface area, without regard to any indented indicia	17. each extension member facet has the same or substantially the same surface area, measured as the surface of a three-dimensional object	17. extension member facets being equal in surface area, without regard to negligible variances in surface area caused by indented indicia

[1] The parties dispute the meaning of equal surface area as used in claims 1 and 17 of the '197 patent. Hasbro, referencing a technical dictionary, observes that surface area is generally understood as "a measure of how much area the solid would have if you could somehow break it apart and flatten it out." *Barron's Dictionary of Mathematical Terms* 327 (Douglas Downing ed., 2d ed.1995). This construction is important to Hasbro's claim because, under this definition, the facets of a die would not have surface areas equal to one another, as the '197 patent claims, unless those facets were flat. In other words, a die with indented indicia could not, as a matter of mathematics, have facets of equal surface area. See *Merriam-Webster Dictionary* 257 (1997) (defining "equal" as "of the same measure, quantity, value, quality, number, degree, or status as another."). This is because an indented indicium, whether an arabic numeral or a combination of pips, FN4 augments the surface area of a given facet to a greater or lesser extent than another indented indicium. For example, if you were able to break apart a six-sided die, flatten out its facets, and compare them individually, you would see that the facet with six pips would cover more area than the facet with only one pip. No two facets have the same number of pips (the die would not randomly generate numbers otherwise), so it follows that no two facets would have the same surface area. According to Hasbro, because the plain meaning of equal surface area is readily understandable in light of the technical definition above, construction is at an end. Bowling responds that Hasbro's construction contradicts how a person of ordinary skill in the art of game playing would interpret equal surface area, ignores the specification, and, if accepted, would exclude the preferred embodiment of the invention.

FN4. A pip is a type of indented indicium that resembles a polka dot.

Without endorsing all of Bowling's characterizations of the '197 patent, the Court agrees that Hasbro's construction cannot withstand a fair reading of the specification, and that its reliance on the extrinsic evidence of dictionary entries is, under the circumstances here, misplaced.

The construction of patent claims is a matter of law properly subject to summary disposition. See *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 977-79 (Fed.Cir.1995). "It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude." *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed.Cir.2004). In construing claims, inquiring courts are to give claim terms "their ordinary and customary meaning," which is the meaning the terms "would have to a person of ordinary skill in the art in question at the time of the invention." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed.Cir.2005). "In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words." *Id.* at 1314. On such occasions, general purpose dictionaries may assist the court in ascertaining the correct construction of the claims. *Id.*

Where, as here, the claim terms are not so readily susceptible to interpretation, *Phillips* outlines what sources the district court may consider and teaches how much weight a particular source deserves. First and foremost, the intrinsic record, which consists of the claims themselves, the specification, FN5 sometimes referred to as the written description, and, where relevant, the prosecution history, FN6 provides the best guidance as to a claim's meaning. *Id.* at 1313-15. Among the sources of intrinsic evidence, *Phillips* places

primary importance on the claims themselves, but recognizes that the claims "are part of 'a fully integrated written instrument,' consisting principally of a specification that concludes with the claims." *Id.* at 1315 (quoting *Markman*, 52 F.3d at 978). For this reason, "claims 'must be read in view of the specification, of which they are a part.'" *Id.* (quoting *Markman*, 52 F.3d at 979). Indeed, "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.'" *Id.* at 1315 (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed.Cir.1996)); *see Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings*, 370 F.3d 1354, 1360 (Fed.Cir.2004) ("In most cases, the best source for discerning the proper context of claim terms is the patent specification wherein the patent applicant describes the invention."); *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1478 (Fed.Cir.1998) ("[t]he best source for understanding a technical term is the specification from which it arose, informed, as needed, by the prosecution history"); *Standard Oil. Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 452 (Fed.Cir.1985) ("The descriptive part of the specification aids in ascertaining the scope and meaning of the claims inasmuch as the words of the claims must be based upon the description. The specification is, thus, the primary basis for construing the claims.").

FN5. Section 112 of Title 35 of the United States Code defines the patent specification as follows:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and 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, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

FN6. The prosecution history "consists of the complete record of the proceedings before the PTO [the Patent and Trademark Office] and includes the prior art cited during the examination of the patent." *Phillips* at 1317. Although generally not as useful in construing a claim as the specification, the court may consider the prosecution history if it is in evidence. Like the specification, the prosecution history "can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." *Id.*; *see also Chimie v. PPG Indus., Inc.*, 402 F.3d 1371, 1384 (Fed.Cir.2005) ("The purpose of consulting the prosecution history in construing a claim is to exclude any interpretation that was disclaimed during prosecution.") (internal quotations and citation omitted). In this case, neither party uses the prosecution history of the '197 patent to support their respective construction of the disputed claims. Hasbro urges the Court to take judicial notice of the prosecution history (along with other material most of which need not be addressed), but did not formally move it into evidence. This writer's review of the material Hasbro submitted, if it constitutes the entirety of the prosecution history, has revealed nothing of significance to the present question.

Additionally, extrinsic evidence, such as dictionaries, treatises, and expert testimony, may provide guidance in certain circumstances, although such sources should be used with caution. In all its forms, extrinsic evidence is recognized as "less significant than the intrinsic record in determining the 'legally operative meaning of disputed claims language.'" *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 862 (Fed.Cir.2004) (quoting *Vanderlande Indus. Nederland BV v. Int'l Trade Comm'n*, 366 F.3d 1311, 1318 (Fed.Cir.2004)). Of particular relevance here, a dictionary definition cannot trump an inventor's definition of claim language in the specification if the two are irreconcilable. *See Phillips*, 415 F.3d at 1320-24; *see also Autogiro Co. of Am. v. United States*, 181 Ct.Cl. 55, 384 F.2d 391, 397 (1967) ("Often the invention is novel and words do not exist to describe it. The dictionary does not always keep abreast of the inventor. It cannot."). *Phillips* discussed this point at length:

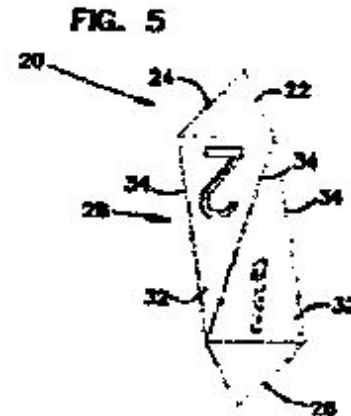
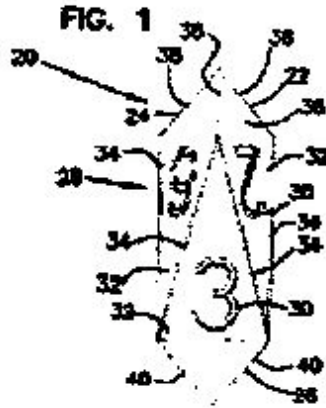
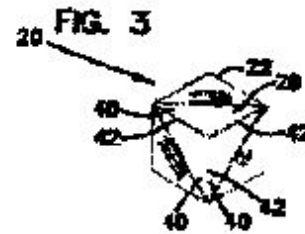
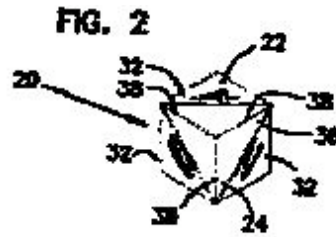
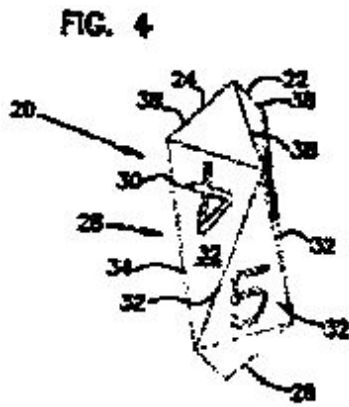
The main problem with elevating the dictionary to such prominence is that it focuses the inquiry on the abstract meaning of words rather than on the meaning of claim terms within the context of the patent.

Properly viewed, the "ordinary meaning" of a claim term is its meaning to the ordinary artisan after reading the entire patent. Yet heavy reliance on the dictionary divorced from the intrinsic evidence risks transforming the meaning of the claim term to the artisan into the meaning of the term in the abstract, out of its particular context, which is the specification. The patent system is based on the proposition that claims cover only the invented subject matter.

Phillips, 415 F.3d at 1321. Accordingly, "a patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning," *Boss Control, Inc. v. Bombardier Inc.*, 410 F.3d 1372, 1377 (Fed.Cir.2005), and, if he does, his lexicography governs. This is true whether the specification *expressly* defines, modifies, or redefines terms used in the claims, *Texas Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1204 (Fed.Cir.2002) ("[T]he presumption in favor of a dictionary definition will be overcome where the patentee, acting as his or her own lexicographer, has clearly set forth an explicit definition of the term different from its ordinary meaning"), or whether the specification does so by *implication*, *Vitronics Corp.*, 90 F.3d at 1582; *see also* *Irdeto Access, Inc. v. Echostar Satellite Corp.*, 383 F.3d 1295, 1300 (Fed.Cir.2004) ("Even when guidance is not provided in explicit definitional format, 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.") (internal quotation marks and citation omitted); *Bell Atl. Network Servs., Inc. v. Covad Commc'ns Group, Inc.*, 262 F.3d 1258, 1268 (Fed.Cir.2001) ("[A] claim term may be clearly redefined without an explicit statement of redefinition.").

The critical question here is whether an ordinary artisan would read equal surface area in the '197 patent as a mathematical absolute, limited, as Hasbro maintains, only by the bounds of mechanical perfection. Or is equal surface area something less exacting, as Bowling contends? The claims themselves offer no guidance. Claim 2 states simply that "discrete facets include printed indicia," and a separate component of claim 17 says that "extension member facets having indicia thereon indicating a number," but these claims make no mention of indented indicia, or how such impressions (necessarily causing variances in surface area among facets) would affect claims 1 and 17.

The claims become more susceptible to interpretation when read in the contextual light of the specification. In pertinent part, the specification states: "*Preferably*, each of the discrete facets are identically shaped and have equal surface areas to each other. That is, each of [the] facets has a surface area which is equal to and no greater and no less than the surface area of any other of the facets," (emphasis supplied), and, further along, "*Preferably*, each of the facets has a surface area of about 0.0089 to 0.89 sq. in., typically about 0.089 sq. in." (Emphasis supplied.) A superficial read of the written description would seem to indicate that a die with flat facets is the preferred embodiment of the invention. However, the patent illustrations show that such a construction could not have been intended. The illustrations of Bowling's six-sided die, provided below, unmistakably display facets with indented arabic numerals. *See, e.g.*, *Permutit Co. v. Graver Corp.*, 284 U.S. 52, 60, 52 S.Ct. 53, 76 L.Ed. 163 (1931) (recognizing that "drawings may be referred to for illustration and may be used as an aid in interpreting the specification or claim"); *Playtex Prods., Inc. v. Procter & Gamble Co.*, 400 F.3d 901, 909 (Fed.Cir.2005) (examining patent illustrations to support the construction of a claim term); *Autogiro*, 384 F.2d at 397 ("In those instances where a visual representation can flesh out words, drawings may be used in the same manner and with the same limitations as the specification."); *cf.* *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1565-67 (Fed.Cir.1991) (noting that "drawings alone may provide a 'written description' of an invention"). Under Hasbro's strict construction, the claims would exclude the very die depicted below (not to mention the dice that Bowling has manufactured and marketed). This is an absurd result that this writer refuses to reach. *Cf.* *Chimie*, 402 F.3d at 1377 (refusing to read the claim "dust-free and non-dusting" in its hyper-literal sense, *i.e.*, that the invention creates absolutely no dust, and instead construing the term to mean a very low level of dust because the former would not read on the preferred embodiment and there was no "highly persuasive evidentiary support" to suggest otherwise).



Even if perfectly flat facets were the preferred embodiment, this would not be the *only* embodiment that the '197 patent protects. Use of the word "preferably" would be superfluous were a die with facets of perfectly equal surface area the only (and not just the best) example of the invention. The very purpose of the specification is "to teach and enable those of skill in the art to make and use the invention and to provide a best mode for doing so." Phillips, 415 F.3d at 1323. "One of the best ways to teach a person of ordinary skill in the art how to make and use the invention is to provide an example of how to practice the invention in a particular case." *Id.* Often, these examples will be very specific to aid instruction. Confining the claims to those embodiments, without indication that the claims and the embodiments are to be strictly coextensive, would defeat this purpose. *See, e.g., Nazomi Commc'ns, Inc. v. Arm Holdings, PLC*, 403 F.3d 1364, 1369 (Fed.Cir.2005) (noting the specification's different emphasis on subject matter); *Playtex*, 400 F.3d at 905-06 (consulting the specification is "for enlightenment and not to read a limitation from the specification"); Phillips, 415 F.3d at 1323 (observing that "although the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments"); *Gemstar-TV Guide Int'l, Inc. v. Int'l Trade Comm'n.*, 383 F.3d 1352, 1366 (Fed.Cir.2004) (same); *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1340 (Fed.Cir.2001) (reading a limitation from the specification into the claims is "one of the cardinal sins of patent law").

Hasbro argues that the indented indicia depicted in the illustrations could be filled in and made flush with the facets, thus complying with its proposed construction of the claims. This argument, although creative, is unsupported and therefore rejected. Hasbro does not identify any intrinsic evidence to explain away the clear disconnect between its construction and the patent illustrations. (The claims are altogether neutral in this regard, as discussed above; the specification is the same: "[e]xtension member 28 functions to display indicia such as polka dots, or numbers or digits.") As for extrinsic evidence, Hasbro points to three state regulations that establish minimum standards for dice used in table games, *i.e.*, gambling. These regulations require that such dice contain indented pips (or an equivalent) that are filled in with a compound and made perfectly flush with the surrounding facet. 68 Ind. Admin. Code s. 14-3-3 (1996); *accord* Mo.Code Regs. Ann. tit. 11, s. 45-5.260 (1999); N.J. Admin. Code s. 19:46-1.15 (1997). If anything, these regulations,

which are, by definition, less reliable than the specification, *see* Phillips, 415 F.3d at 1318 ("extrinsic evidence in general [is] less reliable than the patent ... in determining how to read claim terms"), show that such a procedure is possible; they do not show that the '197 patent required or even contemplated it.

Other extrinsic evidence cuts against Hasbro's position-itself an observation that underscores the primacy of the intrinsic record in claims construction. *See* Phillips, 415 F.3d at 1318 ("[T]here is a virtually unbounded universe of potential extrinsic evidence of some marginal relevance that could be brought to bear on any claim construction question.... [E]ach party will naturally choose the pieces of extrinsic evidence most favorable to its cause."). For instance, Bowling's expert witness, FN7 Kevin Cook, who boasts the world's largest collection of dice, testified that the dice in the '197 patent are for role-playing games, like Dungeons & Dragons. FN8 These types of games do not require dice with the precision of gambling dice. As long as the die remains a "fair playing die," as specified in the written description, negligible variances in surface area are acceptable. Thus, according to Cook (and Bowling, who testified as well), the '197 patent covers both "precision dice" (dice with perfectly equal surface area that would be acceptable for table games) and "loose dice" (dice with negligible variances in surface area commonly used in role-playing games).

FN7. Expert testimony is valuable for providing background on the technology at issue, explaining how an invention works, or describing a distinctive use of a term in a particular field. However, like dictionaries, expert testimony is less reliable than intrinsic evidence for the interpretation of claims. *Phillips* opined, for example, that expert testimony is "generated at the time of and for the purpose of litigation and thus can suffer from bias that is not present in intrinsic evidence." Phillips, 415 F.3d at 1318. The Court refers to expert testimony here simply to counter Hasbro's claim that the extrinsic evidence in this case supports its proposed construction.

FN8. Cook testified via video deposition, which was admitted into evidence.

Hasbro, of course, objects to the notion that the '197 patent covers anything other than precision dice. To support this argument, Hasbro relies upon the description of "center of symmetry," which the specification defines as follows:

By "center of symmetry", it is meant a point that is related to a geographical figure in such a way that for any point on the figure, there is another point on the figure such that a straight line joining the two points is bisected by the original point. Each of the surface area of discrete facets of extension member **28** are equal. The combination of the center of symmetry being the center and the equal surface areas of facets **32** provides for a fair playing die. That is, no one facet **32** is more likely to be rolled than any other of the facets **32**.

For reasons that are not so easily explained, indented indicia distort a die's center of symmetry. However, this argument suffers from the same flaws as Hasbro's earlier argument. At best, precise center of symmetry is, like perfectly equal surface area, just the preferred (and not the only) embodiment of the invention. Additionally, the paragraph immediately preceding the discussion of center of symmetry reinforces Cook's commentary about role playing:

The inventor has discovered that the configuration of the die **20** is advantageous. In particular, the shape of the end caps **24, 26** provides for more bounce when dropping die **20** onto a surface. That is, to generate a random number, the user hold die **20** above a surface at a sufficient distance, such that when die **20** is dropped onto the surface, die **20** rolls before eventually resting upon one of the facets **32** of the extension member **28**.... The shapes of the end caps **24, 26** provide for more bounce and randomness when die **20** is dropped onto a surface. The tapered, triangular shapes of end caps **24, 26** provide for surfaces which can

abut and engage the surface on which die **20** is being dropped, to create a more interesting and amusing outcome.

In the final analysis, the intrinsic evidence, on the whole, rejects Hasbro's rigid construction of equal surface area. The technical dictionary, state regulations, and expert testimony (all extrinsic evidence) are either inconclusive or tend to support Bowling's construction. Accordingly, "discrete facets being identically shaped and having equal surface areas" shall be construed as **discrete facets being identically shaped and having equal surface areas, without regard to negligible variances in surface area caused by indented indicia**, and "extension member facets being equal in surface area" shall be construed as **extension member facets being equal in surface area, without regard to negligible variances in surface area caused by indented indicia**.

B. Inventorship

Hasbro contends that Albert Lizarraga, a professional draftsman, contributed in significant respect to several conceptions of Bowling's invention. (At the beginning of this litigation, Hasbro purchased from Lizarraga any inventorship rights that he may have to the '197 patent.) Specifically, Hasbro claims that Bowling, who hired Lizarraga to draw pictures of his die, originally envisioned an irregular and nonsymmetrical die, like a crystal shard. However, when he began to draw the die, Lizarraga discovered that only a die with facets of equal shape and surface area would generate numbers randomly. Lizarraga presented the drawings to Bowling, who, after reviewing the new concept, accepted the idea and incorporated it into his patent application. According to Hasbro, Bowling's failure to credit Lizarraga as a joint inventor renders the '197 patent invalid. *See Acromed Corp. v. Sofamor Danek Group, Inc.*, 253 F.3d 1371, 1379 (Fed.Cir.2001) ("Omission of an inventor can invalidate a patent unless the omission was an error 'without any deceptive intention.' ") (quoting 35 U.S.C. s. 256). In response, Bowling argues that Lizarraga's testimony is neither corroborated nor clear and convincing, and therefore insufficient to correct inventorship.FN9 This writer agrees.

FN9. Bowling also observes that Lizarraga does not claim to have invented any component of the '197 patent; in fact, during his testimony, Lizarraga conceded that he was "not claiming to be an inventor," although he stated that he was not clear on "the technical term 'inventor.' " However, based on the Court's findings below, the consequence of this concession need not be addressed.

"Inventorship is a question of law with underlying factual issues." *Checkpoint Sys., Inc. v. All-Tag Sec. S.A.*, 412 F.3d 1331, 1338 (Fed.Cir.2005). "Summary judgment is properly granted if the evidence, when viewed in a light most favorable to the nonmoving party, fails to establish the inventorship of an omitted inventor by clear and convincing evidence." *Linear Tech. Corp. v. Impala Linear Corp.*, 379 F.3d 1311, 1327 (Fed.Cir.2004).

[2] Bowling, as the only listed inventor in the '197 patent, is presumed to be the sole inventor. *See Price v. Symsek*, 988 F.2d 1187, 1191 (Fed.Cir.1993). To overcome this presumption, Hasbro must prove Lizarraga's contribution to the conception of the invention by clear and convincing evidence. *Acromed*, 253 F.3d at 1379. Just as co-inventors need not contribute to every claim of a patent, Hasbro can meet this burden by showing that Lizarraga contributed to one or more claims only (it need not show he contributed to all or most claims). *See Stern v. Trs. of Columbia Univ.*, 434 F.3d 1375, 1378 (Fed.Cir.2006). So, for one or more claims, Hasbro must satisfy two elements: (1) *conception*, which is defined as "the 'formation in the mind of the inventor, of a definite and permanent idea of the complete and operative invention,'" *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1376 (Fed.Cir.1986) (quoting 1 *Robinson on Patents* 532 (1890)); and (2) *contribution*, which is understood as the addition of something that "is not insignificant in quality, when ... measured against the dimension of the full invention." *Pannu v. Iolab Corp.*, 155 F.3d

Additionally, to succeed, Hasbro must "provide corroborating evidence of any asserted contributions to the conception." *Acromed*, 253 F.3d at 1379 (quoting *Fina Oil & Chem. Co. v. Ewen*, 123 F.3d 1466, 1474 (Fed.Cir.1997)); *see also* *Kridl v. McCormick*, 105 F.3d 1446, 1450 (Fed.Cir.1997) ("The tribunal must also bear in mind the purpose of corroboration, which is to prevent fraud, by providing independent confirmation of the inventor's testimony."); *Mergenthaler v. Scudder*, 11 App. D.C. 264, 1897 WL 17698 at (D.C.Cir.1897) (explaining that corroboration is meant to frustrate the perjury of would-be inventors having no legitimate claim to the conception of the invention). "[T]he case law is unequivocal that an [alleged] inventor's testimony respecting the facts surrounding a claim of derivation of priority of invention cannot, standing alone, rise to the level of clear and convincing proof." *Price*, 988 F.2d at 1194; *Hess v. Advanced Cardiovascular Sys., Inc.*, 106 F.3d 976, 980 (Fed.Cir.1997). Corroborating evidence takes many forms, the most reliable of which is a "record[] made contemporaneously with the inventive process," *Linear*, 379 F.3d at 1327, such as an alleged inventor's drawing or schematic. Less reliable forms include oral testimony from disinterested witnesses, *see Sandt Tech., Ltd. v. Resco Metal & Plastics Corp.*, 264 F.3d 1344, 1351 (Fed.Cir.2001) ("[P]ostinvention oral testimony is more suspect, as there is more of a risk that the witness may have a litigation-inspired motive to corroborate the inventor's testimony, and that the testimony may be inaccurate."), although any pertinent evidence qualifies as corroborative if, viewed as a whole, it permits a "sound determination of the credibility of the [alleged] inventor's story." *Linear*, 379 F.3d at 1327 (quoting *Price*, 988 F.2d at 1195 (describing the approach as a "rule of reason"))).

[3] [4] In the present case, Hasbro provides no convincing evidence to corroborate Lizarraga's testimony that he, not Bowling, realized that the die's facets must be of equal shape and surface area, as the '197 patent claims. Hasbro points to several drawings (reprinted *supra* Part II.A) that Bowling submitted to the patent office in his application.FN10 Bowling does not dispute that Lizarraga prepared these drawings; instead, he readily concedes that Lizarraga accurately portrayed the invention as Bowling had conceived and described at their initial meeting. It has long been settled that "[a]n inventor 'may use the services, ideas, and aid of others in the process of perfecting his invention without losing his right to a patent.'" *Shatterproof Glass Corp. v. Libbey-Owens Ford Co.*, 758 F.2d 613, 624 (Fed.Cir.1985) (quoting *Hobbs v. U.S. Atomic Energy Comm'n*, 451 F.2d 849, 864 (5th Cir.1971)); *see also* *Ethicon, Inc. v. U.S. Surgical Corp.*, 135 F.3d 1456, 1460 (Fed.Cir.1998) ("One who simply provides the inventor with well-known principles or explains the state of the art without ever having 'a firm and definite idea' of the claimed combination as a whole does not qualify as a joint inventor.") (citing *Hess*, 106 F.3d at 981); *Sewall v. Walters*, 21 F.3d 411, 416 (Fed.Cir.1994) (holding that an alleged inventor that simply reduces an inventor's idea to practice is not necessarily a joint inventor); *O'Reilly v. Morse*, 56 U.S. (15 How.) 62, 111, 14 L.Ed. 601 (1853) (articulating that the inventive process requires the assimilation of knowledge from others that does not necessarily rise to the level of contribution). Without some indication that these drawings reflect anything other than the services of a skilled draftsman in Bowling's employ, they fall short of corroborating Lizarraga's assertions. *See* *Gemstar-TV Guide*, 383 F.3d at 1382-83 (holding that documents that contained an annotation listing the alleged co-inventor's name, but that did not explicitly state what subject matter he had contributed, failed to corroborate his assertions).

FN10. These are the only drawings that Hasbro identifies to corroborate Lizarraga's testimony, (Dkt. Entry No. 89, Def.'s Supplemental Mem. of Law in Supp. of Mot. to Correct Inventorship 3), although it appears from the record that Lizarraga prepared other drawings as well.

Besides, Lizaraga's testimony was conspicuously equivocal on the point Hasbro presses, as seen in the following exchange:

Q. [Plaintiff's counsel]: What you were thinking that Mr. Bowling wanted from you was a dice that would

be like a natural crystal, irregular, odd-shaped, and then you would put numbers on it and use that, correct?

A. *Somewhat*, yes. (Emphasis supplied.)

.....

Q. [Plaintiff's counsel]: You believed Mr. Bowling didn't understand that equal surfaces and equal surface areas were required on a dice [*sic*] of uniform density, required on a typical dice [*sic*] to get random results?

A. I believed he knew that, but, potentially, there might be a way of different surface areas if you increase the width and length on one side and make it shorter and squattier on the other side that you may be able to balance it. I just *assumed* that he was asking me to go to that extent and still balance it out. (Emphasis supplied.)

The frailty of Hasbro's position becomes more apparent in light of Lizarraga's background. Unlike Bowling, Lizarraga is not an engineer; and the only mathematics course he took since high school was an algebra class at community college. Lizarraga may be a talented artist, but it is unlikely (and surely not clear and convincing) that he explained the need for symmetry in dice design to Bowling, who had been using, designing, and inventing polyhedral dice for some time. *Cf.* *Ethicon*, 135 F.3d at 1460 (correcting inventorship because the named inventor did not possess the knowledge of sophisticated electrical engineering concepts required to conceive of the material depicted in the patent drawings). The passing of ten years since Lizarraga's purported contribution makes his claims more unlikely still. *Cf.* *Woodland Trust v. Flowertree Nursery, Inc.*, 148 F.3d 1368, 1373 (Fed.Cir.1998) (noting that post-invention oral testimony is suspect because of the risk of exaggeration and selective memory); *Washburn & Moen Mfg. Co. v. Beat 'Em all Barbed-Wire Co. (The Barbed Wire Patent)*, 143 U.S. 275, 284, 12 S.Ct. 443, 36 L.Ed. 154 (1892) ("Witnesses whose memories are prodded by the eagerness of interested parties to elicit testimony favorable to themselves are not usually to be depended upon for accurate information.").

Viewed as a whole, the evidence upon which Hasbro relies to corroborate Lizarraga's uncertain testimony fails to prove a contribution to the conception of the invention by clear and convincing evidence. Summary judgment on the issue of inventorship shall therefore enter in Bowling's favor.

C. Marking

Patentees, and persons making, offering for sale, or selling within the United States any patented article for or under them, or importing any patented article into the United States, may give notice to the public that the same is patented, either by fixing thereon the word "patent" or the abbreviation "pat.", together with the number of the patent, or when, from the character of the article, this can not be done, by fixing to it, or to the package wherein one or more of them is contained, a label containing a like notice. In the event of failure so to mark, no damages shall be recovered by the patentee in any action for infringement, except on proof that the infringer was notified of the infringement and continued to infringe thereafter, in which event damages may be recovered only for infringement occurring after such notice. Filing of an action for infringement shall constitute such notice.

Under s. 287(a), a patentee "is entitled to damages from the time when it either began marking its products in compliance with section 287(a) or when it actually notified [the accused infringer] of its infringement, whichever was earlier." *Am. Med. Sys., Inc. v. Med. Eng'g Corp.*, 6 F.3d 1523, 1537 (Fed.Cir.1993). Of course, there is no *per se* requirement that a patentee mark his product, but a patentee cannot recover damages for infringement (before the point of actual notice) until he does. *See* 35 U.S.C. s. 287(a). Also,

"once marking has begun, it must be substantially consistent and continuous in order for the party to avail itself of the constructive notice provisions of the statute." Am. Med. Sys., 6 F.3d at 1537; *see also* Sentry Prot. Prods., Inc. v. Eagle Mfg. Co., 400 F.3d 910, 918 (Fed.Cir.2005) (observing that an alleged infringer is deemed to have "constructive notice" of the patent protection "when the patentee consistently mark[s] substantially all of its patented products" with the statutory label) (internal quotation marks and citation omitted). Compliance with s. 287(a) is a question of fact, and the patentee bears the burden of proving compliance by a preponderance of the evidence. Nike, Inc. v. Wal-Mart Stores, Inc., 138 F.3d 1437, 1446 (Fed.Cir.1998).

The relevant inquiry here is whether Bowling complied with the constructive notice provisions of s. 287(a) between August 8, 1999 (when the '197 patent issued) and November 3, 1999 (when Bowling undisputedly gave Hasbro actual notice of infringement).FN11 Assuming that Bowling proves infringement, he can recover damages existing before November 3, 1999 only if he proves compliance with the marking statute; if he does not, Bowling can recover only those damages existing afterwards. Offering a series of arguments, Hasbro asserts, as a threshold matter, that Bowling has not pled and therefore cannot prove compliance; that Bowling cannot prove compliance as a matter of law because he did not mark each patented die with the statutory label; and, even if the dice could not be marked as such, that Bowling has failed to comply with the marking statute's alternative marking scheme. Responding in kind, Bowling maintains that his Complaint sufficiently alerted Hasbro to the marking issue. As for Hasbro's substantive complaints, Bowling argues that marking individual dice as described in s. 287(a)'s primary marking scheme would be prohibitively expensive, if not impossible, and he rejects Hasbro's assertion that he has not otherwise complied with the marking statute. In either event, Bowling observes, genuine issues of material fact on this question preclude summary judgment.

FN11. In an initial memorandum, Hasbro cites several instances after November 3, 1999, that it claims evidence Bowling's failure to consistently mark substantially all of his patented products. However, for the period following actual notice, Bowling's compliance with the constructive notice provisions of s. 287(a) is irrelevant in this case (that is, with respect to Hasbro). *See* 35 U.S.C. s. 287(a) ("except on proof that the infringer was notified of the infringement and continued to infringe thereafter"); *see also* Am. Med. Sys., 6 F.3d at 1537 (discussing a patentee's compliance with the constructive notice provisions of s. 287(a) up until the filing of the lawsuit, which constituted actual notice under the statute). To the extent that Hasbro still relies on this evidence for this purpose, that reliance is in error.

[8] Hasbro's threshold argument essentially is that Bowling's failure to plead compliance with s. 287(a) constitutes a waiver. *See* Maxwell v. J. Baker, Inc., 86 F.3d 1098, 1111 (Fed.Cir.1996) (noting that the patentee "had the burden of pleading and proving at trial that she complied with [s. 287(a)]"); *see also* Dunlap v. Schofield, 152 U.S. 244, 248, 14 S.Ct. 576, 38 L.Ed. 426 (1894) (noting that the patentee has "the duty of alleging and the burden of proving" compliance with the marking statute). This argument, however, is squarely foreclosed. Although Bowling did not affirmatively allege compliance with s. 287(a) in his Complaint, he did allege that Hasbro knew of the '197 patent at least as early as September 1999 (when Hasbro referenced the '197 patent in a letter to Bowling)-a factual predicate for willful infringement. *Imonex Servs., Inc. v. W.H. Munzprufer Dietmar Trenner GmbH*, 408 F.3d 1374, 1377 (Fed.Cir.2005); *see also* Nike, 138 F.3d at 1446 (comparing willful infringement with constructive notice). Presented with this precise issue, the Federal Circuit has held that pleading the knowledge element of willful infringement serves to notify the accused infringer that the patentee will pursue damages under the constructive notice provisions of the marking statute. *Sentry*, 400 F.3d at 918.

This conclusion comports with the liberal pleading requirements of the Federal Rules of Civil Procedure, which require only "a short and plain statement of the claim showing that the pleader is entitled to relief," Fed.R.Civ.P. 8(a)(2), and direct district courts to construe pleadings so "as to do substantial justice."

Fed.R.Civ.P. 8(f). *See* Dopp v. HTP, Corp., 947 F.2d 506, 513 (1st Cir.1991) ("Pleadings are liberally to be construed, and for the purpose of determining what relief a claimant has sought, complaints ought not to be read grudgingly or with a hypertechnical eye."); Torres Ramirez v. Bermudez Garcia, 898 F.2d 224, 226-27 (1st Cir.1990) ("It is not fatal to a complaint that a legal theory has been mischaracterized or that the precise language invoking jurisdiction has not been used."); Conn. Gen. Life Ins. Co. v. Universal Ins. Co., 838 F.2d 612, 622 (1st Cir.1988) (holding that the failure to plead a particular legal theory, when the plaintiff pled two related legal theories, was not a bar to recovery); Janke Constr. Co. v. Vulcan Materials Co., 527 F.2d 772, 776 (7th Cir.1976) (holding that the plaintiff's misconceived legal theory did not preclude it from obtaining relief under another theory).

Moreover, Hasbro has not claimed that it has been unfairly prejudiced by Bowling's oversight such that might warrant a departure from these principles. *Compare* Civix-DDI, LLC, v. Cellco P'ship, 387 F.Supp.2d 869, 901 n. 38 (N.D.Ill.2005) (following the rule in *Sentry* in the absence of unfair prejudice to the accused infringer), *with* Tech. Licensing Corp. v. Thomson, Inc., No. Civ. S-031329, 2005 WL 1562225, at *2-*3 (E.D.Cal. June 30, 2005) (granting summary judgment on patentee's failure to plead compliance with s. 287(a) because the accused infringer had not conducted discovery on the marking issue in reliance on the patentee's failure to so plead). In fact, Hasbro's extensive discovery on this issue (and the present motion itself), suggests that Hasbro was fully aware of the marking issue from an early stage in the litigation. Under these circumstances, granting Hasbro's motion based on a hypertechnical reading of the Complaint would be excessive and unsound.

[9] Turning to Hasbro's second argument, it is unclear whether Bowling's dice would fall under s. 287(a)'s primary marking scheme. The purpose behind the marking statute is to provide notice to the public concerning "the status of the intellectual property embodied in an article of manufacturing or design." *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 162, 109 S.Ct. 971, 103 L.Ed.2d 118 (1989); *Nike*, 138 F.3d at 1446 ("to provide notice *in rem*"); *see also* *Wine Railway Appliance Co. v. Enter. Railway Equip. Co.*, 297 U.S. 387, 397, 56 S.Ct. 528, 80 L.Ed. 736 (1936) (observing that the notice requirement is designed "for the information of the public"); *Rutherford v. Trim-Tex, Inc.*, 803 F.Supp. 158, 161 (N.D.Ill.1992) (discussing the Supreme Court's "long-standing focus on the notice effected by the method of marking the patented article rather than on the precise mechanistic compliance with the statute"). For this reason, the marking statute generally is construed to allow some discretion in the patentee to alternatively mark its product (by marking the product's packaging, for example), particularly when the product in question is small. *See* *Sessions v. Romadka*, 145 U.S. 29, 50, 12 S.Ct. 799, 36 L.Ed. 609 (1892) ("It is not altogether clear that the stamp could not have been made upon the smaller sizes [of truck catches], but, in a doubtful case, something must be left to the judgment of the patentee, who ... affix[ed] a label to the packages in which the fasteners were shipped and sold."); *Gillette Safety Razor Co. v. Standard Safety Razor Corp.*, 2 F.Supp. 64, 69 (D.Conn.1932) (marking the packages containing the razor was sufficient), *rev'd on other grounds*, 64 F.2d 6 (2d Cir.1933); *see also* *Wayne-Gossard Corp. v. Sondra, Inc.*, 434 F.Supp. 1340, 1364 (E.D.Pa.1977) (recognizing other important factors, such as defacement, trade custom, and expense). This is true regardless of whether it is physically possible to place the patent number on the article itself. *See, e.g.*, *Chicago Pneumatic Tool Co. v. Hughes Tool Co.*, 192 F.2d 620, 626 (10th Cir.1951) (involving cone drills and cone cutters used in drilling deep wells for oil and gas); *Saf-Gard Prod., Inc. v. Serv. Parts, Inc.*, 491 F.Supp. 996, 1010 (D.Ariz.1980) (involving automotive radiator caps); *Bergstrom v. Sears, Roebuck & Co.*, 496 F.Supp. 476, 494 n. 9 (D.Minn.1980) (involving a tubular steel fireplace grate).

Hasbro argues that strict compliance is nevertheless required when the product has markings or printing on it already (other than the appropriate patent marking). However, the authority Hasbro relies upon for this proposition is plainly distinguishable from the present case. *Creative Pioneer Prods. Corp. v. K Mart Corp.*, 5 U.S.P.Q.2d 1841, 1847-48, 1987 WL 54482 (S.D.Tex.1987) involved a wire-cutting tool, exponentially larger than the die at issue here, that could have been marked relatively easily. In *John L. Rie, Inc. v. Shelly Bros., Inc.*, 366 F.Supp. 84, 90-91 (E.D.Pa.1973), the patented bag closure device contained the inscription

"JOHN L. RIE, INC. YONKERS, N.Y.," seriously undercutting the patentee's argument that the device was too small to mark. Here, Bowling's dice, which are approximately 1 1/8 inch long and 3/8 inch in diameter, contain only a single arabic numeral on each facet.

[10] Viewing the evidence in the light most favorable to Bowling, and in the absence of any authority directly on point, this writer is not satisfied that this question is appropriate for summary judgment. Several important factors are either disputed or have yet to be ascertained. These factors include, but are not limited to, the relative size of the dice, the processes required to affix the statutory label upon the dice, the costs associated with these processes, the appearance of the dice with the statutory label, and industry practices. The balancing of these factors is a job best suited for a jury.

So too is Hasbro's third and alternate argument that Bowling has failed to comply with s. 287(a)'s alternative marking scheme. Hasbro contends that Bowling did not adequately monitor the retailers that sold his dice, and that, as a result, the packaging of the dice was not consistently and continuously marked. *See Amsted Indus., Inc. v. Buckeye Steel Castings Co.*, 24 F.3d 178, 185 (Fed.Cir.1994) (holding that a patentee's express and implied licensees must comply with s. 287(a) for the patentee to avail itself of the statute's constructive notice provisions). However, when compliance turns on a third party's actions or inactions, a statistical survey of how many articles went unmarked, such as that provided by Hasbro in support of the motion under review, "is not conclusive of the issue whether the patentee's marking was 'substantially consistent and continuous.'" *Maxwell*, 86 F.3d at 1111. Rather, the proper question is "whether the patentee made reasonable efforts to ensure compliance with the marking requirements." *Id.* at 1112 (explaining the difficulty associated with ensuring that licensees comply with the marking statute, and announcing a "rule of reason" approach to determine "substantial" compliance). This question remains in dispute.

III. Conclusion

For all the foregoing reasons, the disputed claims shall be construed in the manner described *supra* Part II.A, Bowling's Motion for Summary Judgment on the issue of inventorship is GRANTED, and Hasbro's Motion for Partial Summary Judgment on the issue of marking is DENIED.

It is so ordered.

D.R.I.,2007.

Bowling v. Hasbro, Inc.

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