

UNITED STATES DISTRICT COURT  
DISTRICT OF MASSACHUSETTS

_____	)	
CRANE SECURITY	)	
TECHNOLOGIES, INC. and VISUAL	)	
PHYSICS, LLC,	)	
	)	
Plaintiffs,	)	
	)	
v.	)	Civil Action No. 14-12428-LTS
	)	
ROLLING OPTICS AB,	)	
	)	
Defendant.	)	
_____	)	

ORDER ON MOTIONS FOR SUMMARY JUDGMENT (DOC. NOS. 325 & 331)

January 26, 2018

SOROKIN, J.

Plaintiffs Crane Security Technologies, Inc. and Visual Physics, LLC have moved for summary judgment of infringement by various RO products on the following 22 claims across five patents:

1. Claims 57, 58, 59, 76, 77, 78, 79 of Pat. No. 7,468,842 (the “842 Patent”);
2. Claims 62, 63, 73, 74, 76 of Pat. No. 8,009,360 (the “360 Patent”);
3. Claims 158 of Pat. No. 8,111,462 (the “462 Patent”);
4. Claims 56, 95, 96 of Pat. No. 8,120,855 (the “855 Patent”); and
5. Claims 167, 175, 176, 177, 178, 181 of Pat. No. 8,254,030 (the “030 Patent”).

Defendant Rolling Optics AB has cross-moved for summary judgment on the following issues:

1. The term “a given plane” in all claims of the ’360 and ’030 Patents is indefinite, such that those claims are invalid;
2. The term “substantially regular array spacing” in claims 62 and 63 of the ’360 Patent and claim 56 of the ’855 Patent is indefinite, such that those claims are invalid;
3. Claims 62 and 63 of the ’360 Patent are invalid as anticipated by the prior art;
4. The allegedly infringed claims of the ’842 Patent are invalid under the on-sale bar;
5. RO’s products have not infringed claims 62 and 63 of the ’360 Patent (requiring “substantially regular array spacing”);
6. RO’s products have not infringed claims 177, 178, and 181 of the ’030 Patent, claims 74 and 76 of the ’360 Patent, or claim 67 of the ’855 Patent (requiring “shaped posts”);
7. RO has not actively induced infringement by third parties; and
8. Crane failed to provide RO with actual notice of infringement prior to December 6, 2012.

For the reasons below, the Court DENIES RO’s motion for summary judgment with respect to its invalidity claims; ENTERS summary judgment in Crane’s favor as to the validity of claims requiring “a given plane” and “substantially regular array spacing”; ALLOWS Crane’s motion for summary judgment of infringement; DENIES RO’s motion for summary judgment of non-infringement; DENIES RO’s motion for summary judgment of no liability for active inducement of infringement; and DENIES RO’s motion for summary judgment limiting damages accrual on the basis of any failure to provide actual notice of infringement.

## I. FACTS

The following facts are undisputed. Plaintiff Crane Security Technologies, Inc. (“Crane Security”) is a New Hampshire corporation with its principal place of business in Nashua, New

Hampshire. Crane Security manufactures anti-counterfeiting technologies that attach to banknote papers and security devices. One such technology, central in this patent infringement action, is a micro-optics system that projects synthetically magnified images.

Plaintiff Visual Physics, LLC (“Visual Physics”) is a Georgia corporation with its principal place of business in Alpharetta, Georgia. Visual Physics is both the wholly-owned subsidiary of Crane Security since 2008, Doc. No. 1 ¶ 3, and the exclusive owner of all five patents in suit, Doc. No. 34 at 2 n.2. Visual Physics licenses these patents to its parent, Crane Security.<sup>1</sup>

Defendant Rolling Optics (“RO”) is a Swedish nanotechnology company with an office and production facility near Stockholm, Sweden. It makes and sells micro-optic foils and delivers them to third-parties who turn the foils into labels for products. Doc. No. 34 at 2.

The patents-in-suit are the ’842 Patent, issued on December 23, 2008; the ’360 Patent, issued on August 30, 2011; the ’462 Patent, issued on February 7, 2012; the ’855 Patent, issued on February 21, 2012; and the ’030 Patent, issued on August 28, 2012. Each of these patents is either a continuation-in-part or divisional from one patent, Pat. No. 7,333,268 (the “’268 Patent”), issued February 19, 2008. Each patent covers a structure comprising a planar array of image icons and a planar array of focusing elements, separated by an optical spacer or substrate. Doc. No. 155 at 2. The technology is described in detail in Crane Sec. Techs., Inc. v. Rolling Optics AB, 166 F. Supp. 3d 76, 79–80 (D. Mass. 2016) (the “Markman Order”).

In February, 2010, Crane learned that “[a] Swedish company called Rolling Optics” had approached Hewlett Packard (“HP”) and “solicited [] business there.” Doc. No. 341-1 ¶ 90. The

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<sup>1</sup> Crane Security is part of a family of companies that includes its parent, Crane & Co., Inc. See, e.g., Doc. No. 1 ¶ 2. Where the specific entity is irrelevant, the Court will use the general reference “Crane,” including when referring to both plaintiffs.

following month, Crane obtained a copy of a Swedish magazine, Inspire, that featured a sample of RO's micro-optic system on the cover. Based on its analysis of the sample, Crane concluded that RO's products infringed the patents-in-suit. Id. ¶ 91.

On April 26, 2010, Crane sent a letter to RO's then-CEO, Fredrik Blomquist, to "alert [him] to a possible patent infringement situation regarding the manufacture and sale of your optical products in relation to our UNISON patents." Crane's letter pointed specifically to RO's "film products [...] that produce three-dimensional images that appear to exist on a plane other than the surface of the film." Id. ¶ 89. On May 14, 2010, RO responded that the company was "not involved in any activities in conflict with [Crane's] patent rights[.]" Doc. No. 22-2 at 2.

Representatives from Crane and RO met in Stockholm on December 10, 2010. Doc. No. 341-1 ¶ 92. At the meeting, Scott Palm, Crane's representative, commented that "there may be conflicts or overlap of intellectual property." Id. At the end of the meeting, the parties discussed possibilities of collaboration. Three days after the meeting, Palm drafted a response to an inquiry from HP stating: "We have seen no evidence that [RO is] either producing or selling thin film authentication products. As a courtesy, earlier this year, when we became aware the [sic] Rolling Optics was conducting research in micro-optics, we advised them of our extensive intellectual property position in the field." Id. ¶ 94.

In or around November 2011, RO and Connecticut-based CMR Associates LLC ("CMR") began negotiating the production of 3D micro-optic foils for use in labels for UGG Australia footwear products. Doc. No. 15 ¶ 2. Between November 2011 and May 2012, RO made and delivered the foils to CMR. CMR took title in Sweden and arranged for the foils to be delivered to a converter in New York, which produced labels from the foils. Id. ¶ 4. CMR then

shipped these labels to China, where they were incorporated into UGG products. Id. RO completed its sale of foils for the UGG products on July 2, 2012. Doc. No. 341-1 ¶ 96.

Meanwhile, in February 2012, RO began working with France-based Société Jas Hennessy & Co., an affiliate of Moët Hennessy, USA, Inc., to produce labels for use in special edition Hennessy VSOP cognac bottles destined for the United States. Doc. No. 29 ¶ 3; Doc. No. 13 ¶ 17. RO completed this sale on July 13, 2012. Doc. No. 341-1 ¶ 96. By May 2013, Moët Hennessy had distributed in the United States 18,000 bottles with labels containing RO's films. Doc. No. 22-17 at 2.

On December 3, 2012, Crane wrote a letter to RO's CEO and to UGG. Doc. No. 22-1 at 2; Doc. No. 22 ¶ 3. The letter noted that "the UNISON patent family has expanded and continues to expand around the world" and enumerated all five of the patents-in-suit. Doc. No. 22-1 at 2. The letter also alleged RO as the source of the infringing labels and reminded the recipients of their receipt of the prior April 26, 2010 letter. Id. at 3.

Prior to 2013, RO produced its foils with a technology that formed icons as voids or recesses. Doc. No. 341-1 ¶ 25. In 2013, RO ceased using this technology and began instead to form icons by printing the inverse of recesses onto a substrate. Doc. No. 327-40 at 9-10.

Crane and Visual Physics filed this complaint on June 9, 2014. The Court held a hearing pursuant to Markman v. Westview Instruments, Inc., 517 U.S. 370 (1996), on December 11, 2015 and issued the Markman Order, which construed five claim terms, on February 9, 2016. See Crane Sec. Tech., 166 F. Supp. 3d 76. Fact discovery closed on May 9, 2016. Expert discovery closed on November 11, 2016. The parties filed motions for summary judgment in April and May of 2017. The Court held a hearing on January 12, 2018, at the conclusion of which each side submitted a booklet of PowerPoint slides.

## II. LEGAL STANDARD

Summary judgment is appropriate when “the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). “A ‘genuine’ issue is one that could be resolved in favor of either party, and a ‘material fact’ is one that has the potential of affecting the outcome of the case.” Calero-Cerezo v. U.S. Dep’t of Justice, 355 F.3d 6, 19 (1st Cir. 2004). The moving party bears the burden of establishing that there is no genuine issue of material fact. See Celotex Corp. v. Catrett, 477 U.S. 317 (1986). “The evidence of the non-movant is to be believed, and all justifiable inferences are to be drawn in his favor.” Anderson v. Liberty Lobby, Inc., 477 U.S. 242 (1986).

## III. DISCUSSION

The Court addresses each of the parties’ arguments below.

### A. Invalidity

#### *i. “A Given Plane”*

RO moves for summary judgment of invalidity as to Crane’s patent claims that use the term “a given plane,”<sup>2</sup> which RO argues is indefinite. Claim 1 of the ’360 Patent is representative:

1. A synthetic magnification micro-optic system comprising:

(a) an array of image icons with a substantially regular array spacing between a substantial number of image icons within at least a portion of the image icon array; and

(b) an array of image icon focusing elements, the array of image icon focusing elements being disposed a substantially uniform distance from the array of image

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<sup>2</sup> RO argues that “all claims in the ’360 and ’030 patents are invalid as indefinite as a matter of law because they include a claim limitation that a synthetically magnified image appears to lie above or below ‘a given plane.’” Doc. No. 331-1 at 19.

icons and forming at least one synthetically magnified image of at least a portion of the image icons,

wherein at least a portion of the image icons are arranged in relation to at least a portion of the focusing elements in a manner such that the at least one synthetically magnified image appears to lie above *a given plane*,

wherein the system has a thickness of less than 50 microns, or image icon focusing elements having an effective base diameter of less than 50 microns, or both.

Doc. No. 327-16 at 50-51 (emphasis added). RO contends that the claims' use of the term "a given plane" as a point of reference provides "no objective boundaries," such that "a person of ordinary skill in the art cannot translate the definition into meaningfully precise claim scope."

Doc. No. 331-1 at 14.

The Patent Act's "definiteness" requirement renders invalid patent claims that do not "particularly point[] out and distinctly claim[] the subject matter which the applicant regards as [the] invention." 35 U.S.C. § 112(b); Nautilus, Inc. v. Biosig Instruments, Inc., 134 S. Ct. 2120, 2124-25 (2014). However, the Patent Act creates a presumption that patents are valid. 35 U.S.C. § 282. "[A] patent is invalid for indefiniteness if its claims, read in light of the patent's specification and prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." Nautilus, 134 S. Ct. at 2123. RO has the burden of proving indefiniteness by clear and convincing evidence. Microsoft Corp. v. i4i Ltd. Partnership, 564 U.S. 91, 95 (2011).

Noting that claims in Crane's earlier '268 Patent referenced "a spatial plane [deeper than or above] the system" and "the plane of the system," RO alleges that Crane's newer formulation of "a given plane" in the '360 and '030 Patents represents an attempt to improperly broaden the claim scope of the parent application by purposefully injecting ambiguity into the claim. Doc. No. 331-1 at 12, 14. According to RO, the term's use of the indefinite article "a" signals that the

claim covers *any* plane that one might select as the point of reference for the synthetically magnified image. Id. at 15. The Court disagrees.

Read in light of the patents’ specifications and prosecution histories, the term “a given plane” does provide one skilled in the art with reasonable certainty about the position of the synthetically magnified image produced by the image icons and focusing elements as claimed in the patents. “A given plane” means the plane of the micro-optic system, as Crane proposes. The plain meaning of “given” is “stated or provided.” The plane so provided in the specification (or the claims) is the plane of the system. See, e.g., Doc. No. 327-16 at 37 (‘360 Patent specifications explaining floating images as appearing “to lie above the plane of the Unison Float material”). Indeed, RO identifies nothing in any of the claims or specifications teaching or suggesting something other than the plane of the system. RO relies entirely on its purely linguistic argument arising from the word “a” while ascribing no meaning to “given.” Moreover, RO presents no expert testimony (or any other evidence) that the term is not reasonably certain to a person skilled in the art.

RO’s understanding would render the limitation meaningless, as any synthetically magnified image would appear simultaneously above and below an indefinite number of “given planes” regardless of the image’s position. The Court considers this consideration significant, especially because RO’s construction is unmoored from the patents at issue. See Boston Scientific Corp. v. Cook Inc., 187 F. Supp. 3d 249, 272 (D. Mass. 2016) (“The fact that [a term] can somehow be rendered to suggest two alternative definitions, one coherent and one nonsensical, does not justify a declaration that the term is indefinite[.]”); Bicon, Inc. v. Straumann Co., 441 F.3d 945, 950-51 (Fed. Cir. 2006) (refusing to construe claim terms in a way that would make limitations meaningless).



That a given plane refers to the plane of the system accords with additional descriptions of synthetically magnified image positioning that appear within the same claims in which “a given plane” appears. For instance, claim 42 of the ‘360 Patent describes an arrangement of image icons and focusing elements giving rise to at least one synthetically magnified image “appear[ing] to lie above a given plane.” That same claim subsequently teaches “at least one synthetically magnified image [...] appearing to lie on a spatial plane above the system, appearing to move between a spatial plane deeper than the system and a spatial plane above the system upon rotation of the system about an axis that intersects the plane of the system, [or] appearing to move in a direction parallel to an axis of tilt of the system upon tilting the system about an axis substantially parallel to the plane of the system[.]” In each of these formulations, it is the micro-optic system that serves as the reference point for the synthetically magnified image effects that the claims describe.

Some claims in the ‘360 and ‘030 Patents recite both “a given plane” and “the plane of the system.” See, e.g., claim 42 of the ‘360 Patent and claims 34, 92, and 145 in the ‘030 Patent. RO urges the Court to infer from this differentiation in terms that the applicants intended these terms to have different meanings, citing Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1119-20 (Fed. Cir. 2004) (“[W]hen an applicant uses different terms in a claim it is permissible to infer that he intended his choice of different terms to reflect a differentiation in the meaning of those terms.” (Internal citation omitted)). The Court finds such an inference unsupported here. Rather, the numerous other formulations that RO itself cites—e.g., “a spatial plane that is visually deeper than the thickness of the material,” “a spatial plane deeper than the thickness of the polymer film,” and “depth planes that lie further from the plane of the Unison material”—illustrate that the applicants did not choose only one phrase in

identifying the plane of the system as the relevant reference point. See Innova, 381 F.3d at 1120 (concluding that the facts presented “simply a case where the patentee used different words to express similar concepts, even though it maybe be confusing drafting practice.”). While the applicants may have guided one skilled in the art better by using uniform terminology, their use of “a given plane” informs with reasonable certainty that the SMIs appear above or below the system itself, rather than any unstated conceivable plane of the patentee’s choosing. This is all the law requires. Nautilus, 134 S. Ct. 2120.

Finally, other evidence indicates that persons skilled in the art understand the phrase “a given plane.” In provisionally rejecting claims in the ‘030 Patent application, the patent examiner used the term “a given plane” in illustrating the substantial equivalence of “appearing to lie below a given plane” with motion effects taught in applicants’ co-pending application. Doc. No. 81-19 at 10 (“Although, [the application] recites the image lies below a given plane, it would have been obvious to one of ordinary skill in the art at the time the invention was made to describe a motion effect (such as floating or depth perceptions) as an image that lie below a given plane.”). RO itself understands the images produced by its film products as appearing above or below the plane of the film. RO’s marketing pitch explained “3D, depth and floating” optical effects as “above and below,” without specific reference to the film’s surface. Doc. No. 327-97 at 11. Similarly, RO specified image depth and float distances in its marketing materials and interrogatory responses without referring to the film surface. Id. at 15 (“Image depths between -50 and +50mm”); Doc. No. 327-104 at 18 (listing “depth” for certain RO products as “3mm under,” “5.3mm over,” “12.8mm under,” etc.).

Because RO has not provided clear and convincing evidence that the term “a given plane” is indefinite, the Court DENIES RO’s request for summary judgment on the invalidity of

claims using that term. Further, a district court may grant summary judgment in favor of a non-movant where it believes that the movant has had adequate notice of the grounds for that judgment, and where there is clear support for such judgment. See Celotex, 477 U.S. at 326; Berkovitz et al. v. Home Box Office, Inc., 89 F.3d 24, 29-30 (1st Cir. 1996). The Court’s evaluation of “a given plane” for definiteness implicated no dispute of material fact warranting a trial on the issue. In light of the extensive briefings and the hearing on the motion, the Court finds that RO has received sufficient fact discovery, appropriate notice, and opportunity to present opposition to a finding of definiteness.<sup>3</sup> Id. at 29-31; see also Skyhook Wireless, Inc. v. Google, Inc., 159 F. Supp. 3d 144, 151-152 (D. Mass. 2015) (entering summary judgment of definiteness sua sponte where discovery was complete and the parties addressed definiteness in their summary judgment filings). Therefore, the Court enters summary judgment in favor of Crane as to the definiteness of the claim term “a given plane.”

*ii. Substantially Regular Array Spacing*

RO also moves for summary judgment of indefiniteness as to Crane’s claim limitations that require “an array of image icons” with “a substantially regular array spacing between a substantial number of image icons.”<sup>4</sup> Claim 62 of the ’360 Patent is representative:

A synthetic magnification micro-optic system comprising:

- (a) *an array of image icons with a substantially regular array spacing between a substantial number of image icons* within at least a portion of the image icon array; and
- (b) an array of image icon focusing elements, the array of image icon focusing elements being disposed a substantially uniform distance from the array of image

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<sup>3</sup> At the motion hearing, RO noted the possibility of further discovery on its unrelated counterclaim against Crane for violation of M.G.L. ch. 93A. Discovery as to patent validity is complete in this almost four-year-old case. Although Crane has not moved for summary judgment of definiteness, Crane asserted the definiteness of “a given plane” in its opposition to RO’s cross-motion for summary judgment. Doc. No. 345 at 11-15. RO in turn responded to Crane’s position. Doc. No. 352-4 at 3-5. The parties further argued whether “a given plane” satisfied the definiteness requirement at the motion hearing and in supplemental PowerPoint slides.

<sup>4</sup> Claims 62 and 63 of the ’360 Patent and claim 56 of the ’855 Patent.

icons and forming at least one synthetically magnified image of at least a portion of the image icons,

wherein at least a portion of the image icons are arranged in relation to at least a portion of the focusing elements in a manner such that the at least one synthetically magnified image appears to lie above a given plane,

wherein the synthetic magnification micro-optic system forms a second synthetically magnified image exhibiting a different optical effect than the at least one synthetically magnified image.

Doc. No. 327-16 at 54 (emphasis added). RO argues that the claim term “substantially regular array spacing” “fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention,” such that it is indefinite under Nautilus.

In particular, RO argues that the claim limitation fails to identify whether “substantially regular array spacing” must be determined by measuring the space in-between icons or the pitch (i.e., the repeat period) of the icons. Doc. No. 352-4 at 5. RO contends that, during prosecution, the applicants distinguished their invention from prior art by purporting to require regular spacing in-between the icons, such that Crane now should not be permitted to declare that array spacing means the repeat period. Id. According to RO, because the ‘360 and ‘855 Patents are silent as to which measure is claimed, the “substantially regular array spacing” limitation is indefinite, since “no informed and confident choice is available among the contending definitions.” Doc. No. 352-4 (citing Nautilus, 134 S.Ct. at 2130 n.8).

The Court disagrees. In addition to the patents’ claims and prosecution histories, the Court looks to the specifications in construing “substantially regular array spacing.” Nautilus, 134 S. Ct. at 2123. The specifications inform that it is the *repeat period* that matters for purposes of array spacing. For instance, Figure 1a in the ‘360 Patent depicts the cross section of the optic system:

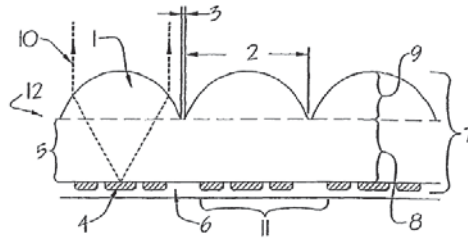


Fig. 1a

Doc. No. 327-16 at 4. The description of the embodiment explains the figure as having “icons 4 of repeat period.” *Id.* at 36. It identifies icon element (4) as “one element of a periodic array of icon elements having periods and dimensions substantially similar to those of the lens array[.]” *Id.* at 36. In turn, Figure 5a “shows a lens array [] having a regular *periodic* array spacing.” *Id.* at 39 (emphasis added). Elsewhere, the specifications identify the “scale ratio” as “the ratio of the *repeat period of the icons* to the repeat period of the lenses,” *id.* at 36 (emphasis added), and describe how visual effects may result from varying the “icon element repeat period,” *id.* at 39. By contrast, the specifications neither identify nor place significance on the space in-between image icons.<sup>5</sup>

RO’s expert Leger in a deposition stated that a “regular array requires periodicity” and that regular “means periodic.” Doc. No. 333-33 at 105:1-2 and 108:2-109:24. In its own marketing materials, RO described its products as having “object arrays” with spacing identified as the “pitch.” Doc. No. 327-87 at 15-16, 18. Thus, both intrinsic and extrinsic evidence support the conclusion that one reasonably skilled in the art would understand, with reasonable certainty, that the patents teach regular *periodic* array spacing.<sup>6</sup>

<sup>5</sup> The ‘855 Patent parallels the ‘360 Patent in these respects. *See* Doc. No. 78-5.

<sup>6</sup> The Court draws no adverse inference from the applicants’ explanation of why their patent claims were not foreclosed by the Florczak prior art reference, as cited by RO. First, to the extent that the Florczak reference disclosed the positioning of an observed image on a portion of a microlens, the Court does not consider applicants’ characterization of the image spacing to be instructive with respect to the Court’s construction of “substantially regular array spacing” of image icons. Second, even were applicants’ explanation relevant to image icons, no principle of estoppel compels the Court to disregard the overriding evidence from the patents’ specifications. *See*

RO further argues that “substantially regular array spacing” is indefinite because the term does not disclose how to measure the space between non-identical image icons. Insofar as RO’s contention relates to the claim invalidity, RO has not met its burden on summary judgment. The claim language enjoys a presumption of validity. 35 U.S.C. § 282. RO has offered no expert testimony or other evidence that the claim language does not inform, with reasonable certainty, a person skilled in the art how the pitch of non-identical image icons is measured. The Court’s construction of the term “substantially regular array spacing” as repeat period applies to identical and non-identical image icons alike. Further, the patents need not quantify “substantially regular,” because numerical precision is not required when using a term of degree such as “substantial.” Exmark Mfg. Co. v. Briggs & Stratton Power Prods. Grp., LLC, 2018 WL 385497 at 8 (Fed. Cir. 2018); see also Ecolab, Inc. v. Encirochem, Inc., 264 F.3d 1358, 1367 (Fed. Cir. 2001) (“[The term] ‘substantially’ is a descriptive term commonly used in patent claims to ‘avoid a strict numerical boundary to the specified parameter.’”); Apple Inc. v. Samsung Elecs. Co., 786 F.3d 983, 1002 (Fed. Cir. 2015) (determining “substantially centered” to be definite because patent challenger failed to produce evidence that an ordinarily skilled artisan would lack reasonable certainty of the claim’s scope).

Moreover, RO’s explanation of the uncertainty of measuring non-identical image icons merges with RO’s defense against Crane’s infringement claim. See Doc. No. 331-1 at 21 (“[A]n array of non-identical micro-images should not be within the scope of these claims because the spacing *between* such micro-images is inherently not ‘regular.’”).<sup>7</sup> To the extent RO argues that

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Southwall Techs., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1578 (Fed. Cir. 1995) (distinguishing prosecution history’s mere relevance to claim construction from prosecution history estoppel in the context of the doctrine of equivalents).<sup>7</sup> In both its Opposition and Cross-Motion for Summary Judgment (Doc. No. 331-1) and its Reply in support thereof (Doc. No. 352-4), RO discusses the limitation’s applicability to *micro-images* that are non-identical. However, the limitations at issue speak to the array of and spacing between *image icons*—the objects that work with the focusing elements to create the synthetically magnified images that are the hallmark of the invention. For purposes of the instant motion, the Court considers RO’s arguments as applied to image icons or their equivalents.

its products feature image icons that do not exhibit substantially regular array spacing, and that they are thus not within the scope of the patent claims as the Court has construed them herein, the Court defers that separate issue for summary judgment discussed below and/or trial on Crane's direct infringement claim.

Because RO has not presented clear and convincing evidence that the term "substantially regular spacing" is not reasonably certain to a person skilled in the art, the Court DENIES RO's motion for summary judgment of invalidity with respect to the claims containing that term. Further, for the reasons that the Court enters summary judgment of definiteness as to claims referencing "a given plane," see supra Section III.A.i., the Court ENTERS summary judgment of definiteness sua sponte in Crane's favor as to the claims that teach "substantially regular array spacing."

*iii. Matsumoto Prior Art*

RO argues that claims 62 and 63 of the '360 Patent are invalid as anticipated by the Matsumoto prior art reference, a Japanese patent application published in 2001.<sup>8</sup> "To anticipate a claim, a single prior art reference must expressly or inherently disclose each claim limitation." Celeritas Techs., Ltd. v. Rockwell Int'l Corp., 150 F.3d 1354, 1361 (Fed. Cir. 1998). Further, "[a]nticipation requires the presence in a single prior art disclosure of all elements of a claimed invention *arranged as in the claim.*" Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 1548 (Fed. Cir. 1983) (internal citation omitted and emphasis added). As already noted, "[p]atents are presumed to be valid and invalidity must be proven by clear and convincing evidence." Osram Sylvania, Inc. v. Am. Induction Techs., Inc., 701 F.3d 698, 704 (Fed. Cir. 2012). "Although anticipation is a question of fact, summary judgment may be appropriate if the record reveals no

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<sup>8</sup> Japanese patent application JP 2000 0118003; publication number JP 2001-55000 (Doc. No. 333-25).

genuine dispute of material fact.” Encyclopaedia Britannica, Inc. v. Alpine Elecs. Of Am., Inc., 609 F.3d 1345, 1349 (Fed. Cir. 2010).

RO cites its expert Leger’s supplemental declaration, in which Leger explains that Embodiment 8 of the Matsumoto application discloses “[a]ll of the limitations in claims 62 and 63 of the ‘360 Patent,” including an array of image icons (“picture elements”), an array of image icon focusing elements (“plano-convex lenses”) on a substrate, all of which generate synthetically magnified images (“virtual images”) appearing above and/or below a given plane (“appear[ing] to have sunk below” and “floating above”). Doc. No. 330-30 at 3-4. Leger infers “substantially regular array spacing” of the picture elements from the embodiment’s description of “a picture element layer formed by arranging a plurality of pixels of the same shape and size vertically and horizontally,” wherein the pixels are formed on a transparent film “at a pitch formed by grid units obtained by a mesh” and the picture elements are “shifted radially by the same width.” Id. ¶¶ 9, 13. Additionally, Leger assumes “substantially uniform distance” between the picture elements and the plano-convex lenses based on his visual examination of the substrate depicted in Figures 28 and 29. Id. at 3-4.

Crane disputes that the Matsumoto reference discloses an array of picture elements with substantially regular spacing, noting that the application never refers to “array,” “spacing,” or related terminology to describe the layout of picture elements. Crane also stresses that Figures 28 and 29 are not drawn to scale, such that the figures disclose neither regular picture element array spacing nor uniform distance between picture elements and lenses. These positions are further explained in the report by Crane’s expert Barbastathis. Doc No. 342-2 at 15-22.

In light of the contradictory evidence that Crane presents, the Court concludes that genuine issues of material fact remain in dispute, including whether the grid-producing mesh



method described in the Matsumoto application discloses the production of an array with substantially regular spacing, see, e.g., Doc. No. 333-51 at 294:10-24 (Leger deposition testimony disclaiming knowledge about the pixel-creating technology in the Matsumoto application), as well as whether the application discloses the disposition of picture elements and lenses at a uniform distance. Accordingly, the Court DENIES RO's motion for summary judgment on the question of anticipation.

*iv. On-Sale Bar.*

RO moves for summary judgment of invalidity of the '842 Patent under the on-sale bar of 35 U.S.C. § 102. A patent is invalid under the statutory on-sale bar if both of two conditions are satisfied prior to the critical date: (1) the product was the subject of a commercial offer for sale and (2) the invention was ready for patenting. Pfaff v. Wells Elecs., Inc., 525 U.S. 55, 67 (1998). "An invention can be found to be 'ready for patenting' in at least the following ways: by proof that it was reduced to practice, or by proof that the inventor had prepared drawings or other descriptions of the invention that were sufficiently specific to enable a person skilled in the art to practice the invention." Cargill, Inc. v. Canbra Foods, Ltd., 476 F.3d 1359, 1368 (Fed. Cir. 2007). To show an actual reduction to practice, the inventor must prove that he constructed an embodiment or performed a process that met all the limitations of the interference count and that he determined that the invention would work for its intended purpose. Cooper v. Goldfarb, 154 F.3d 1321, 1327 (Fed. Cir. 1998).

The Court first addresses the priority date, which is a question of law based on subsidiary factual findings. Medicines Co. v. Hospira, Inc., 827 F.3d 1363, 1371 (Fed. Cir. 2016). The '842 Patent states that it is a "[c]ontinuation-in-part of application No. 10/995,859, filed on Nov. 22, 2004, now Pat. No. 7,333,268." Doc. No. 327-13 at 1. Nowhere does the '842 Patent refer

to the ‘281 provisional application by number or date, a fact which Crane concedes. RO asserts that the effective filing date for application of the on-sale bar then is November 22, 2004—the earliest priority date mentioned in the ‘842 Patent. However, the ‘842 Patent claims priority to non-provisional utility application that was part of the same prosecution as the ‘281 provisional application filed on November 21, 2003. Doc. No. 341-1 ¶ 81. Crane argues that the ‘842 Patent’s reference to the utility application suffices for the ‘842 Patent to enjoy priority to the ‘281 provisional application, because a reasonable person reading the patents-in-suit would understand that the utility application and the ‘842 Patent share common priority. Doc. No. 345 at 21.

35 U.S.C. § 119(e)(1) requires a non-provisional application to include “a specific reference to the provisional application” to which it claims priority. See E.I. du Pont de Nemours & Co v. MacDermid Printing Solutions, LLC, 525 F.3d 1353, 1358 (Fed. Cir. 2008). MPEP § 211.11(a) applies to a non-provisional application claiming the benefit of a provisional application by claiming the benefit of an “intermediate copending nonprovisional application.” That regulation provides that “both the later-filed application and the intermediate application must claim the benefit of the provisional application under 35 U.S.C. § 119(e)” (i.e., by including a specific reference to the provisional application). The Federal Circuit has made clear that when an applicant makes a specific reference to a prior, provisional application, the applicant need not use the “magic words” suggested in the MPEP so long as “a reasonable person reading the language” of the patent “would have concluded that the applicant was claiming priority to an earlier provisional application.” MacDermid, 525 F.3d at 1361. Here, the ‘842 Patent makes no specific reference to the ‘281 provisional application, without such

reference the '842 Patent cannot claim the '281 provisional application's priority date. Thus, the priority date for the '842 Patent is November 22, 2004.

The Court next turns to whether the pre-priority-date sale identified by RO triggers the on-sale bar. RO alleges that the applicants (1) reduced the invention to practice by November 2002 and (2) made a commercial offer for sale of the subject matter claimed in the '842 patent to the United States Bureau of Engraving and Printing (BEP) by March 2003, well before the November 22, 2004 priority date. Doc. No. 331-1 at 31. Whether a sale is experimental and whether an invention has been reduced to practice are questions of law predicated on subsidiary factual findings. Paragon Podiatry Lab., Inc. v. KLM Lab., Inc., 984 F.2d 1182, 1186 (Fed. Cir. 1993); Brown v. Barbacid, 276 F.3d 1327, 1332 (Fed. Cir. 2002). With respect to reduction to practice, RO and Crane dispute the significance of inventor Steenblik's deposition testimony as well as the characterization of a prototype that applicants delivered to the BEP in November 2002. Doc. No. 331-1 at 27-29; Doc. No. 345 at 23-24. Regarding whether applicants' sale of UNISON security film to the BEP in March 2003 was commercial or experimental, the parties dispute the significance of Steenblik's laboratory notebook entry and the film product's stage of development. These disputes present genuine issues of material fact. Thus, the Court DENIES RO's motion for summary judgment on its claim that the '842 patent is invalid under the on-sale bar.

## B. Infringement

### i. *Rolling Optics Pre-2013 Products*

Crane moves for summary judgment asserting RO's pre-2013 foils infringed claims in Crane's '842, '030, '360, and '462 Patents.<sup>9</sup> RO mailed to U.S. recipients at least 45 foils

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<sup>9</sup> Crane alleges infringement by RO's old products of claims 57, 58, 59, 76, 77, 78, and 79 of the '842 Patent; 167, 175, 176, and 181 of the '030 Patent; claims 62, 63, 73, and 76 of the '360 Patent; and claim 158 of the '462 Patent.

created using RO's old technology, which was deprecated in 2013. Doc. No. 341-1 ¶ 42. These foils contained icons formed as shaped recesses and voids. RO claims that the total damages resulting from infringement of these products is \$5,030, too minimal to justify presenting expert analysis. Doc. No. 331-1 at 1. Whatever its reason, RO has provided no evidence of non-infringement with respect to these products.

RO notes that the accused old-technology foils were mailed to the U.S. almost a year before Crane filed this action and that RO has not employed the old technology since 2013. While "patent infringement is an ongoing offense that can continue after litigation has commenced," In re Seagate Tech., LLC, 497 F.3d 1360, 1374 (Fed. Cir. 2007), continued infringement is relevant only to the availability of injunctive relief, such that Crane need not establish continued infringement by RO's old-technology products for RO to be liable for infringement. See Polymer Technologies, Inc. v. Bridwell, 103 F.3d 970, 974 (Fed. Cir. 1996) ("[T]he presumption [of irreparable harm] may be rebutted by evidence that [] the non-movant has or will soon cease the allegedly infringing activities [] thus making an injunction unnecessary[.]" (internal citations omitted)). RO does not contest Crane's charge of infringement against RO's old-technology products, and RO failed to forward any expert analysis attesting to non-infringement. See Cabot Safety Intermediate Corp. v. Arkon Safety Equip., Inc. of U.S.A., 44 F. Supp. 2d 375, 379 (D. Mass. 1999) (finding alleged infringer's arguments insufficient to defeat summary judgment where such arguments were "unsupported by affidavits or expert testimony"). Accordingly, the Court ALLOWS Crane's motion for summary judgment with respect to its infringement claims against RO's old-technology foils.

ii. *Infringement of Claims Requiring “Substantially Regular Array Spacing”*

Crane moves for summary judgment that certain of RO’s new-technology products<sup>10</sup> infringed claims 62 and 63 of the ’360 Patent and claim 56 of the ‘855 Patent. RO cross-moves for summary judgment of non-infringement on the theory that none of its products exhibit “substantially regular array spacing,” as taught by these claims.<sup>11</sup>

Patent infringement analysis is a two-step process that involves “the threshold construction of the meaning and scope of the asserted claim” and “the determination whether the accused product infringes the properly construed claim.” Athletic Alternatives, Inc. v. Prince Mfg., 73 F.3d 1573, 1578 (Fed. Cir. 1996). Though a fact-intensive inquiry, patent infringement may be summarily disposed, in the absence of material fact issue, by a comparison of a properly interpreted claim with a stipulated or uncontested description of an accused device or process. D.M.I., Inc. v. Deere & Co., 755 F.2d 1570, 1573 (Fed. Cir. 1985). The Court has construed “substantially regular array spacing” to refer to the pitch or repeat period. See discussion supra Section 3.A.ii.

The accused RO film products subject to Crane’s motion for summary judgment combine two or more motifs of microimages on a single layer of printing, “resulting in microimages that blend together.” Doc. No. 331-1 at 8. RO’s non-infringement defense revolves around several conclusions that RO’s expert Leger draws about the significance of the overlapping of motifs. Leger observes that the blended “‘icons’ are not identical and constantly changing” because “the microimages that are printed will be a mixture of different features.” Doc. No. 341-1 ¶ 62.

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<sup>10</sup> Crane seeks summary judgment of infringement by products for which RO has provided one or more “object periods” in sworn interrogatory responses. Crane does not seek summary judgment of infringement by products that RO identifies as “integral image” products. Doc. No. 341-1 ¶ 65.

<sup>11</sup> The parties do not dispute that certain of RO’s products meet certain limitations of Claims 62 and 63, such as containing arrays of image icons, Doc. No. 341-1 ¶ 21, arrays of focusing elements, id. ¶ 16, and substrates between the arrays of image icons and arrays of focusing elements, id. ¶ 19 as well as forming at least one synthetically magnified image appearing to move, id. ¶ 37.

Leger posits that this clumping of micro-image elements renders any determination of what portions constitute an “image icon” arbitrary and varies the microimage elements such that the term “array” no longer applies. *Id.* ¶ 64. RO argues that the “random and varied forms” arising from such clumping “obliterat[e] the individual motifs and the boundaries between remaining portions of motifs and destroy[] any regular spacing.” Doc. No. 331-1 at 7.

Because RO’s arguments as to non-infringement implicate the meaning not only of “substantially regular array spacing”—which the Court addressed in considering claim definiteness—but also of other patent terms, the Court looks first to the patents. The Court observes certain properties of “image icons” and “arrays,” as used in the patents, from the depiction of “icon image elements,” “icon images,” and “icon zones” in Figures 24a, 24b, and 25 of the ‘360 Patent:

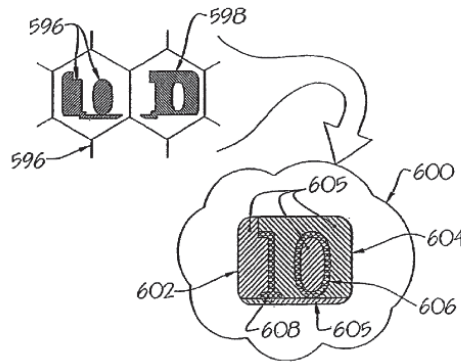


Fig. 24a

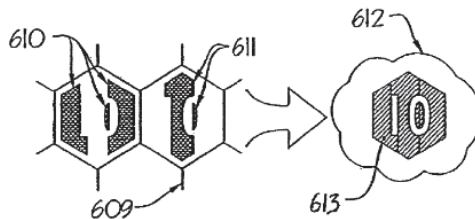


Fig. 24b

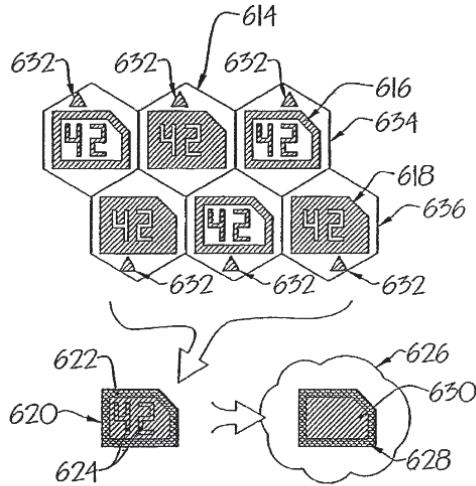


Fig. 25

Doc. No. 327-16 at 46-47. First, image icons can comprise multiple parts (or “elements”) that need not be continuous or abutting. Put differently, each recess or shaped post need not form a whole image icon.<sup>12</sup> Next, each image icon need not itself create a unitary synthetically magnified image. These figures demonstrate that multiple image icons may work together with the lenses to generate a single synthetically magnified image. Further, these figures inform that the recurring unit of the array (for purposes of measuring the repeat period) can be a set of non-identical icon images.<sup>13</sup>

The Court turns to RO’s products with these insights. RO contends as a matter of claim construction that the overlapping of two or more motifs forecloses RO’s products from having arrays of image icons, both because elements of the microimages intersect and introduce variations among the microimages, and because the resulting blend makes image icons

<sup>12</sup> In fact, the specifications suggest size limits to image icons such that an image icon cannot arbitrarily be a mere blip of a recess or post. See Doc. No. 327-16 at 46 (“Thus, an icon image may have minimum features on the order of two microns in dimension, but those features may be placed accurately on any point on a grid of 0.25 micron spacing.”).

<sup>13</sup> Figure 25 depicts icon images with “relative position[s] within their respective icon zones [that are] substantially identical.” Doc. No. 327-16 at 47. The specification’s teaching of icon position within icon zones underscores the periodic nature of substantially regular array spacing.

indistinguishable. The Court is unpersuaded that such overlapping expunges these concepts from RO's products. First, while the claims require "substantially regular array spacing" among image icons, the claims do not require—by their terms and embodiments or by implication—image icons to be identical or even substantially identical. For the same reason, variations among the microimages of a motif do not necessarily prevent the motif from being an array. Further, just as nothing in the term's construction requires an "image icon" to comprise only one continuous element, nothing in the term bars an image icon from touching or overlapping with another.

Second, RO is incorrect in asserting that, as a matter of claim construction, separate arrays of image icons cannot be distinguished within a blend of motifs. Neither the intrinsic evidence of the patents nor the extrinsic evidence presented instructs that a layer may contain only one array or that combinations of arrays escape the claims at issue. Crane's expert Barbasthathis examined a sample foil that UGG manufactured for use with a UGG boot label and identified two arrays of overlapping image icons: an array of starbursts or sun shapes and an array of the word "UGG." Doc. No. 328-2 at BR100-120. Notwithstanding the testimony of its expert Leger, RO itself recognized multiple arrays in separately listing each product's constituent motifs in RO's interrogatory responses. Notably, recognizing the presence of separate arrays of image icons is consistent with the products' formation of differentiated synthetically magnified images (e.g., in the case of the UGG foil, "UGG" images appearing above the label surface and sun images appearing below). *Id.* at BR106.

Having rejected RO's argument that RO's products cannot contain "image icons" and "arrays" as a matter of claim construction, the Court turns to the question of whether the RO products on which Crane moves for summary judgment of infringement exhibit substantially



regular array spacing. For these products, the Court finds no material facts in dispute. RO admitted that these products feature regular spacing in its interrogatory response.<sup>14</sup> Asked to disclose the distance between icons in each product, RO identified two or more “pattern names” (elsewhere referred to as motifs; e.g., sun and “UGG”) and their corresponding “object periods.” RO indicated a constant “object period” for each motif. Doc. No. 327-104. Barbastathis’s measurements of the repeat periods in RO’s films corroborated the “object period” measurements that RO disclosed (e.g., sun icons having an “object spacing” of 71.69 micrometers and “UGG” icons having an “object spacing” of 73.738 micrometers). Doc. No. 328-2 at BR119-120.

Because Crane has established, based on undisputed evidence, that the RO products that it names in its summary judgment motion display “substantially regular array spacing,” the Court ALLOWS Crane’s motion for summary judgment of infringement of claims 62 and 63 of the ‘360 Patent and claim 56 of the ‘855 Patent and DENIES RO’s cross-motion for summary judgment of non-infringement as to those products.

RO also seeks summary judgment of non-infringement as to the remaining products accused in the Complaint but not the subject of Crane’s motion for summary judgment—i.e., those products for which RO did not admit “object periods.” RO advances no theory of non-infringement apart from its legal arguments rejected above that these products contain neither image icons nor arrays. Crane’s expert Barbastathis analyzed one of RO’s “integral” products for which RO did not specify an “object period,” the Luna di Luna wine bottle label.

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<sup>14</sup> RO objects to Crane’s use of its interrogatory responses on the basis that the “object periods” that RO disclosed in its responses correspond to RO’s designs, rather than the actual accused foils. Doc. No. 331-1 at 8. The Court rejects RO’s protest. Crane’s interrogatory clearly instructed RO to “[d]escribe in detail the layout of icons and lenses in each *accused product* including by stating [...] the distance between icons[.]” Doc. No. 327-104 (emphasis added). Further, RO advances no evidence that its actual products deviated in any way from the object periods disclosed in its interrogatory responses.

Barbastathis found the moon icons to have a uniform repeat period of 73.2 micrometers. Doc. No. 328-2 at BR165. Crane’s evidence of infringement presents genuine issues of material fact that preclude a finding of non-infringement at this summary judgment stage. The Court therefore DENIES RO’s cross-motion for summary judgment of non-infringement as to these remaining products.

*iii. Infringement of Claims Requiring “Shaped Posts”*

Crane moves for summary judgment of infringement of five claims<sup>15</sup> that recite “shaped posts,” a term that the Court construed in its Markman Order to mean “icons shaped as pieces fixed in an upright position.” Doc. No. 326-1 at 13; Doc. No. 155 at 13. RO cross-moves for summary judgment of non-infringement of these claims, along with a sixth (claim 67 of the ’855 Patent, which also requires “shaped posts”), solely under the theory that the claim term “shaped posts” means objects that are taller than they are wide. Since RO’s products feature only wider-than-tall icon elements (an undisputed fact), RO argues that its products do not infringe the claims at issue as a matter of law. Crane objects to RO’s construction of “shaped post” and notes that RO raises no other defense to Crane’s charge of infringement.

In the claim construction ruling, the Court construed the term shaped posts to mean icons “shaped as pieces fixed in an upright position.” Doc. No. 155 at 13. At that time, the parties disputed whether shaped posts encompassed printed structures; the Court rejected RO’s position that it did not. *Id.* at 11-12. RO’s present taller-than-wide construction was not then advanced or addressed. At that stage, Crane did request that the Court determine that “mesas” were interchangeable with “shaped posts.” In footnote 5 of its order, in response to this request, the Court observed:

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<sup>15</sup> Claims 177, 178, and 181 of the ’030 Patent and claims 74 and 76 of the ’360 Patent.

Crane suggested that construction of the term “shaped posts” include the word “mesas,” but that word is not interchangeable with the word “posts.” Crane’s briefs did not explain why the term “shaped posts,” as used in the claims at issue, includes “mesas” and the Court discerns no reason why it should. Accordingly, the Court declines to construe “shaped posts” as meaning “mesas.”

Doc. No. 155 at 13. In declining to construe shaped posts as identical to mesas in its order, as Crane had requested, the Court merely determined that the terms “shaped post” and mesa are not wholly interchangeable. See Veracode, Inc. v. Appthority, Inc., 2013 WL 5587946 at \*19 (D. Mass. Oct. 9, 2013) (“The fact that the terms should not be construed as synonymous does not necessarily require that the terms be *mutually exclusive*.”).

RO now contends that the Court’s construction of the term shaped posts means that a shaped post must always be taller than wide. This assertion presents a question of law. O2 Micro Int’l Ltd. V. Beyond Innovation Tech. Co., Ltd., 521 F.3d 1351, 1362 (Fed. Cir. 2008) (“When the parties present a fundamental dispute regarding the scope of a claim term, it is the court’s duty to resolve it.”). The Court evaluates the scope of “shaped post” in light of its Markman Order as well as “the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.” Phillips v. AWH Corp., 415 F.3d 1303, 1314 (Fed. Cir. 2005) (internal citations and quotations omitted). The Court determines that Crane’s patent claims do not contain the dimensional limitation of “shaped posts” that RO now advances.

First, the patents themselves foreclose RO’s contention. They expressly teach shaped posts that are wider than tall. The specifications describe “[i]cons formed from shaped voids and their inverse, icons formed from shaped posts[.]” Doc. No. 327-16 at 46. RO proposed this “inverse” understanding of “shaped posts” at the Markman hearing. Doc. No. 155 at 10. As

Crane notes, the patent elsewhere describes dimensional limitations to various components, but not in relation to shaped posts. Doc. No. 326-1 at 15 (offering as examples the scale ratio of icons and lenses, the diameter of lenses, and the spacing between lenses). The plain meanings of “recesses” and “voids” do not suggest any dimensional limitation that their inverse would exhibit. However, the specifications describe the typical recess or void as being wider than deep: “The icon recesses [...] each measures from about 0.5 to about 8 microns in depth and typically 30 microns in micro-image or icon width.” Doc. No. 327-16 at 49. Thus, a typical shaped post, understood as the inverse of the typical recess, would measure wider than tall.

The patents also teach that shaped posts and mesas are objects with overlapping definitions. The specifications teach that “icons can be created in the form of voids in the resist pattern or they can be created in the form of ‘mesas’ or posts in the resist pattern, or both.” Id. Just as the patents similarly recite “voids or recesses” side-by-side and neither equate nor distinguish the terms, the patents use the terms mesas and posts in a way that indicates that the two are not mutually exclusive. Thus, even if mesas must be wider than tall, as RO suggests, the patents indicate that shaped posts encompass at least some mesas, such that the patents reject RO’s contention that shaped posts must be wider than tall.

Similarly, the Court’s claim construction of shaped posts as “upright” does not limit shaped posts to objects that are taller than wide. The Oxford English Dictionary provides the primary definition of “upright” as “erect on the feet or end; in or into a vertical position; perpendicular to the ground or other surface.” The plain meaning of upright mandates no dimensional limits. Rather, “upright” must be understood in the context of the patents-in-suit and, in particular, in relation to the substrate.

Accordingly, the Court rejects RO's argument that the meaning of the term "shaped post" whether as stated in the patent or as construed by the Court is limited to those objects that are taller than wide.<sup>16</sup> Since RO advances no other defenses to infringement, the Court ALLOWS Crane's motion for summary judgment of infringement of the five "shaped post" claims that Crane names and DENIES RO's cross-motion for summary judgment of non-infringement of the six "shaped post" claims that RO identifies.

C. Other Issues

i. *Active Inducement of Infringement*

RO moves for summary judgment that it is not liable for active inducement of infringement for any sales in the United States of bottles bearing its Luna di Luna, Blu Giovello, and Taittinger foils. RO manufactured these labels in Sweden and delivered them to customers in Italy and France. RO argues that there is no evidence that RO believed or suspected that any of its foils would be used with products sold in the United States. RO also argues that there is no evidence that RO did anything to encourage such sales. Crane cites various correspondence suggesting that RO in fact knew that these three products would be shipped to the United States. In one email, the maker of the Blu Giovello labels referenced assurances that RO had given regarding non-infringement of Crane's patents, writing: "For us, it's extremely important to continue to operate on the USA market." That label maker urged RO to solve its dispute with Crane so that it, the winemaker, and the U.S. wine importer would not be liable for infringement. Doc. No. 344-52 at 3. In a response to Crane's notice of infringement, the Luna di Luna

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<sup>16</sup> To the extent RO argues that this is a new claim construction unfairly rendered at summary judgment without the opportunity for more briefing, the Court disagrees. RO advanced the wider than tall argument. The parties filed briefs in serial fashion. RO had an opportunity to respond in its reply filed months ago. The Court further notes that each side submitted at the conclusion of the hearing lengthy PowerPoint slides, which amount to further supplemental briefing on the matter. RO has had a full and fair opportunity to address the issue. In addition, RO has never contended that the issue in any way could require further discovery.

importer noted that RO had provided the importer with an opinion regarding “Rolling Optics’ freedom to operate in the United States.” Doc. No. 344-55 at 4. Crane further alleges that RO promoted the launch of the Taittinger product to U.S. customers and that RO corresponded with its customers about sales of Taittinger in the United States. Doc. Nos. 344-51 and 344-53.

A claim of induced infringement under 35 U.S.C. § 271(b) requires a showing that the defendant knew that the induced acts constituted patent infringement. Global-Tech Appliances, Inc. v. SEB S.A., 563 U.S. 754, 766 (2011). This standard is fact-bound and frequently requires reliance on circumstantial evidence. Here, the Court recognizes genuine issue of material fact regarding RO’s knowledge of its products being imported into the United States. The Court accordingly DENIES RO’s motion for summary judgment on the issue of active inducement of infringement.

*ii. Actual Notice*

35 U.S.C. § 287(a) requires a patentee to either mark its products with the patent number or provide actual notice to the infringer to recover damages. RO argues that Crane failed to provide actual notice of infringement of the ’842 Patent prior to December 6, 2012 such that, under Section 287(a), RO cannot be liable for damages arising from infringement of the ’842 Patent that occurred before that date. Compliance with Section 287(a) is a question of fact. Gart v. Logitech, Inc., 254 F.3d 1334, 1339 (Fed. Cir. 2001) (citing Maxwell v. J. Baker, Inc., 86 F.3d 1098, 1111 (Fed. Cir. 1996)). “Thus, this issue is properly decided upon summary judgment when no reasonable jury could find that the patentee either has or has not provided actual notice to the particular defendants by informing them of his patent and of their infringement of it.” Gart, 254 F.3d at 1339 (internal citations and quotations omitted).

“For purposes of [Section 287(a)], notice must be of ‘the infringement,’ not merely notice of the patent’s existence or ownership. Actual notice requires the affirmative communication of a specific charge of infringement by a specific accused product or device.” Amsted Indus. Inc. v. Buckeye Steel Castings Co., 24 F.3d 178, 187 (Fed. Cir. 1993). “Although there are numerous possible variations in form and content, the purpose of the actual notice requirement is met when the recipient is notified, with sufficient specificity, that the patent holder believes that the recipient of the notice may be an infringer.” SRI Int’l, Inc. v. Advanced Tech. Labs., Inc., 127 F.3d 1462, 1470 (Fed. Cir. 1997).

Crane admits that it does not mark its products. Doc. No. 341-1 ¶ 89. Crane instead alleges that it complied with Section 287(a) through its April 26, 2010 letter to RO. RO argues that this April 26, 2010 letter did not effect actual notice under Section 287(a), such that Crane first provided RO actual notice of infringement in its December 3, 2012 letter to RO and UGG. Doc. No. 331-1 at 32. RO further notes that the April 26, 2010 letter referenced only the ’842 Patent, since the four other patents-in-suit had yet to be issued at the time of the letter. Crane claims that every product RO made using its pre-2013 technology infringed the ’842 Patent, such that a finding of actual notice of even just that alleged infringement would suffice for damages to begin to accrue with respect to any infringement by RO’s pre-2013 products. With respect to RO’s post-2013 products, RO has conceded that Crane provided “legally sufficient notice meeting the requirements of Section 287(a)” with respect to all patents-in-suit in the December 3, 2012 letter. Doc. No. 101 at 11.

The April 26, 2010 letter from Crane to RO states in relevant part:

Dear Mr. Blomquist:

We are writing to alert you to a possible patent infringement situation regarding the manufacture and sale of your optical products in relation to our UNISON patents.

Visual Physics, LLC, which was acquired by Crane & Co., Inc. in December 2008, is the owner of the patent family for UNISON micro-optic security films [...]. [...] The family originated in the U.S. and is primarily based upon three (3) patent references: U.S. Patent No. 7,333,268 (UNISON 1); U.S. Patent No. 7,468,842 (UNISON 2); and U.S. Patent Application Publication No. US 2008/0037131 (UNISON 3). [...]

We understand that your company is offering film products for sale that produce three dimensional images that appear to exist on a plane other than the surface of the film. We further understand that your company is offering these products for sale for packing and security label applications.

The purpose of the present letter is to alert you to our intellectual property since we believe that Rolling Optics AB respects the rights of others as it would want its own rights respected.

We hereby request that you follow up on this alert and provide us with your confirmation whether or not there is an infringement by Rolling Optics AB film products of the above-mentioned patent rights. [...]

Doc. No. 13-1.

RO principally contends that the letter failed to accuse specific products of infringement as required by Section 827(a). RO cites Amsted, 24 F.3d 178, in which the Federal Circuit found insufficient as a matter of law a patentee's letter that "was merely informational, of the kind that companies often send to others without intending to charge infringement." Id. at 186. Contrary to RO's contention, the Federal Circuit in Amsted did not hold that Section 287(a) is not satisfied when the patentee notifies an alleged infringer of a "type of product" that the patentee believes to infringe its patent. Doc. No. 331-1 at 34; Amsted, 24 F.3d at 186. Rather, the letter that the Federal Circuit found inadequate in Amsted failed to accuse even the offering by any recipient of an infringing product or type of product.<sup>17</sup>

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<sup>17</sup> RO further argues that the April 26, 2010 letter failed to satisfy Section 287(a) by omitting "a proposal to abate the infringement, whether by license or otherwise[.]" citing SRI Int'l, Inc. v. Advanced Tech. Labs., Inc., 127 F.3d



The Court concludes that genuine issues of material fact preclude resolution at this summary judgment stage of whether the April 26, 2010 provided RO with actual notice of infringement of the '842 patent. Crane's letter substantially parallels that in SRI. Whereas the not-insufficient letter in SRI informed the defendant that its products "may infringe" the patents at issue, here, Crane's letter informed RO of "possible patent infringement." SRI, 127 F.3d at 1465-66; see also Ceeco Mach. Mfg., Ltd v. Intercole. Inc., 817 F. Supp. 979, 987 (D. Mass. 1992) ("conditional" nature of patent owner's charge of infringement did not vitiate the sufficiency of the notice under § 287(a)). Crane's letter identifies RO film products "that produce three dimensional images that appear to exist on a plane other than the surface of the film" and that RO offered "for packing and security label applications." A reasonable factfinder could conclude that these statements provided a charge of infringement and sufficiently specific product identification for purposes of actual notice. The Court accordingly DENIES RO's motion for summary judgment that Crane's April 26, 2010 letter failed to satisfy Section 827(a)'s requirements.

#### IV. CONCLUSION

For the foregoing reasons, the Court DENIES RO's motion for summary judgment as to the invalidity of claims in the patents-in-suit; ENTERS summary judgment in favor of Crane as to the definiteness of the claim terms "a given plane" and "substantially regular array spacing"; ALLOWS Crane's motion for summary judgment of infringement; DENIES RO's cross-motion

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1462, 1470 (Fed. Cir. 1997). Doc. No. 331-1 at 34. While some district courts have read SRI to require that actual notice include a "proposal to abate," see, e.g., Jackson v. Intel Corp., 2009 WL 2851742, at \*4 (N.D.Ill. Aug. 31, 2009), a plain reading of Section 287(a) does not support such a requirement. The Court reads the Federal Circuit's opinion SRI to suggest that a proposal to abate infringement suffices to notify a defendant of potential infringement, not that a proposal to abate infringement is a necessary feature of actual notice.

for summary judgment of non-infringement; DENIES RO's cross-motion for summary judgment on the issue of active inducement of infringement; and DENIES RO's motion for summary judgment that Crane is not entitled to damages accruing prior to December 6, 2012.

Accordingly, Crane's Motion (Doc. No. 325) is ALLOWED, and RO's Motion (Doc. No. 331) is DENIED.

Within fourteen days, the parties shall submit a joint status report stating their joint and/or separate positions on the following topics: (1) the issue(s) remaining for trial; (2) the estimated duration of the trial; (3) any further discovery necessary before trial (including reasons to permit or not to permit such discovery); and (4) whether the parties jointly request a period of time prior to preparing for trial to mediate the matter.

SO ORDERED.

/s/ Leo T. Sorokin  
Leo T. Sorokin  
United States District Judge