United States District Court,
D. Minnesota.

3M INNOVATIVE PROPERTIES COMPANY and Minnesota Mining and Manufacturing Company,
Plaintiffs.
v.
AVERY DENNISON CORPORATION,
Defendant.

No. Civ.01-1781(DSD/FLN)

Oct. 19, 2002.

Carolyn V. Peters, 3M Company, St. Paul, MN, Frank P. Porcelli, Kurt L. Glitzenstein, and Fish & Richardson, Boston, MA, John C. Adkisson, R.J. Zayed, and Fish & Richardson, Minneapolis, MN, for plaintiffs.

David P. Pearson, and Winthrop & Weinstine, St. Paul, MN, Jay R. Campbell, and Renner, Otto, Boisselle & Sklar, Cleveland, OH, Roderick G. Dorman, Lawrence M. Hadley, and Hennigan, Bennett & Dorman, Los Angeles, for defendant.

ORDER

DOTY**, J.**

This matter is before the court upon defendant Avery-Dennison Corporation's motion for summary judgment. Based upon a review of the file, record and proceedings herein, and for the reasons stated, the court grants that motion.

BACKGROUND

This action involves the alleged infringement of a patent relating to advanced commercial adhesive products. Plaintiff 3M Innovative Properties Company ("3M") produces, develops and markets adhesive-based products for the commercial graphics industry. Defendant Avery-Dennison Corporation ("Avery") is a leading competitor in this market. 3M asserts that Avery's "EZ Series Fleet Marketing Films" ("EZ Films") infringe upon 3M's Comply product, specifically United States Patent No. 5,897,930 (the " "0 patent").

Commercial graphic materials are used for advertising, logos and signs on the exterior of trucks, buses and other large vehicles. Instead of traditionally painting the advertisements onto the vehicles, computer generated logos and murals are created and generated onto a layer of film. Similar to a bumper sticker, the film has a "release liner" that when stripped off exposes a pressure-sensitive adhesive. The large sheet of film is then placed onto the vehicle, essentially "wrapping" the vehicle in the adhesive graphic. The task of "wrapping" a vehicle with the film is one that poses two problems: (1) positionability and (2) air entrapment.

A. Positionability

The problem of positionability occurs when the film is not correctly situated initially. There is a risk that the product will wrinkle, tear, or stretch when it is repositioned. In 1993, 3M addressed this problem with its Controltac products. Conventionally, the surfaces on both the release liner and the adhesive film are smooth. Controltac products, on the other hand, have a shaped release liner that imparts a special contour to the surface of the adhesive. The surface of the Controltac adhesive is covered with bumps or protrusions that are made of glass beads and a small amount of adhesive. These bumps, naked to the human eye, are only a few microns high. FN1

FN1. The bumps on the adhesive surface are created with a special release liner that has micron-scale depressions. Each depression in the release liner will form one of the bumps on the adhesive film. By spreading the mixture of both glass and adhesive across the release liner, molds of glass beads are formed. A screen of aggressive adhesive is then layered over these beads. In the final step of the application process, when the release liner is peeled off, the glass bumps remain stuck to the adhesive layer.

Because these bumps project out from the surface of the aggressive adhesive, they are the first to come into contact with the application surface. Instead of immediately adhering to the surface, because of the glass beads, the adhesive film can be slid over the surface until it is in the desired location. Once in place, the installer simply presses firmly down on the adhesive film, allowing the aggressive adhesive surrounding the beads to come into contact with the surface to form a permanent bond.

B. Air Entrapment

Installers of large scale commercial graphics also face the problem of air entrapment. When air becomes trapped beneath the film, the graphic's appearance may become blemished by blisters or bubbles. To address this issue, 3M modified the adhesive surface by adding micron-scale channels to the release liner to allow air to "bleed" out of the edges of the adhesive film. The surface area of the release liner above the depressions are called "lands." A high spot on the release liner creates a low spot on the adhesive film. The release liner is disclosed and claimed in the "0 patent.

C. 3M's Patent

3M marketed products with these two features, glass beads to better position the film and air channels to combat air entrapment, as "Controltac Plus Graphic Films with Comply Performance Adhesive Technology" ("the Comply products"). 3M received a patent for the technology included in the Comply products, patent "0. The language of claim 1 of 3M's "0 patent, a relevant claim in this action, states:

A carrier web, comprising:

at least one surface that has a multiple embossed pattern having a first embossed pattern and a second embossed pattern, wherein the first embossed pattern forms an array of depressions, wherein the depressions of the first embossed pattern in the second embossed pattern, wherein the second embossed pattern comprises lands and ridges between the lands, and wherein the height of the ridges over the lands ranges from about 3 to 45 microns.

Claim 6, also relevant to this dispute, requires a first embossed pattern of depressions.

D. EZ Films

3M asserts that Avery's EZ Films infringe upon the "0 patent. Specifically relevant to this motion, 3M contends that Avery's EZ Films contain a "multiple embossed pattern" with a "first embossed pattern" creating an array of "depressions."

To make its EZ Films, Avery deposits raised liquid PU ink dots on the surface of a liner in a process know as flexographic printing. (McHugh Decl. at para. 17.) The raised ink dots are hardened on the liner through a UV curing process. The liner then goes through the embossing process. The printed liner first passes over a number of guide rolls and heating elements prior to reaching the embossing roll. 3M explains that Avery's liner then is embossed twice, first prior to the embossing roll at the squeegee roll and then at the embossing roll. (*See, e.g.,* Pl.'s Mem. in Resp. to Def.'s Mot. for Summ. J. at 8, 14-15.) Avery, however, alleges that the liner is embossed only once and describes the embossing process as follows:

At the contact area or "nip" formed between the bed roll and the embossing roll, two events occur simultaneously: the inverse of the hexagonal pattern on the embossing roll is impressed into and then removed from the PE layer of the liner (thus "embossing" the liner with a hexagonal pattern), and the softened PU ink material is pressed into the softened liner and displaces the PE material in the liner, forming a composite polymer liner material with a flush surface.

(Def.'s Mem. in. Supp. of Mot. Summ. J. at 7.) The parties also dispute whether Avery's EZ Films contain "depressions," as required by the "0 patent.

Because Avery claims that it does not infringe upon the "0 patent, Avery now brings a motion for summary judgment. Based upon a review of the file, record and proceedings herein, and for the reasons stated, the court grants defendant's motion for summary judgment.

DISCUSSION

I. Standard for Summary Judgment

Rule 56(c) of the Federal Rules of Civil Procedure provides that summary judgment is appropriate "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." In order for the moving party to prevail, it must demonstrate to the court that "there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law." Celotex Corp. v. Catrett, 477 U.S. 317, 322 (1986) (quoting Fed.R.Civ.P. 56(c)). A fact is material only when its resolution affects the outcome of the case. Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986). A dispute is genuine if the evidence is such that it could cause a reasonable jury to return a verdict for either party. *See* id. at 252.

On a motion for summary judgment, all evidence and inferences are to be viewed in a light most favorable to the nonmoving party. *See* id. at 255. The nonmoving party, however, may not rest upon mere denials or allegations in the pleadings, but must set forth specific facts sufficient to raise a genuine issue for trial. *See* Celotex, 477 U.S. at 324. Moreover, if a plaintiff cannot support each essential element of its claim, summary judgment must be granted because a complete failure of proof regarding an essential element

necessarily renders all other facts immaterial. Id. at 322-23.

II. Infringement Analysis

An infringement analysis requires two steps. The first is to construe the meaning and the scope of the patent claims, a step commonly referred to as claim construction. Southwall Tech., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1575 (Fed.Cir.1995). The second is to determine whether the accused invention infringes the patent claim as construed. Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed.Cir.1995). A product infringes a patent if it contains every limitation of any one claim or an equivalent of each limitation not literally met. Dolly, Inc. v. Spaulding & Evenflo Cos., Inc., 16 F.3d 394, 397 (Fed.Cir.1994); Becton Dickinson & Co. v. C.R. Bard, Inc., 922 F.2d 792, 796 (Fed.Cir.1990). While the first step is solely a question of law to be determined by the court, the second step is one for the trier of fact. Purdue Pharma L.P. v. Boehringer Ingelheim GMBH, 237 F.3d 1359, 1363 (Fed.Cir.2001); Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1454-55 (Fed.Cir.1998) (en banc).

After the claims are construed as a matter of law, the court must consider whether "a reasonable trier of fact could find that every limitation in any construed claim at issue" may be found in the accused device. Unidynamics Corp. v. Automatic Prods. Int'l, Ltd., 157 F.3d 1311, 1316-17 (Fed.Cir.1998). While the determination of whether an accused device infringes a claim literally or under the doctrine of equivalents is normally a question of fact, Caterpillar Inc. v. Deere & Co., 224 F.3d 1374, 1379 (Fed.Cir.2000), a district court may grant summary judgment "when it is shown that the infringement issue can be reasonably decided only in favor of the movant, when all reasonable factual inferences are drawn in favor of the non-movant." Voice Tech. Group Inc. v. VMC Sys., Inc., 164 F.3d 605, 612 (Fed.Cir.1999); *see also* Optical Disc Corp. v. Del Mar Avionics, 208 F.3d 1324, 1335-36 (Fed.Cir.2000) ("Summary Judgment of noninfringement under the doctrine of equivalents is proper if no reasonable jury could determine that a claim limitation is met in the accused device by an equivalent."). Because the court previously construed the relevant disputed claim terms, FN2 the court now must compare the claims as construed to the allegedly infringing device.

FN2. In 3M Innovative Properties Co. v. Avery Dennison Corp., 185 F.Supp.2d 1031 (D.Minn.2002), the court engaged in the first step of an infringement analysis by construing the relevant disputed claim terms in its preliminary injunction order.

A. Infringement of the "0 Patent

The court finds that Avery's EZ Films do not infringe upon 3M's "0 patent literally or under the doctrine of equivalents because they do not have a "multiple embossed pattern" with a "first embossing step" as required under claims 1 and 6. FN3

FN3. While Avery also claims that its EZ Films do not infringe upon the "0 patent because they do not have a first embossed pattern of "depressions," the court does not address that argument because the court finds that Avery's EZ Films do not have a "multiple embossed pattern."

1. No literal infringement.

In its preliminary injunction order, the court defined the term "multiple embossed pattern" to mean "sequential embossing patterns" and the term "embossed" to mean "a topography created on material by

impressing a corresponding inverse topography on its surface." FN4 3M Innovative Properties Co., 185 F.Supp.2d 1031, 1040 (D.Minn.2002). Based upon those definitions, Avery argues that its liner does not literally infringe upon the "0 patent because, in part, its liner does not contain a "multiple embossed pattern" or a "first embossing step." 3M, however, argues that Avery pre-imbeds ink dots, which constitutes a first embossed pattern and thus that its liner contains a "multiple embossed pattern." After careful review, the court finds that, even assuming pre-imbedding occurs, which the parties dispute, pre-imbedded ink dots do not constitute a first embossed pattern under the court's definition of "embossed." Thus, Avery's EZ Films do not contain a "multiple embossed pattern" or a "first embossing step" because there are no sequential embossing steps.

FN4. Avery requests that the court clarify its earlier claim construction by amending the court's construction of the term "emboss." The court finds that such a clarification is unnecessary.

a. Embedding is not embossing.

Ink dots pre-embedded in a liner do not constitute a "first embossed pattern" because embedding is not embossing. (McHugh Decl. at para. 20.) As persons skilled in the art recognize, embedding is "[the] complete encasement or encapsulation, creating a composite structure," while embossing is "the use of an embossing roll or tool to impress a corresponding, inverse topography in a material." (Id.) Technical dictionaries do not equate the two terms. *See* Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1584 n.6 (Fed.Cir.1996) ("Judges are free to ... rely on dictionary definitions when construing claim terms ..."). For instance, the Encyclopedia of Polymer Science and Technology describes embedding as often synonymous with "casting ..., potting, molding, impregnation, and encapsulation." (McHugh Decl., Ex. 2 at 792-93.) It does not equate embedding with embossing. (*Id.; see also* McHugh Decl., Ex. 2 at 620.)

Nontechnical dictionaries also distinguish between embedding and embossing. *See* Merriam-Webster's Collegiate Dictionary at 376-77 (10th ed.1998) (defining "emboss" as "to raise the surface of into bosses ...; to raise in relief from a surface ..." and defining "embed" as "to enclose closely in ..."); The American Heritage Dictionary at 447-48 (2d College ed.1985) (defining "emboss" as "[t]o mold or carve in relief ...; raise the surface of in relief" and defining "embed" as "to fix firmly in a surrounding mass ... To enclose in a matrix ... To enclose snugly or firmly ... To make an integral part of."). Thus, because pre-embedding is not embossing, pre-embedded ink dots do not create a first embossing step.

b. No Evidence of embossed inverse topography

Moreover, contrary to 3M's assertion, the Avery's liner does not undergo a first embossment at the squeegee stage or at the embossing nip, (McHugh Decl. at para. 22), when the ink dot is allegedly pre-imbedded, because an imbedded ink dot does not create an embossed inverse topography on a liner's surface. Instead, an embedded ink dot displaces a portion of the PE liner material, forming a composite PE/PU liner material with a flush surface.FN5 (McHugh Decl. at para. 16.) The molten PE liner material encasing the softened, embedded PU ink dot is not the inverse topography of the hardened PU ink dot earlier flexographically printed on the liner. (McHugh Decl. at para.para. 17-18.) Therefore, the ink dot does not act as an embossing tool by creating an inverse embossed pattern and thus Avery's liner does not literally infringe upon the "0 patent because it does not have a "multiple embossed pattern" with a "first embossing step."

FN5. While 3M presents expert testimony to support its contention that embossing occurs at the squeegee roll, (Strong Decl., Ex. 1), that testimony does not create a genuine issue of material fact.

2. No infringement under doctrine of equivalents

Further, Avery's EZ Films do not infringe upon the "0 Patent under the doctrine of equivalents. Under that doctrine, "a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is 'equivalence' between the elements of the accused product or process and the claimed elements of the patented invention." Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 21 (1997). The doctrine applies objectively to the individual elements of a claim, not to the invention as a whole. Id. at 21. Consequently, a claim is infringed only if each limitation in the claim is found in the accused devise, either literally or by a substantial equivalent. Wooster Brush Co. v. Newell Operating Co., 46 F.Supp.2d 713, 721 (N.D.Ohio 1999).

The key question in evaluating patent infringement under the doctrine of equivalents is "whether a substitute element matches the function, way, and result of the claimed element, or whether the substitute element plays a role substantially different from the claimed element." Warner-Jenkinson Co., 520 U.S. at 40; *see also* Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 122 S.Ct. 1831, 1838 (2002) ("The doctrine of equivalents allows the patentee to claim those insubstantial alterations that were not captured in drafting the original patent claim but which could be created through trivial changes."); London v. Carson Pirie Scott & Co., 946 F.2d 1534, 1538 (Fed.Cir.1991) ("infringement may be found if an accused device performs substantially the same function in substantially the same way to achieve substantially the same result."). One way to determine if substantial differences exist is to apply the "function-way-result" test. Under that test, the fact-finder considers whether the disputed element of the accused device performs substantially the same function in substantially the same way to achieve substantially the same result as the limitation at issue in the patent. Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp., 149 F.3d 1309, 1315 (Fed.Cir.1998); Wooster Brush Co., 46 F.Supp.2d at 721.

The Supreme Court and Federal Circuit have cautioned against a broad application of the doctrine of equivalents. Warner-Jenkinson Co., 520 U.S. at 29 (emphasizing that "the doctrine of equivalents, when applied broadly, conflicts with the definitional and public-notice functions of the statutory claiming requirement"); London, 946 F.2d at 1538; K-2 Corp. v. Salomon S.A., 191 F.3d 1356, 1367 (Fed.Cir.1999); Ethicon Endo-Surgery, 149 F.3d at 1316. The doctrine of equivalents cannot be employed in a manner that vitiates a claim limitation. Scimed Life Sys., Inc. v. Advanced Cardiovascular Sys., 242 F.3d 1337, 1347 (Fed.Cir.2001); K-2 Corp., 191 F.3d at 1367.

In *Wooster Brush,* the Northern District of Ohio granted summary judgment of non-infringement, finding that an accused device using only a single application of a bonding material did not meet the equivalents test where the patent called for two distinct, sequential applications of the bonding material. Wooster Brush, 46 F.Supp.2d at 722. Because the court's comprehensive analysis is directly on point, it is set out in full:

Plaintiff Wooster's process for producing paint rollers is accomplished in one step. Defendant Newell argues that Wooster's one-step process effectively collapses the '242 patent's two-step process and is therefore not significantly different from the '242 process....

[T]he '242 process as construed by this Court contains separate elements which produce the final product.... Under the terms of the patent claims, this process must occur in sequence.

In the New Wooster process, the formation of the core and the adhesion of the cover to the core occur simultaneously, facilitated by one application of liquid thermoplastic material. Wooster's one-step process is not a combination of the '242 patent's elements; it does not represent a more efficient way of applying two strips of liquid thermoplastic material. Rather, it represents a new method by which one of the two steps of the '242 patent-the second application of the adhesive material and relevant cooling period-is eliminated. To interpret Wooster's process as equivalent to the '242 patent's elements would thus fly in the face of the Supreme Court's admonition that equivalence does not exist when a finding of equivalence would eliminate an element in the patented process.

Id. at 721.

Similar to the accused device in *Wooster Brush,* Avery's printed and single embossed liner is not a combination of the "0 patent elements. Rather, it represents a new method by which one of the steps of the "0 patent-the "first embossed pattern" forming an array of depressions-is removed. It is a process that produces positionability and air egress without the claimed, sequential, multiple embossed pattern. Because the doctrine of equivalents cannot be used to vitiate a claim limitation, the doctrine of equivalents cannot be used to bring Avery's EZ Films within the scope of the "0 patent claims. Thus, the court grants Avery's motion for summary judgment because Avery's EZ Films do not infringe upon the "0 patent either literally or under the doctrine of equivalents.FN6

FN6. Both independent claims 1 and 6 of the "0 patent require a first embossed pattern of depressions. Because these claims are not infringed, none of the dependent claims can be infringed. Wahpeton Canvas Co. v. Frontier Inc., 870 F.2d 1546, 1553 (Fed.Cir.1989) ("It is axiomatic that dependent claims cannot be found infringed unless the claims from which they depend have been found to have been infringed.").

CONCLUSION

Accordingly, IT IS HEREBY ORDERED that defendant's motion for summary judgment is granted.

D.Minn.,2002.
3M Innovative Properties Co. v. Avery Dennison Corp.