United States District Court,
N.D. Illinois.

BREUER ELECTRIC MFG. CO., a/k/a Breuer/Tornado, an Illinois Corporation,
Plaintiff.
v.
TENNANT COMPANY, INC., a Minnesota Corporation; and Castex, Inc. a Michigan Corporation,
Defendants.

Aug. 22, 1997.

MEMORANDUM OPINION AND ORDER

GOTTSCHALL**, District Judge.**

Plaintiff Breuer Electric has brought an action for declaratory judgment for patent invalidity and noninfringement of defendant Tennant Company's U.S.Patent No. 4,956,891 for a five-in-one floor cleaning machine (the '891 patent), and for business defamation and unfair competition. Defendant has brought a counterclaim for patent infringement seeking an injunction and triple damages. Both parties have moved for summary judgment. For reasons stated below, plaintiff's motion for summary judgment for patent invalidity is denied, and plaintiff's motion for summary judgment for noninfringement is granted. Defendant's motion for summary judgment for patent infringement is denied, and defendant's motion for summary judgment on plaintiff's business defamation and unfair competition claim is granted.

I. FACTS

Plaintiff and defendant are both manufacturers of floor cleaning equipment. Defendant Castex is a wholly-owned subsidiary of defendant Tennant (hereinafter collectively referred to as "defendant"). Both manufacture what are termed five-in-one cleaners which are the subject of the present dispute.

Five-in-one floor cleaners are machines that use water to clean floor surfaces such as carpeting. They employ a five step process: (1) applying a clean wash water solution to an area of the floor; (2) scrubbing the floor with this clean water solution; (3) vacuuming the dirty wash water off the floor area; (4) applying clean rinse water to the floor area; and (5) vacuuming the spent rinse water from the floor, all in one pass. A substantial part of the weight of such a floor cleaning machine consists of the weight of the clean and dirty water. FN1 Such floor cleaning machines have one part of the weight load applied to a pair of wheels towards one end of the machine, and the other part to the scrub brush and vacuum nozzles towards the other end.

FN1. One gallon of water weighs approximately 8.34 pounds. *The New York Public Library Science Desk Reference,* p. 5 (1995). The device disclosed in the '891 patent carries 10 gallons of water, while the accused machines of plaintiff carry either 8 or 12 gallons.

The water load is substantial, and during use the weight of the water is transferred from the clean water vessel to the dirty water vessel. This causes a transfer of weight from one end to the other resulting in a change in the amount of load applied to the scrub brush and nozzles, and can result in uneven cleaning performance by the machine.

Defendant's five-in-one machine is designed to eliminate the problems of uneven cleaning performance caused by the longitudinal shifting of weight during use. Defendant's design employs a water compartment composed of a flexible inner chamber for clean water and an outer chamber for dirty water. Viewed from the side, the outer chamber surrounds the inner chamber. FN2 The inner chamber drains and the outer chamber fills simultaneously, and the inner chamber collapses as the quantity of dirty water in the outer chamber increases. The net effect is that the center of gravity for the machine remains stationary and the force applied to the brush and nozzles remains constant, resulting in improved cleaning performance. Defendant was granted patent No. 4,956,891 (the '891 patent) on this design in September, 1990.

FN2. The inner and outer chambers of both plaintiff's and defendant's machines extend the full width of the machine, and when viewed from the front the outer chamber does not surround the inner chamber. All future references to shapes of chambers refer to profile views.

In October 1995 both plaintiff and defendant displayed products at the International Sanitary Supply Association (ISSA) convention in Atlanta, Georgia. Plaintiff displayed its own design five-in-one floor cleaning machine. Plaintiff claimed that its machine employed a concept somewhat different from that embodied in the '891 patent. Both sides agree that during carpet cleaning with the machines in question, a measurable amount of water is not recovered by the machine, typically from 20% to 50% of the initial water volume. FN3 Because this water is not recovered, the combined weight of the machine and its load of water decreases during operation, and as a result the force applied to the brush and nozzles decreases, again resulting in uneven cleaning performance. The plaintiff's machine also employs a water compartment composed of an inner and outer chamber, but the plaintiff's inner chamber is shaped in a manner so that the center of gravity shifts towards the brush and nozzles as the water load decreases, thus compensating for the loss of weight and improving overall cleaning performance. FN4

FN3. The defendant disputes the plaintiff's characterization of this amount as "significant.".

FN4. Plaintiff has applied for a patent for its design.

Plaintiff claims that during the ISSA convention a representative of defendant was telling customers of plaintiff that plaintiff's design was an infringement of the '891 patent, and was implying that legal action would be brought and plaintiff would never be able to market its carpet cleaner. Plaintiff and defendant subsequently corresponded, debating whether plaintiff infringed the patent. In one correspondence, defendant's general counsel wrote to plaintiff that "[a]s discussed in our meeting, a Declaratory Judgment Action is certainly an option at your disposal." Plaintiff subsequently brought the present declaratory judgment action, claiming that the '891 patent is invalid for vagueness, and that even if the patent is valid, the plaintiff's design does not infringe. Plaintiff also brought suit for business defamation and unfair competition. FN5 Defendant brought a counterclaim for infringement seeking injunctive relief and damages.

Plaintiff has moved for summary judgment on the patent validity claim, and both parties have moved for summary judgment on the infringement claims.

FN5. Plaintiff also brought suit for business defamation and unfair competition against Richard Wulff, inventor of the '891 patent, but this action was dismissed for lack of personal jurisdiction.

II. DISCUSSION

A. Summary Judgment

Summary judgment is appropriate where there is no genuine issue of material fact, and the movant is entitled to judgment as a matter of law. Hodosh v. Block Drug Co., Inc., 786 F.2d 1136, 1141 (Fed.Cir.), *cert. denied,* 479 U.S. 827, 107 S.Ct. 106, 93 L.Ed.2d 55 (1988). The movant bears the burden of demonstrating the absence of all genuine issues of material fact, and the district court must view the evidence in a light most favorable to the nonmoving party and draw all reasonable inferences in its favor. Palumbo v. Don-Joy Co., 762 F.2d 969, 973 (Fed.Cir.1985). The party opposing summary judgment must show an evidentiary conflict on the record; mere denials or conclusory statements are not sufficient. Barmag Barmer Maschinenfabrik AG v. Murata Machinery, Ltd., 731 F.2d 831, 836 (Fed.Cir.1984).

B. Patent Invalidity.

Plaintiff first moves for summary judgment on its claim that the '891 patent is invalid for vagueness. Specifically, plaintiff argues that claim 1 does not teach one skilled in the art how to practice the invention because it gives no direction which would make it possible to render the centers of gravity coincident and in substantially a vertical plane between the clean water in the inner chamber and the dirty water in the outer chamber.

Claim 1 of the '891 patent reads as follows:

A floor cleaning machine comprising:

a support structure including a housing thereon forming a front and a rear for said machine;

wheel means having an axle means beneath said support structure on a transverse axis intermediate said front and said rear for mobility of said machine;

handle means at the upper front of said machine for moving said machine;

floor engaging cleaning means adjacent said rear for cleaning the floor, including a clean water outlet and a dirty water vent;

said housing having a first water retention chamber with a center of gravity rearward of said axis and substantially forward of said floor engaging cleaning means;

an inner container within said first chamber defining an inner chamber for retention of water separated from water in said first chamber;

said inner chamber being substantially symmetrical with said center of gravity;

clean water conduit means between one of said chambers and said floor cleaning means clean water outlet for conducting clean water to said floor engaging cleaning means;

dirty water conduit means between the other of said chambers and said floor engaging cleaning means dirty water inlet to conduct dirty water from said dirty water inlet to said other chamber;

said first chamber extending in front of and to the rear of said inner chamber, said first chamber and said

inner chamber being located and configured to cause said center of gravity to remain substantially constant during emptying of said one chamber of clean water and filling of said other chamber of dirty water, such that downforce on said floor engaging cleaning means remains substantially constant throughout the cleaning cycle.

Plaintiff first argues that the patent is invalid inasmuch as the claims are vague and indefinite with regard to the terms "symmetrical" and "center of gravity." Specifically, plaintiff contends that the phrase "said inner chamber being substantially symmetrical with said center of gravity" fails to provide the public with sufficient certainty as to the scope of the claim. Also, plaintiff argues that the patent claims are invalid for failing to show and describe in the patent what is claimed.

A patent is presumed valid, and the burden of establishing invalidity rests on the party asserting the invalidity. 35 U.S.C. s. 282. The attacker faces the burden of showing the invalidity of claims by clear and convincing evidence. Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1467 (Fed.Cir.1990). The patent specification must contain a written description of the invention, and of the manner and process of making and using it, in clear, concise and exact terms as to enable any person skilled in the art to make the invention. Claims must be defined with particularity. 35 U.S.C. s. 112. FN6 Whether a claim is invalid for indefiniteness depends on whether those skilled in the art would understand the scope of the claim when the claim is read in light of the specification. North Amer. Vaccine, Inc. v. American Cyanamid Co., 7 F.3d 1571, 1577 (Fed.Cir.1993), *cert. denied,* 511 U.S. 1069, 114 S.Ct. 1645, 128 L.Ed.2d 365 (1994). Indefiniteness is a question of law. Credle v. Bond, 25 F.3d 1566, 1576 (Fed.Cir.1994). The amount of detail required to be included in claims depends on the particular invention and the prior art, and is not to be viewed in the abstract but in conjunction with whether the specification is in compliance with the first paragraph of s. 112. Shatterproof Glass Corp. v. Libbey-Owens Ford Co., 758 F.2d 613 (Fed.Cir.), *cert. dismissed,* 474 U.S. 976, 106 S.Ct. 340, 88 L.Ed.2d 326 (1985).

FN6. The relevant portion of 35 U.S.C. s. 112 reads 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 distinctively claiming the subject matter which the applicant regards as his invention.
To ascertain the meaning of claims, the court considers three sources: the claims, the specification, and the prosecution history. Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed.Cir.1995), *aff'd,* 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). Claims must be read in view of the specification, of which they are part. *Id.* A patentee is free to give his own definitions to words, but any special definition

given to a word must be clearly defined in the specification. Id. at 980. The terms in a claim are given their ordinary meaning to one of skill in the art unless it appears from the patent and file history that the terms were used differently by the inventors. Intellicall, Inc. v. Phonometrics, Inc., 952 F.2d 1384, 1387 (Fed.Cir.1992). The specification "is the single best guide to the meaning of a disputed term." Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576 (Fed.Cir.1996).

Where there is no definition provided and there is no evidence that the claim limitation as a whole has a special meaning to one skilled in the art, the court may use dictionary definitions to ascertain the ordinary meaning of the relevant claim limitation. Quantum Corp. v. Rodime, PLC, 65 F.3d 1577, 1581 (Fed.Cir.1995), *cert. denied,* 517 U.S. 1167, 116 S.Ct. 1567, 134 L.Ed.2d 666 (1996). Courts may rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1584 n. 6 (Fed.Cir.1996). FN7

FN7. The court noted that although technical treatises and dictionaries fall within the category of extrinsic evidence, as they do not form a part of an integrated patent document, "they are worthy of special note." *Vitronics,* 90 F.3d 1584 n. 6.

Turning to the phrase in claim 1 describing an inner chamber "being substantially symmetrical with said center of gravity," the term "symmetrical" as used in claim 1 can be defined by first looking at the term "said center of gravity." Claim 15 and the specification both define the "center of gravity" as a vertical plane transverse to the longitudinal direction of movement of the machine, between the wheel axle and the scrub brush. The center of gravity is to the rear of the wheel axis and substantially forward of the vacuum nozzles. The '891 patent, col. 4, lines 40-46 and col. 6, lines 31-36. The center of gravity in this case would describe a plane that divides the machine into halves of equal weight. FN8 A claim term "cannot be interpreted differently in different claims because the claim terms must be interpreted consistently." *Southwall Technologies, Inc. v. Cardinal IG Co.,* 54 F.3d 1571, 1579 (Fed.Cir), cert. denied, --- U.S. ----, 116 S.Ct. 515 (1995). Accordingly, "center of gravity" in claim 1 refers to a vertical plane transverse to the longitudinal direction of movement of the machine that divides the machine into halves of equal weight.

FN8. Webster's Ninth New Collegiate Dictionary (1985) defines the term "center of gravity" as "center of mass," "the point at which the entire weight of a body may be considered as concentrated so that if supported at this point the body would remain in equilibrium in any position," or "a point, area, person, or thing that is most important or pivotal in relation to an indicated activity, interest, or condition." It is clear from the '891 patent that the term here refers to mass.

According to the specification, the location of the outer chamber and the inner chamber are such as to cause the center of gravity of the two chambers generally to coincide and be centrally of the inner chamber, whether the outer chamber is empty and the inner chamber full of clean water, or the inner chamber empty and the outer chamber full of spent water, or at any stage therebetween when both chambers contain water. As clean water is progressively depleted from the inner chamber, and spent dirty water fills the outer chamber, the hydrodynamic pressure of the dirty water causes the flexible walls of the inner chamber to collapse, while the center of gravity of the water remains substantially the same at the center of the inner chamber.

It is clear from the specification that there is only one center of gravity for the machine itself as well as the two chambers. The specification states that the centers of gravity of the two chambers coincide (occupy the same space) and lie centrally of the inner chamber. The '891 patent, col. 3, lines 64-66. Further, this center of gravity is a vertical plane. Claim 1 states that the inner chamber is substantially symmetrical with "said center of gravity," referring to the center of gravity of the machine. The inner chamber must therefore be symmetrical on either side of the vertical plane that divides the machine into halves of equal weight.

The patent does not define "symmetrical," and there is no indication that the term is meant to have any special meaning. Webster's Dictionary defines "symmetrical" as "capable of division by a longitudinal plane into similar halves." FN9 Therefore, each half of the inner chamber on either side of the center of gravity must be of a similar shape.FN10

FN9. Webster's Ninth New Collegiate Dictionary (1985). The full definition is:

symmetrical or **symmetric** *adj*. **1:** having, involving, or exhibiting symmetry **2:** having corresponding points whose connecting lines are bisected by a given point or perpendicularly bisected by a given line or plane ((deg.)curves) **3:** *symmetric:* being such that the terms or variables may be interchanged without altering the value, character, or truth (*symmetric* equations) **4a:** capable of division by a longitudinal plane into similar halves ((deg.)plant parts) **b:** having the same number of members in each whorl of floral leaves ((deg.)flowers) **5:** affecting corresponding parts simultaneously and similarly ((deg.) rash) **6:** exhibiting symmetry in a structural formula; esp.: being a derivative with groups substituted symmetrically in the molecule.
FN10. Plaintiff asserts that the definition of "symmetrical" determined by the court in Micro Motion, Inc. v. Exac Corp., 741 F.Supp. 1426, 16 U.S.P.Q.2d 1001 (N.D.Cal.1990) should be applied to the present case. In *Micro Motion* the court defined "symmetrical" as referring to symmetry about an axis or line, rather than planar (mirror image) symmetry. However, *Micro Motion* dealt with a flowmeter patent, and the plaintiff here has given no evidence that a term used in the context of flowmeters would have the same meaning in the context of floor cleaners. Accordingly, this is extrinsic evidence that will not be considered by the court.

The patent teaches a floor cleaning machine with a center of gravity that remains substantially constant during operation. The method it teaches for keeping the center of gravity substantially constant employs a clean water chamber and a dirty water chamber which both share the same center of gravity. The center of gravity for the load as a whole remains balanced about the center of gravity during operation because the centers of gravity for both chambers, which share the same center of gravity with the machine, remain constant during operation. In other words, if the centers of gravity for the individual chambers do not shift, the center of gravity for the load as a whole will not shift either.

The preferred embodiment of the invention employs an inner chamber that appears from the side to be "generally spherical." The drawing also employs a spherical inner chamber, with the center of gravity running vertically through its center. While limitations in the specification are not to be read into the claims, Markman, 52 F.3d at 980, reference to the specification and drawings to interpret specific claim language is proper. General Amer. Transp. Corp. v. Cryo-Trans, Inc., 93 F.3d 766, 770 (Fed.Cir.1996), *cert. denied,* 520 U.S. 1155, 117 S.Ct. 1334, 137 L.Ed.2d 493 (1997). Although the reservoir does not have to be spherical, it is apparent from the specification that the term "symmetrical" refers to the shape of the reservoir. FN11 Even if the term referred to weight balance rather than shape, the requirement that the inner chamber balance its load of water on either side of the center of gravity would dictate a symmetrical shape. This is

the most logical interpretation when reading the patent as a whole. Also, dependent claim 5 of the '891 patent describes an inner chamber of partial spherical configuration. Dependent claims can aid in interpreting the scope of claims from which they depend, but they are only an aid to interpretation and are not conclusive. North Amer. Vaccine, Inc. v. American Cyanamid Co., 7 F.3d 1571, 1577 (Fed.Cir.1993), *cert. denied,* 511 U.S. 1069, 114 S.Ct. 1645, 128 L.Ed.2d 365 (1994). The use of a spherical inner chamber in claim 5 supports a determination that the inner chamber in claim 1 must be symmetrical about the center of gravity, but not necessarily spherical. Interpreting "said inner chamber being substantially symmetrical with said center of gravity" as referring to shape would be a logical interpretation in light of the specification and claim 5.

FN11. The sphere is not the only symmetrical shape. The spherical inner chamber is merely the preferred embodiment.

Defendant argues that the term "symmetrical" refers to the fact that the clean water chamber located within the dirty water chamber positions the clean and dirty water, respectively, in substantially balanced proportion about the center of gravity of the machine in use. In other words, the defendant argues that the patent's description of a substantially constant center of gravity is limited to only the entire load of water, and does not focus on the center of gravity of either of the individual chambers. However, defendant's argument is unavailing. A court can neither broaden nor narrow a claim to give the patentee something different than what the claims set forth. Texas Instruments Inc. v. U.S. Int'l Trade Comm'n, 988 F.2d 1165, 1171 (Fed.Cir.1993). In a cleaner where the two chambers do not share the same center of gravity, if the center of gravity of one chamber were to shift during operation, the center of gravity of the other chamber would also have to shift in the opposite direction in order to compensate if the center of gravity for the entire load is to remain substantially constant. This sort of configuration is beyond what is taught by the '891 patent, which clearly defines a machine where the two chambers share the same center of gravity. Indeed, the patent gives no hint as to how one could create a machine where the center of gravity for the machine remains substantially constant without inner and outer chambers that share the same center of gravity.

Defendant argues that it makes no sense to focus on movement of the centers of gravity of the separate chambers. However, it is the centers of gravity in the separate chambers that enable one reading the patent to recreate it. If defendant's argument were accepted, it would impermissibly broaden claim 1 beyond what is set forth. The patent cannot merely describe a floor cleaning machine that has a substantially constant center of gravity, but must also teach how to make it. 35 U.S.C. s. 112. This the patent does, by teaching the use of inner and outer chambers that have centers of gravity that coincide. This is the only method taught-it does not teach at all how to make a machine with a substantially constant center of gravity where the centers of gravity of the inner and outer chambers shift. "A patent applicant cannot disclose and claim an invention narrowly and then, in the course of an infringement suit, argue effectively that the claims should be construed to cover that which is neither described nor enabled in the patent." North Amer. Vaccine, 7 F.3d at 1577. The patent simply does not contain enough information to enable the scope of the claims as argued by defendant. *See* In re Goodman, 11 F.3d 1046, 1050 (Fed.Cir.1993).

This construction is consistent with the teachings of the patent and this claim is not invalid for indefiniteness. Plaintiff's motion for summary judgment on this contention is denied.

Plaintiff next argues that there is no teaching in the '891 patent of how to achieve a substantially constant downward nozzle force throughout the cleaning cycle. The patent makes no mention of water loss during

operation, a factor that both sides concede occurs during operation. According to plaintiff, if the center of gravity remains constant as described in the patent, and the overall weight of the loaded machine decreases as the amount of water not recovered increases, then the amount of load applied at the vacuum nozzles will decrease, not remain substantially constant as described in the patent.

Whether a claim is invalid for indefiniteness depends on whether those skilled in the art would understand the scope of the claim when the claim is read in light of the specification. North Amer. Vaccine, 7 F.3d at 1579. Experts for both parties have testified about water loss during operation, and one ordinarily skilled in the art would be aware of this factor. The patent makes no mention of water loss, so one skilled in the art would understand the patent to describe situations where most of the water is recovered. Accordingly, one skilled in the art would expect some loss of downforce in situations where a large amount of water is not recovered. This aspect of the patent is not indefinite to the point that one skilled in the art would not understand the claim for "substantially constant" downforce in relation to the decrease in overall weight. Plaintiff's motion with regard to this point is also denied.

Plaintiff's motion for summary judgment for invalidity of defendant's patent is denied.

C. Literal Infringement

Plaintiff next argues that summary judgment should be granted because its machine design does not infringe the '891 patent. Defendant has also moved for summary judgment on this issue, claiming just the opposite.

As was determined above, claim 1 of the '891 patent requires the use of an inner chamber that is of a symmetrical shape so that the chamber maintains a substantially constant center of gravity during operation. This is consistent with the teachings of the '891 patent, which describes a floor cleaning machine that maintains a substantially constant center of gravity through the use of inner and outer chambers that also maintain coincident centers of gravity.

To establish literal infringement, every limitation set forth in a claim must be found in the accused product, exactly. Becton Dickinson & Co. v. C.R. Bard, Inc., 922 F.2d 792, 796 (Fed.Cir.1990). Plaintiff employs two different designs of inner chambers in its accused products. One holds eight gallons of water, the other twelve gallons. Neither is of a shape that could be described as symmetrical about the center of gravity, because as their contents drain out, their centers of gravity shift towards the end of the machine where the cleaning nozzles are mounted.FN12 They both differ from the inner chamber described in the '891 patent, which is "substantially symmetrical with said center of gravity." Because the plaintiff's designs do not employ a symmetrical inner chamber as required by claim 1 of the '891 patent, there is no literal infringement.FN13

FN12. The inner chamber of plaintiff's 8 gallon machine, as depicted in defendant's exhibit 32, has a profile that is trapezoidal in shape with a bottom that slopes toward the cleaning nozzles. The inner chamber of the 12 gallon machine, as depicted in defendant's exhibit 33, was accurately characterized by the plaintiff as "boot-shaped," with the "toe" situated towards the cleaning nozzles. The defendant concedes that the inner chambers of plaintiff's machines are not symmetrical.

FN13. Plaintiff also argues that the constant loading on the rotating brush is also achieved in a substantially different fashion than in the '891 patent. However, claim 1 makes no claims as to loading on the rotating

brush. Claim 1 states that the invention maintains constant downward force on the "Floor engaging cleaning means," which are defined as including "a clean water outlet and a dirty water inlet." The focus is on the water nozzles; there is no mention of the brush. Therefore, the design of the brush mounting is not an issue in determining infringement of claim 1. The brush is the subject of dependent claim 8, but since plaintiff does not infringe independent claim 1, it follows that it does not infringe dependent claim 8. *See, e.g.,* Wolverine World Wide, Inc. v. Nike, Inc., 38 F.3d 1192, 1199 (Fed.Cir.1994).

D. The Doctrine of Equivalents

Even if the claims of the '891 patent do not literally read on the plaintiff's device, the plaintiff may still prove infringement under the doctrine of equivalents. An accused product that does not literally infringe a claim may infringe under the doctrine of equivalents if "it performs substantially the same function in substantially the same way to obtain the same result." *Southwall Technologies,* 54 F.3d at 1579, *quoting* Graver Tank & Mfg. Co. v. Linde Air Prods. Co., 339 U.S. 605, 608, 70 S.Ct. 854, 856, 94 L.Ed. 1097 (1950). Although patents must be particular and distinct under 35 U.S.C. s. 112 so that the public has fair notice of the metes and bounds of the claimed invention, a patentee should not be deprived of the benefits of its patent by competitors who appropriate the essence of an invention while barely avoiding the literal language of the claims. London v. Carson Pirie Scott & Co., 946 F.2d 1534, 1538 (Fed.Cir.1991).

The determination of equivalence is an objective inquiry made on an element-by-element basis. Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co., --- U.S. ----, 117 S.Ct. 1040, 1054, 137 L.Ed.2d 146 (1997). Each element contained in a patent claim is deemed material to defining the scope of the patented invention, and thus the doctrine must be applied to individual elements of the claim, not to the invention as a whole. Id. at 1049. Intent plays no role in the application of the doctrine. Id. at 1052. Infringement under this doctrine is a question of fact. SRI Int'l v. Matsushita Elec. Corp., 775 F.2d 1107, 1125 (Fed.Cir.1985). Where the evidence is such that no reasonable jury could determine that two elements are equivalent, district courts are obliged to grant partial or complete summary judgment. Warner-Jenkinson, --- U.S. at ----, 117 S.Ct. at 1053 n. 8.

There is some debate between the parties as to what happens to the center of gravity of the plaintiff's machines during operation. Plaintiff argues that its machines are designed to shift the center of gravity of the entire load towards the cleaning nozzles during operation to compensate for the loss of the weight of the unrecovered water. Plaintiff's expert has provided extensive calculations demonstrating this effect.FN14 Defendant counters that the center of gravity for the plaintiff's machines (the center of gravity for the entire load) does not shift, and that they operate in a manner similar to that described in its '891 patent. It too has produced extensive expert testimony analyzing the performance of plaintiff's machines, showing that their centers of gravity remain substantially constant.FN15

FN14. Affidavit of Philip Anthony.

FN15. Affidavit of John A. Wilkinson, defendant's exhibit 58.

Even if the court were to assume *arguendo* that the result of plaintiff's machines' operation is the same as taught in the '891 patent, that is, a center of gravity that remains substantially constant, the means through

which they accomplish this are substantially different. The inner chambers of the plaintiff's machines, as previously stated, are asymmetrical. They are shaped in such a manner so that as the clean water load decreases, the center of gravity for the inner chamber must shift towards the cleaning nozzle. If the center of gravity for the entire load is substantially constant, then the outer chamber must be shaped in such a way so as to compensate for the shift in the inner chamber's center of gravity. This method is not taught by the '891 patent, which only teaches how to achieve a substantially constant center of gravity by employing chambers with coincident centers of gravity that do not shift. Even if the plaintiff's machines achieve the same result, they do not do so by performing "substantially the same function in substantially the same way." Graver Tank, 339 U.S. at 608. Plaintiff's machines therefore do not infringe under the doctrine of equivalents.

Defendant also argues that the '891 patent is a pioneer patent entitled to a broad range of equivalents. A pioneer patent is a distinct step in the progress of the art, distinguished from a mere improvement or perfection of what had gone before. Texas Instruments, Inc. v. U.S. Int'l Trade Comm'n, 846 F.2d 1369, 1370 (Fed.Cir.1988). A pioneer patent is entitled to a broader range of equivalents than those that make mere improvements in the art. Hoganas AB v. Dresser Indus. Inc., 9 F.3d 948, 954 (Fed.Cir.1993). In contrast, a patent in a crowded field is entitled only to a narrow range of equivalents. Slimfold Mfg. Co., Inc. v. Kinkead Indus., Inc., 932 F.2d 1453, 1457 (Fed.Cir.1991). The face of the '891 patent lists 34 United States and 2 foreign patent documents considered relevant by the examiner, and the information disclosure statement filed by '891 patent inventor Wulff lists 29 U.S. patents for various floor cleaners. It appears that this is a crowded field. *See, e.g.,* Id. (34 patents listed on reissue application as having been considered by examiner; patent not pioneer patent). Also, the inventor himself stated that the '891 patent machine "was developed and designed to improve the prior product that I had designed...." Defendant's Exhibit 82, p. 127. Defendant's development of a floor cleaner with a substantially constant center of gravity is a mere improvement of the floor cleaner prior art. It is not a distinct step in the progress of the art, and as such it is entitled to only a narrow range of equivalents.

Plaintiff's floor cleaners do not infringe the defendant's patent, either literally or under the doctrine of equivalents.

E. Business Defamation and Unfair Competition

Defendant has also moved for summary judgment on plaintiff's claim that defendant disparaged plaintiff's machine.FN16 Plaintiff bases its allegation on statements made by representatives of defendant at the ISSA trade show, and an alleged statement made by a salesman of defendant to a salesman of plaintiff.

FN16. Plaintiff has denied defendants' factual assertions but has failed to specify any record references, in violation of Local Rule 12(N)(3)(a). Under this local rule, plaintiff has thus conceded defendants' version of the facts.

A cause of action for commercial disparagement requires that the disparaging statement about another's product be published, either in written or oral form, to a third person. Aetna Casualty & Surety Co. v. Centennial Ins. Co., 838 F.2d 346, 351 (9th Cir.1988); General Elec. Co. v. Sargent & Lundy, 916 F.2d 1119, 1124 n. 1 (6th Cir.1990). Section 43(a) of the Lanham Act requires the allegedly false or misleading statement to be made in a "commercial advertising or promotion" to be actionable. 15 U.S.C. 1125(a). In the present case plaintiff has produced no evidence that the alleged statements were heard by anyone besides employees or officers of the two parties, nor has the plaintiff alleged that the statements qualify as

commercial advertising or promotions. Because plaintiff has failed to show that the alleged statements are actionable, defendant's motion for summary judgment on this issue is granted.

III. CONCLUSION

Plaintiff's motion for summary judgment for invalidity of defendant's '891 patent is denied [39]. Plaintiff's motion for summary judgment for noninfringement of the '891 patent is granted [39], and defendant's motion for summary judgment on infringement is denied [35].

N.D.Ill.,1997.
Breuer Elec. Mfg. Co. v. Tennant Co., Inc.