

**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF OHIO
EASTERN DIVISION**

THE HOOVER COMPANY,	:	Case No. 1:00CV347
	:	
Plaintiff,	:	JUDGE O'MALLEY
	:	
v.	:	MEMORANDUM & ORDER
	:	
ROYAL APPLIANCE MANUFACTURING COMPANY,	:	
	:	
Defendant.	:	

Plaintiff Hoover Company brings this action against defendant Royal Appliance Manufacturing Company, asserting that Royal has infringed a number of patents Hoover received in connection with the invention of its “carpet cleaning extractors” – devices configured like upright vacuum cleaners used to clean carpets through application and retrieval of a liquid cleaning solution. Specifically, Hoover alleges it sells various models of “SteamVac” upright carpet cleaning extractors, and that Royal’s sale of its competing “Easy Steamer” products violates Hoover’s patent rights. Based on these allegations, Hoover claims Royal has: (1) infringed claims 1-8 and 15-20 of Hoover’s utility patent 5,500,977 (the “977 patent”) for an “upright carpet extractor;” (2) infringed claim 13 of Hoover’s utility patent 5,761,763 (the “763 patent”) for an “upright carpet extractor;” (3) infringed claim 7 of Hoover’s utility patent 5,406,673 (the “673 patent”) for a “tank carry handle and securement latch;” (4) infringed two of Hoover’s design patents, being patent D358,241 and patent D358,072; and (5) infringed Hoover’s trade dress, in violation of 15 U.S.C. §1125(a). In response, Royal has asserted counterclaims against Hoover, seeking to invalidate Hoover’s patent rights. Specifically, Royal claims that: (1) all of the patents that Hoover cites should be declared

invalid, void, and unenforceable; and (2) this lawsuit is actually an attempt by Hoover to monopolize the relevant market, in violation of the Sherman Act, 15 U.S.C. §2.

Pursuant to Markman v. Westview Instruments, 517 U.S. 370 (1996), the Court held a hearing on September 19, 2000, to determine the meaning or construction of the three utility patents' claims, as a matter of law. On December 21, 2000, the Court issued a memorandum and order ("Markman Order") construing the disputed patent claim language. The parties then filed cross-motions for summary judgment on the utility patent claims.¹ For the reasons stated below, the Court now rules on these motions as follows:

- Royal's motion for summary judgment of invalidity of the 763 patent (docket no. 37) is **DENIED**.
- Hoover's motion for summary judgment of infringement of the 763 patent (docket no. 46) is **GRANTED**.
- Royal's motion for summary judgment of non-infringement of the 673 patent (docket no. 39) is **DENIED**.
- Hoover's motion for summary judgment of infringement of the 673 patent (docket no. 48) is **DENIED**.
- Royal's motion for summary judgment of non-infringement of the 977 patent (docket no. 41) is **GRANTED**.

Finally, the Court **ORDERS** the parties to attend a status hearing on April 19, 2002, at 1:00 p.m.

I. The 763 Patent.

Hoover claims Royal has infringed claim 13 of the 763 patent. Claim 13 refers to, among

¹ The parties filed no dispositive motions with regard to Hoover's design patent and trade dress claims, nor with regard to Royal's Sherman Act counterclaim.

other things, the two tanks on the carpet cleaning extractor, one of which is used to hold the cleaning solution and one to hold the recovered dirty fluid. Specifically, the claim language reads as follows:

A carpet extractor, comprising: a base; a handle pivotally connected to said base; a motor/fan assembly carried by said base; and a first tank carried by and selectively removable from said handle, said first tank having a carrying handle and a latch, said latch operable to selectively hold said first tank on said handle; and a second tank removably carried by said base.

(Emphasis added.)

During the first phase of this case, Hoover and Royal disagreed over the meaning of the terms “first tank” and “second tank” – Royal argued that “first tank” must mean “supply tank” and “second tank” must mean “recovery tank,” while Hoover argued that either the first or second tank may be the supply tank, with the other the recovery tank. The Court agreed with Hoover, “decline[d] to adopt Royal’s requested construction,” and concluded that “[t]he terms “first tank” and “second tank,” as used in the 763 patent, are sufficiently clear such that they need no special construction by the Court.” Markman Order at 20-21.

Royal and Hoover also disagreed about the meaning of the phrase “latch operable to selectively hold said first tank on said handle” – Royal argued that this claim language required a latch configuration such that a “movable member” be mounted on the tank, securing the tank to the handle, while Hoover argued the latch’s “movable member” could be mounted on the tank or the handle. The Court again agreed with Hoover and concluded that “the term ‘latch operable to selectively hold said first tank on said handle’ is sufficiently clear such that it needs no special legal construction by the Court.” Markman Order at 23. The Court explained:

In this case, the patent specification and drawings of the tank latch show a male, movable component mounted on the tank, which engages a female, fixed component found on the handle. Essentially, Royal insists the claim should be construed to limit the tank latch to this configuration – that is, the claim should not

be construed to include a latch, for example, where a male, movable component is mounted on the handle to engage a female, fixed component on the tank.

The Court must reject Royal's position * * * * The claim itself does not make any distinction between a latch and a catch, a moveable and a fixed component, or a male and a female component. Rather, the claim simply refers to the invention of a tank with a latch used to fasten the tank to the handle. Ultimately, the term "first tank having a . . . latch operable to selectively hold said first tank on said handle" does not mandate a certain latch configuration, nor does it require any special construction. Whether the latch component attached to the tank is the moveable or fixed component, and whether it is the male or female component, is not specifically stated in the claim, and is not necessary for an understanding of the invention.

Markman Order at 22.

Now that the Court has construed the disputed patent terms, both parties move for summary judgment on Hoover's claim that Royal has infringed claim 13 of the 763 patent. Royal argues that claim 13 of the 763 patent is invalid as a matter of law because: (a) it is obvious; and (b) it is anticipated by the "Segesman patent." Hoover responds that the 763 patent is not invalid, and further argues that Royal's "Easy Steamer" products literally infringe the 763 patent, as a matter of law and undisputed fact. Royal replies that, even assuming patent validity, the Easy Steamer does not infringe because it does not have a "latch operable to selectively hold said first tank on said handle." The Court declines to invalidate claim 13 of the 763 patent as a matter of law, but does find that, assuming the patent is valid, the Easy Steamer product literally infringes claim 13.

A. Applicable Legal Standards.

1. The Law of Infringement.

"[W]hoever without authority makes, uses, offers to sell or sells any patented invention, within the United States . . . during the term of the patent . . . infringes the patent." 35 U.S.C. §271(a). The patent owner has the burden of proving infringement, whether literal infringement or

infringement under the doctrine of equivalents, by a preponderance of the evidence. Hughes Aircraft Co. v. U.S., 717 F.2d 1351 (Fed. Cir. 1983).

An infringement analysis entails two steps. The first step, commonly known as claim construction or claim interpretation, is determining the meaning and scope of the patent claims asserted to be infringed. The second step is comparing the properly construed claims to the device accused of infringing. Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed. Cir. 1995), aff'd, 661 S.Ct. 1384 (1996). As noted, the Court has already engaged in the first step of the analysis.

The second prong of the infringement analysis, comparison of the claim to the accused device or process, is a question of fact. Markman, 52 F.2d at 976. When an allegedly infringing product includes every limitation of the patent claim, literal infringement is made out, and that is the end of the inquiry. Graver Tank & Mfg. Co. v. Linde Air Products Co., 339 U.S. 605, 607 (1950).

The presence of additional elements in the accused device is irrelevant if all of the claimed elements are present in it. Amstar Corp. v. Envirotech Corp., 730 F.2d 1476, 1482 (Fed. Cir.), cert. denied, 469 U.S. 924 (1984).

Even if an accused device does not literally infringe a patent claim, the accused device is still found to infringe the patent claim under the doctrine of equivalents if the accused device: (a) performs substantially the same function, (2) in substantially the same way, (3) to achieve substantially the same result. Graver Tank, 339 U.S. at 608; Goodwall Constr. Co. v. Beers Constr. Co., 991 F.2d 751 (Fed. Cir. 1993); Pennwalt Corp. v. Durand-Wayland, Inc., 833 F.2d 931, 934 (Fed. Cir. 1987), cert. denied, 485 U.S. 961 (1988). The doctrine of equivalents is designed to avoid “a fraud on a patent” by discouraging a copyist from making changes in the patent which, though

adding nothing, take the copied matter outside the claim. Graver Tank, 339 U.S. at 607-08. A patentee may not obtain under the doctrine of equivalents, however, coverage he could not lawfully obtain from the Patent Office by literal claims. Wilson Sporting Goods v. David Geoffrey & Assocs., 904 F.2d 677, 684 (Fed. Cir. 1990). The range of equivalents afforded a patent varies with the degree of invention. A pioneer invention, one which represents a major advance over the prior art, is entitled to a broad and liberal application of the doctrine of equivalents. Thomas & Betts Corp. v. Litton Systems, Inc., 720 F.2d 1572 (Fed. Cir. 1983). The doctrine of equivalents is a factor to be considered in an infringement analysis only when literal infringement is not found. Hughes Aircraft Co. v. United States, 717 F.2d 1351 (Fed. Cir. 1983).

Infringement is determined by comparing the accused device with the claims, not with the preferred or commercial embodiment. Martin v. Barber, 755 F.2d 1564, 1567 (Fed. Cir. 1985). Claims should be construed, if possible, to sustain their validity. ACS Hosp. Systems, Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577 (Fed. Cir. 1984). However, courts cannot alter what the patentee has chosen to claim as his invention. SSIH Equipment S.A. v. U.S. International Trade Com., 718 F.2d 365, 378 (Fed. Cir. 1983). Particular embodiments appearing in the specifications will not be read into the claims; examples are not what is patented. Shamrock Technologies, Inc. v. Medical Sterilization, Inc., 903 F.2d 789, 792 (Fed. Cir. 1990); Specialty Composites v. Cabot Corp., 845 F.2d 981, 987 (Fed. Cir. 1988).

2. The Law of "Obviousness"

One affirmative defense to a claim of infringement is that the allegedly infringed patent is not valid in the first place, because the invention claimed was "obvious." Specifically, a patent is

invalid “if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which such subject matter pertains.” 35 U.S.C. §103. Obviousness is a question of law, but rests on the resolution of several factual inquiries. In re Woodruff, 919 F.2d 1575, (Fed. Cir. 1990). These factual inquiries are: “(1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; [and] (3) the level of ordinary skill in the [pertinent] art.” Bausch & Lomb, Inc. v. Barnes Hind/Hydrocurve, 796 F.2d 443, 447 (Fed. Cir. 1986), cert. denied, 484 U.S. 823 (1987) (citing Graham v. John Deere Co., 383 U.S. 1, 17 (1966)). Also relevant to the obviousness inquiry are “secondary considerations [such] as commercial success, long felt but unsolved needs, [and] failure of others” to invent. Graham, 383 U.S. at 17-18.

a. Scope and Content of Prior Art

To determine whether a reference is within the scope and content of the prior art, the Court first determines if the reference is within the field of the inventor’s endeavor. If it is not, a court must next consider whether the reference is reasonably pertinent to the particular problem with which the inventor was involved. In re Deminski, 796 F.2d 436, 442 (Fed. Cir. 1986); Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 1535 (Fed. Cir. 1983). Further, the art must have existed as of the date of invention, presumed to be the filing date of the application unless an earlier date is proved. Obviousness is determined as of the time the invention was made.

b. Differences Between the Prior Art and the Claims at Issue.

When ascertaining the differences between the prior art and the claimed invention, the Court must consider the patented claims and the prior art in their entireties to determine whether it would have been obvious to modify the prior art to produce the claimed invention. Ryko Mfg. Co. v. Nu-Star, Inc., 950 F.2d 714 (Fed. Cir. 1991); W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). A court should not “distill the invention down to a ‘gist’ or ‘core,’ a superficial mode of analysis that disregards elements of the whole.” Bausch & Lomb, 796 F.2d at 449. On the other hand, it is not necessarily improper to “focus[] on one element of the claimed invention.” Ryko, 950 F.2d at 717. It is true the Court should not “unduly” focus on one facet of the invention, Gore, 721 F.2d at 1548, but the Court must focus on certain aspects of the invention “to ascertain the principal differences between the patented claim and the prior art.” Ryko, 950 F.2d at 717 (citing Graham, 383 U.S. at 17). When analyzing a patent claim for obviousness, “the claim should be considered as a whole, but the differences between the claim and the prior art need to be identified to place the obviousness analysis into proper perspective.” Id.

Determination of whether a new combination of known elements would have been obvious to one of ordinary skill depends on various factors, including whether the elements exist in “analogous art,” that is, art that is reasonably pertinent to the problem with which the inventor is concerned. Deminski, 796 F.2d at 442. When the references are all in the same or analogous fields, knowledge thereof by the hypothetical person of ordinary skill is presumed, In re Sernaker, 702 F.2d 989, 994 (Fed. Cir. 1983), and the test is whether the teachings of the prior art, taken as a whole, would have made obvious the claimed invention. In re Young, 927 F.2d 588, 591 (Fed. Cir. 1991). When it is necessary to select elements of various teachings in order to form the claimed invention,

a court must ascertain whether there is any suggestion or motivation in the prior art to make the selection made by the applicant. Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 1143 (Fed. Cir. 1985). “Obviousness can not be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination.” In re Bond, 910 F.2d 831, 834 (Fed. Cir. 1990) (quoting Carella v. Starlight Archery and Pro Line Co., 804 F.2d 135, 140 (Fed. Cir. 1986)); In re Cho, 813 F.2d 378, 382 (Fed. Cir. 1987); In re Gorman, 933 F.2d 982, 986 (Fed. Cir. 1991). That knowledge cannot come from the applicant’s invention itself. Diversitech Corp. v. Century Steps, Inc., 850 F.2d 675, 678-79 (Fed. Cir. 1988). Hindsight reconstruction of the prior art by picking and choosing features from existing art and/or patents is impermissible, “absent some teaching or suggestion supporting the combination.” In re Fritch, 972 F.2d 1260, 1266 (Fed. Cir. 1992); Interconnect Planning, 774 F.2d at 1143.

The fact that an invention is a combination of old elements or a simple improvement is not, alone, a foundation upon which a finding of obviousness can be supported. The criteria of §103 is not whether the differences from the prior art are “simple enhancements,” but whether it was obvious to make the total structural combination. Simplicity is not inimical to patentability. Goodyear Tire & Rubber Co. v. Ray-O-Vac Co., 321 U.S. 275, 279 (1944). Complexity is not a requirement for non-obviousness. Demaco Corp. v. F. Von Langsdorff Licensing Ltd., 851 F.2d 1387 (Fed. Cir. 1988), cert. denied, 488 U.S. 956 (1988). It is immaterial that all the elements of an invention are old. What must be found obvious is the claimed combination. Hybritech, Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1383 (Fed. Cir. 1986), cert. denied, 480 U.S. 947 (1987). “Virtually all inventions are ‘combinations,’ and . . . every invention is formed of ‘old elements’ . . . only God works from nothing. Man must work with old elements.” Fromson v.

Advance Offset Plate, Inc., 755 F.2d 1549, 1556 (Fed. Cir. 1985).

c. The Level of Ordinary Skill in the Pertinent Art.

There are six factors relevant to a determination of the level of ordinary skill: educational level of the inventor, type of problems encountered in the art, prior art solutions, rapidity of innovation, sophistication of technology, and educational level of active workers in the field. Environmental Designs, Ltd. v. Union Oil Co., 713 F.2d 693, 697 (Fed. Cir. 1983), cert. denied, 464 U.S. 1043 (1984). As to educational level of the inventor, “[a]lthough the educational level of the inventor may be a factor in determining the level of ordinary skill in the art, it is by no means conclusive.” Orthopedic Equip. Co. v. All Orthopedic Appliances, 707 F.2d 1376, 1382 (Fed. Cir. 1983); Standard Oil Co. v. American Cyanamid Co., 774 F.2d 448 (Fed. Cir. 1985). “The importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry.” Ryko Mfg. Co. v. Nu-Star, Inc., 950 F.2d 714, 719 (Fed. Cir. 1991). Instead of ascertaining what was subjectively obvious to the inventor at the time of invention, the court must ascertain what would have been objectively obvious to one of ordinary skill in the art at such time. Kloster Speedsteel AB v. Crucible Inc., 793 F.2d 1565, 1574 (Fed. Cir. 1986), cert. denied, 479 U.S. 1034 (1987).

d. Secondary Considerations.

Finally, a court should examine other “objective indicia of non-obviousness.” Winner Int’l Royalty Corp. v. Wang, 202 F.3d 1340, 1348 (Fed. Cir. 2000), cert. denied, 530 U.S. 1238 (2000). Such evidence includes commercial success, long felt but unresolved needs, and failed attempts.

Perkin-Elmer Corp. v. Computervision Corp., 732 F.2d 888, 895-96 (Fed. Cir. 1984), cert. denied, 105 S.Ct. 187 (1984). Where secondary considerations are shown, their presence is indicative of non-obviousness. A court must consider these “secondary considerations” when present. Stratoflex, 713 F.2d at 1538; Cable Electric Products, Inc. v. Genmark, Inc., 770 F.2d 1015, 1026-28 (Fed. Cir. 1985). While the presence of secondary factors is relevant to a claim of non-obviousness, a party may not rely on the absence of those factors to support a claim of obviousness. Kansas Jack, Inc. v. Kuhn, 719 F.2d 1144, 1150 (Fed. Cir. 1983).

e. Burden of Proof.

Regarding the burden of proof, the Hoover patents are presumed valid. 35 U.S.C. §282. Royal has the burden of proving invalidity with facts supported by clear and convincing evidence. This burden remains on Royal and never shifts. RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444 (Fed. Cir. 1984), cert. dismissed, 468 U.S. 1228 (1984). Royal must prove by clear and convincing evidence that the subject matter of the particular claims as a whole would have been obvious at the time of the invention to a person having ordinary skill in the art. Polaroid Corp. v. Eastman Kodak Co., 789 F.2d 1556, 1558 (Fed. Cir. 1986), cert. denied, 479 U.S. 850 (1986).

3. The Law of “Anticipation”

Another affirmative defense to a claim of patent infringement closely related to obviousness is that of “anticipation.” A patent is invalid if “the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.” 35 U.S.C. §102(b). In other

words, a patent is not valid if it was anticipated by prior art. See Titanium Metals Corp. of Am. v. Banner, 778 F.2d 775, 782 (Fed. Cir. 1985) (“It is also an elementary principle of patent law that when . . . a claim covers several compositions, the claim is ‘anticipated’ if one of them is in the prior art”). Anticipation is a question of fact (subject to appellate review under the clearly erroneous standard). Electro Med. Sys. S.A. v. Cooper Life Sciences Inc., 34 F.3d 1048, 1052 (Fed. Cir. 1994). “Although anticipation is a question of fact, it still may be decided on summary judgment if the record reveals no genuine dispute of material fact.” Oney v. Ratliff, 182 F.3d 893, 895 (Fed. Cir. 1999). “Summary judgment in favor of the party with the burden of persuasion, however, is inappropriate when the evidence is susceptible of different interpretations or inferences by the trier of fact.” Id. (citing Hunt v. Cromartie, 119 S.Ct. 1545, 1552 (1999)). As with the affirmative defense of obviousness, the Hoover patents are presumed valid and Royal has the burden of proving invalidity with facts supported by clear and convincing evidence. 35 U.S.C. §282; Oney, 182 F.3d at 895.

Normally, to invalidate a patent by anticipation, a single prior art reference needs to disclose each and every limitation of the claim. Standard Havens Prods., Inc. v. Gencor Indus., Inc., 953 F.2d 1360, 1369 (Fed. Cir. 1991); see Verdegaal Bros., Inc. v. Union Oil Co. of California, 814 F.2d 628, (Fed. Cir. 1987) (“[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference”). “However, a prior art reference may anticipate when the claim limitation or limitations not expressly found in that reference are nonetheless inherent in it.” Atlas Powder Co. v. Ireco Inc., 190 F.3d 1342, 1347 (Fed. Cir. 1999). The burden of proving that a patent was anticipated is particularly high when the supposedly anticipatory prior art was before the examiner during prosecution of the application.

Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1467 (Fed. Cir. 1990); see American Hoist & Derrick Co. v. Sowa & Sons, Inc., 725 F.2d 1350, 1359 (Fed. Cir. 1984), cert. denied, 469 U.S. 821 (1984) (“When no prior art other than that which was considered by the PTO examiner is relied on by the attacker, he has the added burden of overcoming the deference that is due to a qualified government agency presumed to have properly done its job, which includes one or more examiners who are assumed to have some expertise in interpreting the references and to be familiar from their work with the level of skill in the art and whose duty it is to issue only valid patents.”).

C. Application of the Law to the Facts of this Case Regarding the 763 Patent.

1. Hoover’s Claim of Literal Infringement.

Hoover argues that Royal’s Easy Steamer product literally infringes claim 13 of the 763 patent. As noted above, when an allegedly infringing product includes every limitation of the patent claim, literal infringement is established. Graver Tank, 339 U.S. at 607. Royal focuses on the following limitation contained in claim 13, and asserts the Easy Steamer does not include this limitation: “a first tank carried by and selectively removable from said handle, said first tank having a carrying handle and a latch, said latch operable to selectively hold said first tank on said handle.”² In particular, Royal insists the supply tank on its Easy Steamer does not have a “latch operable to selectively hold [the supply] tank on [the] handle” – or, at a minimum, a jury should be permitted to determine whether the Easy Steamer product includes this limitation.

² Royal does not argue that its Easy Steamer carpet extractor does not have any of the other limitations of claim 13 of the 763 patent, which are: (1) a base; (2) a handle pivotally connected to said base; (3) a motor/fan assembly carried by said base; and (4) a second tank removably carried by said base.

The Court concludes that, based on the undisputed facts, no reasonable jury could conclude that the Easy Steamer does not include this limitation, and that Hoover has carried its burden of proving literal infringement by a preponderance of the evidence, as a matter of law. The Court returns to its resolution of the parties' dispute over the meaning of this claim limitation:

It is commonly understood that a "latch" is made up of two mating components, one fixed and one movable, used to fasten things together. A common example of such a mechanism is found on a porch door, where a pivoting bar attached to the door (the movable component) falls into a notch mounted to the door frame (the fixed component). Unfortunately, it is also common to refer to the movable component as "the latch" and the fixed component as "the catch." Thus, the term "latch" can refer to either the two components as a unit, or the movable component alone. To confuse things further, the movable component is usually male and the fixed component female (e.g., the porch door latch), so that it is common to understand that a "latch" is a male, movable component and the "catch" is a female, fixed component. But there also exist latch mechanisms where the female component is the movable one.³

In this case, the patent specification and drawings of the tank latch show a male, movable component mounted on the tank, which engages a female, fixed component found on the handle. Essentially, Royal insists the claim should be construed to limit the tank latch to this configuration – that is, the claim should not be construed to include a latch, for example, where a male, movable component is mounted on the handle to engage a female, fixed component on the tank.

The Court must reject Royal's position, however, because, although claims should be read in view of their specifications, the Court must not limit the scope of the claim to the preferred embodiment or specific examples disclosed in the specification. * * * Ultimately, the term "first tank having a . . . latch operable to selectively hold said first tank on said handle" does not mandate a certain latch configuration, nor does it require any special construction. Whether the latch component attached to the tank is the moveable or fixed component, and whether it

³ Specifically, cabinet doors sometimes fasten closed through use of a two-pronged female catch mounted on the (movable) door, which clasps around a single-pronged male latch mounted inside the (fixed) cabinet. It is worth noting here that the Court disagrees with Royal's reading of Webster's New Collegiate Dictionary's definition of "latch." Royal states: "[the dictionary] defines 'latch' to include 'a fastener (as for a door) consisting essentially of a pivoted bar that falls into a notch,' making explicit that the latch is the securement portion that moves." Royal's Markman brief at 21 n.8. In fact, however, the definition defines the term "latch" as being the entire "fastener" mechanism, which consists of both a fixed component (the notch) and a movable component (the pivoted bar). The quoted definition does not define "latch" to mean just the movable component.

is the male or female component, is not specifically stated in the claim, and is not necessary for an understanding of the invention. To construe the claim language as requested by Royal would be to limit the scope of the claim unnecessarily and in contrast to the plain meaning of the words used.

Markman Order at 21-22 (footnote contained in original as n.13; citations omitted).

The question, then, is whether the supply tank on the Easy Steamer has a latch mechanism that operates to secure the supply tank to the handle, regardless of whether: (1) this mechanism consists of a movable female catch and a fixed male latch, or vice versa; or (2) the female catch is mounted on the tank and the male latch is mounted on the handle, or vice versa. Put more simply, does the Easy Steamer use a latching mechanism to secure the tank to the handle, or does it use some other securement mechanism?⁴

The undisputed facts reveal that a reasonable jury could only conclude that the supply tank of Royal's Easy Steamer does have a latch operable to selectively hold the supply tank on the handle. This conclusion is most effectively demonstrated by turning to page four of the owner's manual that Royal provides with its Easy Steamer, which displays a line drawing of the product. This drawing points out the location of the "Clean Solution Reservoir," and also the location of the mechanism that fastens this reservoir to the handle. Although Royal's counsel is careful to refer to this mechanism as a "button," the owner's manual identifies this mechanism as the "Clean Solution Reservoir Latch" (emphasis added).⁵

⁴ Other securement mechanisms could be, for example, straps, magnets, screws, hook-and-loop fabric (e.g., Velcro®), clamps, or a fitted tank-holder combined with friction or gravity.

⁵ As of March 8, 2002, the owner's manual for the Easy Steamer is available for download at <http://www.dirtdevil.com/products/shampooers/CE7150B.asp>. Page seven of the manual demonstrates how the user should operate the "latch" to release and replace the "Clean Solution Reservoir."

Of course, the language used in Royal's owner's manual is not necessarily definitive on the issue. Royal asserts that "what Hoover calls the 'latch' on the supply tank [of the Easy Steamer] is no more than a fixed, molded ledge on which the movable button from the extractor handle can catch." Reply brief at 13. Royal continues:

This molded ledge cannot be "operated" in any fashion, because it does not move and has no moving parts, and it therefore does not meet the limitation. Further, it cannot be operated to "selectively hold" the tank – clearly it is the button located on the extractor handle that must be operated to release the tank from the extractor, as the tank will not come off the extractor simply by tugging on the ridge, which is not reachable by hand when the tank is in place in any case.

Id. This argument, however, merely seeks to take advantage of the confusing nature of the term "latch." See Markman Order at 21 ("It is commonly understood that a 'latch' is made up of two mating components, one fixed and one movable, used to fasten things together. * * * Unfortunately, it is also common to refer to the movable component as 'the latch' and the fixed component as 'the catch.'"). The simple fact is that, together, the "movable button" and the "fixed, molded ledge" to which Royal refers make up the two mating components of a latch mechanism, the former being a female, movable catch (located on the extractor's handle) and the latter a male, fixed latch (located on the tank). That the male component is fixed and the female component is movable on the Royal product – unlike the drawings in the 763 patent, which show a male, movable component mounted on the tank and a female, fixed component on the extractor's handle – does not take Royal's product outside the claim limitation.⁶

⁶ In summary: Royal's product has a male, fixed latch on the tank that mates with a female, movable catch on the handle; Hoover's patent specification shows a male, movable latch on the tank that mates with a female, fixed catch on the handle. Both mechanisms are "latches operable to selectively hold the tank on the handle." Although the parties did not brief the issue, even if Hoover could not prove literal infringement as a matter of law, it is highly likely Hoover would still prevail under the doctrine of equivalents.

As the Court noted earlier, “[w]hether the latch component attached to the tank is the moveable or fixed component, and whether it is the male or female component, is not specifically stated in the claim, and is not necessary for an understanding of the invention.” Markman Order at 22. Because, as a matter of undisputed fact, Royal’s Easy Steamer includes every limitation of claim 13 of the 763 patent, Hoover has proven literal infringement as a matter of law.

2. Royal’s Affirmative Defense of Anticipation.

In addition to arguing that the Easy Steamer does not literally infringe claim 13 of Hoover’s 763 patent, Royal argues the 763 patent is invalid in any event because it was anticipated by the “Segesman patent.” Royals argues, moreover, that an examination of the Segesman patent leads to a finding of anticipation, as a matter of law. The Court disagrees.

As an initial matter, it is clear that the patent examiner was aware of the Segesman patent when examining Hoover’s application for the 763 patent. The 763 patent states explicitly that it is a “continuation” of Hoover’s 977 patent. The 977 patent, in turn, explicitly cites the Segesman patent as a reference. The “primary examiner” of both the 763 patent and the “parent” 977 patent was Chris K. Moore. Furthermore, these two patents were presented to examiner Moore closely in time – the 763 patent was filed with the Patent and Trademark Office (“PTO”) on March 11, 1996, 15 days before the 977 patent issued. It is true, as Royal notes, that the Segesman patent is not cited as a reference in the 763 patent itself. But this Court is required to give the “deference that is due to a qualified government agency presumed to have properly done its job, which includes one or more examiners who are assumed to have some expertise in interpreting the references and to be familiar from their work with the level of skill in the art and whose duty it is to issue only valid

patents.” American Hoist, 725 F.2d at 1359. In the circumstances presented, this deference must include acknowledgment of the extreme likelihood that examiner Moore was aware of the Segesman patent and its applicability vel non to the 763 patent application – even if the Segesman patent is not actually cited in the 763 patent application.⁷ Given this awareness, Royal’s burden of proving that the 763 patent was anticipated by Segesman is “especially difficult” to carry. Hewlett-Packard Co., 909 F.2d at 1467.

The Segesman patent, which issued in 1970, discloses a “liquid container latch and mounting arrangement for floor treating machines.” As described by Royal,

the Segesman device shows two containers, one of which is located inside the other. . . . [T]he cleaning supply tank . . . is a rigid plastic tank. The recovery tank . . . is an expandable ‘bag’-like container located inside the supply tank but with a separate “mouth” so that it can fill with recovered dirty water as cleaning fluid is removed from the outer [supply] tank.

Royal’s brief in support at 7. In addition, Royal notes, the Segesman invention has a “combination handle/latch.” Id. Royal insists that the Segesman patent teaches every limitation contained in claim 13 of Hoover’s 763 patent.

The Court is unpersuaded, however, and will not grant Royal the judgment it seeks on this point. Claim 13 of the 763 patent recites both “a first tank carried by and selectively removable from [the carpet extractor’s] handle” and also “a second tank removably carried by [the carpet extractor’s] base.” This language can only be construed to mean two separate tanks, located on two different parts of the extractor, each of which can be removed independently. Even if the Segesman “bladder-within-a-tank” invention can be read to recite two different tanks, one inside the other,

⁷ The evidence reveals that examiner Moore has been a patent examiner in the “floor care arts” for at least 30 years.

Segesman also teaches that these “two tanks” are both carried on the handle and are removed together. Royal tries to evade this obvious difference by asserting that the base of the Hoover invention “carries” the handle, and the handle “carries” the first tank, so the base “carries” both tanks, just as the handle of the Segesman invention “carries” both tanks. Even accepting this dubious reading of Hoover’s specification language – which the Court does not – Royal still does not address the fact that Segesman teaches “two tanks” that are removed together, while the 763 patent teaches two tanks that are removed independently.⁸

Hoover also argues that the Segesman patent does not teach “a motor/fan assembly carried by [the carpet extractor’s] base,” and, for that matter, teaches only a hard-floor scrubber and not a carpet extractor at all. But the Court need not address these arguments, because it is already clear Royal has failed to establish that the Segesman patent teaches every limitation contained in claim 13 of the 763 patent. “[A]n infringer who assails the validity of a patent fair upon its face bears a heavy burden of persuasion, and fails unless his evidence has more than a dubious preponderance.” Radio Corp. of Am. v. Radio Eng’g Labs., 293 U.S. 1, 8 (1934). Royal’s argument that claim 13 of the 763 patent is anticipated by the Segesman patent as a matter of law fails.

3. Royal’s Affirmative Defense of Obviousness.

Royal also argues that, even if its Easy Steamer otherwise infringes Hoover’s 763 patent, the patent is invalid in any event because the invention it claims was obvious in light of the prior art. Again, the Court disagrees.

⁸ The Court here makes clear that it considered and rejected the arguments advanced by Royal, at pages 17-18 of its brief in support, regarding the meaning of the word “carry” and the alleged immateriality of the fact that the Segesman “tanks” must be removed together.

Royal points to four patents that preceded the 763 patent – known as the Terry, Smith, Segesman, and Burgoon patents – and asserts that “all the elements of claim 13 of the 763 patent can be found in these references.” Royal’s brief in support at 18. For example, “if Segesman does not have a container ‘carried by’ the base, such a configuration can be seen in Terry or Smith; if Terry and Smith lack carrying handles, such a handle is taught in Segesman.” Id. Further, Royal asserts that the reference in the Segesman patent to the Smith patent provided Hoover with an explicit teaching or motivation to combine the elements these two patents contain. Thus, Royal concludes, Hoover’s invention is obvious to a person with ordinary skill in the art, who presumably would have a familiarity with Terry, Smith, Segesman, and Burgoon.

As an initial matter, despite mild protestation by Hoover, the Court agrees with Royal that the Terry, Smith, Segesman, and Burgoon patents are all relevant prior art. These patents are directed at floor-scrubbing inventions and are thus within “the field of the inventor’s endeavor,” even though not all of the patents are necessarily directed particularly at scrubbing of carpeted floors. Shatterproof Glass Corp. v. Libbey- Owens Ford Co., 758 F.2d 613, 620 (Fed. Cir. 1985). Indeed, the 763 patent lists Terry, Smith and Burgoon as references.⁹ And, as noted above, the Segesman patent was cited in the 763 patent’s “parent” 977 patent. In other words, not only is Royal correct that the Terry, Smith, Segesman, and Burgoon patents are all relevant prior art, but it is clear that the patent examiner was aware of all this prior art during the prosecution of the patent.

⁹ In fact, the file wrapper reveals that: (1) examiner Moore initially rejected some of the claims in the 763 patent, citing Terry and Burgoon; and (2) later, Hoover used “Form 1449” to disclose to the PTO the Smith patent as an example of “information or art known to [Hoover] and having an extent of relevance to the [763 patent] application.”

What Royal is essentially arguing, then, is that, even though the patent examiner knew of all the relevant prior art that Royal now cites, and even though the examiner, who is primarily testing for obviousness, allowed the 763 patent to issue, the patent is nonetheless invalid for obviousness. Certainly, the patent examiner's decision on obviousness is not conclusive. But, as noted above, the challenger's burden of showing obviousness "is especially difficult when the prior art was before the PTO examiner during prosecution of the application." Al-Site Corp. v. VSI Intern., Inc., 174 F.3d 1308, 1323 (Fed. Cir. 1999).

In this case, Royal fails to carry its burden. "To establish a prima facie case of obviousness, there must be a teaching in the prior art that would lead one of ordinary skill to combine the relevant teachings of the prior art references." Lenco Racing Co., Inc. v. Jolliffe, 10 Fed. Appx. 865, 868, 2001 WL 294147 at *3 (Fed. Cir. Mar. 26, 2001) (citing Tec Air, Inc. v. Denso Mfg. Mich. Inc., 192 F.3d 1353, 1359-60 (Fed. Cir. 1999)). Thus, it is not enough to point to the existence of the elements of a claim in various prior art references; the prior art must teach the particular combination that is the claimed invention. In re Gorman, 933 F.2d at 986. Notably, Royal offers neither any evidence regarding the level of ordinary skill in the art (e.g., educational level and so on, see, e.g., Ryko, 950 F.2d at 718), nor an affidavit from a person of ordinary skill in the art attesting that Hoover's invention was obvious. Rather, Royal merely points to different elements claimed in prior patents and asserts it was obvious to combine them. This is not enough; not only does Royal oversimplify when it asserts that all of the elements of claim 13 of the 763 patent can be found in various prior art references, it is completely conclusory for Royal to assert, without evidentiary support, that no one with skill in the art could conclude it was an "invention" to combine these elements as Hoover did. In fact, the only record evidence suggests that persons skilled in the

art would not find the invention obvious.

Moreover, even if the Court could conclude Royal made out a prima facie case of obviousness, “objective evidence of non-obviousness may be used by a patentee ‘to rebut a prima facie case of obviousness based on prior art references.’” Lencco Racing, 10 Fed. Appx. at 869, 2001 WL 294147 at *3 (quoting WMS Gaming, Inc. v. Int’l Game Tech., 184 F.3d 1339, 1359 (Fed. Cir. 1999)). This objective evidence includes commercial success. Graham, 383 U.S. at 17-18. Here, Hoover points to the surpassing commercial achievement of its SteamVac product line – it is the single most successful new product in Hoover’s entire company history. Royal counters that Hoover has not adduced evidence linking this success to the novel features of claim 13 of the 763 patent: Royal states that “the success of the device could as easily be attributed to the money Hoover spent marketing the device, or to the coloration of the product.” Reply at 11.

Hoover’s prima facie evidence of non-obviousness, however, is still stronger than Royal’s prima facie evidence of obviousness. As the Federal Circuit Court of Appeals has explained:

[The patent challenger] argues that [the patentee] failed to produce evidence of a nexus between the merits of the invention and its commercial success. Such a nexus is required to prove that the commercial success is not ascribable to other irrelevant commercial and economic factors. However, prima facie evidence of nexus is established if there was commercial success and if the invention disclosed in the patent was that which was commercially successful. Sufficient prima facie evidence [exists] . . . to withstand summary judgment on the nexus issue. Hence, we assume that a nexus existed between the commercial success and the merits of the invention.

Ryko, 950 F.2d at 719. In this case, the Hoover SteamVac is the preferred embodiment described in the 763 patent, complete with all elements of claim 13. This provides at least prima facie secondary evidence of non-obviousness.

In sum, in the circumstances presented, Royal bears an especially heavy burden of persuasion of showing obviousness, and it does not carry that burden sufficiently to warrant judgment as a

matter of law. Indeed, without a more substantial showing on this issue, it is questionable whether Royal could convince the Court even to submit the question of obviousness to a jury.

D. The 673 Patent.

Royal and Hoover both move for summary judgment on the question of whether Royal's Easy Steamer infringes claim 7 of Hoover's 673 patent, either literally or under the doctrine of equivalents. Claim 7 of the 673 patent contains language referring to the design and configuration of one of the tanks on the extractor. Specifically, the claim contains the following language:

A liquid container adapted to be removably mounted upon an ambulatory machine, said container comprising a hollow body having a top portion, a combination carrying handle and securement latch member pivotally attached to said top portion wherein said combination handle and latch member is adapted to coact with cooperating catch means on said ambulatory machine to releasably mount said liquid container upon said machine.

The parties focus on the claim limitation describing the "combination carrying handle and securement latch member pivotally attached," which Royal insists is not present on the Easy Steamer. Hoover stipulates that this limitation is not present on the supply tank of the Easy Steamer, but insists the limitation is present on the recovery tank. The Court concludes that it cannot answer the question of infringement of the 673 patent as a matter of law.

In its Markman Order, the Court examined the phrase "a combination carrying handle and securement latch member pivotally attached to said top portion wherein said combination handle and latch member is adapted to coact with cooperating catch means on said ambulatory machine."

Markman Order at 25-27.¹⁰ The Court concluded that “the phrase ‘combination carrying handle and securement latch member’ means ‘a single member that functions as both a handle and a securement latch.’” Id. at 25-26. The Court further concluded that the phrase “member pivotally attached to said top portion” must be construed to mean “a movable member mounted on the tank to assist in carrying the tank and securing the tank to the ambulatory machine.” Id. at 27. The Court further explained that it would be

inappropriate to allow any construction of the phrase “securement latch member pivotally attached to said top portion” to include a meaning where: (1) the securement latch member attached to the tank is not the moveable, male component of the latching mechanism; or (2) the securement latch member attached to the tank is not also the carrying handle.

Id.¹¹

The question, then, is whether the recovery tank on the Easy Steamer has attached to it a device that is: (1) “a single member that functions as both a handle and a securement latch;” and (2) “a movable member mounted on the tank to assist in carrying the tank and securing the tank to the ambulatory machine.” The Court addresses this question by examining the Royal product itself, and referring to a number of drawings.

¹⁰ The Court underscores here that: (1) the latch mechanism claimed in Hoover’s 763 patent is different from the latch mechanism claimed in Hoover’s 673 patent; and (2) the latch mechanisms on Royal’s supply tank and recovery tank, discussed at length in this memorandum, are not the same.

¹¹ The Court reached this conclusion, in part, because the language of claim 7 of the 673 patent refers to a “catch” and a “latch,” in contrast with the language of claim 13 of the 763 patent, which referred only to a “latch.” See Markman Order at 26-27.

The Easy Steamer's "Dirty Water Tank" is a clear plastic vessel attached to the base of the extractor. On top of this tank is attached a black, U-shaped piece of plastic, which the Easy Steamer owner's manual identifies as the "Dirty Water Tank Handle." See Figure 1. This "Handle" has a lip, or ledge, which fastens into a matching ledge on what the owner's manual identifies as a "Dirty Water Tank Latch." Put differently, the Handle and Latch have mating surfaces which coact to

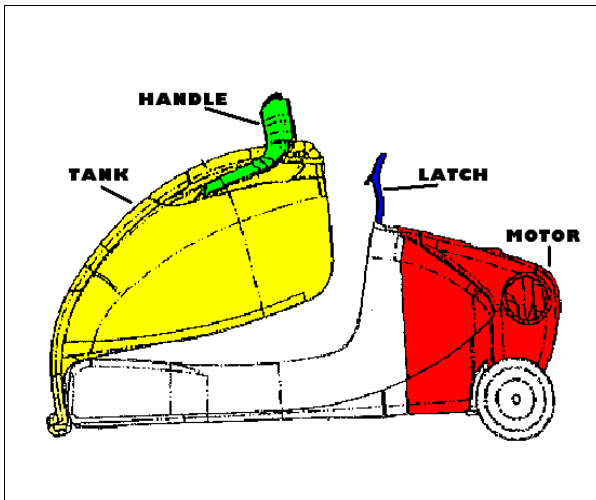


Figure 1

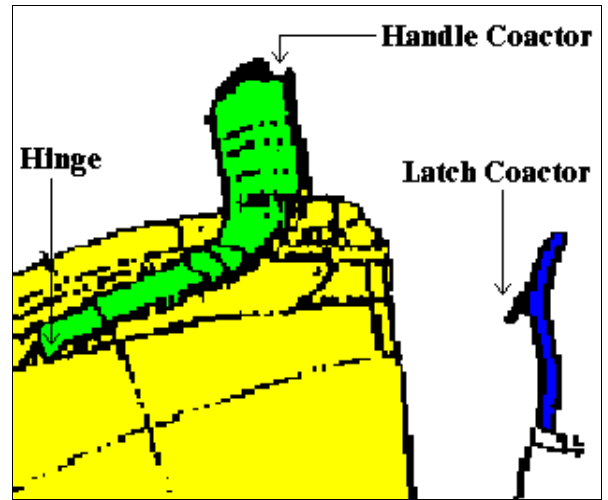


Figure 2

secure the tank to the extractor base. See Figure 2.

There is no question but that the U-shaped piece of plastic attached to the Royal Dirty Water Tank: (1) is a movable member mounted to the tank – it is hinged to the Dirty Water Tank, and has a swing-arc of about 180°; (2) is a handle – it is clearly so identified in Royal's owner's manual, and works quite well as a handle; and (3) working together ("coacting") with the Latch, secures the tank to the extractor – the owner's manual makes clear that the user must depress the "Latch" to release this "Handle" in order to unloose the Dirty Water Tank from the extractor base.

There remains some question, however, regarding whether the U-shaped piece of plastic is

also a “securement latch.” This question is less-than-straightforward because of the way the Handle and Latch coact to provide securement of the tank to the extractor. Both the Handle and the Latch move – neither one is fixed. The Handle is hinged to the tank, while the Latch is hinged to the extractor, displacing to the right (in Figure 2) to receive and release the Handle. Furthermore, neither the Latch nor the Handle can be clearly identified as the male or female coactor, because each of the two parts have a V-shape that receives the other part – similar to a padlock, or to the couplers on a toy train. See Figures 3 & 4.¹²



Interior of Combination Padlock

Figure **Figure 3**



Toy Train Coupler

Figure 4

Because both the Latch and Handle move, and because both can be viewed as either “male” or “female,” the parties’ descriptions of the Royal mechanism are painstakingly divergent. Royal

¹² As can be seen in Figure 3, both of the two mating components in a padlock have a protrusion and an indentation – the protrusions of each fit the indentations of each – and both of the two components move – that is, neither are fixed. The Handle and Latch securing the Royal Easy Steamer Dirty Water Tank work essentially the same way. The couplers that allow two toy train cars to attach, shown in Figure 4, work in a similar fashion – both couplers move, and each coupler extends into the other’s notch.

suggests that an operator of its Easy Steamer should push on the Latch and pull on the side of the Dirty Water Tank to remove it from the extractor, carefully avoiding use of the Handle until the tank is disengaged. This way, the Handle does not move until the tank is released, and Royal can call the Handle “fixed,” even though it is hinged. Furthermore, Royal focuses only on the indentation on the Handle that receives the Latch, ignoring the protrusion on the Handle received by the Latch, and thereby calls the Handle the “female” component. Using this description, Royal states the Handle is a female, fixed component. Royal concludes that, because the Court construed Hoover’s claim language to mean that the “securement latch member attached to the tank” had to be “the moveable, male component of the latching mechanism,” the Easy Steamer does not infringe claim 7 of the 673 patent.

Hoover, on the other hand, suggests (more realistically) that the operator of the Easy Steamer should release the Dirty Water Tank by depressing the Latch, swinging the Handle up, and then grabbing the Handle to pull the tank off of the extractor’s base.¹³ By so doing, Hoover argues, the operator has depressed a “catch” (the Latch) to release a movable “latch” (the Handle). Further, in arguments that mirror Royal’s, Hoover focuses only on the protrusion on the Handle that is received by the Latch, ignoring the indentation on the Handle that receives the Latch, and thereby calls the Handle the “male” component. Hoover concludes that the Handle on the Easy Steamer’s Dirty Water Tank is, therefore, a male, movable component, meeting every limitation of claim 7 of the 673

¹³ It is extremely unlikely that a user would not use the hinged Handle during initial disengagement of the Dirty Water Tank by swinging it free from the Latch while lifting the Tank from the base. As Hoover notes, “[e]ven assuming that [Royal] establishes that its [Easy Steamer] will not infringe under a particular set of controlled circumstances [e.g., avoiding use of the Handle while removing the Dirty Water Tank], . . . this has little bearing on whether its [Easy Steamer] will avoid infringement under other foreseeable operating conditions.” Cannon Computer Sys., Inc. v. Nu-Kote Int’l, Inc., 134 F.3d 1085, 1089 (Fed. Cir. 1998).

patent as construed by the Court.

That the parties' descriptions of a fairly simple mechanism are so different leads the Court to conclude that the question of literal infringement is one for the jury. The Court's view is that the most reasonable description of the Easy Steamer Handle and Latch is that both are movable, female catches, which catch each other, and the Royal product, therefore, does not literally infringe.¹⁴ But a jury could also reasonably conclude that Hoover is correct: the Handle is a male, movable latch coacting with a female catch, and the Easy Steamer literally infringes the 673 patent. Furthermore, given the factual dispute, the Court cannot conclude as a matter of law that the Easy Steamer Handle and Latch perform substantially the same function, in substantially the same way, to achieve substantially the same result, as the mechanism described in claim 7 of the 673 patent. Hoover appears to have a strong equivalency argument, but the Court ultimately believes a reasonable jury could find for either party on the question of infringement, either literally or under the doctrine of equivalents. Accordingly, the Court will deny Royal's and Hoover's cross-motions for summary judgment.

¹⁴ The Court admits that, when it undertook claim construction in the Markman Order, it did not conceive of a latch mechanism made up of two movable components, nor a mechanism made up of two components that are both catches. See Markman Order at 21-22 (discussing the confusing meaning of the term "latch"). The dictionary definition of the term "latch," however, does permit for the term to mean a mechanism made up of two movable, mating catches. See Merriam Webster's Collegiate Dictionary at 657 (10th ed. 1994) (defining "latch" to mean "any of various devices in which mating mechanical parts engage to fasten but usually not to lock something"). The Court did not consider the possibility of two catches, or female components, as "mating," but the world of mechanics clearly permits this to occur. In any event, if a jury concludes the Handle and Latch that work to secure the Easy Steamer Dirty Water Tank to the extractor base are both "catches," then the Easy Steamer does not literally infringe, because the patent claims a "latch member . . . adapted to coact with cooperating catch means" (emphasis added). A jury could still conclude, however, that the Easy Steamer infringes under the doctrine of equivalents.

E. The 977 Patent.

Finally, Royal moves for summary judgment on the question of its Easy Steamer infringes independent claims 1, 2, 15, and 20 of Hoover’s 977 patent.¹⁵ Royal asserts its product does not read on the claims of the Hoover patent and that the Court, accordingly, should enter judgment of non-infringement as a matter of law. Hoover concedes that the Easy Steamer does not literally infringe, but asserts it does infringe under the doctrine of equivalents and asks the Court to reserve that question for trial.

The allegedly infringed claims contain language referring to two different aspects of the design and configuration of the extractor: (1) the method for wetting the carpet, and (2) the relation of the motor to one of the tanks. Specifically, claims 1, 2, 15, and 20 of the 977 patent each include the following claim language: “[a] carpet extractor comprising . . . a base frame, said base frame including . . . cleaning solution distribution means for applying cleaning solution upon the surface being cleaned” (emphasis added). Claims 1 and 20 also disclose that two components of the invention – the “vacuum producing means” and the “cleaning solution recovery tank” – have a specific structural relationship: “said recovery tank surrounding at least a portion of said vacuum producing means” (emphasis added).

In its Markman Order, the Court construed “cleaning solution distribution means” to mean “a structure that discharges liquid cleaning solution into an airflow exiting the discharge nozzle, and equivalents thereof.” Markman Order at 11. The Court also ruled that “cleaning distribution means”

¹⁵ Hoover also claims infringement of a number of dependent claims, but if none of the independent claims are infringed, then none of the dependant claims are, either. See Wahpeton Canvas Co. v. Frontier, Inc., 870 F.2d 1546, 1553 (Fed. Cir. 1989) (“[i]t is axiomatic that dependent claims cannot be found infringed unless the claims from which they depend have been found to have been infringed”).

could not be construed as a “spray nozzle.” The Court explained:

the term “spray nozzle” is generally understood to include (if not be limited to) a structure that performs the function of expulsion of a liquid stream or mist by expelling the liquid under pressure through a small hole (e.g., a garden hose or a spray bottle). But the patent specification in this case suggests a very different means of performing the function of distributing cleaning solution: discharging the “[l]iquid cleaning solution . . . into the turbulent airflow . . . exiting [the] discharge nozzle.” Rather than specifying the expulsion of liquid through a small hole, the patent explicitly specifies that the “cleaning solution distribution means” occurs using a structure that expels liquid into an existing air stream.

Id. (emphasis in original). The Court went on to hold that the phrase “surrounding at least a portion of” would be given its ordinary and customary meaning. Id. at 14-15.

As far as the Court’s construction that “cleaning solution distribution means” means “a structure that discharges liquid cleaning solution into an airflow exiting the discharge nozzle, and equivalents thereof,” id. at 11 (emphasis added), the Court is careful to note the difference between “an equivalence analysis under [35 U.S.C.] §112, ¶6, and the doctrine of equivalents.” Chiuminatta Concrete Concepts, Inc. v. Cardinal Inds., Inc., 145 F.3d 1303, 1310 (Fed. Cir. 1998). “Both §112, ¶6, and the doctrine of equivalents protect the substance of a patentee’s right to exclude by preventing mere colorable differences or slight improvements from escaping infringement.” Id. Section 112, ¶6, however, provides this protection “by incorporating equivalents of disclosed structures into the literal scope of a functional claim limitation,” while the doctrine of equivalents provides this protection “by holding as infringements equivalents that are beyond the literal scope of the claim.” Id. The Court must apply the statutory equivalency test, and not the judicial doctrine-of-equivalents test, if the allegedly equivalent structure already existed at the time the patent issued. Id. at 1310-11; see Al-Site Corp. v. VSI Intern., Inc., 174 F.3d 1308, 1320 (Fed. Cir. 1999) (“an equivalent structure or act under §112 for literal infringement must have been available at the time

of patent issuance while an equivalent under the doctrine of equivalents may arise after patent issuance and before the time of infringement”). In this case, the Court uses the statutory test because, as Hoover effectively concedes, Royal’s allegedly equivalent structure does not “embrace technology developed after the issuance of the patent.” Al-Site Corp., 174 F.3d at 1320.

The two “tests for equivalence are closely related,” id., but “the statutory equivalence analysis, while rooted in similar concepts of insubstantial differences as its doctrine of equivalents counterpart, is narrower.” Odetics, Inc. v. Storage Tech. Corp., 185 F.3d 1259, 1267 (Fed. Cir. 1999); see Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co., 520 U.S. 17, 28 (1997) (structural equivalence under § 112, ¶ 6 is “an application of the doctrine of equivalents . . . in a restrictive role”). The content of the test for insubstantial differences under § 112, ¶ 6 “reduces to ‘way’ and ‘result.’ That is, the statutory equivalence analysis requires a determination of whether the ‘way’ the assertedly substitute structure performs the claimed function, and the ‘result’ of that performance, is substantially different from the ‘way’ the claimed function is performed by the ‘corresponding structure, acts, or materials described in the specification,’ or its ‘result.’” Odetics, 185 F.3d at 1267

Structural equivalence under § 112, ¶ 6 is met only “if the differences are insubstantial; that is, if the assertedly equivalent structure performs the claimed function in substantially the same way to achieve substantially the same result as the corresponding structure described in the specification.” Id. (citing Chiuminatta, 145 F.3d at 1308). “Whether an accused device or method infringes a claim with a § 112, ¶ 6 limitation . . . is a question of fact.” IMS Technology, Inc. v. Haas Automation, Inc., 206 F.3d 1422, 1430 (Fed. Cir. 2000).

Examination of the Royal Easy Steamer reveals that it distributes cleaning solution onto the

carpet using a means, or “way,” that is not equivalent to Hoover’s “cleaning solution distribution means,” as the Court has construed that term. The Easy Steamer has a row of nozzles, or small holes, arranged above a rotating scrub brush that is in contact with the carpet. Cleaning solution is then mechanically pumped from a tank through the nozzles, which spray the fluid onto the scrub brush. The mechanism is virtually identical to the common spray-bottle: mechanically-induced pressure forces fluid through a small hole, creating a mist or stream of fluid. Notably, there is no separate air stream affiliated with Royal’s cleaning fluid dispersion mechanism; neither the Easy Steamer motor’s intake air stream (which creates suction) nor its exhaust air stream facilitate the distribution of cleaning solution onto the scrub brush or the carpet.

The Hoover SteamVac, in contrast, does not use pressure to push fluid from a tank. As described in the 977 patent, “cleaning solution flows, by gravity, from [the] supply tank . . . through ducts and into the turbulent airflow” (emphasis added, numerical references deleted). Further, the turbulent airflow, which is the product of two exhaust airstreams “converging immediately downstream of the [cleaning solution discharge apertures],” uses the Venturi effect to suck cleaning solution from the supply tank.¹⁶ Thus, the SteamVac’s cleaning fluid is not atomized by virtue of leaving a small hole under pressure; rather, the fluid is sucked into a turbulent air stream, created by exhaust from the SteamVac’s motor, and the fluid is atomized. The Royal mechanism does not atomize the cleaning solution at all.

Hoover argues that the differences between its and Royal’s mechanisms are insubstantial,

¹⁶ Royal draws an accurate analogy: the Royal Easy Steamer mechanism acts like a fuel-injector to spray cleaning solution onto the rotating scrub brush, while the Hoover SteamVac mechanism acts like a carburetor to suck cleaning solution into an airflow that is directed at the carpet.

in that they both use pressure to spray liquid. In the same way, however, Hoover could argue that the differences between a carbureted engine and a fuel-injected engine are insubstantial because both mix gasoline with air – the argument proves too much. The undisputed facts show that the Royal Easy Steamer does not distribute cleaning solution in “substantially the same way” as is described in the 977 patent. Hoover attempts to use the doctrine of equivalents to show infringement, but this doctrine “cannot be used to erase meaningful structural and functional limitations of the claim.” Conopco, Inc. v. May Dept. Stores Co., 46 F.3d 1556, 1562 (Fed. Cir. 1994) (citations and internal quotation marks omitted). The Court construed “cleaning solution distribution means” to mean “a structure that discharges liquid cleaning solution into an airflow;” the Royal mechanism does not discharge cleaning solution into an airflow. Nor does the Royal mechanism use a “substantially equivalent way” to wet the carpet. To the contrary, the Royal product uses a pressurized spray nozzle, which the Court explicitly stated was a “very different” mechanism. Markman Order at 11. To say that the “cleaning solution distribution means” claimed in the 977 patent performs in substantially the same way as the Royal mechanism is to completely eliminate the required “airflow element” of the claim language.

Given the Court’s conclusion that the Royal Easy Steamer is not the structural equivalent of at least one of the elements of claims 1, 2, 15, and 20 of Hoover’s 977 patent – the “cleaning solution distribution means – the Court need not address the question of whether the Easy Steamer reads on any other elements of those claims (e.g., whether a tank “surround[s] at least a portion of” the motor). The Royal product does not include every limitation of the 977 patent claims at issue. Based on the undisputed facts, no reasonable jury could find the Royal product is equivalent, under

§112, ¶6, to the structure disclosed in the 977 patent. Accordingly, Royal is entitled to judgment of non-infringement of the 977 patent as a matter of law.

IT IS SO ORDERED.

**KATHLEEN McDONALD O'MALLEY
UNITED STATES DISTRICT JUDGE**

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