United States District Court,
N.D. Illinois, Eastern Division.

WM. WRIGLEY JR. COMPANY, a Delaware Corporation,
Plaintiff.
v.
CADBURY ADAMS USA LLC, a Delaware Limited Liability Corporation,
Defendants.

No. 04 C 346

May 18, 2007.

Background: Patent owner brought action against competitor alleging infringement of patent directed toward method for producing chewing gum containing certain physiological cooling agents. Competitor counterclaimed alleging infringement of patent directed toward method for producing chewing gum containing certain physiological cooling agents. Court set forth to construe disputed claims.

Holdings: The District Court, Zagel, J., held that:
(1) term, "menthol," meant menthol, as distinct and separate substance, as distinguished from being present in mint oils;
(2) phrase, "physiological cooling agent," meant compound which was perceived as cold or cool when contacted with human body and, in particular, with mucous membranes of mouth, nose and throat;
(3) phrase, "N-substituted-p-menthane carboxamide," meant class of molecules with chemical formulas set forth in claims of patent;
(4) phrase, "N-ethyl-p-menthane-3-carboxamide," meant N-substituted-p-menthane carboxamide known by trade name WS-3;
(5) claim differentiation presumption applied;
(6) statements in prosecution history did not provide basis for application of judicial estoppel;
(7) claim did not require 30% threshold ratio of carboxamide to total weight of cooling composition; and
(8) patent disclaimed all compounds other than N-substituted-p-menthane carboxamides.

Claims construed.

5,009,893, 6,627,233. Construed.

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MEMORANDUM OPINION AND ORDER

ZAGEL**, District Judge.**

On January 20, 2004, Plaintiff WM. Wrigley Jr. Co. ("Wrigley") filed suit against Cadbury Adams USA, LLC ("Cadbury") alleging infringement of United States Patent No. 6,627,233 ("'233 Patent"). The subject of the patent is a method for producing a chewing gum containing certain physiological cooling agents. In return, Cadbury countersued alleging infringement of United States Patent No. 5,009,893 ("'893 Patent"). The '893 Patent also claims a chewing gum or confectionary product containing physiological cooling agents. The parties have asked me to construe the meaning of several disputed claim terms.

I. The Standard Principles of Claim Construction

[1] [2] [3] Claim construction is a matter of law for the court to decide. Markman v. Westview Instruments, Inc., 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). In order "[t]o ascertain the meaning of claims, [the court] consider[s] three sources: The claims, the specification, and the prosecution history." Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed.Cir.1995) (citations omitted). These three sources are the intrinsic evidence, public records available for all to consult and rely upon when determining the meaning and scope of a patent claim. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1583 (Fed.Cir.1996). When the intrinsic evidence unambiguously describes the scope of a patented invention, reliance on extrinsic evidence, such as expert testimony and treatises, is inappropriate. Id.

[4] [5] [6] [7] Claim interpretation begins with the actual language of the claims. Bell Communs. Research v. Vitalink Communs. Corp., 55 F.3d 615, 619-20 (Fed.Cir.1995). Generally, the words, phrases and terms in patent claims should receive their ordinary and accustomed meaning. Johnson Worldwide Assocs. v. Zebco Corp., 175 F.3d 985, 989 (Fed.Cir.1999). The strong presumption in favor of the ordinary meaning may be overcome only when the patentee "clearly set[s] forth a definition for a claim term in the specification." Anchor Wall Sys. v. Rockwood Retaining Walls, Inc., 340 F.3d 1298, 1306 (Fed.Cir.2003) (*citing* Johnson Worldwide Assoc., 175 F.3d at 989-90). "[A] technical term used in a patent claim is interpreted as having the meaning a person of ordinary skill in the field of the invention would understand it to mean." Dow Chem. Co. v. Sumitomo Chem. Co., 257 F.3d 1364, 1372 (Fed.Cir.2001) (citation omitted).

[8] [9] "Claims must be read in view of the specification, of which they are a part." Markman, 52 F.3d at 979 (citations omitted). The specification may reveal "whether the inventor has used any terms in a manner inconsistent with their ordinary meaning." Vitronics Corp., 90 F.3d at 1582 (also noting that "the specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term"). The specification also serves as an aid in determining "the meaning of the claim term as it is used ... in the context of the entirety of [the] invention." Interactive Gift Express, Inc. v. Compuserve Inc., 231 F.3d 859, 866 (Fed.Cir.2000) (*quoting* Comark Communs., Inc. v. Harris Corp., 156 F.3d 1182, 1187 (Fed.Cir.1998)).

[10] [11] [12] The claims, however, are not limited to the embodiment shown in the specifications. Anchor Wall, 340 F.3d at 1306-07; Transmatic, Inc. v. Gulton Indus., 53 F.3d 1270, 1277 (Fed.Cir.1995). Limitations appearing only in the specifications cannot be read into a claim because "the claim, not the specification, measures the invention." Howes v. Zircon Corp., 992 F.Supp. 957, 961 (N.D.Ill.1998) (*citing* SRI Int'l v. Matsushita Elec. Corp. Of Am., 775 F.2d 1107 (Fed.Cir.1985)). However, when the specification "makes clear that the invention does not include a particular feature, that feature is deemed to be outside the reach of the claims of the patent, even though the language of the claims, read without reference to the specification, might be considered broad enough to encompass the feature in question." SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc., 242 F.3d 1337, 1341 (Fed.Cir.2001).

[13] [14] [15] [16] The publicly-available prosecution history, which details the proceedings before the Patent and Trademark Office ("PTO"), may limit the interpretation of claim terms by revealing express representations made by the applicant regarding the scope of the claims or by excluding interpretations that were disclaimed during prosecution. Vitronics, 90 F.3d at 1582-83. However, "unless altering claim language to escape an examiner rejection, a patent applicant only limits claims during prosecution by clearly disavowing claim coverage." Kopykake Enters. v. Lucks Co., 264 F.3d 1377, 1382 (Fed.Cir.2001) (internal quotation and citation omitted). Any such disavowal "must be clear and unmistakable." Anchor Wall, 340 F.3d at 1307. Finally, extrinsic evidence such as expert testimony may be considered only where the language of the claims remains ambiguous after consideration of the claim language, specification and file history. Key Pharms. v. Hercon Lab. Corp., 161 F.3d 709, 716 (Fed.Cir.1998). "[E]xtrinsic evidence in general, and expert testimony in particular, may be used only to help the court come to the proper understanding of the claims; it may not be used to vary or contradict the claim language." Vitronics, 90 F.3d at 1584.

II. Claims Requiring Construction

A. The '233 Patent **Claims**

[17] The claims in the '233 Patent which require construction are stated below, with the disputed terms emphasized.

5. A coated chewing gum, the coating comprising:

a) a coating material and

b) a **physiological cooling agent.**

. . . . .

34. A chewing gum composition comprising:

a) about 5% to about 95% gum base;

b) about 5% to about 95% bulking and sweetening agent; and

c) about 0.1 to about 10% flavoring agent wherein the flavoring agent comprises N-2,3-trimethyl-2-isopropyl butanamide and **menthol.** FN1

FN1. Cadbury may have initially disputed several other claim terms, but does not do so now. It stated that the terms "%," "gum base," "bulking and sweetening agent," "flavoring agent," "comprises" and "N-2,3-trimethyl-2-isopropyl butanamide" are all well-known terms that may be understood according to their ordinary and generally accepted meaning and does not argue with the meanings put forth by Wrigley, which will be the meanings used during claim construction. Those terms and their meanings are listed below.

"**About**" is construed as "approximately."

"**%**" is construed as "percent by weight of the chewing gum composition."

"**Gum base**" is construed as "water-insoluble chewable portion."

"**Bulking and sweetening agent**" is construed as "one or more ingredients that impart sweetness and provide bulk."

"**Flavoring agent**" is construed as "natural and/or artificial flavors."

"**Comprises**" is construed as "includes the following elements but does not exclude others."

"**N-2,3-trimethyl-2isopropyl butanamide**" is construed as "a carboxamide formula commonly known as WS-23."

B. The '893 Patent **Claims**

Cadbury argues that Wrigley has infringed on independent claim 1 and dependent claims 2, 3 and 6, and independent claim 12 and dependent claims 13 and 17 of the '893 patent. Those claims are stated below, with the disputed terms emphasized.

1. A chewing gum composition capable of providing long-lasting, breath freshening perception without bitterness comprising a gum base, a sweetener and a cooling composition comprising **menthol** and an **N-substituted-p-menthane carboxamide** of the formula: $C_6CO\text{-}NR_1R_2$ wherein R_1, when taken separately, is selected from the group consisting of hydrogen, and an aliphatic radical containing up to 25 carbon atoms;

R_2, when taken separately is selected from the group consisting of a hydroxy radical, and an aliphatic radical containing up to 25 carbon atoms, with the proviso that when R_1 is hydrogen, R_2 may also be an aryl radical of up to 10 carbon atoms and selected from substituted phenyl, phenalkyl, naphthyl and substituted naphthyl, and pyridyl; and

R_1 and R_2 when taken together, represent a cyclic or heterocyclic group of up to 25 carbon atoms.

2. The chewing gum composition of claim 1 wherein the N-substituted-p-menthane carboxamide is **N-**

ethyl-p-menthane-3-carboxamide.

3. The chewing gum composition of claim 1 wherein the methanol and N-substituted-p-menthane carboxamide are used in amounts of about 30 to about 95% by weight N-substituted p-menthane carboxamide and about 5 to about 7% by weight methanol, all weights being by weight of the cooling composition.

6. The chewing gum composition of claim 1 wherein the cooling composition is present in the chewing gum composition in the amount of about 0.01 to about 2% by weight of the total chewing gum composition.

12. A confectionery composition capable of providing long-lasting, breath freshening perception without bitterness comprising a confectionary matrix and a cooling composition comprising **menthol** and an **N-substituted-p-menthane carboxamide** of the formula: $C_6CO\text{-}NR_1R_2$ wherein R_1 when taken separately, is selected from the group consisting of hydrogen, and an aliphatic radical containing up to 25 carbon atoms;

R_2, when taken separately is selected from the group consisting of a hydroxy radical, and an aliphatic radical containing up to 25 carbon atoms, with the proviso that when R_1 is hydrogen R_2 may also be an aryl radical of up to 10 carbon atoms and selected from substituted phenyl, phenalkyl, naphthyl and substituted naphthyl, and pyridyl; and

R_1 and R_2 when taken together, represent a cyclic or heterocyclic group of up to 25 carbon atoms.

13. The confectionery composition of claim 12 wherein the N-substituted-p-menthane carboxamide is **N-ethyl-p-menthane-3-carboxamide.**

17. The confectionery composition of claim 12 wherein the cooling composition is present in the confectionery composition in an amount of about .01 to about 2% by weight of the total confectionery composition.

III. The '233 Patent

A. "Menthol"

Wrigley seeks to construe menthol as "menthol in its pure or separated form." Cadbury objects to that phrasing because it insists that Wrigley is improperly adding qualifiers/modifiers to a term that is self-explanatory. According to Cadbury, use of the term menthol should refer to the plain and ordinary meaning of menthol as the molecule defined by the molecular formula $C_{10}H_{20}O$, regardless of whether that molecule is separate or part of another substance. While Cadbury's reading is a permissible lexical reading of the patent, based on the intrinsic evidence, I believe Wrigley's interpretation is true to the meaning in the patent. Although mint oils are an acceptable source of menthol, the patent specification consistently lists menthol and mint oils separately, and when it refers to menthol, it does so in many instances in which there is no peppermint oil present.

It is apparent from the language of the '233 Patent that, in nearly all of the situations in which the patent refers to menthol, it is not referring to any menthol that may exist in the formula as a result of the inclusion of any mint oils. Therefore, in the context of the '233 Patent, I am construing "menthol" as "menthol, as a distinct and separate substance, as distinguished from being present in mint oils." This construction does not

impose any restriction or requirement on the actual source of the menthol, it only acknowledgesthe fact that when the patent mentions menthol, it is not talking about any menthol already present as a result of mint oils. There is ample evidence suggesting that a person of ordinary skill in the art would not assume that the menthol indicated in the formula could be the same menthol contained in any added mint oils.

Claim 34 itself does not give any indication of whether it requires the menthol to be separate and distinct from any other substance, but the other claims offer further insight. Claim 1 refers to a "cooling flavor composition which ... does not impart a peppermint flavor ... comprising: about 40% to about 80% by weight menthol ...." ('233 Patent, 54:39-43). Specifically stating that the composition does not impart a peppermint flavor means that, even if peppermint oil (rather than some artificial means) was the original source of the menthol, that menthol is now a separate substance.

This same distinction is drawn again in several other claims in the patent. Indeed, it is drawn in nearly every other claim in which menthol is mentioned. Claim 12 is a dependent claim, adding a flavored coating chosen from a group including, "spearmint, peppermint, eucalyptus, fruity-mint, menthol, wintergreen, and combinations thereof." FN2 ('233 Patent, 55:23-25). Similar groupings are repeated in claims 17 and 23 as well. Lastly, Claim 36 refers to a flavoring agent which "is substantially free of menthol and other mint oil components." Menthol being mentioned completely independent of mint oils shows that the inventors considered the menthol as a separate substance. The ' 233 Patent even specifically states in the specification that the menthol used in a particular embodiment was "used in their separated, or pure, form, as distinguished from being present in peppermint oil." ('233 Patent, 11:66-12:1). By using menthol in such a way, it would prevent adding a peppermint flavor.

FN2. Admittedly, the use of the word menthol in this circumstance (referring to a flavor, rather than a chemical compound) is not identical to its use in the disputed claim, but it is still instructive in showing that Cadbury's proposed construction does not fit.

B. "Physiological Cooling Agent"

[18] Although Wrigley is not claiming infringement of Claim 5, that claim will still be analyzed throughout the course of this litigation, since it is the basis for an inequitable conduct argument by Cadbury that would render Claim 34 unenforceable. As a result, I will also construe the contested term in that claim. Wrigley proposes that "physiological cooling agent" be construed as:

A compound which is perceived as cold or cool when contacted with the human body and, in particular, with the mucous membranes of the mouth, nose and throat; excluded are traditional flavor-derivatives such as menthol or menthone; and included are those compounds listed in columns 9 and 10 of the ' 233 Patent.

Cadbury proposes that I use only the first part, "a compound which is perceived as cold or cool when contacted with the human body and, in particular, with the mucous membranes of the mouth, nose and throat." I will adopt Wrigley's construction, taken directly from the patent language, which describes and limits what should be considered a physiological cooling in that context.

C. Product-by-process

During the Markman hearing the parties discussed the issue of whether it is proper for Wrigley to insert wording into the patent that imposes a restriction on the origin of the ingredients. In its brief, citing IPXL

Holdings, L.L.C. v. Amazon.com, Inc., 430 F.3d 1377 (Fed.Cir.2005), Cadbury argues that Wrigley's claim would be in danger of being invalidated for indefiniteness if it was allowed to insert its "pure" and "separated" proposed modifier. However, the Federal Circuit's statement in IPXL that "reciting both an apparatus and a method of using that apparatus renders a claim indefinite," Id. at 1384, is inapplicable to this situation.

The other cases Cadbury cites are likewise inapplicable, since they primarily deal with whether the product in a product-by-process claim must be independently patentable. *See* Scripps Clinic & Research Foundation v. Genentech, Inc., 927 F.2d 1565, 1583-84 (Fed.Cir.1991); Aventis Pharms., Inc. v. Barr Labs., Inc., 335 F.Supp.2d 558, 581-82 (D.N.J.2004); Mannington Mills, Inc. v. Armstrong World Indus., Inc., 218 F.Supp.2d 594, 598-600 (D.Del.2002). In fact, contrary to Cadbury's assertions, other courts have decided that, "[n]o heed should be paid as to whether the claim is a 'pure product' or a product-by-process claim ...." Mannington Mills, 218 F.Supp.2d at 600.

IV. The '893 Patent

A. "Menthol"

Both sides propose essentially the same constructions for "menthol" as they did for the '233 Patent. For similar reasons, I will construe the term the same way, "menthol" means "menthol, as a distinct and separate substance, as distinguished from being present in mint oils." The context in which menthol is used in the '893 Patent makes it clear that it is being referred to as a separate substance.

Comparative C in Table I and Figure 1 further support the idea that when the patent refers to menthol, it is referring to menthol as a separate substance. Table I shows two inventive compositions and three comparatives. The only difference between the 5 formulas are the relative amounts of menthol and WS-3 in the cooling composition, which combined percentages add up to 0.1062% of the total weight of the formula. Each formula contains the same amount of peppermint oil. Comparative C consists of a cooling composition comprising only WS-3, without any menthol. Figure 1 then goes on to describe comparative C as the formula that contains a 100% carboxamide cooling composition. If Cadbury's argument, about the final mixture making the origin of any menthol irrelevant, was correct, then Table 1 could not claim the cooling composition was 100% carboxamide, because it still would have to take the menthol in the peppermint oil into account.

This same observation is borne out in every Table in the patent. Menthol is always listed as a separate ingredient of the cooling composition, apart from any mint oil that is present in the formula. When calculating the total weight of the formulas in each table, the weight of the menthol is calculated in addition to the weight of the mint oil, further demonstrating that it is considered separately.

B. "N-substituted-p-menthane carboxamide"

[19] Cadbury suggests that the term "N-substituted-p-menthane carboxamide." be construed as "a class of molecules with physiological cooling properties with the chemical formulas set forth in Claims 1 and 12 of the '893 Patent." Wrigley contends that I construe it as "a compound of the formula at column 4, lines 39-63; and which is at least 30% by weight of the combination with menthol." These two constructions are not much different. For reasons I will explain later, I decline to add the 30% limitation offered by Wrigley. In addition, I believe Cadbury's construction adds some unnecessary language. I construe "N-substituted-p-menthane carboxamide"to mean "a class of molecules with the chemical formulas set forth in Claims 1 and

12 of the ' 893 Patent."

C. "N-ethyl-p-menthane-3-carboxamide"

[20] Similarly to the prior term, the constructions proposed by the parties for this term do not differ significantly. Cadbury offers "a species of molecule from the genus of N-substituted-p-menthane carboxamides known by the trade name WS-3." Wrigley proposes "an N-substituted-p-menthane carboxamide commonly known as WS-3." I construe the term as "an N-substituted-p-menthane carboxamide known by the trade name WS-3."

D. Specification Disclaimers

Wrigley attacks Cadbury's proposed claim construction in two ways. First, for a variety of reasons, Wrigley claims that there should be a 30% threshold for the amount of N-substituted-p-menthane carboxamides in the cooling composition. This is a very close question. Secondly, Wrigley claims that the '893 patent disclaims all compounds other than N-substituted-p-menthane carboxamides.

1. The 30% Carboxamide Threshold Disclaimer

[21] Wrigley claims that Cadbury has disclaimed certain aspects of its invention in the patent specification. Patent claims must be construed in light of the specifications. Phillips v. AWH Corp., 415 F.3d 1303, 1313 (Fed.Cir.2005). "Where the specification makes clear that the invention does not include a particular feature, that feature is deemed to be outside the reach of the claims of the patent, even though the language of the claims, read without reference to the specification, might be considered broad enough to encompass the feature in question." SciMed Life Sys. v. Advanced Cardiovascular Sys., 242 F.3d 1337, 1341 (Fed.Cir.2001). "[E]xpressions of manifest exclusion or restriction [may represent] a clear disavowal of claim scope." Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1325 (Fed.Cir.2002).

[22] [23] In order to be considered a clear disavowal, it does not need to be explicitly stated. Describing features of the invention and criticizing other products that lack that feature can operate as a clear disavowal. *See* Astrazeneca AB v. Mut. Pharm. Co., 384 F.3d 1333, 1339-40 (Fed.Cir.2004). Listing the many reasons why the materials used in the patent are superior to those which were not used could also be considered a disavowal of the inferior materials. *See, e.g.,* Honeywell Int'l, Inc. v. ITT Indus., Inc., 452 F.3d 1312, 1320 (Fed.Cir.2006).

Specifically, Wrigley claims that, in the '893 patent specification, the inventors emphasized that a "critical" feature of the invention was that the cooling compositions include at least 30% N-substituted-p-menthane carboxamide by weight of the combination of N-substituted-p-menthane carboxamide and menthol. The specific language that Wrigley points to states that, "[i]t is critical that the amount of the N-substituted-p-menthane carboxamide compound not be below 30% by weight of the combination, since such low amounts fail to form products that exhibit long-lasting cooling which are not bitter." ('893 Patent, 4:26-31). According to Wrigley, by stating this, Cadbury disavowed the use of a cooling composition that includes less than that 30% carboxamide.

Cadbury replies that there is no 30% threshold in the invention. It points to formulation 4 from Table V of the patent, which it claims (after doing some calculations) has a carboxamide ratio of only 2%. Additionally, Cadbury argues that the doctrine of claim differentiation applies, and that including that 30% threshold would result in claims 1 and 3 of the patent no longer differing in scope. Lastly, Cadbury argues that

disclaimer argument is impermissible in view of the preferred embodiments listed in the '893 patent. It claims that the example with that 30% threshold is only a preferred embodiment of the invention. According to Cadbury, that embodiment cannot be read into claims that do not recite the same feature, and a claim may not be construed in a way that excludes the preferred embodiment.FN3

FN3. Cadbury rightly points out that only one of these somewhat contradictory rules is typically applicable in a single case.

i. Claim Differentiation

[24] [25] First, I will deal with Cadbury's argument concerning claim differentiation. "[T]he presence of a dependent claim that adds a particular limitation raises a presumption that the limitation in question is not found in the independent claim." Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 910 (Fed.Cir.2004). That presumption is even stronger "when the limitation in dispute is the only meaningful difference between an independent and dependent claim, and one party is urging that the limitation in the dependent claim should be read into the independent claim." SunRace Roots Enter. Co. v. SRAM Corp., 336 F.3d 1298, 1303 (Fed.Cir.2003). The party seeking to impose that limitation must show sufficient reason to overcome that presumption. *See* Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1187 (Fed.Cir.1998).

[26] Claim three certainly adds a 30% threshold for the carboxamide compound, similar to what Wrigley suggests is imposed on Claim 1 by the specification. However, that threshold is not the only meaningful difference between claim 1 and claim 3. Claim 3 also adds an important instruction that the amount of methanol in the compound should range between 5% and 7% by weight. Therefore, reading in the 30% limitation would not render dependent claim 3 completely superfluous and redundant. Cadbury's argument is inadequate to establish a strong presumption, but Wrigley does not have enough evidence to overcome a weak presumption.

ii. Judicial Estoppel

[27] [28] Wrigley argues that Cadbury is barred by judicial estoppel from presenting any claim construction that would be contrary to a statement that a 30% threshold for carboxamide in the cooling composition exists. The first statement Wrigley points to is related to U.S. Patent No. 5,698,181 ("'181 Patent"). The '181 Patent is another application submitted by Cadbury after the '893 Patent. During the prosecution history of the '181 Patent, Cadbury made several statements about the amount of carboxamide in the cooling composition in the '893 Patent being at least 30%. Wrigley claims that Cadbury is now bound by those statements. Wrigley also points to a similar statement that Cadbury supposedly made before the European Patent Office ("EPO").

[29] "[A]rguments from a later, unrelated patent prosecution cannot be used to interpret and/or limit an earlier, unrelated and already issued patent." Pfizer Inc. v. Ranbaxy Labs. Ltd., 405 F.Supp.2d 495, 506 (D.Del.2005). However, if the patents share some formal relationship, courts have made the prosecution history of the second patent available for construing the first. Goldenberg v. Cytogen, Inc., 373 F.3d 1158, 1167 (Fed.Cir.2004). Although the '181 Patent and the '893 Patent are directed toward very similar inventions and both patents were obtained by Cadbury, that shared ownership is not enough to use statements made during the prosecution of the '181 Patent. *See* Abbott Labs. v. Dey, L.P., 287 F.3d 1097, 1105 (Fed.Cir.2002) (finding that no formal relationship existed because, despite having the same owner and a shared inventor, a second application "was not filed as a continuation, continuation-in-part, or a divisional

application of [the first invention]").

Wrigley has not shown that the patents were related, and its attempt to couch this circumstance in terms of judicial estoppel (rather than prosecution estoppel) does not change the result, because it is still not convincing. *See* Pfizer, Inc. v. Ranbaxy Labs., Ltd., 457 F.3d 1284, 1290 (Fed.Cir.2006). With respect to Cadbury's statement concerning the '893 Patent that it made before the EPO, I make the same determination. The statements Wrigley is referring to were not made during an EPO prosecution of the '893 Patent. They were made during the prosecution of the European counterpart of the ' 181 Patent. It cannot be used to limit Cadbury here.

iii. 30% Threshold in the Specification

[30] After reviewing the patent, I believe the best way to construe it is that the claims do not require a 30% threshold ratio of carboxamide to the total weight of the cooling composition. This is the most consistent way to read the patent.

Table III supports the idea that there is no 30% threshold. The cooling composition in Inventive 5 is described as comprising 25% WS-3, and it is clearly presented as an example of the invention.FN4 Table V of the ' 893 patent sets forth 4 formulations in which the only differences are the amounts of menthol and "Cooling Compound 2470" added to the mixture and the amount of candy base used to keep the weight of the formula constant in the absence of the first two ingredients. The first formulation contains neither menthol nor cooling compound, the second contains menthol but no cooling compound, the third contains the cooling compound but no menthol and the fourth contains both ingredients. Figure 3 illustrates the results of the sensory perception test on those four formulations. In it, formula 4 clearly has the superior high initial cooling and long lasting cooling effect that the ' 893 patent claims is its innovation. Assuming that cooling compound 2470 and menthol together constitute the cooling composition of the invention, cooling compound 2470 would only be 2% by weight of the cooling composition in that formula.FN5

FN4. Wrigley attempts to argue that Table III does not include menthol, but it is clear that each cooling composition in that table contained a certain percentage of menthol and a certain percentage of WS-3.

FN5. The cooling composition contains 0.500g menthol and 0.010g cooling compound 2470

Wrigley claims that, because the patent does not contain any description of cooling compound 2470, formulation 4 (and thus, all of Table 4-since the other formulas are clearly not inventive) should be completely disregarded. It relies in part on a phrase from the EPO stating that, "[w]ith respect to example 4 of table V, the proprietor replied that there was no information as to the nature of 'cooling composition 2470.' " Based on this statement, it argues that table V does not include any Inventive compositions. However, that phrase is ambiguous at best, and is not sufficient reason to completely disregard one of the Tables presented in the patent. It is reasonable to infer that Table V appears in the patent because it contains at least one inventive formula-formula 4.

Using this reading, the only part of the patent that still raises a question is Table I, which supports Wrigley's idea of a 30% threshold. In that table, the formula for Comparative B has a ratio of only 25%-within the bounds the '893 Patent supposedly encompasses. The only differences listed between that Comparative and

the two Inventive formulas are the amounts of menthol and WS-3. This raises the question of why the inventors did not consider Comparative B to be part of the invention. Although there is no explanation for that apparent error, I am not convinced that it is enough evidence to imply a 30% ratio and therefore cause me to disregard the straightforward information in Tables III and V.

Lastly, the statement in the patent that it is critical that the caboxamide ratio in the cooling composition not fall below 30% can be explained as being a property of the preferred embodiment. Combined with the information presented in Tables III and V, it does not act as a clear disavowal. I recognize that Wrigley's reading is not only a permissible reading, but a plausible one as well. It loses by a narrow margin to Cadbury's more plausible construction.

2. Compounds other than N-substituted-p-menthane Carboxamides

[31] Wrigley claims that the '893 Patent disclaims all compounds other than N-substituted-p-menthane carboxamides. The '893 Patent incorporates by reference U.S. Patent No. 4,136,163 ("'163 Patent"), which Wrigley claims is directed toward a specific family of cooling compounds-N-substituted-p-menthane carboxamides-including WS-3. Wrigley claims that the language in the '893 Patent states that the only compounds used in the invention are N-substituted-p-menthane carboxamides. Essentially, Wrigley argues that Cadbury has narrowly defined the cooling compounds that could be used.

I have already stated the standard for a disclaimer above. In its reply brief, Cadbury attempts to argue that a mandatory component of a disclaimer is some criticism of the product it is allegedly disclaiming. That is not true. Although criticizing other products that lack the specific features is one method of disavowing a product, all that is required is some "[expression] of manifest exclusion or restriction ...." Teleflex, 299 F.3d at 1325.

The words in the '893 Patent that Wrigley sees as restricting are primarily in the Background Of The Invention section. "U.S. Patent No. 4,136,163 discloses the formation of a compound .... The compounds disclosed are N-substituted-p-menthane-3-carboxamides which are the same compounds used by Applicants in the present invention." ('893 Patent, 2:23-31). Also, in the Summary Of The Invention, Cadbury states the following:

Applicants have unexpectedly found that N-substituted-p-menthane carboxamides when used in combination with menthol in specific amounts results in an unexpected heightened cooling sensation in edible products. The use of either of these products alone or outside the disclosed ranges fail to result in the cooling effect achieved herein.

(*Id*. 2:34-41). Additionally, when describing the preferred embodiments, Cadbury repeatedly refers to N-substituted-p-menthane carboxamides. (*Id*. 2:47-48, 3:7-8, 3:36-37, 3:44-45, 4:13-14, 4:27-28, 4:40-41, 8:28-29, 8:44-45). Lastly, the patent claims explicitly state that the invention is for "a cooling composition comprising menthol and an *N-substituted-p-menthane carboxamide* of [a specific formula]" (*Id*. 12:48-50) (emphasis added).

Collectively, the above mentioned statements amount to an expression of manifest restriction. In particular, the statement in Claim 1 (and Claim 12 as well) makes it clear that non-N-substituted-p-menthane carboxamides are not included in the invention.

V. CONCLUSION

In the '233 Patent, my construction of disputed claim terms is as follows:

"Menthol" is construed as **"menthol, as a distinct and separate substance, as distinguished from being present in mint oils."**

"Physiological Cooling Agent" is construed as:

A compound which is perceived as cold or cool when contacted with the human body and, in particular, with the mucous membranes of the mouth, nose and throat; excluded are traditional flavor-derivatives such as menthol or menthone; and included are those compounds listed in columns 9 and 10 of the ' 233 Patent**.**

In the '233 Patent, my construction of disputed terms is as follows.

"Menthol" is construed as **"menthol, as a distinct and separate substance, as distinguished from being present in mint oils."**

"N-substituted-p-menthane carboxamide" is construed as **"a class of molecules with the chemical formulas set forth in Claims 1 and 12 of the** '893 Patent."

"N-ethyl-p-menthane-3-carboxamide" is construed as **"an N-substituted-p-menthane carboxamide known by the trade name WS-3."**

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