Internal distribution code:

(A) [-] Publication in OJ
(B) [-] To Chairmen and Members
(C) [-] To Chairmen
(D) [X] No distribution

Datasheet for the decision of 14 July 2015

Case Number: T 0488/12 - 3.3.09

Application Number: 08005710.2

Publication Number: 1935252

IPC: A23G4/00

Language of the proceedings: EN

Title of invention:
Chewing gum composition

Patent Proprietor:
WM. Wrigley Jr., Company

Opponent:
Cadbury Holdings Limited

Headword:
Chewing gum/Wrigley

Relevant legal provisions:
EPC Art. 54, 56
RPBA Art. 12

Keyword:
Novelty - (yes) - main request
Inventive step - (yes) - main request
Late-filed documents - all admitted

Decisions cited:
G 0001/84, T 1505/13

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern
Boards of Appeal
Chambres de recours

European Patent Office
D-80298 MUNICH
GERMANY
Tel. +49 (0) 89 2399-0
Fax +49 (0) 89 2399-4465

Case Number: T 0488/12 - 3.3.09

D E C I S I O N
of Technical Board of Appeal 3.3.09
of 14 July 2015

Appellant: (Opponent)	Cadbury Holdings Limited Cadbury House Sanderson Road Uxbridge, Middlesex UB8 1DH (GB)
Representative:	Hoffmann Eitle Patent- und Rechtsanwälte PartmbB Arabellastraße 30 81925 München (DE)
Respondent: (Patent Proprietor)	WM. Wrigley Jr., Company 410 North Michigan Avenue Chicago, IL 60611 (US)
Representative:	Boult Wade Tennant Verulam Gardens 70 Gray's Inn Road London WC1X 8BT (GB)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 22 December 2011 rejecting the opposition filed against European patent No. 1935252 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	W. Sieber
Members:	N. Perakis
	D. Prietzel-Funk

Summary of Facts and Submissions

I. This decision concerns the appeal filed by the opponent against the decision of the opposition division to reject the opposition against European patent No. 1 935 252, which had been filed as a divisional application of the earlier application 97942618.6.

II. The patent was granted with three claims. The sole independent claim 1 reads as follows:

"1. A chewing gum composition comprising:
a) 5% to 95% gum base;
b) 5% to 95% bulking and sweetening agent; and
c) 0.1% to 10% flavouring agent wherein the flavouring agent comprises an acyclic carboxamide and menthol."

III. A notice of opposition was filed requesting revocation of the patent in its entirety on the grounds that the granted subject-matter was neither novel nor inventive (Article 100(a) EPC) and that it extended beyond the content of the earlier application as filed (Article 100(c) EPC).

IV. The documents filed by the parties included the following:

D1 : US 5 451 404 A;
D2 : R. Lees and E.B. Jackson, "Sugar Confectionery and Chocolate Manufacture", 1973, Leonard Hill Books, pages 332-337;
D4 : WO 96/08232 A1;
D5 : WO 96/17524 A1;

D7 : M.A. Parrish, "Market warms to physiological coolants", *Manufacturing Chemist*, February 1987, pages 31-32;
D10: M.A. Parrish, "Stay Cool", *Food Manufacture*, April 1987, page 56;
D11: US 5 009 893 A;
D12: WO 97/24036 A1;
D14: Experimental Report (submitted by the patent proprietor with letter of 24 December 2010);

V. By the decision under appeal the opposition division rejected the opposition.

The opposition division acknowledged that the granted subject-matter did not extend beyond the content of the parent application as filed (Article 100(c) EPC in combination with Article 76(1) EPC). It also acknowledged the novelty of the granted subject-matter in view of D1, D4 and D12. Regarding inventive step, the opposition division considered D5 to represent the closed prior art. It held that the claimed gum composition differed from that of D5 in that it comprised an acyclic carboxamide instead of a cyclic carboxamide. The technical problem underlying the claimed invention was the provision of a chewing gum composition with reduced bitterness and improved cooling sensation over time. D14 demonstrated that the technical problem of the patent in suit had been solved. The solution provided by the subject-matter of claim 1 was not obvious from the prior art cited by the opponent, in particular D7 and D10. On that basis, inventive step was acknowledged.

VI. On 23 February 2012 the opponent (in the following the appellant) filed an appeal against the decision of the opposition division. The statement setting out the

grounds of appeal was filed on 2 May 2012, including the following new documents:

D28: US 2 806 814 A;
D29: US 3 029 191 A; and
D30: Experimental test report "Descriptive Analysis of Menthol and Cooler Levels of Mint Slab Gum", issued in April 2012.

The appellant contested the novelty of granted claim 1 on the basis of D28 and D29, and inventive step on the basis of D30.

VII. The patent proprietor (in the following the respondent) filed observations on the appeal, including two auxiliary requests, and requested that the appeal be dismissed or that the patent be maintained on the basis of the claims of auxiliary request 1 or 2. The respondent also requested that D28-D30 not be admitted into the proceedings.

VIII. The appellant filed comments regarding the requests of the respondent.

IX. The appellant stated that it would not be attending the oral proceedings scheduled for 14 July 2015.

X. By a further letter, the respondent requested that, if D28 and D29 were admitted into the proceedings, the case be remitted to the opposition division for further prosecution. It also requested that an award of costs be made to its favour for attending further oral proceedings on remittal to the opposition division.

XI. In a communication dated 15 May 2015 the board set out the issues to be discussed at the scheduled oral proceedings.

XII. By letter of 12 June 2015 the appellant withdrew its request for oral proceedings and clarified that it had never requested remittal of the case to the opposition division.

XIII. On 14 July 2015 oral proceedings were held before the board in the absence of the appellant. During these proceedings the respondent withdrew its request for apportionment of costs.

XIV. The relevant arguments put forward by the appellant in its written submissions may be summarised as follows:

- Late-filed documents D28 and D29 should be admitted into the proceedings in view of their high relevance. Their filing was the result of extenuating circumstances rather than any deliberate delay.

- The subject-matter of granted claim 1 lacked novelty in view of both D28 and D29. Example VI of these documents disclosed chewing gum compositions from which the claimed composition differed in that the component "flavour" was specified to be menthol. However, the skilled person intending to reproduce example VI would find in the desription of these two documents the disclosure of three flavouring oils, two of which contained menthol. This corresponded to a selection from one list which destroyed the novelty of granted claim 1.

- The subject-matter of granted claim 1 lacked inventive step. In this context the technical evidence D30, which had been filed as a reply to the evidence D14 of the respondent and which was technically more accurate than D14, should be admitted into the proceedings. In view of D30 the claimed invention did not solve the technical problem of providing a chewing gum delivering a long-lasting cooling sensation without unwanted harshness of flavour characteristics across the scope of claim 1. Therefore the objective technical problem was simply the provision of an alternative chewing gum composition. As a consequence any of D2, D4, D5, D11 or D12, which fell within the technical field of claim 1, namely that of chewing gum compositions, could be considered to represent the closest prior art. The claimed composition differed from that disclosed in the above cited documents in that it combined menthol with acyclic carboxamide. Nevertheless, the skilled person starting from any of those documents and looking for an alternative chewing gum composition would routinely associate menthol with acyclic carboxamide, or would add some acyclic carboxamide to a mixture of cyclic carboxamide and menthol, or would even replace cyclic with acyclic carboxamide without the exercise of any inventive skill. Thus claim 1 lacked an inventive step.

XV. The relevant arguments put forward by the respondent in its written submissions and during the oral proceedings may be summarised as follows:

- Late-filed documents D28-D30 should not be admitted into the proceedings. No explanation of

the alleged extenuating circumstances had been provided by the appellant. The technical evidence D30 was less accurate than D14. Anyway, the respondent should be given the benefit of the doubt in view of the contrary assertions made by the parties.

- The subject-matter of granted claim 1 was novel in view of D28 and D29. Each example VI of these documents did not specify the meaning of the component "flavour". Furthermore, it was not clearly and unambiguously derivable from any other part of these documents that the meaning of "flavour" in each example VI should include menthol. The disclosure in each column 4 concerning flavouring oils in general and giving three examples, two of which contained menthol, did not clearly and unambiguously disclose that only the menthol-containing flavouring oils should be used in example VI.

- The subject-matter of granted claim 1 involved an inventive step. D5 should be considered to represent the closest prior art as it disclosed a chewing gum composition combining menthol with a cyclic carboxamide. The claimed composition differed from that of D5 in that the acyclic carboxamide (i) replaced the cyclic carboxamide or (ii) was present in addition to the cyclic carboxamide. The technical problem was the provision of a composition with reduced bitterness and harshness of menthol while maintaining the cooling sensation of menthol. The superiority of acyclic carboxamides over cyclic carboxamides was shown by D14. D30 could not invalidate the results of D14 because it was less accurate. As the

improved effect of the acyclic carboxamides was not disclosed in the state of the art and did not belong to the general technical knowledge of the skilled person, the subject-matter of granted claim 1 involved an inventive step.

XVI. The appellant requested in writing that the decision under appeal be set aside, that the patent be revoked, and that documents D28 to D30 be admitted into the proceedings.

The respondent requested at the end of the oral proceedings that the appeal be dismissed.

Reasons for the Decision

1. Admission of documents D28, D29

1.1 Both D28 and D29 were filed with the statement setting out the grounds of appeal and were therefore late-filed. Example VI of each of these documents discloses chewing gum compositions which differ from those of granted claim 1 in that they mention "flavour" as an ingredient for chewing gum but do not specify explicitly menthol as a flavouring agent. However, flavouring oils e.g. oils of spearmint and peppermint - which are known to contain menthol - are disclosed in the description of these documents (see D28: column 4, lines 27-28; and D29: column 4, lines 24-25). Consequently D28 and D29 are *prima facie* relevant for the issue of novelty.

1.2 Since only valid European patents should be maintained in force (see G 1/84, OJ EPO 1985, 299, point 3 of the

reasons and T 1505/13) these *prima facie* relevant documents were admitted into the proceedings.

2. Admission of experimental evidence D30

2.1 The appellant argued that D30 had been filed in reply to experimental evidence D14 submitted by the respondent during the proceedings before the opposition division, and that it had not had enough time to plan, arrange for, conduct and analyse a study with the necessary scientific rigour before the oral proceedings scheduled by the opposition division. The board accepted that D30 was filed at the first opportunity after it had become available.

2.2 The appellant also argued that D30 was highly relevant because it showed by replication of the formulations of D14 and by data beyond those of D14 that claim 1 did not achieve a technical benefit, let alone across its entire scope. On this basis the board considered that D30 was *prima facie* relevant.

2.3 In view of the above, D30 was admitted into the proceedings.

3. Remittal

The respondent requested that, if D28 and D29 were admitted into the proceedings, the case should be remitted to the opposition division for consideration of these new references. However, the board considered that the teaching of D28 and D29 was straightforward and easy to deal with and decided not to remit the case back to the opposition division.

4. Novelty

4.1 In the appeal proceedings, the appellant did not pursue the lack of novelty objections raised before the opposition division in view of D1, D4 and D12. It raised new novelty objections on the basis of the two documents D28 and D29.

4.2 D28, example VI discloses a chewing gum composition comprising:

- 20 wt.% gum base
- 60 wt.% sucrose (a sweeting and bulking agent),
- 18.5 wt.% corn syrup,
- 0.5 wt.% sodium lauroyl sarcoside (which according to column 2, lines 18-28, is an acyclic carboxamide) and
- balance (i.e. 0.5 wt.%) of flavour.

Example VI does not explicitly disclose the chemical structure of the ingredient(s) falling under the functional definition of "flavour", with the consequence that example VI does not clearly and unambiguously disclose the presence of menthol in the chewing gum composition.

4.3 In order to fill this gap the appellant made reference to the description, column 4, lines 66-68, which discloses:

"Such materials may be used as ... flavoring agents (e.g., oils of spearmint, peppermint, wintergreen), ..."

and argued that the skilled person knew that the disclosed flavouring oils, spearmint oil and peppermint oil, contained menthol and that he would use such oils to carry out example VI. The selection of a flavouring oil containing menthol, selection from one list containing three components, two of which contained menthol, led to the claimed composition which thus lacked novelty.

4.4 However, the disclosure cited above is part of the paragraph between lines 61-73, which discloses adjuvants incorporated in dental preparations which are not necessarily identical to chewing gum preparations regarding the flavouring component. Moreover, the cited disclosure concerns only natural flavouring oils which are merely one of the possibilities of the flavours to be used in example VI, besides the fact that not all of them contain menthol. Indeed, the appellant explained that only spearmint and peppermint oils contain menthol. Therefore the cited disclosure of D28 does not clearly and unambiguously provide the missing information of example VI concerning the menthol component.

4.5 The disclosure of D29 is similar to that of D28. In this case also the appellant combined example VI with the disclosure in column 4, lines 63-65, which in any case - as indicated above - the skilled person would not combine and would not clearly and unambiguously lead to the subject-matter of claim 1.

4.6 In view of the above, the subject-matter of claim 1 is considered novel over the disclosures of D28 and D29.

5. Inventive step

5.1 Closest prior art

5.1.1 The claimed invention concerns a chewing gum composition which helps to provide a long-lasting cooling sensation without the unwanted harshness or flavour characteristics that come from adding menthol (paragraphs [0001] and [0017]). D5 and D11, which are equivalent documents, are considered to represent the closest prior art. On the one hand they disclose chewing gum compositions similar to those of granted claim 1 since they comprise a gum base, a bulking/ sweetening agent, menthol and a carboxamide - although cyclic. On the other hand they aim to solve a problem similar to that of the claimed invention by providing high initial cooling perception as well as long-lasting breath-freshening without bitterness. Reference is made to D5: abstract; page 5, lines 28-33; page 10, lines 3-5; claim 1 and D11: abstract; column 1, lines 7-13; column 2, lines 34-37; column 3, lines 63-67; claim 1.

5.1.2 Apart from D5 and D11, the appellant referred to documents D2, D4 and D12 which it maintained could also be considered to represent the closest prior art.

D2 is a general commentary on chewing gum compositions which refers to spearmint and peppermint as major flavouring components (bottom of page 332; page 335, lines 5-6; page 336, immmediately under paragraph 16.8).

D4 discloses oral compositions including chewing gum which are considered beneficial for their anticaries,

antiplaque and antigingivitis properties. One non-essential component is a cooling agent or combination of cooling agents, preferably N-ethyl-p-menthane-3-carboxamide (in the following WS-3) and N-2,3-trimethyl-2-isopropyl-butanamide (in the following WS-23). These compositions can also incorporate a flavouring agent or a mixture of compatible flavouring agents. Menthol is disclosed in the list of the most suitable flavouring agents (page 1, lines 4-6; page 5, lines 2-11; page 8, lines 33-36).

D12 concerns a chewing gum composition that offers prolonged release of flavours or throat-active agents selected from a list comprising physiological cooling agents, these cooling agents preferably being menthol, acyclic carboxamides, cyclic carboxamides, and mixtures thereof (page 3, lines 24-26; page 4, lines 16-17; page 7, lines 3-4; page 9, line 6-8; claims 1-4).

The board considers the disclosure of these documents more remote from the claimed invention than that of D5 and D11. In fact, only D5 and D11 disclose chewing gum compositions which combine a carboxamide and menthol.

5.1.3 The claimed composition differs from the chewing gum compositions of D5 and D11 in that it requires the presence of the acyclic carboxamide (i) as a replacement for the cyclic carboxamide or (ii) in addition to the cyclic carboxamide.

5.2 Technical problem

5.2.1 The technical problem underlying the claimed invention in the light of D5/D11 is the provision of a chewing gum composition reducing the harsh notes of menthol (i.e. bitterness, harshness and burning taste) while

maintaining the cooling sensation of menthol (patent in suit, paragraphs [0017], [0018], [0020], [0030], [0037] and [0042]).

D14 provides the experimental evidence that the technical problem has indeed been solved by using a flavouring agent composition comprising an acyclic carboxamide and menthol. The use of an acyclic carboxamide such as WS-23 (claimed invention) rather than a cyclic carboxamide such as WS-3 (D5 or D11), both in association with menthol, provides a cooling sensation over time with less bitterness or mentholic character.

5.2.2 With regard to the criticisms of the appellant regarding D14 the following is remarked:

- The use of a single concentration of carboxamide with a single concentration of menthol in the tests of D14 does not alter the fact that an improvement has been obtained over D5/D11.

- The components and respective amounts used in D14 are typical of what might be used in a commercial formula and fall within the scope of claim 1.

- The results of D14 are not invalidated because the carboxamide:menthol ratio was higher than that of claim 1 of D5. On the one hand this does not apply to D11 whose claim 1 is not restricted by such a ratio. On the other hand, it is self-evident that the higher the amount of carboxamide, be it cyclic or acyclic, the greater the impact on bitterness and menthol character reduction. The use of a higher amount of cyclic and acyclic carboxamide

intensifies the technical effect and facilitates the comparison of cyclic/acyclic carboxamide.

- The fact that only a small portion of the y-axis (corresponding to the bitterness intensity for the graph of figure A; and to menthol character intensity for the graph of figure B) was shown in D14 (from 1 to 3 although the full scale was up to 15) does not invalidate the results, which are fully understandable from the graphs of figures A and B.

- Even assuming, in the appellant's favour, that the average difference of less than 0.2 between the data points of the curves in the graphs of D14 for WS-23 (acyclic carboxamide) and WS-3 (cyclic carboxamide), which represented 1.3% of the scale of 0-15 used, was not statistically significant at 0.05 confidence level but lay within the range of standard experimental error because of the subjectiveness of the ratings, the fact that D14 showed a consistent tendency over time (across the entire x-axis (chewing time)) could not be ignored. On the contrary, this consistent tendency constitutes proof of the superiority - in terms of bitterness and menthol-character reduction - of the acyclic carboxamides over the cyclic carboxamides.

Thus, in agreement with the respondent and the opposition division, the board ackowledges that D14 shows that a chewing gum composition comprising only acyclic carboxamide has less bitterness and menthol character than a chewing gum composition comprising only cyclic carboxamide, despite containing exactly the

same amount of menthol (case (i) of replacing a cyclic carboxamide by an acyclic).

Moreover, following the explanations of the respondent during the oral proceedings, it is technically plausible that similar results would be obtained if the carboxamide was a mixture of acyclic and cyclic and was compared to the cyclic carboxamide of D5/D11 (case (ii) of adding acyclic to cyclic carboxamide).

5.2.3 D30 was filed by the appellant as counter-evidence to D14 and was supposed to demonstrate that acyclic carboxamides were simple alternatives to cyclic carboxamides as

- there was no discernible difference in the performance of WS-23 (an acyclic carboxamide) and WS-3 (a cyclic carboxamide) in terms of bitterness and menthol character at individual points or over time, irrespective of the individual amounts of carboxamide and menthol used, and

- no technical benefit was obtained across the range of claim 1.

However, as pointed out by the respondent at the oral proceedings before the board, the technical evidence of D30 was statistically less accurate than that of D14. In particular, D30 could not be considered as a reproduction of D14 since the methodology used was not the same. The experiments in D14 involved a group of 13 trained panellists, and each panellist chewed every chewing gum composition three times, which meant that each data point on the curves of figures A and B corresponded to 39 tests. In D30 only 11 panellists were involved and no clear indication was given of how

many times each formulation was chewed. For this reason the statistical error in D30 was such that no effect was discernible between WS-23 and WS-3. The statistical uncertainty of D30 was more prominent than that of D14, and D30 could therefore not invalidate the results of D14.

The board can also not accept the appellant's critisism that claim 1 encompasses very low amounts of acyclic carboxamide which would no longer provide the alleged technical effect. The board accepts that the technical effect will become less prominent as the amount of acyclic carboxamide is reduced. However, there is simply no evidence on file that there will be no effect at all.

5.3 Obviousness

The skilled person starting from D5 or D11 and looking for a chewing gum composition with reduced bitterness and menthol character would not find in the art any hint towards adding acyclic carboxamide or replacing cyclic with acyclic carboxamide.

D1 discloses cyclic and acyclic carboxamides as coolant compounds but does not set out qualitative considerations regarding these two groups of compounds (column 4, line 34 to column 5, line 53).

D7 and D10 disclose that the commercial products WS-23 and WS-3 have been considered as physiological coolants for use in flavour enhancement. However, neither provides a qualitative comparison of these two compounds.

5.4 In view of the above, the subject-matter of claim 1 is not obvious and claim 1 involves an inventive step.

6. Dependent claims

Claims 2 and 3 correspond to particular embodiments of the subject-matter of claim 1 and are *mutatis mutandis* novel and inventive.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

M. Cañueto Carbajo W. Sieber

Decision electronically authenticated