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Datasheet for the decision of 22 January 2025

Case Number: T 2568/22 - 3.2.01

Application Number: 08781342.4

Publication Number: 2160104

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Language of the proceedings: EN

Title of invention:
SMOKING ARTICLES HAVING REDUCED IGNITION PROCLIVITY CHARACTERISTICS

Patent Proprietor:
Schweitzer-Mauduit International, Inc.

Opponents:
Miquel y Costas & Miquel, S.A.
Julius Glatz GmbH

Headword:

Relevant legal provisions:
EPC Art. 100(c), 100(a), 54, 56

Keyword:
Grounds for opposition - subject-matter extends beyond content of application as filed (no) - lack of novelty - lack of inventive step (no)

Decisions cited:
T 0811/96

Catchword:

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Case Number: T 2568/22 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 22 January 2025

Appellant: (Opponent 1)	Miquel y Costas & Miquel, S.A. Tuset, 10. Planta 7 08006 Barcelona (ES)
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Appellant: (Opponent 2)	Julius Glatz GmbH Staatsstrasse 37-41 67468 Neidenfels (DE)
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Respondent: (Patent Proprietor)	Schweitzer-Mauduit International, Inc. 100 North Point Center East, Suite 600 Alpharetta, GA 30022 (US)
Representative:	Wall, Leythem Oxon IP B.V. Evert Van De Beekstraat 354 1118 CZ Schiphol (NL)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 14 November 2022 rejecting the opposition filed against European patent No. 2160104 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	V. Vinci
Members:	S. Mangin
	O. Loizou

Summary of Facts and Submissions

I. The appeals were filed by the appellants (opponents 1 and 2) against the decision of the opposition division to reject the opposition filed against the patent in suit (hereinafter "the patent").

II. The opposition division rejected the oppositions. It was held that:
- claims 1, 3-7 and 9 did not extend beyond the content of the application as filed,
- the subject-matter of claim 1 was novel over D3 (WO/061410 A1), D4 (WO 02/37991 A1), D8 (US2005/0241659 A1) and D22 (US 2007/0084475 A1),
- the subject-matter of claim 1 involved an inventive step in view of:
  - D3 in combination with D6 (US 3351479 A1), D7 (US 3620801 A1) or D9 (US 4129134 A1)
  - D4 or D8 in combination with D6, D7 or D9
  - D24 in combination with D16 (US 2004/099279 A1), D17 (EP 1 417 899 A1), D18 (EP 1 333 729 B1) or D19 (WO 2007/020532 A1)
  - D22 in combination with D9, D16, D17, D18, D19 or D21 (EP 1234514 A2).

III. Oral proceedings were held before the Board on 22 January 2025 by videoconference.

IV. The appellants (opponents 1 and 2) requested that the decision under appeal be set aside and that the patent be revoked.

The respondent (patent proprietor) requested that the appeals be dismissed and the patent be maintained as granted (main request) or, in the alternative, that the

patent be maintained in amended form on the basis of one of the auxiliary requests 1-31 filed with the reply to the statements of grounds of appeal of the appellants.

V. Independent claim 1 including the feature numbering used in the appealed decision reads as follow:

A. A paper wrapper (14) for a smoking article (10) that provides the smoking article (10) with reduced ignition proclivity characteristics, wherein the paper wrapper (14) is designed to surround a smokable tobacco,
B. the paper wrapper (14) comprising cellulosic fibers and a filler,
C. the filler being present in the paper wrapper (14) in an amount of from 10 % to 40 % by weight,
D. the paper wrapper (14) including discrete areas treated with a film-forming composition,
E. the treated areas (18) being separated by untreated areas (28),
F. the film-forming composition applied to the paper wrapper (14) comprising a film-forming material, wherein the film-forming material comprises an alginate,
G. the film-forming composition having been printed on to the paper wrapper (14),
H. the treated areas (18) having a permeability of less than 40 Coresta,
I. the paper wrapper (14) having a basis weight from about 18 gsm to about 60 gsm,
J. the paper wrapper (14) having an initial permeability of from 20 Coresta to 150 Coresta,
K. the treated areas (18) being in the shape of circumferential bands (24) having a width of from 4 mm to 10 mm and being spaced from each other at a distance of from 5 mm to 50 mm,

L. said film-forming composition further comprising a polysaccharide, said polysaccharide comprising a starch,
M. the film-forming composition having been applied to the wrapper (14) in an amount from 1 % to 30 % by dry weight based upon the weight of the wrapper (14) within the treated areas (18), and
N. once the film forming composition is applied to the paper wrapper (14) and dried, the treated areas (18) containing a greater amount of polysaccharide than film-forming material.

VI. The following further documents are referred to:

- D25: T. Kimoto et al., "Safety Studies of a Novel Starch, Pullulan: Chronic Toxicity in Rats and Bacterial Mutagenicity", Food and Chemical Toxicoloav, vol. 35, 1997, pages 323-329

- D26 (O1): "Influence of Starch Molecular Weight and Sodium Alginate on Silicone Holdout for Release Papers", dated 2001, submitted by appellant 1 (opponent 1) with their statement of grounds of appeal.

- D26 (O2): (EUROPEAN PARLIAMENT AND COUNCIL DIRECTIVE No 95/2/ EC of 20 February 1995, on food additives other than colours and sweeteners), submitted by appellant 2 (opponent 2) with their statement of grounds of appeal.

Reasons for the Decision

1. Added subject-matter - Article 100(c) EPC

Claims 1-11 as granted do not extend beyond the content of the application as filed.

Claim 1 as granted is a combination of:
- claims 1, 2 and 12 as filed which provide the basis for features A, D, E, F, I and L,
- page 4, lines 8-28 of D1 (WO 2009/006570 A2) which provides basis for features G, H, J, K and M,
- page 13, lines 14-21 of D1 which provides basis for features B and C
- page 10, lines 9-13 and example 2 on page 18 and figure 3 of D1 provides basis for feature N.

1.1 Appellant 2 (opponent 2) argued that claims 1, 2 and 12 did not constitute a permissible starting point for the combination of features claimed in granted claim 1, since the feature of a tobacco column enclosed by the paper wrapper was an essential and inseparable component of the smoking article claimed in the original claim 1 (but not claimed in granted claim 1).

Moreover, claim 12 of D1 did not refer back to claim 2 of D1, but only to claim 1 of D1. In the description of D1, a combination of features such as that formed by a synopsis of claims 1, 2 and 12 of D1 was not disclosed as a preferred embodiment. Rather, the features of claims 1, 2 and 12 of D1 were only disclosed separately from one another in the description as different embodiments (claim 1: see description page 2, lines 23 to 32; claim 2: description page 3, lines 1 to 8; claim 12: description page 5, lines 5 to 7).

Furthermore, multiple selections were required to arrive at the subject-matter of claim 1:
- Printing (feature G) was to be selected among the various methods for applying the film-composition to

the paper (page 4, lines 8-11). Page 13, lines 2-3 disclosed that the composition could be sprayed, brushed or printed onto the wrapper, and
- a greater amount of polysaccharide than film forming material (feature N) was to be selected among the three possibilities disclosed on page 10, lines 9-13.
Appellant 2 (opponent 2) emphasised that the combination of features were not a combination of the broadest possible features but that multiple selections were required.

Finally, appellant 2 (opponent 2) argued that the examples, in particular sample 6 of example 1 and samples 1-3 of example 2 of D1, could not serve as "pointers" since:
- none of these examples used a paper wrapping which specifically had all the features of claim 1,
- the paper wrappers of examples 1 and 2 did not disclose features K and M of granted claim 1, and
- the paper wrappers of examples 1 and 2 were not in line with the invention. No synergetic effect was present for the combination of starch and alginate, starch being present in a greater amount over the whole scope of claim 1.

1.2 The Board is not convinced by the arguments of the appellant 2 (opponent 2). Indeed, the application as a whole including the claims would incite the skilled reader to combine the features of claim 1.

Claims 1, 2 and 12 of the application as filed can be used as a basis for granted claim 1 together with the description. While granted claim 1 does not comprise a tobacco column, feature A of claim 1 as granted specifies that "the paper wrapper is designed to surround a smokable tobacco".

Furthermore, as mentioned by the respondent (patent proprietor), the dependency of the claims should not be disproportionally considered over the content of the application as a whole. For example while claim 12 does not depend directly on claim 2, the skilled person in view of the description, in particular page 5, lines 5-7 would directly and unambiguously derive "the paper wrapper having a basis weight from about 18 gsm to about 60 gsm" which is the broadest range disclosed in the application in combination with original claim 2 specifying that "the film-forming material comprises an alginate and the polysaccharide comprises a starch".

In the summary of invention, on page 4, lines 8-11, the only method for applying the film-forming material mentioned is printing. While page 13, lines 1-3 and page 17, lines 7-8, disclose other examples for applying the film-composition to the paper, i.e spraying and brushing, in the following lines 9-10 is disclosed that "in general, any suitable printing process can be used in the present invention". Furthermore, in all the examples, the composition is printed (see page 17, lines 19-20). Therefore, while spraying and brushing are mentioned in the application as filed as possible methods for applying the film-forming material, there is a clear indication in the application to use printing. Printing clearly stands out as a preferred method for applying the composition.

As for the amount of polysaccharide compared to film-forming material, page 10, lines 9-13 of the application as filed discloses that it may be greater, equal or lower. However, in all the examples where there is a combination of starch with alginate, there is a greater proportion of starch, which gives a clear

indication to the skilled reader that a higher amount of polysaccharide is favoured over the other two alternatives.

While a synergetic effect may not have been shown over the whole scope of claim 1, i.e. with different types of starch and alginates, at least sample 6 of example 1 and samples 1-3 of example 2 show a lower permeability and a reduced ignition proclivity. The examples provided in the application can therefore be taken as indicators for the skilled reader.

Furthermore, while the band width of the treated area and the space between the bands in the examples 1 and 2 is not given, the examples are still indicator for using a higher amount of polysaccharide compared to film forming material. Indeed examples 1 and 2 show the effect of using alginate and starch together, the starch being in a greater proportion than alginate. The permeability is measured where the composition is applied. i.e on the treated areas, so the application in bands and their dimensions is not relevant. The Board acknowledges that examples 1 and 2 do not provide the amount of film-forming composition applied on the paper wrapper. However, it is important to note that the same amount of film-composition is applied to the paper wrapper, thereby ensuring a valid comparison (Reference is made to page page 18, lines 6 and 7 of the application as filed).

2. Regarding dependent claims 2-11, the appellant 2 (opponent 2) relied on their written statements. The Board does not see any reason to change its preliminary opinion expressed in its communication pursuant Article 15(1) RPBA. While some of the original claims forming the basis for these granted dependent claims were not

dependent on claim 1, the disclosure as a whole provides basis for the combination of the claims. Reference is made to point 2.4 of the appealed decision and the mapping table under point 4 of the respondent's reply.

3. Novelty over D22

The subject-matter of claim 1 is novel over D22.

D22 discloses, in paragraphs [0008], [0026] and [0028] and in example 6, film formulations for application to paper wrappers for a smoking article comprising both Pullulan and an alginate.

The question to be answered is whether Pullulan can be considered as a starch or a modified starch.

3.1 Appellant 2 (opponent 2) was of the opinion that Pullulan was a modified starch.

Paragraphs [0030] and [0037] of the patent disclosed that starch may be a natural starch or a modified starch.

D26 representing common general knowledge disclosed under Article 1, point 3 (q) that "modified starches" were substances obtained by one or more chemical treatments of edible starches, which may have undergone a physical or enzymatic treatment, and may be acid or alkali thinned or bleached.

Paragraph [0023] of D22 disclosed that Pullulan was a modified starch: *"Pullulan is a polysaccharide polymer that may be introduced through the reaction of Aureobasidium Pullulan yeast on starch"*.

The skilled person would therefore consider Pullulan as a modified starch, since it was obtained by an enzymatic treatment of starch.

Appellant 2 (opponent 2) also referred to document D25 titled: *"Safety Studies of a Novel Starch, Pullulan Chronic Toxicity in Rats and Bacterial Mutagenicity"* to underline the fact that Pullulan was a starch.

3.2 The respondent (patent proprietor) maintained that Pullulan was not a starch.

They first referred to D22, paragraphs [0008] and [0026] and claims 5, 18 and 29 of D22 to underline that starch and "starch-based materials" were "other film-forming agents" i.e. not Pullulan.

Then they referred to the abstract of D25, describing Pullulan as a "starch like" substance and not a starch or a modified starch and to figure 1 of D25 showing the structure of Pullulan. The structure of Pullulan being different to the one of starch as it did not comprise alternating blocks of amylose and amylopectin. The amylopectin being removed in Pullulan.

They finally noted that in the list of modified starches appearing in the final row of the table on the final page of D26, Pullulan was not listed.

3.3 The Board is not convinced by the arguments of the appellant 2 (opponent 2).

The objection raised against the admissibility of document D26 can be left aside as it does not provide evidence that Pullulan is a modified starch.

Article 1, point 3 (q) of D26 discloses that: *"modified starches are substances obtained by one or more chemical treatments of edible starches, which may have undergone a physical or enzymatic treatment, and may be acid or alkali thinned or bleached"*.

However, modified starch cannot just be defined by the broad treatments the starch has undergone. The resulting composition is to be considered. Pullulan does not have the typical composition of starch or modified starch as can be seen on figure 1 of D25. Pullulan does not have alternating blocks of amylose and amylopectin and is therefore to be considered as a different component than starch or modified starch.

Furthermore, as outlined by the respondent (patent proprietor), the last line of the table on the last page of D26 does not cite Pullulan.

3.4 Inventive step

During oral proceedings appellant 2 (opponent 2) focused on the inventive step objection starting from D22 alone and appellant 1 (opponent 1) focused on the inventive step objection starting from D3 in combination with D9. The appellants referred to their written submission for the other inventive step attacks raised with their statement of grounds of appeal.

Irrespective of the admissibility objection that have been raised by the respondent (patent proprietor), the subject-matter of claim 1 involves an inventive step starting from D22, D3, D24, D4 or D8.

3.4.1 Inventive step starting from D22

3.4.2 Appellant 2 (opponent 2) argued that starting from example 6 of D22, the subject-matter of claim 1 differed from D22 in features:
- L: "*said film-forming composition further comprising a polysaccharide, said polysaccharide comprising a starch", and*
- N: "*once the film forming composition is applied to the paper wrapper (14) and dried, the treated areas (18) containing a greater amount of polysaccharide than film-forming material".*

The problem solved by the subject-matter of granted claim 1 was to be seen merely as providing alternative smoking article wrappers with reduced ignition proclivity properties.

With regard to feature L, paragraph [0008] of D22 taught the skilled person that *"representative formulations can incorporate mixtures of Pullulan with other film forming agents, such as, ethylcellulose, starches, and/or alginates*". The skilled person starting from example 6 would therefore be incited to add starch to the film composition.

With regard to feature N, paragraph [0028] of D22, taught that in coating formulations containing Pullulan and another film-forming agent, e.g. alginate, the proportion of Pullulan (= polysaccharide) was preferably 65% by weight or more, based on the total weight of Pullulan and the other film-forming agent. Therefore, the skilled person starting from example 6 would change the composition such that more polysaccharide was present compared to alginate.

According to appellant 2 (opponent 2) no incentive was required for the skilled person to make these

modifications to the film-forming composition as the problem to be solved was the provision of an alternative.

3.4.3 The Board is not convinced by the arguments of the appellant 2 (opponent 2). Indeed appellant 2's arguments are based on an ex-post facto analysis. Combining example 6 of D22 with passages of paragraph [0008] and paragraph [0028] to arrive at the subject-matter of claim 1 can only be motivated when knowing the subject-matter of claim 1.

Starting from example 6 which has a specific composition, namely about 11,25 parts of Pullulan and about 11,25 parts of alginate, 0,2 parts of potassium sorbate and 0,2 parts of colorant, there is no reason for the skilled person to add specifically starch among the three cited forming agent (ethylcellulose, starches and alginate) cited in paragraph [0008]. The Board notes that paragraph [0026] of D22 also cites further film forming agents that can be added to Pullulan. One of them is "starch-based material". However, there is no pointer to use starch, or modified starch.

Additionally, there is no pointer starting from the specific composition of example 6 to adjust the amount of polysaccharide to arrive to a greater amount than film-forming material. However, even if the skilled person would be encouraged to have a greater amount of polysaccharide than film-forming material, starting from example 6, the most straight forward way to arrive at a greater amount of polysaccharide than film forming material would be to reduce the amount of alginate or increase the amount of Pullulan, however starch would still be missing.

3.4.4 Appellant 2 (opponent 2) further raised inventive step objections starting from D22 in combination with D9, which taught in example 6 a film-forming composition containing a higher proportion of pectin (= starch) and a lower proportion of alginate.

Document D22, and in particular example 6 of this document, taught paper wrappings with reduced ignition proclivity properties. The question for a person skilled in the art, based on the teaching of example 6 of D22, was simply whether they would apply a film-forming composition to areas of the paper wrapper containing a higher amount of polysaccharide and a lower amount of alginate.

In their view, none of the prior art documents revealed any prejudice that would have prevented the skilled person from considering a higher amount of polysaccharide and a lower amount of alginate as equivalent and applying them as a film-forming composition to areas of the paper wrapper.

Instead, the patent taught on this issue (see, for example, page 9, line 15 to page 10, line 16 of D1,the WO application) that the presence of a higher amount of starch enabled a suitable adjustment of the rheological properties of the film-forming composition as well as the physical properties of the treated areas.
This teaching could also be found in document D9, which also taught that the use of pectin had advantages with regard to the rheological and physical properties of the film-forming composition (see column 7, lines 20 to 50 and Table 1 of D9).

3.4.5 Firstly, the Board is of the opinion that the skilled person in view of the problem to be solved (providing

an alternative paper wrapper with reduced ignition proclivity) would not look into D9, which deals with paper wrappers for smoking articles aiming at reducing the production of smoke and improving taste and aroma (see column 1, lines 6-21 of D9).

Secondly, there is no general teaching in D9 that the treated areas of the paper wrapper should contain starch and alginate and a greater amount of polysaccharide than film-forming material. Among all the examples given, there appears to be only one example that has a film-forming composition with the required characteristics of claim 1. Without knowing the subject-matter of claim 1, why would the skilled person take this example, in particular, as the following remark has been noted about this example "smoke flavour slightly different from all pectin, equally mild", which does not give an indication to the skilled person that it would be an appropriate alternative for reducing ignition proclivity.

Thirdly, starting from example 6 of D22, if the skilled person is taught via example 6 of D9 to increase the proportion of polysaccharide, then the skilled person would increase the proportion of Pullulan in the example 6 of D22 and would not arrive at the subject-matter of claim 1 as starch (feature L) would still be missing in the composition.

3.4.6 Inventive step starting from D3

3.4.7 Appellant 1 (opponent 1) argued that starting from D3, the subject-matter of claim 1 differed from D3 in features:

- L: *"said film-forming composition further comprising a polysaccharide, said polysaccharide comprising a starch"*, and
- N: *"once the film forming composition is applied to the paper wrapper (14) and dried, the treated areas (18) containing a greater amount of polysaccharide than film-forming material"*.

Appellant 1 (opponent 1) argued similarly to appellant 2 (opponent 2) that no technical effect was achieved over the whole scope of claim 1 and that the problem to be solved was to be regarded as the provision of a wrapper for smoking articles with reduced ignition tendency properties.

Starting from D3, the skilled person would turn to D9, example 6, where the formulation was made of 8g of pectin, 2g of alginic acid, 3g of glycerol and 0.5g of $Mg(OH)_2$. By selecting this formulation, the skilled person would arrive at the subject-matter of claim 1.

3.4.8 The Board is not convinced by the problem solution approach adapted by appellant 1 (opponent 1).

First of all it is unclear why the skilled person would turn to D9 for providing an alternative wrapper for a smoking article with reduced ignition proclivity properties as the paper wrapper of D9 is not to make smoking articles having reduced ignition proclivity, but to make possible a smoking article which produces less smoke and has an improved taste and aroma (reference is made to column 1, lines 6-22 of D9).

Even if the skilled person would turn to D9, without knowing the subject-matter of claim 1, why would they turn specifically to example 6 among all the examples

provided in D9? In view of providing an alternative wrapper for a smoking cigarette with reduced ignition tendency properties, example 6 providing a mild smoke flavour (see remark in table 1) does not appear suitable.

3.4.9 Starting from D3, appellant 1 (opponent 1) further argued that the skilled person would arrive at the subject-matter of claim 1 without inventive skills when combining it with D6, D7 or D26(O1).

Appellant 1 (opponent 1) maintained that already since 1967 (year of publication of D6) the skilled person in the art would have been prompted to prepare a composition comprising both starch and alginate, and in particular comprising more starch than alginate, in order to improve the printing qualities of the paper. D6 disclosed that the combination of starch or synthetic resin emulsions would yield *"a coated product superior in printing qualities to that which could be obtained using starch or synthetic resin emulsion as the sole additive"* (col. 2, lines 25-30 of D6). D6 also disclosed that this combination would have a synergistic effect. In particular, D6 stated that *"Still another advantage to the use of the coating composition of my invention is that a satisfactory level of printing quality can be maintained at a lower coating weight than is possible using an ordinary coating composition."*, (col. 2, lines 36-40 of D6, emphasis added). D6 also disclosed that said composition comprised, among other components, starch and sodium alginate, wherein *"... starch is present at a concentration not in excess of two and one-half times the weight of said sodium alginate present."* (claim 2 of D6). Thus, from the teachings of D6, it was clear that the effect associated with the use of starch and

alginate in combination was already known more than 50 years before the priority date of the patent and that the skilled person in the art, based on the teachings of this document, would have been prompted to use starch in a greater amount than alginate.
Based on the above, appellant 1 (opponent 1) maintained that when selecting the film-forming materials to be combined among the ones disclosed in D3, the skilled person in the art would have been motivated to combine starch and alginate (in an amount of starch greater than alginate), at least based on the suggestions of D6.

The same reasoning applied in relation to document D7 which referred to the paper industry and in particular to the treatment of paper with a paper coating composition that specifically comprised starch and alginate (such as sodium alginate) in ratios from 12:1 to 240:1 (col. 1, l. 11-17 of D7). A skilled person in the art expert in the field of the paper industry would have been aware of this document and, based on the teachings thereof, would have been motivated to combine starch and alginate (applying a greater amount of starch than alginate) in a film-forming composition to be applied to a paper wrapper.

In order to further demonstrate that the skilled person in the art would have been motivated to combine alginate and starch when preparing a film-forming composition to be applied to the paper wrapper to reduce the ignition proclivity, appellant 1 (opponent 1) submitted document D26 (O1), *"Influence of Starch Molecular Weight and Sodium Alginate on Silicone Holdout for Release Papers"*, dated 2001, which was focused on determining the influence of applying one type of potato starch on silicone holdout, wherein the

efficiency of the combination of starch with sodium alginate to determine its influence on the reduction of the permeability of paper was studied. Again, even if this document was not specifically directed to study papers for smoking articles, the skilled person in the art (expert in the field of the paper industry) would have been aware of the same.

3.4.10 The Board is of the opinion that starting from D3 and in view of the problem to be solved, the skilled person would not consult D6, D7 or D26 as they do not relate to paper wrapper for cigarettes.

Indeed, since the skilled person adapts the properties of the paper in view of its use, they would not look at papers used for other applications for adapting the film forming composition of D3. D6 and D7 deal with the manufacture of coated paper for high quality printing/ recording and D26 relates to silicone holdout for release paper.

3.5 Inventive step starting from D24 in combination with D22, D9, D16-D19 or D21

As no further submission regarding this objection was made during oral proceedings, the Board sees no reason to deviate from its preliminary opinion given in its communication under Article 15(1) RPBA and is reproduced below:

3.5.1 Appellant 2 (opponent 2) was of the opinion that example 3 of D24 disclosed all the features of claim 1 except for feature L.
Feature L reads:" said film-forming composition further comprising a polysaccharide, said polysaccharide comprising a starch".

As no effect regarding the inflammatory properties of the claimed paper wrapper have been provided in the patent, the technical problem to be solved was the provision of an alternative paper wrapper for a smoking article.

D22 taught in paragraphs [0026] to [0028] coating formulations for application to paper wrappers for a smoking article, which contained both Pullulan and an alginate as film-forming agents, with the weight fraction of Pullulan being greater than the weight fraction of alginate.

In addition, document D22 disclosed in paragraph [0026] that other modified starch derivatives could be used as film-forming agents instead of Pullulan.

The same applied to documents D9, D16 to D19 and D21, which also taught that modified starch derivatives could be used as film-forming materials. With regard to documents D9, D16 to D19 and D21, the opposition division argued in its decision (see point 4.5) that, taking into account the statements of the competent board of appeal on the disclosure content of a prior art document in point 1.6 of decision T 811/96, documents D9, D16 to D19 and D21 did not disclose coating compositions containing a combination of alginate and starch.

This argument put forward by the opposition division was, however, incorrect, since example 3 of document D24 already disclosed coating compositions containing alginate and a polysaccharide.

Thus, based on the teaching of example 3 of document D24, the only question that arose was whether a person skilled in the relevant art would have considered using a starch and/or a starch derivative instead of the polysaccharide present in the coating composition in addition to the alginate in example 3 of D24.

Contrary to the opinion of the opposition division, this question must have been answered unequivocally with "yes", since, for example, document D9 in column 2, lines 9 to 26 explicitly taught starch as a suitable film-forming material in coating compositions for tobacco product wrappers, in addition to natural polysaccharides.

3.5.2 The Board is not convinced by the arguments of the appellant 2 (opponent 2).

(a) Example 3 of D24 discloses in paragraph [0061] the following composition:
"The additive mixture incorporates about 71.68 parts water, about 8.8 parts of the alginate set forth in Example 1, about 3.2 parts of an alginate available as Keltone LVCR NF from ISP Corporation, about 0.16 parts of the colorant set forth in Example 1, about 0.16 parts of potassium sorbate, and about 16 parts #3 brown cane sugar".
Example 3 does not disclose at least feature L.

D22 discloses a film forming agent comprising either Pullulan in combination with alginate or Pullulan in combination with modified starch. However, D22 does not disclose starch with alginate as a film-forming agent.

Therefore, even when taking as a problem to be solved the provision of an alternative paper wrapper, the combination of D24 with D22 does not lead to the subject-matter of claim 1. Starting from D24, the skilled person would replace the brown cane sugar with Pullulan. As a result, Feature L would still be missing.

(b) Similarly, starting from example 3 of D24, the skilled person would not arrive at the subject-matter of claim 1 when combining its teaching with either D9, D16 to D19 or D21.

D9, column 2, lines 9-26 discloses that "other natural polysaccharides which will form satisfactory films include gum Karaya, gum acacia, British gum, agar, starch, carib gum, carrageenin and xanthan".

However, there is no teaching in D9 to select "starch" among the above list of polysaccharides and there is no reason for the skilled person to change the specific "#3 brown cane sugar" in the specific composition of example 3 of D24 with starch.

The Board finds that the approach taken by appellant 2 (opponent 2) is an ex-post facto approach which is not suitable for correctly assessing inventive step.

(c) A similar approach has been taken when combining the teaching of D24 with D16-D19 and D21.

3.6 Inventive step starting from D4 or D8 either alone or in combination with D6, D7 or D9

During oral proceedings, appellant 1 (opponent 1) referred to their written submissions.

3.6.1 Appellant 1 (opponent 1) argued that as in the case of D3, the difference between the subject-matter of claim 1 and D4 or D8 were features N and L. Therefore, the same reasoning as given above in relation to D3 would apply should document D4 or D8 be considered the closest prior art.

D4 explicitly disclosed that the film-forming composition could include inter alia alginate solutions, starch solutions, and mixtures thereof (page 3, lines 26 to 31 of D4).

D8 explicitly disclosed that the film-forming composition can include inter alia alginates, starch, and combinations thereof ([0068]).

A skilled person in the art, when exercising his routine work, would have obviously tried the combination of these two compounds, since they were both explicitly mentioned in D4 and D8 and these documents specifically invited to use a mixture of these compounds.

Besides, the same reasoning as regards the combination of the teachings of document D3 with the disclosures of documents D6, D7 or D9 applied. Appellant 1 (opponent 1) therefore maintained that the invention as claimed in claim 1 lacks inventive step in view of D4 alone, D8 alone or D4 or D8 in combination with documents D6, D7 or D9.

3.6.2 The Board disagreed for the same reasons as starting from D3. The paper wrapper of D4 and D8 are similar to D3 and present the same differences with the subject-matter of claim 1. The analysis submitted by appellant 1 (opponent 1) starting from D4 and D8 is also based on an ex-post facto analysis.

Order

For these reasons it is decided that:

The appeals are dismissed.

The Registrar: The Chairman:

M. Schalow V. Vinci

Decision electronically authenticated