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**Datasheet for the decision
of 2 December 2025**

Case Number: T 1156/23 - 3.4.01

Application Number: 16196064.6

Publication Number: 3163675

IPC: H01Q1/12, H01Q5/30, H01Q5/321

Language of the proceedings: EN

Title of invention:
VEHICLE WINDOW GLASS

Patent Proprietor:
Nippon Sheet Glass Company, Limited

Opponent:
AGC Glass Europe

Headword:
Vehicle window glass / Nippon Sheet Glass Company Limited

Relevant legal provisions:
EPC Art. 54(3), 56, 123(2)
RPBA 2020 Art. 12(4), 13(2)

Keyword:

Novelty objection not considered in opposition - considered on appeal

Main Request - Novelty (no)

Auxiliary request 1-1 - amendment within Art 12(4) RPBA - considered (yes) - objections to it considered (yes) - inventive step (no) - added subject-matter (yes)

Auxiliary request 2 - amendment after summons - taken into account (no)

Auxiliary requests 1-2, 1-3, and 1-4 - amendment within Art 12(4) RPBA - considered (no)



Beschwerdekammern
Boards of Appeal
Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0

Case Number: T 1156/23 - 3.4.01

D E C I S I O N
of Technical Board of Appeal 3.4.01
of 2 December 2025

Appellant:

(Opponent)

AGC Glass Europe S.A.
Rue Louis Blériot 12
6041 Gosselies (BE)

Representative:

Müller-Boré & Partner
Patentanwälte PartG mbB
Friedenheimer Brücke 21
80639 München (DE)

Respondent:

(Patent Proprietor)

Nippon Sheet Glass Company, Limited
5-27, Mita 3-chome
Minato-ku
Tokyo 108-6321 (JP)

Representative:

Hasegawa, Kan
Patentanwaltskanzlei Hasegawa
Untere Hauptstraße 56
85354 Freising (DE)

Decision under appeal:

**Interlocutory decision of the Opposition
Division of the European Patent Office posted on
6 April 2023 concerning maintenance of the
European Patent No. 3163675 in amended form.**

Composition of the Board:

Chair

P. Scriven

Members:

A. Medeiros Gaspar

R. Winkelhofer

Summary of Facts and Submissions

- I. The notice of opposition invoked grounds under Article 100(a) EPC.

- II. Among the documents submitted as evidence of lack of novelty, was:

D3 EP 3 101 733 A1.

D3 is a European patent application, published after the filing date of the patent, but with a filing date prior to the patent's earliest priority date.

- III. In their preliminary opinion, the Opposition Division noted that the novelty objections based on D3 had not been properly substantiated, but raised, of their own motion, a novelty objection to claim 1 of patent based on this document.

- IV. In their decision, the Opposition Division concluded that the patent, and auxiliary requests 1 to 3, did not meet the requirements of the EPC, but that auxiliary request 4 did. They did not admit a novelty objection to claim 1 of auxiliary request 4, based on D3.

- V. The opponent appealed this decision, requesting that it be set aside and the patent revoked. This remained their final request, at the end of oral proceedings before the Board.

VI. In their response to the appeal, the proprietor requested that the appeal be dismissed. In the alternative, they requested that the patent be maintained after further amendment, according to one of auxiliary requests 1-1 to 1-4, filed for the first time on appeal. During oral proceedings before the Board, they submitted a further auxiliary request, labelled "2". Their final requests were dismissal of the appeal, or else maintenance of the patent as further amended according to one of auxiliary requests 1-1, 2, 1-2, 1-3, and 1-4, in that order.

VII. Among the issues in dispute, the following are relevant to the present decision:

(a) whether the novelty objection to the request found allowable (current main request) based on D3, should be considered in appeal proceedings; and

(b) whether any of the auxiliary requests filed on appeal, and the objections to them, should be considered, and, if so, whether any of them complied with the EPC.

VIII. Claim 1 of the main request (auxiliary request 4 of the decision) reads:

*A vehicle window glass comprising:
a glass plate (1);
a defogger (2) that is disposed on the glass
plate (1) and includes a plurality of
horizontal heating lines (22),*

*a first feeding portion (50) disposed on the glass plate (1); and
a composite antenna element (5) that is disposed on the glass plate (1) and extends from the first feeding portion (50),
a second feeding portion (30) disposed on the glass plate (1); and
a first media antenna element (3) that is disposed on the glass plate (1), extends from the second feeding portion (50), and receives the frequency band of the first media,
wherein the composite antenna element (5) includes a first media element (53) that mainly receives a frequency band of first media, and a second media element (51) that mainly receives a frequency band of second media having a higher frequency band than the first media,
the first media is FM broadcasting, and
the second media is DAB broadcasting.*

IX. Claim 1 of auxiliary request 1-1 adds:

*... [than the first media,]
the second media element (51) extends substantially perpendicularly downward from the first feeding portion (50),
the defogger (2) and the first media element (53) of the composite antenna element (5) are capacitively coupled or directly coupled,
[the first media] ...*

X. Claim 1 of auxiliary request 2 adds, to claim 1 of the main request:

... [band of the first media,]
wherein the defogger (2) and the first media
element (3) are capacitively coupled or
directly coupled,
[wherein the composite ...]
...
[... or directly coupled,]
the first feeding portion (50), the second
feeding portion (30), the composite antenna
element (5), and the first media antenna
element (3) are disposed above the defogger
(2),
the first feeding portion (50) and the
second feeding portion (30) are disposed on
the upper edge of the glass plate (1),
the first feeding portion (50) is disposed
on the right upper edge of the glass plate
(1),
the second feeding portion (30) is disposed
on the left upper edge of the glass plate
(1),
[the first media]

XI. Claim 1 of auxiliary request 1-2 adds, to claim 1 of auxiliary request 1-1:

... [or directly coupled,]
the first feeding portion (50), the second
feeding portion (30), the composite antenna
element (5), and the first media antenna
element (3) are disposed above the defogger
(2),

[the first media]

XII. Claim 1 of auxiliary request 1-3 adds, to claim 1 of auxiliary request 1-2:

... [above the defogger (2),]
the first feeding portion (50) and the second
feeding portion (30) are disposed on the
upper edge of the glass plate (1),
[the first media]

XIII. Claim 1 of auxiliary request 1-4 adds, to claim 1 of auxiliary request 1-3:

... [of the glass plate (1),]
the second feeding portion (30) is disposed
on the left upper edge of the glass plate
(1),
[the first media]

Reasons for the Decision

Main request - novelty objection in view of D3 - consideration

1. D3 was published after the filing date of the present patent, and is a European patent application with a filing date prior to the earliest priority date of the present patent. Consequently, it forms part of the prior art relevant for novelty under Article 54(3) EPC.

2. The Opposition Division did not consider the question of novelty of claim 1 of the current main request (auxiliary request 4 of the decision) vis à vis D3.
3. As reasons for this, they indicated that the novelty objection had only been raised by the opponent at a very late stage of the oral proceedings, and that it lacked *prima facie* relevance (point 51 of the contested decision).
4. However, D3 was submitted with the notice of opposition, which contained an assertion that claims 1-16 of the patent lacked novelty in view of its disclosure. Although the Opposition Division was of the opinion that the objection was not sufficiently substantiated, they did assess the novelty of claim 1 of the patent in view of D3, in the communication they sent with their summons to oral proceedings.
5. Additionally, as correctly noted by the opponent, there was in fact a novelty objection to this request (then, auxiliary request 4), in the written submission filed by the opponent in preparation for the oral proceedings before the Opposition Division (submission dated 14 December 2022, paragraphs 65 to 72).
6. Hence, at least for the reason that this submission was overlooked, the Opposition Division did not correctly assess the facts surrounding this objection of the opponent. A correct assessment might well have led to a different conclusion.
7. The proprietor argues that the objection raised in appeal referred to passages of D3 that had not been mentioned during opposition proceedings, and, also for

that reason, this novelty objection was a new one that should not be considered.

8. Indeed, during proceedings before the Opposition Division, the objections raised were based on paragraphs [0032], [0038], [0059], [0061], [0106], and [0110], as well as on figures 3, 4, and 5 of D3, while, on appeal, the opponent additionally refers to paragraphs [0044], [0045], [0057], [0086], [0088], and [0091], as well as to figures 9 and 14, and the associated text passages.
9. The Board sees, however, the different parts of the disclosure of D3 as linked and not as independent disclosures, as the proprietor apparently argues.
10. Indeed, in D3, elements 11, 21, and 22 of the composite antenna 10 are depicted and described throughout figures 1 to 20 of D3 as being the same.
11. Additionally, the antenna element 31, and the antenna elements 12 and 13, disclosed in paragraphs [0036] and [0037], respectively, by reference to figures 3, 4, and 5, are also present in all the composite antennas 10 of the "examples" of figures 5 to 15 of D3.
12. Consequently, any passages of D3 providing further details on any of the elements of the composite antenna 10 of figures 5 to 15 of D3, such as those in paragraphs [0057] to [0063], are to be considered when determining whether or not composite antenna of the claim differs from the composite antenna 10 of D3.
13. Furthermore, D3 systematically establishes links between the different "examples" depicted in the

figures 5 to 15, indicating how a subsequent "example" builds on or differs from the previous ones.

14. It follows that the disclosure of paragraph [0045], or that of figure 14 and the text passages describing it, is not unrelated to that of the composite antenna of figure 5 and paragraphs [0032], [0037], and [0038].
15. The disclosure of that example, in particular, seems *prima facie* to prejudice novelty of claim 1 of the present request.
16. Consequently, the question of novelty of claim 1 of the main request in view of D3 is to be considered in substance.

Main request - novelty in view of D3 - substantive assessment

17. D3 discloses, as does the patent in suit, a vehicle window glass incorporating a defogger 90, a composite antenna 10, extending from a first feeding point 15 and adapted to receive FM radio broadcasts and digital audio broadcasts (DAB), and another antenna 60, extending from another feeding point 63 and adapted to receive FM radio broadcasts (D3: figures 5 and 14; paragraphs [0038] to [0040], and [0045]).
18. The proprietor argues that D3 does not unambiguously disclose composite antenna 10 as including an antenna element that mainly receives an FM radio frequency band and another antenna element that mainly receives a DAB frequency band.
19. However, paragraph [0038] of D3 explicitly refers to a plurality of antenna elements adjusted to have lengths

suitable for receiving those two frequency bands. This teaching implies the existence of antenna elements, as defined in the claim.

20. It is immaterial to the conclusion that these elements exist, whether or not it is possible, on the basis of the disclosure of paragraph [0038], to identify which of the elements of the composite antenna 10 are "mainly" adapted to receive the one or the other frequency band.
21. Still, the teaching of paragraph [0038] is completed by the teaching of paragraphs [0057] to [0063], providing further details on how the different elements of the composite antenna 10 contribute to the reception of the different frequency bands.
22. It follows from this further disclosure, for instance, that elements 11 and 21 mainly receive in an FM radio frequency band, while elements 12, 13, and 22 mainly receive in a DAB frequency band.
23. D3 discloses, then, a composite antenna comprising elements that mainly receive in an FM radio frequency band and elements that mainly receive in a DAB band, as required by the claim.
24. In this context, it is also noted that the word *mainly*, employed in the claim, rather than precluding each element defined from also receiving other frequency bands, as seems to be the understanding of the proprietor, explicitly allows for it.
25. The further argument according to which the requirement that the composite antenna extend from the first feeding portion implied that (each element of) the

composite antenna would extend horizontally, or be arranged "in line" with the feeding portion, finds no reflection in the wording of the claim.

26. Therefore, claim 1 of the main request lacks novelty in view of D3 (Article 54(3) EPC).

Auxiliary request 1-1 and objections to it - consideration

27. Auxiliary request 1-1 was filed for the first time with the reply to the appeal.
28. In response, in addition to objecting to its consideration, the opponent raised clarity and added-matter objections, as well as inventive step objections, including an inventive step objection based on the teaching of D3, noting, for the first time, that D3 was the European branch of an international application (WO 2015/111300 A1) published before the priority date of the patent, and thus that its teaching also formed part of the prior art relevant for inventive step.
29. Consideration of this auxiliary request is at the Board's discretion under Article 12(4) RPBA.
30. In view of the decision to consider the novelty attack to the main request based on D3, the proprietor must be able to respond.
31. That does not mean that any new auxiliary request has to be considered, but the amendments introduced into claim 1 of auxiliary request 1-1 seem suitable to address the issue.

32. Indeed, the further definition of the DAB element of the composition antenna as *extending downwardly* in claim 1 of this request requires that a further novelty assessment be carried out, under consideration of whether or not the "downwardly extending" antenna element 31 of the composite antenna 10 of D3, is adapted mainly to receive DAB broadcasting, an assessment that was not made with regards to the main request.
33. This is sufficient reason to admit auxiliary request 1-1 into appeal proceedings (Article 12(4) RPBA).
34. The opponent, of course, must then be able to respond in turn, and so the opponent's objections to this request, including the objection of lack of inventive step based on D3 should also be considered.

Auxiliary request 1-1 - substantive assessment

35. Claim 1 of auxiliary request 1-1 adds, to claim 1 of the main request, the features that:
(a) *the defogger and the first media element, i.e. the FM antenna element, of the composite antenna element are capacitively coupled or directly coupled; and*
(b) *that the second media element, i.e. the DAB element, extends substantially perpendicularly downward from the first feeding portion.*
36. As indicated under item 28. above, the opponent raised several objections to this request.
37. The questions of whether or not claim 1 of this request defined subject-matter that was new and inventive in

view of D3 as a translation of WO 2015/111300 A1, and of whether or not the amendments introduced issues of added-matter, were discussed during the oral proceedings before the Board.

38. Concerning novelty and inventive step, the Board notes that D3 also discloses the defogger as capacitively coupled to FM element 21 of its composite antenna and, hence, the feature indicated under item 35.(a) above.
39. As for the feature indicated under item 35.(b) above, the composite antenna 10 of D3 also comprises an antenna element *extending substantially perpendicularly downward from the first feeding portion*, namely, the antenna element 31 (D3: figure 5).
40. The length and relative position of this element are, however, described as "adjusted to thereby be able to improve the sensitivity on a high band side of the FM radio broadcast band" (D3: paragraph [0061]). Element 31 cannot, therefore, be equated to an antenna element mainly receiving DAB broadcasting, as the antenna element *extending substantially perpendicularly downward* defined in claim 1 of this request.
41. The opponent argued that, in view of the ambiguity of the term *mainly*, the last sentence of paragraph [0061] of D3, stating that "it is also possible to improve the sensitivity of DAB III as a whole" rendered also this feature not new.
42. The Board does not regard such a statement as a direct and unambiguous disclosure that the element 31 is specifically adapted to improve DAB broadcast, but rather, it is a statement that the length and relative

position of this element could, alternatively, be adjusted so as to achieve such an effect.

43. The skilled person seeking to improve the DAB sensitivity in the composite antenna 10 of D3, would find, in such a statement, the necessary incentive for arriving at the subject-matter defined in claim 1 of this request in an obvious manner.
44. Consequently, claim 1 of auxiliary 1-1 lacks inventive step, in view of D3 as translation of translation of WO 2015/111300 A1 (Article 56 EPC).
45. Concerning added-matter, the proprietor indicated, claim 8 and paragraph [0034] of the application as filed, as basis for the amendments indicated under item 35. (a) and (b) above, respectively.
46. The opponent objected to each of the amendments, arguing:
 - (a) that original claim 8 was dependent on claim 7, and so defined a feature that was not included in the new claim 1; and
 - (b) that the feature that had been added on the basis of paragraph [0034] of the application as filed, had been isolated from the other features in connection to which it had been disclosed.
47. Concretely, the opponent argued that original claim 7 (and, therefore, also original claim 8) defined the coupling of the defogger to the FM antenna extending from the second feeding point, whereas claim 1 of auxiliary request 1-1 did not. The application had no basis for such an intermediate generalisation, which, therefore, contravened Article 123(2) EPC. Also the omission of the positioning of the composite antenna on

the "right side of the upper edge of the glass plate", or of a "substantially U-shaped cancel element ... extending to the right side from the vicinity of the upper end of the DAB element", and of "an FM element extending to the right side of the cancel element" mentioned in paragraph [0034] contravened Article 123(2) EPC.

48. The Board agrees with the opponent and is not persuaded by the proprietor's argument to the contrary, according to which the missing elements were not inextricably linked to those introduced into the claim.
49. The relevant disclosure of the application as filed, extending from paragraph [0029] to paragraph [0044], in which paragraph [0034] is included, concerns the vehicle window glass depicted in figures 1 and 3a, which comprises a composite antenna as depicted in figures 2 and 3b.
50. In such a vehicle window glass, the composite antenna is placed on the right upper edge of the vehicle glass and comprises a "cancel element" 52, which is not only disclosed in paragraph [0034] as constructionally linked to the DAB element 51 extending downwardly, but also in paragraph [0043] as functionally linked to that same DAB element.
51. The vehicle window glass of figures 1 and 3a also comprises both the FM element of the composite antenna and the FM element of the additional antenna coupled to the defogger (paragraphs [0029] and [0044]), as defined in original claims 7 and 8.
52. The general reference, from paragraph [0045] onwards, to possible modifications, including the general

statement in paragraph [0050] that the "cancel element" is not necessarily essential or that its length and shape are not particularly limited, does not change the fact that, in the vehicle window described in paragraph [0034], in connection to figures 1 and 3, such an element was described as constructionally and functionally linked to the other elements defined in the claim.

53. It is true that, in the subsequent discussion, from paragraph [0056] onwards, other vehicle windows are described, which differ from those of Figures 1 and 3, in that they comprise a "composite" antenna with fewer elements. Those examples (from paragraph [0057] on), are described as being "of the present invention". The skilled reader, however, understands, this section of the application to be an exposition of various investigations the proprietor, or the inventor, undertook into the different elements of the composite antenna, and their relative placement with regards to the other antenna and the defogger, on the reception sensitivity of vehicle window. In that context, the composite antenna of figure 4 does not comprise a "cancel element", which is shown, in figure 6, to negatively impact DAB reception sensitivity, and the "composite" antenna of figure 11 does not even comprise a FM element.
54. However, rather than supporting the proprietor's defence that the elements left out of the claim were not linked to those that were introduced into the claim, the disclosure of these paragraphs confirms the existence of functional links between them and the relevance of the placement of the composite antenna with regards to the other antenna and the defogger.

55. Therefore, the proprietor's arguments as to why the features added to the claim could be isolated are not persuasive.

56. Consequently, claim 1 of auxiliary request 1-1 also contravenes Article 123(2) EPC.

Auxiliary request 2 - consideration

57. Auxiliary request 2 was filed during the oral proceedings before the Board.

58. Consideration of this auxiliary request at the Board's discretion under Article 13(2) RPBA.

59. Claim 1 of this request adds, to claim 1 of auxiliary request 1-1, the feature of original claim 7, that had been omitted. It also introduces limitations concerning the position of the first and second feeding points on the glass, which were already defined in one of the auxiliary requests filed in response to the appeal (current auxiliary request 1-4), for which paragraphs [0029] and [0034] were indicated as providing basis.

60. Claim 1 does not define, however, the composite antenna as comprising a "cancel element", as described in paragraph [0034] of the application as filed.

61. Additionally, the limitations as to the position of the first and second feeding points triggered objections under Articles 84 and 123(2) EPC, raised by the opponent in response to the proprietor's reply to the appeal.

62. It is then apparent that the amendments prima facie fail to solve the issues identified by the Board without raising new ones.
63. Furthermore, there are no exceptional circumstances that could justify the admission of this request at such a late stage of the proceedings, given that the issues of added-matter identified with claim 1 of auxiliary request 1-1 were raised in the opponent's response to the proprietor's reply to the appeal.
64. Therefore, auxiliary request 2 is not admitted into appeal proceedings (Article 13(2) RPBA)

Auxiliary requests 1-2, 1-3, and 1-4 - added-matter

65. Auxiliary requests 1-2, 1-3, and 1-4 were filed with the reply to the appeal.
66. Their admission is also at the Board's discretion, under Article 12(4) RPBA.
67. They suffer prima facie from, at least, the added-matter issues identified above with regards to auxiliary request 1-1, concerning the lack of the feature that was present in claim 7 as filed, and the lack of definition of the composite antenna as comprising the "cancel element" as described in paragraph [0034].
68. There is, thus, no reason to admit auxiliary requests 1-2, 1-3, and 1-4 into appeal proceedings (Article 12(4)RPBA).

Conclusion

69. In view of the above, there is no allowable request on file. The patent has, therefore, to be revoked.

Order

For these reasons it is decided that:

1. **The decision under appeal is set aside.**
2. **The patent is revoked.**

The Registrar:

The Chair:



D. Meyfarth

P. Scriven

Decision electronically authenticated