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Datasheet for the decision of 12 March 2026

Case Number: T 0776/24 - 3.2.03

Application Number: 16906418.5

Publication Number: 3366841

IPC: E01F15/14

Language of the proceedings: EN

Title of invention:
DAMPING DEVICE

Patent Proprietor:
OAO "Zavod Prodmash"

Opponent:
Industry AMS S.r.l.

Relevant legal provisions:
EPC Art. 56, 69, 100(a), 100(b), 100(c), 123(3)
RPBA 2020 Art. 13(2)

Keyword:
Inventive step - ex post facto analysis - could-would approach - non-obvious modification - auxiliary request (yes)
Grounds for opposition - insufficiency of disclosure (no) - amendment of figures resulting in extension of subject-matter (yes)
Amendment after summons - exceptional circumstances (yes) - taken into account (yes)
Amendments - broadening of claim (no)

Decisions cited:
G 0002/88, G 0002/10, T 0331/87

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Case Number: T 0776/24 - 3.2.03

D E C I S I O N
of Technical Board of Appeal 3.2.03
of 12 March 2026

Appellant: (Opponent)	Industry AMS S.r.l. Via Dante Giacosa snc Zona Industriale ASI Sud 81025 Marcianise (CE) (IT)
Representative:	Dall'Olio, Christian INVENTION S.r.l. Via delle Armi, 1 40137 Bologna (IT)
Respondent: (Patent Proprietor)	OAO "Zavod Prodmash" 11 Zavodskoye Shosse Samara 443022 (RU)
Representative:	Prüfer & Partner mbB Patentanwälte · Rechtsanwälte Sohnckestraße 12 81479 München (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 3 April 2024 rejecting the opposition filed against European patent No. 3366841 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	C. Herberhold
Members:	R. Baltanás y Jorge
	F. Bostedt

Summary of Facts and Submissions

I. European patent No. 3 366 841 B1 relates to a damping device.

II. An opposition was filed against the patent based on Articles 100(b) EPC, 100(c) EPC and 100(a) EPC in conjunction with Article 56 EPC.

III. The present appeal is against the decision of the opposition division rejecting the opposition.

This decision was appealed by the opponent (appellant).

IV. In a communication pursuant to Article 15(1) RPBA, the Board indicated its preliminary opinion.

V. By letter dated 6 February 2026, the appellant informed the Board that it would not attend the oral proceedings.

VI. Oral proceedings were held on 12 March 2026.

VII. Requests

The appellant requested that the decision under appeal be set aside and that the patent be revoked.

The respondent (patent proprietor) requested that the appeal be dismissed, i.e. that the patent be maintained as granted (main request) or, in the alternative, that the decision be set aside and that a patent be maintained in amended form on the basis of:

- the claims as granted and the amended figures submitted with the reply to the appeal (auxiliary request 0), or
- the claims according to auxiliary request 00, filed with letter of 15 December 2025, and the figures of auxiliary request 0 submitted with the reply to the appeal, or
- the claims of one of auxiliary requests 1 to 116 and the figures of auxiliary request 0

VIII. Claim 1 as granted (main request), including the numbering of its features based on the numbering adopted by the parties, reads as follows (amendments with respect to claim 3 as filed when entering the regional European phase marked in bold):

1.1 *Damping device* ***(1)***
2.1 *containing a front deflector* ***(2)*** ~~***representing a moving***~~ ***which includes a moveable*** *support* ***(3)*** *installed at a guide* ***(4)****,*
2.2 ***the front deflector*** *with possibility for movement* ***in case of a vehicle collision,***
3.1 ***sectional side beams (6)***
4.1 *and* ***a*** *section****s*** *of mass dampers* ***(5)****,*
3.2 *whereas*~~***, damping device is additionally equipped with***~~ ***the*** *sectional side beams* ***(6) are*** *designed to provide* ~~***the***~~ ***for*** *telescopic insertion of the front section of* ~~***the***~~ ***a*** *side beam into the next one behind it,*
3.3 *while each* ***of a*** *pair of right and left* ***sectional*** *side beam****s*** ~~***sections***~~ ***(7, 8)*** *is limited by a* ~~***horizontally***~~ ***vertically*** *oriented rectangular frame* ***(9)*** ~~***on***~~ ***having*** *a vertical base entering into* ~~***a***~~ ***the*** *guide* ***(4)*** *and fixed between relevant sections of* ~~***side***~~ ***a pair of*** *right and left side beams* ***(7, 8)****,*

5.1 *while* ***a rear block (12) includes a*** *terminal rectangular frame* ***(11)*** *of* ***the*** *damping device* ***(1)*** ~~***represents a rear block***~~ *and is fitted with* ***a*** *rear fastening* ***(13)*** *rigidly connected to guide* ***(4)***,

4.2 ~~***while***~~ ***wherein the damping device contain sections of mass dampers (14, 19), characterized in that the*** *damping device* ~~***has two types***~~ ***contains sections*** *of mass damper****s*** ~~***sections***~~ ***of a first and/or second types (14, 19)***,

6.1 *where each* ***section of*** *mass damper* ~~***section***~~ *of the first type* ***(14)*** *is formed by twin vertical* ~~***non-contacting***~~ ***spaced apart*** *sheet elements* ***(15)***

6.2 *with zigzag-shaped bends* ***(16)***, *oriented towards each other*,

6.3 *while each end of each* ***sheet*** *element* ***(17)*** *with zigzag-shaped bend* ***(16)*** *is bent outwards forming a through channel* ***(18)*** *parallel to* ***the*** *centre line of* ***the*** *damping device* ***(1)***,

6.4 *and the section* ***of mass damper being*** ~~***is***~~ *limited by vertical plates* ***(23) at its ends***,

7.1 *whereas each* ***section of*** *mass damper* ~~***section***~~ *of the second type* ***(19)*** ~~***represents***~~ ***is formed by*** *a perforated end-to-end duct* ***(20)*** *oriented horizontally relative to a through opening* ***(21)***

7.2 *and perforation* ***(22)*** ~~***is***~~ ***being*** *made at each of four duct walls and at bends* ***between the walls***, *with perforation at bends coming to both adjacent sides of duct*,

7.3 ***the section of mass damper being limited by vertical plates (23) at its ends***,

8.1 ***wherein*** *while* ***the vertical plates (23) connect sections of mass damper (5) with each other***, *some vertical plates* ***(23)*** *limiting the section rest on lower bar of each rectangular frame* ***(24)***,

8.2 *and* ***the*** *front and rear vertical plates* ***(23) of the***

connected sections of mass dampers *are fixed at* ***the*** *front deflector* ***(2)*** *and* ***the*** *rear fastening* ***(13)****, respectively.*

IX. The claims of auxiliary request 0 correspond to the granted claims, but this auxiliary request contains the drawings of the European patent application as published in the European A1 publication, which were resubmitted on 6 December 2024 with the reply to the statement of grounds of appeal.

X. Claim 1 of auxiliary request 00 is based on granted claim 1, in which feature 3.3 has been replaced by the following feature 3.3' (amendments shown in bold):

3.3' *while each of a pair of right and left sectional side beams (7, 8) is limited by a vertically oriented rectangular frame (9)* ***~~having~~ on*** *a vertical base entering into the guide (4) and fixed between relevant sections of a pair of right and left side beams (7, 8),*

The drawings of auxiliary request 00 correspond to the drawings of auxiliary request 0.

XI. Prior art

The following documents were cited in the statement setting out the grounds of appeal and during the opposition proceedings and are relevant to this decision:

D1: EP 0 872 594 A2

D2: WO 2014/141134 A1

D4: KR 20060065554 A

D4a: Automatic English translation of D4

D7: CN 203795348 U

D7a: Automatic English translation of D7

The respondent submitted the following documents with its letter dated 15 December 2025 which are relevant to this decision:

Annex D: Extract from the Cambridge Dictionary Online for the word "base"

Annex E: Extract from the Merriam-Webster Dictionary Online for the word "base"

XII. The appellant's arguments relevant to this decision can be summarised as follows.

(a) Main request, added subject-matter

The amendments in the figures of the patent specification resulted in an unallowable addition of subject-matter since technical details which were not part of the originally filed application had been incorporated.

Concerning claim 1, there was no basis in the original application for replacing the term "representing" with "includes" since the description only disclosed the term "representing" (feature 2.1). The originally filed figures did not support this either.

Furthermore, it would not be obvious for the skilled person that the term "**horizontally** oriented rectangular frame", which was disclosed consistently as such in the originally filed description (see page 3, line 8, page 5, lines 6 and 7, and page 9, line 10) and in claims 1 to 3, was mistaken such that the feature could be

amended to "**vertically** oriented" as it was in granted feature 3.3.

Still relating to feature 3.3, originally filed claim 3 only defined "*a horizontally oriented rectangular frame* ***on*** *a vertical base entering into a guide*", whereas amended feature 3.3 defined a different relationship between the rectangular frame and the vertical base, for which no support could be found in the originally filed application, namely "*a vertically oriented rectangular frame* ***having*** *a vertical base entering into the guide*".

Moreover, lines 9 and 10 of the originally filed page 5 could be understood in only one way, namely that the ultimate rectangular frame (11) was the rear block (12) and that the former was equipped with the rear fastening device (13) rigidly connected to the guide (4). The amendments made in feature 5.1 thus lacked any basis in the originally filed application.

Finally, the originally disclosed term "non-contacting" implied that the sheet elements were in very close proximity to each other without actually touching. Conversely, the replacement feature "spaced apart" (feature 6.1) suggested a noticeable distance between the two sheet elements, indicating a greater separation that could significantly alter the structural and functional characteristics of the mass damper section.

(b) Auxiliary request 0, admittance

Auxiliary request 0 should not be admitted into the appeal proceedings by the Board exercising its power of discretion under Article 12(5) RPBA. The respondent

did not file any auxiliary requests with its reply to the notice of opposition but only shortly before the deadline for making written submissions under Rule 116(1) EPC, the requests being therefore late filed. The auxiliary requests were not adequately substantiated, and several were not suitable for ensuring a convergent development of higher-ranking requests.

(c) Auxiliary request 00, admittance

The appellant did not object to the admittance of auxiliary request 00 in its letter dated 6 February 2026.

(d) Auxiliary request 00, sufficiency of disclosure

The patent did not comply with the requirements of Rule 42(1)(e) EPC with regard to the different aspects objected to, i.e. it did not describe in detail at least one way of carrying out the claimed invention in each respect.

Moreover, some features of claim 1, when implemented across the whole scope of the claim, would not solve the problem addressed by the invention, and the claim was also not supported by the description.

Point 3 of paragraph [0018] of the patent specification disclosed that the vehicle and the damping device could move after a collision. This meant that the guide of feature 2.1 was not necessarily fixed to the ground and that claim 1 thus encompassed embodiments in which the vehicle could not be stopped.

Concerning feature 6.1 ("*where each section of mass damper of the first type is formed by twin vertical spaced apart sheet elements*") defining the first option of claim 1, its literal meaning was that two vertically spaced apart sheet elements were provided, whereas the figures of the patent only disclosed embodiments using four sheet elements, thus leaving the skilled person without any teaching on how to implement this feature.

Furthermore, the sheet elements disclosed in the figures of the patent did not comprise zigzag-shaped bends as defined in feature 6.2 but just a V-shape.

Similarly, according to Figure 4, each end of each sheet element was bent so that it was parallel to the centre line of the damping device. This did not constitute an implementation of the feature "bent outwards", which required each end to be bent transversely with respect to the central longitudinal axis and out of it (feature 6.3).

Concerning the second option of claim 1, the absence of a definition for "through opening" in the claim meant that the skilled person was not provided with any guidance on how to orient the perforated end-to-end duct of feature 7.1. None of the figures showed, for each duct, at least a perforation on a lateral wall as defined in the second option of claim 1 (feature 7.2). Thus, no embodiment of the invention defined in the embodiment "perforated end-to-end duct" of claim 1 was disclosed. Furthermore, feature 7.2 did not include any limitations regarding the shape, size, position or number of perforations, nor did the description provide any details in this respect. Therefore, the skilled person would not know how to carry out the

perforations, in particular for the walls which were not shown in the figures.

(e) Auxiliary request 00, added subject-matter and extension of protection

The same objections relating to added subject-matter raised against claim 1 of the main request also applied to auxiliary request 00, except for the objection relating to the term "having" in feature 3.3.

Furthermore, according to claim 1 as granted, the rectangular frame "comprised", i.e. "had", the vertical base defined in feature 3.3, whereas by replacing "having" with "on" in amended feature 3.3', the vertical base was no longer part of the rectangular frame, nor of the claimed damping device. In this manner, the vertical base became a separate entity that was no longer part of the claimed damping device defined in claim 1. The amendment therefore extended the protection of the patent, contrary to Article 123(3) EPC.

(f) Auxiliary request 00, inventive step

Both embodiments defined in claim 1 were obvious in view of the prior art.

Concerning the first one ("sheet elements"; features 6.1 to 6.4), Figure 4 of D1 showed feature 6.2 (zigzag-shaped bends) since it related to a mass damper. The distinguishing features were related to two different technical problems which could be treated separately, namely how to increase the directional stability of the damping device during a vehicle impact (features relating to the "guide" aspect) and how to provide an

alternative shape of the "sheet elements" of the damper section (features relating to the mass damper construction). The features relating to the "guide" were obvious when considering D4/D4a, and the features relating to the "sheet elements" were obvious in view of the common general knowledge of the skilled person.

The second option defined in claim 1 ("end-to-end duct"; features 7.1 to 7.3) differed from D2 only in features 7.1 ("*perforated end-to-end duct oriented horizontally relative to a through opening*") and 7.2 ("*perforation being made at each of four duct walls and at bends between the walls, with perforation at bends coming to both adjacent sides of duct*"). The technical effect of the distinguishing features was how to reduce the stiffness of the end-to-end duct in the axial direction, and the objective technical problem was therefore how to provide less stiffness of the end-to-end duct in the axial direction during a vehicle collision. The skilled person would implement the perforations at the bends disclosed in Figure 6 of D7 and the perforations "in rows and columns" as disclosed in paragraph [0009] of D7a to reduce the stiffness of the end-to-end duct in an axial direction, thus arriving at the invention in an obvious manner.

XIII. The respondent's arguments relevant to this decision can be summarised as follows.

(a) Main request, added subject-matter

The omission of details not explicitly mentioned in the description was allowable if these details were not essential to the function of the invention, namely for deceleration of the vehicle ensuring minimal damage. The omitted vertical prongs were "entirely

irrelevant" in this respect and did not have any technical function. Thus, their removal from the schematic figures did not constitute an unallowable extension of subject-matter. Figure 10 of the patent still disclosed prongs on top of the rectangular frame and, even though these were shorter than those in originally filed Figures 1 to 3, the skilled person thus knew that prongs of some length to be determined according to their use were to be arranged, their particular length being irrelevant. Concerning the amended damper section and rectangular frame at the rear portion of the device shown in the figures, the patent application provided the skilled person with instructions for making the necessary adjustments to the damping system to achieve the invention's aims depending on the circumstances. The disclosure in lines 1, 2 and 16 to 18 of originally filed page 8 related to an object which the skilled person knew how to design, such that no new technical information resulted from the amendment of the figures. Finally, concerning the amended vertical plates arranged between damper sections, claim 1 required that at least one vertical plate be arranged between the damping elements. The skilled person would know how to form the connection between a vertical plate and a damping element, as shown in the amended figures. Amendments to the figures should be allowed in the same manner as for amendments to the claims.

The originally filed application provided a basis for each feature of claim 1 when the respective technical teaching was considered.

Concerning feature 3.3 ("*vertically oriented rectangular frame* ***having*** *a vertical base*"), the usual meaning of "base" (supported by Annex D and Annex E)

implied that the base was the lower part of the element associated to it, being thus implicit that the rectangular frame was arranged on the base in feature 3.3. It was irrelevant whether the base and the rectangular frame were displaced with respect to each other since the technical function would in any case be fulfilled. In such a construction, the rectangular frame would still be arranged "on" the base since it would sit on the base in the same manner as a statue on its base.

(b) Auxiliary request 0, admittance

Auxiliary request 0 was filed in opposition proceedings within the deadline for filing written submissions before the oral proceedings. Auxiliary request 0 was thus not late filed. Furthermore, the request was convergent relating to the ground for opposition addressed by it.

(c) Auxiliary request 00, admittance

Auxiliary request 00 was submitted as a response to the objection relating to extension of protection raised by the Board in point 10.4 of its communication under Article 15(1) RPBA. This represented exceptional circumstances justifying the admittance of the request after notification of the communication.

(d) Auxiliary request 00, sufficiency of disclosure

The appellant's objections were not persuasive since they concerned clarity aspects such as the alleged omission of essential features. The person skilled in the art would know how to implement each contested feature using their common general knowledge.

Feature 6.1 defined that at least two "twins", i.e. at least four spaced apart individual sheets, were present. This followed from the claim language itself and the consistency between the claims, the description and the figures.

(e) Auxiliary request 00, added subject-matter and extension of protection

The objections found convincing by the Board were addressed by means of the amended drawings and the amended feature 3.3'.

Concerning extension of protection, the interpretation of the vertical base as a separate entity not forming part of the damping device defined in claim 1 was technically not meaningful and not supported by the description and the figures of the patent specification. Furthermore, "having" did not imply a monolithic configuration of the rectangular frame and the vertical base. The replacement of "*vertically oriented rectangular frame* ***having*** *a vertical base*" with "*vertically oriented rectangular frame* ***on*** *a vertical base*" thus did not extend the scope of protection.

(f) Auxiliary request 00, inventive step

Concerning the first alternative of claim 1 ("sheet elements"; features 6.1 to 6.4), the skilled person would understand feature 6.1 as defining two twin sheet elements, each comprising two individual sheets. Consequently, D1 did not anticipate this feature since the mass damper shown only comprised two spaced apart sheet elements. Furthermore, an isolated single bend (as shown in D1) did not represent a zigzag bend, as

defined in feature 6.2. The ensemble of distinguishing features relating to the guiding elements and the sheet elements solved the objective technical problem of how to ensure a more uniform deceleration of a vehicle during a collision while enhancing the directional stability and maintaining structural integrity and minimising damage to both the vehicle and its occupants. D4 did not disclose the sheet elements of claim 1 and could not lead the skilled person towards the invention, and D1 did not provide any motivation for them to undertake the necessary modifications either. The modifications proposed by the appellant represented a functional change of the mass damper of D1 which required extensive simulation and prototyping to validate the performance of the new designs.

In the case of the second alternative of claim 1 (end-to-end ducts), D2 represented different ways of reducing the stiffness, such as by using ribs (2), grooves or notches. The objective technical problem solved by the distinguishing features of claim 1 was how to ensure a more uniform deceleration of a vehicle during a collision and minimum damage to the vehicle and its occupants (see paragraphs [0008] and [0016] of the patent specification). D7/D7a did not show two types of perforations arranged as defined in claim 1. Furthermore, the damping of the D7/D7a devices operated in a different way to that of D2, such that the combination of D2 and D7 would require major modifications in the existing ribs, grooves and notches of D2.

Reasons for the Decision

1. Continuation of the proceedings - Rule 115(2) EPC, Article 15(3) RPBA

The appellant was duly summoned to oral proceedings with a communication from the Board dated 24 September 2025.

Since the appellant did not attend the oral proceedings (as previously announced, see point V above), the proceedings were continued without that party in accordance with Rule 115(2) EPC and Article 15(3) RPBA, the appellant being treated as relying only on its written case.

2. Main request, added subject-matter - Article 100(c) EPC

2.1 Amended figures

2.1.1 It is uncontested that a number of figures of the patent specification were amended with respect to the figures of the originally filed application (i.e. the corresponding international publication in Russian WO 2017/222412 A1). See below the comparison between some of the originally filed figures (on the right) and the corresponding figures of the patent specification (on the left).

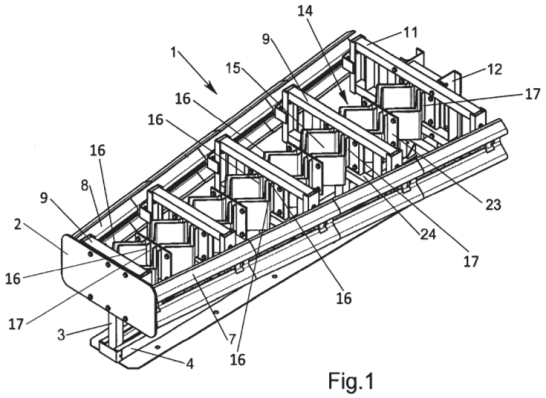
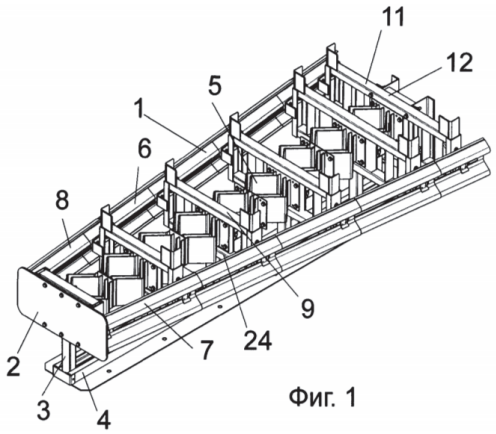


Fig.1



Фиг. 1

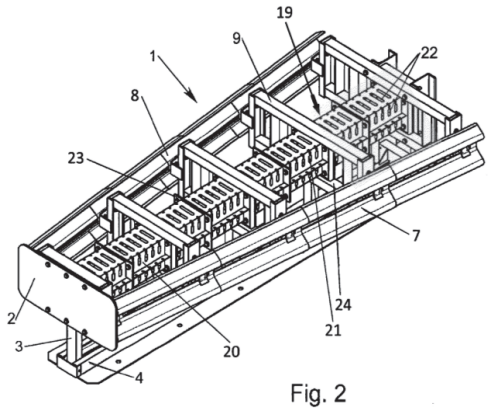
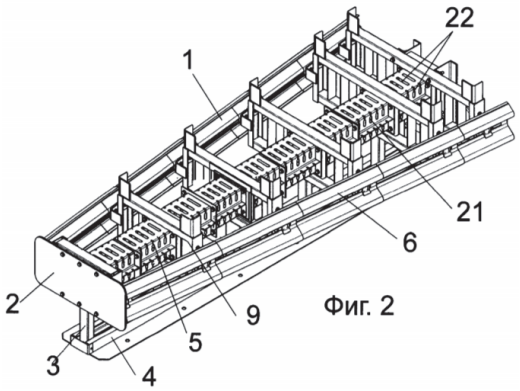


Fig. 2



Фиг. 2

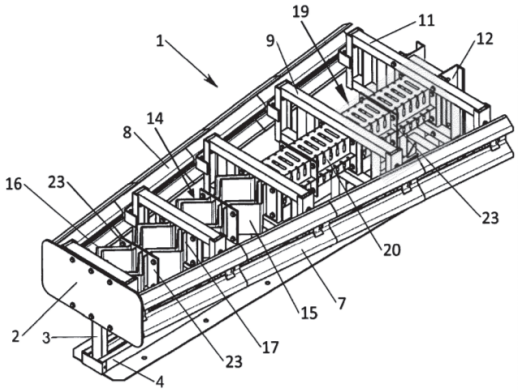
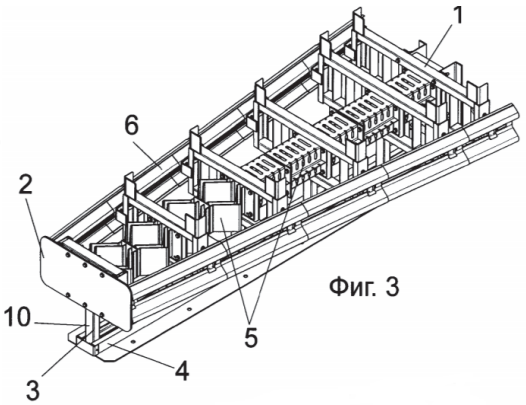


Fig. 3



Фиг. 3

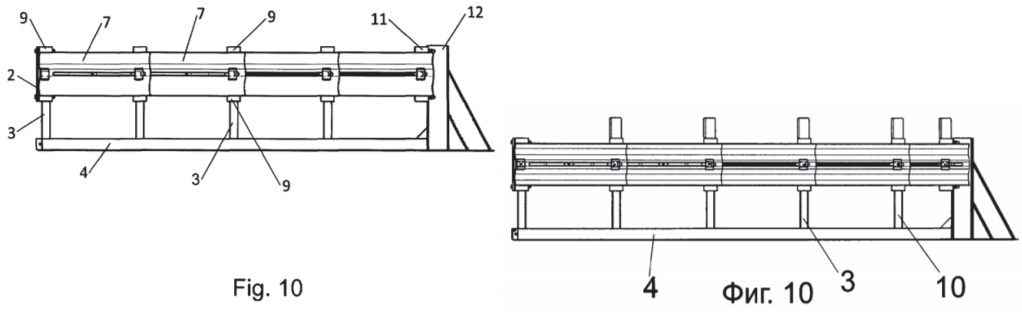


Fig. 10 Фиг. 10

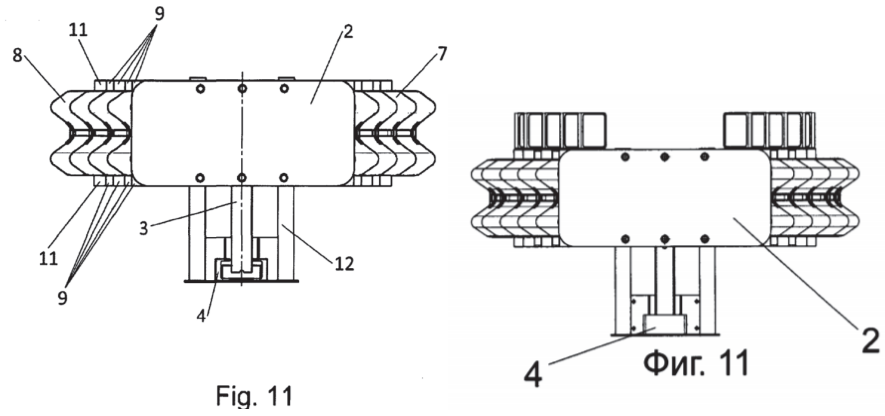


Fig. 11 Фиг. 11

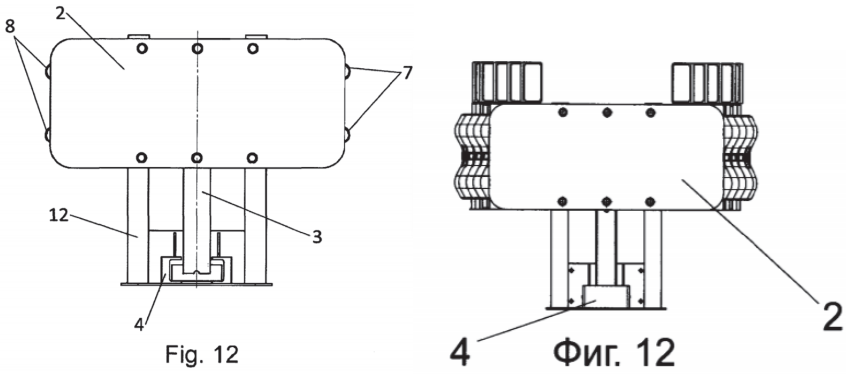
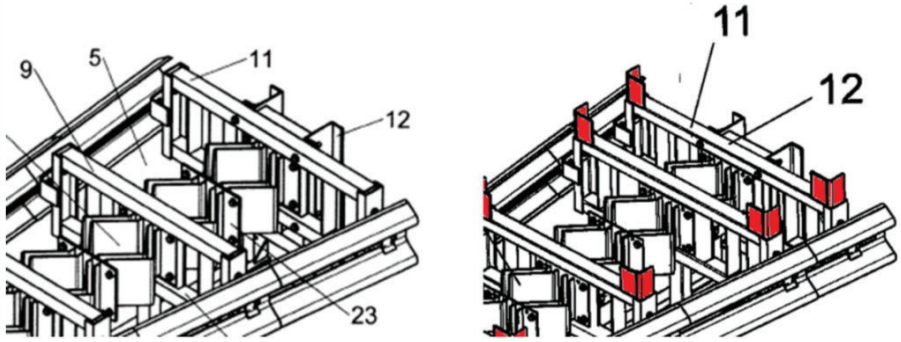


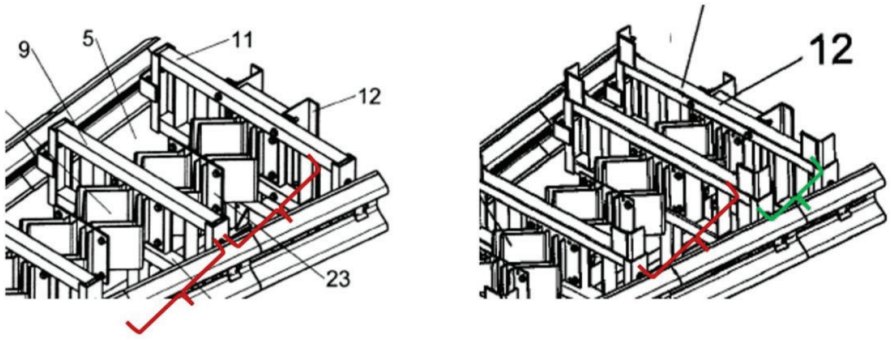
Fig. 12 Фиг. 12

2.1.2 Of the several amendments carried out, the appellant focused its objections on three aspects:

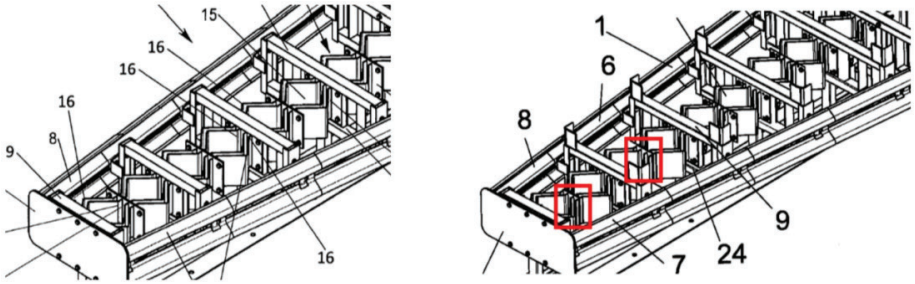
- the omission of the vertical prongs represented as protruding from the top corners of the rectangular frames (9) (see all the figures above and the marked figure below, taken from the reply to the appeal)



- the omission of the last rectangular frame (9) and the last damper section, with a length equal to half the length of the other damper sections (see Figures 1, 2, 3 and 10 above and the marked figure below, taken from the reply to the appeal)



- the addition of vertical plates connected with bolts between consecutive damper sections (see Figures 1, 2, 3 and 10 above and the marked figure below, taken from the reply to the appeal)



2.1.3 The modifications of the figures extend the subject-matter of the patent specification beyond the content of the application as filed for the reasons explained below since they result in a new technical teaching not directly and unambiguously derivable from the patent application as originally filed.

2.1.4 The opposition division decided on added subject-matter by applying the following criteria to the assessment of the amendments:

- whether the features omitted in the amended drawings were described as intrinsically linked to other features shown in the respective figure or as serving a specific purpose
- whether the variation in the damping effect caused by the amended feature was "*fully predictable*" such that the skilled person understood from the patent application that, depending on the circumstances, a corresponding parameter could be adjusted
- whether the amendments in some figures resulted in uniformity with the disclosure in other figures of the patent application

2.1.5 The respondent argued that the omission of details not explicitly mentioned in the description was allowable if these details were not essential to the function of the invention. According to the respondent, this omission did not provide the skilled person with technical information that was not directly and unambiguously disclosed in the original application.

Still according to the respondent, the omitted vertical prongs were "*entirely irrelevant to the invention*", namely for deceleration of the vehicle ensuring minimal damage, and did not have any

technical function. Thus, their removal from the schematic figures did not constitute an unallowable extension of subject-matter. The respondent cited decision T 331/87 relating to the omission of features from a claim. The respondent also argued that Figure 10 of the patent still showed short prongs on top of the rectangular frame and that even though these were shorter than those in originally filed Figures 1 to 3, the skilled person knew that prongs of some length to be determined according to their use were to be arranged, their particular length being irrelevant.

Concerning the amended damper section and rectangular frame at the rear portion of the device shown in the figures, the respondent submitted that the patent application provided the skilled person with instructions for making the necessary adjustments to the damping system to achieve the invention's aims depending on the circumstances, such that it would be an obvious step for the skilled person to configure an adapted damper section, as shown in the amended figures. According to the respondent, the disclosure in lines 1, 2 and 16 to 18 of originally filed page 8 related to an object which the skilled person knew how to design, such that no new technical information resulted from the amendment of the figures.

Finally, concerning the amended vertical plates arranged between damper sections, the respondent argued that claim 1 required that at least one vertical plate be arranged between the damping elements and that the skilled person would know how to form the connection between a vertical plate and a damping element, as shown in the amended figures. According to the appellant, originally filed Figure 1 disclosed such vertical plates, even though they were

of a different size to those shown in originally filed Figures 4 to 8, which disclosed large vertical plates with bolts. The respondent noted that amendments to the figures should be allowed in the same manner as amendments to the claims.

2.1.6 The reasons provided in the contested decision and the arguments of the respondent are not persuasive.

2.1.7 The decisive criterion for assessing whether an amendment results in an unallowable extension of subject-matter is that amendments can only be made within the limits of what a skilled person would derive directly and unambiguously, using common general knowledge, and seen objectively and relative to the date of filing, from the whole of the documents as filed, irrespective of the context of the amendment made (the gold standard; see G 2/10, Reason 4.3). The amendment must not result in the skilled person being presented with new technical information (G 2/10, Reason 4.5.1).

2.1.8 The technical teaching of the originally filed figures includes, *inter alia*, that the embodiments comprise vertical prongs at the upper corners of each rectangular frame (see originally filed Figures 1 to 3 and 10 to 14) and a shorter damping section plus a corresponding rectangular frame at the rear portion of the damping device (see originally filed Figures 1 to 10). Also, in some of these embodiments, the front damper sections arranged between rectangular frames do not comprise vertical plates protruding from the damper section and connected by bolts (see Figures 1 to 3 and 5).

2.1.9 It is undisputed that each of the above-mentioned amended features is of a technical character. Thus, they are part of the technical teaching provided by the represented embodiment. Any change to these features thus results in new technical information which was not **directly and unambiguously** disclosed in the figures or the description of the application as originally filed, i.e. it results in embodiments which do not correspond to those originally disclosed in the figures.

2.1.10 Concerning the vertical prongs, the Board does not agree with the respondent's interpretation of Figure 10 of the patent specification as still showing vertical prongs since the skilled person would not interpret the small rectangles protruding above the side beams (at reference signs (9) and (11)) as "prongs" in view of granted Figures 1 to 3, 11 and 13 but merely as the upper part of the vertical rectangular frames disclosed. This is confirmed when comparing originally filed Figure 10 (disclosing vertical prongs corresponding to originally filed Figures 1 to 3 arranged on the same small rectangles which appear in granted Figure 10) with Figure 10 of the patent specification.

2.1.11 The use of criteria which might be applicable to inventive step (e.g. whether adapting the disclosed invention to the circumstances is obvious), to sufficiency of disclosure (e.g. whether the skilled person has sufficient information to carry out an embodiment) or to the assessment of the allowability of amendments to a claim by omission of features (e.g. the essentiality test in accordance with T 331/87, which is subordinate to the gold standard - see Case Law of the Boards of Appeal, 11th edn., II.E.1.4.2 - and cannot replace it) is not relevant to this discussion.

2.1.12 Contrary to what seems to have been the understanding of the opposition division and the respondent, the "technical teaching" of a patent application is not limited to a particularly prominent aspect of the patent application, namely, the features which in fact allow the "invention" to fulfil its aims, such that other "secondary aspects" can be excised at will from the embodiments of the original content or amended on grounds of being "obvious modifications" in view of the common general knowledge of the skilled person. Whether the scope of an amended claim is justified after amendment in view of the entire technical teaching of the patent application (including the originally filed claims) is a different question which would require an analysis that cannot be used to assess the allowability of amendments to the drawings that form part of that technical teaching.

2.1.13 In view of the above, the main request is not allowable owing to an unallowable extension of subject-matter resulting from the amendments made to the figures (Article 100(c) EPC).

2.2 Amendments in claim 1

2.2.1 Feature 2.1 ("*a front deflector which* ***includes*** *a moveable support installed at a guide*")

The parties agreed that the description and the claims of the originally filed application (see the translated application submitted upon entry into the European regional phase) only disclosed a front deflector "representing" a movable support installed on a guide, with regard to the relationship between the front deflector and the movable support (see page 3, lines 3

to 5, page 5, lines 1 and 2, and claims 1 to 3 of the originally filed application).

The parties also agreed that the originally filed application disclosed that the front deflector (2) and the movable support (3) of the embodiments were not the same entity (see Figures 1 to 3, and also page 9, reference numbers (2) and (3)).

The appellant argued that there was no basis in the original application for replacing the term "representing" with "includes" since the description only disclosed the term "representing". According to the appellant, the originally filed figures showed that the front deflector (2) was a deflector plate which did not include the movable support (3), the latter being a rod that was only indirectly mounted to the deflector plate which could not be part of any device deflecting an impacting vehicle in view of its position (see Figure 10).

The Board finds that this amendment does not add subject-matter in an unallowable manner in view of the technical teaching of the originally filed application.

The general part of the originally filed description discloses a "*damping device containing a front deflector* ***representing*** *a movable support installed on a guide with possibility of movement*" (emphasis added; see page 3, lines 3 to 5). Originally filed claims 1, 2 and 3 disclose the same subject-matter in spite of some minor differences in language. This subject-matter implies a front deflector, which, by some undefined means, "represents" a movable support installed on a guide. The skilled person understands from this that the front deflector, whose main aim is to receive the

impact of a vehicle, also performs the function of a movable support installed on a guide.

The embodiments shown in Figures 1, 2 and 3 disclose, according to the description, a "*front deflector 2* ***representing*** *a movable support 3 installed on guide 4 with possibility of movement*" (emphasis added; see page 5, lines 1 and 2). Figures 1, 2 and 3 include reference numbers corresponding to the front deflector (2) and the corresponding movable support (3) installed on the guide (4).

Having considered the general part of the description and the claims, the skilled person would understand that the arrow of reference number (2) pointing to a plate of the front deflector in the figures does not imply that the "front deflector" according to the invention is **only** formed by this plate. In fact, when considering the information about the embodiments in light of the entire disclosure, the skilled person will see that the "front deflector" within the meaning of the patent application is intended to refer to the unit formed by the element that will be contacted by the colliding vehicle, e.g. the plate disclosed in the figures, and the element that connects it to the guide, i.e. the movable support as defined in claim 1. The definition of the "front deflector" within the meaning of the patent application is not affected by whether the connection between the element to be contacted by the colliding vehicle and the movable support is direct or indirect.

In view of the above, the originally filed application discloses the technical teaching of "*a front deflector which includes a moveable support installed at a guide*", as defined in feature 2.1.

2.2.2 Feature 3.3 ("*each of a pair of right and left sectional side beams is limited by a* ***vertically*** *oriented rectangular frame*")

The appellant argued that it would not be obvious for the skilled person that the term "**horizontally** oriented rectangular frame", which was disclosed consistently as such in the originally filed description (see page 3, line 8, page 5, lines 6 and 7, and page 9, line 10) and in claims 1 to 3, was mistaken since a horizontal orientation of the frame was feasible depending on its construction. According to the appellant, amending the description and claims solely based on the drawings, as if the latter prevailed over the former, was not justified. Concerning the alleged basis provided by the respondent in the originally filed description, the appellant argued that the fact that the description disclosed a "lower bar" (24) of the rectangular frame did not lead directly and unambiguously to the conclusion that the rectangular frame had to be vertically oriented. According to the appellant, a horizontally oriented rectangular frame might still possess a lower bar, e.g. a bottom edge of the frame, since these terms could indicate relative positions within the frame's structure and not the orientation of the frame as a whole.

This is not persuasive.

The originally filed description (see page 3, line 8, page 5, lines 6 and 7, and page 9, lines 10) and claims 1 to 3 consistently refer to a "horizontally oriented rectangular frame". However, the discrepancy between this consistent terminology and the figures of all the disclosed embodiments - and in particular between lines

6 and 7 of page 5 and the figures which are referred to in that passage - would alert the skilled person to the use of an incorrect term.

While the appellant is correct that the figures do not take precedence over the rest of the disclosure, the clear contradiction between all the relevant figures and the description suggests an error, with the same wrong term across the whole description and claims being consistently used. This is confirmed by the disclosure in the originally filed description of the "**vertical** base" (10) associated to the "**horizontally** oriented rectangular frame" (9) (see lines 6 and 7 of page 5 and Figure 10) and of the "lower bar" (24) of the rectangular frames (9). While a lower bar could theoretically be identified in some sort of horizontally oriented rectangular frame, the description explicitly refers to the device disclosed in the figures. Therefore, when analysing the information as a whole, it must be concluded that the term "horizontally oriented" is incorrect as the disclosed rectangular frame is without any doubt as vertically oriented as the "vertical base" (see page 5, line 7) and consequently has a "lower bar" in accordance with the description.

2.2.3 Feature 3.3 ("*rectangular frame **having** a vertical base entering into the guide and fixed between relevant sections of a pair of right and left side beams*")

The appellant argued that the originally filed claim 3 only defined "*a horizontally oriented rectangular frame **on** a vertical base entering into a guide*" (emphasis added), whereas the amended feature 3.3 defined a different relationship between the rectangular frame and the vertical base, for which no support could be

found in the originally filed application, namely "*a vertically oriented rectangular frame* ***having*** *a vertical base entering into the guide*" (emphasis added).

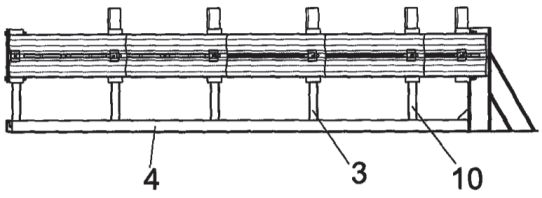
This argument was raised before the opposition division (see contested decision, last three sentences of the second bullet point in point II.1.2). However, no reasons were provided in the decision explaining why the objection was deemed not persuasive.

The respondent argued that the usual meaning of "base" (supported by Annex D and Annex E) implied that the base was the lower part of the element associated to it. According to the respondent, it was thus implicit that the rectangular frame was arranged on the base in feature 3.3. Concerning the possibility of a base which was not arranged on the same vertical plane as the rectangular frame, the respondent submitted that, from a technical point of view, it was irrelevant whether the base and the rectangular frame were displaced with respect to each other since the technical function of supporting the rectangular frame and enabling the movement of the ensemble along the guide would in any case be fulfilled. The respondent also argued that, in such a construction, the rectangular frame would still be arranged "on" the base since it would sit on the base in the same way as a statue sits on its base.

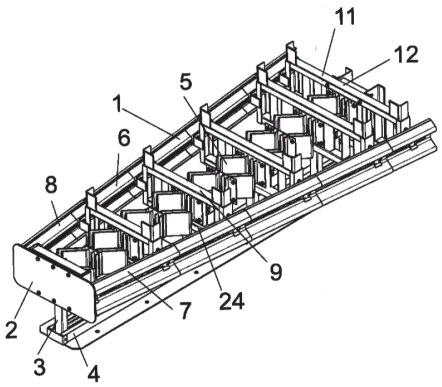
This is not persuasive.

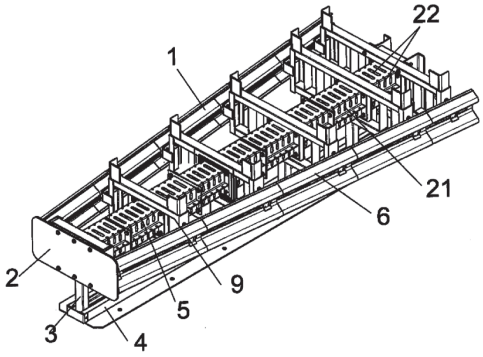
The originally filed description and claims disclose in a consistent manner a "*rectangular frame* ***on a*** *vertical base*" (see page 3, lines 8 and 9, page 5, line 7, and claims 1, 2 and 3).

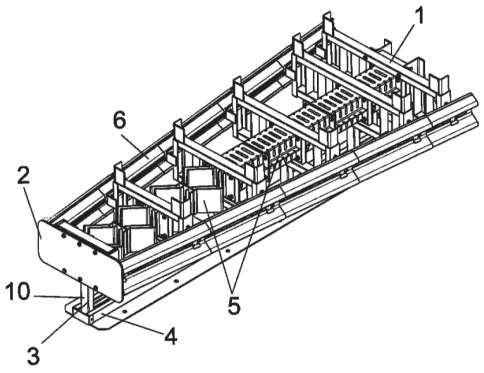
Originally filed Figure 10 (reproduced below) is the only figure disclosing the vertical base (10) referred to in the description of the particular embodiment with its reference number.



Originally filed Figures 1 to 3 (reproduced below) disclose the vertical base (10) and the rectangular frame (9), even if the reference number of the vertical base was not included.







Given the schematic nature of the figures and the lack of detail, no conclusions beyond the explicitly

described spatial arrangement (i.e. rectangular frame "on" the vertical base) can be drawn about the relationship between the rectangular frame (9) and the vertical base (10).

The skilled person reading the originally filed application would understand "on" in the given context, i.e. meaning that the rectangular frame is arranged above the base along a common vertical plane. Whether the usual meaning of "base" in a general context (as in the case of a statue) could encompass situations in which the base is not in the same vertical plane as the associated object to be supported by it is irrelevant. For the skilled person reading the originally filed patent application, the technical teaching is that "on" implies a coplanar location of the two elements.

This spatial arrangement is not implicit in the term "having"; the relative position of the rectangular frame and the vertical base defined in feature 3.3 is thus open in this respect. In other words, the rectangular frame of granted claim 1 does not necessarily have to be located "on" the vertical base as it could be arranged on a different vertical plane - contrary to what was originally disclosed. Such an embodiment is technically sensible since claim 1 does not specify how the rectangular frame connects to the base, and an arrangement along two different vertical planes is technically feasible when appropriate connecting means between the rectangular frame and the base are provided.

Consequently, the amendment of "*rectangular frame* ***on a*** *vertical base*" to "*rectangular frame* ***having a*** *vertical base*" results into an unallowable extension of subject-matter.

2.2.4 Claim 1: feature 5.1 ("*a rear block* ***includes*** *a terminal rectangular frame of the damping device and* ***is fitted with a rear fastening*** *rigidly connected to guide*")

The appellant argued that lines 9 and 10 of the originally filed page 5 could only be understood in one way, namely that the ultimate rectangular frame (11) was the rear block (12) and that the former was equipped with the rear fastening device (13) rigidly connected to the guide (4). According to the appellant, this understanding was consistent with originally filed Figure 1, in which both reference numbers (11) and (12) were associated with the same horizontal bar. It was also not contradicted by Figures 10 and 13, from which no conclusive information could be extracted relating to the shape of the rear block (12) or the rear fastening device (13). The appellant therefore concluded that the amendments made in feature 5.1 lacked any basis in the originally filed application.

This is not persuasive.

Lines 9 and 10 of originally filed page 5 read: "*Ultimate rectangular frame 11 of damping device is rear block 12 and is equipped with rear fastening device 13 rigidly connected to guide 4 (see Fig. 1,2,3, 10,11,12)*."

From this, the skilled person learns that the expression "*terminal rectangular frame of damping device represents a rear block*" in originally filed claim 3 actually means that the ultimate rectangular frame and the rear block are identical, i.e. they are one and the same. This is confirmed by the arrows of reference numbers (11) and (12) pointing to the same

element in originally filed Figure 1 (referred to in the above-cited passage) and by the following statement in lines 10 to 12 of originally filed page 3: "*Ultimate rectangular frame of the damping device* ***serves as*** *a rear block,* ***which is equipped with a rear fastening device*** *rigidly connected to the guide*" (emphasis added).

According to the originally filed application, the terminal rectangular frame and the rear block are actually the same element. Therefore, the fact that one is described as including the other or that the rear fastening device is described as belonging to either of them does not result in an unallowable extension of subject-matter (see also lines 10 to 12 of originally filed page 3).

2.2.5 Claim 1: feature 6.1 ("*each section of mass damper of the first type is formed by twin vertical* ***spaced apart*** *sheet elements*")

The appellant argued that the originally disclosed term "non-contacting" implied that the sheet elements were in very close proximity to each other without actually touching. This was evident from the original application context, in which the sheet elements were depicted as having the same orientation and being in close proximity (see Figure 4). According to the appellant, this encompassed embodiments in which the distance between the sheet elements was so small that they would act as a single sheet, this having a substantial effect on damping. Conversely, the replacement feature "spaced apart" suggested a noticeable distance between the two sheet elements, indicating a greater separation that could

significantly alter the structural and functional characteristics of the mass damper section.

This is not persuasive since the objection is based on a subjective and unsubstantiated difference between the expressions "non-contacting" and "spaced apart".

The skilled person would understand both expressions to be synonymous when used in the context of the invention, and the alleged differences argued by the appellant are not supported by any evidence as the usual understanding of the terms is equivalent.

The passages referred to by the appellant - corresponding to lines 13 to 17 of originally filed page 3 and lines 14 to 18 of page 5 - merely describe that "[e]*ach section of the mass damper of the first type is formed by twin vertical non-contacting sheet elements with zigzag shaped bends oriented towards each other*". This is described in the context of Figures 1, 4 and 5, which show a corresponding construction. Nothing in this disclosure suggests a meaning of the expression "non-contacting" that differs from the synonym "spaced apart".

The appellant's argument that the separation distance is so small that the damper would act as if it were made of a single sheet is not persuasive since this would also apply to the feature once defined as "spaced apart" given the synonymous meaning of the term. The presence of a separation between the sheet elements complies with the feature "spaced apart", regardless of how small the separation is, as long as the skilled person can identify it, i.e. as long as the sheet elements do not contact each other, as defined in the alternatively worded original disclosure.

2.3 Conclusion

The subject-matter of the main request extends beyond the content of the application as filed for the reasons explained in points 2.1 (figures) and 2.2.3 (rectangular frame **having** a vertical base) above.

3. Auxiliary request 0, added subject-matter - Article 100(c) EPC

Since claim 1 of auxiliary request 0 is identical to granted claim 1, auxiliary request 0 is not allowable for the same reasons as set out in point 2.2.3 above.

Therefore, the question raised by the appellant regarding the admissibility of auxiliary request 0 can be left unanswered.

4. Auxiliary request 00

4.1 Admittance - Article 13(2) RPBA

Auxiliary request 00 was submitted on 15 December 2025, i.e. after notification of the Board's communication under Article 15(1) RPBA.

The admittance of auxiliary request 00 is thus governed by Article 13(2) RPBA, which states that such late amendments of a party's case shall, in principle, not be taken into account unless there are exceptional circumstances, which have been justified with cogent reasons by the party concerned.

Before the filing of auxiliary request 00, the appellant had not raised any objections to the

substance of the auxiliary requests then on file. The only objections raised related to admittance and to the alleged lack of substantiation of the requests by the respondent (see point 13.5 of the appellant's letter dated 16 May 2025).

In its communication under Article 15(1) RPBA, the Board deemed it appropriate to assess, of its own motion, compliance with the requirements of Article 123(3) EPC in several auxiliary requests as regards the replacement of feature 3.3 (see point 10.4 of the communication).

As a result, an objection under Article 123(3) EPC was raised by the Board against the auxiliary requests.

The respondent was thus confronted with a new objection to which it was entitled to respond. The respondent did so by filing auxiliary request 00, which is *prima facie* suitable to address the objections relating to Article 123(2) and (3) EPC since it comprises the figures of auxiliary request 0, which basically correspond to the originally filed figures (besides the translation of some terms into English) and the originally disclosed feature "*rectangular frame* ***on*** *a vertical base*".

The Board notes that the appellant did not object to the admittance of auxiliary request 00 in its letter dated 6 February 2026.

The Board thus considers that the submission of auxiliary request 00 is justified in view of the exceptional circumstances relating to the new objection raised by the Board and the *prima facie* suitability of the amendments to overcome all objections and decides

to admit this request into the appeal proceedings (Article 13(2) RPBA).

4.2 Added subject-matter - Article 123(2) EPC

4.2.1 Figures

Since the figures of auxiliary request 00 (i.e. the figures of auxiliary request 0) correspond to Figures 1 to 14 as filed upon entry into the regional European phase on 19 April 2018 and Figure 15 submitted on 18 July 2018, i.e. the figures published in the A1 EP publication in English, and these are undisputedly identical to the figures as originally filed (with the exception of the translation of some Russian terms into English in Figure 15), the amendments in auxiliary request 0 successfully address the objection explained in point 2.1 above.

4.2.2 Feature 3.3' ("*rectangular frame **on** a vertical base entering into the guide and fixed between relevant sections of a pair of right and left side beams*")

It is undisputed that the feature "rectangular frame **on** a vertical base" is disclosed in the originally filed application (see page 3, lines 8 and 9, claim 1 and Figure 10).

The amendment thus conforms with Article 123(2) EPC and successfully addresses the objection outlined in point 2.2.3 above.

4.2.3 The further objections related to added subject-matter are not convincing (see point 2.2 above).

4.3 Extension of protection - Article 123(3) EPC

The appellant argued that, according to claim 1 as granted, the rectangular frame "comprised", i.e. "had", the vertical base defined in feature 3.3, whereas by replacing "having" with "on" in amended feature 3.3', the vertical base was no longer part of the rectangular frame or the claimed damping device. According to the appellant, in this manner the vertical base became a separate entity which was not part of the claimed damping device defined in claim 1. The amendment therefore resulted in an extension of the scope of protection, contrary to Article 123(3) EPC.

This is not persuasive.

The technical meaning of the feature "on" is a further limitation with respect to the granted feature "having". In other words, the replacement of "having" with "on" results in a more specific embodiment of the general embodiment defined by the feature "having", namely an embodiment limited to a particular spatial arrangement of both elements.

The skilled person interpreting the feature "on" in light of the granted description and drawings, which are to be considered to determine the protection conferred and thus whether the requirements of Article 123(3) EPC are fulfilled (see G 2/88 on the interpretation of the claims in accordance with Article 69 EPC and its Protocol in such cases, in particular headnote I and Reasons 3.3 and 4), would understand from Figure 10 that the vertical rectangular frame defined in feature 3.3' indeed "has" the vertical base on which it is arranged, i.e. each rectangular frame is arranged on a respective base corresponding to it.

The interpretation of "having" as implying that the vertical base had to be part of the rectangular frame lacks any basis in granted claim 1 in the absence of any further clarification about the relationship between both elements. The skilled person understanding the granted term "having" in light of Figure 10 of the patent specification would reach the same conclusion as explained above for auxiliary request 00 since nothing in the description or the figures suggests that the vertical base is a part of the rectangular frame.

Consequently, there is no extension of the protection conferred with respect to the replacement of "having" with "on" when considering the meaning of the term "having".

Furthermore, there is no confusion about whether or not the vertical base is a part of the claimed damping device since the vertical base is defined as one among several components which are all defined in the same manner. Nor are the elements "vertically oriented rectangular frame" (feature 3.3'), "rear block", "terminal rectangular frame", "rear fastening" (feature 5.1) and "vertical plates" (features 6.4 and 7.3) explicitly defined in a formal manner as parts of the claimed damping device, but the skilled person would understand from the context that since all these parts (in the same manner as the vertical base) are functionally related to each other to enable the operation of the damping device, it is implicit that they must all be part of it.

Therefore, the amendment of feature 3.3' does not result in an extension of protection when considering the list of components of the damping device either.

Claim 1 of auxiliary request 00 thus complies with the provisions of Article 123(3) EPC.

4.4 Sufficiency of disclosure - Article 100(b) EPC

4.4.1 General remarks about sufficiency of disclosure

(a) Non-applicability of Rule 42(1)(e) EPC

The appellant repeatedly argued that the patent did not comply with the requirements of Rule 42(1)(e) EPC with regard to the different aspects objected to, i.e. that it did not describe in detail at least one way of carrying out the claimed invention.

However, this is not persuasive as an argument concerning sufficiency of disclosure.

First, non-compliance with Rule 42(1)(e) EPC is not a valid ground for opposition.

Second, while there are decisions of the boards of appeal in which the disclosure of at least one way of carrying out the claimed invention was considered relevant for a positive finding on sufficiency of disclosure, a negative conclusion based on the absence of an embodiment explicitly disclosing **all** technical details is not necessarily justified. What is decisive for sufficiency of disclosure is whether the skilled person, provided with the information disclosed in the patent **and their common general knowledge**, can reproduce the invention set out in the claims or not. The skilled person does not require a detailed disclosure of features that can be reproduced without

an undue burden based on their common general knowledge.

(b) Allegedly non-working embodiments

The appellant also argued repeatedly that some features of claim 1, when implemented across the whole scope of the claim, would not solve the problem addressed by the invention.

However, this does not indicate a lack of sufficient disclosure if the appellant does not demonstrate that the skilled person would consider the non-working or inefficient embodiments to be a technically sensible understanding of the claimed invention and that they would face an undue burden when trying to reproduce them.

(c) Alleged lack of support by the description

Finally, the appellant repeatedly alleged that claim 1 lacked support in the description.

Even if this were the case, this would represent an alleged non-compliance with the requirement of Article 84, second sentence, EPC, which is not a ground for opposition and not a problem of sufficiency of disclosure.

4.4.2 Feature 2.1 ("*moveable support installed at a guide*")

The appellant argued that point 3 of paragraph [0018] of the patent specification disclosed that the vehicle and the damping device could move after a collision. According to the appellant, this meant that the guide of feature 2.1 was not necessarily fixed to the ground

and that claim 1 thus encompassed embodiments in which the vehicle could not be stopped.

This argument is not persuasive.

First, when trying to reproduce the invention, the skilled person reads the patent with a mind willing to understand the invention and, in the current case, the skilled person is aware that the invention relates to a damping device that helps to decelerate and stop a vehicle. Given this, it defies logic to interpret the phrase "[i]*f the collision speed is less than 50 km/h, damages are insignificant and allow the vehicle to continue motion by its own*" (point 3 of paragraph [0018] of the patent specification) as meaning that the vehicle moves together with the damping device. On the contrary, the skilled person understands from the mere construction of the sentence, let alone in the context of the invention, that the damping effect provided by the invention is capable of minimising damage to the vehicle to the extent that it can continue to move on its own after having crashed into the damping device and once released from it. It is not a technically sensible interpretation to understand this as meaning that a vehicle should "*continue motion by its own*" with an attached damping device.

Second, the arguments of the appellant based on interpreting claim 1 as if it encompassed embodiments where the guide is not fixed are not persuasive since they defy logic in the technical field. The skilled person would understand the holes along the guide (4) in Figures 1 to 3 to be usual means of fixing the guide to some kind of support.

4.4.3 Feature 6.1 ("*twin vertical spaced apart sheet elements*")

The appellant argued that the literal meaning of feature 6.1 ("*where each section of mass damper of the first type is formed by twin vertical spaced apart sheet elements*") was that two vertically spaced apart sheet elements were provided, whereas the figures of the patent only disclosed embodiments using four sheet elements, thus leaving the skilled person without any teaching on how to implement this feature.

The respondent argued that the presence of twin sheet elements according to feature 6.1 required that at least two "twins", i.e. at least four spaced apart individual sheets, were present, as shown in the corresponding figures of the patent. According to the appellant, this followed from the claim language because the plural form was used for the "*sheet element**s***", which were defined as "*twin sheet elements*" in the claim and described accordingly in the description and shown in the figures. According to this interpretation, the mass damper of the first type comprised two of these sheet elements, each of which comprised two individual sheets.

Upon reading the patent in its entirety, the skilled person would indeed understand that the only embodiments represented disclose the use of four sheet elements for each section of the mass damper (see Figures 1, 3, 4, 5, 8 and 9). This is defined as a "*twin configuration*" in point 2 of paragraph [0016] of the patent specification. However, the same term "twin" is then used in feature 2.1 in an ambiguous manner since it could refer to "*twin sheet elements*" (i.e. two sheet elements, as argued by the appellant) or to the

"*twin arrangement*" of vertically spaced apart sheet elements (i.e. four sheet elements as disclosed in the figures). Regardless of whether the skilled person would recognise this ambiguity and solve it in light of the entire disclosure of the patent, neither of the two embodiments according to the two possible interpretations poses any problem to the skilled person concerning its implementation. The skilled person in the technical field knows how to provide sheet elements with shapes defined by either interpretation.

4.4.4 Feature 6.2 ("*zigzag-shaped*")

The appellant argued that the sheet elements disclosed in the figures did not comprise zigzag-shaped bends as defined in feature 6.2 but just a V-shape.

This is not persuasive as an argument regarding sufficiency of disclosure. Even if the skilled person did not understand feature 6.2, in light of the description or their common general knowledge, to encompass the shape disclosed in the figures, the appellant has not explained why the skilled person would not be able to provide, on the basis of their common general knowledge in metal handling, further bends in the sheet elements which would result in the "zigzag-shaped bends" allegedly required (see point 4.4.1(a) above).

4.4.5 Feature 6.3 ("*each end of each sheet element with zigzag-shaped bend is bent* ***outwards***")

The appellant argued that according to Figure 4, each end of each sheet element was bent so that it was parallel to the centre line of the damping device. According to the appellant, this did not constitute an

implementation of the feature "bent outwards", which required each end to be bent transversely with respect to the central longitudinal axis and out of it.

This is not persuasive since the appellant fails to explain the obstacles that the skilled person would encounter when implementing the feature, even when interpreted as done by the appellant. Deforming metal sheets according to this interpretation is well within the capabilities of the skilled person with a background in mechanics (see points 4.4.1(a) and (c) above).

4.4.6 Feature 7.1 ("*each section of mass damper of the second type is formed by a perforated end-to-end duct oriented horizontally relative to a through opening*")

The appellant argued that the absence of a definition for "through opening" in claim 1 meant that the skilled person was not given any guidance on how to orient the perforated end-to-end duct. According to the appellant, the term "oriented horizontally" was thus presented without sufficient context, leaving its meaning open to arbitrary interpretation. The appellant submitted that if the "through opening" were the axial channel of the perforated end-to-end duct, there would be no logical basis for describing the relative orientation of the latter as the orientation of the axial channel would inherently follow that of the duct itself, thus rendering the feature redundant and meaningless. The appellant also argued that the description did not define the direction of the vehicle impact, nor did it provide any information from which the spatial orientation of the perforated end-to-end duct could be unequivocally inferred. The respondent's argument that this duct had to be horizontally arranged as a

technical necessity thus lacked any clear foundation in the description.

This is not persuasive.

In light of the nature of the invention and in view of the function of the duct as a damper section, the skilled person understands the "perforated end-to-end duct" to be an element to be arranged horizontally, as defined in claim 1, i.e. in the direction of the expected deformation caused by the collision of a vehicle, which occurs almost exclusively in the horizontal direction. The horizontal orientation is therefore indeed a technical necessity when the claim is read with a mind willing to understand the patent.

Even if the skilled person considered the "through opening" defined in claim 1 to be unclear, they would consult the corresponding passage of the description and the figures to which it refers, where this element is explicitly shown (see paragraph [0014] and Figure 2). They would thus conclude that the "through opening" indeed corresponds to the opening defined by the perforated end-to-end duct.

The fact that some essential features might be missing for defining the orientation or that the features of the claim may result in subject-matter which is "*redundant and meaningless*" is a matter of clarity, which is not a ground for opposition.

4.4.7 Feature 7.2 ("*perforation being made at each of four duct walls and at bends between the walls, with perforation at bends coming to both adjacent sides of duct*")

The appellant argued that none of the figures showed, for each duct, at least a perforation on a lateral wall, meaning that no embodiment of the invention according to claim 1 was disclosed. Furthermore, feature 7.2 did not include any limitations regarding the shape, size, position or number of perforations, nor did the description provide any details in this respect. Thus, according to the appellant, the skilled person would not know how to carry out the perforations, in particular for the walls which were not shown in the figures. The appellant submitted that the common general knowledge could not replace a description of at least one way of carrying out the invention.

This is not persuasive.

The skilled person in the technical field of mechanics knows how to produce perforations on the walls and at the bends between the walls of a duct as defined in feature 7.2. No guidance is needed from the schematic figures. These figures must be understood as disclosing a symmetrical arrangement of perforations for the necessary balance of the device during a vehicle collision, an aspect known to a skilled person. Therefore, whether the schematic Figure 2 actually discloses perforations on the lateral wall or not is irrelevant.

The absence of precise construction details for the perforations in the description is also irrelevant as

the skilled person understands that the perforations can be provided in multiple ways depending on multiple factors such as intended damping capabilities, the dimensions of the duct and the materials used. This is well within the routine skills of the skilled person in the field of mechanics, who knows that the deformation properties will also depend on the type of perforations provided.

As explained in point 4.4.1(a) above, common general knowledge does indeed play a role in assessing whether the skilled person would be able to carry out an invention. It is not unusual for widely known construction details of an invention to be omitted from a patent since the skilled person is well aware of how to put them into practice without a need for instructions.

4.5 Inventive step - Article 56 EPC

4.5.1 Claim 1: mass damper of the first type (bent sheet elements)

(a) Uncontested disclosed features

It is not disputed that D1 discloses:

A damping device (10) (feature 1.1)

containing a front deflector (17) which includes a moveable support (11),

the front deflector (17) with possibility for movement in case of a vehicle collision (feature 2.2),

sectional side beams (15) (feature 3.1),

and sections of mass dampers (27) (feature 4.1),

whereas the sectional side beams (15) are designed to provide for telescopic insertion of the front section of a side beam into the next one behind it (see page 4, line 20) (feature 3.2),

while each of a pair of right and left sectional side beams (15) is limited by a vertically oriented rectangular frame (11 to 14) on a base,

while a rear block (18) includes a terminal rectangular frame (14) of the damping device,

wherein the damping device contains sections of mass dampers (27) of a given type (feature 4.2),

the section of mass damper being limited by vertical plates (34) at its ends (feature 6.4).

Thus, the parties agree that D1 anticipates features 1.1, 2.2, 3.1, 3.2, 4.1, 4.2 and 6.4.

(b) Feature 6.1 ("*each section of mass damper of the first type is formed by twin vertical spaced apart sheet elements*")

The respondent submitted, in a similar manner to its arguments on sufficiency of disclosure, that the skilled person would understand feature 6.1 as defining two twin sheet elements, each comprising two individual sheets. According to this interpretation of the feature, D1 would not anticipate it since the mass damper shown only comprises two spaced apart sheet elements (see Figures 1 to 4).

This is not persuasive since both interpretations of the feature are actually possible in view of its ambiguity (see point 4.4.3 above). The interpretation according to which feature 6.1 only defines two single sheet elements makes technical sense, and the Board sees no reason to exclude it.

Consequently, D1 anticipates feature 6.1.

(c) Feature 6.2 ("*with zigzag-shaped bends, oriented towards each other*")

The appellant argued that feature 6.2 was anticipated by Figure 4 of D1, corresponding to a mass damper according to lines 45 and 46 of page 2 and lines 37 to 39 of page 3, since the shape represented coincided with the shape of the damper sections disclosed in the patent (see Figures 1, 3, 4 and 5).

This is not persuasive since D1 explicitly states that Figure 4 merely represents the basis of a theoretical discussion (see page 3, lines 52 to 55). This clear explanation and its subsequent theoretical analysis take precedence over the shorter and, in that respect, misleading statement in lines 37 to 39 of page 3, which the skilled person would understand as relating to a theoretical discussion linked to the devices shown in Figures 1 to 3, and in lines 45 and 46 of page 2, which relates to "diamond-shaped" embodiments not necessarily represented in the figures and whose construction is therefore undefined.

Consequently, D1 does not anticipate feature 6.2.

(d) Feature 8.2 ("*the front and rear vertical plates of the connected sections of mass dampers are fixed at the front deflector and the rear fastening, respectively*")

The respondent argued that since D1 did not show any guide, feature 8.2 was not anticipated in this document.

This argument is not persuasive since D1 shows that the front and rear vertical plates (11, 14) of the connected sections of the mass dampers (27) are fixed to the front deflector (17) and the rear fastening (18), respectively. This is precisely the subject-matter of feature 8.2, which does not refer to the "guide" in feature 2.1. However, the front deflector (17) and the rear fastening (18) of D1 are not associated with a guide as defined in features 2.1 and 5.1.

(e) Distinguishing features and objective technical problem posed

In view of the above, the subject-matter of the first alternative of claim 1 (mass damper of the first type made of bent sheet elements) differs from D1 in the following features:

- 2.1 ("*a front deflector which includes a moveable support* ***installed at a guide***")

- 3.3' ("*each of a pair of right and left sectional side beams is limited by a vertically oriented rectangular frame on a vertical base entering into the guide and fixed between relevant sections of a pair of right and left side beams*")

- 5.1 ("*a rear block includes a terminal rectangular frame of the damping device* ***and is fitted with a rear fastening rigidly connected to guide***")

- 6.2 ("[twin vertical spaced apart sheet elements] *with zigzag-shaped bends, oriented towards each other*")

- 6.3 ("*each end of each sheet element with zigzag-shaped bend is bent outwards forming a through channel parallel to the centre line of the damping device*")

- 8.1 ("*the vertical plates connecting sections of mass damper with each other, some vertical plates limiting the section resting on lower bar of each rectangular frame*")

Concerning the objective technical problem, the respondent argued that the guide was not only simpler compared to the prior art but also provided higher stability, in particular in the event of a side impact. Concerning the design of the mass dampers of the considered alternative of claim 1, the respondent asserted that it allowed a smooth compression of the device in a collision due to the twin configuration of the sheet elements (as disclosed in paragraph [0016] of the patent) such that the vehicle was uniformly decelerated (as disclosed in paragraph [0018] of the patent). According to the respondent, the distinguishing features relating to the guide and the particular mass damper construction worked together in a synergistic manner because the folding of the twin zigzag sheet elements along the central axis of the device upon impact was effective only due to the

directional stability provided by the guide. The respondent argued that it was thus not appropriate to consider separate independent partial problems for assessing inventive step.

The appellant agreed with the contested decision, which held that the distinguishing features could be treated separately since those relating to the guide were associated to the objective technical problem of how to increase the directional stability of the damping device during a vehicle impact, whereas those relating to the mass damper construction merely had the technical effect of representing an alternative shape of the "sheet elements" of the damper section, the corresponding objective technical problem thus being how to provide an alternative shape for the sheet elements. The appellant argued that the patent did not disclose that either the zigzag shape or the through channel had a technical effect relating to providing uniform deceleration and minimum damage to the impacting vehicle.

The Board agrees with the respondent that there is a common aim linking the distinguishing features related to the guide and the mass damper construction which cannot be ignored for the following reasons.

Contrary to the views of the opposition division and the appellant, the distinguishing features relating to the damper section are not merely the provision of "*an alternative shape*" for the sheet elements since they result in a technical effect. As disclosed in point 2 of paragraph [0016], the zigzag-shaped twin configuration ensures smooth compression, resulting in uniform deceleration of the colliding vehicle (see paragraph [0018], point 1). This solves the objective

technical problem of minimising damage to the colliding vehicle (see paragraph [0018] of the patent).

The contested decision correctly identified the technical effect of the distinguishing features relating to the guide as reducing the possibility of movement of the mass dampers to a single direction. However, the objective technical problem considered (how to provide increased directional stability of the damping device during a vehicle impact) essentially repeats this technical effect as if it were an end in itself. In fact, the purpose of the technical effect provided by this group of distinguishing features is closely related to the objective technical problem solved by the distinguishing features related to the construction of the mass dampers. This is because the defined mass dampers, which are based on twin zigzag-shaped sheet elements, require guidance, i.e. the technical effect provided by the guide to function properly due to basic mechanical considerations. The skilled person understands that the twin configuration of the mass dampers can provide its full advantages only when deformation occurs in the direction ensured by the guide and not when it takes place in an uncontrolled manner.

In view of the above, the objective technical problem related to distinguishing features 2.1, 3.3', 5.1, 6.2 and 6.3 is how to minimise damage to a colliding vehicle.

The Board notes that the appellant did not explain how the skilled person would arrive in an obvious manner at the subject-matter of feature 8.1, i.e. which technical problem should be considered to be linked to it and why the solution would be obvious.

(f) Obviousness

Even if the approach of the contested decision and the appellant based on the two proposed partial problems were to be accepted (the first one resulting in a combination of D1 with D4), the arguments presented would still not be persuasive for the following reasons.

The appellant argued that Figure 4 showed an embodiment of a mass damper intended for the device of D1. According to the appellant, when trying to find an alternative shape for the sheet elements (second partial problem as defined by the appellant), the skilled person would rearrange the straight portion (33) of the embodiment shown in Figures 2 and 3 of D1 (reproduced below) at both ends of each sheet element, rather than at an intermediate position. According to the appellant, this first change was "*somewhat in the middle between the embodiments of figures 2, 3, on one side, and of figure 4, on the other side*". The appellant stated that this would be a first change but not the only possible change since, when looking for an alternative shape of the sheet elements of the embodiments of Figures 2, 3 and 4 of D1, the skilled person, instead of joining "*together in abutting relationship*" their "*respective ends 31-32*" when welding (see page 3, lines 43 and 44), would distance the shaped elements (28) from each other so that a through channel was formed, this constituting a second change not interrelated with the first one and resulting in a mass damper as defined in the first alternative of claim 1.

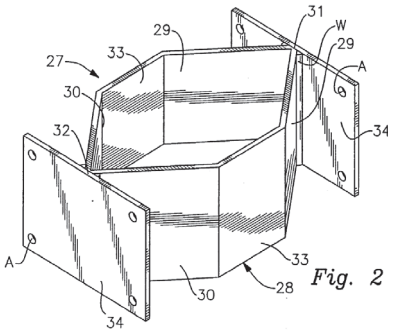


Fig. 2

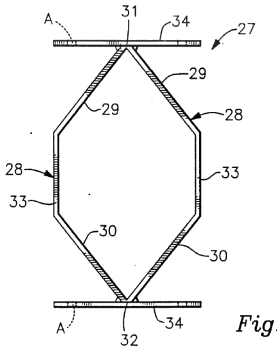


Fig. 3

This is not persuasive since the argument is based solely on hindsight and on what the skilled person could do, instead of explaining what the skilled person would do. The appellant has not identified any motivation for the skilled person to carry out the proposed modifications, with the reasoning merely showing how some elements of D1 could be altered to result in something corresponding to the defined mass damper.

Even when considering the second partial objective technical problem suggested by the opposition division and the appellant, the search for an alternative shape for the sheet elements is clearly limited to ensuring that the mass damper remains functional. There is no reason for the skilled person to believe that the modification of the shape of the sheet elements of D1 proposed by the appellant would result in a functional mass damper. This can only be determined in hindsight.

(g) Conclusion

The objection against the first alternative of claim 1 based on D1 in combination with D4 and the common general knowledge is not persuasive.

4.5.2 Claim 1: mass damper of the second type (perforated duct)

(a) Starting point, D2

It is uncontested in appeal that D2 discloses a damping device (1) showing all features 1.1, 2.1, 2.2, 3.1, 3.2, 3.3', 4.1, 4.2, 5.1, 7.3, 8.1 and 8.2.

(b) Distinguishing features and objective technical problem posed

It is common ground that the subject-matter of the second alternative of claim 1 relating to the type of mass damper (perforated duct) differs from D2 in the following features:

- 7.1 ("*each section of mass damper is formed by a perforated end-to-end duct oriented horizontally relative to a through opening*")
- 7.2 ("*and perforation being made at each of four duct walls and at bends between the walls, with perforation at bends coming to both adjacent sides of duct*")

The appellant argued, as was done in the contested decision, that the technical effect of the distinguishing features was to reduce the stiffness of the end-to-end duct in the axial direction. According to the appellant, the objective technical problem to be considered was therefore how to reduce the stiffness of the end-to-end duct in axial direction during a vehicle collision, in particular since claim 1 did not define a specific regular geometry for the duct or the perforations which could justify considering the "*uniform compression*" suggested by the respondent.

This is not persuasive.

The Board agrees that the **technical effect** of the distinguishing features 7.1 and 7.2 is a reduction in stiffness of the end-to-end duct in the axial direction. However, the objective technical problem identified in the contested decision and by the appellant merely states the achievement of this effect, as if it were an aim in itself.

Such an approach is not correct since the reduction in stiffness of the end-to-end duct in the axial direction is intended to adjust the damping effect provided by the damping device, which must be seen in the context of the general aim of reducing damage in a colliding vehicle (see paragraphs [0008] and [0018] of the patent specification).

Consequently, the objective technical problem to be considered is how to reduce damage in a colliding vehicle.

(c) Obviousness

The appellant argued that the skilled person would implement the perforations at the bends disclosed in Figure 6 of D7 and the perforations "*in rows and columns*" as disclosed in paragraph [0009] of D7a to reduce the stiffness of the end-to-end duct in an axial direction.

This is not persuasive.

First, the objective technical problem formulated by the appellant is not the appropriate one. D7/D7a does

not disclose the distinguishing features as a solution to the problem of how to reduce damage in a colliding vehicle.

Second, even if the objective technical problem to be considered were as the appellant suggests, D7/D7a does not disclose perforations as defined in feature 7.2 ("*at each of four duct walls and at bends between the walls, with perforation at bends coming to both adjacent sides of duct*") as a solution to the problem of how to reduce stiffness of the end-to-end duct in axial direction. D7a does not disclose any technical effect or problem to be addressed in connection with the "voids" disclosed in paragraph [0009] or the perforations allegedly shown in Figure 6. D7a only mentions as technical problems in the context of the invention disclosed "*that the energy absorbing buffering protection facilities at the shunt triangle end meet the premise of convenient installation and beautiful appearance, as well as the blocking function, the buffering function and the guiding function*". The "voids" of paragraph [0009] or the perforations allegedly shown in Figure 6 could at most be associated with any of these technical effects, none of which involves a reduction in stiffness.

Finally, the schematic Figure 6 does not disclose in a direct and unambiguous manner that perforations are made "*at bends between the walls, with perforation at bends coming to both adjacent sides of duct*". The rather schematic figure merely shows black dots arranged at regular distances along the corners of the duct (5). No explanation can be found about the meaning of these dots in the description of D7a which could establish a link between them and some kind of

perforation, let alone perforations "*coming to both adjacent sides of a duct*".

(d) Conclusion

The objection against the second alternative of claim 1 (mass dampers as end-to-end ducts) based on D2 in combination with D7/D7a is not persuasive.

5. Conclusion

Taking into consideration the amendments made by the respondent in auxiliary request 00, the patent and the invention to which it relates meet the requirements of the EPC.

The patent can therefore be maintained as amended (Article 101(3)(a) EPC).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the opposition division with the order to maintain a patent as amended in the following version:

Claims:
No. 1 to 3 according to auxiliary request 00 filed with the letter of 15 December 2025

Description:
of the patent specification

Drawings:
Figures of auxiliary request 0 filed with the reply to the grounds of appeal on 6 December 2024

The Registrar: The Chairman:

C. Spira C. Herberhold

Decision electronically authenticated