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**Datasheet for the decision
of 21 March 2019**

Case Number: T 1479/16 - 3.2.01

Application Number: 08736407.1

Publication Number: 2148801

IPC: B61B9/00

Language of the proceedings: EN

Title of invention:

RAIL TRANSPORTATION SYSTEM WITH RELEASABLE HAULAGE CABLE AND
RELATIVE DRIVE METHOD

Patent Proprietor:

LEITNER S.p.A.

Opponent:

Innova Patent GmbH

Headword:

Relevant legal provisions:

EPC Art. 123(2), 123(3), 84, 83

Keyword:

Amendments - added subject-matter (yes) - main and first to third auxiliary requests - added subject-matter (no) - fourth auxiliary request - broadening of claim (no) - fourth auxiliary request

Claims - clarity (yes) - fourth auxiliary request

Sufficiency of disclosure - (yes) - fourth auxiliary request

Decisions cited:

Catchword:



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Case Number: T 1479/16 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 21 March 2019

Appellant: Innova Patent GmbH
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 20 April 2016
rejecting the opposition filed against European
patent No. 2148801 pursuant to Article 101(2)
EPC.**

Composition of the Board:

Chairman G. Pricolo
Members: C. Narcisi
A. Jimenez

Summary of Facts and Submissions

I. The opposition against European patent No. 2 148 801 was rejected and the patent was maintained as granted by the decision of the Opposition Division posted on 20 April 2016. Against this decision an appeal was lodged by the Opponent in due form and in due time pursuant to Article 108 EPC.

II. Oral proceedings were held on 21 March 2019. The Appellant (Opponent) requested that the impugned decision be set aside and that the patent be revoked. The Respondent (Patentee) requested that the appeal be dismissed (i.e. that the patent be maintained as granted (main request)) or, alternatively, that the decision under appeal be set aside and that the patent be maintained in amended form according to auxiliary requests 1 to 5 (filed on 2 January 2017).

III. Granted claim 1 (according to the text intended for grant pursuant to Rule 71(3) EPC constituting the legally binding version of granted claim 1) reads as follows:

"A cable transportation system (1) comprising rails (3; 44) and a draw cable (4; 45), both extending along a transportation path (P; P1); a drive member (15; 50) for driving the draw cable (4, 45); at least one vehicle ((6; 47), which moves along the transportation path (P; P1) and comprises wheels (17) which roll along the rails, and a coupling device (20) for connecting the vehicle (6; 47) to the draw cable (4; 45); and at least one passenger station (7; 48) where the vehicle (6; 47) is stopped; the vehicle (6; 47) comprising an electric machine to generate electric power on board the vehicle (6; 47); the system being

characterized in that the electric machine (21) comprises a stator and a rotor driven by the wheels (17) and each wheel (17) comprises a hub (28) and a pin (30); the electric machine (21) being fitted to the hub (28), and the hub (28) of the wheel (17) rotating about the pin (30) and supporting the rotor (33) of the electric machine (21)."

Claim 1 of the first auxiliary request is identical with granted claim 1, given that the term "each" in the wording "each wheel (17) comprises", which was erroneously omitted in claim 1 of the published patent specification, was already included in the text of the claim intended for grant (see above).

Claim 1 of the second auxiliary request reads as follows:

"A cable transportation system (1) comprising rails (3; 44) and a draw cable (4; 45), both extending along a transportation path (P; P1); a drive member (15; 50) for driving the draw cable (4, 45); at least one vehicle ((6; 47), which moves along the transportation path (P; P1) and comprises a frame (16); a number of supporting wheels (17) which roll along the rails, and a coupling device (20) for connecting the vehicle (6; 47) to the draw cable (4; 45); a number of direction wheels (18); and a cab (19) on top of frame (16); and at least one passenger station (7; 48) where the vehicle (6; 47) is stopped; the vehicle (6; 47) comprising an electric machine to generate electric power on board the vehicle (6; 47); the system being characterized in that the electric machine (21) comprises a stator and a rotor driven by the supporting wheels (17) and each supporting wheel (17) comprises a hub (28) supporting a wheel rim (29), in

turn supporting tyre (26), and is mounted to rotate about a pin (30) connected to arm (27) and hinged to frame (16) about a steering axis (A4); the electric machine (21) being fitted to the hub (28), and the hub (28) of the supporting wheel (17) rotating about the pin (30) and supporting the rotor (33) of the electric machine (21)."

Claim 1 of the third auxiliary request reads as follows:

"A cable transportation system (1) comprising rails (3; 44) and a draw cable (4; 45), both extending along a transportation path (P; P1); a drive member (15; 50) for driving the draw cable (4, 45); at least one vehicle ((6; 47), which moves along the transportation path (P; P1) and comprises a number of wheels (17) which roll along the rails, and a coupling device (20) for connecting the vehicle (6; 47) to the draw cable (4; 45); and at least one passenger station (7; 48) where the vehicle (6; 47) is stopped; the vehicle (6; 47) comprising an electric machine to generate electric power on board the vehicle (6; 47); the system being characterized in that the electric machine (21) comprises a stator and a rotor driven by the wheels (17) and the vehicle (6; 47) comprises a number of electric machines, each wheel (17) comprising a hub (28) and a pin (30); each electric machine (21) being fitted to the hub (28) of a corresponding wheel (17), and the hub (28) of the wheel (17) rotating about the pin (30) and supporting the rotor (33) of the electric machine (21)."

Claim 1 of the fourth auxiliary request reads as follows:

"A cable transportation system (1) comprising rails (3; 44) and a draw cable (4; 45), both extending along a transportation path (P; P1); a drive member (15; 50) for driving the draw cable (4, 45); at least one vehicle ((6; 47), which moves along the transportation path (P; P1) and comprises a frame (16); a number of supporting wheels (17) which roll along the rails, a coupling device (20) for connecting the vehicle (6; 47) to the draw cable (4; 45) a number of direction wheels (18); and a cab (19) on top of frame (16); and at least one passenger station (7; 48) where the vehicle (6; 47) is stopped; the vehicle (6; 47) comprising an electric machine to generate electric power on board the vehicle (6; 47); the system being characterized in that that the electric machine (21) comprises a stator and a rotor driven by the supporting wheels (17) and the vehicle (6; 47) comprises a number of electric machines (21), each supporting wheel (17) comprising a hub (28) supporting a wheel rim (29), in turn supporting tyre (26), and is mounted to rotate about a pin (30) connected to arm (27) and hinged to frame (16) about a steering axis (A4); each electric machine (21) being fitted to the hub (28) of a corresponding supporting wheel (17), and the hub (28) of the supporting wheel (17) rotating about the pin (30) and supporting the rotor (33) of the electric machine (21)."

IV. The Appellant's arguments may be summarized as follows:

The subject-matter of granted claim 1 extends beyond the content of the application as filed (see published patent application, hereinafter designated as WO-A). In effect, said subject-matter results from the combination of claims 1, 6 and 7 as filed, except for the features stating that "each vehicle comprises a

frame" and "each wheel comprising a pin hinged to the frame" (included in claim 7 as filed), which have been omitted. These features are evidently closely related and linked to the performance of the electric machine fitted to the wheel, the wheel's pin hinged to the frame obviously reducing the wheel's slip (e.g. in a curved path) and thus reducing power losses of the electric machine. Further, the omission of the pin's fixation to the frame leads to the pin being in principle allowed to perform additional linear and rotational motion (with respect to the frame), which was not disclosed in WO-A.

The same objections apply to claim 1 of the first and the third auxiliary request.

The subject-matter of claim 1 of the second auxiliary request extends beyond the content of the application as filed. This subject-matter is derived from the combination of claim 1 as filed with features taken from the description of WO-A (see page 5, line 25-page 6, line 4; page 6, line 24-page 7, line 11), part of these features (see page 6, line 24-page 7, line 11) relating to the embodiment illustrated in figure 3 of WO-A. However, claim 1 as filed encompasses all the embodiments of WO-A, i.e. also the embodiment of figure 4 in WO-A (including only one electric machine), leading to a combination of different and distinct embodiments which was not previously disclosed in the application as filed (WO-A).

Further, the subject-matter of amended claim 1 of the second auxiliary request broadens the scope of protection conferred by granted claim 1, for according to amended claim 1 the wheel does not necessarily comprise a pin, as required by granted claim 1.

The subject-matter of amended claim 1 of the fourth auxiliary request lacks clarity, for the feature reading "the electric machine (21) comprises a stator and a rotor driven by the supporting wheels (17)" is not compatible with the further feature implying "each electric machine (21) being fitted to the hub (28) of a corresponding supporting wheel (17)".

In addition, the invention is not disclosed in the patent specification (hereinafter designated as EP-B) in a manner sufficiently clear and complete for it to be carried out by the person skilled in the art. Indeed, said feature reading "the electric machine (21) comprises a stator and a rotor driven by the supporting wheels (17)" encompasses (or includes) an embodiment wherein the electric machine is driven by all the supporting wheels, such an embodiment being however not disclosed in EP-B or WO-A. However, in conformity with established case law of the Boards of Appeal, all embodiments encompassed by the scope of the claim have to be disclosed in a manner sufficiently clear and complete in the patent specification, and moreover an interpretation of the claimed subject-matter arbitrarily excluding or ignoring specific claimed features is likewise not permissible.

Finally, an embodiment of the invention including both an electric machine driven by all the wheels and an electric machine fitted to a wheel is not disclosed in the application as filed (WO-A), therefore the subject-matter of amended claim 1 extends beyond the content of the application as filed.

V. The Respondent's arguments may be summarized as follows:

The subject-matter of granted claim 1 (main request) does not extend beyond the content of the application as filed (WO-A). In particular, the omission of aforesaid features (i.e. "each vehicle comprises a frame" and "each wheel comprising a pin hinged to the frame") is permissible, given that (a) these features are not disclosed as essential features, (b) these features are not indispensable for the function of the invention in the light of the technical problem the invention seeks to solve and (c) the replacement or omission of these features requires no relevant modification of other features to compensate for the change. For instance, possible movements of the pin with respect to the frame do not anyway contribute to generating electrical power or reducing power losses, which is the object of the invention (see EP-B, [0008]). Likewise, said omitted features are not closely linked or related to the remaining features of dependent claim 7 in WO-A, as the pin could e.g. also be rigidly mounted on said frame.

The above arguments also apply to claim 1 of the first and third auxiliary request.

The subject-matter of amended claim 1 of the second auxiliary request does not extend beyond the content of the application as filed. In this respect it is noted that the second embodiment according to figure 4 (see WO-A, description page 11, line 11-page 12, line 10) is based on the same principles as the first embodiment and the constructional parts are substantially the same as in the first embodiment. Therefore no impermissible combination of the first and second embodiment is implied by amended claim 1.

The subject-matter of claim 1 of the fourth auxiliary request is clear, as it is obvious that all wheels at least indirectly contribute to the vehicle's motion and therefore to driving any electric machine mounted on the vehicle. One single electric machine is not sufficient to support the vehicle and "drive" the rotor of the electric machine along the rails, wherein the term "drive" can be understood as meaning guiding, towing, pushing etc. With this construction of aforesaid feature (i.e. "the electric machine (21) comprises a stator and a rotor driven by the supporting wheels (17)") in mind, the further objections of the Appellant in relation to Article 123(2) EPC and Article 83 EPC are also overcome.

Reasons for the Decision

1. The appeal is admissible.
2. The subject-matter of granted claim 1 (main request) extends beyond the content of the application as filed (WO-A) (Article 123(2) EPC). This subject-matter results from the combination of claims 1, 6 and 7 of WO-A, albeit the features "each vehicle comprises a frame" and "each wheel comprising a pin hinged to the frame" having been omitted.

This omission contravenes Article 123(2) EPC, implying specifically that the pin is not any more necessarily connected or fixed to the vehicle's frame. Thus according to claim 1 the pin does not necessarily provide support for the wheel and act as the wheel's axle, the pin e.g. possibly being coaxially linearly

movable and rotatably arranged not only with respect to the hub (and the wheel) but also with respect to the wheel's axle (not mentioned in claim 1).

In conclusion, said omission implies that granted claim 1 encompasses embodiments not disclosed in the application as filed, wherein support for the wheel (on the frame) is not forcibly provided by said pin, and wherein said pin performs a kind of motion and a function which is not derivable from and goes beyond the disclosure of WO-A.

3. For the above stated reasons the subject-matter of claim 1 of the first and third auxiliary request likewise does not comply with Article 123(2) EPC.
4. The subject-matter of claim 1 of the second auxiliary request extends beyond the content of the application as filed (WO-A) (Article 123(2) EPC), given that it combines two different embodiments (i.e. the embodiment of figure 3 and of figure 4) and that there is no clear and unambiguous indication in WO-A about which constructional parts belonging to said two embodiments are identical (see WO-A, page 12: "... the component parts are substantially the same as in the first embodiment ...).
5. The subject-matter of amended claim 1 of the second auxiliary request does not extend the scope of protection as conferred by granted claim 1 (Article 123(3) EPC).
The added features specify (inter alia) that the pin is hinged to the frame and that the hub and the wheel are mounted to rotate about the pin, such that the pin constitutes the wheel's axle. Thus, these features solely further limit the scope of the claim, whilst not contradicting the wheel still being regarded (according

to one possible interpretation) as comprising the pin (see granted claim 1, feature reading "each wheel (17) comprises a hub (28) and a pin (30)", omitted in claim 1 of second auxiliary request), given the pin performing the axle's function and being mechanically connected to the wheel (through the bearing).

In conclusion, no broadening of the scope of protection results from said amendments, for these do not affect the pin's function or its constructional features as implied by the claim and by the description, which shall be used to interpret the claims in order to determine the scope of protection conferred (Article 69 EPC).

6. The subject-matter of claim 1 of the fourth auxiliary request complies with the requirements of Article 84 EPC.

Indeed, the Board finds that by any reasonable measure said subject-matter is sufficiently clear. The introduced amendments now unambiguously indicate (as opposed and by contrast to the granted claim) that **each** electric machine is fitted to the hub of a **corresponding** supporting wheel (see feature reading "each electric machine (21) being fitted to the hub (28) of a corresponding supporting wheel (17), and the hub (28) of the supporting wheel (17) rotating about the pin (30) and supporting the rotor (33) of the electric machine (21)) and that the vehicle comprises a "**number** of electric machines" which evidently corresponds to (and equals) the "**number** of supporting wheels".

Thus the feature reading "the electric machine (21) comprises a stator and a rotor driven by the wheels (17) and the vehicle (6; 47) comprises a number of

electric machines (21)", read in conjunction with the aforementioned features, merely states that the vehicle comprises a number of electric machines, each comprising a stator and a rotor driven by the **corresponding** supporting wheel. Although admittedly aforesaid feature is to a certain extent (partly) redundant in view of the further claimed features (see above paragraph), nevertheless in the mentioned context of claim 1 it is more than abundantly clear that **each** (i.e. without exception) electric machine mounted on the vehicle is driven by a corresponding supporting wheel (and not by a plurality of wheels).

7. The subject-matter of claim 1 of the fourth auxiliary request does not extend beyond the content of WO-A (Article 123(2) EPC). In effect, the claimed subject-matter is clear and is entirely supported by and limited to the embodiment disclosed in figure 3 (in conjunction with figure 1 and 2) of WO-A. Therefore no misunderstandings or ambiguities arise concerning possible further embodiments alleged by the Appellant (likewise supposedly encompassed by the claim), which are not disclosed in the application as filed (WO-A).

Moreover, for the same reasons as set out in relation to claim 1 of the second auxiliary request (see above), the claimed subject-matter does not confer an extended scope of protection as compared to granted claim 1 (Article 123(3) EPC).

8. The subject-matter of claim 1 of the fourth auxiliary request in conjunction with the description of WO-A (or EP-B) discloses the invention in a manner sufficiently clear and complete for it to be put into effect by the skilled person (Article 83 EPC).

For the same reasons as stated in relation to Article 84 EPC and Article 123(2) EPC the Appellant's allegations are unfounded. Indeed, as discussed above, the amended claim renders clear (contrary to claim 1 as granted) that it is limited to the embodiment illustrated in figure 3 (wherein each electric machine is driven by a corresponding supporting wheel), thus excluding any doubts relating to an undisclosed embodiment being allegedly likewise encompassed by claim 1, wherein at least an electric machine or each electric machine is driven by a plurality of wheels.

9. The Appellant did not submit any arguments based on lack of inventive step (Article 100(a) EPC) (or lack of novelty) against claim 1 of the fourth auxiliary request. The Board, in view of the cited documents discussed in the appealed decision in opposition proceedings and in view of the Appellant's arguments submitted during appeal proceedings (in relation to claim 1 of the main request), does not see any evident and obvious reasons giving rise to doubts concerning an inventive step being involved in the subject-matter of claim 1 of the fourth auxiliary request.

Hence, taking into due account the limits imposed upon the Board's investigation of its own motion within the framework of appeal proceedings, maintenance of the patent in amended form on the basis of claim 1 of the fourth auxiliary request is not prejudiced by any ground of opposition. The same holds for independent method claim 6, whose subject-matter is based entirely on the subject-matter of claim 1 and includes features corresponding and equivalent to those of claim 1.

The description has been adapted to the claims on file (Article 84 EPC).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with the order to maintain the patent in amended form on the basis of the following documents:

Claims : Nos. 1 to 12 of auxiliary request 4 filed with the reply to the grounds of appeal on 2 January 2017.

Description: columns 1 and 2 filed during oral proceedings; columns 3 to 6 of the patent as granted.

Drawings: Figures 1 to 4 of the patent as granted.

The Registrar:

The Chairman:



T. Buschek

G. Pricolo

Decision electronically authenticated