

Internal distribution code:

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

**Datasheet for the decision
of 7 November 2017**

Case Number: T 2007/14 - 3.2.01

Application Number: 08786860.0

Publication Number: 2183142

IPC: B61B7/02

Language of the proceedings: EN

Title of invention:

CABLE TRANSPORTATION SYSTEM AND RELATIVE OPERATING METHOD

Patent Proprietor:

ROPFIN B.V.

Opponent:

Doppelmayr Seilbahnen GmbH

Headword:

Relevant legal provisions:

EPC Art. 123(3), 54(1), 56

Keyword:

Amendments - broadening of claim (no)

Grounds for opposition - fresh ground for opposition (yes) -
not admitted

Novelty - (yes)

Inventive step - (yes)

Decisions cited:

G 0001/95

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 2007/14 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 7 November 2017

Appellant: Doppelmayr Seilbahnen GmbH
(Opponent) Rickenbacherstrasse 8-10
6922 Wolfurt (AT)

Representative: Beer & Partner Patentanwälte KG
Lindengasse 8
1070 Wien (AT)

Respondent: ROFFIN B.V.
(Patent Proprietor) 38, Waaier
2451 VW Leimuïden (NL)

Representative: Eccetto, Mauro
Studio Torta S.p.A.
Via Viotti, 9
10121 Torino (IT)

Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
11 August 2014 concerning maintenance of the
European Patent No. 2183142 in amended form.**

Composition of the Board:

Chairman G. Pricolo
Members: H. Geuss
P. de Heij

Summary of Facts and Submissions

- I. The appeal is directed against the interlocutory decision of the Opposition Division of the European Patent Office posted on 11 August 2014 concerning maintenance of the European Patent No. 2183142 in amended form.
- II. The opposition division held that the subject-matter of claims 1 and 11 of the main request, sent by the patent proprietor with their telefax of 24 May 2013, is new and based on inventive step with regard to (among other) documents

WO 01/87683 A1 (D3),
JP 7123523(A) (D4)

and the prior use Skyrail, supported by the following evidence:

(D6) Wikipedia Skyrail Midorizaka Line,
(D7) Extract from internet: Skyrail Midorizaka Line
(D8) Skyrail: New Hybrid Transit System.

- III. Oral proceedings were held on 7 November 2017.

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

The respondent (the patent proprietor) submitted a corrected version of their main request during oral proceedings and requested that the patent be maintained in amended form in accordance with this main request and with pages 1-11 of the description as filed with the fax dated 24 May 2013 and with figures 1-10 of the

patent as granted.

- IV. Claim 1 according to the main request (filed during the oral proceedings before the Board) reads as follows: (structure of features according to decision of the opposition division, cf. paragraphs 5 and 6, introduced in brackets by the Board):

A cable transportation system (1; 35) **[a]** comprising a pull cable (2; 37) **[b]**;
at least one transportation unit (3; 38) moving along a given path (P1; P2) and connectable selectively to the pull cable (2; 37) by a coupling device (16; 46) **[c]**;
at least one passenger station (4; 39) where the transportation unit (3; 38) is detached from the pull cable (2; 37) **[d]**;
and an auxiliary drive device extending along the passenger station (4; 39) to move the transportation unit (3; 38) along a portion of said given path (P1; P2) **[e]**, and comprising a synchronous linear electric motor (22; 53) **[f]**
comprising a linear stator (10; 42) extending along said portion of said given path (P1; P2) **[g]**;
and a slide (20; 48) associated with said transportation unit (3; 38) **[h]**; the slide (20; 48) and the linear stator (10; 42) being connected magnetically to each other along said portion of said given path (P1; P2) **[i]**;
each slide (20; 48) comprising two sets (32) of permanent magnets (33) **[j]**; each set (32) of permanent magnets (33) facing the other set (32) of permanent magnets (33) **[k]**, and both sets (32) of permanent magnets (33) facing the linear stator (10; 42) along said passenger station (4) **[l]**;
the linear stator (10; 42) comprising a succession of electric coils (24) powered selectively with electric

energy **[m]**, and an elongated body (23) of nonferrous material in which the electric coils (24) are embedded, and having two opposite parallel faces (26), each facing the slide (20 48) **[n]**.

- V. Claim 11 according to the main request (filed during the oral proceedings before the Board) reads as follows: (structure of features according to the decision of the opposition division, cf. paragraphs 5 and 6, introduced in brackets by the Board):

A method of operating a cable transportation system (1; 35) **[o]**, the cable transportation system comprising a pull cable (2; 37) **[p]**; at least one transportation unit (3; 38) moving along a given path (P1; P2) and connectable selectively to the pull cable (2; 37) by a coupling device (16; 46) **[q]**; and at least one passenger station (4; 39) where the transportation unit (3; 38) is detached from the pull cable (2;37) **[r]**;
the method comprising the steps of
moving the transportation unit (3; 38) along the passenger station (4;39) by means of a synchronous linear electric motor (22;53) **[s]** comprising a linear stator (10; 42) extending along a portion of said given path (P1; P2) **[t]**, and including electric coils (24) powered selectively with electric energy **[u]**; and a slide (20;48) associated with said transportation unit (3;38) **[v]**; connecting the slide (20;48) and the linear stator (10; 42) magnetically along said portion of said given path (P1; P2) **[w]**; powering each electric coil (24) independently of the other electric coils (24) **[x]**; acquiring a number of position signals (PS) related to the position of the transportation unit (3;38) **[y]**, and a number of speed signals (V) related to the speed of the transportation unit (3; 38) **[z]**;

supplying a regulating signal (VT) as a function of a comparison between the position (PS) and speed (V) signals and an optimum speed profile (VR) along the passenger station (4; 39) **[aa]**; and modulating the intensity and/or the frequency of the current supply to each electric coil (24) **[bb]**.

VI. The appellant's submissions as far as relevant to the present decision may be summarised as follows:

Claim 1 as amended during opposition proceedings extends the scope for protection compared with claim 1 as granted.

In claim 1 as granted it is the electric motor which extends along a portion of a given path whereas amended claim 1 defines in feature g) that the linear stator extends along a portion of said given path. The change from "motor" to "stator" results in a broader scope of protection.

Furthermore, claim 11 is not allowable since it contains subject-matter which is not disclosed in the application as originally filed. The last feature of claim 11 reads "modulating the intensity and/or frequency of the current supply...". This feature comes from claim 23 as granted and has its basis in claims 29 and 30 as originally filed, whereby claim 30 is dependent on claim 29. From this it follows that current intensity and frequency have not been disclosed as being independent alternatives of the modulation of the current supply to the electric coils in the original disclosure.

The lack of clarity raised in respect of claim 11 of the main request which was the subject of the decision of the opposition division has been settled with the

amendment in claim 11, as filed with the request during the oral proceedings.

The subject-matter of claim 1 lacks novelty over document D3, figure 7.

According to the description of D3, pages 8 and 9, the elements 17 are permanent magnets and element 19 is a stator coil (inductor). Page 4 of D3 discloses a linear electric motor of the synchronous type.

D3 therefore explicitly discloses all features of claim 1 except the feature n) according to which the electric coils are embedded in non-ferrous material. However this is self-evident, since ferrous material would interfere with the magnetic field of the coils. As the position of the coils is concerned, it should be considered that linear motors of the synchronous type were generally known by the skilled person. For the skilled person it is evident that the coil should be in the pathway and the magnets in the cabin unit. The location of coils in the path has the apparent advantage that no power supply is necessary for the cabin unit. The subject-matter of claim 1 is therefore, if novel, anyhow not based on an inventive step.

Also, the subject-matter of independent claim 11 is not based on inventive step.

Features aa) and bb) are not disclosed in document D3, however these features could be derived from document D4 (or D8).

The abstract of D4 discloses a speed controller for a linear motor and an AC voltage control system, including positioning sensors. The reference to "current supply" in feature bb should be understood as implying a power supply based on voltage control or alternatively current control. In D4 speed is also regulated with either voltage or current. The same line

of argument is put forward, starting from documents D6 to D8 in combination with D3.

VII. The respondent's rebuttal was essentially the following:

The amendment made during opposition proceedings does not result in an extension of scope of protection. The stator is a part of the linear electric motor, so that the feature according to which the stator extends along a given path means that the motor extends along that path.

Consent is not given to examine the new ground of opposition relating to an objection of added matter in the granted patent.

Article 100(c) EPC has not been an issue in opposition proceedings and the objection has been put forward for the first time in appeal proceedings with the statement of grounds of appeal.

The amendment of claim 11 according to the request as filed during the oral proceedings before the Board of Appeal is directed at overcoming a clarity objection raised by the appellant. With the amendment, claim 11 is now clear and concise.

The subject-matter of claim 1 is novel over document D3. D3 fails to disclose features g, i, j, k, l, m, and n. In particular, it is not clear which elements in figures 7 and 8 are coils and which parts are permanent magnets since the description on pages 8 and 9 does not differentiate between electromagnets and permanent magnets. It cannot be taken for sure that the expression "magnet" in D3 always means a permanent magnet since this interpretation would mean that the device

according to figure 8 would only consist of permanent magnets. However this is not possible. Thus the structure of the linear motor according to the invention cannot be clearly and unambiguously derived from D3, figure 7.

There is no hint in the state of the art to modify the cable transportation system according to E3. The system according to the invention provides many advantages such as a precise movement in shunting the cabin units and the possibility to program a specific path profile, for instance with a braking or acceleration zone and areas for storing cabins. Entry/exit zones can be programmed in a flexible manner and easily changed. An emergency operating mode can be used in which all transportation units at the station are stopped automatically by short-circuiting all electric coils.

At least features x, aa) and bb) of claim 11 are not disclosed in document D3. These features cannot be derived from any of the other state of the art documents. Furthermore a skilled person would not take document D4 into account to improve the system according to document D3, since the linear motor according to D4 is an asynchronous motor, driven by a voltage control (cf. D4, abstract and figure 3). The functionality of an asynchronous motor is completely different from that of a synchronous linear motor used in accordance with the invention. The motor of the synchronous type according to the invention is controlled by current, which is a different technique of power supply and based on a different general concept of the motor.

The same argument applies for the appellant's line of attack based on documents D6 to D8 in combination with

D3.

Reasons for the Decision

1. The appeal is admissible.

2. The claims of the main request in suit, filed during the oral proceedings, differ from the set of claims which formed the basis for the maintenance of the patent in amended form according to the decision of the opposition division only by the amendment of claim 11 consisting in replacing the term "said " by "a" in feature t), so that feature t) now reads: "a linear stator (10,42) extending along a portion of said given path (P1,P2)".

This amendment was made to overcome a clarity objection, due to the fact that there was no prior mention of a "portion" in the claim to which the term "said portion" could refer.

The patent proprietor/respondent stated that this amendment did not change the claimed subject-matter and renders claim 11 clear and concise.

The opponent/appellant and the Board agreed to this view.

3. Claim 1 as amended does not extend the scope of protection, Article 123 (3) EPC.

The appellant objects that whilst claim 1 as granted recites that the electric motor extends along a portion of a given path (last feature of claim 1 as granted), amended claim 1 defines in feature g) that it is the linear stator that extends along a portion of a path. The change from the *motor* to the *stator* results in a

broadening of the scope of protection.

The Board holds that the linear stator is a constructive part of the linear electric motor and the reference in the amended claim to the stator extending along said portion of the path implies necessarily that the linear motor extends along said path. Thus, the Board does not see any differences in the scope of the features.

4. The appellant's objection of added subject-matter in respect of claim 11 relies on the allegation that the subject-matter of granted claim 23 is not disclosed in the application as originally filed. However, no allegations of added subject-matter in the patent as granted were made during the proceedings before the opposition division.
Therefore this objection raises a new ground for opposition which cannot be dealt with in appeal proceedings without the consent of the patent proprietor (G 9/91) which was explicitly withheld. This is also the case when, like in the present opposition proceedings, the feature in dispute was a part of a dependent claim in the patent as granted and becomes a part of an independent claim (here: claim 11).
5. The subject-matter of claim 1 is novel over the disclosure of document D3, Article 54 (1) EPC.

In this respect, the Board follows the decision of the opposition division, stating that document D3 discloses a cable transportation system according to features a) to f) of claim 1; however D3 does not contain any further information on the constructive design of the linear motor. Thus D3 does not disclose at least

features j) to n).

- 5.1 In particular, it is not clearly and unambiguously shown that the linear motor in figures 7 and 8 is of a synchronous type. In particular, the description of figures 7 and 8 on pages 8 and 9 leaves open whether the magnets (Magnete 17) are permanent magnets and the stator 19 (Induktor) is a "succession of electric coils" as asserted by the appellant. The magnets (Magnete) could be either permanent magnets or electromagnets including coils.

The interpretation of the appellant of figure 7 - namely that magnets 17 are permanent magnets and part 19 is a stator coil - is not consistent with the further description of D3. In particular in view of figure 8 the appellant's interpretation results in a contradiction: if elements denominated as "magnet" in D3 should be permanent magnets, it would follow from page 9, line 5, that the device shown in figure 8 only consists of permanent magnets: consequently also magnets 21 ("Magneten 21") should be of a permanent magnet type. However, such an arrangement would not function in practice.

6. The subject-matter of claim 1 is based on inventive step, Article 56 EPC.
- 6.1 The appellant assert that linear electric motors of different types are generally known in the art. Page 4 of D3 explicitly mentions linear motors of the synchronous and asynchronous type, with a long stator or a short stator alternatively.
- Furthermore the appellant argues that it is clear for the skilled person to provide the path with coils and the transportation unit (cabin) with permanent magnets

since it would be too complicated to distribute electric power to the cabin unit.

- 6.2 The Board agrees that linear electric motors, both of the synchronous and asynchronous type, are well known to the person skilled in the art and that he could select a motor of the synchronous type with coils in the path and permanent magnets in the cabin unit. However the appellant could not convince the Board that the skilled person would do so, thereby arriving at the specific combination of features as claimed. None of the embodiments in the state of the art as cited by the appellant gives a hint directing the skilled person to specifically select a synchronous motor with coils being provided in the path.

The claimed combination of features in fact has advantages with respect to the state of the art.

The synchronous motor allows a very precise movement of the transportation unit. The fact that the coils are located in the path and the magnets in the cabin unit has the advantage that a specific path profile, for instance with braking or acceleration zones, areas for storing cabins, entry/exit zones can be programmed in a flexible manner and easily changed; an emergency operating mode is possible in which all transportation units at the station are stopped automatically by short-circuiting all electric coils, cf. description of the amended patent, page 8, lines 10 to 14.

7. The subject-matter of claim 11 is based on inventive step, Article 56 EPC.
- 7.1 Features x), aa) and bb) of claim 11 are not disclosed in document D3 beyond dispute:

x) powering each electric coil (24) independently of the other electric coils (24)

aa) supplying a regulation signal (VT) as a function of a comparison between the position (PS) and speed (V) signals an optimum speed profile (VR) along the passenger station (4;39); and

bb) modulating the intensity and / or the frequency of the current supply to each electrical coil (24).

7.2 The appellant argues that the differentiating features are disclosed in document D4. The abstract of D4 discloses a speed controller for a linear motor and an AC voltage control system, including positioning sensors. Figure 3 of D4 would disclose feature x.

7.3 The Board disagrees. Document D4 is directed to a linear motor of the asynchronous type, which is in its function completely different from a motor of the synchronous type, so that a skilled person would not take document D4 into account for improving the system with a synchronous linear motor according to document D3.

The linear motor according to D4 is driven by a voltage control (cf. D4, abstract and figure 3) which is a clear indication for an asynchronous motor whereas a motor of the synchronous type is controlled by current, which is a fundamentally different technical approach.

Thus, the board cannot agree with the argument of the appellant that the feature bb) "current supply" of claim 11 should not be interpreted in a limited manner in the sense of providing a certain current but should

be understood in a more general way to also include a power supply based on voltage control.

The whole technical setting of the invention is focused on a motor of the synchronous type with the advantages as discussed for claim 1, see above. Hence, there is no indication in the specification of the patent in suit, that the feature "current supply" should be interpreted in a broader manner than that explicitly stated, that is as a power source supplying the coils with a specific current.

As already pointed out for claim 1, the fact that coils are located in the path and magnets in the transport unit (which is an implicit consequence of feature t)) leads to advantages such as a precise positioning of the transportation units and a flexible definition of the pathway.

7.4 In summary, the skilled person would not combine documents D3 and D4, but even if he would, he would not arrive at the combination of features according to claim 11, since none of the documents discloses a modulation of the current. In addition, none of the documents discloses feature x. Figure 3 of D4 seems to show a switch for each coil of the linear motor, but from this figure it cannot be inferred that the coils can be powered independently of the other coils.

7.5 With respect to the appellant's line of argument based on the prior use Skyrail (documents D6 to D8), the Board notes that these documents disclose an asynchronous motor and - as a consequence - a voltage control, cf. D8, page 13.2. For this reason, the combination of D6 to D8 with document D4 cannot challenge inventive step of claim 11 for the same

reasons as discussed for document D3 and D4, see above.
The same applies to the combination of D3 with the
prior use, in view of the fact that D8 relates to an
asynchronous motor analogously to D4.

Order

For these reasons it is decided that:

The decision under appeal is set aside.

The case is remitted to the department of first
instance with the order to maintain the patent as
amended in the following version:

Description:

Pages 1-11 filed with the fax of 24 May 2013;

Claims: No. 1-12 filed during oral proceedings;

Drawings: Figures 1-10 of the patent specification.

The Registrar:

The Chairman:



A. Vottner

G. Pricolo

Decision electronically authenticated