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Datasheet for the decision of 16 September 2024

Case Number: T 0160/23 - 3.2.01

Application Number: 16766370.7

Publication Number: 3328698

IPC: B60T13/66, B60T17/22

Language of the proceedings: EN

Title of invention:
ELECTRO-PNEUMATIC APPARATUS FOR CONTROLLING THE BRAKING OF A RAILWAY VEHICLE

Patent Proprietor:
Faiveley Transport Italia S.p.A.

Opponent:
KNORR-BREMSE
Systeme für Schienenfahrzeuge GmbH

Headword:

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

Keyword:
Inventive step - (yes)

Decisions cited:

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

Boards of Appeal

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Case Number: T 0160/23 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 16 September 2024

Appellant: (Opponent)	KNORR-BREMSE Systeme für Schienenfahrzeuge GmbH Moosacher Str. 80 80809 München (DE)
Representative:	Prüfer & Partner mbB Patentanwälte · Rechtsanwälte Sohnckestraße 12 81479 München (DE)
Respondent: (Patent Proprietor)	Faiveley Transport Italia S.p.A. Via Volvera 51 10045 Piossasco (TO) (IT)
Representative:	Deambrogi, Edgardo Jacobacci & Partners S.p.A. Corso Emilia 8 10152 Torino (IT)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 22 December 2022 rejecting the opposition filed against European patent No. 3328698 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	G. Pricolo
Members:	J. J. de Acha González
	S. Fernández de Córdoba

Summary of Facts and Submissions

I. The opponent's appeal is directed against the decision of the Opposition Division rejecting the opposition to European patent No. 3328698.

II. The Opposition Division decided among others that the subject-matter of granted claim 1 involved an inventive step in view of the following combinations of prior art:

- **E11** (US 2004/0046442 A1) with common general knowledge or **E12** (EP 0438678 A1),
- **E10** (Slovenian Standard SIST EN 156611:2009+A1:2011) with **E12**, and
- **E3** (EP 0 958 980 A2) with **E11**.

III. Oral proceedings before the Board were held on 16 September 2024 as a videoconference.

The appellant (opponent) 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.

IV. Granted claim 1 reads as follows (feature numbering according to the decision under appeal):

1.1 *Electro-pneumatic apparatus (1) for controlling the braking of a bogie of a railway vehicle, comprising*
1.2 *means (2) for generating a vehicle load signal,*
1.3 weighting means (WCU; EPDA) designed to supply a weighted pneumatic pressure as a function of the load signal, and
1.4 *first and second braking control means (BCU1, EPCA1; BCU2, EPCA2)*
1.4.1 *both coupled to the weighting means (WCU, EPDA) and*
1.4.2 *comprising respective relay valves (RV)*
1.4.2.1 *which supply at their outlets respective braking pressures, modulated as a function of said weighted pneumatic pressure, to respective braking actuators (BC1, BC2) associated with the wheels of a respective axle (A1, A2) or of a respective bogie of the vehicle;*
1.3.1 *the weighting means (WCU, EPDA) comprising an electro-pneumatic drive assembly (EDPA)*
1.3.1.1 *which is interposed between pneumatic pressure supply means (AR1, AR2; RI, R2; SV) and the drive inlet (d) of the relay valves (RV) and an electronic weighting control unit (WCU) which controls said drive assembly (EPDA) as a function of said load signal, so as to modulate in a predetermined way the pressure at the drive inlet (d) of said relay valves (RV); and wherein*
1.5 *said pneumatic pressure supply means comprise first and second pressure reservoirs (AR1, AR2) coupled to the inlet of the relay valve (RV) of the first and second braking control means (BCU, EPCA1; BCU2, EPCA2), respectively, through respective shut-off valves (R1, R2).*

Reasons for the Decision

1. *Inventive step*

1.1 The subject-matter of granted claim 1 involves an inventive step in view of the prior art at hand (Articles 100(a) and 56 EPC).

1.2 The appellant maintained the following lines of attack on which the contested decision was based:

- E11 with common general knowledge or E12,
- E10 with E12, and
- E3 with E11.

1.3 In arguing on inventive step and starting from E11 as the closest prior art, the opponent considered, in line with the Opposition Division's assessment (see point 18 of the contested decision), that the subject-matter of granted claim 1 differed from the apparatus disclosed in E11 by virtue of features 1.3.1, 1.3.1.1 and 1.5. The respondent did not dispute this.
On the basis of this difference, the opponent formulated the inventive step objections according to the established problem-solution approach, by arguing that features 1.3.1 together with 1.3.1.1 were aggregated to feature 1.5, and accordingly formulated two separated partial problems.

Feature 1.5 concerned the pneumatic system and, more specifically, the provision of shut-off valves, and addressed the partial problem of improving safety by providing redundancy in the pneumatic system. The Opposition Division was right (see point 20 of the contested decision) that the provision of shut-off

valves was an obvious design consideration. In that sense, E11 included, for example, a shut-off valve 27 provided elsewhere, as described in paragraph [0108]. A person skilled in the art would therefore have no difficulty in concluding from document E11 alone that the provision of shut-off valves in a braking system is absolutely standard practice and, if they were solving the problem of increasing the safety and reliability of a braking system, they would naturally also provide corresponding shut-off valves between the relay valves and the auxiliary pressure reservoirs.

1.3.1 This reasoning, as explained by the respondent, is based on hindsight. A person skilled in the art, taking into account common general knowledge, would not be motivated to place a shut-off valve downstream of the reservoir 33. A shut-off valve 27 is already provided upstream of the reservoir 33 and is arranged to isolate the bogie from the main reservoir line 42 (see cited paragraph [0108] and figure 6 of E11). In other words, the reservoir 33 is intended to supply pneumatic pressure only to the bogie 3 and, in the event of a failure in the apparatus of the bogie 3, the shut-off valve 27 is already provided to disconnect the bogie (or axle in the alternative of paragraph [0116]) from the main reservoir line 42. There is no reason to provide a shut-off valve between the reservoir 33 and the inlet of the relay valve for actuating the brakes of the bogie/axle (see figure 4 of E11).

For this reason alone, the inventive step attacks starting from E11 cannot succeed, since both attacks address the obviousness of feature 1.5 in the same way as explained above.

1.4 Regarding the attack starting from E10 as the closest prior art, the appellant also identified the differences of the subject-matter of granted claim 1 from the disclosure of E10 as features 1.3.1, 1.3.1.1 and 1.5. Analogously to the attack starting from E11, the problem solution approach was formulated as providing solutions to the two partial problems already mentioned.
As regards the obviousness of feature 1.5, the appellant merely referred to the reasoning of the Opposition Division in point 20 of the decision under appeal and argued that, for the same reasons, feature 1.5, which differed only in the presence of the shut-off valves in the claimed specific location, could not justify an inventive step.

1.4.1 The objection starting from E10 is also based on hindsight. The Opposition Division's reasoning in point 20 of the contested decision refers to the obviousness of that feature in the light of the disclosure of E11, which comprises the first and second pressure reservoirs, and not in the light of the disclosure of E10 as the starting point. The Opposition Division considered that E10 failed to disclose not only the shut-off valves but also that the pressure supply means comprises two pressure reservoirs (see point 16 of the decision). The appellant fails to address this difference in appeal and the Opposition Division is correct in this respect. Consequently, the appellant's argument does not explain why the skilled person would provide two pressure reservoirs in the apparatus of E10, each with a shut-off valve arranged according to feature 1.5, in an obvious manner.

1.5 Starting from E3, it was common ground that the subject-matter of claim 1 differs from the apparatus of E3 on account of features 1.4.2, 1.3.1.1 and 1.5.

With regard to the obviousness of feature 1.5, the appellant repeated exactly the same arguments as for E10 as the closest prior art (see points 38 and 46 of the statement of grounds of appeal).

1.5.1 Starting from E3, the Opposition Division took the view, as regards feature 1.5, that the difference consisted not only in the absence of the shut-off valves but also in the absence of a second pressure reservoir (see points 24.11 and 25 of the contested decision).
For the same reasons as for the attack starting from E10 above, the appellant again failed to show why feature 1.5, including the two pressure reservoirs, was obvious starting from E3.
Moreover, the Opposition Division considered that feature 1.5 was not obvious when starting from E3 (see page 26, second paragraph of the decision). The appellant has not addressed this point and the Board considers that the Opposition Division is correct in this respect.

Consequently, the combination of E3 with E11 does therefore not succeed either.

2. It follows that the appeal of the opponent is not allowable.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

M. Schalow G. Pricolo

Decision electronically authenticated