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D E C I S I O N
of 8 December 2004

Case Number: T 0161/03 - 3.2.1

Application Number: 98955391.2

Publication Number: 1028885

IPC: B62D 25/20, B61D 17/10

Language of the proceedings: EN

Title of invention:
A floor for a transport means and profiles for the construction thereof as well as a vehicle provided with such a floor

Applicant:
M.C.M. HOLDING A/S

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step (yes)"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0161/03 - 3.2.1

D E C I S I O N
of the Technical Board of Appeal 3.2.1
of 8 December 2004

Appellant: M.C.M. HOLDING A/S
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Representative: Boesen, Johnny Peder
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 28 August 2002 refusing European application No. 98955391.2 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: S. Crane
Members: J. Osborne
G. E. Weiss

Summary of Facts and Submissions

I. The appeal is directed against the decision posted 28 August 2002 to refuse European patent application no. 98 95 5391.2.

II. The following citations were listed in the search report:

D1: DE-A-195 20 007
D2: EP-A-0 615 894
D3: EP-A-0 619 216
D4: FR-A-1 081 087
D5: EP-A-0 498 270
D6: WO-A-96 03290.

III. The Examining Division's decision was based on a set of claims including independent claims 1 and 12 directed to a product and a method respectively. It found that amendments made to claim 1 satisfied the requirements of Article 123(2) EPC but that the subject-matter of the claim did not involve an inventive step in the light of a combination of the disclosures of D4 and D2.

IV. In a communication pursuant to Article 110(2) EPC the Board informed the appellant of its provisional opinion that although the subject-matter of claim 1 on which the Examining Division's decision was based appeared to involve an inventive step in the light of a combination of D4 and D2, the amendments to the claim did not satisfy the requirements of Article 123(2) EPC and the subject-matter of the claim lacked an inventive step in the light of a combination of the disclosures of D6 and D4.

V. During oral proceedings held 9 September 2004 the appellant requested that a patent be granted on the basis of a method claim 1 and an independent product claim 4. The Board found the requirements of Article 123(2) EPC to be satisfied and the subject-matter of the claims to involve an inventive step. The procedure was continued in writing in order to correct deficiencies in the documents underlying the application.

VI. With a letter dated 2 November 2004 the appellant filed description pages 1 to 12 and claims 1 to 16 to form the basis of the grant of a patent.

VII. Independent claims 1 and 4 according to the appellant's request after correction of an obvious error in claim 4 (marked in italics) read as follows:

"1. A method of mounting chairs in a means of transport, comprising

forming a floor plate of a plurality of parallel floor profiles (11) by interconnecting the floor profiles (11) via side flanges by welding, gluing, tongue and groove connection or the like, which floor profiles (11) are constructed as U-profiles or closed profiles with plane or substantially plane upper sides (21), which floor plate comprises a plurality of recesses (3, 31)) distributed in a suitable pattern for receiving securing means for securing chairs,

attaching the floor plate to a bottom (12) of said means of transport,

placing and securing chairs in structural attachment with said floor plate, using said recesses (3, 31) independently of said bottom.

4. A means of transport comprising a bottom (12) with an upper side, where a floor plate is attached to said bottom (12), said floor plate being placed on said upper side of said bottom (12), which floor plate comprises a plurality of recesses (3, 31) distributed in a suitable pattern for receiving securing means for securing chairs, and where chairs are placed in structural attachment with said floor plate (1) using said recesses (3, 31) independently of said bottom (12), characterized in that the floor plate is formed by a plurality of parallel floor profiles (11) being interconnected via side flanges (16) by welding, gluing, tongue *and* groove connection or the like, and which floor profiles (11) are constructed as U-profiles or closed profiles with plane or substantially plane upper sides."

The applicant's request also contains claims 2, 3 and 5 to 16 which define features additional to those of claims 1 and 4 respectively.

VIII. The appellant's arguments in respect of inventive step can be summarised as follows:

The floor plate according to the patent application is built up from a series of interconnected profiles. This permits flexibility in their arrangement both in respect of the layout of the recesses according to the desired seating layout and in respect of the dimensions

of the floor plate, thereby permitting floor plates to be produced to match the dimensions of the vehicle in which it is to be fitted. The floor plate is mounted to the bottom of the vehicle and the seats are mounted to the floor plate.

According to D2 a floor plate is mounted above transversely arranged channels to which the seats are attached. If the seats were to be mounted to the floor plate alone it would not be sufficiently strong to carry the loads transmitted to it by the seats during a crash.

The disclosure of D4 is that the bottom of the vehicle itself should be produced from a series of interconnected profiles. Each of these profiles is individually removable by being pivoted upwards. This arrangement would not be suitable for attachment of seats.

In the arrangement according to D6 the frame is intended only to act to add rigidity to the vehicle floor and it is this which provides the anchorages for the seats. This is derivable from figures 3 and 4 showing retention means beneath the floor, the fact that at the time of the priority date of D6 it was a legal requirement to be able to inspect set mountings and the fact that it would not be possible to arrange the lower fixing of the bolts inside the closed section of the floor plate.

It follows that no combination of D2, D4 and D6 renders obvious the presently claimed arrangement in which the seats are in structural attachment with the floor plate, independently of the bottom.

Reasons for the Decision

1. The application relates to a floor plate fitted to the existing floor ("bottom") of a vehicle such as a van in order to permit the attachment of seats. The aim is to achieve flexibility with respect to the positioning of seats in the vehicle and to provide seat mounting points of sufficient strength to withstand the loads imposed during an accident by an occupant wearing a three-point restraint harness. By virtue of the interconnected profiles it is possible to build floor plates of a desired seating configuration suitable for installation in different vehicles.

2. The closest prior art is that disclosed by D6. This relates primarily to providing a framework comprising "longerons" and transverse members which is positioned on and attached to the vehicle floor. The framework comprises a series of pre-drilled holes ("recesses") in order to provide anchorages for vehicle seats ("chairs") which are structurally attached to the frame independently of the vehicle floor. D6 begins from a prior art in which the attachment of seats to the vehicle is insufficiently strong to remain intact during a crash and shares with the present application the aim of providing anchorages for seats which carry the loads from three-point occupant restraint harnesses.

As an alternative to the framework D6 proposes a plate such as a honeycomb composite panel.

2.1 The Board cannot agree with the appellant that D6 discloses that the seat anchorages pass through the frame or panel to the vehicle floor.

2.1.1 The appellant's argument is primarily based on figures 3 and 4 in which not only bolts 22 which attach the frame to the floor but also seat anchorage means 17 and 18 are shown as extending to beneath the lower surface of the frame. The figures are merely schematic, however, as derivable from that fact that whilst figure 1 is a perspective view of the frame attached to the vehicle floor in the form of a corrugated panel, figures 3 and 4 are elevational views of a seat and the frame mounted on the flat upper surface of what is represented merely as a block of indeterminate thickness. As a result, it is not possible to derive from figures 3 and 4 that the anchorage means extend to the lower side of the vehicle floor. Moreover, it is established case law of the Boards that features which are derivable only from schematic drawings and which find no support in the text of a document are not disclosed. In the present case the text of D6 provides no disclosure to support the appellant's view. It does, on the other hand, contain a number of explicit indications that the frame itself forms the anchorage for the seats, for example:

- "said framework being secured to the vehicle floor and the longerons affording forward and rearward anchorage points for ... seating" (page 2, second paragraph and claim 1);

– "the seating may have base member fastening points … adapted for bolting to the longerons" (page 3, first sentence);

– "the seating … has ... fastening points adapted for bolting to the longerons" (page 5, final sentence and claim 6).

2.1.2 Moreover, the Board cannot accept the appellant's argument that it would be necessary to pass the seat anchorage bolts through the floor in order to ensure access to the lower ends. An arrangement such as the provision of a captive nut within the longerons or in depressions on their lower surfaces would fall within the normal capability of the skilled person. Nor would the existence in any territory of a legal requirement to inspect the seat anchorages change the teaching of D6. The content of patent applications may be no more than concepts which take no account of certain considerations relevant to bringing a product onto the market. In the absence of any reference in D6 to a particular legal requirement, the apparent failure of an embodiment to satisfy that requirement is not relevant to the implicit disclosure of the document.

2.1.3 Based on the foregoing the Board takes the view that D6 is a clear teaching that the seats are mounted only to the frame.

2.2 The subject-matter of claim 1 differs from the disclosure of D6 by:

– forming the floor plate of a plurality of parallel floor profiles by interconnecting the floor profiles via side flanges by welding, gluing, tongue and groove connection or the like, which floor profiles are constructed as U-profiles or closed profiles with plane or substantially plane upper sides.

The subject-matter of claim 1 solves the problem of permitting greater flexibility in the adaptation of the floor plate to the layout of the vehicle its seating.

3. D4 relates to the construction of a vehicle floor. It acknowledges prior art arrangements in which the floor was formed from a series of U-profiles interconnected by tongue and groove formations. These prior art arrangements had the disadvantage that in the event that one profile was damaged it was necessary to remove at least all of the profiles extending to the edge of the floor. The invention of D4 aims to improve the situation with a series of essentially U-shaped profiles having interlocking formations in the form of gear teeth. Resultant pivotal motion between adjacent profiles allows the removal of individual profiles.

3.1 The essential teaching of D4 is that a vehicle floor should be built up from a series of profiles which are interconnected by positive engagement means but which nevertheless are individually removable. It is not disclosed that such a construction could form a plate which is attachable to the vehicle floor in order to provide structural attachments for seats independently of the vehicle floor. Indeed, the teaching of D4 is specifically directed towards providing a flexible interconnection between the profiles which permits

their removal individually and is silent as regards the mounting of seats.

3.2 D4 results from an application filed in 1954, some 40 years before the priority date for D6, and at which time the problem addressed in both D6 and the present application of maintaining secure attachment of a seat to the vehicle during a crash was not generally recognised. The skilled person at the priority date of the present application would not have considered the arrangement according to D4 as being suitable for mounting seats and would have seen no reason to combine it with the arrangement according to D6.

4. D2 begins from a prior art in which the seats were mounted directly to the floor panel of a vehicle and which exhibited the problem that during a crash there was a risk that the seat mountings would be torn from the floor panel. The solution taught by D2 is to provide beneath the floor panel a series of longerons and transverse profiles and to directly connect the seat mountings to the latter. The teaching of D2 is therefore similar to that of D6 in as far as a series of seat mountings is provided on a framework. However, the framework is beneath the floor and so, unlike D6, structural attachment of the seats to the framework is not provided independently of the vehicle floor. Moreover, the arrangement offers no more flexibility than D6 in the adaptation of the framework to the vehicle and its seating.

5. It follows from the foregoing that neither a combination of D6 with D4 nor D4 with D2 renders the subject-matter of claim 1 obvious. The remainder of the cited documents are less relevant.

6. The subject-matter of independent product claim 4 differs from that of the closest prior art D6 by the features in the characterising portion. These correspond to the differentiating features of claim 1 set out under 2.2 above and the above reasoning in respect of claim 1 applies equally to claim 4.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the first instance with the order to grant a patent on the basis of the following documents:

   – description pages 1 to 12 filed with a letter dated 2 November 2004;

   – claims 1 to 16 filed with the letter dated 2 November 2004, with "tongue or groove" in claim 4 amended to read "tongue and groove";

   – drawings sheets 1/2 and 2/2 as originally filed.

The Registrar: The Chairman:

A. Vottner S. Crane

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Case Number: T 0161/03 - 3.2.1

D E C I S I O N
of 9 February 2005
correcting an error in the decision
of the Technical Board of Appeal 3.2.1
of 8 December 2004

Appellant: M.C.M. HOLDING A/S
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 28 August 2002 refusing European application No. 98955391.2 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: S. Crane
Members: J. Osborne
G. E. Weiss

In application of Rule 89 EPC the decision of 8 December 2004 is hereby corrected as follows:

Page 11, point 2 of the Order in the final line indicating the drawings to be included in the documents:

"drawings sheets 1/2 and 2/2 as originally filed" is replaced by

"drawings sheets 1/9 to 9/9 as published.

The Registrar: The Chairman:

A. Vottner S. Crane