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Aktenzeichen / Case Number / N^o du recours : T 409/88 - 3.2.1

Anmeldenummer / Filing No / N^o de la demande : 84 901 075.6

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Bezeichnung der Erfindung: Detachable towing bracket

Title of invention:

Titre de l'invention :

Klassifikation / Classification / Classement : B60D 1/06

ENTSCHEIDUNG / DECISION

vom / of / du 1 March 1990

Anmelder / Applicant / Demandeur : TOBO MADE B.V.

Patentinhaber / Proprietor of the patent /
Titulaire du brevet :

Einsprechender / Opponent / Opposant :

Stichwort / Headword / Référence :

EPÜ / EPC / CBE Article 56

Schlagwort / Keyword / Mot clé : "Inventive step (yes)"

Leitsatz / Headnote / Sommaire



Case Number : T 409/88 - 3.2.1

D E C I S I O N
of the Technical Board of Appeal 3.2.1
of 1 March 1990

Appellant : TOBO MADE B.V.
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Representative : de Boer, H., G., J.;
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Decision under appeal : Decision of Examining Division 075
of the European Patent Office
dated 8 March 1988 refusing European
patent application No. 84 901 075
pursuant to Article 97(1) EPC

Composition of the Board :

Chairman : F. Gumbel
Members : P. Alting van Geusau
J. Saisset

Summary of Facts and Submissions

- I. European patent application No. 84 901 075.6, filed as International Application PCT/EP84/00078 on 15 March 1984 and published on 27 September 1984, was refused by a decision of the Examining Division dated 8 March 1988.
- II. The decision was based on Claims 1 to 5 as originally filed.

The reason given for the refusal was that the subject-matter of Claim 1 lacked novelty contrary to Article 54 EPC having regard to the document FR-A-2 359 000 (D2).

In a communication dated 15 July 1986 the Examining Division had informed the Appellant that the subject-matter of dependent Claims 2 to 5 did not involve an inventive step having regard to the prior art disclosed in D2 and in FR-A-2 348 073 (D1) and to the customary practice of a person skilled in the art.

- III. An appeal was lodged against this decision on 26 April 1988 together with payment of the appeal fee.

The Statement of Grounds of Appeal was submitted on 8 July 1988 together with two propositions of new claims (New Claims I; Claims 1 to 5, New Claims II; Claims 1 to 3).

- IV. In a communication dated 22 September 1989 the Board of Appeal set out their preliminary opinion in that Claim 1 of the first set of claims was not considered acceptable for lack of inventive step, but that Claim 1 of the second set of claims appeared to include inventive subject-matter and thus could form the basis for grant of the patent.

- V. After discussion over the telephone between the rapporteur and representative concerning formal requirements of the application, the Appellant filed, by letter of 22 January 1990, amended pages 1a, 1b and 1c, which replace the introduction to the description on pages 1 and 2, lines 1 to 3 as originally filed and dependent Claims 2 and 3. A new Claim 1 was filed on 6 February 1990. Claims 1 to 3 were substantially identical to the Claims 1 to 3 of the second set of claims filed on 8 July 1988, however, they included the respective reference signs and Claim 1 was redrafted to take account of the nearest prior art disclosed in D1.

The Appellant requests the grant of a patent on the basis of the new documents together with original pages 2 (from line 4) and 3 of the description and original pages 1/2 and 2/2 of the drawings.

- VI. Subsisting Claim 1 reads as follows:

1. A detachable towing bracket for a vehicle, in particular for an automobile, in which the towing hook with a first coupling member (1, 8) can be slid vertically upwards and thus become detached from a second coupling member (3, 9) with fittings to be attached to the vehicle, and in which the first coupling member (1, 8), when slid vertically downwards, is arrested in place by a locking pin (10) which is provided with a tapering end, is fitted on the first coupling member (1, 8) and runs substantially crosswise of the second coupling member into a receiving bore, whilst the coupling members (1, 8, 3, 9) can be linked together by means of a dovetailed joint, characterised in that the coupling members (1, 8, 3, 9) have been designed as trapezoid plates whereby the raised edges (7) of the second trapezoid coupling member (3, 9) approximately taper with respect to each other, and

the dovetailed groove-forming edges (6) of the first coupling member (1, 8) taper correspondingly, that the second coupling member (3, 9) is a flat plate and that this flat plate forms the part of the coupling to be attached to the automobile, and that the locking pin (10) is forced under spring (12) tension into locked position in such a fashion that with the towing bracket in coupled position the locking pin (10) runs eccentrically relative to the bore in the second coupling member (3, 9).

Reasons for the Decision

1. The appeal is admissible.
2. Present Claim 1 is a combination of the features of original Claims 1 to 3. Claims 2 and 3 are identical to original Claims 4 and 5.

These claims, therefore, meet the requirement of Article 123(2) EPC.

- 3a. The nearest prior art when considering the subject-matter of Claim 1 is disclosed in D1, which document shows a detachable towing bracket comprising a dovetailed joint including the features of the precharacterising part of Claim 1.
- 3b. The detachable towing bracket according to Claim 1 differs from this known towing bracket in the combination of features contained in the characterising part, which features can be classified in

I features relating to a tapered dovetail joint

II features relating to the coupling members being essentially trapezoid plates, the coupling member attached to vehicle being a flat plate and

III features relating to a spring biased locking pin.

- 3c. Hence, Claim 1 contains novel subject-matter and thus complies with Article 52 EPC as far as novelty is concerned.
- 4a. Features I to III have the effect that, when compared to the construction shown in D1, improved locking without play by pressing together of the coupling members is achieved, whereas feature II in addition provides a simple and easy to manufacture assembly.

It is hereby noted that according to the first three lines on page 2 of the original description the locking pin arrangement is said to have the advantage that the locking pin fits snugly at all times within the bore through the second coupling member. Although such an effect is indeed arrived at, it would, in the view of the Board, be immediately apparent to the skilled person, in particular when considering Figures 1 and 6 of the application, that a further effect resulting in improved locking without play by pressing together of the coupling members as referred to above is achieved. In this respect, the indication in Claim 1 that the locking pin runs eccentrically relative to the bore in the flat plate is considered sufficiently clear for the skilled man to realise immediately the above functional idea behind this constructional detail and to choose the direction of eccentricity in a manner that this effect can be obtained.

- 4b. In view of the above technical effects, the objective problem underlying the present invention relates to an improvement of the known construction with a view of avoiding play and providing a simple construction.

The problem itself is not considered to include inventive merit, since the disadvantages of the known towing bracket can easily be recognised during its use; the desire for improvement being a normal engineering attitude.

- 4c. In the Board's judgement, when considering avoidance of play, the skilled man should turn to D2 in which a detachable towing bracket is disclosed comprising two tapers (tapers α and β). Although this towing bracket does not actually relate to a dovetailed joint, both vertical and horizontal locking is ensured in this prior art. Further, a tapered sliding locking pin (24) is provided for pressing the contact surfaces of the coupling members against each other (page 5, lines 5-20).

- 4d. However, as argued by the Appellant in his letter of 8 July 1988, page 3, last paragraph and page 4, first paragraph, even if D2 may show good vertical and horizontal locking the occurrence of clearance (play) in this known coupling may result in wear of the coupling. In the towing bracket according to the present application as defined as Claim 1, the locking pin forced under spring tension presses the first coupling member against the second coupling member under all circumstances, thereby ensuring - even in the case of wear of the coupling - good locking of the coupling members.

Although the locking slide (24) in D2, due to its conical shape, also presses the coupling members together if clearance occurs, this known locking means does not provide the self-sustaining clearance avoiding action of the spring biased locking pin arrangement defined in Claim 1.

Further, a comparison of the coupling members shown in D1 or D2 and the coupling members defined in Claim 1 lead to the conclusion that a particularly simple and easily attendable construction is provided which is particularly due to feature II referred to under point 3b above. With respect to safety and appearance, attention is drawn to known disadvantages of the prior art referred to in D1, page 1, lines 21-25.

Therefore, even when combining the teachings of D1 and D2, the skilled man would not arrive at the construction according to Claim 1 without substantial further development to which the cited prior art does not give any lead. Hence, it is considered that an inventive activity was necessary in order to arrive at the claimed detachable towing bracket. The subject-matter of Claim 1 thus also meets the requirement of Article 56 EPC with respect to inventive step.

5. Claim 1 being allowable, the same applies to dependent Claims 2 and 3, which merely represent preferred embodiments of the detachable towing bracket of Claim 1 and the patentability of which is supported by that of Claim 1.

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 the patent on the basis of the following documents:

Claims: 1 filed on 6 February 1990
2 and 3 filed with letter of 22 January 1990.

Description: pages 1a, 1b and 1c filed with letter of 22 January 1990.

page 2, from line 4 and page 3 as originally filed.

Drawings: Figures 1 to 7 as originally filed.

The Registrar:

The Chairman:

S. Fabiani

S. Fabiani

F. Gumbel

F. Gumbel

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