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**Datasheet for the decision
of 2 October 2009**

Case Number: T 0166/08 - 3.2.01

Application Number: 02763164.7

Publication Number: 1429929

IPC: B60G 11/22

Language of the proceedings: EN

Title of invention:
Flexible element

Applicant:
Volvo Articulated Haulers AB

Headword:
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Relevant legal provisions:
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Relevant legal provisions (EPC 1973):
EPC Art. 56

Keyword:
"Inventive step (no)"

Decisions cited:
-

Catchword:
-



Case Number: T 0166/08 - 3.2.01

D E C I S I O N
of the Technical Board of Appeal 3.2.01
of 2 October 2009

Appellant:

Volvo Articulated Haulers AB
Västra Esplanaden 9 A
S-351 83 Växjö (SE)

Representative:

Fröhling, Werner Otto
Volvo Technology Corporation
Corporate Patents 06820, M1.7
S-405 08 Göteborg (SE)

Decision under appeal:

Decision of the Examining Division of the
European Patent Office posted 31 August 2007
refusing European patent application
No. 02763164.7 pursuant to Article 97(1) EPC
1973.

Composition of the Board:

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

Summary of Facts and Submissions

- I. The appeal is directed against the decision posted 31 August 2007 refusing European patent application No. 02 76 3164.7.
- II. The examining division found that the subject-matter of claim 1 filed with a letter of 17 March 2006 did not involve an inventive step in the light of *inter alia* the following state of the art:
- D1: US-A-1 841 795.
- III. The appellant requested in its statement setting out the grounds of appeal that the decision be set aside and a patent granted on the basis of claims 1 to 6 filed with the letter of 17 March 2006.
- IV. The board summoned the appellant to oral proceedings to be held on 2 October 2009 and in a communication pursuant to Article 15(1) RPBA indicated its provisional opinion that the examining division was correct in its assessment of inventive step.
- V. With a letter dated 21 August 2009 the appellant indicated that it would not attend the oral proceedings. In accordance with Article 15(3) RPBA the board held the oral proceedings in the absence of the appellant.
- VI. Claim 1 according to the appellant's request reads:
- "A vehicle spring element (1) intended to transmit compression forces and tensile forces between a vehicle frame (14) and a wheel axle (15) arranged

movably in relation to the vehicle frame (14), especially between the wheel axle (15) and the end of a bogie beam mounted pivotably in the vehicle frame (14), which spring element (1) comprises a rubber body (4), and a mechanical connection member (6) which extends through the rubber body (4) and is arranged to limit the distancing movement between said vehicle frame (14) and wheel axle (15), the connection member (6) comprising a coupling device (8) for coupling the connection member (6) to one of said vehicle frame (14) or wheel axle (15), the coupling device (8) comprising a stub (11, 22), with a threaded portion (12, 23), protruding from the spring element (1), characterized in that the stub (11, 22) is designed with means (19) for obtaining rotationally fixed, formfit on said vehicle frame (14) or wheel axle (15)."

VII. The appellant's submissions in as far as they are relevant to this decision may be summarised as follows:

The features contained in the preamble of claim 1 are known in combination from D1. The characterising feature has the effect that the rotational position of the spring element relative to the vehicle frame/wheel axle can be fixed, which is advantageous during mounting/dismounting of the spring element. When mounting the element to the vehicle the second end plate is first fastened to the wheel axle and the first end plate is then fastened to the vehicle frame by a threaded element. The rubber body is normally in close contact with the mechanical connection member and the characterising feature ensures that torque arising from

the rotation of the threaded element during the fastening to the frame is not transmitted to the mechanical connection member which may then damage the rubber body. The objective problem therefore is to provide a spring element which facilitates its attachment to and removal from a vehicle whilst reducing the risk of damage to the rubber body. D1 neither addresses this problem nor renders the claimed solution obvious. There is no information in the state of the art as a whole which would motivate the skilled person to adopt the presently claimed features. It is undisputed that it is well known to use a rotationally fixed formfit between two interconnected parts in order to prevent them from turning relative to one another. However, the use of this technical principle in the present case as a solution to the stated objective technical problem cannot be regarded as obvious without the use of hindsight.

Reasons for the Decision

1. The board agrees with the appellant that claim 1 is correctly presented in the two-part form based on D1. D1 discloses an element for use in place of a shackle for a vehicle leaf spring. The element comprises a rubber block having, in one embodiment, a metallic cable passing along its longitudinal axis and fastened to threaded end fittings ("stubs") for attachment by means of nuts to the vehicle frame and to the spring. The assembly deforms under compressive forces but is essentially rigid in tension. In an alternative embodiment (figure 6) the metallic cable is replaced by a chain passing through a hole in the rubber block.

1.1 The board and the appellant are in agreement that the subject-matter of claim 1 differs from that of D1 in that the stub is "designed with means for obtaining rotationally fixed, formfit" on the vehicle frame or wheel axle. In the described embodiments the stubs have external flats which correspond with internal flats in mating holes. The above-mentioned differentiating feature has the effect that the stubs are prevented from rotating under the influence of torque applied during tightening or loosening of nuts or bolts. The appellant argues that the objective problem is to provide a spring element which facilitates its attachment to and removal from a vehicle whilst reducing the risk of damage to the rubber body. This assessment of the problem is based on the notion that rotation of the stubs would damage the rubber body and the appellant's statement that the rubber body is "normally" in close contact with the mechanical connection member. However, present claim 1 contains no such feature and the connection member could be merely located in a bore as in D1 figure 6. Based on the features included in claim 1 and in the light of D1 the objective problem is therefore to rotationally immobilise the stub, thereby preventing rotation of both the spring element as a whole and the stub relative to the rubber body. Indeed, in the description of the present application page 3, lines 26 to 31 there is a mention only of rotation of the spring element as a whole whilst on page 6, lines 14 to 22 there is mention only of rotation of the stub alone. Prevention of any damage to the spring is not mentioned and any which might occur would be merely a fortuitous collateral advantage.

- 1.2 The provision of a formfit to prevent relative rotation is well known to the person skilled in the art, as acknowledged by the appellant (letter of 20 December 2007, page 3, 3rd paragraph). It therefore would be an obvious measure for the skilled person faced with the problem of the stub rotating either alone or together with the remainder of the spring element to employ such a feature. The appellant argues that this finding relies on a *ex post* consideration. However, as set out above, its argumentation is based on an incorrect assessment of the problem solved, relying on features not contained in the claim.
2. On the basis of the foregoing the board concludes that the subject-matter of claim 1 does not involve an inventive step (Article 56 EPC 1973).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

A. Vottner

S. Crane