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D E C I S I O N
of 6 July 2004

Case Number: T 0424/01 - 3.4.2

Application Number: 95931496.4

Publication Number: 0779973

IPC: G01M 17/06

Language of the proceedings: EN

Title of invention:
Device for stationary inspection of vehicles

Applicant:
Josam Lastbilsteknik AB

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 54, 56

Keyword:
"Inventive step (yes)"

Decisions cited:
-

Catchword:
-

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Case Number: T 0424/01 - 3.4.2

D E C I S I O N
of the Technical Board of Appeal 3.4.2
of 6 July 2004

Appellant: Josam Lastbilsteknik AB
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Representative: Estreen, Lars
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 5 December 2000 refusing European application No. 95931496.4 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: A. G. Klein
Members: G. M. Maaswinkel
C. Rennie-Smith

Summary of Facts and Submissions

I. The appellant lodged an appeal, received on 1 February 2001, against the decision of the examining division, dispatched on 5 December 2000, refusing the European patent application 95 931 496.4. The fee for the appeal was paid on 1 February 2001 and the statement setting out the grounds of appeal was received on 2 April 2001.

II. The examining division objected that the application did not meet the requirements of Article 52(1) EPC because the subject-matter of Claim 1 was not novel in the sense of Article 54 EPC having regard to the teaching of document (D1) DE-A-2 737 661.

Furthermore, the subject-matter of Claims 2 to 8 lacked inventive step (Article 56 EPC) taking into account the contents of documents

(D2) EP-A-0 281 207

(D3) DE-A-2 801 855.

III. In reply to a Communication of the Board and a telephone consultation with the Rapporteur the appellant filed with a letter dated 15 June 2004 a set of amended claims and an adapted description. The appellant requested that the decision under appeal be set aside and a patent be granted on the basis of the following documents filed with this letter:

Claims: 1 to 6;

Description: pages 1, 2, 2a, 3 to 6;

Drawings: sheets 1/2 and 2/2 of the published application.

IV. The wording of independent claim 1 reads as follows:

"A device for stationary inspection of steering joints and suspension parts in vehicles, which inspection device comprises:

- an essentially planar lower plate (1) arranged to be placed in a fixed position and attached to a plane substrate,

- an upper plate (2) resting on said lower plate and being rotatable about a bearing pin (3) at a first end of the upper plate, wherein the bearing pin is attached to said lower plate at a first end of the lower plate, and

- a force-application component (5) attached to said lower plate (1) and said upper plate (2) so as to impart rotational movement to said upper plate relatively to said lower plate,

characterised in that

- said force-application component (5) is attached to said lower plate (1) at a second, free end thereof opposite to said first end of said lower plate,

- said force-application component (5) is attached to said upper plate on the upper side of said upper plate at a second, free end thereof opposite to said first end of said upper plate, and

- said upper plate (2) is essentially planar,

- wherein the device has said bearing pin (3) and said force application component (5) provided at opposite ends of the device and the device exhibits an area between said bearing pin (3) and the force-application component (5) onto which vehicles can be driven.".

Claims 2 to 6 are dependent claims.

V. The appellant's arguments may be summarised as follows:

The newly submitted claims are based on the originally filed claims with the additional features that the force-application component is attached to the free ends of the lower and upper plates which are opposite to the end at which the bearing pin is attached and that the upper plate is essentially planar. These features are fully supported by the Figures and the corresponding parts in the description. Dependent Claims 2 to 6 all correspond to the original dependent claims and are therefore also supported.

The present patent application relates to a device for stationary inspection of steering joints and suspension parts in vehicles. Such a device is known from document D1. As shown in Figure 3 of D1, this device comprises a lower plate (6) arranged to be placed in a fixed position and attached to a plane substrate, an upper plate (4) resting on the lower plate and being rotatable about a bearing pin (7). The bearing pin is attached at a first end of the lower plate and at a first end of the upper plate. A force-application component (10) is attached to the lower and upper

plates so as to impart rotational movement to the upper plate relative to the lower plate. In the device disclosed in D1, the force-application component is attached to the lower plate close to the first end thereof where the pivot point is positioned. Due to the positioning of the force-application component and the bearing pin, the upper plate is provided with a concave upper surface 5 protruding upwardly from the lower plate 6. Also, due to the orientation of the device disclosed in D1, vehicles will be driven onto the device above the bearing pin 7, see Figure 6. This solution leads to a bulky device which cannot be easily installed.

It is an object of the invention to provide a considerably simpler mechanism for stationary inspection of steering joints and suspension parts in a vehicle. A further object is to provide an inspection unit that is easy to install in a workshop. The invention is based on the realisation that by providing the pivot point, i.e. the bearing pin on one side of the wheel driven onto the upper plate and the force-application component, i.e. the hydraulic cylinder, on the other side of the wheel, a particularly simple arrangement can be provided with an essentially planar upper plate whence the vehicle to be inspected can be driven onto the device in this area.

For the person skilled in the art faced with the problem of providing a device for inspection of vehicles that has a simple mechanism and is easy to install it would not be obvious to modify the device known from document D1 in the way defined in Claim 1, because the selection in this document of the pivot

point or bearing pin in front of the wheel to be tested implies the use of a bulky upper plate including the ramps 16. Furthermore none of the other available documents teaches the use of a bearing pin and a force-application component provided on opposite sides of a wheel. In D1, the importance of the recess 4 is stressed and teaches away from using an essentially planar upper plate. Also D2 teaches a pivot point positioned either in front or behind the wheel to be tested, see column 1, lines 38 to 44. Document D3 discloses an even more remote device.

Therefore Claim 1 comprises patentable subject-matter.

Reasons for the Decision

1. The appeal is admissible.

2. *Amendments (Article 123(2) EPC)*

The Board is satisfied that the amendments in Claim 1 are fairly supported by the passages in the original application documents referred to by the appellant. The adaptation of the description and the acknowledgement of the prior art (document D1) are equally admissible.

3. *Patentability*

3.1 Novelty

3.1.1 Document D1 discloses a device for stationary inspection of steering joints and suspension parts of vehicles. The device comprises (*see Figures 3 and 4*) a

planar lower plate 6, an upper plate 4 resting on the lower plate and being rotatable about a bearing pin 7, and a force-application component 10 attached to the respective plates so as to impart rotational movement to the upper plate relative to the lower plate as defined in the preamble of Claim 1. The bearing pin 7 is attached at a first end (*center of left side or end*) of the upper plate 4 and at a first end (*left side or end*) of the lower plate 6.

3.1.2 In the device disclosed in D1, the general arrangement of the bearing pin and force-application component with respect to the upper and lower plates is different from the one defined in Claim 1 expressed in the first and second feature of its characterising portion. In the prior art device the force application component is attached at the lower left corner of the lower plate which attachment position is not opposite to the attachment of the bearing pin, as is readily visible in Figures 3 and 4. Furthermore, since the position of the bearing pin with respect to the upper plate is at the center of its left side or end, the attachment of the force-application component to this upper plate, namely at its lower right corner, is also not "opposite" to the position of the bearing pin. Furthermore in the prior art device the upper plate 4 is not essentially planar but has a concave or arcuate shape (*see Figure 2*). As a result the device in document D1 does not exhibit an area on the planar upper plate between the bearing pin and the force-application component on which vehicles can be driven. The subject-matter of Claim 1 is therefore novel over the disclosure in document D1.

3.1.3 The further documents on file disclose less relevant subject-matter. Document D2 discloses a device for moving in a horizontal direction a wheel mounted on a vehicle comprising a turntable mounted on a pivot bearing unit and a supporting roller. The turntable has a downward-running extension piece and is therefore not planar. Document D3 discloses a backlash detector for vehicle axles. The device comprises pneumatically-operated bearer plates with spring loaded balls.

3.1.4 Therefore the subject-matter of Claim 1 is novel.

3.2 Inventive step

3.2.1 According to the applicant, the technical problem solved by the differences between the subject-matter of Claim 1 and the closest prior art (*defined in the characterising portion of the Claim, see Section 3.1.2*) is to be seen in providing a simpler inspection device which is more easily to install in a workshop.

3.2.2 In the opinion of the Board, although the formulation of the problem as such, to provide a simpler inspection device, cannot in itself be regarded as involving an inventive step, the solution defined in Claim 1 does not appear obvious.

3.2.3 According to document D1, see page 11, 1st paragraph, the upper plate ("Aufnahmeplatte") should be pivotable around a vertical axis to be positioned in a plane in the center of the wheel but remote from the steering axle. This implies that the bearing pin 7 is to be arranged as shown in Figures 3 and 4, i.e. at the symmetry line of the front wheel shown schematically

with the dashed line 3. Therefore already the presence of this feature, which according to the cited passage in D1 is essential, excludes an arrangement wherein the bearing pin and the force-application component are at opposite ends of the plate in order to position a wheel to be tested at the center of the plate as defined in Claim 1.

3.2.4 Furthermore, document D1 discloses that the upper plate is in the shape of a trough ("Aufnahmemulde") in order to capture the wheel free of play and prevent its slipping (*page 11, 2nd paragraph*). As pointed out by the appellant, the arcuate shape of this trough additionally enables to arrange the bearing pin below the upper surface of the upper plate and in front of the wheel to be tested. Therefore the skilled person, without the knowledge of the invention, would not as a routine measure consider to dispense with the arcuate shape of the upper plate of the device disclosed in document D1, because neither in D1, nor in the further documents on file an arrangement as in the device of Claim 1 is disclosed or suggested. In particular document D2 discloses that the wheel to be inspected should be placed above the axis of rotation of the turntable or between this center of rotation and the supporting roller (*column 2, lines 6 to 11*). As pointed out before, document D3 relates to a rather different device which, considered alone or in combination with the other documents, would also not lead to the claimed subject-matter.

3.2.5 Therefore the subject-matter of Claim 1 is considered as involving an inventive step within the meaning of Article 56 EPC.

3.2.6 Claims 2 to 6 are dependent of the independent Claim 1 and they therefore also define patentable subject-matter.

4. For the above reasons, the Board finds that the appellant's request meets the requirements of the EPC and that a patent can be granted on the basis thereof.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

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

Claims: 1 to 6, filed with the letter of 15 June 2004;

Description: pages 1, 2, 2a, 3 to 6, filed with the letter of 15 June 2004;

Drawings: sheets 1/2 and 2/2 of the published application.

The Registrar: The Chairman:

P. Martorana A. Klein