

Internal distribution code:

- (A) [-] Publication in OJ
- (B) [-] To Chairmen and Members
- (C) [-] To Chairmen
- (D) [X] No distribution

**Datasheet for the decision
of 13 June 2017**

Case Number: T 1535/14 - 3.2.08

Application Number: 07104598.3

Publication Number: 1972825

IPC: F16D65/56, F16D55/00

Language of the proceedings: EN

Title of invention:

Disc brake

Patent Proprietor:

Haldex Brake Products AB

Opponent:

Knorr-Bremse
Systeme für Nutzfahrzeuge GmbH

Headword:

Relevant legal provisions:

EPC Art. 54, 56, 123(2)
Notice of the Vice-President of Directorate-General 3 of the
EPO dated 16 July 2007

Keyword:

Novelty - main request (no)

Inventive step - auxiliary request (yes)

Amendments - extension beyond the content of the application
as filed (no)

Postponement of oral proceedings (no)

Decisions cited:

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

European Patent Office
D-80298 MUNICH
GERMANY
Tel. +49 (0) 89 2399-0
Fax +49 (0) 89 2399-4465

Case Number: T 1535/14 - 3.2.08

D E C I S I O N
of Technical Board of Appeal 3.2.08
of 13 June 2017

Appellant: Haldex Brake Products AB
(Patent Proprietor) P.O. Box 501
261 24 Landskrona (SE)

Representative: Habermann, Hruschka & Schnabel
Patentanwälte
Montgelasstraße 2
81679 München (DE)

Appellant: Knorr-Bremse
(Opponent) Systeme für Nutzfahrzeuge GmbH
Moosacher Str. 80
80809 München (DE)

Representative: Specht, Peter
Loesenbeck - Specht - Dantz
Patent- und Rechtsanwälte
Am Zwinger 2
33602 Bielefeld (DE)

Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted on
30 May 2014 concerning maintenance of the
European Patent No. 1972825 in amended form.

Composition of the Board:

Chair P. Acton
Members: M. Foulger
P. Schmitz

Summary of Facts and Submissions

- I. With the decision dated 30 May 2014, the opposition division decided that account being taken of the amendments of the patent according to auxiliary request 2 made during the opposition proceedings, the patent and the invention to which it relates met the requirements of the EPC.
- II. Appellant 1 (patent proprietor) and appellant 2 (opponent) filed appeals against this decision. The appeals were filed in due form and within the given time limits.
- III. Appellant 1 requested that the decision under appeal be set aside and that the patent be maintained as granted, or, in the alternative, that the patent be maintained in amended form as found allowable by the opposition division in the impugned decision.
- Appellant 2 requested that the decision under appeal be set aside and that the patent be revoked. Moreover, as requested by fax dated 9 June 2017, that the oral proceedings be postponed.
- IV. Oral proceedings were held before the Board on 13 June 2017.
- V. a) Main request (patent as granted)

Claim 1 reads:

"Disc brake comprising a caliper (1) embedding at least one brake disc and a brake actuation mechanism (2) with a thrust element (6) for transferring a clamping force to a brake disc via a brake pad (8), the thrust element

(6) comprising at least one rotatable element (10) and an element (11) cooperating with said rotatable element (10) in such a way so that a relative motion between said rotatable element (10) and said element (11) is enabled in order to provide clearance adjustment at the brake pad (8), whereas said element (11) is connected to the brake pad (8) via a pressure plate (9;27) and whereas said element (11) is non-rotatably guided during brake actuation and release, further comprising means (15) configured and arranged to be able to interfere with said relative motion so as to limit rotation of the element (11) when the non-rotatable guidance of said element (11) is completely disintegrated during and after disassembly of the disc brake or components of it,

characterized in that

said means comprises a protection bellow (15) arranged between said element (11) and the caliper (1), whereas the protection bellow (15) is reinforced for providing a defined resistance against rotations."

Claim 3 reads:

"Disc brake comprising a caliper (1) embedding at least one brake disc and a brake actuation mechanism (2) with a thrust element (6) for transferring a clamping force to a brake disc via a brake pad (8), the thrust element (6) comprising at least one rotatable element (10) and an element (11) cooperating with said rotatable element (10) in such a way so that a relative motion between said rotatable element (10) and said element (11) is enabled in order to provide clearance adjustment at the brake pad (8), whereas said element (11) is connected to the brake pad (8) via a pressure plate (9;27) and whereas said element (11) is non-rotatably guided during brake actuation and release, further comprising

means (17,18;20,21;28,29,30) configured and arranged to be able to interfere with said relative motion so as to limit rotation of the element (11) when the non-rotatable guidance of said element (11) is completely disintegrated during and after disassembly of the disc brake or components of it,

characterized in that

said means comprises at least one element (17;20;28,29) attached to the pressure plate (9;27) which cooperates with at least one element (18;21;30) arranged at the caliper (1) or a carrier supporting the caliper (1)."

b) Auxiliary request

The characterising part of claim 1 has been modified as follows (deletions struck through and additions underlined):

"said means comprises a protection bellow (15) arranged between said element (11) and the caliper (1), ~~whereas the~~ said protection bellow (15) is being reinforced in that it is made of elastic material and armoured with fibres (16), the incorporation and orientation of which in said elastic material is selected to define the overall torsion elasticity and rolling elasticity in linear axial direction of said protection bellow (15) for providing a defined resistance against rotations.

Claim 3 has been modified by the addition of the following features:

"the pressure plate (9) comprises a guidance element (17;20;28;29) which is adapted to be guided by a guidance element (18;21;30) of the caliper (1) or the carrier,
in which the guidance elements (17;20;;28;29;18;21;30)

are configured to only enable linear sliding in the axial direction of the brake disc, so as to also serve to limit any rotation of the element (11) when the pressure plate (9;27) is not in force transmitting contact with the brake pad (8)."

VI. The following documents are relevant for this decision:

E1: DE 103 30 633 A1

D3: DE 102 60 597 A1

E4: DE 40 07 862 A1

VII. Appellant 1 argued essentially that:

a) Postponement of the oral proceedings

There was no objection to the oral proceedings being postponed.

b) Main request - novelty of the subject-matter of claim 3

The subject-matter of claim 3 was new. The characterising features of claim 3 had to be read in conjunction with the preamble of the claim and in the light of paragraphs [0006] to [0008] of the patent description. These paragraphs set out the disadvantages of the prior art which the invention sought to overcome. The bellows 28 shown in Fig. 2 of D3 clearly did not have sufficient strength in order to be able to prevent or interfere with a rotation of the element as required by the claim.

The subject-matter of claim 3 was thus new.

c) Auxiliary request

i) Claim 1 - added subject-matter

The features added to claim 1 as granted were clearly and unambiguously derivable from paragraphs [0018] and [0048] of the published application. Hence, claim 1 fulfilled the requirements of Article 123(2) EPC.

ii) Claim 3 - added subject-matter

The position of the "front element 11" in relation to the rest of the disc brake was defined in the preamble of claim 3. There was therefore no unallowable generalisation. Hence, claim 3 fulfilled the requirements of Article 123(2) EPC.

iii) Claim 1 - inventive step

The problem to be solved was given in the patent, paragraph [0010], as being to realize a disc brake which can provide easy replacement of the brake pads and other maintenance handling at the disc brake without the risk of harming the brake actuation mechanism and components of it by manual or any other interference.

The prior art did not contain any hint that the bellows of D3 required any reinforcement. The bellows shown in E4 was for a different application and contrary to the claimed bellows did not show any rolling elasticity. Hence, the skilled person would have neither considered that the bellows in the disc brake known from D3 required reinforcement nor considered E4.

Hence, the subject-matter of claim 1 involved an

inventive step.

iv) Claim 3 - novelty

D3 did not disclose the feature of claim 3 whereby the pressure plate comprised a guidance element which was adapted to be guided by a guidance element of the caliper or the carrier, in which the guidance elements are configured to enable linear sliding in the axial direction of the brake disc, so as to prevent excessive rotational movements of the element or at least limit such rotational movements to a certain threshold torque or rotational angle when the pressure plate is not in force transmitting contact with the brake pad.

The bellows of D3 would not be able to prevent movements other than linear sliding because they were not disclosed as being of any special construction and would normally be some elastic material such as rubber which would not be suitable for such a guiding function in only the axial direction.

The subject-matter of claim 3 was therefore new.

VIII. Appellant 2 argued essentially that:

a) Postponement of the oral proceedings

It was requested that the oral proceedings be postponed to allow take-over negotiations between the parties (i.e. appellants 1 and 2) to be finalised.

b) Main request - novelty of the subject-matter of claim 3

D3 disclosed the features of the preamble of claim 3.

The means referred to in the claim could be regarded as being the bellows 28 shown in Fig. 2 of D3. These bellows were attached to the end of the sleeve 3 and to the caliper 1. According to the patent, paragraph [0021], the pressure plate could be integrally formed with the outer sleeve. Thus the feature was fulfilled, whereby the means for limiting rotation of the element (11) when the non-rotatable guidance of the element was completely disintegrated during and after disassembly of the disc brake or components of it, comprised one element attached to the pressure plate. Furthermore, according to paragraph [0019] the means could be configured as "interfering elements, surfaces, geometries etc.". Hence, the groove on the caliper 1 could be regarded as an element in this sense and so the feature of claim 3 whereby there was at least one element arranged at the caliper was also fulfilled.

Therefore the subject-matter of claim 3 was not new with respect to D3.

c) Auxiliary request

i) Claim 1 - added subject-matter

The addition of the features whereby the bellows is made of elastic material and armoured with fibres, the incorporation and orientation of which in said elastic material is selected to define the overall torsion elasticity and rolling elasticity in linear axial direction of the protection bellows, had led to the subject-matter of the claim being extended beyond that of the application as originally filed.

The orientation of the fibres and the bellows being made of elastic material were not disclosed in

combination. Moreover, "orientation" was not disclosed in combination with any technical effect.

ii) Claim 3 - added subject-matter

The feature of the description "front element (11)" had been altered to simply "element (11)" in the claim. This was an unallowable generalization and hence this modification was in contravention of Article 123(2) EPC.

iii) Claim 1 - inventive step

The subject-matter of claim 1 differed from the disc brake disclosed in D3 in that the protection bellow is armoured with fibres, the incorporation and orientation of which in the elastic material is selected to define the overall torsion elasticity and rolling elasticity in linear axial direction of the protection bellow for providing a defined resistance against rotations of the element.

The problem to be solved was to provide a reinforcing of the bellows of D3.

The skilled person knew either from their common general knowledge or from E4 that fibres could be used to reinforce elastic bellows. It would have been therefore obvious for the skilled person to have applied this teaching to the disc brake of D3 and to thereby have arrived at the subject-matter of claim 1.

The subject-matter of claim 1 did not therefore involve an inventive step (Article 56 EPC).

iv) Claim 3 - novelty

The subject-matter of claim 3 lacked novelty with respect to D3 because the bellows 28 could be regarded as a guidance element which was guided in a groove of the caliper and allowed only linear sliding in the axial direction.

Thus the subject-matter of claim 3 was not new.

Reasons for the Decision

1. Postponement of the oral proceedings

According to the Notice of the Vice-President of Directorate-General 3 of the EPO dated 16 July 2007, oral proceedings will only be postponed if serious reasons are advanced which justify the fixing of a new date. This Notice gives examples of circumstances that would justify a postponement.

In the current case the reasons put forward, i.e. that the parties were involved in merger proceedings, did not prevent the parties attending the oral proceedings but rather concerned the economic interests of the parties. Moreover, the reasons given do not correspond to any of the examples listed in the above Notice.

Furthermore, since both parties are appellants it would appear likely that oral proceedings would have to be held even in the event of the merger taking place. This would be against procedural efficiency and only delay the proceedings.

The Board therefore refused this request.

2. Main Request - Novelty

D3 discloses a disc brake according to the preamble of claim 3. In particular, that means, i.e. the bellows 28 shown in Fig. 2, are provided which are configured and arranged to be able to interfere with relative motion between a rotatable element ("Schubhülse" 3) and an element ("Bremssattel" 1) which cooperates with the rotatable element (3) so as to limit rotation of the element (3) when the non-rotatable guidance of said element is completely disintegrated during and after disassembly of the disc brake or components of it. It is indeed true that D3 does not provide any information as to the resistance of these bellows. It is however certain that the bellows of D3 will provide some rotational resistance. This rotational resistance will limit rotation of the element to a certain degree which is all that the claim requires. Thus all features of the preamble of claim 3 are known from D3.

Moreover, the bellows are attached to the end of the sleeve 3 and to the caliper 1. According to the patent, paragraph [0021], one possibility is that the pressure plate is integrally formed with the outer sleeve. Thus the feature whereby the means for interfering with relative motion comprise one element attached to the pressure plate is fulfilled. Furthermore, according to paragraph [0019] the above means could be configured as "interfering elements, surfaces, geometries etc.". Hence, the groove on the caliper 1 could be regarded as the one element arranged at the caliper and so the feature of claim 3 whereby there is at least one element arranged at the caliper is also fulfilled.

Therefore the subject-matter of claim 3 is not new with respect to D3.

3. Auxiliary request

3.1 Added subject-matter

3.1.1 Claim 1

Paragraph [0018] of the application as filed states that reinforcement of the protection bellow could be realised by fibres included into the material of the bellows. The overall torsion elasticity and rolling elasticity was defined by the incorporation of the reinforcing elements and their orientations. Furthermore in paragraph [0048] of the application which deals with the reinforcement of the bellows, the fact that the bellows are made from an elastic material is disclosed.

Thus, the subject-matter of claim 1 is clearly and unambiguously derivable from the application as originally filed. Hence, the requirements of Article 123(2) EPC are fulfilled.

3.1.2 Claim 3

Leaving out the adjective "front" in front of the noun "element" is not an unallowable generalisation because claim 1 as originally filed only referred to an "element". There is no rear element as such mentioned in the application. The element is defined in the preamble of the claim by its position in the disc brake.

Hence, there is no generalisation and consequently

claim 3 meets the requirements of Article 123(2) EPC.

3.2 Inventive step - claim 1

D3 discloses the preamble of claim 1 and also the feature that the means comprise a bellows.

The subject-matter of claim 1 differs essentially from the disc brake of D3 in that the protection bellow is armoured with fibres.

Appellant 2 formulated the problem underlying the invention as being the provision of reinforcement. This formulation however already contains pointers to the solution. It does not therefore avoid hindsight and is thus not sufficiently broadly formulated.

The problem to be solved by the patent (see paragraph [0010]) is to realize a disc brake which can provide easy replacement of the brake pads and other maintenance handling at the disc brake without the risk of harming the brake actuation mechanism and components of it by manual or any other interference.

E4 does disclose a fibre reinforced bellows albeit of a different type to that shown in D3. The bellows of E4 does not have any rolling elasticity because it deforms by means of a folding concertina mechanism. However, according to the claim, the incorporation and orientation of the fibres is selected to define the overall rolling elasticity in the linear axial direction. Therefore, no reason can be seen as to why, in seeking to solve the above problem, the skilled person would consider E4 and, even if E4 were to be considered, the skilled person would not have arrived at the subject-matter of claim 1.

Hence, the subject-matter of claim 1 involves an inventive step.

3.3 Novelty - claim 3

Appellant 2 argues that the bellows of D3 could be regarded as a guidance element which is configured to only allow linear sliding in the axial direction.

This argument is not persuasive because the bellows would not be able to prevent movements other than linear sliding. The bellows of D3 are not disclosed as being of any special construction and would normally be of some elastic material such as rubber which would not be suitable for such a guiding function and which would allow movements other than in the axial direction. Thus the feature of claim 3, whereby the guidance elements are configured to only enable linear sliding in the axial direction, is not known from D3.

The subject-matter of claim 3 is therefore new.

Order

For these reasons it is decided that:

The appeals are dismissed.

The Registrar:

The Chair:



C. Moser

P. Acton

Decision electronically authenticated