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**Datasheet for the decision
of 27 June 2024**

Case Number: T 0386/22 - 3.2.08

Application Number: 15151916.2

Publication Number: 2944840

IPC: F16D65/095

Language of the proceedings: EN

Title of invention:
Decoupling brake component

Patent Proprietor:
Akebono Brake Industry Co., Ltd.

Opponent:
VRI-Verband der Reibbelagindustrie e.V.

Headword:

Relevant legal provisions:
EPC Art. 83, 54

Keyword:
Sufficiency of disclosure - (yes)
Novelty - (yes)

Decisions cited:

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 0386/22 - 3.2.08

D E C I S I O N
of Technical Board of Appeal 3.2.08
of 27 June 2024

Appellant: VRI-Verband der Reibbelagindustrie e.V.
(Opponent) Robert-Perthel-Str. 49
50739 Köln (DE)

Representative: Lecomte & Partners
76-78, rue de Merl
2146 Luxembourg (LU)

Respondent: Akebono Brake Industry Co., Ltd.
(Patent Proprietor) 19-5, Nihonbashi Koami-cho
Chuo-ku
Tokyo 103-8534 (JP)

Representative: Wolff, Felix
Kutzenberger Wolff & Partner
Waidmarkt 11
50676 Köln (DE)

Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 10 December
2021 rejecting the opposition filed against
European patent No. 2944840 pursuant to Article
101(2) EPC.**

Composition of the Board:

Chairman C. Schmidt
Members: M. Foulger
A. Björklund

Summary of Facts and Submissions

- I. The appeal lies against the decision of the opposition division to reject the opposition against European patent No. EP 2 944 840 B1.
- II. The appellant requested that the decision under appeal be set aside and the patent be revoked.
- III. The respondent requested that the appeal be dismissed, i.e. that the patent be maintained as granted (main request) or that the case be remitted to the opposition division for examination of auxiliary requests I and II as filed on 21 October 2020 in opposition proceedings.
- IV. Oral proceedings took place before the Board on 27 June 2024.
- V. The following documents have been discussed in appeal proceedings:
- E1: US 2013/0025982 A1
E2: FR 2 347 572 A2
E3: JP 3 815 695 B2
- VI. Claim 1 reads as follows:
- "1.1** A brake system (2) comprising:
1.2 a) a caliper (4) having:
i. one or more piston bores (7); and
ii. a piston (8) located within each of the one or more piston bores (7);
b) two or more brake pads (10) located within the

caliper (4);

- 1.3** c) a shim (30) in communication with at least one of the two more brake pads(10), wherein the shim includes:
 - i. one or more tie bars (34), and
 - ii. an open space (32) on each side of the tie bar (34), and wherein each open space is a window (32) that is a through hole through the shim (30);
- 1.4** wherein during a brake apply, the one or more tie bars allow at least one of the two or more brake pads (10) to rotate relative to the piston while the tie bar remains an only point of contact between the shim and the piston so that the piston moves at least one of the two or more brake pads along a piston bore axis;
- 1.5** wherein the open spaces (32) allow at least one of the two brake pads to pivot about the piston bore axis (16); and
- 1.6** wherein during the brake apply, the piston can extend into the open spaces and be free of contact with the brake pad."

(Feature numbering added in bold)

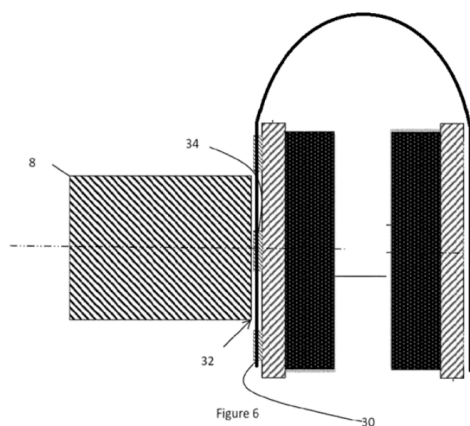
VII. The appellant argued essentially the following:

i) Article 100(b) EPC

The patent did not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

a) The claim encompassed a brake which had exactly two pads and a shim that communicated with the two pads. The two pads must be arranged on opposite sides of the

brake disc. A sketch illustrating was included on page 2 of the statement setting out the grounds of appeal and is reproduced below, this hypothetical embodiment had a shim which extended across the brake disc. It was not explained how this conceivable embodiment could be put into practice.



b) Secondly, feature 1.4 of the claim included an embodiment where one piston moved two or more brake pads that were potentially arranged on opposite sides of the brake disc. It was not described how a single piston could move both brake pads and ensure their pivoting motion.

c) Thirdly, feature 1.5 of claim 1 required that the "brake pads pivot about the piston bore axis (16)". The claim was clear and did not require any interpretation. There was no disclosure in the patent of how this feature should be carried out.

The above feature was interpreted by the opposition division as meaning "that the movement of the piston relative to the shim and to the brake pad corresponds to a rotation around/about the line of contact with the ... tie bar" (impugned decision section 22). There was no justification for such an interpretation.

Consequently the invention was not described in a manner sufficiently clear and complete for it to be

carried out by the skilled person.

ii) Article 100(a) EPC - Novelty

The appellant further argued that the subject-matter of claim 1 lacked novelty with respect to D1, D2 or D3.

VIII. The respondent argued essentially the following:

i) Article 100(b) EPC

The patent gave an example of how to carry out the invention. With a mind willing to understand, the skilled person would be able to put the invention into practice.

ii) Article 100(a) EPC

None of the documents cited disclosed all features of claim 1.

Reasons for the Decision

1. Sufficiency of disclosure - Article 100(b) EPC

The appellant argued that the ground of opposition of Article 100(b) EPC prejudiced the maintenance of the patent as granted. They advanced three principal arguments which are summarised above in section VII).

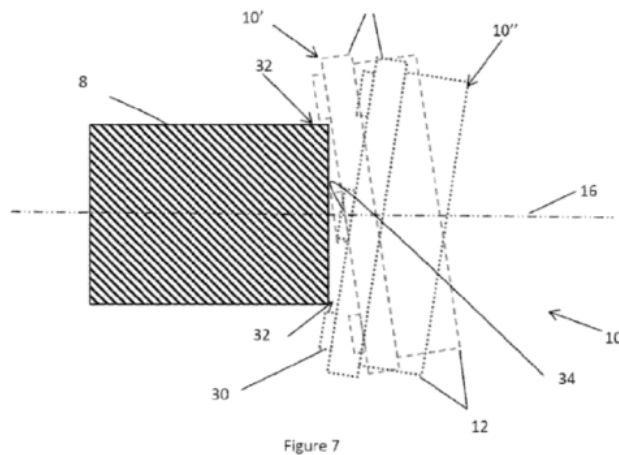
Regarding the first and second arguments the Board considers that the patent shows at least one way of realising these features. The Board considers that the claim only requires a shim between piston and one of the brake pads because "the tie bar remains an only

point of contact between the shim and the piston" (from feature 1.4). Thus, it is not necessary that the shim extends across to the other side of the brake disc as shown in the above sketch. If there is no piston on one side then, according to the language of the claim, there is also no need for a shim on that side. Consequently, the claim does also not require any rotation or pivoting of the brake pad on that side.

Regarding the third objection, the appellant argues that the claim is clear and needs no interpretation. Furthermore, the claim unambiguously required the brake pads to "pivot about" the axis 16, i.e. that the brake pad should swivel around the axis of the piston.

As argued by the appellant, feature 1.4 requires that the tie bars allow at least one of the brake pads to rotate relative to the piston. In addition, feature 1.5 requires that the open spaces allow at least one of the brake pads to pivot about the piston bore axis. The appellant argued that the patent did not disclose how to achieve these two different movements of the brake pad.

The Board considers that Fig. 7 of the patent, reproduced below, shows clearly how the brake pads can pivot.



Also, because the tie bars are the only point of contact between brake pad and piston they clearly allow the rotation of the brake pads relative to the piston, as required by feature 1.4, in the sense that they are not suitable to prevent this motion.

Moreover, it is the open spaces that allow the brake pads to pivot (feature 1.5) because the pad can enter them when it moves about the tie bar.

The Board considers that the patent does not disclose an embodiment in which the brake pads pivot about the piston bore axis, in the sense that they rotate around the piston bore axis. The patent discloses in Figure 10 that the brake pads rotate with respect to the tie bars and that the piston can extend into the open spaces formed in part by the tie bars (feature 1.6). This latter feature supports the Board's view that the pivoting motion must be about the tie bar, as shown in Fig. 7 reproduced above.

Hence, the patent described the invention in a manner sufficiently clear and complete so that the skilled

person could put the teaching of claim 1 into practice.

2. Novelty

2.1 With respect to E1

Feature 1.4 of claim 1 reads:

"wherein during a brake apply, the one or more tie bars allow at least one of the two or more brake pads (10) to rotate relative to the piston while the tie bar remains an only point of contact between the shim and the piston so that the piston moves at least one of the two or more brake pads along a piston bore axis;"

The Board considers that E1 does not disclose at least that the tie bar is the only point of contact between the shim and piston because, as well as the "tie bar" 16, there is also the rest of the shim which comes into contact with the piston, see Fig. 3. Furthermore, even if this point of contact could be regarded as being a "tie bar" it does not have an open space on either side into which the piston can extend as required by feature 1.6 of the claim.

Hence, E1 is not novelty destroying with regard to the subject-matter of claim 1.

2.2 With respect to E2

The appellant argued that as the piston only made contact at the footprint A shown in Figures 2, 7 or 8 these points of contact between the holes could be considered to be a "tie bar".

The Board considers that the line formed by the piston on a shim cannot be regarded as being a "tie bar". The

shim is essentially a solid plate with four holes in it; there is thus no element that can be regarded as a "tie bar". Furthermore, even if these points of contact could be regarded as being "tie bars" they do not have an open space on either side as required by feature 1.3 of the claim.

Moreover, it is not apparent how the brake pad could pivot about the "tie bar" because there is not an open space on either side.

The subject-matter of claim 1 is new with respect to E2.

2.3 With respect to E3

E3 discloses a similar arrangement to E2, therefore for the same reasons, the subject-matter of claim 1 is new with respect to E3.

2.4 Thus, none of documents E1 - E3 disclose the features of claim 1 of the patent.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



C. Moser

C. Schmidt

Decision electronically authenticated