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**Datasheet for the decision
of 16 January 2020**

Case Number: T 2735/16 - 3.2.08

Application Number: 01924728.7

Publication Number: 1274950

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B60T11/04, B62K23/02, B62L1/00,
B62L3/00, F16C1/10

Language of the proceedings: EN

Title of invention:
BALL BEARING MECHANICAL DISC BRAKE

Patent Proprietor:
SRAM Corporation

Opponent:
SHIMANO INC.

Headword:

Relevant legal provisions:
EPC Art. 56, 84, 100(a), 100(b), 100(c), 108, 111(1), 123(2)
EPC R. 99(1)(c), 101(1)

Keyword:

Admissibility of appeal (yes) - notice of appeal - request
defining subject of appeal
Grounds for opposition - discretion of opposition division -
fresh ground for opposition, Article 100(b) EPC(yes)
Inventive step - Main request (No) - auxiliary request (yes)
Amendments - added subject-matter (no) - res iudicata
Claims - clarity (yes) - support in the description (no) -
remittal

Decisions cited:

T 0554/11

Catchword:



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Case Number: T 2735/16 - 3.2.08

D E C I S I O N
of Technical Board of Appeal 3.2.08
of 16 January 2020

Appellant: SRAM Corporation
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 14 October 2016
revoking European patent No. 1274950 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman C. Herberhold
Members: A. Björklund
C. Schmidt

Summary of Facts and Submissions

- I. The patent proprietor filed an appeal against the opposition division's decision to revoke the European Patent No. 1 274 950.

The opposition division considered that the issue of extended subject-matter had already been settled in decision T 0554/11 of the Boards of Appeal. It further found that the objection that the invention was not sufficiently disclosed for it to be carried out by the skilled person was *prima facie* not relevant and so did not admit it into the proceedings. The subject-matter of claim 1 of the main and auxiliary request was found to be clear and novel, but not to involve an inventive step.

- II. Oral proceedings before the Board took place on 16 January 2020.
- III. As announced by letter dated 15 November 2019, the appellant (patent proprietor) did not attend the oral proceedings.
- IV. The appellant requested in writing that the decision under appeal be set aside and that the patent be maintained on the basis of the main request or the auxiliary request, both filed at the oral proceedings before the opposition division on 27 September 2016.
- V. The respondent (opponent) requested that the appeal be either rejected as inadmissible or dismissed.
- VI. Independent claim 1 of the main request reads as follows:

A "A ball bearing mechanical bicycle disc brake having a caliper housing (18) configured for attachment to a bicycle frame (12),

B a pair of opposing brake pad assemblies (72,74) received within the housing (18) configured to reside on opposite sides of a disc (14) operatively associated therewith,

C a drive mechanism within the housing (18) operatively associated with at least one of the brake pad assemblies (72, 74), the drive mechanism being configured to advance and retract the at least one brake pad assembly (72, 74) relative to the disc (14) along an advancement axis to effect braking,

D an adjustment knob (264; 106) attached to the housing (18) for rotation about a rotation axis, the adjustment knob (264; 106) being fixed against axial movement relative to the housing (18);

E and a rotary to linear linkage between one of the brake pad assemblies (72, 74) and the adjustment knob (264; 106) providing axial advancement of the linked brake pad assembly (72, 74) relative to the housing (18) and the disc (14) upon axial rotation of the adjustment knob (264; 106) in a select direction,

the mechanical disc brake being characterized in that

F1 the caliper housing (18) is configured to be rigidly fixed to the bicycle frame (12) to prevent lateral movement of the caliper housing (18) relative to the disc (14),

F2 such that rotation of the adjustment knob (264; 106) allows a select distance to be

fixed between the linked brake pad assembly (72, 74) and the disc (14)."

The feature references have been added by the Board.

VII. Claim 1 of the auxiliary request differs from claim 1 of the main request in that the following features have been added at the end:

"wherein the mechanical bicycle disc brake further comprises:
an indicator (86) visually observable outside the housing (18), the indicator (86) being operatively associated with the rotary to linear linkage to advance with the linked brake pad assembly (72, 74) as the adjustment knob (106) is rotated in the select direction,
wherein the rotary to linear linkage comprises the indicator (86) having a leading portion within the housing (18) and a trailing portion extending into a hole in the adjustment knob (264; 106) along the rotation axis, the trailing portion and the hole being configured to permit axial movement of the indicator (86) relative to the adjustment knob (264; 106) but to prevent radial movement of the indicator (86) relative to the adjustment knob (264; 106) so that as the adjustment knob (264; 106) is rotated about the rotation axis the indicator (86) is rotated about the rotation axis."

VIII. The following documents are referred to in the present decision:

- E1: JP 59-77136 A
- E4: DE 26 48 765 A1
- E5: DE 298 17 680 U1

IX. The appellant argued essentially the following:

Admissibility of the appeal

The respondent's view that the appeal was inadmissible was incorrect.

The notice of appeal contained a request to set aside the indicated decision and to maintain the patent in amended form, thereby defining the subject of the appeal and meeting the requirements of Rule 99(1)(c) EPC.

Furthermore, the grounds of appeal specified a main request to maintain the patent with a main set of claims and an auxiliary request to maintain the patent with an auxiliary set of claims. As confirmed by letter of 23 May 2018, these requests were the same as those on which the opposition division's decision was based.

There was thus no reason to reject the appeal as inadmissible.

Added subject-matter

In its earlier decision T 0554/11 the Board had decided that the patent could not be revoked on the grounds of Article 100(c) EPC. It was to be noted that section 3.9 of the reasons did not refer to claims 1 and 2 only, but to the then main request as a whole, which comprised the claims of the main and auxiliary requests as now pursued before the Board.

Therefore, it had already been decided that the present main set of claims 1 to 8 and the auxiliary set of

claims 1 to 6 did not violate the requirements of Article 123(2) EPC.

The objections raised by the opponent (respondent) against dependent claims 3 to 8 were thus not only late-filed, but related to matter which had already been decided on by the Board.

Sufficiency of disclosure

As correctly decided by the opposition division, the invention was sufficiently disclosed, so the requirements of Article 83 EPC were met and the late-filed ground for opposition under Article 100(b) EPC was without merit.

Main request - clarity

As likewise correctly decided by the opposition division, the term "opposing" in claim 1 did not introduce any clarity issues and the claim therefore met the requirements of Article 84 EPC.

Main request - inventive step

The skilled person starting from the brake of E5 and searching for a solution to the problem of eliminating the need for a tool to operate the adjustment bolt 38 would firstly not consider E4, which concerned brakes for motorized vehicles, and, secondly, they would at most provide the bolt 38 with a cover that could be manually operated. Such a brake would, however, still not include a non-axially moving adjustment knob as defined in claim 1. Furthermore, E5 did not disclose a caliper housing rigidly fixed to the bicycle frame.

Auxiliary request - inventive step

According to claim 1 of the auxiliary request, the indicator was defined as visually observable outside the housing, which implied that no specific measures were required for observing the indicator.

Since the screw 10 of the brake in Figure 2 of E4 was unobservable outside the housing, it was not an indicator within the meaning of the claim. Indeed, for bicycles, the width of gaps such as shown in Figure 2 of E4 was typically minimised in order to prevent interference from dirt and debris. Looking through the gaps required at least some sort of illumination arrangement and an observer lying on the ground and looking upwards. Realistically, the screw 10 could only be visually inspected with the brake disc and brake pads removed.

Claim 1 of the auxiliary request therefore involved an inventive step over E4, either alone or in combination with other documents.

X. The respondent argued essentially the following:

Admissibility of the appeal - late-filed requests

The appeal was not admissible because the notice of appeal contained a literal and explicit request to maintain the patent *as granted*. However, the appealed decision of the opposition division did not concern the patent *as granted*, dealing instead with a request submitted at the oral proceedings before the opposition division on 27 September 2016. Since the scope of the claims filed at the oral proceedings before the opposition division had been narrowed compared with the

claims of the patent as granted, the sole explicit request now filed to maintain the patent as granted went beyond the scope of the appealed decision.

The grounds of appeal did not allow for any other interpretation of the appellant's requests either. No claims constituting the main or auxiliary requests were filed with the grounds of appeal and the appellant's arguments in the grounds of appeal were consistent with the request to maintain the patent as granted. The reference to a "ball bearing mechanical disc brake" in the grounds of appeal did not change this, since the title of the granted patent was "BALL BEARING MECHANICAL DISC BRAKE".

Therefore, contrary to the requirements of Article 108 and Rule 99(1)(c) EPC, neither the appeal nor the grounds of appeal contained a request defining the subject of the appeal. The requests filed with the letter dated 23 May 2018 were too late. Thus the appeal should be rejected as inadmissible.

Should the appeal be deemed admissible, the main request and auxiliary requests should not be admitted into the proceedings under Article 13(1) RPBA 2007 as they were filed with the appellant's submission of 23 May 2018 and therefore were late-filed.

Added subject-matter

In points 3.7 and 3.8 of the reasons in decision T 0554/11, the Board stated that the subject-matter of claims 1 and 2 did not extend beyond the content of the application as filed. The decision, however, did not mention the dependent claims.

The Board should therefore examine the objection that the subject-matter of dependent claims 3 to 8 extended beyond the content of the application as originally filed.

Sufficiency of disclosure

The opposition division had not exercised its discretion correctly when it decided not to admit the objection under Article 100(b) EPC.

The objection should therefore be admitted into the current appeal proceedings.

Main request - clarity

During the opposition proceedings, the word "opposing" had been added such that Feature B now read "a pair of opposing brake pad assemblies...". There were several valid interpretations of "opposing brake pad assemblies", including one where the brake pads moved in opposite directions. In this case the function of the brake pad moving away from the [brake] disc would not be clear. The subject-matter of claim 1 did therefore not fulfill the requirements of Article 84 EPC.

Main request - inventive step

The subject-matter of claim 1 of the main request did not involve an inventive step.

The subject-matter of claim 1 differed from the mechanical disc brake disclosed in Figures 1 to 6 of E5 in feature D, and consequently also in features E and F2.

The problem solved by these differences was to provide an arrangement for adjusting the brake without tools, as stated in paragraph [0027] of the patent in suit.

E4 addressed this problem in the second paragraph on page 5 (handwritten numbering). In Figure 2, it showed a solution in the form of an adjustment mechanism having an axially fixed yet rotatable adjustment knob 11 and a rotary to linear linkage in the form of an adjustment screw 10. It was obvious to the skilled person to apply such an adjustment mechanism to the brake of E5 in order to solve the problem posed. This resulted in the subject-matter of claim 1, which consequently did not involve an inventive step.

Auxiliary request - inventive step

The subject-matter of claim 1 of the auxiliary request did not involve an inventive step either.

As set out with respect to the main request, the skilled person would apply the teaching of an adjustment mechanism having an axially fixed but rotatable adjustment knob and a rotary to linear linkage in the form of the adjustment screw from E4 to the brake in E5 in order to solve the problem of providing an alternative arrangement for adjusting the brake without tools. When built into the cam 31 of the brake in E5, the adjustment screw 10 was a visually observable indicator within the meaning of claim 1. Through a trivial kinematic reversal of the connection between the adjustment knob and the adjustment screw, the skilled person would arrive at the subject-matter of claim 1 of the auxiliary request.

Similarly, if starting from the brake disclosed in Figure 3 of E1, it would be obvious to the skilled person to apply the teaching of the adjustment mechanism in E4 to the brake in E1 in order to solve the same problem. Again, when built into the brake in E1, the adjustment screw was an indicator within the meaning of the claim. With the trivial kinematic reversal of the connection between the adjustment knob and the screw, this led to the subject-matter of claim 1 of the auxiliary request.

Finally, the general existence of two different types of brakes having either a floating or a fixed caliper housing was common general knowledge to the skilled person. It was thus trivial for the skilled person to modify the brake in Figure 2 of E4 from having a floating caliper housing to having a fixed caliper housing. Again, the adjustment screw 10 was an indicator within the meaning of the claim. With the trivial kinematic reversal of the connection between the adjustment knob 11 and the screw 10, this likewise resulted in the subject-matter according to claim 1 of the auxiliary request.

Auxiliary request - Article 84 EPC

Paragraph [0021] of the description of the patent in suit described the indicator as optional, which contradicted claim 1.

The patent could thus not be maintained on the basis of the auxiliary request since claim 1 was not supported by the description, contrary to the requirements of Article 84 EPC.

Reasons for the Decision

1. As announced with the submission dated 15 November 2019, the appellant did not attend the oral proceedings.

In accordance with Rule 115(2) EPC and Article 15(3) RPBA 2020, the oral proceedings were held in the appellant's absence. By its decision not to attend the oral proceedings, the appellant chose not to make any further submissions during the oral proceedings.

The duly summoned appellant was therefore treated as relying only on its written submissions.

2. Admissibility of the appeal

Article 108 and Rule 99(1)(c) EPC do not preclude the admissibility of the current appeal.

It is undisputed that the notice of appeal contained a request to set aside the indicated decision and "to maintain the patent as granted, subsidiary in amended form". Thus the subject of the appeal has been defined in accordance with Article 108 and Rule 99(1)(c) EPC.

The question of whether or not the patent can be maintained on the basis of one of these requests in view of a possible conflict with the first appeal decision T 554/11 - or any other requirement of the EPC - is a question not of the admissibility of the appeal but of its allowability.

Therefore there is no reason to reject the appeal as inadmissible in view of Rules 101(1) and 99(1)(c) EPC.

3. Admittance of the main and auxiliary requests

The respondent submitted that the main and auxiliary request were to be regarded as filed with the appellant's letter of 23 May 2018. They were therefore late-filed and should not be admitted into the proceedings under Article 13(1) RPBA 2007.

The Board disagrees with this argument. The appellant's letter of 23 May 2018 merely contains a clarification of the requests already discussed in the grounds of appeal rather than a filing of new requests. Indeed, the first paragraph on page 4 of the grounds of appeal describes the features which have been added to claim 1 of the auxiliary request. These features correspond to the features of claim 1 of the auxiliary request in the appealed decision. Furthermore, with respect to the main request, the grounds of appeal make explicit reference to "the ball bearing bicycle disc brake **as defined in claim 1**", a definition which is present only in claim 1 of the main request on which the impugned decision is based, not in claim 1 as granted. It is thus clear that the requests to which the appellant referred in the grounds of appeal are those on which the impugned decision is based and not the claims as granted.

Consequently, there is no reason not to admit the explicit text of these requests, despite it only being (re-)submitted with the letter dated 23 May 2018.

4. Added subject-matter - *res judicata*

The opposition division revoked the patent in suit in a first decision under the ground for opposition in Article 100(c) EPC.

The patent proprietor appealed against that decision. In the subsequent decision T 0554/11, the Board found that the patent in suit, according to the then valid main request, could not be revoked on the ground for opposition in Article 100(c) EPC.

Even though the reasons in points 3.7 and 3.8 of the Board's decision only explain why the subject-matter of claims 1 and 2 does not extend beyond the content of the application as originally filed, point 3.9 of the reasons explicitly states that the patent in suit cannot be revoked on the grounds of Article 100(c) EPC. This clearly represents the Board's conclusion that the subject-matter of the then main request in its entirety did not extend beyond the content of the application as filed.

According to established case law, in so far as the facts remain the same, the Board is bound in the current appeal proceedings by the *ratio decidendi* of the earlier decision T 0554/11 (Case Law of the Boards of Appeal of the European Patent Office, 9th edition, 2019, V.A.8.4).

The main request in this case differs from the request upon which decision T 0554/11 is based only in that the dependencies of claims 4 and 5 of the current main request have been amended. Specifically, claim 4 has been restricted to be dependent only on claim 2, and claim 5 has been restricted to be dependent only on

claim 4. These amendments have not changed the facts of the current appeal proceedings with respect to those upon which decision T 0554/11 is based.

Since claim 1 of the auxiliary request ("auxiliary set of claims") is based on the combination of claims 1, 2 and 4 of the main request ("main set of claims"), the facts with respect to the auxiliary request also remain the same as in decision T 0554/11.

The objection of extended subject-matter (Article 100(c) EPC) therefore concerns *res judicata* and cannot be challenged in the current appeal proceedings.

5. Sufficiency of disclosure

The respondent raised an objection under Article 100(b) EPC during the opposition proceedings after the case had been remitted to the opposition division following decision T 0554/11. That objection is raised again in the current appeal proceedings.

The opposition division found the objection to be *prima facie* not relevant and did not admit it into the proceedings; see bullet point d) under point 6 on page 5 of the impugned decision.

The respondent submitted that the opposition division did not properly exercise its discretion not to admit this objection into the opposition proceedings. However, the respondent has not given any reasons as to why and how the opposition division erred in not admitting said objection.

The Board therefore sees no reason to reverse the opposition division's decision not to admit the ground for opposition under Article 100(b) EPC.

6. Main request - clarity

Feature B reads "a pair of opposing brake pad assemblies received within the housing configured to reside on opposite sides of a disc operatively associated therewith".

The respondent submitted that interpreting feature B to mean that the brake pad assemblies could move in opposing directions, with one of them not performing any braking function, would be a valid interpretation of the claim. For this reason, the skilled person would not be able to clearly delimit the scope of the claim.

However, such an interpretation is at odds with the wording of feature B and does not make any technical sense either. Feature B explicitly defines that the brake pads are "configured to reside on opposite sides of a [brake] disc". As correctly set out by the opposition division in bullet point e) of point 6 of the appealed decision, the introduction of the word "opposing" merely clarifies that the brake pads are positioned on opposite sides of the brake disc.

The respondent's objection under Article 84 EPC therefore does not prejudice the maintenance of the patent.

7. Main request - inventive step

7.1 Document E5 (see e.g. Figures 1-6) discloses a ball bearing mechanical bicycle disc brake with a caliper

housing 20 (comprising elements 30 & 40) according to feature A, brake pads 32 & 42 and a brake disc 63 according to feature B, and drive mechanisms based on the cams 31 and 41 cooperating with respective balls 34 and 44 when rotated by the lever 50 according to feature C.

The appellant argued that the caliper housing was not rigidly fixed to the bicycle frame according to feature F1. However, the figures show the parts 30 and 40, which together can be regarded as a caliper housing within the meaning of the claim, to be bolted together and onto the fork of the bicycle via the element 10. This forms rigid fixing according to feature F1.

- 7.2 The subject-matter of claim 1 differs from the brake in E5 in features D and E, and therefore also in feature F2.
- 7.3 The parties essentially identify the same problem solved by these differing features, namely to enable adjustment of the brake without the need for a tool.
- 7.4 This problem is explicitly addressed on page 5, second paragraph (handwritten numbering) of E4. Although the explicit example in this document concerns a racing car, the second paragraph on page 3 (handwritten numbering) states that it concerns mechanical disc brakes which may be operated by a brake lever. The brakes in E4 may therefore be operated in a similar way to bicycle brakes. While E4 does not concern bicycle brakes, it belongs to the neighbouring field of mechanical disc brakes for motor vehicles, and the skilled person would also consider these when searching for a solution to the problem posed.

E4, Figure 2 shows an axially fixed but rotatable adjustment knob 11 cooperating with a rotary to linear linkage in the form of an adjustment screw 10. As described in the last sentence of the first paragraph of page 9 (handwritten numbering), this mechanism enables adjustment of the brake without tools.

In view of this teaching, it is obvious to the skilled person to replace the adjustment screw 38 of the brake in E5 with the adjustment mechanism as disclosed in E4, in order to solve the problem posed. This results in an adjustment mechanism having an axially fixed but rotatable adjustment knob attached to the cam 31 and a rotary to linear linkage in the form of an adjustment screw.

Having regard to the reference signs used in claim 1 and the embodiment in e.g. Figure 6 of the patent in suit, feature D, which defines "an adjustment knob (264; 106) attached to the housing (18)...", encompasses an adjustment knob attached indirectly to the housing via the drive mechanism, and therefore also an adjustment knob attached to the rotating cam 31 of the brake in E5.

Applying the teaching of E4 to the brake in E5 thus results in subject-matter falling under the definition of claim 1 of the main request, which consequently does not involve an inventive step.

8. Auxiliary request - inventive step

The respondent argued that the adjustment screw 10 of the brake in Figure 2 of E4 was an indicator within the meaning of claim 1 of the auxiliary request.

However, from the schematic drawings of E4 it cannot be determined whether the geometry of the caliper housing allows for a visual observation of the adjustment screw 10 from outside the caliper housing. It is also not literally described that this screw is observable from the outside. At best, the screw appears to be observable only from specific angles, possibly requiring a laid-down position and specific illumination arrangements. The adjustment screw 10 in E4 can therefore not be regarded as an "indicator visually observable outside the housing" within the meaning of the claim.

Even if the teaching of such an adjustment screw according to E4 were transferred to the bicycle brakes in E5 or in Figure 3 of E1, it would still not form an indicator as claimed. Due to the geometry of the respective caliper housings, the adjustment screw would be in a comparably or even more hidden part of the brake than in E4. For the same reasons as discussed with respect to E4 above, it therefore cannot be regarded as an "indicator visually observable outside the housing" within the meaning of the claim.

To conclude, the adjustment screw is not an indicator according to claim 1 of the auxiliary request, regardless of whether it is provided in the brake in E4 or in the brakes in E5 or E1.

Consequently, the skilled person does not arrive at the subject-matter of claim 1 of the auxiliary request, irrespective of whether the brake in E4, E5 or E1 is chosen as a starting point. The subject-matter of claim 1 of the auxiliary request therefore involves an inventive step.

9. Auxiliary request - Article 84 EPC; remittal to the opposition division

As pointed out by the respondent, claim 1 of the auxiliary request is not fully supported by the description in paragraph [0021], which describes the indicator, a mandatory feature according to claim 1, as being preferable and thus optional.

However, it appears disproportionate to dismiss the appeal and revoke the patent due to this minor discrepancy between the claims and the description.

The Board thus finds it appropriate, using its discretionary power under Article 111(1) EPC, to remit the case to the opposition division for the description to be adapted to the valid claims of the auxiliary request.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division with the order to maintain the patent on the basis of claims 1 to 6 of the auxiliary request submitted at the oral proceedings before the opposition division on 27 September 2016 and a description to be adapted accordingly.

The Registrar:

The Chairman:



C. Moser

C. Herberhold

Decision electronically authenticated