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Datasheet for the decision of 31 May 2012

Case Number: T 0696/09 - 3.2.06

Application Number: 01101546.8

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IPC: B62M25/02, B62J11/00

Language of the proceedings: EN

Title of invention:
Mounting device for bicycle component

Patentee:
SHIMANO INC.

Opponent:
SRAM Deutschland GmbH

Headword:

Relevant legal provisions:
EPC Art. 123
EPC 1973 Art. 84, 56
RPBA Article 13(1), 13(3)

Keyword:
Main request - extension beyond the content of the application as filed (yes)
Auxiliary request 1 - inventive step (no)
Auxiliary request 2 - amendments allowable - inventive step (yes)

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Case Number: T 0696/09 - 3.2.06

D E C I S I O N
of the Technical Board of Appeal 3.2.06
of 31 May 2012

Appellant: (Opponent)	SRAM Deutschland GmbH Romstr. 1 97424 Schweinfurt (ALLEMAGNE)
Respondent: (Patent Proprietor)	SHIMANO INC. 3-77 Oimatsu-cho Sakai-ku, Sakai City Osaka 590-8577 (JAPON)
Representative:	GROSSE SCHUMACHER KNAUER VON HIRSCHHAUSEN Patent- und Rechtsanwälte Nymphenburger Strasse 14 80335 München (ALLEMAGNE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted 9 December 2008 concerning maintenance of the European Patent No. 1129935 in amended form.**

Composition of the Board:

Chairman: M. Harrison
Members: T. Rosenblatt
W. Sekretaruk

Summary of Facts and Submissions

I. The opponent (appellant) filed an appeal against the interlocutory decision of the opposition division dated 9 December 2008 in which it found that European patent No. 1 129 935 in an amended form met the requirements of the EPC.

II. Claim 1 in the amended form found allowable by the opposition division reads:

"*An adjustable mounting device (23) adapted to be coupled to a handlebar (13) of a bicycle (10), said mounting device (23) comprising:*
a bar clamp (24a) having a bar clamping portion (29a) adapted to be coupled to the handlebar (13) of the bicycle (10) and a support portion (30a) spaced from said bar clamping portion (29a); and
a support member (25) slidably coupled to said support portion (30a) and adapted to adjustably support at least one bicycle component (21a) thereon;
characterized in that
each of said bar clamping portion (29a) and said support portion (30a) has a split ring section (31a, 41a) with a mounting bore (34a, 44a) that is adjustable in size;
and one of said bar clamping portion (29a) and said support portion (30a) of said bar clamp (24a) has a ball joint (45a) with a mounting bore (47a) formed therein."

III. In the communication sent subsequent to the summons to oral proceedings, according to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA), the Board informed the parties of its preliminary opinion that the amendment in claim 1 underlying the impugned

decision appeared not to be allowable under Article 123(2) EPC in respect to the first feature added in the characterising portion ("*each of ... adjustable in size*"), taken from granted dependent claim 5 but from which the feature "... *adjustable in size by at least one fastener*" (emphasis added) was omitted. The Board *inter alia* also opined that the mounting devices disclosed in

E3: US-A-5 413 007,

appeared to provide alternative solutions to the problem indicated in the patent so that redefinition of the technical problem(s) based on the technical effects achieved by the distinguishing features might be required. Whether or not the solution according to claim 1 was obvious might be discussed in view of

E9: US-A-4 391 353,
E10: DE-A-199 07 686,
E11: EP-A-0 476 324.

IV. With its letter received on 25 April 2012, the respondent (patent proprietor) submitted amended paragraphs of the description to complement the claims found allowable by the opposition division, constituting its main request, and a set of amended claims as an auxiliary request.

V. Oral proceedings were held on 31 May 2012, during which the respondent submitted a first auxiliary request including the claims filed on 25 April 2012 together with an amended description, and a second auxiliary request.

VI. The appellant requested that the decision under appeal be set aside and that the European patent be revoked.

VII. The respondent requested that the European patent be maintained on the basis of the main request of 25 April 2012, or on the basis of auxiliary request 1 of 31 May 2012 or on the basis of auxiliary request 2 of 31 May 2012.

VIII. Claim 1 according to auxiliary request 1 differs from claim 1 of the main request in that the first feature in the characterising portion has been amended to read :

"*each of said bar clamping portion (29a) and said support portion (30a) has a split ring section (31a, 41a) with a mounting bore (34a, 44a) that is adjustable in size by at least one fastener;*"

IX. Compared to auxiliary request 1, claim 1 according to auxiliary request 2 has been further amended in that the following features are added at the end:

"*wherein said ball joint (45a) is movably coupled within said mounting bore (44a) of said support portion (30a); and*
wherein said support member (25) is an elongated rod that is slidably coupled within said mounting bore (47a) of said ball joint (45a)."

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

Main request

a) In claim 1, the omission of the fastener contravened Article 123(2) EPC because the

application as filed did not disclose any other means for fastening the mounting device to the handle bar.

Auxiliary request 1

b) The feature "slidably coupled" in the preamble of claim 1 was disclosed in E3 in the embodiment of Figures 1 and 2. The claim was not limited to an axially slidable coupling and covered also a rotational sliding movement such as in the threaded coupling between the arm and the bracket in Figure 1 of E3. The only difference between the subject-matter of claim 1 of auxiliary request 1 and the device of E3 was therefore the ball joint as defined in the last feature of the claim.

c) The technical problem formulated by the respondent in view of the provision of the bar clamping and support portions with their respective size-adjustable split ring sections was not correct since it was not disclosed that the split ring section should be adjustable in diameter. The solution of the second problem formulated by the respondent to additionally provide a well-known ball joint on the mounting device to adjustably hold whatever additional accessory, for example an umbrella as disclosed in E10, would be obvious to the skilled person.

Auxiliary request 2

d) This request should not be admitted. It was not filed in response to the Board's communication and the substance of the proceedings had not changed.

e) Further, the features added in claim 1 rendered the claim unclear because the claim first defined that either the bar clamping portion or the support portion had a ball joint and, subsequently, that the ball joint was movably coupled within the support portion's mounting bore. The claim could accordingly be read in the sense that the bar clamping portion had the ball joint which was movably coupled (e.g. by some further means) to the mounting bore of the support portion.

f) The amendments in claim 1 of auxiliary request 2 also did not change the objection of lack of inventive step in view of a combination of E3 with E10, E11 or E9, since the added features had been taken into account when presenting arguments on the subject-matter of claim 1 of auxiliary request 1. It was irrelevant to the assessment of novelty and inventive step whether the mounting device was to be coupled to a handlebar or to any other tubular portion of the bicycle, so that the skilled person would also have considered solutions in the more general field of mounting devices for bicycles, such as for example in E11 or E9, and was not limited to solutions involving mounting devices specifically adapted to be coupled to handlebars.

XI. The respondent's arguments may be summarised as follows:

Main request

a) In claim 1, there was no need to define that the mounting bore was adjustable by a fastener. The

last sentence in paragraph [0029] made clear that it was intended to receive handlebars of different diameters in the bar clamping portion, which implied that the mounting bore diameter of the clamping portion must be adjustably accordingly. Such an adjustment did not necessarily require a fastener.

Auxiliary request 1

b) The subject-matter of claim 1 differed from the mounting device in Figure 1 of E3 by the features in the claim's characterising portion. Additionally, the arm representing the support member was not slidably coupled to the bracket as defined in the preamble of claim 1, since "slidably" implied movement along a surface, when read by a skilled person.

c) Starting from E3 and faced with the complete teaching of two working embodiments which each provided (already) adjustability for optimum viewing conditions of a specific gauge on a motorcycle, the skilled person had no motivation to change anything in these embodiments. The technical problem to be solved by the first feature in the characterising portion of claim 1 in combination with the slidable coupling of the support member to the support portion was to provide a mounting device adapted to receive differently configured and sized support members. This problem was derivable already from the originally filed claims which covered all types of support members and by the feature "adjustable in size" which implied also that the support members should have different diameters. The problem to be

solved by the second feature in the characterising portion of claim 1 was to provide further possibilities for receiving and adjusting further components on the mounting device to increase its flexibility of use.

Auxiliary request 2

d) Auxiliary request 2 constituted an appropriate reaction to the arguments presented for the first time during the oral proceedings and which addressed the missing links between the individual features defined in claim 1 of the former requests and the resulting definitions of two unrelated technical problems.

e) The amendments were based on granted dependent claims 7 and 8 and thereby did not contravene either Article 123 EPC or Article 84 EPC. Contrary to the appellant's contention, the resulting subject-matter did not anyway lack clarity since the relationship between the individual elements was clearly defined. The request should therefore be admitted into the proceedings.

f) The additional features in claim 1, which were also not known from the mounting devices of E3, established the functional relationship between all features of claim 1. The single technical problem to be solved was to provide a mounting device that was freely adjustable to support any orientation of the bicycle component and that overcame the problems in the prior art. The claimed combination of ball joint, split ring sections and support member was not derivable from any of E9, E10 or E11. The ball joint known from

E10 would require a complete re-design since it did not comprise the claimed features. E9 and E11 disclosed solutions to unrelated problems in the field of hydraulic bicycle brakes.

Reasons for the Decision

1. *Main request*

The main request is not allowable because the amendments to claim 1 do not result in subject-matter meeting the requirement of Article 123(2) EPC, for the following reasons:

1.1 Claim 1 has been amended by adding *inter alia* several features of granted dependent claim 5 but omitting at the same time the feature "by at least one fastener". The claim consequently defines an adjustable mounting device in which the bar clamping portion and the support portion have split ring sections with mounting bores that are adjustable in size without requiring a fastener. The application as filed however does not disclose that the size of the mounting bores of the two split ring sections is adjustable by any other means than a fastener.

1.2 The respondent pointed in particular to the end of paragraph [0029] of the published application, from which, due at least in part to the mounting bore being disclosed as being "sized to receive a portion of the handlebar" it was allegedly apparent that handlebars with considerably different diameters would have to be received in the bar clamping portion's mounting bore, implying that a corresponding broad range of possible size adjustments had to be considered which did not necessarily require a fastener.

However, the cited paragraph, which relates to the embodiment shown in Figures 6 to 9 and which has to be read in the context of the subsequent paragraphs [0030, 31], only discloses a fastener for the purpose of size adjustment (and fastening) of both mounting bores of the bar clamp to the handlebar and the support member respectively. Further, in contrast to the handlebar, the support member is a feature of the claimed mounting device. The respondent did not indicate any basis in the application as filed, nor could the Board find any such basis, that the support portion's mounting bore would also have to receive support members of different sizes.

1.3 The subject-matter of claim 1 therefore extends beyond the content of the application as filed, contrary to the requirement of Article 123(2) EPC.

2. *Auxiliary request 1*

Auxiliary request 1 is not allowable because the subject-matter of claim 1 does not involve an inventive step (Article 56 EPC 1973).

2.1 The closest prior art to the subject-matter of claim 1 may be considered as being represented by the adjustable mounting device of Figure 1 of E3. This device comprises all features of the preamble of claim 1.

In particular, the threaded engagement between the arm 17 (which corresponds to the support member of claim 1) and the bracket 13 (which corresponds to the support portion in claim 1) constitutes a coupling in which the threads on the arm slide within and along the threads

of the bore in the bracket. According to E3, column 2, lines 44-46, this coupling is adjustable and thus is "adapted to adjustably support at least one bicycle component thereon". Claim 1 is not limited to an axially slidable coupling but covers also embodiments in which the support member (arm) is rotationally slidably coupled to the support portion (bracket). Even if the respondent's definition of the term "to slide" would be found to provide a limitation of the terminology "slidably coupled" in claim 1, albeit this is anyway only one particular definition, the feature "slidably coupled" would still be anticipated by the known threaded coupling of E3, since the threads of one element slide along the surface of the threads of the other element.

2.2 The features of the characterising portion of claim 1 are however not known from the device of Figure 1 of E3. Although the appellant considered only the last feature ("ball joint with a mounting bore") not to be known from E3, the first feature in the characterising portion, requiring that each of the bar clamping portion and the support portion has a split ring section with a mounting bore that is adjustable in size by at least one fastener, is also not anticipated. Only the clamp 21, by which the mounting device of Figure 1 of E3 is attached to the handlebar, comprises a split ring section, adjustable in size by fasteners in form of machine screws (E3, column 2, lines 52-54).

2.3 The device disclosed in Figure 1 of E3, as well as the second embodiment shown in Figures 3 and 4, permit the adjustment of a gauge assembly (the "bicycle component") about multiple axes for optimum viewing conditions for the rider. The technical problem to be solved indicated in the disputed patent (see paragraph

[0007]) - to provide a mounting device that is adjustable to support the orientation of a bicycle component which is easy to install, simple and not expensive - is therefore already solved by the device(s) of E3, albeit by alternative means. In order to arrive at an objective problem which is solved by the subject-matter of claim 1 when starting from E3 as the closest prior art, it is therefore necessary to re-define the technical problem.

2.4 The Board notes that the features in the characterising portion are not structurally or functionally interrelated, nor does the claim establish a clear structural and functional relationship between the features of the preamble and those of the characterising portion. For example, the claim does not define whether the support member is to be slidably coupled to the mounting bore of the support portion's split ring section or to some other part of it. Also the claim does not specify the exact location where on the respective portions the ball joint is to be provided, whether it is to be installed in one of the mounting bores or at some other part on the two portions, whether its mounting bore is in the joint's ball to receive the support member (or some other element), or whether the ball is received itself in a mounting bore of some other part of the joint.

2.5 A split ring section with a mounting bore that is adjustable in size by at least one fastener, provided (in addition to that on the bar clamping portion) on the support portion, allows the introduction of the support member or indeed some other element into its mounting bore and the tightening of the split ring around the support member or other element with the fastener by reducing the ring's diameter (size). As

such, this feature is merely an alternative means of adjusting and fastening a support member, or some other element, on the mounting device's support portion.

The ball joint with mounting bore provides for an alternative or additional means to adjustably support or attach some (albeit undefined) element on the mounting device.

2.6 The objective technical problems to be solved by the above two unrelated features are hence

(i) to provide an alternative adjusting and fastening means on the support portion,

and

(ii) to provide an alternative or additional means to adjustably support or attach some element on the mounting device adapted to be coupled to the handle bar of a bicycle.

2.7 The Board cannot accept the technical problem defined by the respondent with respect to the size adjustable split ring section as being an objective technical problem when starting from E3. Although the originally filed independent claim generally defines a support member without any details of its shape or dimensions, and therefore indeed covers differently sized and shaped support members, this cannot be regarded as a direct and unambiguous disclosure that a corresponding split ring section had the purpose of being adapted to receive differently sized or shaped support members. The respondent also failed to indicate a corresponding disclosure in the description or in the drawings of the application as filed that different support members should at all be received in its mounting bore or that the size adjustability of the split ring section's

mounting bore should serve that alleged purpose, nor could the Board identify any such disclosure.

2.8 Clamps formed with split ring sections operable by fasteners were part of the common general knowledge of the skilled person at the filing date of the present patent. This was not denied by the respondent and indeed the mounting device in Figure 1 of E3 discloses such a size adjustable split ring section on the clamp for fastening the device of the prior art to a handle bar. It would thus have been obvious to the skilled person faced with the above objective technical problem (i) to provide this well known feature also on the other portion of the bracket of E3, since a well known split ring section is thereby being used on the mounting device simply for its well-known and acknowledged purpose.

Also the use of ball joints for the adjustable attachment of accessories to bicycles was generally known to the skilled person at the date of filing of the patent. E10 shows an example of using a ball joint to adjustably attach an umbrella to a bicycle, where the ball is received in the cylindrical bore of some mounting element (see drawings, "*Zeichnungen Seite 3*"). Faced with the above objective technical problem (ii), it would therefore have been obvious for the skilled person to provide such a generally known ball joint also on some (unspecified) portion of the mounting device of E3 to adjustably attach whatever element was desired to it.

2.9 The Board is not convinced by the respondent's argument that the skilled person starting from E3 had no motivation to consider further changes to a mounting device because the two embodiments disclosed therein

presented complete and perfectly working teachings which already offered adjustability about different axes. Even if it were assumed that E3 provided a "complete" solution to all the problems posed therein, the skilled person always considers improvements or alterations to existing devices, e.g. to make technical advancement or simply provide alternative solutions. The question to be answered is thus not whether or not the skilled person had a motivation to change a given teaching per se; rather, following from the correct application of the problem-solution approach, it has to be asked whether or not, starting from a particular piece of prior art, and faced with an objective technical problem(s) to be solved, the claimed subject-matter would have been obvious to the skilled person in the light of the available prior art (including common general knowledge).

2.10 The fact that other solutions may have existed to adjustably attach an element to a mounting device is irrelevant. The skilled person requires no inventive skill to make a selection from known alternatives and it has not been disputed that the size adjustable split ring section as well as the ball joint were such well known alternatives each used in this mounting device in a conventional manner with their known advantages and disadvantages. The Board also cannot see any reason which would run counter to the conventional use of these well known features defined in claim 1 to solve the objective technical problems.

The subject-matter of claim 1 hence does not involve an inventive step (Article 56 EPC 1973).

3. *Auxiliary request 2*

3.1 Admissibility

Claim 1 of this request is a combination of granted claims 1, 5, 7 and 8. It was submitted during the oral proceedings before the Board of Appeal as a reaction to the discussion of the lacking structural and functional relationship between the different claimed features and the resulting technical objective technical problem(s) to be solved having regard to the distinguishing features of claim 1 of auxiliary request 1. That discussion concentrated for the first time in detail on the missing links between a number of features defined in the independent claim and resulted in the formulation of the two unrelated objective technical problems (see above).

For this reason the Board cannot accept the appellant's argument that the request should not be admitted because it was not submitted in due time in reply to the Board's preliminary opinion stated in the annex to the summons to oral proceedings.

The amendments did not raise any complex issues which the Board and the appellant could not be expected to deal with during the oral proceedings, it being noted here that the appellant had already acknowledged that its inventive step arguments were unchanged irrespective of the further features added to the claim compared to those in the first auxiliary request. Also, since the amendments made appeared to be clearly allowable in the sense that they overcame the objection of lack of inventive step made against the first auxiliary request without contravening other requirements of the EPC, the Board admitted auxiliary request 2 into the proceedings (Articles 13(1) and (3) RPBA).

4. The appellant did not raise any objection under Article 123 EPC in regard to the second auxiliary request and the Board also found no reason as to why the requirements of this Article might not be met.

5. Contrary to the appellant's view the Board considers that the amendment to the subject-matter of claim 1 does not lead to a lack of clarity. A construction of the claim terminology according to which the bar clamping portion has the ball joint and where said ball joint is further movably coupled to or within said mounting bore of said support portion without being received within said bore is not a technically meaningful reading of the claimed subject-matter. The skilled person would understand the expression "*ball joint is movably coupled within said mounting bore of said support portion*" to mean that the ball joint itself is within the mounting bore of the support portion and not within the bar clamping portion and merely coupled in some contrived way to the mounting bore of the support portion, so that the alleged ambiguity does not exist when the claim is correctly interpreted by a skilled person.

The requirements of Article 84 EPC 1973 are thus found to be met.

6. *Inventive step*

6.1 By the inclusion of the additional features from granted dependent claims 7 and 8, the claim defines *inter alia* that the ball joint with a mounting bore formed therein is movably coupled within the support portion's mounting bore, which as part of the support portion's split ring section is adjustable in size by

at least one fastener, and that the support member is slidably coupled within the ball joint's mounting bore. These features, which are not known from the mounting devices disclosed in E3, contribute to the technical effect of allowing for adjustment of the support member with a limited angular range corresponding to the available range of spherical free movement of the ball joint.

6.2 The objective technical problem to be solved is to provide alternative adjustment means in a mounting device adapted to be coupled to a handlebar of a bicycle to allow for adjustment of the support member within a limited angular range.

6.3 First it should be noted that none of the documents cited by the appellant addresses this objective problem.

Although the appellant argued generally that all the features of claim 1 simply combined to provide suitable alternative adjustability in the mounting device of E3 by known means, the documents cited by the appellant do not support its argument because none of them discloses or teaches the particular ball joint construction defined according to claim 1 as being an alternative for combining such adjustment means as known from E3.

Further, the combination of the ball joint known from E10 with a mounting device of E3 does not result in the claimed subject-matter, since a number of claimed features would still be missing (in particular, the feature defining that the support member is an elongated rod that is slidably coupled within the mounting bore of the ball joint). The appellant also did not provide any further reasoning as to why the

modifications necessary to arrive at claim 1 when starting from E3, which in the Board's view amount to a complete re-design of the ball joint, would have been obvious to the skilled person.

Document E11 relates to a hydraulic bicycle brake assembly and addresses the specific problem of very precise adjustment of the hydraulic brake cylinder with respect to the wheel, so that an improved bearing of the brake cylinder in relation to the wheel should be provided (col. 1, lines 14-20). For this purpose indeed a ball joint is used within a mounting bracket secured to the front fork or frame of the bicycle. Although it may be conceded that the skilled person would not limit the search for a solution to the objective problem only to devices adapted for being coupled to handlebars, the problem solved in E11 is however far too specific, so that the skilled person would not have considered this solution as providing the necessary teaching to solve the objective technical problem given above. Similar considerations apply also in view of document E9, which also relates to improvements in hydraulic brake assemblies.

6.4 Having regard to the documents E3, E9, E10 and E11 cited by the appellant and the arguments of the appellant based thereon in this regard, the Board thus concludes that the subject-matter of claim 1 involves an inventive step (Article 56 EPC 1973).

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 European patent with the following documents:

claims 1-14 and description pages 1, 1a, 2-7 of auxiliary request 2, filed 31 May 2012,
drawings Figures 1-50 as granted.

The Registrar: The Chairman:

M. Patin M. Harrison

Decision electronically authenticated