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**Datasheet for the decision  
of 18 July 2012**

**Case Number:** T 1647/08 - 3.2.06

**Application Number:** 02023389.6

**Publication Number:** 1304285

**IPC:** B62M25/00, B62M9/12, B62M25/02

**Language of the proceedings:** EN

**Title of invention:**  
Assisting apparatus for changing speeds in a bicycle  
transmission

**Patentee:**  
SHIMANO INC.

**Opponent:**  
SRAM Deutschland GmbH

**Relevant legal provisions:**  
EPC 1973 Art. 56, 84  
EPC Art. 54(3), 123(2)  
RPBA Art. 13(1); Art. 13(3)

**Keyword:**  
Admissibility of amendments - yes  
Novelty - yes  
Inventive step - yes



**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 1647/08 - 3.2.06

**D E C I S I O N**  
**of the Technical Board of Appeal 3.2.06**  
**of 18 July 2012**

**Appellant:** SRAM Deutschland GmbH  
(Opponent) Romstr. 1  
97424 Schweinfurt (DE)

**Representative:** Jordan, Volker Otto Wilhelm  
Weickmann & Weickmann  
Patentanwälte  
Postfach 860 820  
81635 München (DE)

**Respondent:** SHIMANO INC.  
(Patent Proprietor) 3-77 Oimatsu-cho  
Sakai-ku,  
Sakai City  
Osaka 590-8577 (JP)

**Representative:** GROSSE SCHUMACHER KNAUER VON HIRSCHHAUSEN  
Patent- und Rechtsanwälte  
Nymphenburger Strasse 14  
80335 München (DE)

**Decision under appeal:** **Decision of the Opposition Division of the  
European Patent Office posted 16 July 2008  
rejecting the opposition filed against European  
patent No. 1304285 pursuant to Article 101(2)  
EPC.**

**Composition of the Board:**

**Chairman:** M. Harrison  
**Members:** G. Kadner  
W. Sekretaruk

### **Summary of Facts and Submissions**

- I. The mention of grant of European patent No. 1 304 285, on the basis of European patent application No. 02023389.6 filed on 18 October 2002 and claiming a US priority from 19 October 2001, was published on 29 December 2004.
  
- II. Notice of opposition, in which revocation of the patent on the ground of Article 100(a) EPC was requested, was filed against the granted patent.  
  
By way of its decision posted on 16 July 2008, the opposition division rejected the opposition.
  
- III. Notice of appeal was filed against this decision by the appellant (opponent) on 22 August 2008, and the appeal fee was paid on the same day. With its grounds of appeal dated 7 November 2008, the appellant pursued its request for revocation of the patent on the grounds of lack of novelty with respect to E10 (EP-A-1 132 287) and E9 (EP-A-0 658 475).
  
- IV. On 23 April 2009 the appellant filed a new document E12 (EP-A-1 300 329) as prior art according to Article 54(3) EPC to further support its objection of lack of novelty of the subject-matter claimed.
  
- V. On 22 December 2009 the respondent (patentee) filed a new main request including an amended claim 1.
  
- VI. In a communication accompanying the summons to oral proceedings the Board expressed its preliminary view that the new main request did not seem admissible under Article 123(2) EPC but that if that deficiency (of the

claim) were corrected, novelty and inventive step appeared to be present.

- VII. The appellant filed no reply either to the new main request of 22 December 2009 or to the respondent's auxiliary request filed on 18 June 2012.
- VIII. Oral proceedings were held before the Board on 18 July 2012 during which the respondent filed a new main request.

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

The respondent requested that the European patent be maintained on the basis of the following documents: Claims 1 to 24, filed 18 July 2012; description pages 1, 1a, 1b, 2 to 11, filed 18 July 2012; drawings Figures 1 to 36 as granted.

Claim 1 reads as follows:

"An assisting apparatus (608) for using power from a rotating member (616) to assist the operation of a bicycle transmission comprising:  
a mounting unit;  
an input transmission member (706) coupled to the mounting unit, wherein the input transmission member (706) moves to at least a first input position and a second input position;  
an output transmission member (794) coupled to the mounting unit, wherein the output transmission member (794) moves to at least a first output position and a second output position corresponding to the first input position and the second input position of the input transmission member (706);

a rotating member engaging member (892) that moves between a rotating member engaging position and a rotating member disengaging position;

a switching mechanism for moving the rotating member engaging member to the rotating member engaging position when the input transmission member (706) is in one of the first input position or second input position and the output transmission member (794) is not in the corresponding first output position or second output position, and for moving the rotating member engaging member to the rotating member disengaging position when the input transmission member (706) is in one of the first input position or second input position and the output transmission member (794) is in the corresponding first output position or second output position,

wherein at least one of the input transmission member (706) and the output transmission member (794) rotates around a rotational axis (X, Y); and

wherein the switching mechanism includes a cam (698) that moves together with the input transmission member (706) and a cam follower (827) that moves with the output transmission member (794); and

a motion transmitting mechanism for transmitting motion from the rotating member engaging member (892) to the output transmission member (794);

wherein said motion transmitting mechanism comprises a ratchet (814) rotating together with the output transmission member,

said ratchet (814) includes a plurality of position maintaining teeth (818) corresponding to the at least first output position and second output position of the output transmission member (794), and

a position maintaining pawl (744) that engages selected ones of the plurality of position maintaining teeth (818) for maintaining the output transmission member

(794) in a selected position corresponding to said at least first input position and second input position of the input transmission member (706)."

IX. The arguments of the appellant can be summarized as follows:

Claim 1 lacked clarity because the added features relating to the switching mechanism including a cam and a cam follower had been taken out of the context of their technical effect. No coherence could be identified as regards how these elements worked within the switching mechanism having the further features of claim 1.

The subject-matter of claim 1 lacked novelty when compared with the disclosure of E12. Undisputedly most of the features of claim 1 were present in the embodiment shown in Fig. 3 which corresponded to Fig. 3 of the patent in suit. The only features in dispute - a cam moving together with the input transmission member and a cam follower moving together with the output transmission member - were indicated in Fig. 3 with reference numerals 220, 230, 236, 290 and had a comparable function as was described with respect to Figures 5, 6A and 6B. Intermediate ring 236 could thus be identified as a cam, and abutment member 290 as a cam follower since it caused the ring 236 to rotate around it eccentrically with respect to an axis X and Y and member 290 itself was fixed to ring 244 which also rotated so that it followed in this manner the movement of the ring 236.

The subject-matter of claim 1 was not inventive when compared with the teaching of E10; as shown in Figs. 15, 17 and 18, shift key member 700 included non-rotating

cam followers 740 cooperating with a cam surface 749. By rotation of shift key member 700 the cam followers were moved to the right. The skilled person, based on his general knowledge with respect to relatively fixed and movable parts, would easily be in the position to change this arrangement so as to provide a rotating cam follower cooperating with the cam thus arriving at the claimed solution without involving an inventive step.

- X. The respondent argued that claim 1 of the sole request was an amended claim combining granted claim 1 and dependent claim 4, thus giving rise to no objection under Articles 84 or 123 EPC.

The subject-matter claimed was novel with respect to E12 since that arrangement did not include a cam and a cam follower; abutment member 290 was not a cam follower but rather acted as a fulcrum for the rotating motion of intermediate ring 236. Therefore the newly introduced attack against the amended claim did not *prima facie* put novelty in any doubt.

Since the cited prior art documents did not give any indication towards the claimed assisting apparatus, the subject-matter of claim 1 also involved an inventive step.

### **Reasons for the Decision**

1. The appeal is admissible.
2. *Amendments (Article 84 EPC 1973, 123(2) EPC)*

Claim 1 consisted of a combination of the features of granted claims 1 and 4. No objection had been raised

under Article 123(2) EPC against this claim or the granted claims, and since the claim was a pure combination, no objection arose under Article 123(2) EPC from the amendment.

Likewise, no lack of clarity can be identified by the Board arising from the combination of granted claims, and therefore an objection under Article 84 EPC 1973 does not arise. Although the appellant argued that the functional relationship of the cam and cam follower in claim 1 was not defined in a clear manner relative to other features of the claim, this argument is evidently tantamount to an objection to the clarity of the granted claims. Since clarity is not a ground of opposition and since a lack of clarity has not been caused by the amendment, such objection need not be considered further.

3. *Novelty (Article 54(3) EPC; Article 13(1) RPBA)*

3.1 The appellant's objection of lack of novelty was firstly raised against granted claim 1 based on E10. Novelty was then, after the respondent's reply of 23 March 2009, further attacked based on E12, a document according to Article 54(3) EPC. After the respondent had filed an amended set of claims, no further substantive submission was made by the appellant until the oral proceedings itself. Therefore the Board had to exercise its discretion in accordance with Article 13 of the Rules of Procedure of the Boards of Appeal (RPBA) as to whether the amendment of the appellant's case in this way should be allowed. In this regard, it must be observed that the respondent filed an amended claim 1 with its reply of 22 December 2009, and then amended claim 1 further according to an auxiliary request after the Board's communication. Claim 1 filed during the oral proceedings



was further amended with respect to the preceding auxiliary request, albeit by reintroducing features present in the granted claims. Since this was the appellant's first opportunity to comment on the newly filed claim 1, the Board exercised its discretion under Article 13(1) RPBA to admit the amendment to the appellant's case into the proceedings.

3.2 The appellant was of the opinion that, since paragraph [0016] of E12 and paragraph [0017] of the patent in suit have the same wording, the subject-matter of claim 1 was disclosed in E12. It is however to be noted that claim 1 was restricted to the embodiment shown in Fig. 21 which is not part of E12. Figures 3, 5, 6A, 6B of E12 on which the novelty objection was based, are however the same as Figures 3, 5, 6A, 6B of the patent including the same reference numerals.

3.3 It was not disputed that all features of granted claim 1 were known from E12. The added features compared to claim 1 as granted are that "at least one of the input transmission member and the output transmission member rotates around a rotational axis (X, Y); and that the switching mechanism includes a cam that moves together with the input transmission member and a cam follower that moves with the output transmission member". E12 discloses an input drive member 220 which rotates intermediate ring 236 clockwise, and when inner peripheral surface 294 of intermediate ring 236 contacts abutment member 290 on output transmission member 280, abutment member 290 acts as a fulcrum and causes intermediate ring 236 to rotate eccentrically with respect to the coincident rotational axes X and Y (see E12 e.g. column 8, lines 9 to 28).

3.4 Given that the input drive member 220 rotates together with an input member, the intermediate ring 236 cannot be defined as a cam because it does not drive a cam follower. Moreover, even if *arguendo* ring 236 were to be understood as being a "cam", the abutment member 290 in the form of a pin fixed to the output transmission member 280 cannot be defined as a cam follower because it is not driven by ring 236. Instead, as clearly described, it acts as a fulcrum for the rotation of the intermediate ring 236. Therefore the subject-matter of claim 1 is novel when compared with the disclosure of E12.

3.5 Although the appellant argued that abutment member 290 was caused to follow the movement of intermediate ring 236 indirectly by a later rotation of output member 280, the Board finds that this does not qualify abutment member 290 as being a cam follower, since a cam follower is understood to be a component which follows the path of the cam surface during movement, which is not the case for abutment member 290 when viewed in regard to its movement with respect to intermediate ring 236.

4. *Inventive step (Article 56 EPC 1973; Article 13(3) RPBA)*

4.1 The appellant's objection of lack of inventive step was first raised during the oral proceedings, albeit that an amendment had been made to claim 1 to include a cam and a cam follower (taken as a feature from granted claim 4) as a result of the filing of E12 by the appellant after having filed its grounds of appeal, and to which new request the appellant had not replied.

4.2 According to the established case law of the Boards of Appeal, an amendment to a party's case at such a late stage should only be admitted if, at a minimum, the new

submission is *prima facie* of such relevance that the proceedings would be highly likely to take a different course in respect of the maintenance of the patent. Therefore the Board had to decide whether the amendment of the appellant's case at least fulfilled this criteria in order for it to be admitted into the proceedings.

4.3 The appellant submitted that the shift assisting apparatus of E10, having in its opinion the most features of claim 1, also disclosed a cam and a cam follower, albeit in a somewhat kinematically different arrangement with respect to the input and output shafts. As shown in Figs. 15, 17 and 18, shift key member 700 included non-rotating cam followers 740 cooperating with a cam surface 749. By rotation of shift key member 700 the cam followers are moved to the right. The skilled person, based on his general knowledge with respect to relatively fixed and movable parts, would allegedly easily be in the position to change this arrangement so as to provide a rotating cam follower cooperating with a cam, thus arriving at the claimed solution without involving an inventive step.

4.4 The Board concludes however that the embodiment shown in E10 has a very specific functionality together with the connection or release of the first planet gear carrier 550 to or from the clutch ring 562 (see paragraph [0034]). No indication can be found when considering that embodiment or in the mind of a skilled person to change the functions in respect of their rotation between the cam follower and the cam. Neither is an input member for a driving motion of the cam follower 740 present, nor can such a member readily be integrated by a slight change of the construction. Therefore the new attack in respect of inventive step is not *prima facie* of such relevance that the amendment to the

appellant's case can be admitted. The Board thus exercised its discretion in accordance with Article 13(1) RPBA not to admit the amendment of the appellant's case into the proceedings. Further, admittance of the amendment to the appellant's case would have raised issues which, not least when having regard to the respondent's need for full consideration of the new line of attack, the respondent could not have been expected to deal with without adjournment. The amendment to the appellant's case was therefore also not admitted by the Board when exercising its discretion under Article 13(3) RPBA.

5. Since no further objections or arguments were presented in respect of inventive step against claim 1 of the sole request, the Board is also satisfied that the subject-matter of independent claim 1 meets the requirements of the EPC. No further objections were raised against claims 2 to 24, the dependency of which was adapted to claim 1, nor to the adapted description, nor did the Board itself find reason to raise objection in this regard.

## 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 to 24, filed 18 July 2012;  
description pages 1, 1a, 1b, 2 to 11, filed 18 July 2012;  
drawings Figures 1 to 36 as granted.

The Registrar:

The Chairman:



M. Patin

M. Harrison

Decision electronically authenticated