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Datasheet for the decision of 14 March 2013

Case Number: T 0177/10 - 3.2.06

Application Number: 95116921.8

Publication Number: 700827

IPC: B62M25/04, B62K23/04, // B62M9/12

Language of the proceedings: EN

Title of invention:
Hand-operated shift actuator for multiple-gear bicycles

Patent Proprietor:
SRAM, LLC.

Opponent:
SHIMANO INC.

Relevant legal provisions:
EPC 1973 Art. 54(2), 56
EPC Art. 99(1), 100
EPC R. 1, 55

Keyword:
Admissibility of opposition - (yes)
Novelty - main request (no)
Inventive step - auxiliary request (no)

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Case Number: T 0177/10 - 3.2.06

D E C I S I O N
of Technical Board of Appeal 3.2.06
of 14 March 2013

Appellant: (Patent Proprietor)	SRAM, LLC. 1333 North Kingsbury, 4th Floor Chicago, IL 60642 (US)
Representative:	Thum, Bernhard Wuesthoff & Wuesthoff Patent- und Rechtsanwälte Schweigerstrasse 2 81541 München (DE)
Appellant: (Opponent)	SHIMANO INC. 3-77 Oimatsu-cho Sakai-ku Sakai City Osaka 589-8577 (JP)
Representative:	Grosse, Wolfgang Grosse - Schumacher - Knauer - von Hirschhausen Patent- und Rechtsanwälte Nymphenburger Straße 14 80335 München (DE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 26 November 2009 concerning maintenance of the European Patent No. 700827 in amended form.**

Composition of the Board:

Chairman: M. Harrison
Members: G. Kadner
K. Garnett

Summary of Facts and Submissions

I. The mention of grant of European patent No. 0 700 827, on the basis of European patent application No. 95116921.8 filed on 18 March 1992 and claiming a US-priority from 20 March 1991, was published on 2 November 2005.

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 interlocutory decision posted on 26 November 2009, the opposition division found that the European patent in an amended form (1st auxiliary request) met the requirements of the EPC. The opposition division held that the opposition was admissible because it met the requirements of Articles 99(1) and 100 EPC and of Rules 1(1) and 55 EPC. The subject-matter of claim 1 according to the first auxiliary request was novel over

E1: JP-U-57-117738,

and inventive when considering

E2: DE-A-32 15 427

as the most relevant prior art, taken in combination with the teaching of E1 alone or in combination with

E3: DE-U-85 36 537.

III. Notice of appeal was filed against this decision by appellant I (patentee) on 3 February 2010 and by appellant II (opponent) on 19 January 2010, and the

respective appeal fees were paid on the same day as the appeals were filed. Appellant I filed its grounds of appeal on 26 March 2010.

Appellant II provided together with its grounds of appeal of 6 April 2010 an additional prior art document

E12: US-A-2 874 587

and pursued its request for revocation of the patent on the ground of lack of inventive step.

IV. In a communication accompanying the summons to oral proceedings, the Board expressed its preliminary view that the opposition seemed to be admissible, that the admittance of E12 into proceedings required consideration but that the Board currently saw no reason to deviate from the opposition division's conclusion in respect of inventive step.

V. With letter dated 20 December 2012 appellant I (patentee) informed the Board that it would not file further written submissions and would not attend the oral proceedings.

With letter dated 14 February 2013 appellant II (opponent) confirmed its request for revocation of the patent, filed a complete translation of E1 into English and gave further arguments concerning lack of inventive step based on the combination of E12 with E1. In its letter of 13 March 2013, appellant II informed the EPO that it also would not attend the oral proceedings.

VI. Oral proceedings were held before the Board on 14 March 2013 in the absence of the parties (as announced).

Appellant I (patentee) had requested in writing that the decision under appeal be set aside and the European patent 0 700 827 be maintained as granted, alternatively that Appellant II's appeal be dismissed. It had also requested in writing that E12 not be admitted into the proceedings.

Appellant II (opponent) had requested in writing that the decision under appeal be set aside and that the patent be revoked.

Claim 1 according to the patentee's main request (i.e. maintenance of the patent as granted) reads as follows:

"A bicycle derailleur rotary handgrip shift actuator (408, 408c, 410) for use in a multiple-gear bicycle (400) having a gear-shifting derailleur actuated by the lengthwise displacement of a control cable (415, 417), the shift actuator (408, 408c, 410) having a rotator (412, 412c, 413) mountable over the outside of the handlebar (402) and selectively rotatable around a first axis (466) in a down-shifting direction and in an opposite, up-shifting direction, wherein the first axis (466) is co-axial with the handlebar(402); the rotator (412, 412c, 413) being positioned to be substantially inboard of an end of the handlebar,
characterised in that the actuator (408, 408c, 410) has a jack spool (436, 436a, 436c) rotatable about a second axis (468) angularly offset from the first axis (466), an end (460) of the control cable (415, 417) being secured to the jack spool (436, 436a, 436c), the jack spool (436, 436a, 436c) being rotatable one way in a down-shifting direction in which the jack spool (436, 436a, 436c) pulls the control cable (415, 417) and the opposite way in an up-shifting direction in which the jack spool (436, 436a, 436c) releases the control cable

(415, 417);
and in that a cable connection (448, 448a) separate from the control cable (415, 417) is provided between the rotator (412, 412c, 413) and the jack spool (436, 436a) such that down-shifting rotation of the rotator (412, 412c, 413) will cause down-shifting rotation of the jack spool (436, 436a), and up-shifting rotation of the rotator (412, 412c, 413) will cause up-shifting rotation of the jack spool (436, 436a, 436c)."

Claim 1 as found allowable by the opposition division reads as follows:

"A bicycle gear shifting system, comprising:
a bicycle derailleur rotary shift actuator (408, 408c, 410) for use in a multiple-gear bicycle (400) having a gear-shifting derailleur actuated by the lengthwise displacement of a control cable (415, 417), the shift actuator (408, 408c, 410) having a rotator (412, 412c, 413) mountable over the outside of the handlebar (402) and selectively rotatable around a first axis (466) in a down-shifting direction and in an opposite, up-shifting direction, wherein the first axis (466) is co-axial with the handlebar(402); the rotator (412, 412c, 413) being positioned to be substantially inboard of an end of the handlebar,
a derailleur (54, 56) operatively associated with a plurality of gears (48, 52) affixed to an axle (38, 44), a drive chain (50) of said bicycle (400) movable by said derailleur(54, 56) from any of said gears (48, 52) to any other one of said gears (48, 52), a control cable (415, 417) having a first end operatively connected to said derailleur (54, 56), displacement of said control cable (415, 417) by a predetermined amount actuating said derailleur (54, 56) to shift between a present one of said gears (48, 52) and a selected other

one of said gears (48, 52),
characterised in that the actuator (408, 408c, 410) has a jack spool (436, 436a, 436c) rotatable about a second axis (468) angularly offset from the first axis (466), an end (460) of the control cable (415, 417) being secured to the jack spool (436, 436a, 436c), the jack spool (436, 436a, 436c) being rotatable one way in a down-shifting direction in which the jack spool (436, 436a, 436c) pulls the control cable(415, 417) and the opposite way in an up-shifting direction in which the jack spool (436, 436a, 436c) releases the control cable (415, 417);
and in that a cable connection (448, 448a) separate from the control cable (415, 417) is provided between the rotator (412, 412c, 413) and the jack spool (436, 436a) such that down-shifting rotation of the rotator (412, 412c, 413) will cause down-shifting rotation of the jack spool (436, 436a), and up-shifting rotation of the rotator (412, 412c, 413) will cause up-shifting rotation of the jack spool (436, 436a, 436c)."

VII. The arguments of appellant I (patentee) can be summarized as follows:

The opposition was inadmissible because the opponent had attacked claim 1 of the disputed patent in an extremely unconventional way. In a first version of claim 1 as presented by the opponent, additional terms had been arbitrarily introduced which were not included in the granted version. In a second version named "structural features only", selected features had been extracted from the first version wherein the aforementioned additionally introduced terms had been maintained and other terms of the granted claim had been omitted. This second version was thus only a "filtrate" of claim 1 as granted, this "filtrate" then

being used in the subsequent arguments against novelty and inventive step. By simply ignoring features of the claim, the opponent had not in fact dealt with the subject-matter claimed. This prevented both the opposition division and the patentee from passing conclusive judgement on the asserted grounds for opposition without making inquiries of their own (T 134/88). The opposition had consequently been insufficiently substantiated, which not only contravened the practice of the European Patent Office but also meant that it was not admissible.

E1 had only been partly translated, whereby the true disclosure of E1 could not be ascertained. Anyway, the speed adjusting apparatus for the vehicle disclosed in E1 did not relate to a bicycle derailleur handgrip shift actuator for use in a multiple-gear bicycle but to a rotary handgrip used in a motorcycle for actuating the throttle valve. The handgrip according to E1 was not clearly and unambiguously disclosed as being positioned substantially inboard of an end of the handlebar. Since the speed adjusting device of E1 was not a shift actuator, no down-shifting and up-shifting direction of the control cable was present. This prior art apparatus was not at all suitable for the control of a shift operation for a multi-speed bicycle, and therefore the subject matter of claim 1 was novel when compared with E1.

The newly filed E12 was not more relevant than the prior art on file because it did not disclose more features than E1. Consequently it should not be admitted into the proceedings.

Since the disclosure of E12 did not provide more information than E1 which had already been considered

during the opposition proceedings, the opposition division's conclusion on inventive step was correct.

VIII. Appellant II (opponent) argued that the opposition division's conclusions in respect of admissibility of the opposition and novelty were correct. It further argued that E12 was explicitly related to a multispeed transmission of a bicycle (col. 1, lines 15 to 23) and therefore that it was more relevant than E1, which concerned a speed adjusting apparatus for a vehicle with a throttle valve. In respect of inventive step, E12 disclosed most of the features of claim 1, except that a hub transmission was provided instead of a derailleur; and in the shift actuator, the control cable was fixed to the jack spool, and a separate cable connection was provided to connect the jack spool to the rotator.

The technical effects of these distinguishing features did not provide any synergy. To use a derailleur instead of a hub transmission was within the common general knowledge of the person skilled in the art. When providing a mere alternative cable transmission for the control of a remote device, the skilled person would apply the teaching of E1 and would not encounter any problem. Thus the subject-matter of claim 1 found allowable by the opposition division did not involve an inventive step.

Reasons for the Decision

1. The appeals are admissible.

2. *Admissibility of the opposition*

The opposition division held that the opposition was admissible since it met the requirements of Articles 99(1) and 100 EPC as well as Rules 1(1) and 55 EPC.

The notice of opposition at least dealt with a plurality of features of claim 1, the so-called "structural features only". Novelty and inventive step were both attacked based on that version of the claim. Thus both the opposition division and the patent proprietor were able to compare the features allegedly disclosed in the prior art with the features included in that "version" and also with those which were part of the granted claim, and were able to draw their respective conclusions. The Board thus finds that the opposition was sufficiently substantiated. The opposition division's conclusion that the correctness (or not) of the opponent's assessment was not a matter of sufficiency of substantiation was thus correct.

3. *Main request (Article 54(2) EPC 1973)*

3.1 In its communication, the Board opined in respect of novelty of the subject-matter of claim 1 that the terminology "for use" was not suitable for distinguishing the subject-matter claimed from the prior art since there was no structural feature in claim 1 which was specific for the intended use and at the same time not disclosed in E1, and consequently

that nothing in the device of E1 rendered it unsuitable for the use stated in the claim.

3.2 The appellant I (patentee) did not react to the Board's statement concurring with the opposition division's conclusion.

In its statement of grounds of appeal, appellant I had argued that the features 1, 4, 3.2, 5.3 and 6 according to its feature analysis were not clearly and unambiguously disclosed in E1, these features being as follows:
(1) bicycle derailleur handgrip shift actuator for use in a multispeed bicycle,
(4) the rotator being positioned to be substantially inboard of an end of the handlebar,
(3.2), (5.3), (6) down-shifting direction and up-shifting direction; pulling the cable in a down-shifting direction and up-shifting direction; down-shifting rotation of the rotator will cause down-shifting rotation of the jack spool, and up-shifting rotation of the rotator will cause up-shifting rotation of the jack spool.

3.3 In its reasons for the decision the opposition division explained that the manual drive control member disclosed in E1 was also suitable for a bicycle shift derailleur, that its position substantially inboard of an end of the handlebar was implicit (Figures 5 and 6) and that its mode of operation was not distinguishable from the rotary handgrip shift actuator according to claim 1 by virtue of any structural features. The control cable being pulled and released in a lateral direction was equally suitable for use in any up-shift and down-shift operation, which in any event was not further defined in the claim. Thus the arguments

advanced once again by appellant I in its appeal were dealt with fully by the opposition division and the Board agrees with those conclusions.

3.4 The Board therefore finds that claim 1 lacks novelty with respect to the explicit and implicit disclosure of E1.

3.5 Although appellant I also argued that no complete translation had been filed, this was remedied by appellant II in its response of 14 February 2013, thereby allowing the Board and the patentee the opportunity to check its contents for any contradictory statements compared to the partial translation of E1 previously on file.

3.6 The Board does not accept appellant I's argument that the device of E1 is not suitable for a bicycle gear shift apparatus because of a varying degree of angular movement output for constant angular input in E1 due to operating a throttle valve. Nothing in claim 1 defines how much or how finely the cable should move as a result of rotational grip movement; changing gears on a derailleur is equally possible with the device of E1.

4. *First auxiliary request (Article 56 EPC 1973)*

4.1 A review of the disclosure of E12 leads the Board to the conclusion that this document indeed comes closer to the subject-matter of claim 1 than the other prior art on file because it explicitly relates to a rotatable handle control mechanism *inter alia* for multi-speed transmission for a bicycle (col. 1, lines 20 to 23). Therefore the Board concludes, since it is at least *prima facie* highly relevant in respect

of inventive step, that it is to be admitted into the proceedings.

4.2 E12 discloses a bicycle rotary shift actuator for use in a multiple-gear bicycle having a gear-shifting device actuated by the lengthwise displacement of a control cable 2, the shift actuator having a rotator 14 mountable over the outside of the handlebar and selectively rotatable around a first axis in a down-shifting direction and in an opposite, up-shifting direction, wherein the first axis is co-axial with the handlebar. The rotator 14 is positioned substantially inboard of an end of the handlebar. The actuator has a jack spool 12 rotatable about a second axis angularly offset from the first axis, an the control cable is guided by the jack spool, the jack spool 12 being rotatable one way in a down-shifting direction in which the jack spool pulls the control cable and the opposite way in an up-shifting direction in which the jack spool releases the control cable. Down-shifting rotation of the rotator causes down-shifting rotation of the jack spool, and up-shifting rotation of the rotator causes up-shifting rotation of the jack spool (col. 1, lines 20 to 23; col.3, lines 30 to 40; Figs. 2, 4, 6).

4.3 The subject-matter of claim 1 differs from this known device in that:
a cable connection separate from the control cable is provided between the rotator and the jack spool to which an end of the control cable is secured;
and in that:
a derailleur is operatively associated with a plurality of gears affixed to an axle; a drive chain of the bicycle is movable by the derailleur from any of the gears to any other one of the gears; the control cable is operatively connected to the derailleur;

displacement of the control cable by a predetermined amount actuates the derailleur to shift between a present one of the gears and a selected other one of the gears.

4.4 As a result of these differences, the objective problem underlying the subject-matter claimed can be identified as being to provide an alternative rotary shift actuator usable for a multi-speed bicycle having a derailleur gear shifting device (to move the chain from one gear to a selected other gear).

4.5 The skilled person looking for an alternative actuator device would find a suitable construction in E1, which discloses a handgrip shift actuator having a rotator mounted over the outside of the handlebar and selectively rotatable around a first axis, wherein the first axis is co-axial with the handlebar and wherein a control cable 16 is actuated in lengthwise displacement in one direction (in a "down-shifting" direction) and in an opposite direction (in an "up-shifting" direction). The rotator (in rotor housing 31) is positioned inboard of an end of the handlebar. The actuator has a jack spool (similar to 10 in Fig. 1) rotatable about a second axis angularly offset from the first axis (Fig. 5). A cable connection 15 separate from the control cable 16 is provided between the rotator and the jack spool to which an end of the control cable 16 is secured (E1-Translation, page 3, lines 22 to 32; page 4, line 25 to page 5, line 12; Figs. 1, 5, 6).

4.6 The skilled person would thus recognize that this embodiment, having a similar structure to that shown in E12, can not only be easily applied to the hand control mechanism disclosed in E12, but would also result in an

alternative way for controlling the multi-speed transmission of a bicycle. Further, at the priority date of the patent in suit, the skilled person was well aware that such a handgrip shift actuator was similarly usable for a hub transmission or for derailleur speed transmission of a bicycle, and would therefore readily use it as well for the shift control of a multiple-gear bicycle wherein the derailleur, in a usual and well-known manner, is operatively associated with a plurality of gears affixed to an axle, a drive chain of the bicycle is movable by the derailleur from any of the gears to any other one of the gears, the control cable being operatively connected to the derailleur, and wherein displacement of the control cable by a predetermined amount actuates the derailleur to shift between a present one of the gears and a selected other one of the gears.

4.7 Thus starting from E12 and applying an alternative jack spool solution from E1, the skilled person would merely resort to general knowledge in the technical field of bicycle speed-change mechanisms to arrive at the subject-matter according to claim 1 without involving of an inventive step.

5. None of Appellant I's requests on file being allowable, the patent has to be revoked.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

M. H. A. Patin M. Harrison

Decision electronically authenticated