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**Datasheet for the decision  
of 31 August 2006**

**Case Number:** T 0127/05 - 3.2.01

**Application Number:** 95309511.4

**Publication Number:** 0719701

**IPC:** B62M 25/04

**Language of the proceedings:** EN

**Title of invention:**  
Bicycle shifting apparatus

**Patentee:**  
SHIMANO INC.

**Opponent:**  
SRAM Deutschland GmbH

**Headword:**  
-

**Relevant legal provisions:**  
EPC Art. 54, 56, 123

**Keyword:**  
"Improvement of patentee's position (yes)"  
"Novelty (yes)"  
"In agreement with G 1/99 (yes)"  
"Inventive step (yes)"

**Decisions cited:**  
G 0001/99, G 0009/92

**Catchword:**  
-



Case Number: T 0127/05 - 3.2.01

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.01  
of 31 August 2006

**Appellant:** SRAM Deutschland GmbH  
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**Decision under appeal:** Interlocutory decision of the Opposition  
Division of the European Patent Office posted  
30 November 2004 concerning maintenance of  
European patent No. 0719701 in amended form.

**Composition of the Board:**

**Chairman:** J. Osborne  
**Members:** P. L. P. Weber  
G. Weiss

## Summary of Facts and Submissions

I. The present appeal of the opponent is against the interlocutory decision of the opposition division of 30 November 2004 that account being taken of the amendments according to the auxiliary request submitted during the oral proceedings of 11 November 2004, the patent and the invention to which it relates are found to meet the requirements of the EPC .

The notice of appeal was filed on the 28 January 2005 and the fee paid on the same day.

The grounds of appeal were filed on 5 April 2005.

II. Oral proceedings were held on 31 August 2006.

III. The appellant requested the revocation of the patent in its entirety.

IV. The respondent requested the appeal to be dismissed (main request) or, in the alternative, the patent to be maintained with the word "fixing" in claim 1 being replaced by the word "positioning" (auxiliary request).

V. Claim 1 according to the main request reads as follows:

A bicycle shifting control apparatus for a bicycle transmission, the apparatus comprising a first shifting control device (9, 10) located at a first position on the bicycle, the first shifting control device including a first shifting lever (24, 11) and a first transmission element (59,14), said first shifting lever (24,11) being operable for causing the first shifting control device (9, 10) to pull and release the first

transmission element (59, 14), the apparatus being characterised by further comprising:

a second shifting control device (16, 20) located at a second position on the bicycle, the second shifting control device (16, 20) including a second shifting lever (26, 22) and a second transmission element (60,13), said second shifting lever (26,22) being operable for causing the second shifting control device (16, 20) to pull and release the second transmission element (60, 13);

interlocking means (72, 63, 66) for interlocking the first shifting control device (9, 10) and the second shifting control device (16, 20) so that the movement of either the first shifting lever (24, 11) or the second shifting lever (26, 22) causes the bicycle shifting control apparatus to shift the bicycle transmission;

a first winding drum (44) coupled to the first shifting lever (24, 11) for winding and unwinding the first transmission element (59, 14); and

a first positioning unit (38, 39, 41) coupled to the first shifting lever (24, 11) for fixing the first shifting lever (24, 11) at discrete locations;

wherein the interlocking means comprises a connector (63, 66) for connecting the first transmission element (59, 14) and the second transmission element (60, 13) to the bicycle transmission.

Claim 1 according to the auxiliary request reads as follows:

A bicycle shifting control apparatus for a bicycle transmission, the apparatus comprising a first shifting

control device (9, 10) located at a first position on the bicycle, the first shifting control device including a first shifting lever (24, 11) and a first transmission element (59,14), said first shifting lever (24,11) being operable for causing the first shifting control device (9, 10) to pull and release the first transmission element (59, 14), the apparatus being characterised by further comprising:

a second shifting control device (16, 20) located at a second position on the bicycle, the second shifting control device (16, 20) including a second shifting lever (26, 22) and a second transmission element (60,13), said second shifting lever (26,22) being operable for causing the second shifting control device (16, 20) to pull and release the second transmission element (60, 13);

interlocking means (72, 63, 66) for interlocking the first shifting control device (9, 10) and the second shifting control device (16, 20) so that the movement of either the first shifting lever (24, 11) or the second shifting lever (26, 22) causes the bicycle shifting control apparatus to shift the bicycle transmission;

a first winding drum (44) coupled to the first shifting lever (24, 11) for winding and unwinding the first transmission element (59, 14); and

a first positioning unit (38, 39, 41) coupled to the first shifting lever (24, 11) for positioning the first shifting lever (24, 11) at discrete locations;

wherein the interlocking means comprises a connector (63, 66) for connecting the first transmission element (59, 14) and the second transmission element (60, 13) to the bicycle transmission.

Claims 2 to 7 define features additional to those of claim 1.

VI. Following documents were of importance in the appeal procedure:

E1: US-A-3901095

E2: US-A-4480720

E4: US-A-3394604

VII. The arguments of the appellant to support its request to revoke the patent can be summarized as follows:

- (a) The introduction during the opposition procedure of the term "fixing" instead of "positioning" in the feature "a first positioning unit (38, 39, 41) coupled to the first shifting lever (24, 11) for fixing the first shifting lever (24, 11) at discrete locations" infringes Art.123(2) EPC. To satisfy the requirement of Art.123(2) EPC, the feature (here the word fixing) must be directly and unambiguously derivable from the originally filed application documents. This is not the case here. The only place in the originally filed documents where the verb fix appears is in the text corresponding to paragraph (0021) of the patent specification which concerned the functioning of the device in a non-stepwise manner, which the patent proprietor has deleted from the description since it no longer falls within the claims on file. A so called fixing has not been described in relation with the actuation of the lever in a stepwise manner.

In addition it is not clear from the patent application whether the lever has to be fixed or is in any way intended to be fixed, at discrete locations. The holes 46 in position determining plate 41 shown in Figure 6 of the patent have such a small diameter that they cannot fix the position determining balls when the latter are in the holes with part of their outer periphery. Balls which serve to fix when in their holes are shown for example in the Figures 5a to 5d of E4. It can clearly be seen in these figures that the balls penetrate much more into the holes than in the shifting device according to the patent in suit. Furthermore as described in the original application the cable for actuating the shifter is said to be a push-pull cable which is an indication for the skilled person that a shifting device is used which can be actuated in either direction without the lever having to be fixed.

- (b) In the present appeal procedure the patentee is respondent since he did not file an appeal against the decision of the opposition division. In such a context, the decision G 9/92, (OJ 1994, 875) of the Enlarged Board of Appeal does not allow an amendment of the claims which puts the patentee in a better position than the one he had before the appeal. The change of "fixing" into "positioning" puts the respondent in a better position since he comes back to the wording of the granted claim, although he did not appeal. Therefore such an amendment is not allowable.

While decision G 1/99, (OJ 2001, 381) allows correction of an objection raised by the appellant during the appeal proceedings it does not allow a return back to the previous stage. The proprietor also had the opportunity to file an appeal, but he chose not to do so. It would not be equitable to allow him to go back to the previous version of the claim. This would also not be in line with the logic of an appeal proceedings since otherwise the proprietor would never have to file an appeal because he could always correct the patent documents to come back to their previous version. Paragraph 12 of G 1/99 only allows amendment in case of an objection newly raised in the appeal proceedings. In the context of G 1/99 the first of the three conditions mentioned obliges to try first to overcome the deficiency by adding features, which has not been tried in the present case so that the proposed return to "positioning" is also not allowable for that reason.

- (c) The subject-matter of claim 1 according to the auxiliary request is not novel over E1.

E1 discloses a bicycle shifting control apparatus for a bicycle transmission, the apparatus comprising a first shifting control device 21 located at a first position on the bicycle, the first shifting control device including a first shifting lever 34,35 and a first transmission element 20, said first shifting lever 34 being operable for causing the first shifting control device 21 to pull and release the first transmission element 20.



The shifting apparatus according to E1 further comprises

a second shifting control device

98,99,101,104,105,106 (see Figure 12) located at a second position on the bicycle, the second shifting control device including a second shifting lever 99 and a second transmission element 101, said second shifting lever 99 being operable for causing the second shifting control device to pull and release the second transmission element 101;

interlocking means 101 for interlocking the first shifting control device and the second shifting control device so that movement of either the first shifting lever 34 or the second shifting lever 99 causes the bicycle shifting control apparatus to shift the bicycle transmission;

a first winding drum 33 coupled to the first shifting lever 34 for winding and unwinding the first transmission element 20; and

a first positioning unit 45,46,47 coupled to the first shifting lever 34 for positioning the first shifting lever 34 at discrete locations;

wherein the interlocking means comprises a connector for connecting the first transmission element 20 and the second transmission element 101 to the bicycle transmission.

It is to be noted that since the kind of connector is not defined more precisely in the feature of claim 1, any way of connecting the two transmission elements fulfils the claimed condition. Since the two transmission elements in

E1 are connected through the other elements of the shifting device they fulfil the claimed condition.

- (d) In any case a direct connection of the two transmission elements could not be considered inventive in view of E2 Figure 3 which shows a well known way of connecting two cables to operate a further single cable.

In addition, the subject-matter of claim 1 according to the auxiliary request would not be inventive over E4 in combination with E1.

E4 discloses a bicycle shifting control apparatus for a bicycle transmission, the apparatus comprising a first shifting control device located at a first position on the bicycle, the first shifting control device including a first shifting lever 26 and a first transmission element 14, said first shifting lever 26 being operable for causing the first shifting control device to pull and release the first transmission element 14.

The shifting control apparatus according to E4 also comprises

a first winding drum 27 coupled to the first shifting lever 26 for winding and unwinding the first transmission element 14 and a first positioning unit 22, 29a, 29b, 29c, 30, 31, 33 coupled to the first shifting lever 26 for positioning the first shifting lever at discrete locations defined by the holes 29a, 29b, 29c.

The apparatus according to E4 thus does not comprise the following features of claim 1:

- a second shifting control device located at a second position on the bicycle, the second shifting control device including a second shifting lever and a second transmission element, said second shifting lever being operable for causing the second shifting control device to pull and release the second transmission element;

- interlocking means for interlocking the first shifting control device and the second shifting control device so that movement of either the first shifting lever or the second shifting lever causes the bicycle shifting control apparatus to shift the bicycle transmission;

- the interlocking means comprising a connector for connecting the first transmission element and the second transmission element to the bicycle transmission.

The differentiating features however represent a simple doubling of the shifting control units to facilitate the actuating of the shifter from different positions of the cyclist on the bicycle. Such doubling is obvious in view of E1, in particular Figure 12 and the corresponding part of the description (see in particular column 11, lines 3 to 6) in which the same problem is said to be solved in the same way.

VIII. The arguments of the respondent can be summarized as follows:

- (e) Nothing pleads in favour of the opponent's argument that the position determining balls cannot fix the lever in the position determining

holes; this is a question of forces applied and drafting of the drawings.

According to the Oxford dictionary the verb "to fix" means to define or to determine a position. In the original application the verb "to fix" has been used in relation with the actuation of the lever in a non stepwise manner whereas the verb "to determine a position" has been used in relation with the first and main actuation of the lever used in a stepwise manner, but this does not alter the meaning.

The application as a whole should be used for assessing whether a particular item was originally disclosed or not for the skilled person, and in the present case it is clear for the skilled person that a fixing of the lever is necessary. In particular even though a return spring 43 is said to be used in the control unit to counterbalance the return spring of the rear shifter, it is clear for the skilled person that in practice these two springs never can be completely balanced so that a fixing is necessary.

In the context of the patent "fixing" does not mean to lock, it merely means to hold and it is quite clear that also when the lever is used in a non stepwise manner and is said to be fixed by friction, this friction can be overcome to move the lever.

- (f) Decision G 9/92 already allows the proprietor to make amendments if they arise from the appeal itself. This is confirmed in point 14 of G 1/99 which explicitly deals with the case in which an amendment was found allowable by the opposition

division during the opposition procedure but is considered not to comply with the requirements of the EPC at the appeal stage. In such a case the Enlarged Board held that the proprietor must be allowed to make an amendment to meet the objection raised by the appellant or the board.

By changing "fixing" into "positioning" the claim does not go back to its version as granted since compared to that version the last feature of the claim has been added.

- (g) Concerning the novelty objection made by the appellant, E1 cannot be novelty destroying, several features not being disclosed.

In the shifting apparatus according to E1 the first shifting lever is not operable for causing the first shifting control device to release the first transmission element. In this device the act of releasing, which in this field of technology means paying out the cable is not done with the same lever but with the second lever, one of the levers being used for the shifting up and one being used for the shifting down.

The same applies for the second shifting lever which is not used to release the cable either. The shifting device according to E1 also does not show a interlocking means comprising a connector for connecting the first transmission element and the second transmission element to the bicycle transmission. In the device according to E1 the second shifting lever is connected with the first shifting lever, but not to the bicycle transmission as required by the claim.

- (h) As to the inventive step objection starting from E1 and combining it with E2, the respondent does not see how such a device could possibly be constructed and function and the opponent did not give any explanations on that issue.

The respondent does not dispute that the features mentioned by the appellant as known from E4 are effectively disclosed in E4. However in the opinion of the respondent, the skilled person would never take E1 to find a solution to the problem mentioned by the opponent, the two shifting technologies disclosed in E1 and E4 being much too different.

### **Reasons for the Decision**

1. The appeal fulfils the requirements of Articles 106 to 108 and Rule 64 EPC and is therefore admissible.

#### *Main request*

2. In comparison with claim 1 as originally filed the word "fixing" has replaced the word "positioning", resulting in the feature of a first positioning unit (38, 39, 41) coupled to the first shifting lever (24, 11) for fixing the first shifting lever (24, 11) at discrete locations.

The Board cannot agree with the respondent's view that the skilled reader would consider the concept of fixing the lever at discrete locations as directly and unambiguously disclosed in the original application

documents, and that the change therefore would be allowable.

The only place where the verb "to fix" is used in the description of the originally filed application documents is in the context of an alternative method of use in which the lever is used in a non-stepwise manner. In this context it is said that the lever is fixed by frictional contact.

However the subject-matter of claim 1 comprises a stepwise shifted lever (... at discrete locations) as described in the context of the first and main method of use and in this context the wording used in the original application to define the elements 38,39,41 of the positioning unit of the lever is position determining plate 41, position determining balls 39, position determining holes 46. There is no mention whatsoever of any fixing.

The Board judges that it is not at all certain that any kind of fixing would be necessary or was originally meant to be present in the context of the first method of use. Given the presence of the return spring 43 in the lever to balance the force of the return spring of the rear shifter, and given the illustrated shallow engagement of the "position determining balls" 39 in the "position determining holes" 46, it seems that their role simply is to do what is indicated by their names, namely to help the cyclist determine which is the right position of the lever for a particular chosen speed. Indeed it is of great help for a cyclist when changing gear ratio to know when the lever is in the right position so that the transmission is correctly

engaged and there is no risk that when pressing on the pedals the transmission might "slip".

The Board judges that the skilled person when reading the originally filed application documents will not deduce any fixing function of these elements. On the contrary, the wording "position determining" seems to correctly describe the actual function of the position determining holes and position determining balls.

The Board judges that this is already sufficient to show that the feature of fixing the lever at discrete locations cannot be directly and unambiguously derived from the originally filed application documents.

The respondent argued that there is no idea of locking the lever at discrete locations in the word "fixing" and that similarly no such concept of locking was originally meant.

While the Board agrees that in the context of the first method of use there is no idea of locking the lever, it has to be stressed that also there is neither any mention of fixing nor any indication in the description of any function which could fall under the concept of fixing. In addition, the claimed subject-matter is more general than the detailed embodiment and no fixing has originally been disclosed in the context of this more general subject-matter.

The Board therefore judges that the main request includes an amendment which contravenes the provision of Article 123(2) EPC.



*Auxiliary request*

3. In the auxiliary request the word "fixing" has been returned to "positioning" as in the granted claim in respect of which no formal objections were raised.

Allowability of the amendment under G 9/92 and G 1/99.

While confirming that a non-appealing party against an interlocutory decision of an opposition division could in principle only defend the result obtained in the opposition proceedings, the Enlarged Board of Appeal has made an exception to this principle for the proprietor when the opponent was the sole appellant. In case G 9/92 the Enlarged Board of Appeal held that the proprietor may be allowed to make amendments if they are appropriate and necessary. In case G 1/99 (see point 14) the Enlarged Board of Appeal held that for reasons of equity when an amendment introduced in opposition proceedings and found allowable by the opposition division does not comply with the requirements of the EPC and would have the direct consequence that the patent would have to be revoked the proprietor may be allowed to file requests in order to overcome the deficiency.

As explained above the feature of the first positioning unit being coupled to the first shifting lever for "fixing" the first shifting lever at discrete locations was not disclosed in the originally filed application, contrary to Article 123(2)EPC. Were this feature to remain unamended in claim 1 of the amended patent according to the interlocutory decision, then this would inevitably lead to the revocation of the patent.

This situation corresponds to the one discussed under point 14 of G 1/99. The amendment introduced during the opposition procedure and consisting of changing the word "positioning" into "fixing", was objected to by the opponent but was found allowable by the opposition division. In its statement of the grounds of appeal the appealing opponent maintained his opinion concerning the unallowability of the amendment under Article 123(2) EPC.

It results from point 2 above that in the present case, the Board considers that the opposition division made an error of judgment by considering that this amendment met the requirement of Article 123(2) EPC.

The Enlarged Board of Appeal stated in its decision G 1/99 that in such a case the respondent/patent proprietor can attempt to resolve the problem by filing requests, as follows:

- in the first place, for an amendment introducing one or more originally disclosed limiting features, which would not put the opponent/appellant in a worse situation than it was in before it appealed;  
or
- if such a limitation proves impossible, for an amendment introducing one or more originally disclosed features, which extends the scope of the patent as maintained, but within the limits of Article 123(3) EPC; or

- if such amendment proves impossible, for deletion of the inadmissible amendment maintained by the opposition division, but within the limits of Article 123(3) EPC, even if as a result the situation of the opponent/appellant is made worse.

According to G 1/99 such requests for amendment are to be considered appropriate and necessary and, therefore admissible (cf. decision G 9/92).

In the present case as already mentioned above the amendment made during the opposition proceedings is considered not to be disclosed in the originally filed application, and more particularly it is considered that the concept of "fixing ... at discrete locations" is not disclosed. In such a case the Board considers that the first kind of request mentioned in the decision G 1/99 is not possible, since any amendment including the concept of "fixing...at discrete locations" would contravene Article 123(2) EPC.

In such a situation the second kind of request has to be considered.

The Board judges that the replacement of "fixing" by "positioning" according to the auxiliary request amounts to a request of the second kind, introducing one or more originally disclosed features but within the limits of Article 123(3) EPC. By broadening the scope of protection, the situation of the opponent is made slightly worse but not so much as if the whole of the feature were to be deleted (third option of G 1/99).

Thus, the Board considers the auxiliary request to be allowable under G 1/99.

The appellant considers that allowing this request amounts to a return to the granted version and removing any reason for the patent proprietor to file an appeal since he could anyway correct a deficient amended patent.

The Board cannot agree with this statement since the respondent has not come back to the previous version of the main claim the latter one not comprising the last feature of present claim 1. In addition a patent proprietor who files no appeal is in a weaker situation than one who does. An opponent who is the sole appellant has the possibility to withdraw its appeal if it finds that the outcome would be disadvantageous to itself. In G 7/91 and G 8/91 (OJ 1993, 346 and 356) the Enlarged Board of Appeal ruled that as far as the substantive issues settled by the decision at first instance are concerned, appeal proceedings are terminated when the sole appellant withdraws its appeal. It follows that an opponent who is the sole appellant can, if it so wishes, force the non-appealing patent proprietor to "live with" a deficiency which it has introduced. A patent proprietor who files an appeal can prevent itself from being placed in such a situation.

The Board also cannot agree with the appellant that the decision G 1/99 in paragraph 12 restricts amendment to a response to an objection first raised in appeal proceedings. The final sentence of that paragraph reads "However, in particular if the patent cannot be

maintained for reasons which were not raised at the first instance, the non-appealing proprietor deserves protection for reasons of equity" (emphasis added). This statement clearly does not restrict itself to the case of an objection first raised in appeal proceedings. Moreover, the Enlarged Board of Appeal in G 1/99 in formulating the order referred to "an objection put forward by the opponent/appellant or the Board during the appeal proceedings" without any restriction as regards when the objection was first raised.

The same conclusion results from paragraph 14 of G 1/99 which, as already mentioned, deals with the situation which arises in the present case.

4. Novelty

The appellant considered the subject-matter of claim 1 to lack novelty over E1.

The Board does not share the appellant's opinion. In the device according to E1, the first shifting device comprises two levers which are used in combination, one for pulling the endless transmission element 20 in one direction and one for pulling it in the opposite direction. With either one of the levers shown in E1 (in Figures 3 and 4) it is only possible to perform one of the two actions. Since the transmission element is endless pulling it in one direction corresponds to releasing it in the other direction. However, when the transmission element is pulled by one lever the other lever is inactive and so has no release function.

In the Board's view the first shifting lever according to E1 therefore is not operable for causing the first shifting control device to both pull and release the first transmission element.

In addition the Board judges that there is no winding drum coupled to the first shifting lever for winding and unwinding the first transmission element. In the device according to E1, the drum means 33 is not used for winding the transmission element 20 on it, it is only used for pulling the transmission element 20 in the one or the other direction. The transmission element is wrapped around the drum means 33 in order to ensure that there is sufficient friction between the drum means and the transmission element for the latter to be pulled.

A first positioning unit coupled to the first shifting lever for positioning the first shifting lever at discrete locations is also not disclosed in E1. In the context of the patent in suit the discrete locations for the lever are the positions of the lever corresponding to each of the positions of the shifter. In the device according to E1 the levers do not adopt several positions corresponding to those of the shifter, but act in the manner of a ratchet returning to the same rest position after each actuation.

The feature that the interlocking means comprise a connector for connecting the first transmission element and the second transmission element to the bicycle transmission also is not present in the device disclosed in E1, contrary to the opinion of the appellant. In the device according to E1, the second

transmission element connects the second shifting lever to the first shifting lever. The second transmission element is only corrected to the bicycle transmission via the first shifting control device and the first transmission element. Present claim 1 on the other hand, requires the presence of a connector which in the opinion of the board has to be understood as an element connecting each of the two transmission elements to the bicycle transmission and cannot be understood as a multiplicity of pieces including the first transmission element which through their mutual interconnection form the general concept of a connecting element.

For the reasons above, the subject-matter according to claim 1 of the auxiliary request is novel over E4.

5. Inventive step

The appellant considered the subject-matter to lack inventive step over a combination of E1 and E2 or E1 and E4.

- 5.1 E2 discloses in respect of Figures 2 and 3 a brake operating device in which two pull control wires actuated by the brake levers are connected together by a connector 55 which pulls on a single wire 56 itself connected to a control member 2 actuating the front and the rear brakes in a differentiated manner.

The connector 55 of the braking system of E2 is not suitable for integration into the shifting apparatus disclosed in E1. The shifting apparatus according to E1 functions with two separate ratchet type shifting levers each of which is operated repeatedly in order to

successively change the gear ratio in the respective direction. Two second shifting levers are provided, each being connected by a respective second transmission element to a respective first shifting lever. It follows that in the course of successive upward or downward changes of gear ratio the respective second transmission element undergoes a repeated reciprocal movement whilst the first transmission element undergoes successive non-reciprocal movements. As a result it would not be possible to connect the first and second transmission elements as is done by the connector according to E2.

The appellant gave no explanation either as to how the connector according to E2 would function in the apparatus according to E1 or as to why the skilled person would be motivated to combine the respective teachings. Moreover, as set out as regards novelty of the subject-matter of present claim 1 with respect to E1, the connector is only one of multiple features which form a distinction from the disclosure of E1.

- 5.2 As accepted by both parties, E4 discloses a bicycle shifting control apparatus for a bicycle transmission, the apparatus comprising:
- a first shifting control device located at a first position on the bicycle, the first shifting control device including a first shifting lever 26 and a first transmission element 14, said first shifting lever 26 being operable for causing the first shifting control device to pull and release the first transmission element 14; and
  - a first winding drum 27 coupled to the first shifting lever 26 for winding and unwinding the first



transmission element 14 and a first positioning unit coupled to the first shifting lever for positioning the first shifting lever at discrete locations defined by the holes.

The apparatus according to E4 does not comprise:

- a second shifting control device located at a second position on the bicycle, the second shifting control device including a second shifting lever and a second transmission element, said second shifting lever being operable for causing the second shifting control device to pull and release the second transmission element;

- interlocking means for interlocking the first shifting control device and the second shifting control device so that movement of either the first shifting lever or the second shifting lever causes the bicycle shifting control apparatus to shift the bicycle transmission;

- the interlocking means comprising a connector for connecting the first transmission element and the second transmission element to the bicycle transmission.

These differentiating features facilitate the use of the shifting control apparatus since it may be operable from a second grip position on the handlebar.

The objective problem solved by these features can thus be considered to be to render the operation of changing gear ratio more ergonomic.

E1 suggests using a second lever which actuates the first lever of the shifting device by repeatedly

pulling on the second transmission element; this is a different solution to a similar problem. This solution to the set problem is simple to apply in the apparatus of E1 but cannot be a solution when starting from the device according to E4, the shifting device disclosed in E4 being of a different type in which the positions adopted by the shifting lever are in correspondence with those of the shifter which it operates. In the shifting device according to E4 each time the lever is turned in one direction the drive chain is shifted to a lower gear ratio sprocket wheel whereas each time the lever is turned in the opposite direction the drive chain is shifted to a higher gear ratio sprocket wheel.

Thus, the Board judges that, given the different types of shifting devices disclosed in E1 and E4, it is already questionable whether the skilled person would consider E1 when looking for a way to improve the ergonomics of the shifting device according to E4. Even if he were to do so, the shifting device according to E1 could not have suggested the claimed solution because the way of working of the two devices is so different that the solution adopted in E1 is not transferable into the device according to E4.

5.3 The Board therefore concludes that the subject-matter of claim 1 according to the auxiliary request involves an inventive step. Since claims 2 to 7 contain all features of claim 1 this applies equally to those claims.

6. The appellant did not raise any objection in respect of the amended description. The Board is satisfied that

the description has been amended for consistency with the claims.

## **Order**

### **For these reasons it is decided that:**

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with the order to maintain the patent on the basis of the following documents:
  - claims 1 to 7 as filed during the oral proceedings on 31 August 2006.
  - description: page 2 filed during the oral proceedings on 31 August 2006, pages 3 to 5 filed on 11 November 2004.
  - drawings: pages 9 to 14 of the patent specification.

The Registrar:

The Chairman:

A. Vottner

J. Osborne