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11/367,696	03/06/2006	Etsuyoshi Watarai	SN-US065025	4552

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EXAMINER	
LIU, HENRY Y	

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3657	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	11/367,696	WATARAI, ETSUYOSHI	
	Examiner	Art Unit	
	HENRY LIU	3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 March 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/24/2006, 2/27/2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This is the first action on the merits for application 11/367696. Claims 1-16 are currently pending in this application.

Status of Claims

Claims 1-16 are pending, of which **Claims 1 and 14** are in independent form.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 3, 4, 6, 8, 9, 10, 11, 12, 13, 14 are rejected under 35 U.S.C. 102(b) as being anticipated by FEY (5,357,177).

Regarding Claim 1, the current 102(b) rejection is based on a reasonable interpretation of the claim language.

FEY teaches "an electronic derailleur control system (12) (Fig. 3) (Col. 3 lines 20-34) comprising: a derailleur (14) (Fig. 3) configured and arranged to shift from at least a

first derailleur position to a second derailleur position (Col. 3 lines 20-34, Col. 4 lines 1-10)." FEY teaches "a gear shift controller (18) (Fig. 1) operatively coupled to the derailleur (14) to operate the derailleur (14) to shift from the first derailleur position to the second derailleur position during a gear shifting operation (Col. 3 lines 20-34)."

FEY teaches "and a storage device (52) (Fig. 2) containing at least first stored gear shifting data pertaining to a first gear configuration and second stored gear shifting data pertaining to a second gear configuration." The position of the adjusting member (20) (Fig. 2) is stored for each available gear (Col. 5 lines 33 - Col. 6 line 68). The position of the adjusting member (20) for a gear of the available gears in a chain wheel package corresponds as the "first stored gear shifting data." A second position of the adjusting member (20) for the gear of the available gears in a chain wheel package corresponds as the "second stored gear shifting data." Two set adjusting values are stored for each possible gear, namely one for upshifting to this gear and one for downshifting to this gear (Col 6 lines 34-40). The gear upshift adjusting value corresponds to the "first gear configuration." The gear downshift adjusting value corresponds to the "second gear configuration."

FEY teaches the storage device (52) being operatively coupled to the gear shift controller (18) to selectively provide one of the first and second stored gear shifting data contained in the storage device (52) to the gear shift controller (18) to selectively control the derailleur (114) based on which of the first and second stored gear shifting data is being used." If the user enters a shift request to upshift to a gear, the first gear shifting

data is used. If the user enters a shift request to downshift to the gear, the second gear shifting data is used.

Regarding Claims 2 and 8, FEY teaches “wherein the gear shift controller (18) is contained in the derailleur (14).” See figure 1.

Regarding Claim 3 and 9, FEY teaches “wherein the storage device (52) is contained in the derailleur (14).” The storage device (52) is contained in the controller (18) which is contained in the derailleur (14). See figure 1.

Regarding Claim 4, FEY teaches “a remote user input unit (16) (Fig. 1) operatively coupled to the derailleur (14) with the remote user input unit (16) being configured to selectively send a gear shifting data selection that instructs the gear shift controller on which of the first and second stored gear shifting data is to be used (Col. 3 lines 20-34, Col. 5 lines 33 - Col. 6 line 68).”

Regarding Claim 6, FEY teaches "a remote user input unit (16) (Fig. 1) operatively coupled to the derailleur (14) with the remote user input unit (16) being configured to selectively send a gear shifting data selection that instructs the gear shift

controller (18) on which of the first and second stored gear shifting data is to be used (Col. 3 lines 34-68)."

Regarding Claim 10, FEY teaches "wherein the derailleur includes an electric motor (42) (Fig. 2)."

Regarding Claim 11, FEY teaches "wherein the derailleur is a rear derailleur (14) (Fig. 1)."

Regarding Claim 12, FEY teaches "wherein the derailleur is a front derailleur (114') (Fig. 3)."

Regarding Claim 13, FEY teaches "wherein the gear shift controller (18) is configured to selectively control an amount of movement of the derailleur (14) between at least the first and second derailleur positions based on which of the first and second stored gear shifting data is being used (Col. 3 lines 34-68, Col. 5 lines 33 - Col. 6 line 68)."

Regarding Claim 14, FEY teaches "a method of setting up a bicycle comprising: installing a drive train onto the bicycle that includes a front sprocket (110f) (Fig. 3) arrangement and a rear gear arrangement (110b) (Fig. 3) with a chain (48) (Fig. 1) selectively engaged with the front sprocket (110f) (Fig. 3) arrangement and the rear gear arrangement (110b) (Fig. 3)."

FEY teaches "installing a derailleur (14) (Fig. 1) configured and arranged to shift from at least a first derailleur position to a second derailleur position to selectively shift the chain (48) (Fig. 1) (Col. 3 lines 20-34, Col. 4 lines 1-10)."

FEY teaches "providing a gear shift controller (18) operatively coupled to the derailleur (14) (Fig. 1) to operate the derailleur (14) to shift from the first derailleur position to the second derailleur position during a gear shifting operation (Col. 3 lines 20-34)."

FEY teaches "and storing at least a first gear spacing into a storage device (52) that matches a gear spacing of one of the front sprocket (110f) arrangement and the rear gear arrangement (110b) (Col. 6 line 52- Col. 7 line 16)."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 3, 4, 8, 9, 10, 11, 12, 13, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over FEY (5,357,177) in view of HORIUCHI (6,467,786).

Regarding Claim 1, the current 103(a) rejection is based on applicant's intended interpretation of the claim language.

FEY teaches "an electronic derailleur control system (12) (Fig. 3) (Col. 3 lines 20-34) comprising: a derailleur (114) (Fig. 3) configured and arranged to shift from at least a first derailleur position to a second derailleur position (Col. 3 lines 20-34, Col. 4 lines 1-10)." FEY teaches "a gear shift controller (18) (Fig. 1) operatively coupled to the derailleur (14) to operate the derailleur (14) to shift from the first derailleur position to the second derailleur position during a gear shifting operation (Col. 3 lines 20-34)."

FEY teaches "and a storage device (52) (Fig. 2) containing at least first stored gear shifting data pertaining to a first gear configuration." The position of the adjusting member (20) (Fig. 2) is stored for each available gear (Col. 5 lines 68 - Col. 6 line 68). The position of the adjusting member (20) for a gear of the available gears in a chain wheel package corresponds as the "first stored gear shifting data." The chain wheel

package which each stored adjusting member position for each available gear corresponds to “first gear configuration.”

FEY does not teach “and second stored gear shifting data pertaining to a second gear configuration."

HORIUCHI teaches additional preset gear changing programs (Col. 2 lines 15-38).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the control system in FEY with presets in HORIUCHI such that the presets are used to hold gear shifting adjusting member positions in the memory device (52) for multiple chain wheel packages and cranksets to allow the rider to change the chain wheel gear set and the crankset according to riding conditions without having to reprogram the controller each time the rider chooses to use one of the various chain wheel gear sets or cranksets within the rider’s possession.

FEY as modified by HORIUCHI teaches the storage device (52) being operatively coupled to the gear shift controller (18) to selectively provide one of the first and second stored gear shifting data contained in the storage device (52) to the gear shift controller (18) to selectively control the derailleur (114) based on which of the first and second stored gear shifting data is being used.” A second set of presets would allow second stored gear shifting data to be contained in the storage device.

Regarding Claims 2 and 8, FEY as modified teaches "wherein the gear shift controller (FEY (18)) is contained in the derailleur (FEY (14))." See figure 1.

Regarding Claims 3 and 9, FEY as modified teaches "wherein the storage device (FEY (52)) is contained in the derailleur (FEY (14))." The storage device (FEY (52)) is contained in the controller (FEY (18)) which is contained in the derailleur (FEY (14)). See figure 1.

Regarding Claim 4, FEY as modified teaches "a remote user input unit (FEY (16)) (Fig. 1) operatively coupled to the derailleur (FEY (14)) with the remote user input unit (FEY (16)) being configured to selectively send a gear shifting data selection that instructs the gear shift controller on which of the first and second stored gear shifting data is to be used (Col. 3 lines 20-34, Col. 5 lines 68 - Col. 6 line 68)."

Regarding Claim 10, FEY as modified teaches "wherein the derailleur includes an electric motor (FEY (42)) (Fig. 2)."

Regarding Claim 11, FEY as modified teaches "wherein the derailleur is a rear derailleur (FEY (14)) (Fig. 1)."

Regarding Claim 12, FEY as modified teaches “wherein the derailleur is a front derailleur (FEY (114’)) (Fig. 3)."

Regarding Claim 13, FEY teaches “wherein the gear shift controller (FEY (18)) is configured to selectively control an amount of movement of the derailleur (FEY (14)) between at least the first and second derailleur positions based on which of the first and second stored gear shifting data is being used (Col. 3 lines 34-68, Col. 5 lines 33 - Col. 6 line 68).”

Regarding Claim 15, FEY does not teach “selecting a first gear configuration” and “operating the electronic derailleur in accordance with the selected first gear configuration (Col. 3 lines 20 - Col. 4 lines 36).”

FEY does not teach "from a plurality of gear configurations stored in a memory.”

HORIUCHI teaches additional preset gear changing programs (Col. 2 lines 15-38).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the control system in FEY with presets in HORIUCHI such that the presets are used to hold a plurality of gear configurations for multiple

chain wheel packages and cranksets to allow the rider to change the chain wheel gear set and the crankset according to riding conditions without having to reprogram the controller each time the rider chooses to use a chain wheel gear sets or cranksets which he has already programmed.

Regarding Claim 16, FEY as modified teaches "wherein the plurality of gear configurations include at least two sets of stored gear shifting data that contain different axial gear spacings such that the operating of the electronic derailleur between two derailleur positions based on which of the stored gear shifting data has been selected as the selected first gear configuration." As stated above, the modification of FEY by HORIUCHI allows for a plurality of gear configurations. There is inherently axial distance between gears in a crankset or chain wheel set. The controller (18) programs and stores adjusting member positions for each gear in each gear configuration (Col. 3 lines 20-34, Col. 5 lines 68 - Col. 6 line 68). Thus, FEY as modified stores different gear shifting data accounting for different axial gear spacings for two different gear configurations.

Claims 5 and 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over FEY (2002/0170056) in view of DEJOUNGE (6,564,661).

Regarding Claim 5, FEY teaches “wherein the remote user input unit (16) contains gear shifting selections that correspond to different gear configurations (Col. 3 lines 20-34, Col. 5 lines 68 - Col. 6 line 68).”

FEY does not teach the use of "a list."

DEJOUNGE teaches “a list” as the use of an interface module capable of directly selecting any of the available gears or drive modes and a display for indicating the selected dialed position (Col. 6 lines 10-55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a list to display the gear shifting selections to allow the skipping of intermediate gears and so the rider knows which gear he is in and which one he is switching to.

Regarding Claim 7, FEY does not teach “wherein the remote user input unit contains a list of gear shifting selections that correspond to different gear configurations (Col. 3 lines 20-34, Col. 5 lines 68 - Col. 6 line 68).”

DEJOUNGE teaches “a list” as the use of an interface module capable of directly selecting any of the available gears or drive modes and a display for indicating the selected dialed position (Col. 6 lines 10-55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a list to display the gear shifting selections to allow the skipping of intermediate gears and so the rider knows which gear he is in and which one he is switching to.

Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over FEY (2002/0170056) in view of HORIUCHI (6,467,786) and further in view of DEJOUNGE (6,564,661).

Regarding Claim 5, FEY as modified teaches “wherein the remote user input unit (FEY (16)) contains gear shifting selections that correspond to different gear configurations (FEY Col. 3 lines 20-34, Col. 5 lines 68 - Col. 6 line 68).”

FEY does not teach the use of "a list."

DEJOUNGE teaches “a list” as the use of an interface module capable of directly selecting any of the available gears or drive modes and a display for indicating the selected dialed position (Col. 6 lines 10-55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a list to display the gear shifting selections to allow the rider to quickly select the crankset or chain wheel set he is using.

Regarding Claim 7, FEY as modified does not teach “wherein the remote user input unit contains a list of gear shifting selections that correspond to different gear configurations (FEY Col. 3 lines 20-34, Col. 5 lines 68 - Col. 6 line 68).”

DEJOUNGE teaches “a list” as the use of an interface module capable of directly selecting any of the available gears or drive modes and a display for indicating the selected dialed position (Col. 6 lines 10-55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a list to display the gear shifting selections to allow the skipping of intermediate gears and so the rider knows which gear he is in and which one he is switching to.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HENRY LIU whose telephone number is (571) 270-7018. The examiner can normally be reached on Mon-Thurs 7:30am - 5:00pm ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, ROBERT SICONOLFI can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HENRY LIU/
Examiner, Art Unit 3657

/Robert A. Siconolfi/
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