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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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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 *4/8/2009*.

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) _____ 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4a) Of the above claim(s) _____ is/are withdrawn from consideration.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) _____ 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 _____ 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 _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Arguments

Applicant's arguments with respect to Claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

Rejection to Amended Claims

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, 6, 8, 9, 10, 11, 12, 13, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over FEY (5,357,177) in view of HORIUCHI (6,467,786) and FEY2 (4,862,395).

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 of a first drive train." 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 of a second drive train that is different from the first drive train."

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 additional presets as in HORIUCHI to store settings for downshifting to a gear or upshifting to a gear.

HORIUCHI does not teach gear shifting data pertaining to a second gear configuration of a second drive train that is different from the first drive train.

FEY2 teaches a bicycle computer which has stored wheel diameter data pertaining to a first wheel diameter and a second wheel diameter that is different than the first wheel (Col. 2 lines 18-36).

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 as modified with the presets for allowing the device to work properly on different bicycles using different components as in FEY2 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. The modification allows 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 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 6, 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 (FEY (18)) on which of the first and second stored gear shifting data is to be used (FEY Col. 3 lines 34-68).”

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).”

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 FEY2 (4,862,395) 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.

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over FEY (5,357,177) in view of FEY2 (4,862,395).

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 a plurality of gear spacing data into a storage device (52) (Col. 6 line 52- Col. 7 line 16)."

FEY does not teach "the gear spacing data corresponding to a plurality of drive trains with different axial gear spacings; and selecting one of the plurality of gear spacing data that matches an axial gear spacing of the drive train installed on the bicycle (Col. 6 line 52- Col. 7 line 16)."

FEY2 teaches a bicycle computer which has stored wheel diameter data corresponding to a plurality of bicycles with different wheel diameters and selecting one of the plurality of wheel diameters that matches the wheel installed on the bicycle (Col. 2 lines 18-36).

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 as modified with the presets for allowing the device to work properly on different bicycles using different components as in FEY2 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. The modification allows 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.

Regarding Claim 15, FEY does not teach "selecting one of a plurality of gear spacing configurations stored in a memory, the gear spacing configurations corresponding to a plurality of drive trains with different axial gear spacings, the selected one of the gear spacing configurations corresponding to an axial gear spacing of a drive train installed on the bicycle and operating the electronic derailleur in accordance with the selected one of the gear spacing configuration such that the operating of the electronic derailleur selectively controls an amount of movement of the electronic derailleur between two derailleur positions based on which of the stored gear spacing configurations has been selected as the selected one of the gear spacing configurations."

FEY2 teaches the selecting of stored wheel diameter data corresponding to a plurality of bicycles with different wheel diameters and selecting one of the plurality of wheel diameters that matches the wheel installed on the bicycle (Col. 2 lines 18-36). Calculations regarding distance and speed are made according to the set wheel diameter (Col. 5 lines 10-22).

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 as modified with the presets for allowing the device to work properly on different bicycles using different components as in FEY2 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. The

modification allows 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 teaches "and operating the electronic derailleur in accordance with the selected one of the gear spacing configuration such that the operating of the electronic derailleur selectively controls an amount of movement of the electronic derailleur between two derailleur positions based on which of the stored gear spacing configurations has been selected as the selected one of the gear spacing configurations (FEY Col. 3 lines 20 - Col. 4 lines 36) (Col. 3 lines 20-34, Col. 5 lines 68 - Col. 6 line 68)." FEY2 teaches the storage and selection of data corresponding to different bicycle components to operate correctly and FEY teaches the operating of an electronic derailleur using stored gear spacing data.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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

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