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[Continued on next page]

(54) Title: ADJUSTABLE STATIONARY FITTING VEHICLE WITH SIMULATED ELEVATION CONTROL

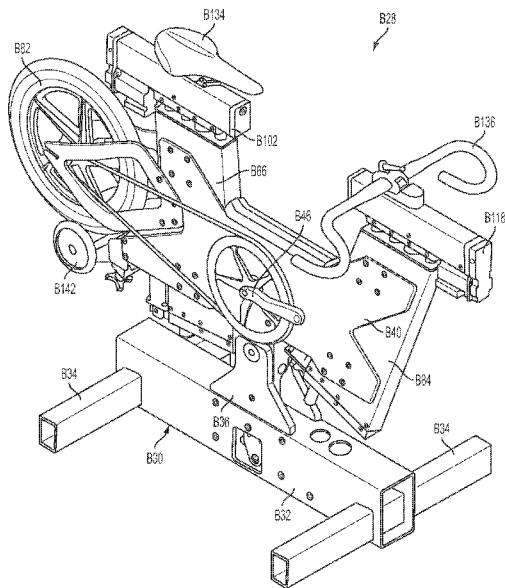


FIG. 14

(57) Abstract: An optimal bicycle frame size and configuration is determined based on operational characteristics provided by a rider when riding an adjustable stationary bicycle. An optimal motorcycle and motorcycle configuration is determined based on characteristics of the rider when riding an adjustable stationary motorcycle. A camera system can be used to collect anthropomorphic data about the rider to establish an initial positioning of the components of the adjustable vehicle. The camera system can also be used to collect real-time information about the rider's body positioning so as to cause adjustment of the positioning of the components of the adjustable vehicle.





Published:

(88) Date of publication of the international search report:

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

26 February 2015

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 14/43270

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A63B 22/06 (2014.01)

CPC - A63B 2225/096

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8): A63B 22/06 (2014.01)

CPC: A63B 2225/096

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

IPC(8): A63B 22/02, A63B 69/16, B62K 15/00 (2014.01)

CPC: A63B 22/02, A63B 22/0015, A63B 69/16, B62K 3/02, B62K 15/00 USPC: 482/51, 482/57, 482/61

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PatBase; ProQuest Dialog; Google Patents; Google Web; Google Scholar

Search Terms: stationary, fit%, foot, feet, pedal%, support, rest, horizontal axis, seat, handlebar, actuator, angle%, incline%, fixed, bike, bicycle, vehicle, adjust%, mov%, handlebar%

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1410984 A1 (Buzzi). 21 April 2014 (21.04.2014) Figs. 1-2; para [0031], [0036], [0040]-[0041].	1-2
A	US 7,905,817 B2 (Giannascoli et al.). 15 March 2011 (05.03.2011) Fig. 1; col 2, ln 60-62; col 3, ln 28-33.	1-2

Further documents are listed in the continuation of Box C.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search
15 December 2014 (15.12.2014)

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02 JAN 2015

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 14/43270

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I: Claims 1-2, directed to a stationary fitting bike;

Group II: Claims 3-13, directed to a stationary fitting bike;

Group III, Claim 14, directed to a system for determining a motorcycle fit and configuration for a rider; and

-*-Continued on extra page-*-

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-2

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 14/43270

-*Box III-Observations Where Unity of Invention Is Lacking-*

Group IV: Claims 15-20, directed to a fitting bike.

The inventions listed as Groups I - IV do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features because of the following reasons:

Group I requires the special technical feature of at least one of a handlebar actuator and a seat actuator are angled relative to perpendicular to a horizontal longitudinal axis of a frame, which technical features are not required by the claim limitations of Groups II-IV.

Group II requires the special technical features of a seat actuator including a seat support adapted to be attached to a seat; a lower guide attached to a housing; an upper guide spaced apart from the lower guide and attached to the housing; and two spaced apart rods extending between the guides and translatable relative to a frame, the seat support being attached proximate top ends of the rods, which technical features are not required by the claim limitations of Groups I, III or IV.

Group III requires the special technical features of a system for determining a motorcycle fit and configuration for a rider, including an adjustable stationary motorcycle, the adjustable stationary motorcycle having a seat and handlebars that are dynamically repositionable at the direction of a control system; and a plurality of sensors for measuring position characteristics of the adjustable stationary motorcycle when the rider is positioned on the adjustable stationary motorcycle, the plurality of sensors being operably connected to the control system, which technical features are not required by the claim limitations of Groups I, II or IV.

Group IV requires the special technical feature of a power tilting mechanism for tilting a frame relative to a base.

The only feature(s) shared by Groups I-IV that would otherwise unify the groups, are a stationary adjustable fitting bike (a two-wheeled vehicle) having adjustable handlebars and an adjustable seat.

However, these technical features do not represent a contribution over the prior art, because the shared technical features are anticipated by US 7,905,817 B2 to Giannascoli et al. (hereinafter 'Giannascoli').

Giannascoli teaches a stationary adjustable fitting bike (10 in Fig. 1; col 2, ln 60-62) having adjustable handlebars (18 in Fig. 1; col 3, ln 32-33) and an adjustable seat (16 in Fig. 1; col 3, ln 28-32).

As the common technical features were known in the art at the time of the invention, they cannot be considered a common technical feature that would otherwise unify Groups I-IV.

The only feature(s) shared by Groups I-II that would otherwise unify the groups, are a stationary adjustable fitting bike (a two-wheeled vehicle) having a frame, a foot support mounted on the frame, adjustable handlebars moved by a handlebar actuator, and an adjustable seat moved by a seat actuator.

However, these technical features do not represent a contribution over the prior art, because the shared technical features are anticipated by Giannascoli.

Giannascoli teaches a stationary adjustable fitting bike (10 in Fig. 1; col 2, ln 60-62) having a frame (12 in Fig. 1; col 2, ln 60-62), a foot support (crankset 14 in Fig. 1; col 2, ln 60-62), adjustable handlebars (18 in Fig. 1; col 3, ln 32-33) moved by handlebar actuators (31, 34 in Fig. 1; col 3, ln 34-44) and an adjustable seat (16 in Fig. 1; col 3, ln 28-32) moved by handlebar actuators (24, 27 in Fig. 1; col 3, ln 23-24 and 30-32).

As the common technical features were known in the art at the time of the invention, they cannot be considered a common technical feature that would otherwise unify Groups I-II.

Therefore Groups I-IV lack unity under PCT Rule 13.