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(54) Title: EQUINE WIRELESS PHYSIOLOGICAL MONITORING SYSTEM

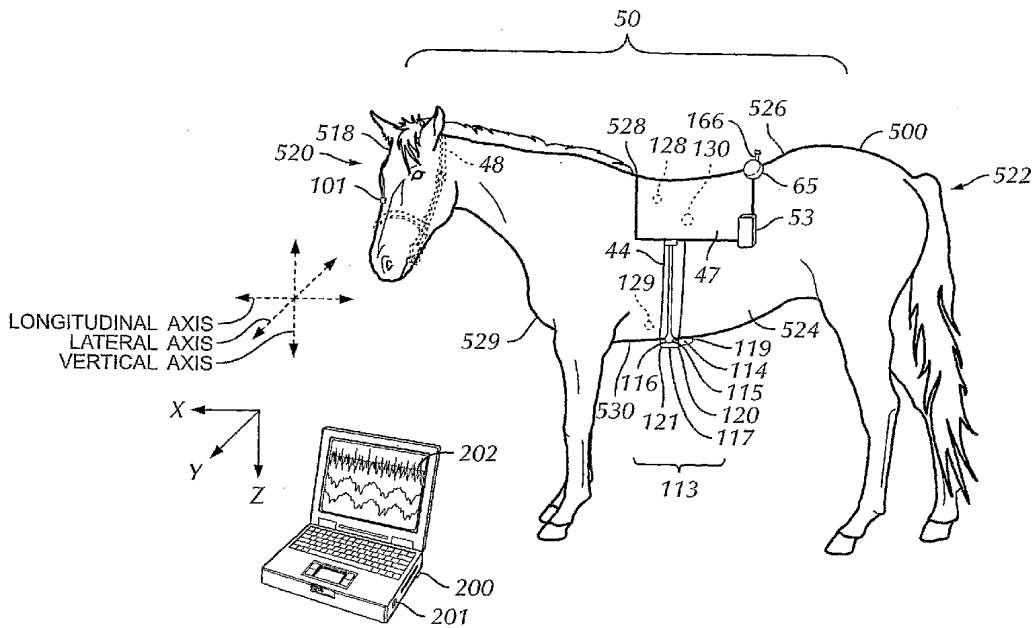


FIG. 1

(57) Abstract: An accelerometer senses equine respiratory structural vibrations. The accelerometer includes a sensing surface configured to be attached to one of hair, skin, bone, ligament, cartilage, and other tissue of a horse. The accelerometer is responsive to respiratory structural vibrations of the horse and outputs a signal corresponding to the respiratory structural vibrations.

WO 2006/053290 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/41146

A. CLASSIFICATION OF SUBJECT MATTER  
 IPC: A61B 5/08(2006.01)  
  
 USPC: 600/534  
 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)  
 U.S. : 600/529-543

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

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,309,922 A (SCHECHTER et al) 10 May 1994 (10.05.1994), entire document.	1-4
X, P	US 2004/0243005 A1 (RAPPS) 02 December 2004 (02.12.2004), entire document.	1-4

Further documents are listed in the continuation of Box C.  See patent family annex.

* Special categories of cited documents:		
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
"E" earlier application or patent published on or after the international filing date	"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
"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)	"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
"O" document referring to an oral disclosure, use, exhibition or other means	"&"	document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search 11 January 2008 (11.01.2008)	Date of mailing of the international search report 28 JAN 2008
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Authorized officer <i>Navin Natnithadha</i> NAVIN NATNITHADHA Telephone No. (571) 272-2975

**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:  
Please See Continuation Sheet

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 any 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.: 1-4
- 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.

**BOX III. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING**

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 1, claim(s) 1-4, drawn to an accelerometer that senses equine respiratory structural vibrations.

Group 2, claim(s) 5-6, drawn to a motion sensor that senses equine motion in multi-dimensional space.

Group 3, claim(s) 7-12, drawn to a wireless equine physiological monitoring system comprising a respiratory sensor and a memory.

Group 4, claim(s) 13, drawn to a wireless equine physiological monitoring system comprising a respiratory detection sensor, memory, and a real-time trend display.

Group 5, claim(s) 14, drawn to a wireless equine physiological monitoring system comprising a speed sensor and a real-time trend display.

Group 6, claim(s) 15, drawn to a wireless equine physiological monitoring system comprising a single-axis angular rate sensor and a real-time trend display.

Group 7, claim(s) 16-27, drawn to a wireless equine physiological monitoring system comprising a respiratory detection sensor, a second sensor, and a one of a trend display and a computer.

Group 8, claim(s) 28, drawn to a wireless equine physiological monitoring system comprising a speed sensor, a second sensor, and one of a trend display and a computer.

Group 9, claim(s) 29-30, drawn to an equine physiological monitoring system comprising a portable controller, a lateral-axis angular rate sensor, a vertical-axis angular rate sensor, an ECG electrode configuration set, and a respiratory detection sensor.

Group 10, claim(s) 31-33, drawn to a method of monitoring physiological data of an exercising horse.

Group 11, claim(s) 34, drawn to a method of monitoring physiological data of an exercising horse.

Group 12, claim(s) 35, drawn to a method of monitoring interactions of physiological events of an exercising horse.

Group 13, claim(s) 36, drawn to a method of monitoring interactions of physiological events of an exercising horse.

Group 14, claim(s) 37-39, drawn to a method of monitoring interactions of physiological events of an exercising horse.

The inventions listed as Groups 1-14 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 for the following reasons: each of the groups contain distinctive features as shown in the limitations of each group and requires separate, burdensome searches.