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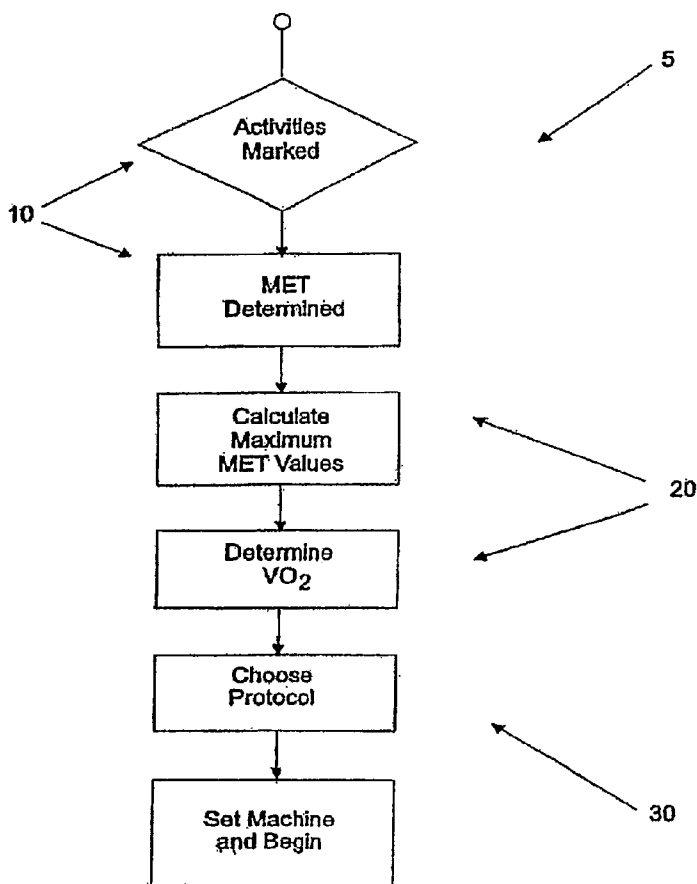
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(54) Title: APPARATUS AND METHOD FOR PHYSIOLOGICAL TESTING INCLUDING CARDIAC STRESS TEST



(57) Abstract: A physiological stress testing apparatus and method which provides customized exercise routines that challenge an individual to achieve the maximal desirable heart rates and exercise stress loads. The method and apparatus applies a gradually increasing workload for a patient on the exercise apparatus regardless of the speed or efficiency at which the patient operates the apparatus. An electromagnetic resistance unit is controlled by a programmable logic controller and a pulse width modulation controller to adjust the resistance applied by the apparatus in order to maximize the workload for the patient. When a patient reaches a maximal workload, this allows the apparatus to automatically calculate a VO₂ maximum.

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A. CLASSIFICATION OF SUBJECT MATTER

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USPC - 482/8

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) - A61B 5/22; A63B 21/00, 21/005, 24/00 (2007.10)

USPC - 482/1, 8, 9, 900, 901; 600/513

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)

Patbase

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,916,274 B2 (GLUSCO) 12 July 2005 (12.07.2005) entire document	1-2
Y		3-16
Y	US 6,321,700 B1 (HEIN et al) 27 November 2001 (27.11.2001) entire document	3-7, 13-16
Y	US 2005/0240831 A1 (BALKMAN et al) 27 October 2005 (27.10.2005) entire document	4-7, 14-16
Y	US 6,022,195 A (GAUDET et al) 08 February 2000 (08.02.2000) entire document	6-7, 15-16
Y	US 4,566,461 A (LUBELL et al) 28 January 1986 (28.01.1986) entire document	8-16

Further documents are listed in the continuation of Box C.

* Special categories of cited documents:	"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
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
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"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)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
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