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**EUROPEAN PATENT APPLICATION**

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⑤① Int. Cl. 4: **G 06 F 15/42, A 63 B 21/00**

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⑧⑧ Date of deferred publication of search report: **23.11.89 Bulletin 89/47**

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⑤④ **Electronically controlled exercise system.**

⑤⑦ A system and method for providing an exercise program at a desired pace throughout each repetition and which applies resistance against a user's efforts based upon user performance history and user demographics. A central controller stores user demographics and performance information, and provides this information as well as program criteria and evaluations to any of a plurality of exercise stations. The exercise stations each include a magnetic brake for producing the desired resistance levels. A central processor unit (CPU) controls the exercise program at each station. The initial brake resistance is established based upon user demographic information and initial user performance of an exercise. The brake resistance is represented by lights in an LED stack simulating weights which move up and down along a run in conformity with position of a movement arm which the user moves. A pacer light moving adjacent the LED weight stack guides the user at a desired pace throughout each repetition. User performance including rate and limb extension is monitored and resistance is changed during the exercise period as performance corresponds to selected criteria. The user's performance is evaluated based on performance history and demographically-based criteria to provide coaching comments to the user and to propose changes to the exercise program. Selected educational and instructional material relevant to

the particular user may also be provided. In addition, by monitoring user parameters such as weight and percent body fat, and in view of user demographic and performance information, diet control information may also be provided.



European Patent  
Office

# EUROPEAN SEARCH REPORT

0246771

Application number

EP 87 30 3857

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
X	EP-A-0 057 609 (NAUTILUS SPORTS/ MEDICAL INDUSTRIES)  * Page 2, line 25 - page 3, line 26; page 10, lines 12-19; page 11, line 1 - page 12, line 24; page 15, lines 24-37; figures 4,5 *	1-6,8, 10-14, 24-31, 39-49, 51-61, 66,76- 79,83- 89	G 06 F 15/42 A 63 B 21/00
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X	WO-A-80 00 124 (POLHEMUS et al.)  * Page 8, lines 15-34; page 10, lines 1-6; page 14, line 23 - page 15, line 25 *	1-6,8, 10-14, 24-31, 39-49, 51-61, 66,76- 79,83- 89	
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X	US-A-4 556 216 (PITKANEN)  * Column 1, line 62 - column 2, line 2; column 4, line 31 - column 5, line 10; column 6, lines 1-11 *	1-6,8, 10-14, 24-31, 39-49, 51-61, 66,76- 79,83- 89	G 06 F 15/42 A 63 B 21/00
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<del>X The document is not relevant for the purposes of the search</del>			
Place of search THE HAGUE		Date of completion of the search 18-04-1989	Examiner LECOMTE
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons &amp; : member of the same patent family, corresponding document</p>			



### CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid.
- namely claims:
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

### X LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions.

namely:

1. Claims 1-6, 8, 10-14, 24-31, 39-49, 51-61, 66, 76-79, 83-89:  
Assisting, guiding, coaching the user through audio-visual means
2. Claims 7, 15, 16, 19-23, 67-71, 73:  
Automatic adjustment of exercise programm
3. Claims 9, 17, 18, 32-38, 50, 65, 72, 74, 75, 80-82, 95-101:  
Interconnection of exercise stations
4. Claims 62-64, 92-94:  
Exercise apparatus with diet control
5. Claims 90, 91:  
Method of defining extension values

- ☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid.
- namely claims:
- ☒ - None of the further search fees has been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims.

namely claims: 1-6, 8, 10-14, 24-31, 39-49, 51-61, 66, 76-79, 83-89