

Title (en)
Suspension system for exercise apparatus

Title (de)
Federungssystem für ein Übungsgerät

Title (fr)
Système de suspension pour appareil d'exercice

Publication
EP 0956884 A1 19991117 (EN)

Application
EP 98303615 A 19980508

Priority
• EP 98303615 A 19980508
• CA 2236774 A 19980506
• JP 14230898 A 19980508

Abstract (en)
A treadmill (10) includes a frame on which are mounted transverse forward and rearward roller assemblies (14, 16). An endless belt (18) is trained about the forward and rearward roller assemblies. A deck (20) is positioned between the upper run of the belt and the frame. The rearward portion of the deck (20) is mounted to the frame by a pivot connection (24) to allow pivoting of the deck about an axis transversely to the length of the deck. Elongate springs (26) of adjustable stiffness are mounted either along the sides of the frame to underlie the side margins of the deck, or transversely of the deck, to support the deck in conjunction with the pivot connection (24) and to absorb impact loads imparted on the deck by the user. <IMAGE>

IPC 1-7
A63B 22/02

IPC 8 full level
A63B 22/02 (2006.01); **A63B 23/04** (2006.01)

CPC (source: EP)
A63B 22/02 (2013.01); **A63B 22/0214** (2015.10); **A63B 22/0228** (2015.10); **A63B 22/0235** (2013.01)

Citation (applicant)
• US 4974831 A 19901204 - DUNHAM PAUL T [US]
• US 4984810 A 19910115 - STEARNS KENNETH W [US], et al
• FR 2616132 A1 19881209 - TECHNOLOGIES MACHINES SPECIALE [FR]
• US 5336144 A 19940809 - RODDEN PATRICK T [US]
• US 5454772 A 19951003 - RODDEN PATRICK T [US]

Citation (search report)
• [X] WO 9721471 A1 19970619 - SPORT ENGINEERING LIMITED [GB], et al
• [X] US 4350336 A 19820921 - HANFORD NORRIS E
• [X] US 5476430 A 19951219 - LEE MICHAEL G [US], et al

Cited by
CN111973937A; CN107626093A; GB2364251A; US6589138B2; WO2008099430A1; US10058730B2; US10688336B2; US11364412B2

Designated contracting state (EPC)
DE ES FI FR GB IT

DOCDB simple family (publication)
EP 0956884 A1 19991117; **EP 0956884 B1 20040818**; CA 2236774 A1 19991106; CA 2236774 C 20050118; DE 69825723 D1 20040923; DE 69825723 T2 20050113; ES 2227774 T3 20050401; JP 4065603 B2 20080326; JP H11319144 A 19991124

DOCDB simple family (application)
EP 98303615 A 19980508; CA 2236774 A 19980506; DE 69825723 T 19980508; ES 98303615 T 19980508; JP 14230898 A 19980508