

1) Family number: 63714009 (US2018073590A)

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Title: DAMPER FOR DAMPING A PIVOT MOVEMENT

Priority: DE201510104927 20150331 WO2016EP57162 20160331 DE201610118920 20161005
WO2017EP57791 20170331

Family:

Publication number	Publication date	Application number	Application date
■ CN109073030 A	20181221	CN201780026773	20170331
■ DE102015104927 A1	20161006	DE201510104927	20150331
■ DE102016118920 A1	20171005	DE201610118920	20161005
■ DE102016118920 B4	20190711	DE201610118920	20161005
■ EP3436717 A2	20190206	EP20170719170	20170331
■ US2018073590 AA	20180315	US20160563675	20160331
■ US2019111300 AA	20190418	US20170090338	20170331
■ WO16156544 A1	20161006	WO2016EP57162	20160331
■ WO17168004 A2	20171005	WO2017EP57791	20170331
■ WO17168004 A3	20171130	WO2017EP57791	20170331

Probable Assignee: INVENTUS ENG GMBH

Assignee(s):(std): INVENTUS ENG GMBH

Assignee(s): INVENTUS ENGINEERING GMBH

Inventor(s):(std): BATTLOGG STEFAN

Agent(s): BSB PATENTANWALTE SCHUETTE AND ENGELN PARTNERSCHAFT MBB; ENGELN DANIEL ET AL; BSB INTELLECTUAL PROPERTY LAW

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KH KM KN KP KR KW KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class (IPC 8-9): A61B5/22 A63B21/005 A63B21/008 A63B22/00 A63B22/02 A63B22/06 A63B24/00 F16D37/02 F16D59/00 F16F15/10 F16F9/10 F16F9/12 F16F9/36 F16F9/53 (Advanced/Invention)

CPC: F16D37/02 F16F9/36 F16F9/103 F16F9/12 F16F15/10 A63B21/00845 A63B22/0048 A63B22/0076 A63B22/02 A63B22/0605 A63B24/0087 A63B2024/0093 A63B2220/30 A63B2220/40 A63B2220/51 A63B2220/54 A63B2220/56 A63B2230/06 A61B5/22 F16F9/535 H04M1/72527 F16F9/125 F16F9/19

US class: 1/1 188/267

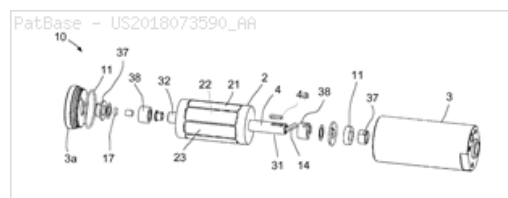
[Classification Explorer](#)

Cited documents: WO17013236 A1, WO17013234 A1, WO14037105 A2, WO14013435 A1, WO10108170 A1, WO08093938 A1, WO06099484 A1, US2015247548 AA, US2013260968 AA, US2007045068 AA, US2004084887 AA, JP2009287639 A2, EP2408526 A1,
DE202004008024 U1
DE102012017423 A1
DE102012016948 A1
CN102171481 A, CN101966116 B, CN101175539 A,

Forward Citations: WO19138015, WO18154117, WO18108937, US2019011013, DE102018100390, DE102017103811, DE102017103810, DE102016124117,

Abstract:

A rotary damper for damping a pivoting motion has two components, one component being an inside component and the other component an outside component. The outside component radially surrounds the inside component at least in sections. Between the components a damping gap is formed that is bordered radially inwardly by the inside component and radially outwardly, by the outside component. The gap is filled with a magnetorheological medium. The damping gap can be exposed to a magnetic field to damp a pivoting motion between the two counter-pivoting components about an axle. One of the components is provided with a plurality of radially extending arms. The arms are equipped with an electric coil having a winding, the winding extending adjacent to the axle and spaced apart from the axle.



2) Family number: 41745013 (US2008096725A)

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Title: PERFORMANCE MONITORING AND DISPLAY SYSTEM FOR EXERCISE BIKE

Priority: US20060584283 20061020 WO2007US80481 20071004 US20100376203F 20101004
US20110391779F 20110512

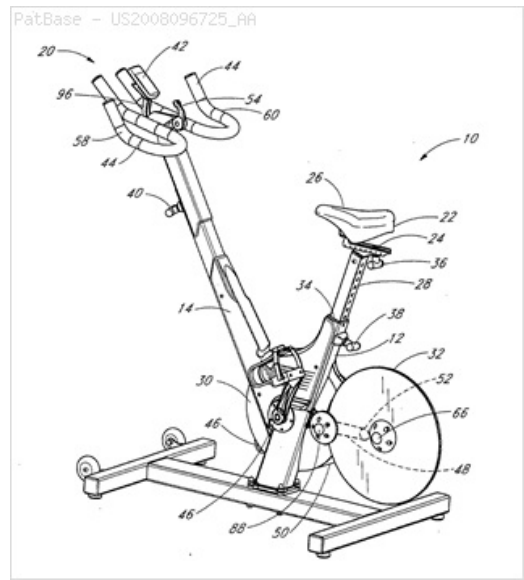
Family:

Publication number	Publication date	Application number	Application date
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CA2702640 AA	20080502	CA20072702640	20071004
EP2079365 A2	20090722	EP20070843866	20071004
EP2079365 A4	20110323	EP20070843866	20071004
US2008096725 AA	20080424	US20060584283	20061020
USD643887 S1	20110823	US20100376203F	20101004
USD659778 S1	20120515	US20110391779F	20110512
WO08051693 A2	20080502	WO2007US80481	20071004
WO08051693 A3	20080703	WO2007US80481	20071004

Probable Assignee: KEISER CORP
Assignee(s):(std): KEISER CORP ; KEISER DENNIS L
Inventor(s):(std): KEISER DENNIS L
Agent(s): DUXBURY STEPHEN; KNOBBE MARTENS OLSON AND BEAR LLP; DELANEY KAROLINE A
Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZZ
International class A61B5/22 A63B21/00 A63B21/005 A63B22/06 A63B71/00 G01L5/00 (Advanced/Invention);
(IPC 8-9): A61B5/22 A63B21/00 A63B22/06 A63B71/00 G01L5/00 (Core/Invention)
CPC: A63B21/0052 A63B21/015 A63B21/225 A63B2022/0658 A63B2024/0093 A63B2220/34 A63B2220/51 A63B2220/54 A63B22/0605 A63B21/0051
European class: A63B21/005B A63B22/08 K63B21/005B K63B21/005B2 K63B21/015 K63B21/22F K63B22/06C4S K63B220/34 K63B220/51 K63B220/54 K63B24/00R4
US class: 482/57 482/8 D21/667 D21/694
Locarno class: 21/02
[Classification Explorer](#)
Cited documents: USD636449 S1, USD625762 S1, USD596680 S1, USD586409 S1, USD473602 S1, USD460794 S1, USD430240 S1, USD382925 S1, USD380796 S1, USD379164 S1, USD372284 S1, USD356840 S1, USD354887 S1, USD343659 S1, USD323368 S1, USD311047 S1, USD307928 S1, USD299732 S1, USD296457 S1, USD291462 S1, USD281711 S1, USD280923 S1, USD280226 S1, USD224329 S1, USD150765 S1, USD141926 S1, USD126371 S1, US7927258 BB, US7785236 BA, US7641600 BB, US7175570 BB, US7172532 BB, US7090619 BB, US7011607 BB, US6669603 BA, US6612970 BB, US6569063 BB, US6450922 BA, US6407663 BA, US6152856 A, US5961424 A, US5712767 A, US5076573 A, US5065633 A, US5004443 A, US4875674 A, US4817939 A, US4464834 A, US4071235 A, US2468933 A, US2010179030 AA, US2008103030 AA, US2008020908 AA, US2007197346 AA, US2007173381 AA, US2006234840 AA, US2006102348 AA, US2006079382 AA, US2006046905 AA,
Forward Citations: WO13138303, WO11053272, WO10105223, USD877267, USD861083, USD852905, USD831758, USD807443, USD797213, USD662559, USD649607, US9999818, US9943718, US9861855, US9737746, US9707445, US9700753, US9671062, US9579534, US9480877, US9314667, US9174085, US8585561, US8162803, US7874957, US7762931, US2018028858, US2017340913, US2017312580, US2017128763, US2016236037, US2016076694, US2015265873, US2014171266, US2014106936, US2014077494, US2011195818, US2011009239, US2010234185, US2008261774, US2008207402, US2008015089, US10537764, US10486026, US10384097, US10335633, US10322315, US10272280, US10220260, US10143880, US10046222, US10022590, US10010746, US10004941, US09999818, GB2463768, GB2463768, EP3000507, EP2886167, EP2848288, EP2848288, CN108692844, CN107349556, CN107349556, CN107343992, CN107343992, CN105444933, CN103301604, CN103301604, CN103111041,

Abstract:
An apparatus and method for determining the power of a user of an exercise cycle by measuring an RPM and resistance level achieved by the user in combination with a predetermined relationship. The RPM may be measured by sensing the rotation of, for example, a driving wheel or **flywheel** of the exercise cycle. The resistance level experienced by the user may be varied by an eddy current braking system. The eddy current braking system may include a pair of magnets that sweep across the face of the **flywheel** to thereby vary the experienced resistance level.



3) Family number: 63860029 (US2016310786A)

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Title: CYCLE-TYPE EXERCISE EQUIPMENT CONVERSION APPARATUS AND METHODS OF CONVERTING THEREOF

Priority: US20150153289P 20150427 US20160136560 20160422 US20180048770 20180730

Family:

Publication number	Publication date	Application number	Application date
US2016310786 AA	20161027	US20160136560	20160422
US2018333607 AA	20181122	US20180048770	20180730
US10039953 BB	20180807	US20160136560	20160422
WO16176123 A1	20161103	WO2016US29007	20160422
WO16176123 A8	20170803	WO2016US29007	20160422

Probable Assignee: PROSNITZ SOLUTIONS LLC

Assignee(s):(std): PROSNITZ SOLUTIONS LLC ; PROSNITZ SOLUTIONS LLC

Inventor(s):(std): PROSNITZ JOSEPH H

Agent(s): DRINKER BIDDLE AND REATH LLP; PUPP BRIAN C ET AL; RUPP BRIAN C ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class (IPC 8-9): A63B22/00 A63B22/06 B62K13/00 B62M1/12 B62M1/24 B62M1/26 (Advanced/Invention)

CPC: A63B22/0007 A63B22/0012 A63B22/0605 A63B22/0611 A63B22/0647 A63B22/067 A63B22/0682 B62K13/00 B62M1/26

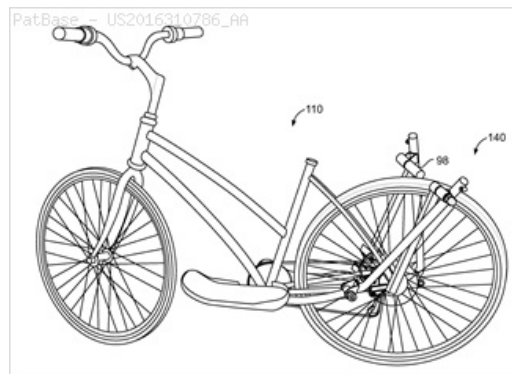
US class: 1/1 482/61

[Classification Explorer](#)

Cited documents: WO11157910 A1, WO11065637 A1, USD633416 S1, USD526250 S1, US9260156 BB, US8388004 BB, US8220578 BB, US8181977 BA, US8162337 BB, US8128536 BB, US8128111 BB, US8123242 BB, US8061728 BB, US8029009 BB, US7967313 BA, US7909348 BB, US7797841 BB, US7717446 BB, US7662071 BB, US7651446 BA, US7455623 BB, US7296813 BB, US7191884 BB, US7140626 BA, US6773022 BB, US6663127 BB, US6659486 BB, US6648353 BA, US6572128 BB, US6557657 BB, US6439590 BA, US6431301 BA, US6398244 BA, US6171217 BA, US6171217 B1, US6090013 A, US5593372 A, US558464 A, US5540637 A, US5511810 A, US5419572 A, US4666173 A, US4577879 A, US4212480 A, US4193324 A, US4141587 A, US4026571 A, US3259398 A, US2014091551 AA, US2012178592 AA, US2009239714 AA, US2008116655 AA, US2007213180 AA, US2006019802 AA, US2005263978 AA, KR20110067080 A, EP1930235 B1, EP0285858 A2, CN202557720 U, CA2434373 C,

Abstract:

An apparatus for converting a cycle-type exercise machine into another type of exercise machine includes a stationary frame structure that attaches to a frame of the cycle-type exercise machine, a pair of swing arms pivotally coupled with the stationary frame structure, and a pair of coupler bars pivotally coupled with the pair of swing arms on one end and rotationally attached to a crank bar of the cycle-type exercise machine on an opposite end.



4) Family number: 62900032 (CN205649818U)

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Title: GEAR HOBBLING FORMULA BICYCLE BALANCE SIMULATION WARE OF RIDING SUITABLE FOR CHILDREN

Priority: CN201610281945 20160429 CN201620381392U 20160429

Family:

Publication number	Publication date	Application number	Application date
CN105749527 A	20160713	CN201610281945	20160429
CN205649818 U	20161019	CN201620381392U	20160429

Probable Assignee: XU FENG

Assignee(s):(std): XU FENG

Inventor(s):(std): XU FENG

International class (IPC 8-9): A63B69/16 (Advanced/Invention)

CPC: A63B69/16 A63B2069/163 A63B2069/164 A63B2225/09

[Classification Explorer](#)

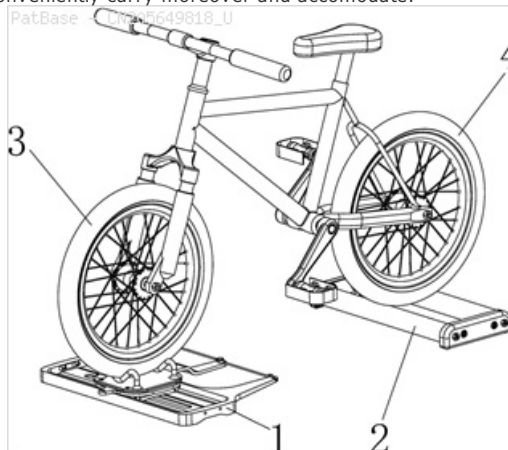
Cited documents: US2015217158 AA, US2013065734 AA, CN205649818 U, CN203043417 U, CN200995048 Y, CN104587637 A, CN104174151 A,

Forward Citations: CN105749527,

Abstract:

The utility model relates to a **gear** hobbling formula **bicycle** balance simulation ware of riding suitable for children, this simulator include balancing unit and cylinder device, balancing unit includes base, slider, rotating member and swing, and the other end of swing is the arc and is equipped with along arc limit continuous distribution's the teeth of a cogwheel, and **curved** centre of a circle is coincident mutually with the rotation tie point of rotating member, has set firmly the rack on the base, still is equipped with stop device on the rotating member, the cylinder device includes frame and two cylinders, is provided with the more than one **flywheel** between frame and the cylinder, and the **flywheel** is connected the transmission with the cylinder. This simulator can utilize the inertia that sets up the **flywheel** between frame and cylinder to drive the cylinder in the transition zone time and rotate to driving the **bicycle** rear wheel and rotating, in order accomplishing a power zone to the smooth transition of another

power zone, the external diameter and the quality of greatly reduced cylinder not only reduce the focus of riding of **bicycle**, make children, old man and beginner have more the sense of security, conveniently carry moreover and accomodate.



5) Family number: 15721042 (US2005085354A)

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Title: HANDLEBAR ASSEMBLY

Priority: GB20010020598 20010824 EP20020767608 20020823 WO2002GB03859 20020823

Family:	Publication number	Publication date	Application number	Application date
	AU2002330604 AA	20030310	AU20020330604	20020823
	AU2002330604 BB	20090604	AU20020330604	20020823
	CA2458496 AA	20040224	CA20022458496	20020823
	CN1296109 C	20070124	CN20028019372	20020823
	CN1561247 A	20050105	CN20028019372	20020823
	DE60243053 D1	20120802	DE20026043053	20020823
	EP1420859 A2	20040526	EP20020767608	20020823
	EP1420859 B1	20120530	EP20020767608	20020823
	GB200120598 A0	20011017	GB20010020598	20010824
	GB200406172 A0	20040421	GB20040006172	20020823
	GB2396308 A1	20040623	GB20040006172	20020823
	GB2396308 B2	20060412	GB20040006172	20020823
	JP2005500882 T2	20050113	JP20030522874T	20020823
	JP4214054 B2	20090128	JP20030522874T	20020823
	US2005085354 AA	20050421	US20020487756	20020823
	US7870809 BB	20110118	US20020487756	20020823
	WO03018391 A2	20030306	WO2002GB03859	20020823
	WO03018391 A3	20030605	WO2002GB03859	20020823

Probable Assignee: PULSE FITNESS LTD

Assignee(s):(std): MICHAEL RICE ; PATRICK RICE MICHAEL JOSEPH ; RICE MICHAEL J P ; RICE MICHAEL JOSEPH PATRICK

Assignee(s): RICE MICHAEL JP ; RICE MICHAEL JOSEPH PATRICK BATHAMPTON ; PULSE FITNESS LTD ; MICHAEL JOSEPH PATRICK RICE

Inventor(s):(std): PATRICK RICE MICHAEL JOSEPH ; RICE MICHAEL J P ; RICE MICHAEL JOSEPH PATRICK

Inventor(s): MICHAEL JOSEPH PATRICK RICE ; RICE MICHAEL JP ; RICE MICHAEL JOSEPH PATRICK BATHAMPTON ; RICE MICHAEL

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; MACRAE AND CO; DEHMEI AND BETTENHAUSEN PATENT U RECHTSANWAELTE; TRANTER ANDREW DAVID; CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC; CHRISTENSEN OCONNOR JOHNSON KINDNESS PLLC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

International class
(IPC 8-9): A63B21/00 A63B21/055 A63B22/08 A63B22/12 A63B23/035 A63B23/12 A63B69/16 A63F13/06 B62K21/12 B62K21/14 (Advanced/Invention); A63B21/00 A63B21/02 A63B22/06 A63B23/035 A63B69/16 A63F13/02 (Core/Invention)

International class
(IPC 1-7): A63B21/00 A63B21/02 A63B21/055 A63B22/08 A63B22/12 A63B23/035 A63B23/12 A63B69/16 A63F13/06 B62K21/14

CPC: A63B23/035 A63B22/0605 A63B22/0005 A63B22/0012 A63B22/0056 A63B22/06 A63B71/0622 A63B2022/003 A63B2022/0035 A63B2208/12 A63F13/06 A63F2300/1043 A63F2300/1062 Y10T74/2078 Y10T74/20786 A63F13/245 A63F13/803

European class: A63B22/00A6S A63B22/00P6 A63B22/08 A63B23/035 A63B71/06D2 A63F13/06 K63B208/12 K63B22/00A2 K63B22/00C2P K63B22/00C6 K63B22/08 K63F300/10M K63F300/10S

US class: 482/121 482/121P 482/126 482/126S 482/92 482/92S 74/551.1 74/551.2

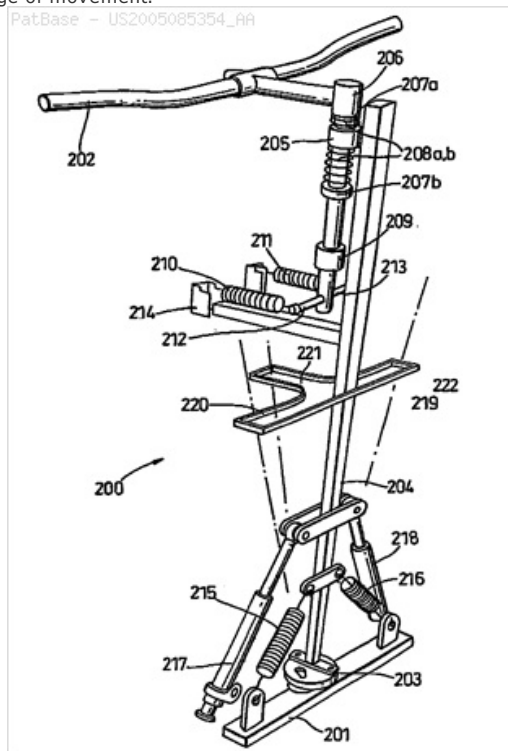
[Classification Explorer](#)

Cited documents: WO0129646 A1, US6234800 BA, US6056672 A, US6056672, US5743835 A, US5584700 A, US5565002 A, US5554700 A, US5240417 A, US5209662 A, US5104119 A, US5035418 A, US4709917 A, US4351410 A, US3587319 A, US2003121358 AA, JP6210023 A2, JP6210023, JP6136651 U, JP61036651 U1, JP6056672 B1, JP3078781 U, JP2046871, JP2000325497, JP0246871, DE4207805 A1, CN2201149 Y, CN2198006 Y,

Forward Citations: WO10110670, WO09095036, WO07055584, WO05046806, US9868022, US9861852, US9855480, US9649530, US9580137, US9579542, US9352183, US9039582, US8764616, US8419597, US7963889, US7682286, US7322908, US6910991, US2016236055, US2009239718, US2008318744, US2007049472, US2007032355, US10589145, US10569827, US10071298, JP3955916, JP2005087525, EP1516655,

Abstract:

A handlebar assembly (100) is disclosed comprising a lower base portion (101) which is adapted to support a handlebar (202) through a guide means which is so constructed and arranged to permit the handlebar (202) to move along a path relative to the base portion (101) whereby upon movement of the handlebar (202) along the path to the left or the right relative to a central position the handlebar (202) tilts and the centre of the handlebar (202) moves downwards relative to the base portion (101) as well as horizontally from the central position. The assembly allows the handlebars to move in a way which mimics the movement of the handlebars of a **bicycle**. In a modification, the guide means may restrain the handlebar for movement up/down or forwards/backwards or side to side, again to provide a more realistic range of movement.

**6) Family number: 2977050** (US4828522A)

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Title: AQUATIC EXERCISER**Priority:** US19880208966 19880620**Family:**

Publication number	Publication date	Application number	Application date
US4828522 A	19890509	US19880208966	19880620

Probable Assignee: SANTOS T R**Assignee(s):(std):** SANTOS T R**Inventor(s):(std):** SANTOS T R

International class
(IPC 8-9): B63B35/74 (Advanced/Invention);
A63B21/22 A63B22/08 (Advanced/Non-invention);
B63B35/73 (Core/Invention);
A63B21/00 A63B22/06 (Core/Non-invention)

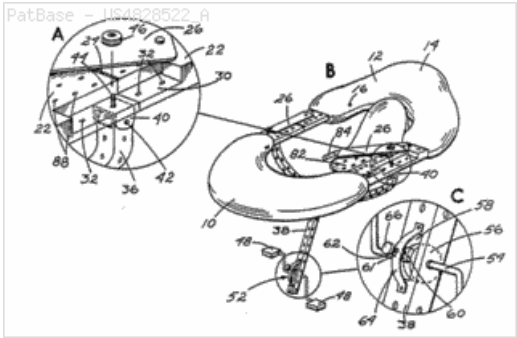
International class
(IPC 1-7): B63C9/08

CPC: A63B22/0023 A63B2022/0647 A63B21/225 A63B22/0605 A63B2225/605 B63B34/50**European class:** B63B35/74 K63B21/22F K63B22/08 K63B225/60B**US class:** 272/1B 441/129 441/132 472/129 482/58[Classification Explorer](#)**Cited documents:** US2317905 A, US1625579 A, US1555589 A,

Forward Citations: WO11110362, US9474930, US9056220, US8074304, US7749034, US7481745, US7425190, US5779513, US5752899, US5092589, US4971317, US2019262655, US2016346599, US2015335936, US2011275487, US2009258550, US2008311803, US2008124991, US2007290538, US2007238581, US10493349, US10433612, US10426989, US10391361, US10279212, US10272317, US10226664, US10226396, US10220259, US10188890, ITP120090019, FR3017364, EP2364686, EP2364686, EP1477401,

Abstract:

The invention provides a **bicycle**-like pedal exerciser in a flotation structure designed for use in water. Two crescent shaped inflatable tubes are oppositely affixed in a fold-in frame horizontally disposed point to point. Hinged frame sections exposed between the flotation points and the convex inner wall tube shapes provides an operational and fixture-attach opening. A **curved**, flat bottom seat suspended downwardly in the opening faces a yoke-attached adjustable shaft downwardly affixed with a small **flywheel** turnable by **bicycle**-type pedals. The seat is adjustable and removable. An adjustable brake supplies a desired tension to the small **flywheel**. The device is operational in swimming pools or other limited water areas. The user sits or stands submerged to arm pit level and exercises by cranking the **flywheel** with the **bicycle**-like pedals. A variety of positions may be assumed for in-water therapy or for healthful exercising.



7) Family number: 42759059 (US2009011907A)

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Title: STATIONARY EXERCISE EQUIPMENT
Priority: US20070946568P 20070627 US20080147694 20080627
Family:

Publication number	Publication date	Application number	Application date
US2009011907 AA	20090108	US20080147694	20080627
US7833135 BB	20101116	US20080147694	20080627
WO09003170 A1	20081231	WO2008US68585	20080627

Probable Assignee: RADOW SCOTT B
Assignee(s):(std): BLAU DAVID A ; RADOW SCOTT B
Inventor(s):(std): BLAU DAVID A ; RADOW SCOTT B
Agent(s): PRICE HENEVELD COOPER DEWITT AND LITTON LLP; DOLCE MARCUS P
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

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[Classification Explorer](#)

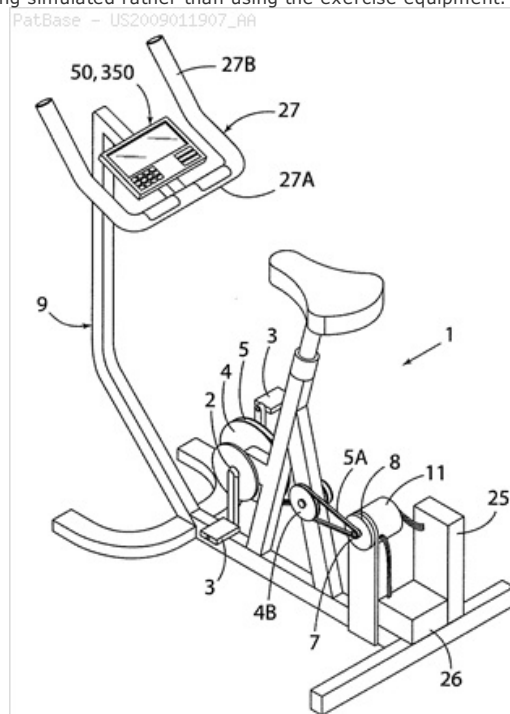
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Forward Citations: WO19148261, WO19126467, WO19118853, WO18125838, WO16196289, WO16170361, WO16162586, WO14196866, WO13158887, WO13124509, US9994099, US9944349, US9944167, US9943718, US9937783, US9931924, US9922528, US9902252, US9878608, US9815363, US9795872, US9744845, US9738151, US9737746, US9701190, US9669700, US9669699, US9636993, US9636992, US9579534, US9541903, US9514576, US9409622, US9398782, US9341526, US9334013, US9102317, US9090300, US9067099, US9067098, US9064153, US8876663, US8845493, US8786448, US8762168, US8690735, US8641581, US8585561, US8485944, US8142334, US8011242, US7972245, US2019143193, US2018207485, US2018036592, US2017340913, US2017128763, US2016367890, US2016300390, US2016153852, US2015262459, US2015146918, US2015024906, US2014315689, US2014229054,

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Abstract:

A control system and method for exercise equipment and the like provides a way to simulate a physical activity in a manner that takes into account the physics of the physical activity being simulated to provide an accurate simulation. According to one aspect of the present invention, the control system and method takes into account the physics of the corresponding physical activity to generate a virtual or predicted value of a variable such as velocity, acceleration, force, or the like. The difference between the virtual or expected physical variable and a measured variable is used as a control input to control resistance forces of the exercise equipment in a way that causes the user to experience forces that are the same or similar to the forces that would be encountered if the user were actually performing the physical activity being simulated rather than using the exercise equipment.



8) Family number: 57926096 (EP2808064B1)

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Title:	TRAINING DEVICE FOR CYCLISTS DISPOSITIF D'APPRENTISSAGE POUR CYCLI																											
Priority:	IT2013VI00145 20130530 EP20140425067 20140530																											
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Probable Assignee:	ELITE SRL																											
Assignee(s):(std):	ELITE SRL																											
Assignee(s):	ELITE SRL FONTANIVA																											
Inventor(s):(std):	SARTORE NICOLETTA																											
Agent(s):	SANTI FILIPPO; DE ELZABURU ALBERTO																											
Designated states:	AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR																											
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Abstract:

A training device (11) for cyclists, which is applied to a **bicycle** (10) and which comprises a support (12) composed of two uprights (13), at the lower ends of which respective supporting bases (14) are fixed; on the support (12) a containing casing (24), containing a driving pulley (15), equipped with a free wheel (16) on which a fork (17) of the **bicycle** (10) is engaged, a snub pulley (18) and a driven pulley (19), suitable for allowing a shaped belt (20) running, is fixed. In correspondence of the driven pulley (19) and opposite to the abovementioned pulleys (15, 18, 19) a housing (22) of a sealed room (23) is mounted, which is closed by an external shell (29) covering the housing (22) and which is filled by oil; a **flywheel** (25) is placed within the sealed room (23), and rotates about a rotating pin (27) of the driven pulley (19) and provides an axis of rotation parallel to the axis of rotation of the driving (15) and snub (18) pulleys.

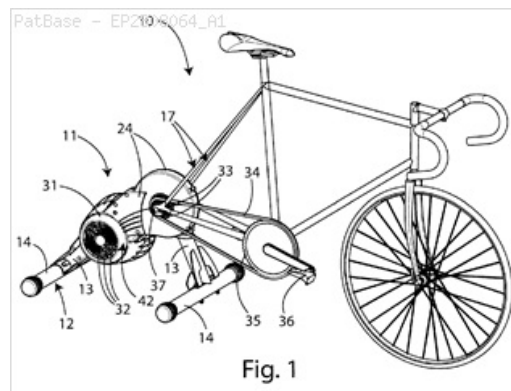


Fig. 1

9) Family number: 34208101 (US2007037667A)

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Title: EXERCISE DEVICE

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Probable Assignee: EXERCITING LLC

Assignee(s):(std): EXERCITING LLC ; GORDON JOEL D ; OLSCHANSKY SCOTT M ; ROSS GLENN D ; OLSCHANSKY BRAD R ; ABELBECK KEVIN G

Assignee(s): EXERCITING LLC ; EXERCITING LLC MARIETTA

Inventor(s):(std): JOEL D GORDON ; SCOTT M OLSCHANSKY ; KEVIN G ABELBECK ; BRAD R OLSCHANSKY ; GLENN D ROSS ; OLSCHANSKY BRAD R ; ABELBECK KEVIN G ; OLSCHANSKY SCOTT M ; ROSS GLENN D ; GORDON JOEL D

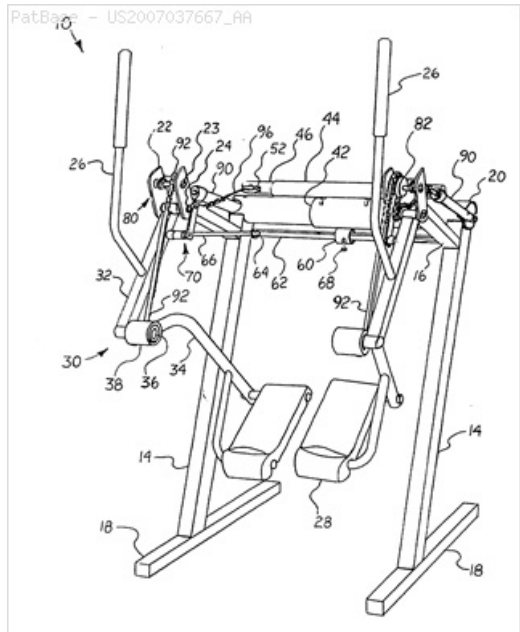
Inventor(s):	GORDON JOEL ; OLSCHANSKY BRAD R MARIETTA ; OLSCHANSKY SCOTT M MARIETTA ; ROSS GLENN D CANTON ; ABELBECK KEVIN G FORT COLLINS ; GORDON JOEL D OWINGS MILLS
Agent(s):	ADE AND CO INC; VOSSIUS AND PARTNER PATENTANWAELTE RECHTSANWAELTE MBB; Vossius & Partner; VOSSIUS AND PARTNER PATENTANWAELTE RECHTSANWAELTE MBB; CLT PATENT AND TRADEMARK HK LTD; ROSENBERG KLEIN AND LEE; SHERRILL LAW OFFICES PLLC; SHERILL LAW OFFICES PLLC; LEE JUN Y ET AL
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Cited documents:	WO08124025 A1, USD703278 S1, USD640337 S1, USD555743 S1, USD476046 S1, US9682279 BB, US9364708 BB, US9254413 BB, US9050491 BB, US8627583 BB, US8627582 BB, US8617033 BB, US8409058 BB, US8171657 BA, US8109861 BB, US8082029 BB, US7950166 BA, US7913422 BA, US7905033 BA, US7900377 BA, US7887465 BB, US7878947 BA, US7862482 BA, US7833134 BB, US7828698 BB, US7708669 BB, US7645215 BB, US7608018 BB, US7530926 BB, US7520839 BB, US7285075 BB, US7226390 BB, US7201704 BB, US6390953 BA, US6368252 BA, US6183397 BA, US6183397, US6152859 A, US6138397 A, US6045487 A, US6036622 A, US6036622 A, US6004244 A, US5967944 A, US5911649 A, US5910072 A, US5876308 A, US5857940 A, US5813949 A, US5792029 A, US5792028 A, US5792027 A, US5792026 A, US5788610 A, US5769760 A, US5746681 A, US5735773 A, US5637058 A, US5611756 A, US5595553 A, US5593372 A, US5593371 A, US5584780 A, US5577985 A, US5573480 A, US5549526 A, US5540637 A, US5538486 A, US5529555 A, US5529554 A, US5527246 A, US5518473 A, US5499956 A, US5496235 A, US5423729 A, US5419747 A, US5401226 A, US5383829 A, US5352169 A, US5336141 A, US5299993 A, US5295928 A, US5290211 A, US5290211 A, US5279530 A, US5279529 A, US5242343 A, US5195935 A, US5186697 A, US5154685 A, US5149312 A, US5135447 A, US5131895 A, US5129872 A, US5072928 A, US5062627 A, US5048821 A, US5040786 A, US5039088 A, US5039087 A, US5038758 A, US5000443 A, US5000442 A, US4989857 A, US4951942 A, US4949993 A, US4949954 A, US4940233 A, US4900013 A, US4869494 A, US4850585 A, US4838543 A, US4786050 A, US4779863 A, US4733858 A, US4720093 A, US4709918 A, US4708338 A, US4685666 A, US4679786 A, US4561318 A, US4555109 A, US4509742 A, US4496147 A, US4470597 A, US4456279 A, US4456276 A, US4379666 A, US4379566 A, US4188030 A, US4185622 A, US4181353 A, US4053173 A, US4023795 A, US3995491 A, US3970302 A, US3810662 A, US3316899 A, US3316898 A, US3178200 A, US2497391 A, US219439 A, US219439 A, US2016256735 AA, US2015065304 AA, US2014148311 AA, US2011119953 AA, US2011039662 AA, US2011028275 AA, US2010267524 AA, US2010160115 AA, US2010093498 AA, US2009203501 AA, US2008287265 AA, US2008132385 AA, US2007037667 AA, US2006189454 AA, US2005124467 AA, US2005054488 AA, US2004224825 AA, US2003092532 AA, US2002049121 AA, TWM378001 Y, TWM378001, EP2000178 A1, EP2000178 A1, DE2919494 A1, DE10060466 A1, CN2620564 Y, CN2342840 Y, CN2325071 Y, CN202682672 U, CN1933877 A,
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Forward Citations:	WO19011716, WO18164822, WO17116765, WO16191581, WO16092498, WO15134693, WO12120299, WO12056454, WO12056454, WO11140216, USD850541, USD795975, USD795974, USD795973, USD742977, US9993680, US9968824, US9937380, US9931257, US9907721, US9901774, US9776034, US9757614, US9691304, US9682279, US9682277, US9579537, US9421144, US9364708, US9358420, US9272180, US9144705, US9050491, US8992390, US8740755, US8409058, US8171570, US8109861, US8093731, US8060945, US8013457, US7993247, US7887464, US7833134, US7780577, US7747355, US7591772, US7559882, US7445583, US2019022458, US2018339188, US2018221708, US2017340914, US2017274248, US2017266487, US2017144016, US2017087403, US2017053569, US2016151664, US2016008195, US2015202489, US2015141207, US2015051519, US2014287887, US2012277064, US2011039662, US2010152001, US2009124472, US2008294080, US2008287850, US2008200316, US2008157636, US2008157635, US2008157615, US2008157536, US2008150495, US2008150493, US2008150378, US2008093517, US2008020902, US2008004163, US10561894, US10561877, US10549147, US10543395, US10537764, US10518128, US10500473, US10493349, US10471299, US10456624, US10449416, US10441844, US10441840, US10434360, US10433612, US10426989, US10420976, US10376736, US10369404, US10350451, US10343017, US10343005, US10335631, US10315067, US10299981, US10293211, US10279212, US10272317, US10258828, US10252109, US10251805, US10220250, US10207148, US10188890, US10143877, US10105569, US10052516, US10052515, US10052513, US10046197, TWI649109, TWI511761, RU2606944, KR101265918, JP2014507239, EP3086866, EP3086866, EP2842610, EP2842610, EP2842610, EP2289602, CN105999614, CN105167965, CN105167965, CN104606850, CN104606850, CN103533992, CN103533992, CN103025389, CN103025389, AU2012226547,
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Abstract:
An exercise device upon which a user generally standing upright supported by foot platforms suspended from a frame via linkages in which the linkage lengths and pivot points correspond generally to the users upper and lower legs and hip and knee joints. This device not only allows natural free and spontaneous leg movement, able to simulate such exercises as walking, jogging, running, stepping, skiing or gliding, bicycling, climbing, reverse action and various isolated leg exercises, where the exercises can be performed at random generally without the need to reconfigure the device. This device preferably includes an isolation system capable of simulating natural forces throughout the entire range of movement in the horizontal and/or vertical plane. A safety/suspension system can be provided, alone or in combination with the isolation system, to resist sudden foot movement in the same direction, yet allows a slow and controlled tilting of the linkages whereby the user may simulate uphill and downhill travel.



10) Family number: 12012106 (US5836855A)

© PatBase

Title: Recumbent elliptical exercise machine

Priority: US19970801194 19970218 US19980063316 19980420

Family:	Publication number	Publication date	Application number	Application date
	US5836855 A	19981117	US19970801194	19970218
	US6017295 A	20000125	US19980063316	19980420

Probable Assignee: ESCHENBACH PAUL WILLIAM

Assignee(s): ESCHENBACH PAUL WILLIAM

Inventor(s):(std): ESCHENBACH PAUL WILLIAM

International class (IPC 8-9): A63B22/12 A63B23/04 B62K3/00 B62M1/20 B62M1/24 (Advanced/Invention);
A63B22/06 A63B23/035 (Advanced/Non-invention);
A63B22/06 (Core/Non-invention)

International class (IPC 1-7): A63B22/00 A63B69/16 B62K21/18

CPC: A63B22/001 A63B22/0015 A63B22/0664 A63B2022/0038 A63B2022/0041 A63B2022/0682
A63B2208/0238 B62K3/005 B62M1/20 B62M1/26 B62M1/28

European class: A63B22/00A6 A63B22/00B A63B22/06E B62K3/00C B62M1/20 B62M1/26 B62M1/28 K63B208/02E4
K63B22/00C10 K63B22/00C8 K63B22/06E4S

US class: 280/257 482/51 482/57 482/62

[Classification Explorer](#)

Cited documents: US5836855 A, US5690346 A, US5653662 A, US5611757 A, US5591107 A, US5529555 A, US5527246 A, US5518473 A, US5433680 A, US5356356 A, US5039088 A,

Forward Citations: WO16020860, WO03074132, WO03074132, WO0174453, WO0100280, WO0100280, USRE42698, USD792530, USD527060, US9987513, US9950209, US9808667, US9802078, US9802076, US9724559, US9295875, US9272180, US9242696, US9199115, US9067094, US9050485, US8840529, US8647240, US8562491, US8292789, US8025611, US7993247, US7967313, US7824314, US7815551, US7785235, US7758473, US7713176, US7604574, US7544153, US7507185, US7497808, US7494449, US7494448, US7465254, US7462134, US7455626, US7448986, US7364532, US7361122, US7344480, US7341542, US7303509, US7270626, US7270625, US7267637, US7244217, US7214168, US7201705, US7179201, US7172531, US7169089, US7169088, US7141008, US7140626, US7137927, US7097593, US7086993, US7025710, US6908416, US6830538, US6825574, US6729890, US6663127, US6575877, US6547701, US6540646, US6409635, US6283895, US6206806, US6146314, US6077197, US6017295, US5916065, US2017106231, US2016375300, US2015360078, US2015141200, US2015072336, US2014265210, US2014243157, US2013244837, US2013090217, US2011028277, US2010298096, US2009209395, US2009093346, US2009075786, US2008045385, US2007281833, US2007225129, US2007161465, US2007161463, US2007099764, US2007042872, US2007032349, US2006287167, US2006223678, US2006217235, US2006100066, US2006100065, US2006035752, US2005209057, US2005187073, US2005170934, US2005107219, US2005085344, US2004266588, US2004266587, US2004257627, US2004157706, US2004102291, US2004063344, US2002115537, US10561891, US10561877, US10543396, US10537764, US10518126, US10500437, US10493349, US10470961, US10272290, US10252101, US10086227, TWI640340, RU2485000, GB2452114, EP2996780, EP2188022, EP2127705, EP1250945, EP1250945,

Abstract:

An exercise apparatus is provided for sit down exercise operated in the recumbent position where foot operated pedals follow an oblong pedal path coordinated with arm exercise. The pedals are guided by extended foot supports as part of a linkage system that is coupled to the arm exercise. Pedal motion and arm exercise can be adjusted during operation of the exercise apparatus to exercise different muscles. An alternate application of the pedal and arm exercise motion is offered as a propulsion mechanism coupled to the drive train of a land or amphibious exercise apparatus.



11) Family number: 34089110 (US2007010377A)

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Title: VIRTUAL REALITY BICYCLE-TRAINING SIMULATION PLATFORM

Priority: US20050177806 20050708

Family:	Publication number	Publication date	Application number	Application date
	US2007010377 AA	20070111	US20050177806	20050708
	US7226395 BB	20070605	US20050177806	20050708

Probable Assignee: TAIWAN BICYCLE IND R AND D CENTER

Assignee(s):(std): CYCLING AND HEALTH TECH IND R and D ; TAIWAN BICYCLE IND R AND D CENTER ; TAIWAN BICYCLE IND R AND D

Assignee(s): TAIWAN BICYCLE IND R AMP AMP ; TAIWAN BICYCLE INDUSTRY R and D CENTER ; CYCLING AND HEALTH TECH IND R AND D CENTER ; CYCLING AND HEALTH TECH INDUSTRY R AND D CENTER ; D CENTER ; TAIWAN BICYCLE IND ; CYCLING AND HEALTH TECH IND

Inventor(s):(std): CHEN CHUNG CHIEH ; WU HUNG SHENG ; CHIANG TZU PENG

Agent(s): CHARLES E BAXLEY ESQ; CHARLES E

International class (IPC 8-9): A63B22/06 A63B69/16 (Advanced/Invention); A63B69/16 (Core/Invention)

CPC: A63B69/16 A63B2024/009 A63B2069/163 A63B2069/165

European class: A63B69/16 K63B24/00R2 K63B69/16A2C K63B69/16A3H

US class: 280/293 482/57 482/61

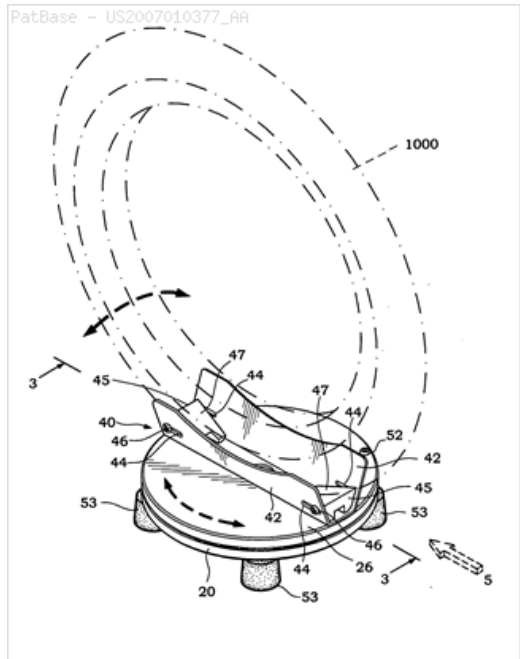
[Classification Explorer](#)

Cited documents: US6142913 A, US6126571 A, US6004243 A, US5050865 A, US4955600 A, US4595194 A, US3903613 A, US2002055422 AA,

Forward Citations: WO09005254, WO09005254, US9868022, US9855480, US9802099, US9731164, US9694235, US9662533, US9517376, US9486687, US9205301, US9149702, US9039582, US8979715, US8764616, US8746268, US8439808, US8435161, US8419597, US8313419, US8162806, US8147388, US8092352, US8079941, US8011242, US7955228, US7927258, US7766798, US7748486, US7481748, US7303510, US7278956, US2016346591, US2016236055, US2015168768, US2011212812, US2011039664, US2011028286, US2010298103, US2010216103, US2010200136, US2010062909, US2010062908, US2010024590, US2009283648, US2009048076, US2007123397, US2007051848, US2007004565, US10384111, US10276056, CN106075861, CN106075861, CN105498182, CN104174152, CN104174151, CN104174150, CN104174150, CN104174149, CN104174149, CN104174149, CN104174149, CN103239850, CN103239850,

Abstract:

A virtual reality **bicycle**-training simulation platform is disclosed to include a rotary steering unit and rear wheel rack that support the front and rear wheels of a **bicycle** and are linked to a multimedia system for outputting a signal to the multimedia system indicative of the biasing of the front wheel of the **bicycle** and controllable by the multimedia system to impart a damping resistance to the rear wheel of the **bicycle**.



12) Family number: 15007125 (US6042512A)

© PatBase

Title:	Variable lift cross trainer exercise apparatus																				
Priority:	US19990361328 19990727		US20000488593 20000124		US20000550914 20000417																
Family:	<table><tr><th>Publication number</th><th>Publication date</th><th>Application number</th><th>Application date</th></tr><tr><td> US6042512 A</td><td>20000328</td><td>US19990361328</td><td>19990727</td></tr><tr><td> US6210305 BA</td><td>20010403</td><td>US20000488593</td><td>20000124</td></tr><tr><td> US6361476 BA</td><td>20020326</td><td>US20000550914</td><td>20000417</td></tr></table>					Publication number	Publication date	Application number	Application date	 US6042512 A	20000328	US19990361328	19990727	 US6210305 BA	20010403	US20000488593	20000124	 US6361476 BA	20020326	US20000550914	20000417
Publication number	Publication date	Application number	Application date																		
 US6042512 A	20000328	US19990361328	19990727																		
 US6210305 BA	20010403	US20000488593	20000124																		
 US6361476 BA	20020326	US20000550914	20000417																		
Probable Assignee:	STMICROELECTRONICS SRL																				
Assignee(s):	ESCHENBACH PAUL WILLIAM ; STMICROELECTRONICS SRL ; STMICROELECTRONICS SRL VIA C OLIVETT																				
Inventor(s):(std):	ESCHENBACH PAUL WILLIAM																				
Inventor(s):	PAUL WILLIAM ESCHENBACH																				
International class (IPC 8-9):	A63B22/12 A63B23/04 (Advanced/Invention); A63B23/035 (Advanced/Non-invention)																				
International class (IPC 1-7):	A63B2/100 A63B2/204 A63B2/212 A63B21/00 A63B22/04 A63B22/12 A63B6/916 A63B69/16																				
CPC:	A63B22/001 A63B22/0023 A63B22/0664 A63B22/067 A63B22/0015 A63B22/002 A63B22/206																				
European class:	A63B22/00A6 A63B22/00B A63B22/00B4 A63B22/06E K63B22/00B2P K63B22/06E2 K63B22/20T6																				
US class:	482/51 482/52 482/57 482/70																				

[Classification Explorer](#)

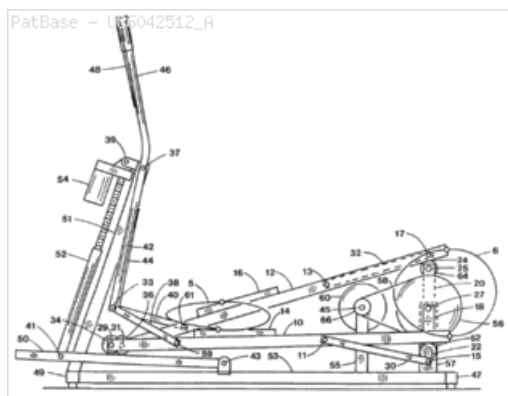
Cited documents: US6090014 A, US6077196 A, US6042512 A, US6027431 A, US5997445 A, US5993359 A, US5921894 A, US5919118 A, US5895339 A, US5893820 A, US5857941 A, US5848954 A, US5836854 A, US5788610 A, US5779599 A, US5743834 A, US5685804 A, US5242343 A,

Forward Citations: WO16195322, WO16145403, WO09036347, WO04108225, WO02078791, USD836710, USD489101, US9993684, US9724566, US9700755, US9649529, US9643045, US9636540, US9604096, US9597540, US9511255, US9498672, US9468795, US9457230, US9352187, US9308415, US9272182, US9248338, US9126654, US9108081, US9095741, US9039577, US9011291, US8858403, US8840529, US8808148, US8740754, US8734299, US8696524, US8562491, US8556779, US8454478, US8419598, US8323155, US8162805, US8128535, US8062188, US8062187, US8062185, US8057363, US8047968, US8033961, US8025609, US8012073, US7985165, US7955240, US7955225, US7942787, US7922625, US7918766, US7909740, US7901330, US7887465, US7874963, US7871356, US7833133, US7824313, US7815551, US7785235, US7775940, US7766797, US7758473, US7749137, US7740564, US7740563, US7736279, US7736278, US7731635, US7717828, US7704192, US7699754, US7682293, US7674205, US7670267, US7658698, US7632219, US7618350, US7604573, US7591761, US7582043, US7568999, US7494447, US7462134, US7455624, US7448986, US7425189, US7377881, US7361122, US7341542, US7316632, US7303509, US7278955, US7270626, US7267637, US7264576, US7244217, US7229386, US7223209, US7214168, US7201705, US7179201, US7172531, US7169089, US7169088, US7131935, US7097593, US7097592, US7097591, US7052438, US7025711, US7025710, US7022049, US6991587, US6976940, US6908416, US6758790, US6749211, US6726600, US6689019, US6672992, US6659915, US6612969, US6575877, US6440042, US6422977, US6361476, US6210305, US6196948, US2018290014, US2018122342, US2017128772, US2017072256, US2016375301, US2015202488, US2014371032, US2014221165, US2013244837, US2013210585, US2013079200, US2013053218, US2012190509, US2012190508, US2011218079, US2011172062, US2011143885, US2011086743, US2011028277, US2010317497, US2010279822, US2010255958, US2010242246, US2010204017, US2010197466, US2010152000, US2010041522, US2009312157, US2009176625, US2009075786, US2009062081, US2009054212, US2009048077, US2008318736, US2008300114, US2008287265, US2008261780, US2008242516, US2008220943, US2008214362, US2008207400, US2008200314, US2008194388, US2008167163, US2008161164, US2008153674, US2008125291, US2008081741, US2007298936, US2007238582, US2007238580, US2007202999, US2007179023, US2007129218, US2007129217, US2007123393, US2007087907, US2007087906, US2007054779, US2006287161, US2006281604, US2006234838, US2006223679, US2006217235, US2006189447, US2006183605, US2006172864, US2006172863, US2006172862, US2006094570, US2006058159, US2006040795, US2006040794, US2006035755, US2006035754, US2006003868, US2005250621, US2005245361, US2005245358, US2005202939, US2005181912, US2005181911, US2005164835, US2005026752, US2004248710,

US2004248709, US2004248708, US2004248707, US2004248706, US2004248704, US2004224825, US2004132583, US2004097339, US2003092532, US2003022763, US2002177510, US2002155927, US10561894, US10561877, US10543395, US10537764, US10500473, US10493349, US10471299, US10441844, US10433612, US10426989, US10376736, US10369404, US10343017, US10335631, US10311840, US10293211, US10279212, US10272317, US10258828, US10252109, US10213644, US10201727, US10188890, US10086227, RU2706598, KR101933180, KR101593069, KR101018286, KR101018283, FR2869550, FR2869549, EP3388114, EP2996780, EP2488260, EP2188022, EP2018897, EP1372794, EP1247547, CN106512301, CN106512300, CN103656993,

Abstract:

The present invention relates to a standup exercise apparatus that simulates walking, jogging and climbing with arm exercise. More particularly, the present invention relates to an exercise machine having separately supported pedals for the feet and arm exercise coordinated with the motion of the feet. Cross trainers guide the feet along a generally elliptical shaped **curve** to simulate the motions of jogging and climbing. Existing machines often produce user problems such as excessive foot articulation. The present invention is an improved elliptical exercise machine capable of extended exercise with fewer user problems. Further, the cross trainer is adjustable to vary the motion of the elliptical stride from walking to climbing. A foot support member is guided by a roller on one end and driven by a crank linkage on the other end. The resulting pedal motion has less severe pedal angles than a simple crank cross trainer. Handles are coupled to the foot support member with connector links for coordinated arm exercise.



13) Family number: 3406134 (GB2130901A)

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Title: Exercise machine

Priority: GB19820034043 19821130 GB19830031994 19831130

Family:

Publication number	Publication date	Application number	Application date
DE3343353 A1	19840530	DE19833343353	19831130
FR2536664 A1	19840601	FR19830019030	19831129
GB2130901 A1	19840613	GB19830031994	19831130
GB8331994 A0	19840104	GB19830031994	19831130
IT8349401 A0	19831129	IT19830049401	19831129
JP59118171 A2	19840707	JP19830224618	19831130
KR19840006611 A	19841201	KR19830005669	19831130
KR840006611 A	19841201	KR19830005669	19831130

Probable Assignee: UTEC BV

Assignee(s):(std): UTEC BV ; UTEX AB

Assignee(s): YUUTETSUKU AB ; UTEC B V

Inventor(s):(std): RONALD EVANS HAROLD ; HARORUDO RONARUDO EBUANSU ; EVANS HAROLD RONALD

Inventor(s): HAROLD RONALD EVANS

International class (IPC 8-9): A63B22/12 A63B23/04 (Advanced/Invention); A63B21/018 A63B23/035 (Advanced/Non-invention); A63B23/04 (Core/Invention); A63B21/012 A63B23/035 (Core/Non-invention)

International class (IPC 1-7): A63B21/00 A63B21/22 A63B23/04

CPC: A63B22/0056 A63B21/018 A63B2208/0233 A63B2210/50 A63B2225/093 A63B2225/30 A63B21/4047

European class: A63B22/00P6 A63B23/035G K63B208/02E2 K63B21/018 K63B210/50 K63B225/09H K63B225/30

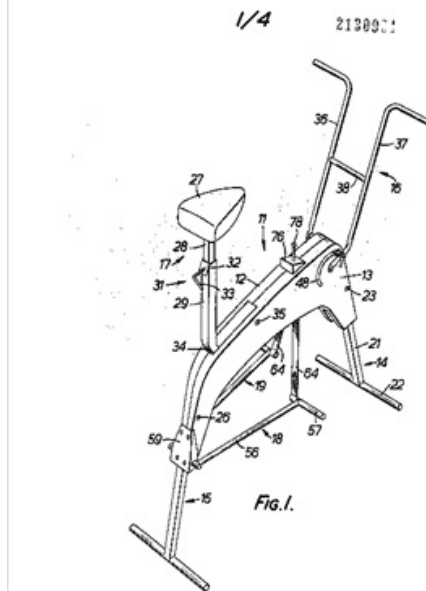
[Classification Explorer](#)

Cited documents: US3982756 A, US3970302 A, GB2027598 A1, GB2012599 A1, GB2010101 A1, GB1599394 A, GB1521473 A, EP0019935 A1, DE2428515 A1,

Forward Citations: US4632386, KR200477862, JP62142369,

Abstract:

The machine comprises a **body** (11) standing on front and rear legs (14, 15), a seat (17) and a handlebar (16) mounted on the **body**, a pair of pedals (18, 19) pivotally connected to the **body**, and a flat tape 64 having its two ends attached to the two pedals, the tape passing through a guide system which includes a guide element over which the tape slides frictionally when the pedals are moved. The frictional effect of the guide system may be adjustable and a counter arrangement may be provided. The machine may be collapsible.

**14) Family number: 47677150** (US2011237403A)

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Title: EXERCISE MACHINE WITH STATIONARY BICYCLE AND INFLATABLE SEAT

Priority: US20090216599P 20090518 US20100132178 20100317 WO2010US00797 20100317
 CN201020176816U 20100415 US20110132178 20110601 US20130835118 20130315
 US20150744286 20150619 US20180047266 20180727

Family:	Publication number	Publication date	Application number	Application date
	AU2010250126 AA	20101125	AU20100250126	20100317
	BRPI1012120 A2	20160329	BR2010PI12120	20100317
	CA2762253 AA	20101125	CA20102762253	20100317
	CN101920091 A	20101222	CN201010163813	20100415
	CN201899819 U	20110720	CN201020176816U	20100415
	EP2432568 A1	20120328	EP20100778029	20100317
	IN08436CN2011 A	20130315	IN2011CN08436	20111116
	JP2012527301 T2	20121108	JP20120511805T	20100317
	RU2011146241 A	20130627	RU20110146241	20100317
	RU2547043 C2	20150410	RU20110146241	20100317
	TW201103601 A	20110201	TW20100115309	20100513
	US2011237403 AA	20110929	US20100132178	20100317
	US2015283424 AA	20151008	US20150744286	20150619
	US2018333606 AA	20181122	US20180047266	20180727
	US9079067 BB	20150714	US20100132178	20100317
	US9216786 BA	20151222	US20130835118	20130315
	US10035040 BB	20180731	US20150744286	20150619
	WO10134944 A1	20101125	WO2010US00797	20100317
	ZA201108461 A	20120725	ZA20110008461	20111117

Probable Assignee: CORDIO LLC

Assignee(s):(std): CORDIO LLC ; HUBER AARON D ; HUBER RICHARD A

Inventor(s):(std): HUBER RICHARD A ; HUBER AARON D ; KH JUBER RICHARD EHJ ; KH JUBER AARON DI ; HUBER A D ; HUBER R A

Inventor(s): A D HUBER ; R A HUBER ; RAHUBER ; ADHUBER ; HUBER RICHARD ; HUBER AARON ; RICHARD A HUBER ; AARON D HUBER

Agent(s): LESICAR MURRAY TRENTO; LESICAR MAYNARD ANDREWS PTY LTD; NORTON ROSE CANADA SENCRL SRL LLP; RAFFAY AND FLECK; FUKAMI PATENT OFFICE PC; SAND AND SEBOLT; JOHN D; CUNNINGHAM CLAY H ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class (IPC 8-9): A63B A63B21/008 A63B22/04 A63B22/06 A63B22/08 A63B22/12 A63B22/14 A63B22/16 A63B23/02 A63B23/035 A63B41/00 A63B69/16 A63B71/00 A63B71/06 B62J1/00 B62K5/003 B62K5/02 B63B22/06 (Advanced/Invention); A63B21/005 A63B21/008 A63B21/015 A63B21/22 A63B23/02 (Advanced/Non-invention); A63B21/008 A63B22/06 (Core/Non-invention)

CPC: A63B22/0605 A63B21/0051 A63B21/0088 A63B21/015 A63B21/225 A63B23/0216 A63B41/00 A63B71/0622 A63B2022/0652 A63B2208/0238 A63B2220/34 A63B2225/093 A63B2225/62 A63B2230/06 A63B2230/50 A63B2230/75 A63B23/0205 A63B23/0233 B62J1/00 B62K5/003 B62K5/02 B62K3/005 B62K5/023

European class: A63B22/06C A63B41/00 A63B71/06D2 K63B208/02E4 K63B21/005B K63B21/008C4 K63B21/015 K63B21/22F K63B22/06C4R K63B220/34 K63B225/09H K63B225/62 K63B23/02A4 K63B230/06

US class: 1/1 482/57 482/57P 482/62

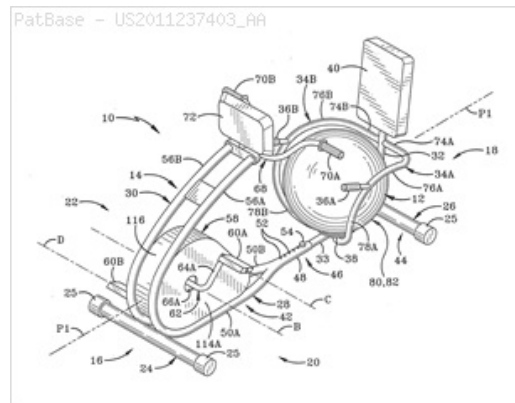
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Cited documents: WO9901332 A1, WO19001332, WO03086152 A1, USD679916 S1, USD669280 S1, USD637245 S1, USD625370 S1, USD610635 S1, USD552696 S1, USD536542 S1, USD528172 S1, USD521084 S1, USD513421 S1, USD509548 S1, USD503756 S1, USD503553 S1, USD476705 S1, USD471371 S1, USD471025 S1, USD418893 S1, USD410712 S1, USD403034 S1, USD362699 S1, USD355942 S1, USD330237 S1, US8469369 BA, US8231175 BB, US7828378 BB, US7713180 BB, US7674216 BA, US7662070 BA, US7635161 BB, US7448676 BB, US7344487 BB, US7341548 BB, US7141011 BB, US7118517 BA, US7114783 BB, US7060015 BB, US7044558 BB, US6929325 BA, US6886202 BB, US6832817 BA, US6827402 BB, US6746372 BB, US6689026 BB, US6616238 BA, US6601922 BB, US6547706 BA, US6520578 BA, US6478721 BA, US6461284 BA, US6447070 BA, US6375601 BA, US6203043 BA, US6171217 BA, US6171217 B1, US6070943 A, US6012772 A, US5833587 A, US5690389 A, US5419612 A, US5244251 A, US5169112 A, US5143390 A, US5026 A, US5007 A, US4126326 A, US4018 A, US2010285924 AA, US2009325770 AA, US2009111656 AA, US2009105046 AA, US2009098520 AA, US2008224506 AA, US2008119333 AA, US2007117682 AA, US2006063653 AA, US2006040808 AA, US2005261114 AA, US2005261114, US2005168045 AA, US2005107229 AA, US2005079964 AA, US2005079964, US2004180768, US2003199363 AA, US2003067200, SD355942, JP63179172 A2, GB2226769 A1, FR2859640 A1, FR2828640 A1, EP1025879 A1, EP0870444 A2, DE2523073 A1, CN201899819 U,

Forward Citations: USD863466, USD785732, USD785107, USD784465, USD783741, US9993683, US9919183, US9878201, US9868485, US9750979, US9707437, US9474930, US9422019, US9340292, US9314668, US9295875, US8920292, US2018117419, US2015148196, US2015145292, US2013292437, US2013102443, US2013090217, US10343017, US10212994, US10155130, US10143875, US10112071, KR101564677, FR3060518, EP3339154, CN107137902, CN105411826, CN101920091,

Abstract:

An exercise machine includes a frame with foot pedals mounted thereon and a seat having an inflatable bladder whereby the user may undertake a cardiovascular workout and a core workout of abdominal and back muscles. A sensor may be used to sense the degree of compression of the inflatable bladder when a person sits on the inflatable seat whereby the internal pressure of the bladder may be adjusted accordingly. The frame may have two sections which are detachable so that one of the sections and the inflatable seat serve as a seating assembly when detached.



15) Family number: 3177168 (US4867439A)

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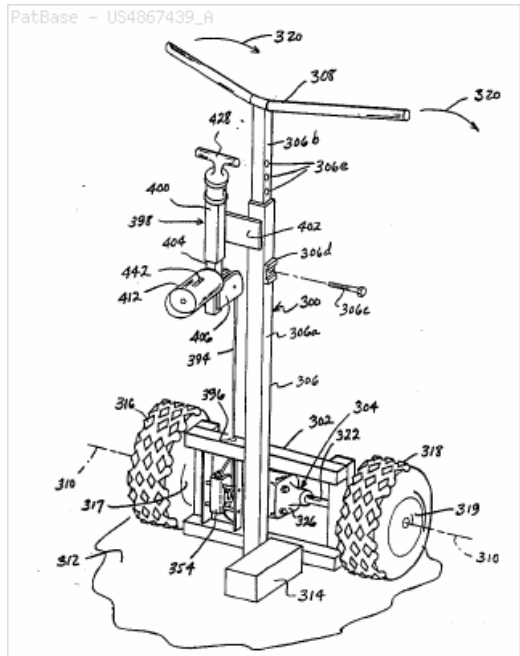
Title:	Locomotion exercise enhancement equipment			
Priority:	US19860852065 19860415 US19880202799 19880603			
Family:	Publication number	Publication date	Application number	Application date
	US4867439 A	19890919	US19880202799	19880603
Probable Assignee:	COACH AND CO INC			
Assignee(s):	COACH AND CO INC ; COACH AND CO INC A CORP OF MI			
Inventor(s):(std):	SALYER ALAN			
International class (IPC 8-9):	A63B69/00 (Advanced/Invention);			
	A63B21/015 A63B21/06 A63B21/22 F02B75/02 (Advanced/Non-invention)			
International class (IPC 1-7):	A61H3/00			
CPC:	A63B21/015 A63B21/0618 A63B21/225 A63B23/047 A63B69/0028 F02B2075/025			
European class:	A63B21/06H A63B23/04B10 A63B69/00J K63B21/015 K63B21/22F R02B75/02S2			
US class:	272/70.3 482/118 482/68			

[Classification Explorer](#)

Cited documents: US4438921 A, US4334677 A, US4289309 A, US3758967 A, US3062548 A, US1839096 A, WO13038129, WO03105967, US9834242, US8469861, US8070659, US7678026, US7430927, US7322905, US6920947, US6749543, US6612971, US5810697, US5283031, US2017106891, US2015084299, US2007277625, US2007037666, US2006071443, US2005272572, US2004005958, US2003228959, US2003069111, US2002086780, US10398927, US10398926,

Abstract:

Locomotion exercise enhancement equipment comprises a frame which is supported for rolling motion along ground by a pair of axled wheels. The user either pulls or pushes the frame. A rotary load is supported on the frame and operatively coupled with the axled wheels to cause resistance to be imposed on the rotation of the wheels. A selector control varies the degree of coupling of the wheels with the rotary load to thereby vary the effective load imposed on the wheels. Several embodiments of the locomotion exercise enhancement equipment are disclosed. In one of these embodiments the rotary load comprises a disk that is attached to a housing containing a differential mechanism; as the equipment is rolled, the wheels drive the differential mechanism, causing the housing and the disk to rotate. A caliper brake mechanism disposed in association with the disk is set by an adjustment mechanism to impart a desired force against opposite sides of the disk, and thereby set the desired loading.



16) Family number: 12192172 (US5456648A)

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Title: REWARD GRANTING EXERCISE MACHINE

Priority: US19940213141 19940314

Family:

Publication number	Publication date	Application number	Application date
US5456648 A	19951010	US19940213141	19940314

Probable Assignee: EDINBURG PETER J

Assignee(s): EDINBURG PETER J ; FOUNTAIN FRANK S ; JOHANSON WILLIAM G

Inventor(s):(std): EDINBURG PETER J ; FOUNTAIN FRANK S ; JOHANSON WILLIAM G

International class (IPC 8-9): A63B24/00 (Advanced/Invention); A63B21/00 A63B21/005 A63B21/015 A63B21/22 A63B23/035 A63B23/04 (Advanced/Non-invention); A63B24/00 (Core/Invention); A63B21/00 A63B21/005 A63B21/012 A63B23/035 A63B23/04 (Core/Non-invention)

International class (IPC 1-7): A63B24/00

CPC: Y10S482/90 A63B22/0007 A63B21/0052 A63B21/0055 A63B21/015 A63B21/225 A63B22/0023 A63B22/205 A63B23/03516 A63B23/0417 A63B24/00 A63B71/0622 A63B2022/002 A63B2022/0038 A63B2208/0238

European class: A63B22/00A4 A63B22/00B4 A63B22/20T4 A63B23/035C A63B24/00 A63B71/06D2 K63B208/02E4 K63B21/005B2 K63B21/005C1D K63B21/015 K63B21/22F K63B22/00B2P K63B22/00C8 K63B23/04B2

US class: 434/247 482/137 482/4 482/70 482/900

[Classification Explorer](#)

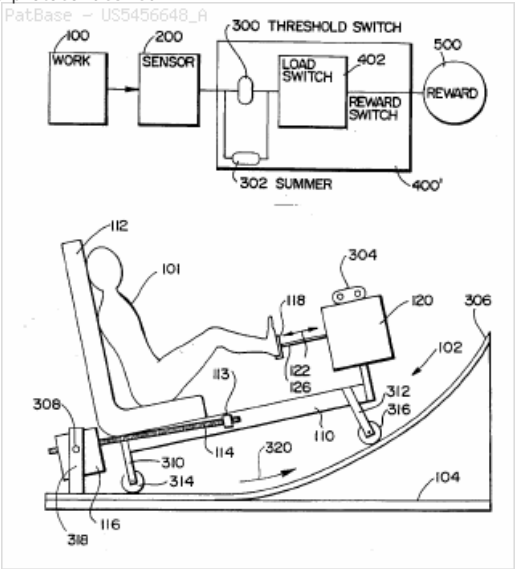
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Forward Citations: WO16059625, WO10074907, WO05079924, US9971340, US9965059, US9959090, US9921726, US9907396, US9898886, US9819754, US9801547, US9799160, US9795323, US9778280, US9773244, US9743443, US9730619, US9730025, US9728059, US9712629, US9700780, US9692844, US9672754, US9672715, US9669262, US9662560, US9658066, US9656146, US9656145, US9655053, US9646481, US9643072, US9643071, US9641469, US9639170, US9636566, US9633508, US9623315, US9615215, US9597598, US9517406, US9460632, US9449409, US9449365, US9421448, US9420083, US9390427, US9374279, US9370320, US9352209, US9344546, US9310909, US9288298, US9241635, US9227106, US9188460, US9162142, US9159186, US9098966, US9098965, US9089760, US9081534, US9066209, US9064342, US9039614, US9031812, US8972220, US8956228, US8954290, US8954289, US8942953, US8938368, US8935123, US8924249, US8924248, US8909543, US8894547, US8892401, US8849697, US8849610, US8838471, US8827906, US8818753, US8812260, US8812259, US8805646, US8793101, US8781791, US8775120, US8768648, US8762102, US8762101, US8751194, US8744804, US8608552, US8419543, US8360865, US8177645, US8177260, US8087996, US7972213, US7101282, US7044891, US6904801, US6690779, US6530835, US6376936, US6299566, US6244988, US6179746, US6179746, US6139431, US5909486, US2016253918, US2014375452, US2014247038, US2013331239, US2013330694, US2013196298, US2013172150, US2011212765, US2010156760, US2010113224, US2009325666, US2008182724, US2008093838, US2007192171, US2007018009, US2007004514, US2006287050, US2006287049, US2006252549, US2006247042, US2006040244, US2006025206, US2005255921, US2005227811, US2005075908, US2004106454, US2004082384, US2003228906, US10588519, US10575352, US10569121, US10561894, US10546480, US10543395, US10500473, US10497246, US10493349, US10471299, US10460337, US10459611, US10441844, US10433612, US10426989, US10419842, US10390620, US10388183, US10343017, US10339782, US10304072, US10303426, US10293211, US10282742, US10279212, US10272317, US10258828, US10252109, US10238959, US10226396, US10220259, US10209705, US10206498, US10188890, US10187918, US10185537, US10168986, US10133261, US10130170, US10130169, US10126998, US10109175, US10104026, US10089714, US10085562, US10080530, US10058774, US10038952, US10010750, US10008090, US10004406, JP6518728, JP6238857, JP2017205542, JP2014237044, ITRM20120005,

Abstract:

Method and apparatus for exercise in which a preselected work input to an exercise machine that is associated with an award-granting switch triggers a reward. The input can be a particular rate of work as measured by rotational speed or linear motion or

a summation of the time during which a threshold level of work was exceeded. The reward can be turning on a TV or like electrical apparatus or it can be a change in the exercise machine and regime. An exercise machine incorporating the award-granting switch is disclosed in which the reward is a change in the angle to horizontal at which the exercise is performed. This change can make the exercise harder or easier depending on the exercise protocol desired.



17) Family number: 52816176 (US2013017932A)

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Title: SYSTEMS AND METHODS FOR EXERCISE MECHANISM

Priority: US20110181473 20110712 US20110300508 20111118

Family:

Publication number	Publication date	Application number	Application date
US2013017932 AA	20130117	US20110300508	20111118
US2013017934 AA	20130117	US20110181473	20110712

Probable Assignee: TAYEBI SEAN K

Assignee(s):(std): TAYEBI SEAN K

Inventor(s):(std): TAYEBI SEAN K

International class (IPC 8-9): A63B21/00 A63B21/008 A63B21/04 A63B21/06 (Advanced/Invention)

CPC: A63B21/153 A63B2069/068 A63B2208/0204 A63B2225/107 A63B21/154 A63B69/06 A63B21/0084 A63B21/0088 A63B21/023 A63B21/225 A63B22/0076 A63B22/0089 A63B22/16 A63B22/203 A63B24/0062 A63B2022/0035 A63B2022/0079 A63B2022/206 A63B2208/0238 A63B2220/70 A63B2225/605 A63B2230/06 A63B2230/75 B63H16/12 B63H2016/085 G09B9/06 A63B21/0628 A63B21/008 A63B21/4035 A63B21/4045 A63B21/4047 B63B34/20

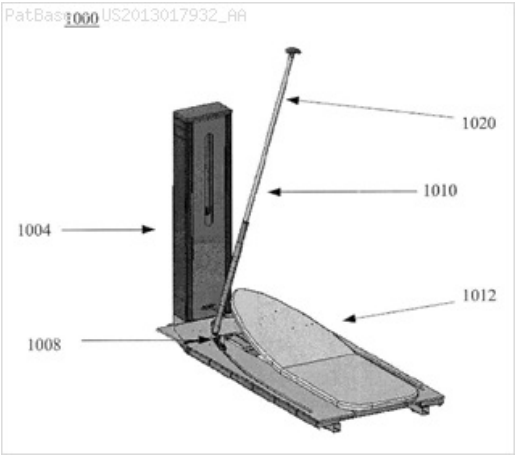
US class: 482/111 482/129 482/133 482/94

[Classification Explorer](#)

Cited documents: US7056224 BA, US5895327 A, US5467993 A, US5443433 A, US5382211 A, US5192257 A, US4043291 A, US2751876 A, US2008261784 AA,

Forward Citations: WO19204930, WO16022352, WO14196870, US9623279, US9452310, US9259606, US8708867, US2018056117, US2017319905, US2017165552, US2017032447, US2015258366, US2015161718, US2014221169, US2014155232, US2013225375, US2013225374, US10460375, US10449410, US10265581, EP3177374,

Abstract: Provided are systems and methods for an exercise mechanism including: a base for a user to sit or stand on; a track arranged near the base; at least one handle bar comprising a handle and a paddle blade attached to the track so as to allow sliding movement alongside the track; and a resistance mechanism to provide resistance as the user moves the handle bar in a selected motion depending on the user's exercise goals.

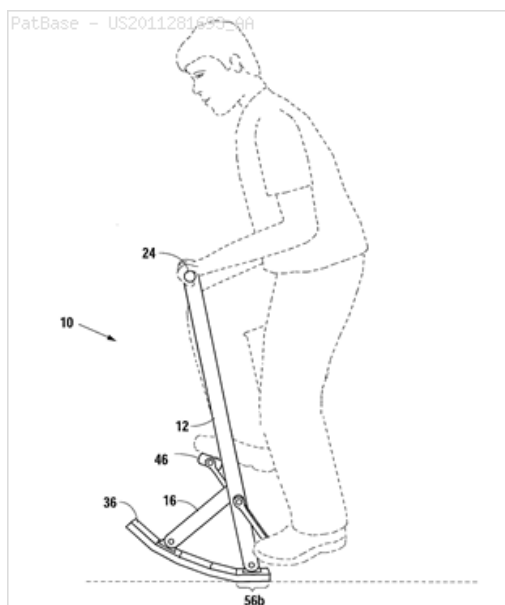


Title: PORTABLE STATIONARY BICYCLE TRAINER**Priority:** US20100780286 20100514**Family:**

Publication number	Publication date	Application number	Application date
US2011281693 AA	20111117	US20100780286	20100514
US8062192 BA	20111122	US20100780286	20100514

Probable Assignee: ARSTEIN SHAWN**Assignee(s):(std):** ARSTEIN SHAWN**Inventor(s):(std):** ARSTEIN SHAWN**International class (IPC 8-9):** A63B21/00 A63B22/06 B62K13/00 (Advanced/Invention)**CPC:** A63B21/00069 A63B22/0605 A63B21/00192 A63B21/015 A63B21/225 A63B22/16 A63B23/0476 A63B26/003 A63B2022/0647 A63B2208/0204 A63B2209/08 A63B2210/50 A63B2225/09 A63B2225/093 A63B21/4049**European class:** A63B21/015 A63B21/22F A63B22/06C A63B22/08 A63B22/16 A63B26/00B A63B69/16 K63B208/02B K63B210/50 K63B22/06C4P K63B225/09 K63B225/09H K63B23/04C**US class:** 280/7.1 482/57 482/57P[Classification Explorer](#)**Cited documents:** USRE34478 E, USD641798 S1, US7935027 BB, US7648444 BB, US7326151 BB, US7303510 BB, US6860490 BB, US6852070 BA, US6837838 BB, US6793609 BA, US6793608 BB, US6749543 BB, US6705977 BA, US6702721 BB, US6648802 BB, US6569063 BB, US6561955 BA, US6554753 BA, US6551220 BA, US6527681 BB, US6488611 BA, US6475122 BB, US6322480 BA, US6132341 A, US6126577 A, US5897474 A, US5582567 A, US5549527 A, US5512025 A, US5423728 A, US5292295 A, US4915376 A, US4902004 A, US4743012 A, US4696467 A, US4492374 A, US2680020 A, US2008026916 AA, US2007054782 AA, US2007049467 AA, US2004198562 AA, US2004063549 AA, US2004053751 AA,**Forward Citations:** US9254415, US9180337, US9044639, US9039581, US2014100087, US2013260967, US2013260966, US2013260964, US10493349, US10433612, US10426989, US10391361, US10279212, US10272317, US10226396, US10220259, US10188890, GB2525850,**Abstract:**

A portable stationary **bicycle** trainer comprises a main frame having a top end and a bottom end and having handlebars attached to the top end thereof. A support member having a first end and a second end is connected at its first end to the main frame. A plurality of pedals is rotatably engaged to the main frame at a position adjacent to the first end of the support member. An arcuately shaped base having varied topography that simulates outdoor variable-grade terrain is connected to the bottom end of the main frame and the second end of the support member. The portable stationary **bicycle** trainer simultaneously provides the user with leg exercise and core muscle strength training.

**Title:** TREADMILL WITH SLATTED TREAD BELT**Priority:** US20140085194P 20141126 US20150944976 20151118**Family:**

Publication number	Publication date	Application number	Application date
US2016144224 AA	20160526	US20150944976	20151118
US9694234 BB	20170704	US20150944976	20151118

Probable Assignee: ICON HEALTH AND FITNESS INC**Assignee(s):(std):** ICON HEALTH AND FITNESS INC**Assignee(s):** JPMORGAN CHASE BANK NA ADMINISTRATIVE AGENT AS**Inventor(s):(std):** DALEBOUT WILLIAM T ; ERCANBRACK GAYLEN**Agent(s):** HOLLAND AND HART LLP**International class (IPC 8-9):** A63B22/00 A63B22/02 A63B22/20 (Advanced/Invention); A63B21/22 A63B24/00 A63B69/16 A63B71/06 (Advanced/Non-invention)**CPC:** A63B22/02 A63B22/0285 A63B21/225 A63B22/0023 A63B24/0087 A63B69/16 A63B2022/0278

A63B2071/0625 A63B2071/065 A63B2071/0655 A63B2071/0658 A63B2071/0661 A63B2071/068
A63B2209/08 A63B2220/17 A63B2220/18 A63B2220/803 A63B2220/805 A63B2225/20 A63B2225/50
A63B2225/685 A63B2230/06 A63B2230/75

US class: 482/54

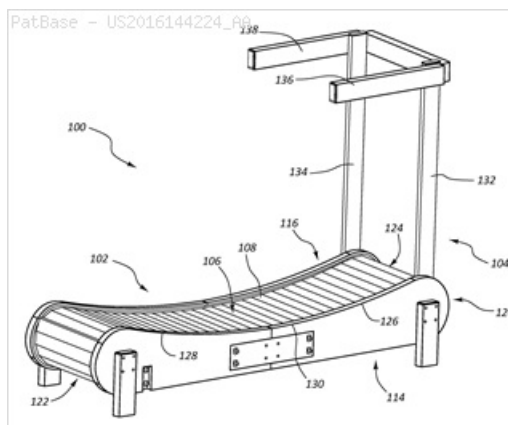
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Cited documents: US9352188 BB, US9114276 BB, US9039580 BA, US8986169 BB, US8690738 BA, US8343016 BA, US8308619 BA, US6348025 BA, US6347603 BA, US6095952 A, US6053848 A, US6042514 A, US5709632 A, US5538489 A, US4548405 A, US4361115 A, US2014080679 AA, US2012270705 AA, US2012157267 AA, US2012010053 AA, US2008287266 AA,

Forward Citations: USD837312, USD827058, US9987516, US9968823, US9895568, US2018214735, US2018111018, US2017340917, US2017312567, US2017312566, US2017252623, US2017056716, US2016367851, US2016074690, US10561894, US10561893, US10556168, US10543395, US10500473, US10493349, US10471299, US10449416, US10441844, US10433612, US10426989, US10376736, US10343017, US10293211, US10293204, US10279212, US10272317, US10258828, US10252109, US10238912, US10188890, US10183191, US10039952, KR101933101, KR101933100, GB2556907, CN107398056, CN107398056,

Abstract:

A treadmill includes an exercise deck, and a tread belt on the exercise deck having multiple slats. At least one slat of the multiple slats has a first rod end and a second rod end protruding from the slat. A first track is defined in a first side of the exercise deck and a second track is defined in a second side of the exercise deck. The first track receives and guides the first rod end, and the second track receives and guides the second rod end.



20) Family number: 62457213 (US2016144225A)

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Title: TREADMILL WITH A TENSIONING MECHANISM FOR A SLATTED TREAD BELT

Priority: US20140085196P 20141126 US20150944994 20151118

Family:	Publication number	Publication date	Application number	Application date
	US2016144225 AA	20160526	US20150944994	20151118
	US9675839 BB	20170613	US20150944994	20151118

Probable Assignee: ICON HEALTH AND FITNESS INC

Assignee(s):(std): ICON HEALTH AND FITNESS INC

Assignee(s): JPMORGAN CHASE BANK NA ADMINISTRATIVE AGENT AS

Inventor(s):(std): ERCANBRACK GAYLEN ; WORKMAN RYAN ; DALEBOUT WILLIAM T

Agent(s): HOLLAND AND HART LLP

International class (IPC 8-9): A63B22/00 A63B22/02 A63B22/20 (Advanced/Invention); A63B21/22 A63B24/00 A63B69/16 A63B71/06 (Advanced/Non-invention)

CPC: A63B22/02 A63B22/0285 A63B21/225 A63B22/0023 A63B22/0221 A63B24/0087 A63B69/16 A63B2022/0278 A63B2071/0625 A63B2071/065 A63B2071/0655 A63B2071/0658 A63B2071/0661 A63B2071/068 A63B2209/08 A63B2220/17 A63B2220/18 A63B2220/803 A63B2220/805 A63B2225/20 A63B2225/50 A63B2225/685 A63B2230/06 A63B2230/75

US class: 482/54

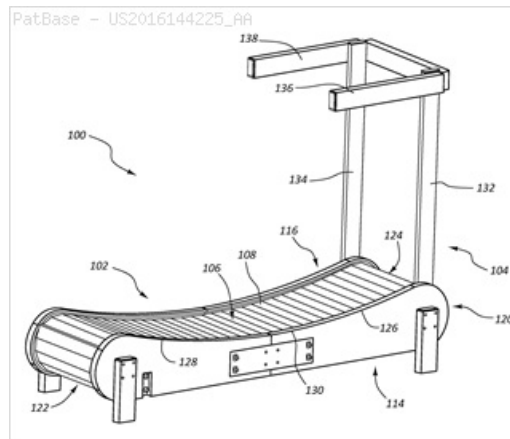
[Classification Explorer](#)

Cited documents: US9039580 BA, US8790222 BB, US8690738 BA, US8113994 BB, US8002674 BB, US6053848 A, US5709632 A, US5643144 A, US4614337 A, US2012270705 AA, US2012010053 AA,

Forward Citations: USD827733, USD827058, US2018111018, US2017340917, US2017312567, US2017312566, US2016023039, US10561894, US10561893, US10556168, US10493349, US10478666, US10471299, US10449416, US10143884, US10039952,

Abstract:

A treadmill has an exercise deck, and a tread belt disposed on the exercise deck. The treadmill further has a tensioning mechanism attached to the exercise deck, and the tensioning mechanism has a selectively movable structure movable with respect to the exercise deck to push outward against an inward surface of the tread belt.



21) Family number: 57265224 (US2014243163A)

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Title: GRAVITY RETURN ROWING EXERCISE DEVICE

Priority: US20130850901P 20130226 US20140190326 20140226

Family:

Publication number	Publication date	Application number	Application date
CA2843983 AA	20140826	CA20142843983	20140226
US2014243163 AA	20140828	US20140190326	20140226
US9878200 BB	20180130	US20140190326	20140226

Probable Assignee: EDMONDSON ROBERT

Assignee(s):(std): EDMONDSON ROBERT

Assignee(s): EDMONDSON ROBERT391 WALTON ST.PETERBOROUGH01K9H 4S9CA

Inventor(s):(std): EDMONDSON ROBERT

Inventor(s): EDMONDSON ROBERT391 WALTON ST.PETERBOROUGH01K9H 4S9CA

Agent(s): TEITELBAUM AND MACLEAN; NEIL; DOUG

International class (IPC 8-9): A63B21/00 A63B21/02 A63B21/22 A63B22/00 A63B22/14 A63B22/20 A63B69/06 (Advanced/Invention)

CPC: A63B22/0076 A63B21/152 A63B21/153 A63B21/154 A63B21/227 A63B21/4015 A63B21/4035 A63B2208/0223

US class: 482/72

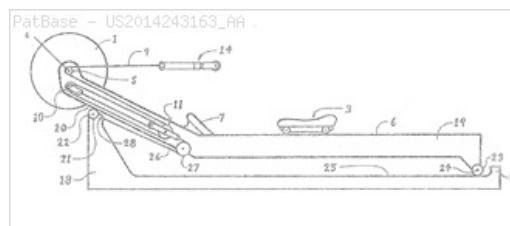
[Classification Explorer](#)

Cited documents: US8038582 BB, US7862484 BA, US6991589 BA, US6926647 BA, US5916069 A, US5906564 A, US5779600 A, US567915 A, US5626541 A, US5470295 A, US5382210 A, US5085429 A, US5072929 A, US4798378 A, US4772013 A, US4616825 A, US4396188 A, US3558130 A, US337942 A, US232022 A, US2014296044 AA, US2013035216 AA, US2012094804 AA, US2011028278 AA, US2005085348 AA, US2002132706 AA, US1928089 A,

Forward Citations: USD861805, US10569121, US10449409, US10426989, US10376730, US10188890, CN105413100, CN105413100,

Abstract:

A rowing exercise device in which the return force for the rowing handle is provided by the force of gravity rather than an elastic cable. The rowing machine includes a stationary base and a moveable frame, which rotates or slides upwardly relative to the moveable frame when a pulling force is applied to the handle, and then rotates or slides back down to the initial position under the force of gravity when the pulling force is removed.



22) Family number: 56591258 (US2015290490A)

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Title: EXERCISING BICYCLE

Priority: NO20120001437 20121130 NO20130000220 20130208 WO2013NO50210 20131202

Family:

Publication number	Publication date	Application number	Application date
US2015290490 AA	20151015	US20130648771	20131202
US10004940 BB	20180626	US20130648771	20131202
WO14084742 A1	20140605	WO2013NO50210	20131202

Probable Assignee: ACTIVETAINMENT AS

Assignee(s):(std): ACTIVETAINMENT AS ; BADARNEH ZIAD

Inventor(s):(std): BADARNEH ZIAD

Agent(s): OPPEDahl PATENT LAW FIRM LLC; OSLO PATENTKONTOR AS

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class (IPC 8-9): A63B21/00 A63B21/005 A63B22/00 A63B22/06 A63B24/00 (Advanced/Invention); A63B71/06 (Advanced/Non-invention)

CPC: A63B22/0015 A63B24/0075 A63B21/00076 A63B21/00192 A63B21/0058 A63B21/0053 A63B21/0051 A63B2022/0611 A63B2022/0028 A63B2220/00 A63B2220/17 A63B22/0023 A63B22/0605 A63B2022/0641 A63B2220/20 A63B22/0017 A63B22/0025 A63B24/0087 A63B2071/0638 A63B2071/0647 A63B2220/80 A63B2220/833 A63B2225/09

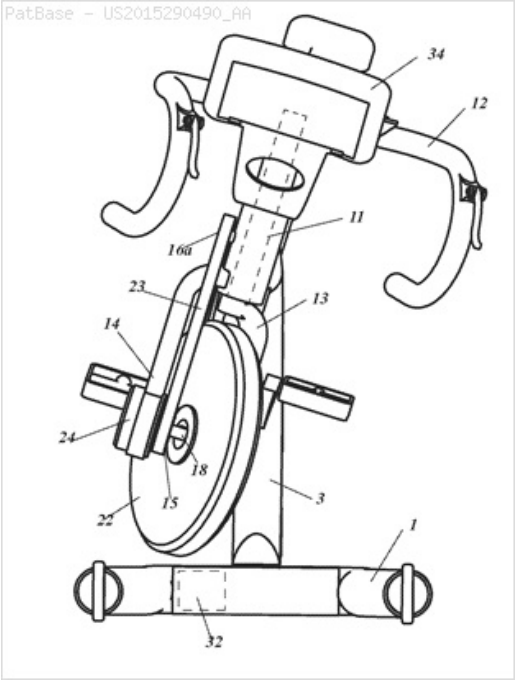
US class: 482/57 482/6

[Classification Explorer](#)

Cited documents: WO07055584 A1, WO05046806 A2, US9381395 BB, US8902352 BB, US8062183 BB, US8033830 BB, US8029415 BB, US8029287 BB, US7927258 BB, US7857732 BB, US7837595 BB, US7809577 BB, US7481746 BB, US6561952 BB, US6126577 A, US5890995 A, US5240417 A, US4957282 A, US4887967 A, US4743012 A, US2011234175 AA, US2011118086 AA, US2010125029 AA, US2008269025 AA, US2007072744 AA,

Forward Citations: WO18085051, WO18034367, USD825012, US9868028, US9808673, US9776043, US9707445, US9691078, US2018207485, US2018085617, US2018017849, US2016361602, US2016325146, US2016236037, US2016051847, US2015005137, US10596446, US10589145, US10561894, US10561877, US10549140, US10543395, US10500473, US10493349, US10471299, US10471298, US10441844, US10433612, US10426989, US10391361, US10379604, US10376736, US10369407, US10343017, US10293211, US10279212, US10272317, US10258828, US10252109, US10238913, US10228608, US10226396, US10220259, US10188890, US10150003, US10109216, US10016655, EP3281088, CN106139560, CN106139560,

Abstract:
A training **bicycle**, including a first frame (1, 36) configured to be supported on a floor, a second frame (2, 37) connected to the first frame, the second frame including an axle (4) allowing the second frame to tilt relative to the first frame along an axis in the longitudinal direction of the training apparatus, a handlebar (12, 35, 77, 90) connected to the upper end of a steering shaft (11, 76), the steering shaft being rotationally connected to the second frame, a crank (26, 110) connected to the second frame, and a first **flywheel** (22, 41, 56, 167, 193) rotationally connected to the lower end of said steering shaft with means for transferring movement from the crank to the first **flywheel**.



23) Family number: 11562284 (US5310392A)				
© PatBase				
Title:	MAGNET-TYPE RESISTANCE GENERATOR FOR AN EXERCISE APPARATUS			
Priority:	US19930098427 19930727			
Family:	Publication number	Publication date	Application number	Application date
	US5310392 A	19940510	US19930098427	19930727
Probable Assignee:	JOHNSON METAL IND CO LTD			
Assignee(s):(std):	JOHNSON METAL IND CO LTD			
Assignee(s):	JOHNSON METAL INDUSTRIES CO ; JOHNSON METAL INDUSTRIES CO LTD ; JOHNSON METAL IND ; JOHNSON METAL IND CO			
Inventor(s):(std):	LO PETER K			
International class (IPC 8-9):	A63B21/005 (Advanced/Invention);			
	A63B21/22 A63B24/00 (Advanced/Non-invention);			
	A63B21/005 (Core/Invention);			
	A63B21/00 A63B24/00 (Core/Non-invention)			
International class (IPC 1-7):	A63B21/24 A63B69/16			
CPC:	Y10S482/903 A63B21/0051 A63B21/225 A63B2220/34			
European class:	A63B21/005B K63B21/22F K63B220/34			

US class: 482/5 482/63 482/903

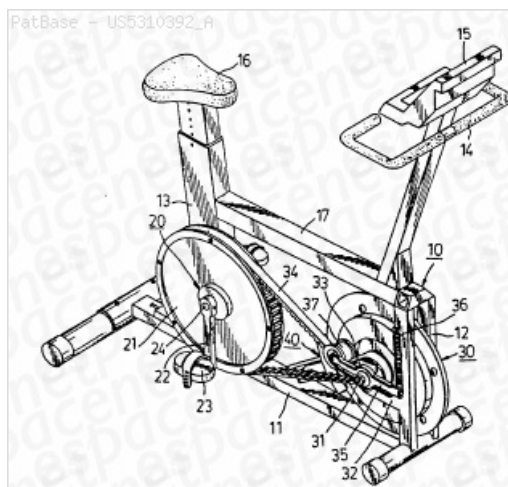
[Classification Explorer](#)

Cited documents: US5145480 A, US5094447 A, US5031901 A, US4775145 A, US4752066 A,

Forward Citations: WO08136588, US9623281, US8876668, US8591385, US8545371, US8545370, US7922635, US7862483, US7785236, US7771325, US7762931, US7736273, US7717826, US7608028, US7608022, US7364533, US7264577, US7226393, US7175570, US7172532, US7115080, US7108641, US7083554, US7077789, US7070545, US7029424, US7011607, US6964633, US6784561, US6695752, US6102169, US5944638, US5938551, US5577986, US5484358, US5466203, US2013005549, US2012329622, US2012329607, US2011152039, US2010113223, US2010077564, US2010036736, US2010035726, US2009170663, US2009137367, US2009118099, US2009054207, US2008261774, US2008234107, US2008207402, US2007173381, US2007042868, US2006276307, US2006160669, US2005250623, US2005221961, US2004166996, US2003158016, US2003127863, US2003109362, US10569121, US10561894, US10561884, US10561883, US10543395, US10500473, US10493349, US10471299, US10441844, US10434354, US10433612, US10426989, US10376736, US10343017, US10293211, US10279212, US10272317, US10265566, US10258828, US10252109, US10238911, US10188890, GB2379618, EP2405978, DE29512243,

Abstract:

A magnet-type resistance generator is to be used with an exercise apparatus which has a **flywheel** and includes a magnet unit with a **curved** housing which confines a groove and which has opposite inner wall surfaces that are respectively provided with a plurality of permanent magnets which extend into the groove. A tubular sleeve extends from a rear side of the **curved** housing and has a distal end which is formed with an internally threaded portion. The tubular sleeve is received slidably in a tubular slide seat. A guide bolt extends axially into the slide seat and has a threaded portion that engages the internally threaded portion of the tubular sleeve. A slide potentiometer has a slider connected to the **curved** housing of the magnet unit. An instrument control unit activates a motor to rotate the guide bolt axially and cause the tubular sleeve to move slidably in the slide seat, thereby moving the magnet unit toward or away from the periphery of the **flywheel** so that the periphery of the **flywheel** can extend into the groove of the **curved** housing by a desired depth in order to attain a desired resistance to rotation of the **flywheel**. The slider moves with the magnet unit to permit the slide potentiometer to control the instrument control panel to deactivate the motor when the desired depth has been reached.



24) Family number: 15371299 (WO0136055A1)

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Title: BICYCLE TRAINING APPARATUS APPAREIL D'ENTRAINEMENT AU VELO

Priority: WO1999US27022 19991115

Family:	Publication number	Publication date	Application number	Application date
	AU200017241 A1	20010530	AU20000017241	19991115
	AU200017241 A5	20010530	AU20000017241	19991115
	WO0136055 A1	20010525	WO1999US27022	19991115

Probable Assignee: WERNER TODD R

Assignee(s):(std): TODD R WERNER ; WERNER TODD R

Inventor(s):(std): WERNER TODD R

Inventor(s): TODD R WERNER

Designated states: AT AU BE CA CH CY DE DK ES FI FR GB GR IE IT JP LU MC NL NZ PT SE US

International class (IPC 8-9): A63B21/22 A63B22/16 A63B26/00 A63B69/16 (Advanced/Invention); A63B21/22 A63B26/00 (Advanced/Non-invention); A63B22/00 A63B26/00 A63B69/16 (Core/Invention); A63B21/00 (Core/Non-invention)

International class (IPC 1-7): A63B69/16

CPC: A63B21/225 A63B22/16 A63B26/003 A63B69/16 A63B2069/167

European class: A63B22/16 A63B26/00B A63B69/16 K63B21/22F K63B69/16A6

[Classification Explorer](#)

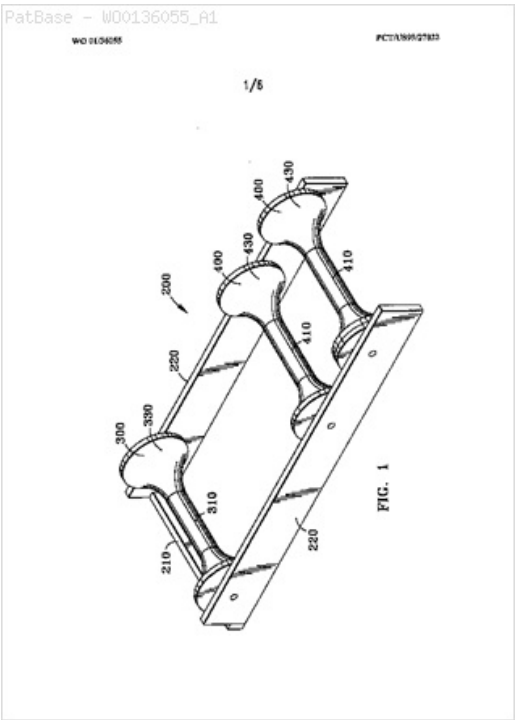
Cited documents: WO9813108 A1, US5472392 A, US4441705 A, US3905597 A, US3572758 A, US2198058 A, EP0215177 A1, DE99657 A, DE2208948 A1, CH657782,

Forward Citations: WO16047978, WO15073624, WO03050476, US9895589, US9295894, KR101503650, EP3068502, CN104826317, CN104826317,

Abstract:

A **bicycle** roller training system of the type having three rollers for supporting a freestanding **bicycle** uses rollers of a novel design. The rollers comprise a cylindrical middle portion of a uniform first diameter, two end portions of a second diameter larger than the first diameter, and two transitional portions between the middle portion and the end portions. The length of the middle portion is greater than the tread width of a tire of a **bicycle** with which the apparatus is used. The transitional portions increase in diameter from the cylindrical middle portion toward the ends of the roller. The transitional portions preferably have a curvilinear

profile, and the preferred profile of the transitional portions is a parabolic **curve**. Thus the transitional portions preferably comprise paraboloids of revolution. The rollers also have disk-shaped **weights** mounted at one or more ends for increased angular momentum. Axles of the rollers are rotatably mounted to a frame. One or more steps may be provided on the frame for convenience in mounting the **bicycle**.



25) Family number: 30883300 (US5514053A) © PatBase

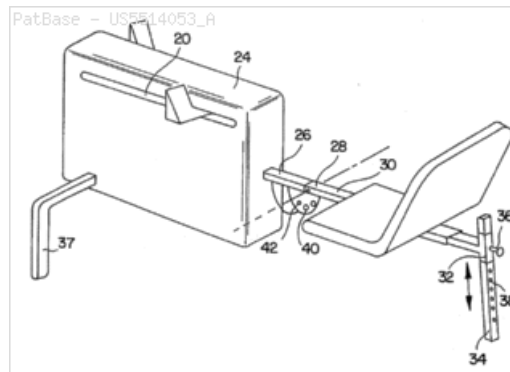
Title:	Recumbent pedal exerciser							
Priority:	US19920900154 19920617		US19930061779 19930512		US19940319325 19941006			
Family:	Publication number		Publication date		Application number		Application date	
	US5514053 A		19960507		US19940319325		19941006	
Probable Assignee:	HAWKINS TRANEL							
Assignee(s):	HAWKINS TRANEL ; SMITH ROBERT S							
Inventor(s):(std):	SMITH ROBERT S ; HAWKINS TRANEL							
International class	A63B23/04 (Advanced/Invention);							
IPC 8-9):	A63B21/00 A63B21/008 A63B21/012 A63B21/015 A63B23/035 A63B24/00 (Advanced/Non-invention)							
International class	A63B22/00							
IPC 1-7):								
CPC:	A63B21/0088 A63B21/0125 A63B21/015 A63B21/15 A63B21/153 A63B21/157 A63B21/225 A63B22/0023 A63B22/0056 A63B22/203 A63B22/2038 A63B22/2051 A63B22/206 A63B2071/025 A63B2208/0238 A63B2220/13 A63B2220/16							
European class:	K63B208/02E4 K63B21/008C4 K63B21/012D K63B21/015 K63B21/22F K63B22/00B4 K63B22/00C8 K63B22/00P2 K63B22/20T6 K63B220/13 K63B220/16 K63B71/02S1R							
US class:	482/63 482/64 482/65 601/36							

[Classification Explorer](#)

Cited documents: WO9111219 A1, US5125677 A, US5039091 A, US4953415 A, US4550908 A, US4282865 A, US4047715 A, US3824994 A,

Forward Citations: WO9845164, WO9845164, WO19003218, WO04058363, WO03004107, WO0076592, WO0054848, US9907992, US9802074, US9474930, US9272180, US9192810, US8968162, US8636628, US8562491, US8206272, US8118715, US8043195, US7993247, US7815551, US7744507, US7727125, US7713176, US7507185, US7497808, US7494448, US7422549, US7201708, US6932745, US6790162, US6561955, US6299566, US6241565, US6213487, US6199884, US2015141207, US2014274577, US2014274576, US2014113776, US2011082015, US2011028277, US2010227739, US2009075786, US2009036274, US2008051274, US2008045385, US2007238583, US2007161465, US2007161463, US2007099764, US2006281604, US2006094569, US2004204293, US2004157708, US10596410, US10569121, US10561894, US10561877, US10543395, US10537764, US10500473, US10493349, US10493311, US10471299, US10441844, US10433612, US10426989, US10376736, US10343017, US10293211, US10279212, US10272317, US10272287, US10258828, US10252109, US10188890, US10086227, GB2347873, GB2347873, EP2188022, CN108744417,

Abstract: An exercise apparatus for performing recumbent pedalling exercises including pedals slidably mounted on a substantially horizontal track, a belt having one end secured to each pedal extending back toward the user over an idler then to a drive shaft so that the belt unwinds from the drive shaft as the pedals are pressed along the track. Each drive shaft (one for each pedal) is coupled to a resistance wheel assembly through a one way clutch. The drive shaft is spring loaded so that each pedal returns to a starting position after being extend. Each pedal operates independent of the other pedal. In one embodiment, the resistance wheel assembly includes a fan in which resistance to turning can be controlled by controlling the width of expandable blades, by partially covering up the fan blades or by a variable transmission coupling the fan to the drive shaft. In another embodiment, the resistance wheel assembly includes a rubber wheel in contact with a roller. Force of the roller against the wheel may be controlled by any one of a number of means including a mechanical or electrical actuator.



26) Family number: 29330320 (US4782602A)

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Title:	Shoe with foot warmer including an electrical generator							
Priority:	US19870054189	19870526	US19870093579	19870904	US19880177410	19880404		
	US19880230908	19880811	US19880262749	19881028	WO1988US03881	19881101		
	CA19880582244	19881104	CA19880582452	19881107	US19890323340	19890314		
	US19890427515	19891027	WO1990US01377	19900313	US19900539978	19900618		
	US19900636603	19901231	WO1991US04328	19910617	US19910754059	19910903		
	US19910754039	19910903	WO1991US09347	19911213	US19920907755	19920629		
	US19920931025	19920817	WO1993US06215	19930629	US19940284894	19940802		
	US19960032155P	19961129	US19970781531	19970109	WO1997US21676	19971128		

Family:

Publication number	Publication date	Application number	Application date
AT139886 E	19960715	AT19880904493T	19881101
AT174190 E	19981215	AT19900905774T	19900313
AU199053495 A1	19901009	AU19900053495	19900313
AU199180628 A1	19920107	AU19910080628	19910617
AU199191656 A1	19920817	AU19910091656	19911213
AU199349919 A1	19940124	AU19930049919	19930629
AU651948 B2	19940811	AU19900053495	19900313
AU662482 B2	19950907	AU19910080628	19910617
CA1341244 A1	20010605	CA19880582452	19881107
CA2085341 AA	19921214	CA19912085341	19910617
CA2099766 AA	19930629	CA19912099766	19911213
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DE69032822 D1	19990121	DE19906032822	19900313
DE69032822 T2	19990708	DE19906032822T	19900313
EP0441779 A1	19910821	EP19890904493	19881101
EP0441779 A4	19911030	EP19890904493	19881101
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EP0463095 A1	19920102	EP19900905774	19900313
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JP5508783 T2	19931209	JP19910511280T	19910617
JP6503981 T2	19940512	JP19920503339T	19911213
KR0144563 B1	19980715	KR19910071129	19910914
KR19920700568 A	19920810	KR19910701129	19910914
KR19927000568 A	19920810	KR19917001129	19900313
KR19930700023 A	19930313	KR19920703261	19921217
KR19937000023 A	19930313	KR19927003261	19910617
KR19937002910 A	19931129	KR19937001989	19911213
KR930702910 A	19931129	KR19930701989	19930630
US4782602 A	19881108	US19870054189	19870526
US4823482 A	19890425	US19870093579	19870904
US4845338 A	19890704	US19880177410	19880404
US4941271 A	19900717	US19880230908	19880811
US4991317 A	19910212	US19890323340	19890314
US5025575 A	19910625	US19890427515	19891027
US5158510 A	19921027	US19910754039	19910903
US5846063 A	19981208	US19970781531	19970109
US6014823 A	20000118	US19920931025	19920817
WO8909552 A1	19891019	WO1988US03881	19881101
WO9010396 A1	19900920	WO1990US01377	19900313
WO9119430 A1	19911226	WO1991US04328	19910617
WO9211780 A1	19920723	WO1991US09347	19911213

WO9400032 A1	19940106	WO1993US06215	19930629
WO9823863 A1	19980604	WO1997US21676	19971128

Probable Assignee: LEMIRE BRETT J

Assignee(s):(std): LAKIC NIKOLA ; LEMIRE BRETT J

Assignee(s): NIKOLA LAKIC ; LAKIC NIKOLA INDIO CALIF ; LAKIC NIKOLA INDIO CALIF US

Inventor(s):(std): LAKIC NIKOLA ; NIKOLA LAKIC ; LEMIRE BRETT J

Inventor(s): LAKIC NIKOLA INDIO CALIF ; LAKIC NIKOLA INDIO CALIF US

Agent(s): GRIFFITH HACK; CASSAN MACLEAN; RIDOUT AND MAYBEE LLP; BARRIGAR AND MOSS

Designated states: AT AU BE BR CA CH CS DE DK ES FI FR GB GR HU IE IT JP KR LI LU MC NL NO PL PT RO SE SU

International class (IPC 8-9): A41D13/00 A41D13/015 A41D19/00 A41D19/015 A42B3/12 A43B13/20 A43B13/38 A43B13/40 A43B13/41 A43B13/42 A43B17/03 A43B17/04 A43B17/05 A43B23/07 A43B23/16 A43B5/04 A43B7/02 A43B7/04 A43B7/06 A43B7/08 A43B7/14 A43B7/32 A61F5/058 A63B21/065 A63B22/00 A63B71/14 B29D35/12 B62J1/26 (Advanced/Invention); A43B13/38 A43B13/42 A43B7/14 F25B27/00 (Advanced/Non-invention); A41D13/00 A41D13/015 A41D19/00 A41D19/015 A42B3/04 A43B13/18 A43B13/38 A43B13/42 A43B17/00 A43B23/00 A43B5/04 A43B7/00 A43B7/14 A43B7/32 A61F5/04 A63B21/06 A63B22/00 A63B71/08 B29D35/00 B62J1/00 (Core/Invention)

International class (IPC 1-7): A41D1/00 A41D19/00 A42B3/00 A42B3/12 A43B13/20 A43B13/38 A43B13/40 A43B13/41 A43B13/42 A43B17/03 A43B19/00 A43B19/00 A43B23/07 A43B5/04 A43B5/04 A43B7/02 A43B7/04 A43B7/04 A43B7/06 A43B7/06 A43B7/14 A43B7/28 A43B7/32 A47C27/10 A61F7/00 A63B22/00 A63B71/14 B62J1/26 F04B23/00 F04B41/00 F28F7/00 H05B3/00 H05B3/00

CPC: F25B27/00 A43B7/082 A43B7/081 A43B5/0439 A43B23/029 A43B7/20 A42B3/122 A43B23/16 B29D35/12 A41D13/015 A63B21/4001 A41D19/01535 A43B13/206 A42B3/121 A43B1/0018 A43B1/0054 A43B3/0005 A43B5/0407 A43B7/04 A43B13/203 A43B17/035 A61F5/05816 B62J1/26 A41D19/0055

European class: A41D13/00C A41D13/015 A41D19/00D A41D19/00P A41D19/015C A41D19/015D2 A42B3/12B A42B3/12B2 A43B1/00B A43B1/00M A43B13/20P A43B13/20T A43B17/03P A43B23/16 A43B3/00E A43B5/04B2 A43B7/02 A43B7/04 A43B7/08B A61F5/058C A63B21/14A B29D35/12 B62J1/26 R25B27/00

US class: 128/382 165/46 2/2.1R 2/413 219/211 219/527 297/199 297/452.41 36/11.5 36/117 36/117.1 36/117.3 36/117.9 36/119 36/2.6 36/26 36/29 36/3B 36/43 36/44 36/54 36/71 36/93 417/435 417/440 482/51 52/57 52/74 607/111

[Classification Explorer](#)

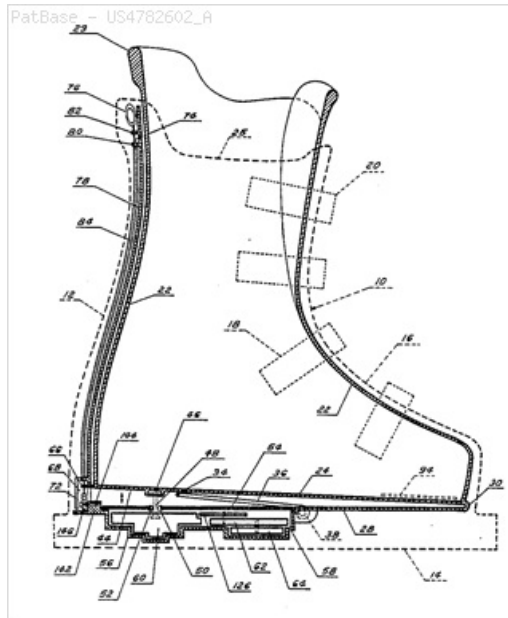
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Forward Citations: WO9953784, WO9854996, WO9831584, WO9715796, WO9520332, WO9515094, WO9307773, WO9211780, WO9119430, WO9009115, WO20050734, WO19040354, WO19013653, WO18137440, WO15128292, WO15108600, WO14032029, WO14031867, WO12138505, WO12056306, WO12027680, WO11067768, WO11063573, WO11019961, WO11019961, WO07121987, WO07121987, WO06089035, WO06065225, WO06017223, WO05114063, WO05004657, WO04004503, WO03034856, WO0108523, WO0032069, WO0024283, USD857353, USD846130, USD844953, USD831314, USD814750, USD803539, USD801624, USD797430, USD797429, USD797428, USD794813, USD784665, USD778567, USD778040, USD776289, USD776288, USD772546, USD772418, USD771922, USD771921, USD7766560, USD762368, USD762367, USD762366, USD761543, USD758058, USD747810, USD744111, USD742017, USD738995, USD737769, USD734012, USD729393, USD724013, USD722222, USD719504, USD666797, USD666796, USD643198, USD634525, USD614839, USD613352, USD579116, USD577441, USD569985, USD495127, US9993978, US9975025, US9961958, US9943421, US9937096, US9936766, US9930926, US9914012, US9901775, US9893652, US9889025, US9868046, US9867758, US9854868, US9839550, US9839549, US9839548, US9839260, US9826792, US9820873, US9808666, US9789662, US9788602, US9788601, US9757256, US9756955, US9744065, US9737113, US9730488, US9724554, US9716419, US9700751, US9687034, US9683622, US9681700, US9681696, US9675135, US9669250, US9668907, US9663199, US9661890, US9615946, US9572397, US9572387, US9568946, US9560894, US9554623, US9549586, US9548618, US9538807, US9538806, US9526299, US9516921, US9510965, US9510646, US9510635, US9504289, US9498017, US9492305, US9492301, US9491982, US9486335, US9474323, US9468553, US9468255, US9468252, US9468236, US9462844, US9446278, US9420849, US9420847, US9408436, US9398963, US9392824, US9380832, US9375340, US9370222, US9364735, US9364348, US9358755, US9358413, US9351536, US9345286, US9339842, US9339074, US9333106, US9320320, US9314064, US9303628, US9301566, US9289051, US9259346, US9254591, US9248042, US9232830, US9220621, US9215905, US9214077, US9198780, US9190886, US9179734, US9175676, US9155931, US9144266, US9119440, US9119439, US9114570, US9107475, US9101177, US9079218, US9072617, US9060564, US9044348, US9024462, US8991072, US8970054, US8950735, US8950089, US8925117, US8919013, US8914994, US8911577, US8907505, US8873914, US8871328, US8869431, US8869429, US8869428, US8863409, US8863408, US8858200, US8857076, US8848368, US8844165, US8814150, US8813389, US8800167, US8739639, US8732868, US8719967, US8677652, US8676541, US8670246, US8667710, US8661710, US8661572, US8657979, US8656608, US8650775, US8636678, US8631588, US8590063, US8578631, US8572867, US8572786, US8567095, US8562549, US8561323, US8544120, US8540838, US8540654, US8506510, US8494324, US8475537, US8453348, US8434244, US8414275, US8367642, US8359769, US8341857, US8327559, US8312643, US8302328, US8302234, US8257232, US8256141, US8241450, US8231561, US8230874, US8209882, US8192380, US8182547, US8178022, US8172778, US8162863, US8151489, US8146266, US8091963, US8074378, US8060964, US8042286, US8037623, US8015730, US8011117, US8001703, US7966750, US7950909, US7950169, US7934521, US7931606, US7930839, US7917981, US7900586, US7879824, US7878950, US7845038, US7810256, US7810255, US7810254, US7784196, US7774955, US7735241, US7721465, US7717869, US7716852, US7707745, US7707744, US7698835, US7694438, US7676956, US7676955, US7665230, US7622014, US7614991, US7600331, US7578074, US7571555, US7562469, US7559107, US7556846, US7555848, US7543726, US7533477, US7513067, US7487602, US7478488, US7478487, US7475498, US7472496, US7468048, US7451556, US7451555, US7451554, US7448676, US7448522, US7448150, US7434339,

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Abstract:

There is disclosed an inner shoe for a molded ski boot which includes a foot warmer mechanism having an electrical resistance heater, an electrical generator, a mechanical translator to translate vertical movements of the wearer's heel into uni-directional rotational movement of a **flywheel**, and a **gear** box mechanically coupling the **flywheel** to the electrical generator. Specific features of the mechanism include: a shock absorbing resilient coupling of the **flywheel** to prevent damaging the mechanism while jumping or otherwise subjecting the shoe to hard usage; interchangeable generators and **gear** boxes to accommodate wearer's of varied size and **weight** as well as for varied intensity of activity; and an entirely sealed, remote latch to lock the mechanical drive out of operation.



27) Family number: 11077339 (US5191809A)

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Title: EXERCISE BICYCLE FLYWHEEL

Priority: US19910760700 19910916

Family:

Publication number	Publication date	Application number	Application date
US5191809 A	19930309	US19910760700	19910916

Probable Assignee: FOOTHILL CAPITAL CORP

Assignee(s):(std): ROADMASTER CORP

Assignee(s): FF ACQUISITION CORP ; FOOTHILL CAPITAL CORP ; RDM HOLDING INC

Inventor(s):(std): CRAIG MARION N

International class (IPC 8-9): A63B21/22 F16F15/30 (Advanced/Invention);
A63B21/06 (Advanced/Non-invention);
A63B21/00 F16F15/30 (Core/Invention);
A63B21/06 (Core/Non-invention)

International class (IPC 1-7): F16F15/10 F16F15/22 G05G1/00

CPC: A63B21/0604 A63B21/225 F16F15/30 Y10T74/2132

European class: A63B21/06A4 A63B21/22F F16F15/30

US class: 482/62 482/64 74/572 74/572.21 74/573R 74/574

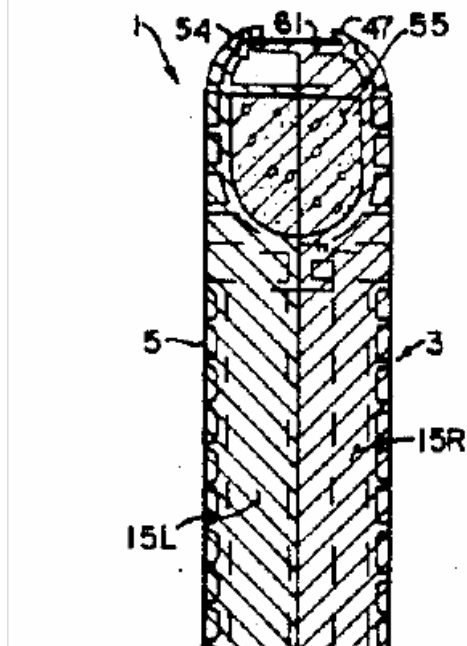
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Forward Citations: US8834323, US8752452, US6910992, US5907979, US2014221168, US2013061714, US2012067163, US2009173183, US2004072657, DE202012009027,

Abstract:

An exercise **bicycle** wheel comprises a pair of facing fly wheel halves. The **flywheel** halves include spokes which extend outwardly from a hub portion and terminate in concave rim portions which face one another. When the two halves are joined, the rim portions define a water tight cavity. This cavity is filled with a heavy material which is initially flowable and which sets in the cavity. Preferably the mixture includes hematite chips, magnetite powder, hydrated lime, portland cement, a water reducer, and water.

**28) Family number: 33206349** (WO06078168A1)

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Title: A MOTION DEVICE AND APPARATUS FOR PHYSICAL EXERCISE**Priority:** NO20050000273 20050118 NO20050000752 20050211**Family:**

Publication number	Publication date	Application number	Application date
NO20050273 A0	20050118	NO20050000273	20050118
WO06078168 A1	20060727	WO2006NO00017	20060113

Probable Assignee: KALIFEN AS**Assignee(s):(std):** BADARNEH ZIAD ; ELLIS CAMPBELL ; HANSEN BENEDICT J M ; KALIFEN AS**Assignee(s):** HANSEN BENEDICT J**Inventor(s):(std):** HANSEN BENEDICT JAMES MARIUS ; HANSEN BENEDICT J M ; ELLIS CAMPBELL ; BADARNEH ZIAD**Inventor(s):** HANSEN BENEDICT J

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class
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A63B (Subclass/Invention)

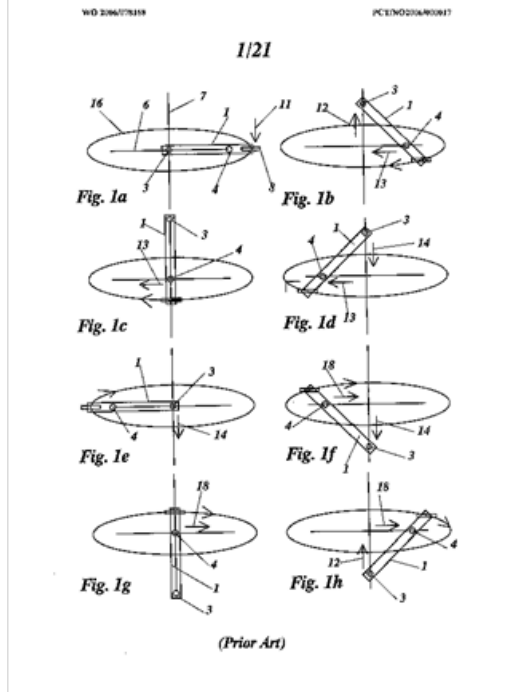
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K63B230/06 K63B230/06A

[Classification Explorer](#)**Cited documents:** US6688192 BA, US6334836 BA, US6135923 A, US5924963 A, US2004005960 AA,**Abstract:**

A motion device and training apparatus for physical exercise or training and with means which provide for a plurality of different workout options simulating human physical movements, said apparatus having a mechanical motioning device connectable to feet supports for a user in order to drive the motion device. The apparatus has input, control and adjustment means of the motion device related to one or more of paths of motion or style of training related to walking, jogging, running, climbing or skiing; stride length, angle of orbital or rectilinear path relative to the horizontal, maintenance of posture of feet support during movement through a path, change of posture of feet support means through movement along the path, level of brake force acting on an apparatus **flywheel**, personal workout levels, caloric burn rates, heart or pulse rate, physical condition of user. Adjustment is made possible during an ongoing exercise.

**29) Family number: 12682355** (US6149612A)

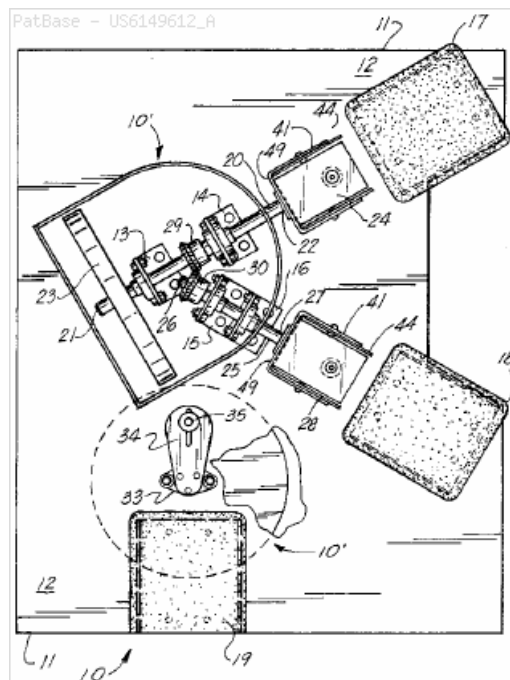
© PatBase

Title: Rehabilitative apparatus for treating reflex sympathetic dystrophy**Priority:** US19980152576 19980914

Publication number	Publication date	Application number	Application date
US6149612 A	20001121	US19980152576	19980914

Probable Assignee: SCHNAPP MOACIR**Assignee(s):(std):** SCHNAPP MOACIR**Assignee(s):** MAYS KIT S**Inventor(s):(std):** SCHNAPP MOACIR ; MAYS KIT S**International class**
(IPC 8-9): A61H1/02 (Advanced/Invention);
A63B23/14 (Advanced/Non-invention)**International class**
(IPC 1-7): A61H1/00**CPC:** A61H1/0285 A61H2001/0203 A61H2201/1276 A63B21/00178 A63B23/14**European class:** A61H1/02M5 A63B21/00P K61H1/02A3 K61H201/12D2A2 K63B23/14**US class:** 482/44 482/45 482/46 482/47 482/49 601/23 601/33 601/40 601/5[Classification Explorer](#)**Cited documents:** US5720711 A, US5186695 A, US5039091 A, US4986261 A, US4647036 A, US4337050 A, US4077626 A, US407071 A, US3064972 A, US2387966 A, US2032303 A, US1899255 A,**Forward Citations:** WO17090009, WO08047355, US9889058, US9549866, US9474673, US9345634, US9131873, US9095492, US8771210, US8718777, US8679040, US8639455, US8606361, US8353854, US8274244, US8073546, US8058823, US8052629, US7983762, US7831305, US7811189, US7756584, US7731642, US7565200, US7565199, US7483747, US6951529, US6565492, US2016271438, US2016144229, US2013012362, US2011300994, US2010273619, US2009227430, US2006106430, US10350448, US10179078, US10112066, EP2480290, EP2349500, EP2349500, CN104801019, AU2009318230,**Abstract:**

The apparatus provides active and passive exercise to the hand, wrist and forearm of the patient. It has dual handles and an attached inertia apparatus such that both the affected arm and the non affected arm are subjected to the therapy. It is theorized that in the retraining of nerve, muscle and ligament/tendon function there is cross-training of right-left part of the systems and the healthy system can assist the afflicted part of the system in retraining. The apparatus addresses specifically the range of motion of the wrist, both for flexion-extension and pronation-supination. For pronation-supination, two conical handles, one for each hand is attached through an axis to a gear system connected to a flywheel. The gear/flywheel system allows for clockwise and counterclockwise rotations of the flywheel. The patient puts the system in motion by rotating the handles in either a clockwise or counterclockwise direction. The rotary (oscillating) motion is transferred to the flywheel through the gears. Adjustment of the starting position of the handle allows the patient to establish the starting point as the point where the patient's strength is maximal. The flywheel stores sufficient energy during the starting input of the patient to continue rotation after the patient's strength and range of motion decreases to the point that no further active rotation is produced by the patient. The inertia in the flywheel then continues the rotation of the patient's wrist, and effects a decrease in the tendon overload which normally occurs in normal physical therapy. An alternative embodiment includes a handle attachment for flexion and extension of the wrist with the orientation of the handle effectively at right angles to the flywheel gear drive of the prior embodiment, whereby the wrist is flexed and extended in causing oscillating rotary movement of the flywheel.



30) Family number: 64147362 (US2016346595A)

Title: EXERCISE MACHINE WITH UPRIGHT AND RECUMBENT CYCLING MODES

Priority: US20150166554P 20150526 US20160163960 20160525

Family:

Publication number	Publication date	Application number	Application date
■ CN106178410 A	20161207	CN201610356273	20160525
■ EP3097956 A1	20161130	EP20160168501	20160505
■ TW201706019 A	20170216	TW20160114095	20160506
■ US2016346595 AA	20161201	US20160163960	20160525

Probable Assignee: ICON HEALTH AND FITNESS INC

Assignee(s):(std): ICON HEALTH AND FITNESS INC

Assignee(s): JPMORGAN CHASE BANK NA ADMINISTRATIVE AGENT AS

Inventor(s):(std): DALEBOUT WILLIAM T ; ERCANBRACK GAYLEN W ; ERCANBRACK GAYLEN

Agent(s): STUTTARD GARRY PHILIP

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO
PL PT RO RS SE SI SK SM TR

International class A63B21/00 A63B21/22 A63B22/00 A63B22/06 A63B22/08 A63B23/04 A63B24/00 (Advanced/Invention)
(IPC 8-9):

CPC: A63B21/0051 A63B22/0005 A63B22/0012 A63B22/0023 A63B22/20 A63B2208/0233 A63B2208/0238
A63B2208/0242 A63B24/0087 A63B24/0062 A63B21/00192 A63B21/225 A63B22/0046 A63B22/0605
A63B2210/50 A63B22/022/0611 A63B2022/0635

US class: 1/1 482/4

Classification Explorer

Cited documents: US9757611 BA, US8876669 BB, US8062190 BB, US7422548 BA, US7393308 BA, US6926645 BA, US6648353 BA, US6497426 BB, US6039676 A, US5178589 A, US2015182781 AA, US2014274581 AA, US2014087923 AA, US2013260964 AA, US2013237383 AA, US2012322625 AA, US2011039661 AA, US2010077564 AA, US2007238584 AA, US2007161467 AA.

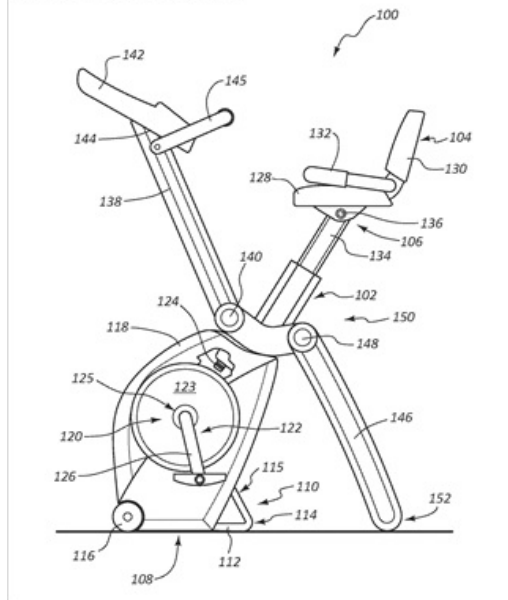
DE102005027148 A1

CN201175544 Y, CN102753240 A, CH708378 A2, CA2509122 AA.

Forward Citations: WO18139913, USD863465, US2018071573, US10561878, US10561877, US10493349, US10052516,

Abstract:

An exercise machine includes a frame member and a seat connected to the frame member at a first end where the frame member includes a base at a second end. The exercise machine further includes a crank assembly connected to the frame member between the first end and the second end. A leg member is pivotally attached to a mid-region of the frame member and selectively movable between a first angular position that orients the frame member in an upright orientation and a second angular position that orients the frame member in a recumbent orientation. The leg member includes a foot that is spaced closer to the base of the frame member when the leg member is in the upright orientation than when the leg member is in the recumbent orientation.

**31) Family number: 28190371** (US2002028731A)

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Title: EXERCISE METHOD AND APPARATUS

Priority: US19970837986 19970415 US19980207057 19981207 US20000567654 20000509
US20000570751 20000515 US20010981473 20011016 US20040933208 20040831

Family:	Publication number	Publication date	Application number	Application date
	US2002028731 AA	20020307	US20010981473	20011016
	US2005101446 AA	20050512	US20040933208	20040831
	US5848954 A	19981215	US19970837986	19970415
	US6063009 A	20000516	US19980207057	19981207
	US6302825 BA	20011016	US20000567654	20000509
	US6340340 BA	20020122	US20000570751	20000515
	US6783481 BB	20040831	US20010981473	20011016
	US7141004 BB	20061128	US20040933208	20040831

Probable Assignee: MARESH JOSEPH D

Assignee(s):(std): MARESH JOSEPH D ; STEARNS KENNETH W

Inventor(s):(std): STEARNS KENNETH W ; MARESH JOSEPH D

Inventor(s): MARESH JOSEPH ; STEARNS KENNETH ; JOSEPH D MARESH ; KENNETH W STEARNS

Agent(s): MARK A KRULL

International class
(IPC 8-9): A63B22/00 A63B23/04 A63B69/16 (Advanced/Invention);
A63B21/00 A63B23/035 (Advanced/Non-invention);
A63B23/04 (Core/Invention);
A63B21/00 A63B23/035 (Core/Non-invention)

International class
(IPC 1-7): A63B2/200 A63B2/204 A63B22/00 A63B22/04 A63B22/06 A63B22/12 A63B6/916 A63B69/16

CPC: A63B21/15 A63B21/225 A63B22/001 A63B22/0012 A63B22/0015 A63B22/0023 A63B22/0664
A63B22/203 A63B2022/002 A63B2022/0041 A63B2022/067

European class: K63B21/22F K63B22/00B2P K63B22/00C10 K63B22/06E2 K63B22/20T2

US class: 482/51 482/52 482/52P 482/57 482/57S 482/70

[Classification Explorer](#)

Cited documents: US6783481 BB, US6783481 BA, US6575877 BB, US6575877 BA, US6340340 BA, US6302825 BA, US6126574 A, US6063009 A, US5967944 A, US5947872 A, US5882281 A, US5879271 A, US5848954 A, US5759136 A, US5593371 A, US5577985 A, US5573481 A, US5573480 A, US5562574 A, US5549526 A, US5542893 A, US5540637 A, US5529555 A, US5529554 A, US5518473 A, US5453066 A, US5423729 A, US5397286 A, US5383829 A, US5295928 A, US5279529 A, US4962925 A, US4786050 A, US4185622 A,

Forward Citations: WO05092034, WO05000421, WO04014494, WO0025694, USRE42699, USRE39904, USD850541, US9937378, US9937377, US9937376, US9931534, US9861509, US9788597, US9693927, US9649529, US9636540, US9566467, US9511255, US9498672, US9468797, US9440107, US9375606, US9357812, US9352187, US9308415, US9272182, US9254413, US9254412, US9055788, US8858403, US8758207, US8734299, US8696524, US8419598, US8323155, US8235873, US8147385, US8079937, US8062187, US8021275, US7942787, US7935027, US7922625, US7909740, US7874963, US7833133, US7811209, US7811208, US7811205, US7785235, US7775940, US7766797, US7758473, US7749137, US7740563, US7736279, US7736278, US7717828, US7713178, US7708668, US7678025, US7674205, US7670266, US7666122, US7658698, US7641598, US7632219, US7618350, US7578770, US7544152, US7540827, US7517303, US7507184, US7462134, US7455624, US7448986, US7425188, US7377881, US7361122, US7344480, US7341542, US7303509, US7270626, US7267637, US7264576, US7244217, US7214168, US7201706, US7201705, US7179201, US7172531, US7169089, US7169088, US7169087, US7141004, US7137927, US7097593, US7097591, US7033306, US7025710, US6905442, US6855094, US6849033, US6783481, US6752744, US6689021, US6689020, US6689019, US6652423, US6648800, US6626802, US6609995, US6575877, US6527676, US6511402, US6340340, US6302825, US6277055, US6238321, US6217486, US6183398, US6171215, US6171215, US6165107, US6126574, US6123650, US6042516, US6042512, US5989163, US2017028250, US2017028249, US2017028248, US2016243400, US2016243399, US2016243398, US2015141209, US2015141208, US2015065306, US2012190509, US2011218079, US2011034303, US2010255958, US2010248899, US2010173754, US2010137110, US2009247371, US2009176626, US2009156370, US2008280731, US2008207400, US2008188357,

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ZM ZW

International class
(IPC 8-9):

A63B22/00 A63B22/06 A63B23/02 A63B23/035 A63B24/00 A63B71/06 B62J99/00 B62K11/14
B62K19/30 B62K21/12 B62K23/06 B62K23/08 B62K3/16 B62M1/12 B62M1/16 B62M1/26 B62M1/36
B62M11/02 B62M11/10 B62M15/00 B62M17/00 B62M23/00 B62M3/08 B62M3/14 B62M9/00 B62M9/12
F16H19/04 F16H25/04 F16H31/00 F16H37/12 (Advanced/Invention);
A63B21/04 A63B21/22 B62M15/00 B62M3/00 B62M9/00 (Advanced/Non-invention)

CPC:

B62M3/14 A63B23/03583 A63B23/0222 A63B22/0605 A63B22/0087 A63B22/001 A63B21/225
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B62K19/30 B62M9/12 B62M11/02 B62M11/10 B62M17/00 B62M23/00 B62K11/14 F16H19/04 F16H25/04
F16H31/001 F16H37/12 B62M1/12

US class:

1/1 280/234 482/62 482/8 74/551.8

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US2007114086, US2005044981 AA, US2004113384 AA, JP9020279, JP2008518826 T2, FR2686305 A1,
EP911076057, EP91107605, EP0456250 A1, DE8708478 U,

DE102010034035 A1

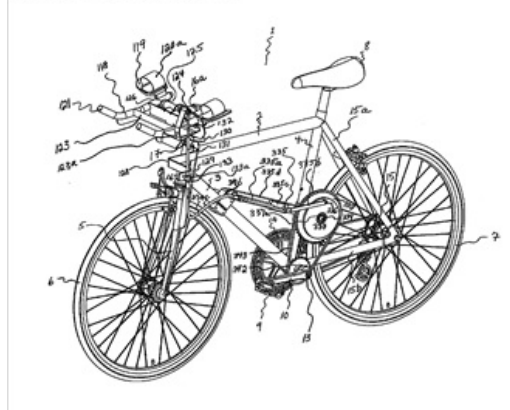
CN2319299 Y, CN204775788 U, CN1169386 A,

Forward Citations: USD808306, US9676442, US10276056, RU2696905, CN105438395,

Abstract:

The present invention relates to a rider's simultaneous use of his forearms/hands and legs to provide dual power into a propulsion system for riding a cycle vehicle, including a **bicycle** and a tricycle, or other vehicles. The invention permits the rider to have complete control turning the cycle vehicle, at will, right or left, while at the same time pumping a set of forearm/hand bars in an up power stroke and a down power stroke. In addition, even though the pumping action is lineally moving a telescoping rod and a push/pull cable back and forth, it is also simultaneously rotating a **flywheel**, upper and lower sprockets, and the crank axle to drive the **bicycle** wheel forward over the riding surface. Thus, the rider can provide maximum power into rotating the rear tire by simultaneously using both his arms and legs, while contemporaneously controlling his direction of travel.

PatBase - US2015298761_AA



33) Family number: 28294395 (US2002022553A)

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Title: EXERCISE TRAINER WITH INTERCONNECTED GROUNDED MOVEMENT

Priority: US19980093927P 19980723 US19990249189 19990212 US20000740445 20001219
US20000740455 20001219 US20010028451 20011022 US20020173775 20020618
US20050154850 20050616 US20050181647 20050714

Family:	Publication number	Publication date	Application number	Application date
	US2002022553 AA	20020221	US20000740445	20001219
	US2002049122 AA	20020425	US20010028451	20011022
	US2002155927 AA	20021024	US20020173775	20020618
	US2005245358 AA	20051103	US20050154850	20050616
	US2005250621 AA	20051110	US20050181647	20050714
	US6183398 BA	20010206	US19990249189	19990212
	US6183398 BB	20010206	US19990249189	19990212
	US6575877 BB	20030610	US20000740445	20001219
	US6908416 BB	20050621	US20010028451	20011022
	US7025710 BB	20060411	US20020173775	20020618
	US7267637 BB	20070911	US20050154850	20050616

Probable Assignee: UNISEN INC

Assignee(s):(std): CORBALIS KEVIN P ; GOH YONG M ; GOH YONG MING ; MERCADO FRED ; RUFINO JOHN C ; UNISEN INC DBA STAR TRAC ; UNISEN INC

Assignee(s): PNC BANK NATIONAL ASSOCIATION ; GOH YOUNG MING ; KELMSCOTT COMMUNICATIONS LLC A DELAWARE LIABILITY ; KELMSCOTT COMMUNICATIONS LLC A DELAWARE LIABILITY CO DBA ORANGE COUNTY PRINTING LTD ; CORE HEALTH AND FITNESS LLC ; CORE IND LLC ; CORTLAND CAPITAL MARKET SERVICES LLC

Inventor(s):(std): CORBALIS KEVIN P ; RUFINO JOHN C ; GOH YONG MING ; GOH YONG M ; GOH YOUNG MING ; MERCADO FRED

Inventor(s): KEVIN P CORBALIS ; YONG MING GOH ; JOHN C RUFINO ; GOH YONG ; RUFINO JOHN

Agent(s): KNOBBE MARTENS OLSON AND BEAR LLP; GEORGE F BETHEL

International class (IPC 8-9): A63B22/04 A63B23/035 A63B23/04 A63B69/16 A63B69/18 (Advanced/Invention); A63B21/22 A63B23/035 (Advanced/Non-invention); A63B23/04 (Core/Invention); A63B21/00 A63B23/035 (Core/Non-invention)

International class (IPC 1-7): A63B2/204 A63B22/02 A63B22/04 A63B22/06 A63B6/916 A63B69/16 A63B69/18

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European class: A63B21/00T A63B22/00A6 A63B22/06E K63B208/02B K63B208/02E2 K63B21/005B K63B21/005C K63B21/22F K63B22/06E2 K63B22/06E4 K63B22/06E4S K63B22/20T6

US class: 482/51 482/52 482/52P 482/54 482/54P 482/57 482/57P 482/57S 482/62 482/70 482/70S

[Classification Explorer](#)

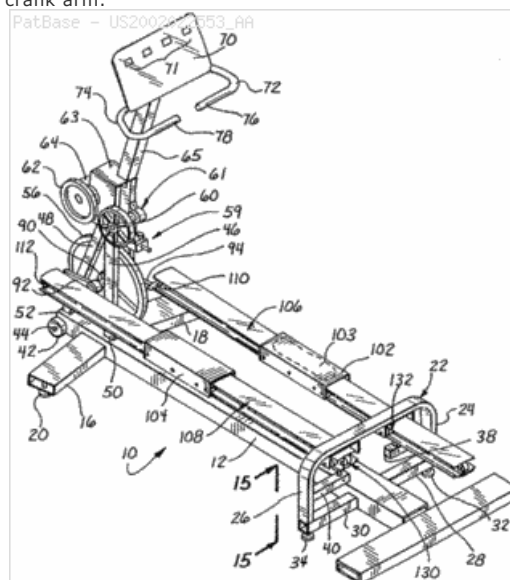
Cited documents: US6908416 BB, US6846272 BB, US6196948 BA, US6196948, US6190289 BA, US6190289, US6183397 BA, US6183397, US6176814 BA, US6176814 B1, US6176814, US6171217 BA, US6171217 B1, US6171217, US6171215 BA, US6171215 B1, US6171215, US6168552 BA, US6168552 B1, US6168552, US6165107 A, US6165107, US6159132 A, US6159132, US6152859 A, US6152859, US6149551 A, US6149551, US6146314 A, US6146314, US6146313 A, US6146313, US6142915 A, US6142915, US6135927 A, US6135927, US6135926 A, US6135926, US6135923 A, US6135923, US6126574 A, US6126574, US6126573 A, US6126573, US6123650 A, US6123650, US6113518 A, US6113518, US6099439 A, US6099439, US6090014 A, US6090014, US6090013 A, US6090013, US6080086 A, US6080086, US6077198 A, US6077198, US6077196 A, US6077196, US6063009 A, US6063009, US6063008 A, US6063008, US6053847 A, US6053847, US6045488 A, US6045488, US6045487 A, US6045487, US6042512 A, US6042512, US6036622 A, US6030320 A, US6030320, US6027431 A, US6027431, US6027430 A, US6027430, US6024676 A, US6024676, US6022296 A, US6022296, US6019710 A, US6019710, US6017294 A, US6017294, US6007462 A, US6007462, US6004244 A, US6004244, US5997445 A, US5997445, US5993359 A, US5993359, US5989159 A, US5989159, US5971892 A, US5971892, US5967944 A, US5967944, US5961423 A, US5961423, US5957814 A, US5957814, US5947872 A, US5947872, US5938570 A, US5938570, US5938568 A, US5938568, US5938567 A, US5938567, US5928114 A, US5928114, US5924963 A, US5924963, US5924962 A, US5924962, US5921894 A, US5921894, US5919118 A, US5919118, US5916065 A, US5916065, US5916064 A, US5916064, US5913751 A, US5913751, US5911649 A, US5911649, US5899833 A, US5899833, US5899388 A, US5899388, US5895339 A, US5895339, US5893820 A, US5893820, US5882281 A, US5882281, US5879271 A, US5879271, US5876308 A, US5876308, US5876307 A, US5876307, US5868650 A, US5868650, US5865712 A, US5865712, US5860895 A, US5860895, US5857941 A, US5857941, US5857940 A, US5857940, US5848954 A, US5848954, US5846166 A, US5846166, US5836855 A, US5836855, US5836854 A, US5836854, US5830112 A, US5830112, US5823919 A, US5823919, US5823917 A, US5823917, US5823914 A, US5823914, US5820524 A, US5820524, US5813949 A, US5813949, US5803872 A, US5803872, US5803871 A, US5803871, US5800315 A, US5800315, US5795268 A, US5795268, US5792029 A, US5792029, US5792028 A, US5792028, US5792026 A, US5792026, US5788610 A, US5788610, US5788609 A, US5788609, US5782722 A, US5782722, US5779599 A, US5779599, US5779598 A, US5779598, US5776035 A, US5776035, US5772558 A, US5772558, US5769760 A, US5769760, US5766113 A, US5766113, US5762588 A, US5762588, US5759136 A, US5759136, US5759135 A, US5759135, US5755645 A, US5755645, US5755643 A, US5755643, US5755642 A, US5755642, US5749809 A, US5749809, US5746683 A, US5746683, US5743834 A, US5743834, US5743832 A, US5743832, US5741205 A, US5741205, US5738614 A, US5738614, US5735774 A, US5735774, US5735773 A, US5735773, US5733227 A, US5733227, US5707321 A, US5707321, US5692997 A, US5692997, US5692994 A, US5692994, US5690589 A, US5690589, US5685804 A, US5685804, US5685333 A, US5685333, US5658227 A, US5658227, US5653662 A, US5653662, US5616106 A, US5616106, US5611758 A, US5611758, US5611756 A, US5611756, US5595553 A, US5595553, US5593372 A, US5593372, US5591107 A, US5591107, US5577985 A, US5577985, US5573480 A, US5573480, US5562574 A, US5562574, US5549529 A, US5549529, US5540637 A, US5540637, US5529555 A, US5529555, US5527246 A, US5527246, US5518473 A, US5518473, US5499956 A, US5499956, US5496235 A, US5496235, US5419747 A, US5419747, US5403255 A, US5403255, US5401226 A, US5401226, US5383829 A, US5383829, US5346447 A, US5346447, US5320588 A, US5320588, US5299993 A, US5299993, US5295928 A, US5295928, US5290211 A, US5290211, US5279529 A, US5279529, US5242343 A, US5242343, US5195935 A, US5195935, US5186697 A, US5186697, US5163888 A, US5163888, US5149312 A, US5149312, US5135447 A, US5135447, US5131895 A, US5131895, US5078389 A, US5078389, US5062627 A, US5062627, US5048821 A, US5048821, US5040786 A, US5040786, US5039088 A, US5039088, US5000443 A, US5000443, US4989857 A, US4989857, US4951942 A, US4951942, US4949993 A, US4949993, US4940233 A, US4940233, US4900013 A, US4900013, US4869494 A, US4869494, US4850585 A, US4850585, US4786069 A, US4786069, US4786068 A, US4786068, US4779863 A, US4779863, US4720093 A, US4720093, US4709918 A, US4709918, US4708338 A, US4708338, US4685666 A, US4685666, US4679786 A, US4679786, US4645200 A, US4645200, US4643419 A, US4643419, US4592544 A, US4592544, US4561318 A, US4561318, US4555109 A, US4555109, US4509742 A, US4509742, US4456276 A, US4456276, US4456176 A, US4456176, US4379566 A, US4379566, US4188030 A, US4188030, US4185622 A, US4185622, US4053173 A, US4053173, US3970302 A, US3970302, US3759511 A, US3759511, US3756595 A, US3756595, US3713438 A, US3713438, US3566861 A, US3566861, US3475021 A, US3475021, US3432164 A, US3432164, US3316898 A, US3316898, US2892455 A, US2892455, US2826192 A, US2826192, US2603486 A, US2603486, US219439 A, US219439, US2002032104 AA, US1909190 A,

Forward Citations: WO14137514, WO14016680, WO12047298, WO10085010, WO09113049, WO07002471, WO07002471, WO05089882, WO05011815, WO05011815, WO04014494, USRE39904, US9907996, US9873012, US9779360, US9636540, US9610475, US9604096, US9492705, US9474930, US9468795, US9339685, US9314664, US9283425, US9242138, US9138614, US9114275, US9050498, US8998775, US8936535, US8894551, US8781690, US8678981, US8647240, US8469861, US8444580, US8419598, US8328692, US8323156, US8292789, US8272997, US8128536, US8083650, US8079937, US8061728, US8029417, US8025611, US8021274, US8007422, US7955229, US7955225, US7942793, US7931566, US7909745, US7909739, US7896782, US7887463, US7874961, US7828698, US7824314, US7785235, US7771324, US7758473, US7731634, US7717837, US7708669, US7704192, US7662070, US7618351, US7604574, US7594877, US7578770, US7530926, US7520839, US7517303, US7468021, US7465254, US7462134, US7448986, US7422550, US7377881, US7361122, US7354384, US7341542, US7270626, US7267637, US7244217, US7214168, US7207925, US7201707, US7201706, US7201705, US7182714, US7179201, US7172531, US7169089, US7169088, US7141004, US7121984, US7112161, US7097593, US7097591, US7094184, US6926646, US6835166, US6811517, US6796926, US6761665, US6689019, US6652423, US6527676, US6468184, US2015343265, US2015080188, US2014150578, US2013237393, US2013138302, US2013045839, US2013035213, US2012058862, US2011124472, US2011028276, US2011021956, US2011015551, US2010298096, US2010295263, US2010273618, US2010248899, US2010216612, US2010204024, US2010204023, US2010105528, US2010087298, US2010075813, US2010022370, US2010010397, US2009291810, US2009264257, US2009227428, US2009209395, US2009209394, US2009203502, US2009181828, US2009156369, US2009143198, US2009062080, US2009023566, US2008188357, US2008139366, US2008070755, US2008058168, US2007298936,

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Abstract:

An exercise trainer having a frame with a **flywheel** supported on the frame and first and second crank arms having a common axle on the **flywheel**. A first foot link and a second foot link are respectively connected to the crank arms for pivotal reciprocating movement. The links have channel tracks and an elongated tunnel. Bearing surfaces support the first foot links rearwardly and engage the channels. Foot pedals are mounted on the foot links for relative movement on the foot links. A flexible member such as a belt, cable, or chain is connected to the foot pedal. A lower portion of the flexible member is connected to a fixed location or ground on the frame. A forward and rearward rotational support such as a pulley receives the flexible member defining a lower portion wrapping around the pulleys and connected to the frame. The pulleys are mounted in the tunnel to provide movement of the foot pedals greater than twice the length of the crank arm.



34) Family number: 41109429 (DE102006031855A1)

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Title: BRAKE DEVICE I.E. ROTATION BRAKE, FOR SINGLE-LANE VEHICLE E.G. BICYCLE OR MOTOR CYCLE, HAS PISTONS COUPLED WITH DISK NEAR TO DISK EDGE BY LEVER, AND HINGE FIXEDLY OR FLEXIBLY CONNECTED WITH DISK AT END AND WITH STATIC PART AT ANOTHER END BREMS-VORRICHTUNG FUER EINSPURIGE FAHRZEUGE, VORZUGSWEISE FUER FAHRRADER ODER

Priority: DE200610031855 20060710

Family:	Publication number	Publication date	Application number	Application date
	DE102006031855 A1	20080117	DE200610031855	20060710

Probable Assignee: MERLAKU KASTRIOT

Assignee(s):(std): MERLAKU KASTRIOT

Inventor(s):(std): MERLAKU KASTRIOT

International class (IPC 8-9): A63B21/22 A63B22/06 A63B69/16 A63C17/14 B60T1/087 B60T1/10 B60T13/68 B60T8/17 B62L1/00 F16D65/18 (Advanced/Invention)

CPC: A63B21/00069 B60T10/04 A63B21/0083 A63B21/0087 A63B22/02 A63C17/1427 B60T1/062 F16D57/06 A63B22/0605

European class: A63B21/008B2 A63B21/008C2 A63C17/14B A63C17/14B4 B60T1/06B B60T10/04 F16D57/06 K63B22/02 K63B22/08

[Classification Explorer](#)

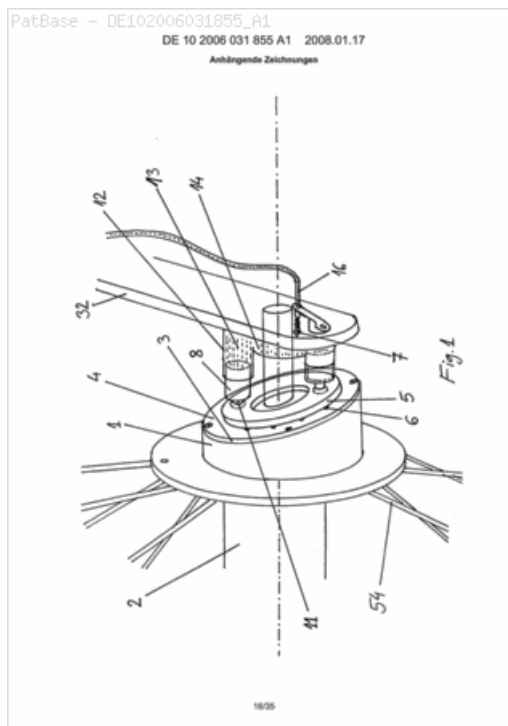
Cited documents: WO04058550 A2, EP1382501 A1, EP0945616 A2, DE4212542 A1, DE4139186 A1, DE3907053 A1, DE3716202 C3, DE3621290 C2,
DE102004028747 A1

DE10132210 A1,

Forward Citations: EP2749483, EP2749483, DE102013017921, DE102012224382, CN103895632, CN103895632, CN103148131,

Abstract:

The device has a disk (5) lying on an upper surface of a swash plate, and pistons (8) coupled with the disk near to a disk edge by a lever. A mechanical valve (7) or an electrical valve is integrated in a connection-channel (14), where the valve controls intensities of fluid flow between pressure chambers/pressure cylinders (12) in a continuous or gradual manner. A hinge (11) is fixedly or flexibly connected with the disk at an end and with a static part of a **bicycle** at another end, where the hinge exhibits tumbling motion of the disk.



35) Family number: 32584440 (WO06011812A1)

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Title: A CRANK DEVICE AND APPARATUS FOR PHYSICAL EXERCISE

Priority: NO20040003230 20040730

Family:

Publication number	Publication date	Application number	Application date
NO20043230 A0	20040730	NO20040003230	20040730
WO06011812 A1	20060202	WO2005NO00284	20050728

Probable Assignee: FLEXIPED AS

Assignee(s):(std): BADARNEH ZIAD ; ELLIS CAMPBELL ; FLEXIPED AS ; HANSEN BENEDICT J M ; MOLLATT TORBJOERN

Assignee(s): HANSEN BENEDICT J

Inventor(s):(std): HANSEN BENEDICT J M ; HANSEN BENEDICT JAMES MARIUS ; MOLLATT TORBJOERN ; MOLLATT TORBJORN ; BADARNEH ZIAD ; ELLIS CAMPBELL

Inventor(s): HANSEN BENEDICT J

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class (IPC 8-9): A63B22/06 A63B23/04 (Advanced/Invention); A63B21/005 A63B21/22 (Advanced/Non-invention); A63B22/06 A63B23/04 (Core/Invention); A63B21/00 A63B21/005 (Core/Non-invention); A63B (Subclass/Invention)

International class (IPC 1-7): A63B22/06 A63B23/04 B62M3/06

CPC: A63B22/0605 A63B22/0023 A63B21/0051 A63B21/225 A63B22/001 A63B22/0015 A63B22/0046 A63B22/0664 A63B22/203 A63B2022/002 A63B2022/0629 A63B2022/0688 A63B2230/062 A63B2230/065 A63B2230/75 A63B2230/067 A63B22/0017

European class: A63B22/00A6 A63B22/00B A63B22/00B4 A63B22/06E A63B22/20T2 K63B21/005B K63B21/22F K63B22/00B2 K63B22/00B2P K63B22/00D K63B22/06C2M K63B22/06E6 K63B230/06A K63B230/06A6 K63B230/75

[Classification Explorer](#)

Cited documents: WO9941140 A1, WO9903727 A1, EP0761528 A1,

Forward Citations: WO13067999, WO06038815, US9427620, RU2609392, EP2776135, CN103930170, CN103930170,

Abstract:

A crank device and training apparatus for physical exercise or training with means which provide for a plurality of different workout options simulating human physical movements, said apparatus having a crank device connectable to feet supports for a user in order to drive the crank device. The apparatus has input, control and adjustment means of the crank device related to one or more of paths of motion or style of training related to walking, jogging, running, climbing or skiing; stride length, angle of orbital or rectilinear path relative to the horizontal; maintenance of posture of feet support during movement through a path and change of posture of feet supporting means through movement along the path; level of brake force acting on an apparatus **flywheel** and personal workout levels, caloric burn rates, heart or pulse rate, and physical condition of user. Adjustment is made possible during an ongoing exercise.

1/22

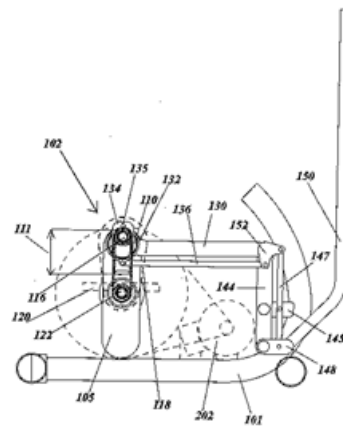


Fig. 1

36) Family number: 4602456 (DE3603853A1)

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Title: BICYCLE ERGOMETER FAHRRAD-ERGOMETER**Priority:** DE19863603853 19860207

Family:	Publication number	Publication date	Application number	Application date
	DE3603853 A1	19870820	DE19863603853	19860207
	DE3603853 C2	19891019	DE19863603853	19860207

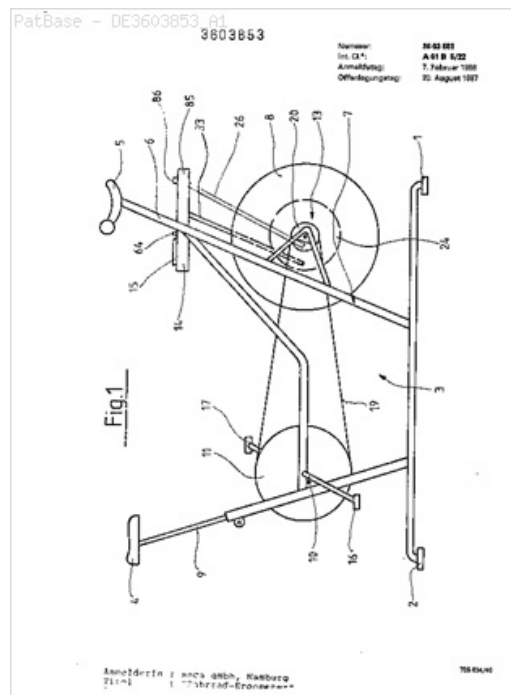
Probable Assignee: SECA GMBH**Assignee(s):(std):** SECA GMBH**Assignee(s):** SECA GMBH 2000 HAMBURG DE**Inventor(s):(std):** SIEVERS CLAUS DIETER**Inventor(s):** SIEVERS CLAUS DIETER 2000 HAMBURG DE

International class
(IPC 8-9): A63B21/015 A63B22/08 (Advanced/Invention);
A63B21/005 A63B21/22 (Advanced/Non-invention);
A63B21/012 A63B22/06 (Core/Invention);
A63B21/00 A63B21/005 (Core/Non-invention)

International class
(IPC 1-7): A61B5/22

CPC: A63B21/00069 A63B21/015 A63B21/0052 A63B21/225 A63B22/0605 A63B21/4049**European class:** A63B21/015 A63B22/08 K63B21/005B2 K63B21/22F[Classification Explorer](#)**Cited documents:** DE7523938 U, DE7243931 U, DE2525739 A1, DE1961488 A1,**Forward Citations:** DE4118082,**Abstract:**

A **bicycle** ergometer with a pedal arrangement has an adjustable braking device and a display instrument for the braking torque. The display instrument (15), in particular for the torque, which cooperates with the braking device, is a pointer instrument, and the pointer spindle (47) is directed in a direction essentially vertically with respect to the shaft of the pedal arrangement (10). Arranged between the braking device (8, 24) and the pointer spindle (47) is a mechanical linkage either with transmission levers or else connected to particularly large transmission devices.



37) Family number: 28329457 (US2002142890A)

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Title: EXERCISE MACHINE

Priority: US20010823362 20010330 WO2002US09867 20020328 US20030742702 20031219
US20070767873 20070625 US20090636814 20091214 US20110108704 20110516
US20120692840 20121203 US20140480707 20140909 US20160018329 20160208

Family:

Publication number	Publication date	Application number	Application date
AT417651 E	20090115	AT20020757879T	20020328
CN1254287 C	20060503	CN20028011068	20020328
CN1512903 A	20040714	CN20028011068	20020328
DE02757879 T1	20050113	DE20020757879T	20020328
DE60230396 D1	20090129	DE20026030396	20020328
EP1372794 A1	20040102	EP20020757879	20020328
EP1372794 A4	20061213	EP20020757879	20020328
EP1372794 B1	20081217	EP20020757879	20020328
ES2214986 T1	20041001	ES20020757879T	20020328
TWI250883 B	20060311	TW20020106031	20020327
US2002142890 AA	20021003	US20010823362	20010330
US2004132583 AA	20040708	US20030742702	20031219
US2007298936 AA	20071227	US20070767873	20070625
US2010093499 AA	20100415	US20090636814	20091214
US2011218079 AA	20110908	US20110108704	20110516
US2013310226 AA	20131121	US20120692840	20121203
US2015065306 AA	20150305	US20140480707	20140909
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US6689019 BB	20040210	US20010823362	20010330
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US6689019 C2	20190128	US20010823362	20010330
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US7341542 C2	20190319	US20030742702	20031219
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US7632219 C1	20181030	US20070767873	20070625
US7632219 C2	20190401	US20070767873	20070625
US7942787 BB	20110517	US20090636814	20091214
US8323155 BB	20121204	US20110108704	20110516
US8323155 C1	20181029	US20110108704	20110516
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US8858403 BB	20141014	US20120692840	20121203
US9272182 BB	20160301	US20140480707	20140909
US10201727 BB	20190212	US20160018329	20160208
WO202078791 A1	20021010	WO2002US09867	20020328

Probable Assignee: NAUTILUS INC

Assignee(s):(std): NAUTILUS INC ; OHRT JOHN ARTHUR ; NEUTILUS INC ; DUNCAN JAMES A

Assignee(s): JPMORGAN CHASE BANK NA ADMINISTRATIVE AGENT AS ; STAIRMASTER SPORTS MEDICAL PRODUCTS INC ; OCTANE FITNESS LLC ; OF HOLDINGS INC ; WELLS FARGO BANK NATIONAL ASSOCIATION ; BANK OF AMERICA NA ; BANK OF AMERICA NA ADMINISTRATIVE AGENT AS ; BANK

OF WEST ; DASHAMERICA INC

Inventor(s):(std): DUNCAN J A OHRT J A ; JA DUNCAN ; JA OHRT ; OHRT JOHN ; DUNCAN JAMES ; OHRT JOHN ARTHUR ; DUNCAN JAMES A ; OHRT JOHN A ; DUNCAN A ; OHRT ARTHUR ; DUNCAN J A ; OHRT J A

Inventor(s): J A DUNCAN ; J A OHRT ; JA OHRT JA DUNCAN ; J A OHRT J A DUNCAN ; JOHN ARTHUR OHRT ; JAMES A DUNCAN

Agent(s): MILLER JAMES LIONEL WOOLVERTON ET AL; DORSEY AND WHITNEY LLP, INTELLECTUAL PROPERTY DEPARTMENT; DORSEY AND WHITNEY LLP INTELLECTUAL PROPERTY DEPARTMENT; DORSEY AND WHITNEY LLP ON BEHALF OF NAUTILUS INC; DORSEY AND WHITNEY LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

International class (IPC 8-9): A63B21/00 A63B22/00 A63B22/02 A63B22/04 A63B22/06 A63B22/12 A63B23/035 A63B23/04 A63B69/16 (Advanced/Invention); A63B21/005 A63B21/008 A63B21/012 A63B21/22 A63B22/00 A63B22/06 A63B22/12 A63B71/00 (Advanced/Non-invention); A63B22/06 (Core/Non-invention)

International class (IPC 1-7): A63B21/00 A63B22/04 A63B22/06 A63B22/12 A63B69/16

CPC: A63B2022/0043 A63B21/0051 A63B21/0053 A63B21/0058 A63B21/008 A63B21/012 A63B21/154 A63B21/225 A63B22/001 A63B22/0015 A63B22/0023 A63B22/0664 A63B2022/0038 A63B2022/0041 A63B2022/0623 A63B2022/067 A63B2071/0063 A63B2220/30 A63B2220/36 A63B21/00069 A63B21/4034 A63B21/4035 A63B21/4049 A63B22/0025 A63B23/03591 A63B22/0017 A63B22/04

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[Classification Explorer](#)

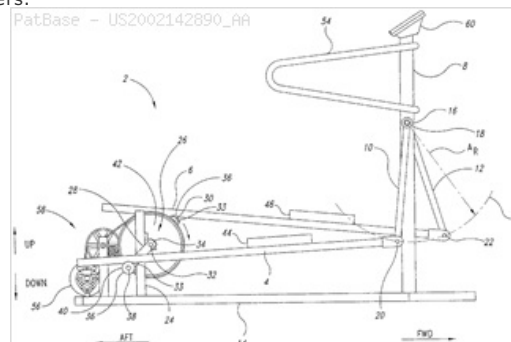
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Abstract:

An exercise device providing a fore and aft horizontal component of striding motion that is dynamically user-defined, while providing a vertical component of the motion that is maintained on a predetermined vertically reciprocating path in some embodiments. The exercise device guides the user's foot in a pseudo-elliptical stride path, while providing a dynamically variable stride length that allows the user to move with a natural stride length. The exercise device allows tall and short users to extend or curtail the stride length to match their natural stride lengths. The length of the reciprocating path is dynamically adjusted during the exercise operation without equipment adjustments by changes in the length of the stride input by the user at a pair of foot engagement pads disposed on laterally spaced apart foot support members.



38) Family number: 29988461 (US2005245365A)

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Title:	METHOD FOR CONDUCTING A TARGETED TRAINING AND A CORRESPONDING TRAINING DEVICE			
Priority:	DE20021015622 20020409	DE20031000253 20030103	DE20031015723 20030404	
	DE20035011119 20030404	WO2003DE01123 20030404	US20030510815 20030404	
	WO2003DE001123 20030404	US20050510815 20050502	US20100726698 20100318	

Family:	Publication number	Publication date	Application number	Application date
	AT421366 E	20090215	AT20030727176T	20030404
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	CN1658929 A	20050824	CN20038013357	20030404
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	DE50311119 D1	20090312	DE20035011119	20030404
	DK1492597 T3	20090518	DK20030727176T	20030404
	DK1492597 T4	20120827	DK20030727176T	20030404
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US2010173752 AA	20100708	US20100726698	20100318
US7691033 BB	20100406	US20050510815	20050502
US7942786 BB	20110517	US20100726698	20100318
WO03084616 A1	20031016	WO2003DE01123	20030404

Probable Assignee: ENGELBERT ROLLI

Assignee(s):(std): ENGELBERT ROLLI ; ROLLI ENGELBERT

Inventor(s):(std): ROLLI ENGELBERT ; ENGELBERT ROLLI

Agent(s): RUCKH RAINER GERHARD; DE ELZABURU ALBERTO; VENABLE LLP; ROBERT; JUSTINE A

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class (IPC 8-9): A63B22/00 A63B22/06 A63B22/08 A63B23/02 A63B23/035 A63B23/04 A63B26/00 A63B69/00 A63B69/16 (Advanced/Invention); A63B22/02 A63B22/06 A63B22/10 A63B23/00 A63B23/04 A63B24/00 A63B69/16 (Advanced/Non-invention); A63B22/00 A63B22/06 A63B23/00 A63B23/035 A63B23/04 A63B26/00 A63B69/00 A63B69/16 (Core/Invention); A63B22/00 A63B23/04 A63B24/00 A63B69/16 (Core/Non-invention)

International class (IPC 1-7): A61H1/00 A63B21/00 A63B22/06 A63B22/08 A63B22/12 A63B23/02 A63B23/035 A63B23/04 A63B23/35 A63B69/16

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US class: 482/142 482/142S 482/146 482/51 482/51P 482/57 482/57S 482/92 482/92P

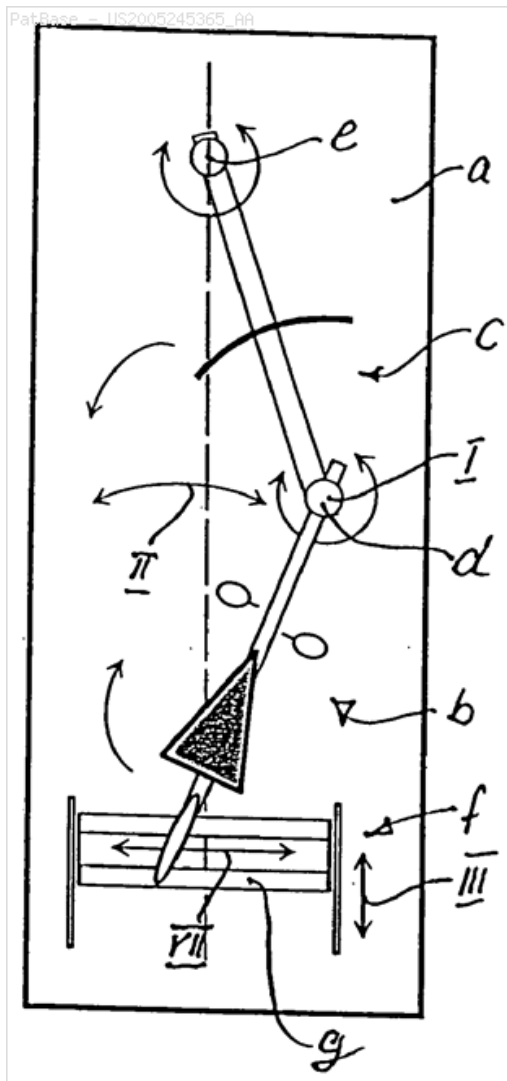
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Cited documents: USD279918 S1, US7704200 BB, US7608025 BA, US7147589 BB, US7090628 BB, US6918861 BB, US6857992 BA, US6733429 BB, US6712737 BA, US6648802 BB, US6561952 BB, US6309326 BA, US6220991 BA, US6149552 A, US6132341 A, US6066076 A, US6036623 A, US5980431 A, US5947873 A, US5931765 A, US5908373 A, US5860899 A, US5842710 A, US5800313 A, US5749809 A, US5645512 A, US5569128 A, US554754 A, US5545111 A, US5419573 A, US5338272 A, US5336147 A, US5330402 A, US5232422 A, US5141483 A, US5044627 A, US5035418 A, US4958832 A, US4925183 A, US4846156 A, US4743010 A, US4705269 A, US4580983 A, US4579360 A, US4436097 A, US4417745 A, US4402502 A, US3964742 A, US3905597 A, US3572699 A, US3307534 A, US3213852 A, US3057201 A, US2005101460 AA, US2004077465 AA, US2004023759 AA, US2003195094 AA, US2003186794 AA, US2003092533 AA, US2002004439 AA, GB2349099 B2, GB2349099 A1, DEG8623738 U, DE8623738 U1, DE4321558 A1, DE3447829 A1, DE29913080 U1, DE29816928 U1, DE20200580 U1, DE20001315 U1, DE19828025 A1, DE10131377 A1,

Forward Citations: WO09113049, US9757605, US9616276, US8864628, US7976433, US7896782, US2013260965, US2010285940, US10569121, US10449416, US10441840, US10426989, US10293211, US10279212, US10252109, US10188890, KR101265918, KR101197184, KR101149896, FR2915401, EP2265340, DE102017209989, DE102007032148, DE102007032148, DE102005017330, DE102005017330, CN104884133,

Abstract:

The invention relates to a method for a targeted training of the human **body** as well as a corresponding training device for realizing said method. The training device is used for the training of the **body** region (vertebral column) between shoulder girdle and pelvic girdle (back region) by using the limbs, arms and legs, such that the **body** region of the shoulder girdle is turned (twisted) in the opposite direction as the **body** region of the pelvic girdle, thereby resulting in a relative turning movement between the respective vertebrae of the vertebral column.

**39) Family number: 11467461** (US5876308A)

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Title: Running exercise machine
Priority: US19980105982 19980626

Family:	Publication number	Publication date	Application number	Application date
	US5876308 A	19990302	US19980105982	19980626

Probable Assignee: JARVIE JOHN E

Assignee(s): JARVIE JOHN E

Inventor(s):(std): JARVIE JOHN E

International class A63B23/04 (Advanced/Invention);
 (IPC 8-9): A63B21/00 A63B23/035 A63B23/08 (Advanced/Non-invention)

International class A63B22/00
 (IPC 1-7):

CPC: A63B21/154 A63B22/001 A63B22/0015 A63B22/0664 A63B2022/0051 A63B2022/0688

European class: K63B22/00B K63B22/00P2 K63B22/06E6

US class: 482/51 482/52

[Classification Explorer](#)

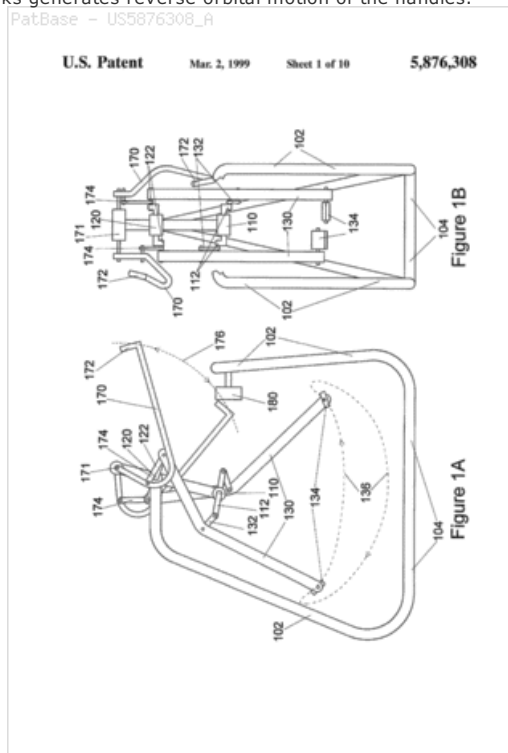
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Forward Citations: WO05000416, WO05000416, US9993680, US9968824, US9682279, US9364708, US9067103, US8043195, US7841968, US7828698, US7744507, US7708669, US7621848, US7530926, US7520839, US7448986, US7361122, US7270626, US7267637, US7141008, US7025710, US6908416, US6837830, US6575877, US6551218, US2015065304, US2010227739, US2009181828, US2009156369, US2008004163, US2007238583, US2005250621, US2005245358, US2005187073, US2005181911, US2005164835, US2005124467, US2005124466, US2002155927, US10493349, US10350451, US10220250, US10046197, ITRA20110004, EP2996780, EP2435141,

Abstract:

An exercise machine is disclosed herein comprising: a frame; a lower crank mounted on the frame; a substantially identical upper crank mounted on the frame above the lower crank; a right moment arm pivotably connected to both upper and lower right crank arms; a left moment arm pivotably connected to both upper and lower left crank arms; a pedal pivotably connected to the bottom end of each of the moment arms; and right and left pedal connecting rods pivotably connected to right and left secondary crank arms, respectively, and to the right and left pedals, respectively. Simultaneous rotation of the lower crank in a forward direction and the upper crank in a reverse direction generates forward orbital motion of the pedals and flexion-type motion of the pedals, thereby simulating the movements of a user's feet during running and/or walking. The disclosed exercise machine may also provide for arm movements appropriate for running and/or walking. This may be achieved by an exercise

machine further comprising right and left upper reciprocating arms with handles that are pivotably connected to the frame above the upper crank and coupled to the upper crank by arm connecting rods, so that rotation of the upper crank causes reciprocating motion of the arms and handles. Alternatively, an exercise machine may further comprise handles connected to the top ends of the moment arms. The simultaneous rotation of the upper and lower cranks generates reverse orbital motion of the handles.



40) Family number: 52218464 (US2012277062A)

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Title: ELLIPTICALLY BASED ROBOTIC GAIT TRAINER (EBRGT)

Priority: US20110478981P 20110426 US20120456593 20120426 US20120644033P 20120508
US20130889650 20130508

Family:

Publication number	Publication date	Application number	Application date
US2012277062 AA	20121101	US20120456593	20120426
US2013245511 AA	20130919	US20130889650	20130508
US9060914 BB	20150623	US20130889650	20130508
US9308414 BB	20160412	US20120456593	20120426

Probable Assignee: VIRGINIA COMMW UNIV

Assignee(s):(std): BRADFORD JESSICA CORTNEY ; FRANKART JEFFERY A ; PIDCOE PETER E ; UNIV VIRGINIA COMMW ; VIRGINIA COMMW UNIV

Assignee(s): VIRGINIA COMMW UNIV

Inventor(s):(std): PIDCOE PETER E ; BRADFORD JESSICA CORTNEY ; FRANKART JEFFERY A

Agent(s): WHITHAM CURTIS CHRISTOFFERSON AND COOK PC

International class (IPC 8-9): A61H1/00 A63B22/00 A63B22/04 A63B22/06 A63B24/00 (Advanced/Invention); A61H1/02 A63B21/22 A63B22/06 (Advanced/Non-invention)

CPC: A61H1/001 A61H1/0262 A61H1/0266 A61H2201/1215 A61H2201/164 A61H2201/5061 A61H2203/0406 A63B2022/002 A63B2022/0092 A63B2022/0094 A63B2220/13 A63B2220/51 A63B2220/54 A63B22/0046 A63B21/225 A63B22/001 A63B22/0664 A63B2022/067 A63B2220/10 A63B2220/16 A63B2220/78 A63B2220/805

US class: 1/1 482/52 482/7 482/8 601/33

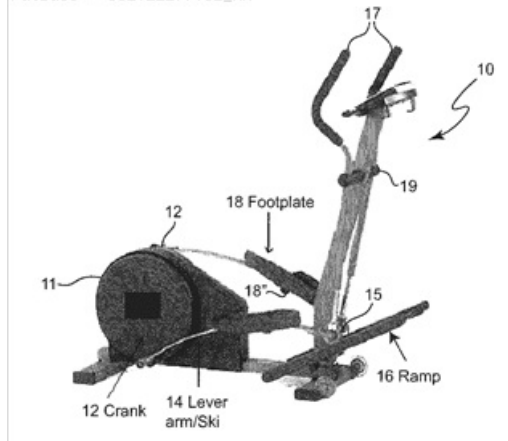
[Classification Explorer](#)

Cited documents: US7485080 BA, US7163492 BA, US7160230 BB, US5954621 A, US2012277063 AA, US2011294624 AA, US2009005222 AA, US2007298935 AA, US2005085344 AA,

Forward Citations: US9687720, US2015343262, CN105434143, CN105214282, CN105214282, CN103690333, CN103690333,

Abstract:

A robotic module which can be attached to an exercise apparatus provides enhanced physical therapy for victims of stroke or other maladies or accidents by simulating normal or arbitrarily modified profiles of angular position of an extremity such as a foot in accordance with a position of that extremity along a locus of repetitive motion.

**41) Family number: 11839475** (US2004046736A)

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Title:	NOVEL MAN MACHINE INTERFACES AND APPLICATIONS			
Priority:	US19920946588 19920918	US19920496908 19920918	US19940290516 19940815	
	US19950496908 19950629	US19970056639P 19970822	US19970059561P 19970919	
	US19980138285 19980821	US19990142777P 19990708	US19990435854 19991108	
	US20000183807P 20000222	US20000142777P 20000222	US20000187396P 20000307	
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Family:

Publication number	Publication date	Application number	Application date
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Probable Assignee: GESTURE TECHNOLOGY PARTNERS LLC

Assignee(s):(std): MOTION GAMES LLC ; PRYOR TIMOTHY R ; SMITH PETER ; PRYOR MARIE C ; PRYOR TIMOTHY ; SMITH PETER H ; APPLE INC

Assignee(s): APPLE INC CUPERTINO ; GESTURE TECHNOLOGY PARTNERS LLC ; INCASA HEALTH LLC ; TACTILE FEEDBACK TECHNOLOGY LLC ; PSTP TECHNOLOGIES LLC

Inventor(s):(std): SMITH PETER H ; PRYOR TIMOTHY ; SMITH PETER ; PRYOR MARIE C ; PRYOR TIMOTHY R

Inventor(s): PRYOR TIMOTHY R TECUMSEH

Agent(s): FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; HERBERT SMITH FREEHILLS; FREEHILLS PATENT ATTORNEY S; FPA PATENT ATTORNEYS PTY LTD; BARDEHLE PAGENBERG PARTNERSCHAFT MBB PATENTANWALTE RECHTSANWALTE; CALDERBANK THOMAS ROGER; LANG JOHANNES; BARTON RUSSELL GLEN; MARKS AND CLERK; NORTON ROSE FULBRIGHT HONG KONG; STITES AND HARBISON PLLC; WARNER NORCROSS AND JUDD LLP; APPLE C O MORRISON AND FOERSTER LLP LOS ANGELES; WARNER NORCROSS AND JUDD LLP,INTELLECTUAL PROPERTY GROUP; WARNER NORCROSS AND JUDD LLP INTELLECTUAL PROPERTY GROUP; DOUGLAS E; ROSS F; HUNT JR ROSS F; JACKSON DOUGLAS E; MORRISON AND FOERSTER LLP; KUBOTA GLENN M ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class (IPC 8-9): A61B3/02 A61B5/11 A61B5/12 A61B6/00 A63B24/00 A63B71/00 A63F13/00 A63F13/02 A63F13/04 A63F13/06 A63F13/219 A63F3/00 A63F3/02 A63F7/02 A63F9/24 B60K B60K1/00 B60K35/00 B60K37/02 B60K37/06 B60Q1/00 B60R11/02 G01C21/36 G01D1/00 G01D13/00 G01F G01F1/708 G01S5/16 G05B G05B11/01 G05B15/00 G05B19/042 G06F G06F15/00 G06F15/16 G06F17/00 G06F17/30 G06F19/00 G06F3/00 G06F3/01 G06F3/03 G06F3/033 G06F3/0354 G06F3/038 G06F3/041 G06F3/042 G06F3/043 G06F3/045 G06F3/048 G06F3/0484 G06F3/0488 G06K11/06 G06K9/00 G06M11/04 G06T17/40 G06T7/00 G08B21/00 G08B6/00 G08C21/00 G09G5/00 G09G5/08 G09G5/10 G10H1/00 G10L21/00 H04B3/36 H04N5/225 H04N5/64 H04N7/18 H04N9/31 H04Q9/00 (Advanced/Invention); A63F9/24 B60R11/00 G06F3/041 (Advanced/Non-invention); A63B71/00 A63F3/02 A63F7/02 B60K37/04 B60Q1/00 G01D1/00 G01S5/00 G05B11/01 G05B15/00 G06F15/00 G06F15/16 G06F17/00 G06F17/30 G06F19/00 G06F3/033 G06F3/041 G06F3/048 G06K9/00 G06M11/00 G09G5/00 G09G5/08 G10L21/00 H04N5/225 H04N5/64 H04N7/18 H04N9/31 (Core/Invention); A63F9/24 G06F3/041 (Core/Non-invention); B60K (Subclass/Invention)

International class (IPC 1-7): A63F9/24 B60K1/00 G06F19/00 G06K9/00 G09G5/00 G09G5/08

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704/275 704/275S 704/E21.001 704/E21.001S 707/802 707/802S 707/E17.044 707/E17.044S 709/206
709/206S 715/702 715/702S 715/709 715/744 715/745 715/764 715/764P 715/788 715/789 715/810
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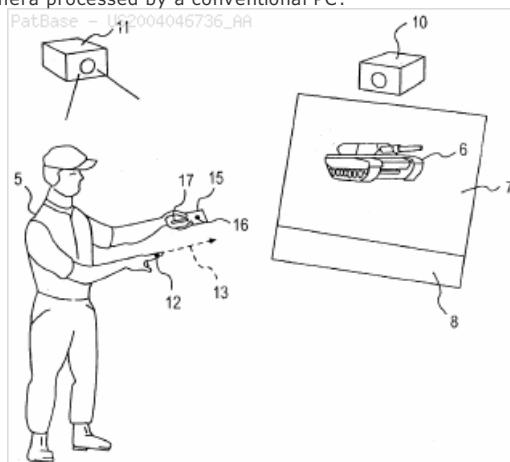
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Abstract:

Affordable methods and apparatus are disclosed for inputting position, attitude (orientation) or other object characteristic data to computers for the purpose of Computer Aided Design, Painting, Medicine, Teaching, Gaming, Toys, Simulations, Aids to the disabled, and internet or other experiences. Preferred embodiments of the invention utilize electro-optical sensors, and particularly TV Cameras, providing optically inputted data from specialized datum's on objects and/or natural features of objects. Objects can be both static and in motion, from which individual datum positions and movements can be derived, also with respect to other objects both fixed and moving. Real-time photogrammetry is preferably used to determine relationships of portions of one or more datums with respect to a plurality of cameras or a single camera processed by a conventional PC.



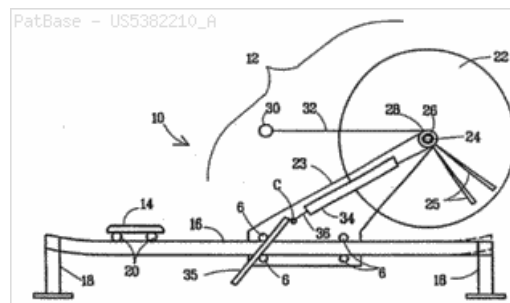
42) Family number: 11767511 (US5382210A)

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Title:	Dynamically balanced rowing simulator			
Priority:	US19920976166 19921113			
Family:	Publication number	Publication date	Application number	Application date
	 US5382210 A	19950117	US19920976166	19921113
Probable Assignee:	REKERS CASPER J N			
Assignee(s):(std):	REKERS CASPER J N			
Inventor(s):(std):	REKERS CASPER J N			
International class (IPC 8-9):	A63B69/06 (Advanced/Invention); A63B21/00 A63B21/22 (Advanced/Non-invention)			
International class (IPC 1-7):	A63B69/06			
CPC:	A63B21/157 A63B21/225 A63B22/0076 A63B2022/0079			
European class:	A63B21/15G A63B22/00R A63B23/035G K63B21/22F K63B22/00R2			
US class:	482/125 482/72			
Classification Explorer				
Cited documents:	US567915 A, US4798378 A, US4789153 A, US4772013 A, US4647035 A, US4396188 A, US2183345 A, EP0376403 A1, CH99125 A, CH164228 A,			
Forward Citations:	USD861805, USD477040, US9878200, US8708867, US8608626, US8192332, US7470223, US5820528, US2018056117, US2013225375, US2011082015, US2010190615, US2008261782, US2008020898, US2007082793, US2007049470, US2005277521, US10556167, US10449410, US10449409, US10279214, EP3357544,			

Abstract:

A rowing simulator which provides an oarsman with realistic resistance, motion, and feel. A **curved** frame supports and guides a freely sliding seat and a freely sliding energy dissipation unit. An oarsman, positioned on the seat, places his or her feet on a footrest that is part of the energy dissipating unit and pulls on a handle that simulates an oar. A chain connected to the handle causes a **geared**, resistance-producing **flywheel** to spin and a take-up device, having a series of pulleys and an elastic element, controls chain tension. During exercise, the independent seat and energy dissipating unit move apart and then together in a coordinated manner as a function of the stroke cycle of the oarsman. The curvature of the frame allows gravity to keep the oarsman in a central portion of the frame.



43) Family number: 30181519 (US2001001304A)

© PatBase

Title:	EXERCISE METHODS AND APPARATUS							
Priority:	US19950497377	19950630	US19950503931	19950719	US19950535566	19950928		
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Family:

Publication number	Publication date	Application number	Application date
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WO0100280 A3	20011011	WO2000US17352	20000623

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Inventor(s):(std): MARESH JOSEPH D ; STEARNS KENNETH W ; KRULL MARK A ; MARESH JOSEPH DOUGLAS ; CULPEPPER EDWARD ALAN ; BURNS KEITH DOUGLAS ; RICCIO LOUIS MICHAEL ; STEARNS KENNETH K

Inventor(s): JOSEPH D MARESH ; KENNETH W STEARNS ; MARESH JOSEPH ; MARK A KRULL ; STEARNS KENNETH

Agent(s): MARK A KRULL ; MARK KRULL ; SMITH HILL AND BEDELL PC ; CHERNOFF VILHAUER MCCLUNG AND STENZEL LLP ; CHERNOFF VILHAUER MCCLUNG AND STENZEL

Designated states: AE AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CR CU CY CZ DE DK DM EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

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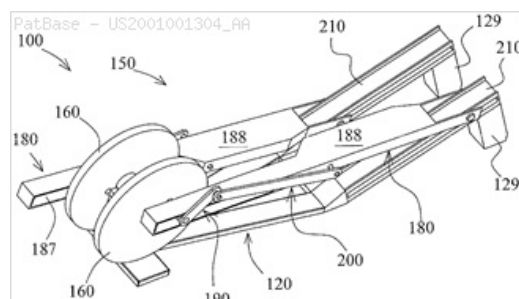
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Abstract:

An exercise apparatus includes a force receiving member movable relative to a frame. A roller is rotatably mounted on a first crank and supports a rearward portion of the force receiving member. A link is rotatably interconnected between a second crank and an intermediate portion of the force receiving member. The cranks, the roller, and the link cooperate with the force receiving member to move the latter in a desired path.



44) Family number: 29372519 (US4859493A)

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Title:	METHODS OF FORMING SYNTHETIC DIAMOND COATINGS ON PARTICLES USING MICROWAVES			
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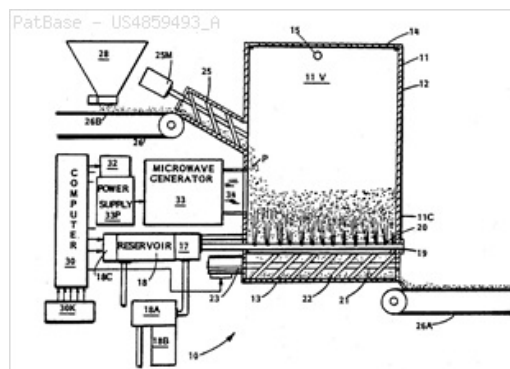
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Abstract:

An apparatus and method for applying hard surface coatings to articles of manufacture such as particles, filaments, sphereoids, rollers, bearings, tools, and assemblies. In one form, coating of hard surface film, such as synthetic diamond, is effected while the objects fall freely through space in a coating chamber. In another form, coating is effected while particles are fluidized by gas containing molecules which are formed of matter to be deposited by gas or chemical vapor deposition employing high energy radiation, such as microwave energy and/or other form of radiation. In other forms, an ion beam or beams containing hot carbon ions is directed through a fluidized bed of particles to be coated or through a chamber in which small objects are made to continuously fall freely through space to coat same with carbon in the form of synthetic diamond. In another method, such small objects are caused to continuously tumble through a coating region of a coating chamber into which is directed gas and/or vapor containing molecules of a hydrocarbon, such as methane, and hydrogen, while microwave energy is directed through such region. Other forms of the invention include the selective deposition and coating of synthetic diamond onto substrates to form or protect microminiature electronic circuits and circuit elements such as transistors and interconnects and to protect bonds such as welds, or to form bonds between components joined together thereby. In yet another form, hard synthetic diamond coatings are deposited per se or in combination with other materials, by a hybrid process including chemical vapor deposition, ion deposition by beam(s), sputtering and the like.



45) Family number: 3443528 (US4925183A)

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Title: INDOOR-ROLLBIKE APPARATUS

Priority: US19870056856 19870601 WO1988US01819 19880527 US19890344015 19890426
US19890344016 19890426

Family:	Publication number	Publication date	Application number	Application date
	KR19897001171 A	19891219	KR19890700178	19880527
	US4925183 A	19900515	US19870056856	19870601
	US4958831 A	19900925	US19890344015	19890426
	US4958832 A	19900925	US19890344016	19890426
	WO8809688 A1	19881215	WO1988US01819	19880527

Probable Assignee: KIM SANG SUP

Assignee(s):(std): KIM SANG SUP

Inventor(s):(std): KIM SANG SUP

Designated states: AT BE CH DE FR GB IT JP KR LU NL SE

International class A63B22/16 A63B23/04 A63B26/00 A63B69/16 G09B9/058 (Advanced/Invention);
(IPC 8-9): A63B22/00 A63B23/04 A63B26/00 A63B69/16 G09B9/04 (Core/Invention)

International class A63B21/00 A63B23/04 A63B69/00 G09B9/04
(IPC 1-7):

CPC: A63B22/0605 A63B22/0046 A63B2208/12 A63B22/16 A63B26/003 A63B69/16 A63B2069/163 A63B2069/165 A63B2069/166 G09B9/058

European class: A63B22/16 A63B23/04C A63B26/00B A63B69/16 K63B208/12 K63B69/16A2C K63B69/16A3H K63B69/16A4

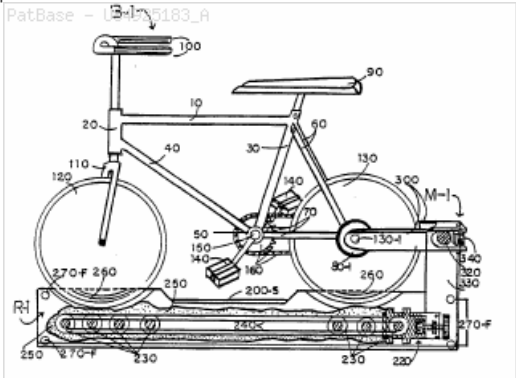
US class: 272/73 434/61 482/54 482/61 482/65

[Classification Explorer](#)

Cited documents: US581835 A, US554754 A, US4750737 A, US4743012 A, US4674742 A, US4673178 A, US4673177 A, US4614337 A, US4580983 A, US4441705 A, US4415152 A, US4227487 A, US4212480 A, US4082265 A, US4079931 A, US3940128 A, US3686776 A, US3432164 A, US2623302 A, GB475207 A, EP0121186 A1, DE99657 A, DE2950605 A1,

Forward Citations: WO9829173, WO9829173, WO9423807, WO9216267, WO9216267, WO20036312, WO20018930, WO19240367, WO19035990, WO18150069, WO18148213, WO16016493, WO14134138, WO10021461, WO10021461, WO10018936, WO10018936, WO09154659, WO09154659, WO09036699, WO09025654, WO09025654, WO05035072, WO04094006, USD736678, USD475208, US9980465, US9962590, US9943722, US9895589, US9808672, US9802099, US9517376, US9468794, US9393453, US9381395, US9314664, US9295894, US9289648, US9278249, US9259633, US9205301, US9149702, US9072942, US9039579, US9028368, US8979715, US8808150, US8801581, US8784270, US8758201, US8746268, US8690735, US8632479, US8439808, US8435161, US8430797, US8382646, US8313419, US8298123, US8251874, US8202201, US8162806, US8128536, US8092352, US8029415, US7998032, US7985164, US7981000, US7980996, US7976437, US7976434, US7955228, US7942789, US7942786, US7927258, US7883449, US7862478, US7862476, US7857731, US7833135, US7789800, US7780573, US7766798, US7713171, US7691033, US7662071, US7645213, US7637847, US7628730, US7625315, US7618353, US7582044, US7575536, US7556590, US7549947, US7510511, US7510509, US7455622, US7442152, US7438672, US7367926, US7326151, US7220219, US7166064, US7112168, US6945917, US6945916, US6918859, US6726483, US6551220, US6328676, US6322480, US6155833, US6027432, US5947739, US5890995, US5785630, US5662559, US5628711, US5527241, US5466200, US5462503, US5352166, US5240417, US5076792, US5035418, US2019022457, US2017340917, US2016313214, US2014243171, US2014024502, US2014024500, US2012283070, US2012238412, US2011287901, US2011212812, US2011205664, US2011143887, US2011118086, US2011105282, US2011082012, US2011071003, US2010298103, US2010249674, US2010248900, US2010216103, US2010200136, US2010173752, US2010062909, US2009270227, US2009270226, US2009258758, US2009215589, US2009170667, US2009048076, US2008300110, US2008194386, US2008103027, US2008051256, US2008009396, US2007219054, US2007202998, US2007087909, US2007072743, US2007060451, US2007054782, US2006217237, US2006205569, US2005272567, US2005245365, US20052233861, US2005209064, US2005170935, US2005164843, US2005148444, US2004192511, US2004162189, US2004127335, US2003211446, US2003195089, US2002077231, US2002045519, US10561894, US10561877, US10543395, US10537764, US10500473, US10493349, US10493320, US10478666, US10471299, US10449416, US10441844, US10441840, US10434394, US10433612, US10426989, US10417930, US10391361, US10388183, US10376736, US10343017, US10337936, US10293211, US10279212, US10272317, US10258828, US10252109, US10238913, US10226396, US10220259, US10212994, US10188890, US10130864, US10124226, US10039952, US10010746, JP6309640, JP2016537157, FR2652506, ES2557852, ES2220206, ES2113287, EP3147187, EP3147187, EP2961494, EP2231285, EP2191876, EP2191876, EP1616601, EP1175251, EP0453766, EP0453766, EP0354785, EP0354785, DE102005017330, DE102005017330, CN105727506, CN105709396, CN105489079, CN105489079, CN102123767, AU735604, AU2007357870,

Abstract:
A conventional **bicycle** is mounted and restrained for exercise on a treadmill frame. A motion-coordinator system is connected to the **bicycle** and permits free motion of the front wheel and limited lateral tilting of the **bicycle**. Roller type lateral stops prevent a rider from riding off the treadmill. Irregularities in the treadmill surface provide a road surface simulation.



46) Family number: 41849541 (US2008124991A)

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Title: EXERCISE KIT FOR PERSONAL FLOTATION DEVICE
Priority: US20060564526 20061129 WO2007US85942 20071129
Family:

Publication number	Publication date	Application number	Application date
 CN101573267 A	20091104	CN200780044402	20071129
 CN101573267 B	20131211	CN200780044402	20071129
 EP2086828 A2	20090812	EP20070854832	20071129
 EP2086828 A4	20140423	EP20070854832	20071129
 US2008124991 AA	20080529	US20060564526	20061129
 US7425190 BB	20080916	US20060564526	20061129
 WO08067470 A2	20080605	WO2007US85942	20071129
 WO08067470 A3	20081211	WO2007US85942	20071129

Probable Assignee: BOOMERX LLC
Assignee(s):(std): JACQUELIN KOLARICK ; KOLARICK JACQUELIN ; KOLARICK ROBERT ; ROBERT KOLARICK
Assignee(s): BOOMERX LLC

Inventor(s):(std): JACQUELIN KOLARICK ; KOLARICK JACQUELIN ; KOLARICK ROBERT ; ROBERT KOLARICK

Agent(s): HARRISON GODDARD FOOTE; MCHALE AND SLAVIN PA; SLAVIN MICHAEL A

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class (IPC 8-9): A63B21/008 B63B35/73 B63B35/74 B63C9/08 B63C9/28 (Advanced/Invention); A63B21/008 A63B22/00 A63B22/06 (Advanced/Non-invention); A63B21/008 B63C9/00 (Core/Invention)

CPC: A63B22/0005 B63B34/00 B63B34/50 A63B21/0084 A63B22/0012 A63B22/0605 A63B22/0694 A63B2225/09 A63B2225/605

European class: A63B22/00A6S A63B22/06C A63B22/06P B63B35/73 K63B21/008B4 K63B22/00A2 K63B225/09 K63B225/60B

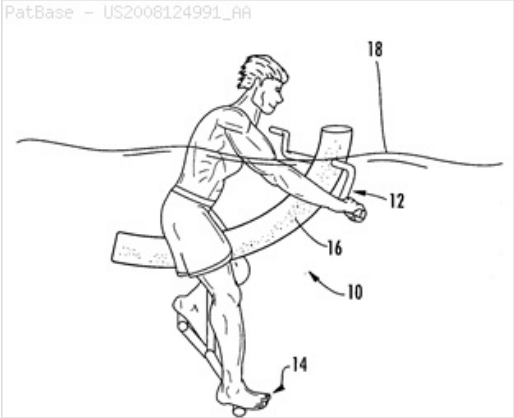
US class: 441/129 441/129P 472/129 482/111

[Classification Explorer](#)

Cited documents: WO06114524 A1, US6790112 BB, US6692317 BB, US6482058 BB, US6027393 A, US5149314 A, US5123641 A, US4828522 A, US4768774 A, US4241688 A, US2317905 A, US2004259440 AA, US1728103 A, US1610778 A, US1457908 A, US1318879 A, FR394165 A,

Forward Citations: WO16018901, WO13192602, WO11110362, USD783106, USD769391, USD753780, USD736335, USD708690, USD707320, USD705375, USD583222, US9782011, US9387354, US9199114, US9168986, US9056220, US9039473, US8057369, US7946970, US2016206107, US2015335936, US2015190723, US2014357141, US2014099855, US2014087622, US2013280972, US2011275487, US2010126902, US10238984, EP2364686, EP2364686, CN108744534, CN108744534, CN107812386, CN104640609, CN104640609, CN103476466, CN103476466,

Abstract:
The instant invention relates to a kit for converting an elongated flexible noodle-type personal floatation device into a floating exercise assembly. Specifically, the rider straddles the flexible noodle-type device while rotating the first exercising assembly and/or the second exercising assembly for exercising the user's lower and upper **body**, respectively.



47) Family number: 64694555 (US2017014674A) © PatBase

Title:	MULTIFUNCTIONAL EXERCISE MACHINE			
Priority:	WO20161B53903 20130629	US20150231629P 20150713	US20150283839P 20150914	
	US20150283840P 20150914	US20160391111P 20160420	US20160187564 20160620	
	US20160187567 20160620	WO20161B53903 20160620	WO20161B53903 20160629	
	US20160204863 20160707	WO20161B54191 20160713	WO20161B54213 20160714	
	WO20161B54191 20160714	WO20161B05421 20160714	US20160258047 20160907	
	WO20161B05542 20160912	US20160265768 20160914	US20160577628F 20160914	
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	US20170493125 20170420	US20170492929 20170420	US20170492606 20170420	
	US20180917872 20180312			

Family:	Publication number	Publication date	Application number	Application date
	CN108721829 A	20181102	CN201710585815	20170718
	US2017014674 AA	20170119	US20160204863	20160707
	US2017014677 AA	20170119	US20160265768	20160914
	US2017014678 AA	20170119	US20160265791	20160914
	US2017014679 AA	20170119	US20160187564	20160620
	US2017106227 AA	20170420	US20160258047	20160907
	US2017216649 AA	20170803	US20170493125	20170420
	US2017216659 AA	20170803	US20170492929	20170420
	US2017304676 AA	20171026	US20170492606	20170420
	US2018200571 AA	20180719	US20180917872	20180312
	US2019111310 AA	20190418	US20160759526	20160927
	US9744401 BB	20170829	US20160204863	20160707
	US9789347 BB	20171017	US20170493125	20170420
	US9789351 BB	20171017	US20160265791	20160914
	US9789352 BB	20171017	US20160265768	20160914
	US9789353 BB	20171017	US20170492929	20170420
	USD814577 S1	20180403	US20160577628F	20160914
	USD843519 S1	20190319	US20170597948F	20170321
	US10143881 BB	20181204	US20160258047	20160907
	US10569127 BB	20200225	US20170492606	20170420

US10583322 BB	20200310	US20160759526	20160927
WO17009729 A1	20170119	WO20161B53903	20160629
WO17009794 A1	20170119	WO20161B54191	20160714
WO17009801 A1	20170119	WO20161B54213	20160714
WO17046690 A1	20170323	WO20161B55428	20160912
WO17046784 A1	20170323	WO20161B55757	20160926
WO17046785 A1	20170323	WO20161B55760	20160926
WO17046786 A1	20170323	WO20161B55761	20160927
WO17184841 A1	20171026	WO2017US28576	20170420

Probable Assignee: NABILE INNOVATIONS LLC

Assignee(s):(std): LALAOUA NABILE ; NABILE INNOVATIONS LLC

Inventor(s):(std): LALAOUA NABILE

Agent(s): VENABLE LLP; CHOW MING; HECKENBERG DONALD ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class (IPC 8-9): A61H1/00 A61H15/00 A63B1/00 A63B21/00 A63B21/008 A63B21/015 A63B21/02 A63B21/04 A63B21/055 A63B21/06 A63B21/068 A63B21/16 A63B21/22 A63B22/00 A63B22/04 A63B22/06 A63B22/08 A63B22/16 A63B22/20 A63B23/00 A63B23/02 A63B23/035 A63B23/04 A63B23/12 A63B24/00 F16B7/10 (Advanced/Invention); A61H15/00 A63B21/008 A63B21/04 A63B21/055 A63B21/068 A63B21/072 A63B21/22 A63B22/00 A63B22/20 A63B23/00 A63B23/035 A63B23/04 A63B23/12 A63B26/00 A63B41/00 A63B69/00 A63B69/16 A63B71/00 A63B71/06 F16B7/10 (Advanced/Non-invention)

CPC: A63B21/1609 A63B21/4027 A63B23/04 A63B2071/027 A61H2015/0021 A63B21/0421 A63B21/055 A63B21/0407 A63B22/0046 A63B23/0355 A63B2208/0233 A61H2015/0071 A61H2201/1609 A61H2203/0425 A61H2203/0456 A63B21/00061 A63B26/003 A63B41/00 A63B2022/0097 A63B22/18 A63B2208/0252 A63B23/0205 A63B21/0428 A63B21/4001 A63B22/0605 A63B21/015 A63B21/225 A63B22/201 A63B69/0057 A63B2071/009 A63B2225/10 A63B2230/75 A63B21/00185 A63B21/153 A63B21/1654 A63B21/1663 A63B21/169 A63B21/4013 A63B21/4043 A63B23/03575 A63B23/0482 A63B2208/0209 A63B2208/029 A63B43/002 A61H2201/0119 A61H2205/081 A63B1/00 A61H1/00 A63B21/00069 A63B21/0083 A63B21/023 A63B23/0227 A63B71/0622 A63B2208/0214 A63B2230/06 A63B21/00072 A63B21/0552 A63B21/068 A63B21/4034 A63B21/4035 A63B21/4047 A63B23/0222 A63B23/0233 A63B23/03525 A63B2071/065 A63B2208/0204 A63B2210/52 A63B2220/17 A63B2220/58 A63B2225/09 A63B2225/093 F16B7/10 F16B7/105 A63B2210/50 A61H15/00 A61H2015/0014 A61H2201/0161 A61H2201/1261 A61H2201/1284 A61H2201/1604 A61H2201/1623 A61H2201/1633 A61H2201/1635 A61H2201/1669 A63B21/00065 A63B21/0414 A63B21/0442 A63B21/0615 A63B21/0622 A63B21/072 A63B21/154 A63B21/16 A63B21/4003 A63B21/4033 A63B21/4039 A63B21/4045 A63B21/4049 A63B22/0087 A63B22/20 A63B23/0211 A63B23/0216 A63B23/03508 A63B23/03541 A63B23/1209 A63B2022/206 A63B2023/003 A63B2023/006 A63B2208/0228 A63B23/02 A61H23/00 A63B2071/0063 A63B22/16 A63B21/00 A63B23/00

US class: 1/1 482/126 482/128 482/130 482/139 482/140 482/142 482/52 482/8 D21/688 D21/690

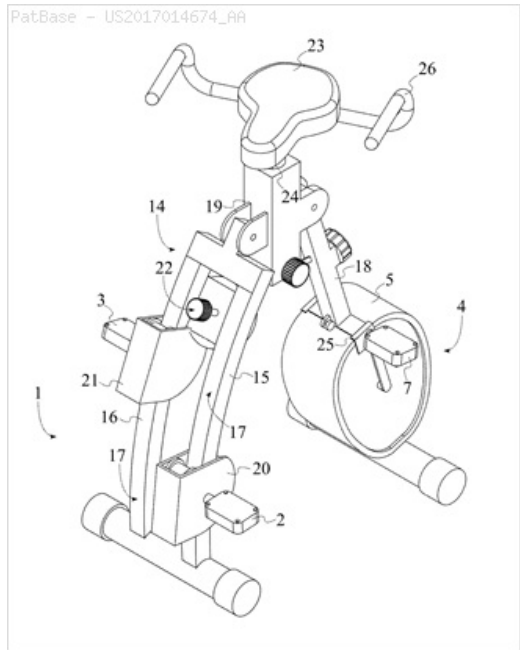
Locarno class: 21/02

[Classification Explorer](#)

Cited documents: WO15057526 A1, WO13120436 A1, USD814577 S1, USD730458 S1, USD723638 S1, USD664615 S1, USD647153 S1, USD582494 S1, USD581471 S1, USD424142 S1, US9789353 BB, US9789352 BB, US9789351 BB, US9757608 BB, US9446276 BB, US9352675 BB, US9278253 BB, US9126073 BB, US9028381 BB, US8876676 BB, US8840075 BB, US8721510 BB, US8672817 BB, US8663075 BB, US8641588 BB, US8128543 BA, US8113997 BB, US8033961 BB, US7976445 BB, US7901329 BB, US7637848 BA, US7621861 BA, US7377889 BB, US7361127 BB, US7331911 BB, US7326159 BB, US7147589 BB, US7125366 BA, US6981932 BA, US6971977 BA, US6905442 BA, US6872170 BB, US6814690 BA, US6752745 BA, US6716144 BA, US6616580 BA, US6602171 BA, US6537185 BA, US6468184 BA, US6402669 BA, US6387024 BA, US6312401 BA, US6248047 BA, US6231489 BA, US6231484 BA, US6220995 BA, US6159133 A, US6149552 A, US6146343 A, US6117056 A, US6110081 A, US6022303 A, US6015369 A, US5928114 A, US5899836 A, US5871425 A, US5833590 A, US5833582 A, US5772614 A, US5674167 A, US5634887 A, US5607374 A, US5573485 A, US5542898 A, US5387171 A, US5362296 A, US5324243 A, US5299995 A, US5299992 A, US5176601 A, US5090694 A, US5080353 A, US4921247 A, US4838547 A, US4804180 A, US4757993 A, US4645200 A, US4645197 A, US4494662 A, US2017304676 AA, US2017296867 AA, US2017216659 AA, US2017216649 AA, US2017106227 AA, US2017043207 AA, US2017028250 AA, US2017028249 AA, US2017014679 AA, US2017014678 AA, US2017014677 AA, US2017014674 AA, US2016361588 AA, US2016016038 AA, US2015375030 AA, US2015202484 AA, US2015196798 AA, US2015190672 AA, US2015165255 AA, US2015141200 AA, US2015105228 AA, US2015105226 AA, US2014274617 AA, US2014274599 AA, US2013345031 AA, US2013337984 AA, US2013157818 AA, US2013045844 AA, US2013035220 AA, US2012277066 AA, US2012100973 AA, US2012058867 AA, US2012040812 AA, US2011177921 AA, US2010210425 AA, US2010184572 AA, US2010099542 AA, US2009312164 AA, US2009239714 AA, US2009149370 AA, US2008076649 AA, US2007270294 AA, US2007243980 AA, US2007149370 AA, US2006281610 AA, US2006166799 AA, US2006068979 AA, US2006014614 AA, US2005277526 AA, US2005181916 AA, US2004152572 AA, RU2011135473 A, GB2284012 A1, EP0347492 A1, DE2529297 A1, CN2778085 U, CN204522214 U, CN202682678 U, CN202618951 U, CN202219063 U, CN202169048 U, CN202154311 U,

Forward Citations: USD855720, USD852371, USD843519, USD841746, USD839366, USD814577, US9789353, US9789351, US9789347, US9744401, US2019009130, US2017304703, US2017216649, US2017014678, US10583322, US10486046, US10449416, US10441840, US10426989, US10335634, US10293211, US10279212, US10252109, US10188890, US10143881, IT201700097069, GB2571065, FR3077002, EP3623021, EP3456306, CN109078303, CN108939435,

Abstract:
A multifunctional exercise machine is an exercise machine that combines a stepper assembly and a stationary **bicycle** assembly into a single machine. The stepper assembly is positioned on a frame member while the stationary **bicycle** assembly is positioned on a stand member. The frame member and the stand member are both hingedly connected to a bridge positioned between the frame member and the stand member. A stepper resetting mechanism is utilized to regulate the movement of a first step pedal and a second step pedal of the stepper assembly. The first step pedal and the second step pedal are slidably engaged to a first rail and a second rail of the frame member. The machine may be utilized in a standing position or in a seated position via an adjustable seat. A handlebar assembly may be utilized for user stability while exercising.



48) Family number: 56883567 (US2014194251A)

© PatBase

Title: ADAPTIVE MOTOR RESISTANCE VIDEO GAME EXERCISE APPARATUS AND METHOD OF USE THEREOF
Priority: US20080091240P 20080822 US20090545324 20090821 US20100387772P 20100929
US20110010909 20110121 US20120588327P 20120119 US20120591699P 20120127
US20120591712P 20120127 US20130737724 20130109

Family:	Publication number	Publication date	Application number	Application date
	US2014194251 AA	20140710	US20130737724	20130109
	US9144709 BB	20150929	US20130737724	20130109

Probable Assignee: STREAMLINE AUTOMATION LLC
Assignee(s):(std): REICH ALTON ; SHAW JAMES
Assignee(s): STREAMLINE AUTOMATION LLC
Inventor(s):(std): SHAW JAMES ; REICH ALTON
Agent(s): KEVIN

International class A63B21/005 A63B23/035 A63B23/12 A63B24/00 A63F13/00 (Advanced/Invention);
(IPC 8-9): A63B21/00 A63B22/06 (Advanced/Non-invention)

CPC: A63B24/0087 A63B21/00178 A63B21/00181 A63B21/0058 A63B21/151 A63B22/0605 A63B23/03525
A63B23/1209 A63B2024/0093 A63B2024/0096 A63B2220/10 A63B2220/18 A63B2220/30 A63B2220/40
A63B2220/51 A63B2220/72 A63B2220/74 A63B2220/805 A63B2225/20 A63B2225/50 A63B2225/54
A63B2230/067 A63B2230/30 A63F13/00 A63B21/4035 A63B21/4043 A63F13/212 A63F13/65

US class: 1/1 482/6

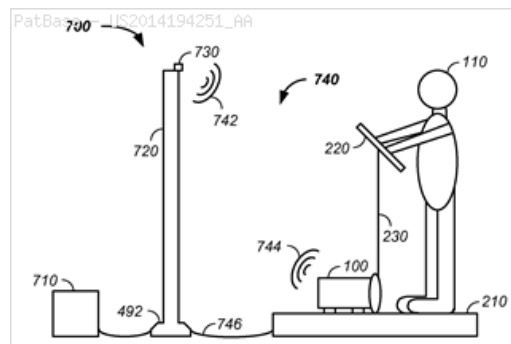
[Classification Explorer](#)

Cited documents: WO08055173 A2, US8398546 BB, US8360935 BB, US7942783 BB, US7785232 BB, US7764990 BB, US7682287 BA, US7556590 BB, US7536277 BB, US7480601 BB, US7470216 BB, US7317770 BB, US7289906 BB, US7260501 BB, US7191110 BA, US7163488 BB, US7149320 BB, US7060006 BA, US7058550 BB, US7027953 BB, US7020507 BB, US7016825 BA, US7006947 BB, US7005652 BA, US6997852 BB, US6902513 BA, US6882959 BB, US6786847 BA, US6728660 BB, US6505145 BA, US6463311 BA, US6405108 BA, US6270445 BA, US6050920 A, US6027429 A, US5993556 A, US5993356 A, US5980435 A, US5919115 A, US5853364 A, US5738611 A, US5577981 A, US5489532 A, US5466213 A, US5409435 A, US5407402 A, US5304104 A, US5248480 A, US5242340 A, US5165278 A, US5015926 A, US4869497 A, US4784481 A, US4277133 A, US3664666 A, US3477863 A, US2014194251 AA, US2014194250 AA, US2012190502 AA, US2011287896 AA, US20111251021 AA, US20111215081 AA, US2011195819 AA, US2011172058 AA, US2011165997 AA, US2011165996 AA, US2011165995 AA, US2010216600 AA, US2010144496 AA, US2010069202 AA, US2009069647 AA, US2009024332 AA, US2008248926 AA, US2008161733 AA, US2008146416 AA, US2008082018 AA, US2008058164 AA, US2008027341 AA, US2007299371 AA, US2007202992 AA, US2007066449 AA, US2006190217 AA, US2006166176 AA, US2005281711 AA, US2005233871 AA, US2005119591 AA, US2002061804 AA, US2001036883 AA, US2001019985 AA,

Forward Citations: WO19222114, WO17176633, WO17153232, US9272186, US9144709, US2016346616, US2015209617, US2014287876, US10589163, US10524728, US10493349, US10486015, US10449416, US10441840, US10433612, US10426989, US10391361, US10376732, US10293211, US10279212, US10272317, US10252109, US10226396, US10220261, US10220259, US10188890, US10182722, US10118073, US10111589, CN105233464,

Abstract:

The invention comprises a method and/or an apparatus using computer configured exercise equipment and an electric motor provided physical resistance in conjunction with a game system, such as a video game system, where the exercise system provides real physical resistance to a user interface. Results of user interaction with the user interface are integrated into a video game, such as running on a game console. The resistance system comprises: a subject interface, software control, a controller, an electric servo assist/resist motor, an actuator, and/or a subject sensor. The system provides actual physical interaction with a resistance device as input to the game console and game run thereon.



49) Family number: 34070595 (US2007004565A)

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Title: BICYCLE TRAINING APPARATUS

Priority: US20050174154 20050701

Family:	Publication number	Publication date	Application number	Application date
	US2007004565 AA	20070104	US20050174154	20050701
	US7303510 BB	20071204	US20050174154	20050701

Probable Assignee: GEBHARDT JAMES

Assignee(s):(std): GEBHARDT JAMES

Inventor(s):(std): GEBHARDT JAMES

Agent(s): SONNABENDLAW; JEFFREY

International class
(IPC 8-9): A63B69/16 (Advanced/Invention);
A63B69/16 (Core/Invention)

CPC: A63B69/16 A63B2069/163 A63B2069/164 A63B2220/78

European class: A63B69/16 K63B220/78 K63B69/16A2C K63B69/16A3

US class: 482/5 482/61

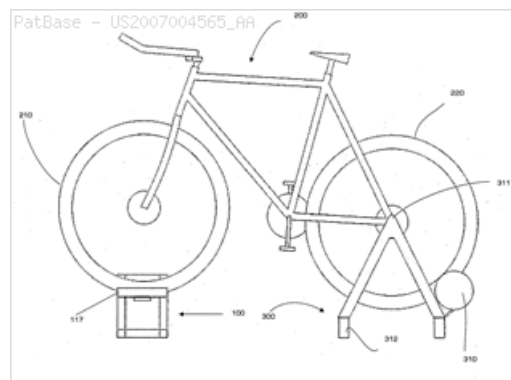
[Classification Explorer](#)

Cited documents: US7226395 BB, US7011607 BB, US6712737 BA, US6702721 BB, US6648802 BB, US6530864 BA, US6152856 A, US6056672 A, US5967946 A, US5890995 A, US5785631 A, US5785630 A, US5645513 A, US5549527 A, US5364271 A, US5354251 A, US5240417 A, US5035418 A, US4955600 A, US4938475 A, US4834363 A, US4077607 A, US2001003969 AA,

Forward Citations: WO19018416, WO16128682, USD736678, US9868022, US9802099, US9517376, US9468794, US9315230, US9205301, US9149702, US9039582, US9028368, US8979715, US8845493, US8784270, US8764616, US8758201, US8690735, US8439808, US8435161, US8419597, US8313419, US8162806, US8062192, US7955228, US7766798, US2014015219, US2013274067, US2013059698, US2012238412, US2012071301, US2011212812, US2011172059, US2011039664, US2010298103, US2010216103, US2010200136, US2010062909, US2010062908, US2009209393, US2007284881, US10561894, US10561877, US10543395, US10537764, US10500473, US10493349, US10471299, US10441844, US10433612, US10426989, US10391361, US10388183, US10384111, US10376736, US10343017, US10293211, US10279212, US10276056, US10272317, US10258828, US10252109, US10226396, US10220259, US10188890,

Abstract:

A **bicycle** training apparatus having an elevator assembly, a wheel support assembly operatively coupled to the elevator assembly, and a resistance interface assembly operationally coupled to the elevator assembly. The elevator assembly operates to raise and lower the wheel support assembly, and the resistance interface assembly provides an output signal proportional to the height of the wheel support assembly.



50) Family number: 32064610 (US2007298935A)

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Title: APPARATUS FOR PHYSICAL EXERCISE, AND A CRANK DEVICE AND FOOT SUPPORTING PLATFORMS FOR USE WITH SUCH APPARATUS

Priority: NO20030005785 20031222 NO20040000138 20040112 NO20040000466 20040202
NO20040001472 20040407 NO20040001473 20040407 NO20040001474 20040407
NO20040001804 20040503 WO2004NO00396 20041221

Family:	Publication number	Publication date	Application number	Application date
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CA2551192 AA	20060622	CA20042551192	20041221
EP1701878 A2	20060920	EP20040808890	20041221
US2007298935 AA	20071227	US20040583831	20041221
WO05061056 A2	20050707	WO2004NO00396	20041221
WO05061056 A3	20060316	WO2004NO00396	20041221

Probable Assignee: ZIAD BADARNEH

Assignee(s):(std): BADARNEH ZIAD ; ELLIS CAMPBELL ; HANSEN BENEDICT J M ; MOLLATT TORBJOERN ; ZIAD BADARNEH

Assignee(s): MOLLATT TORBJORN ; HANSEN BENEDICT J

Inventor(s):(std): BADARNEH ZIAD ; ELLIS CAMPBELL ; HANSEN BENEDICT J M ; MOLLATT TORBJOERN ; MOLLATT TORBJORN ; HANSEN BENEDICT J

Inventor(s): HANSEN BENEDICT ; HANSEN BENEDICT JM

Agent(s): BERESKIN AND PARR; RODMAN RODMAN

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

International class (IPC 8-9): A63B22/06 A63B22/08 A63B23/04 B62M3/02 B62M3/06 (Advanced/Invention); A63B21/22 A63B22/06 A63B23/035 (Advanced/Non-invention); A63B22/06 A63B23/04 B62M3/00 (Core/Invention); A63B21/00 A63B22/06 A63B23/035 (Core/Non-invention)

International class (IPC 1-7): A63B22/06 A63B22/08 A63B23/04 B62M3/02 B62M3/06

CPC: A63B22/0605 A63B2022/0647 A63B2022/0652 A63B22/0023 A63B21/225 A63B22/001 A63B22/0015 A63B22/0046 A63B22/0664 A63B22/203 A63B24/00 A63B2022/002 A63B2022/0617 A63B2022/0623 A63B2022/0629 A63B2022/067 A63B2022/0688 A63B2208/0204 A63B2208/0233 A63B2208/0238 A63B2210/50 A63B2220/12 A63B2220/13 A63B2220/16 A63B2220/30 A63B2220/805 A63B2230/06 A63B2230/062 A63B2230/75 A63B22/0017

European class: A63B22/00A6 A63B22/00B A63B22/00B4 A63B22/06E A63B24/00 K63B208/02B K63B208/02E2 K63B208/02E4 K63B21/22F K63B210/50 K63B22/00B2 K63B22/00B2P K63B22/00D K63B22/06C2D K63B22/06C2L K63B22/06C2M K63B22/06E2 K63B22/06E6 K63B22/08 K63B22/20T2 K63B220/12 K63B220/13 K63B220/16 K63B220/30 K63B220/80D K63B230/06 K63B230/06A K63B230/75

US class: 482/52 482/52P

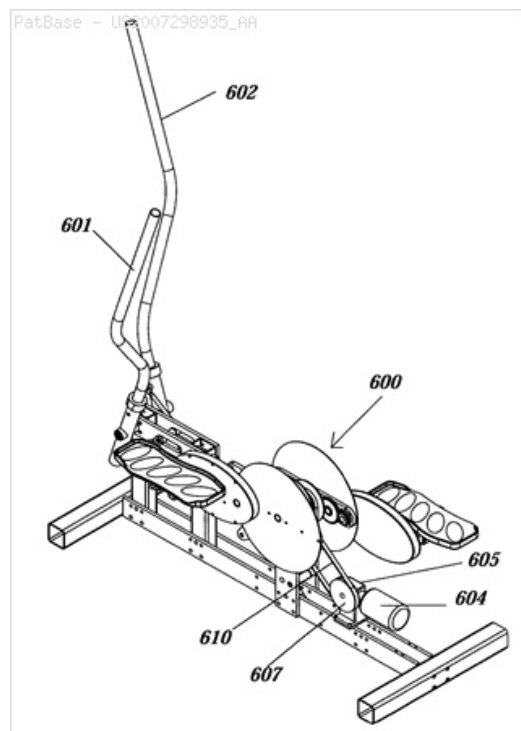
[Classification Explorer](#)

Cited documents: WO9903727 A1, WO0068067 A1, US5419572 A, EP0761528 A1, DE3346139 A1,

Forward Citations: WO18128891, WO11046789, WO09113049, WO08024192, WO08024192, WO07114533, WO06038815, US9937377, US9926077, US9345926, US9308414, US9254416, US9239616, US9060914, US9056240, US8979713, US8870716, US8177691, US8177688, US8051752, US8007405, US7901331, US7896782, US7695408, US7485073, US2018236294, US2016243399, US2016059077, US2016052401, US2014221165, US2014194254, US2014194253, US2013245511, US2013237378, US2013210586, US2013181490, US2013079200, US2012277062, US2011294624, US2011152742, US2011092340, US2011086742, US2010190613, US2009227428, US2008161163, US2008051258, US2008032866, US10569125, US10561894, US10561884, US10561883, US10561877, US10543395, US10537764, US10532662, US10500473, US10493349, US10471299, US10441844, US10434354, US10433612, US10426989, US10391361, US10376736, US10343017, US10328305, US10315069, US10315068, US10293211, US10279212, US10272317, US10265566, US10258828, US10252109, US10238911, US10226396, US10220259, US10188890, US10046202, US10035421, KR100637316, JP2013507224, GB2436531, GB2436531, EP3119669, EP2488260, EP2265340, EP2265340, EP2265340, EP2008634, DE102011055202, CN106794884, CN106794884, CN102665827, CN102665827, CN102580284, CN102580284,

Abstract:

A crank device comprising foot supports with means for controlling stability and angle relative to the motion. There are linkages for stabilising and keeping a correct angle relative to an apparatus frame during a full rotation. The foot supporting means have also means for adjusting the angle to create a toe-heel tilt. The foot supporting means in form of platforms have optional tilt movement with an adjustable mechanism, the movement transverse the stepping motion, for utilising proprioceptive training and exercise.



51) Family number: 46622628 (EP2221091B1)

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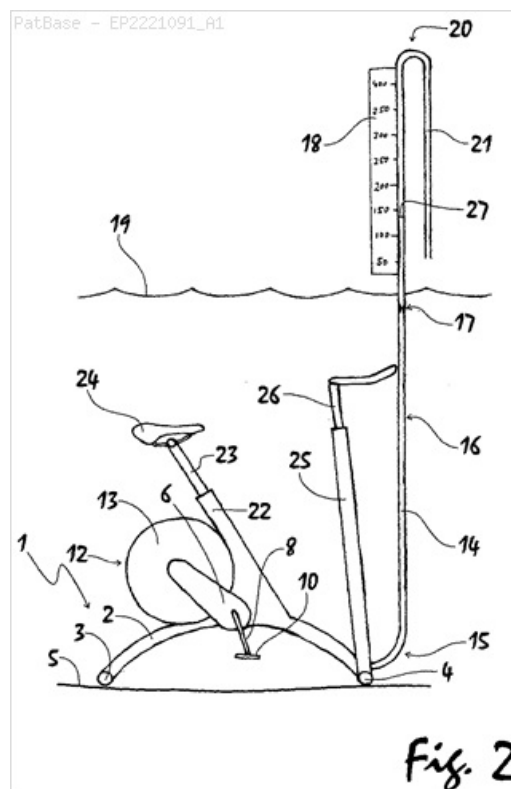
Title: TRAINING DEVICE APPAREIL D'ENTRA
Priority: DE200910009937 20090220 EP20100001555 20100216
Family:

Publication number	Publication date	Application number	Application date
DE102009009937 A1	20100826	DE200910009937	20090220
DE502010005729 D1	20140213	DE201050005729T	20100216
EP2221091 A1	20100825	EP20100001555	20100216
EP2221091 B1	20131225	EP20100001555	20100216

Probable Assignee: GLASER HARALD
Assignee(s):(std): GLASER HARALD
Inventor(s):(std): GLASER HARALD
Agent(s): RACKETTE PARTNERSCHAFT PATENTANWALTE
Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
International class (IPC 8-9): A61B5/22 A63B21/008 A63B22/08 (Advanced/Invention); A61B5/22 A63B21/008 A63B22/06 (Core/Invention)
CPC: A63B21/00069 A63B21/0084 A63B2071/065 A63B2208/03 A63B2220/56 A63B2225/60 A63B22/0605 A63B21/008
European class: A63B21/008B A63B21/008B4 A63B22/08 K63B208/03 K63B220/56 K63B225/60 K63B71/06D4
[Classification Explorer](#)
Cited documents: WO03013661 A1, US5665039 A, US4645199 A, US2504007 A, DE93087 A, DE2113152 A1,
Forward Citations: FR2985193,

Abstract:

The device has a fluid-mechanically acting resistance unit (12) including an outer housing (13) and a resistance wheel enclosed by the outer housing. The resistance wheel is designed such that a laminar stream is generated in the outer housing. The resistance wheel is formed as a flat disk and a radial pump wheel and peripheral pump wheel. The outer housing is opened and closed and formed with a flow-rate adjusting unit. An end of a riser pipe (14) is connected to the outer housing. A pressure sensor unit detects static pressure at an area in the housing.

**52) Family number: 72980668** (US2019022497A)

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Title: BICYCLE CLIMBING AND DESCENDING TRAINING DEVICE
Priority: US20170534296P 20170719 US20180036626 20180716 WO2018US42517 20180717
Family:

Publication number	Publication date	Application number	Application date
CN109789326 A	20190521	CN201880003753	20180717
US2019022497 AA	20190124	US20180036626	20180716
WO19018416 A1	20190124	WO2018US42517	20180717

Probable Assignee: WAHOO FITNESS LLC
Assignee(s):(std): WAHOO FITNESS LLC

Inventor(s):(std): MENDEZ JOSE R ; BYLER SHANE A ; CARLSON MICHAEL J ; POWERS MEGAN K ; HAWKINS III HAROLD M ; HAWKINS HAROLD M III

Inventor(s): HAWKINS HAROLD M III

Agent(s): MIKA DAVID ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class (IPC 8-9): A63B22/00 A63B24/00 A63B69/16 (Advanced/Invention)

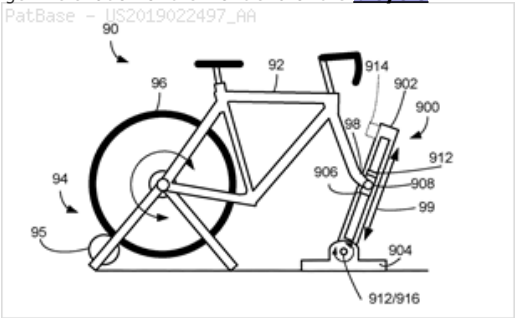
CPC: A63B22/0023 A63B24/0075 A63B24/0084 A63B24/0087 A63B69/16 A63B71/0619 A63B2024/0093 A63B2069/162 A63B2071/0655 A63B2220/18 A63B2220/40 A63B2220/80 A63B2220/801 A63B2225/09 A63B2225/20 A63B2225/50 A63B24/0062 A63B2220/12

US class: 1/1 482/5

[Classification Explorer](#)

Cited documents: US8444147 BB, US5240417 A, US2011039664 AA, US2007004565 AA, FR2852526 A1, EP0995466 A1,

Abstract:
A training device for use with a **bicycle** includes a shuttle guide member including a lower end and an upper end that define an axis therebetween. A shuttle is operably coupleable to a front end of the **bicycle** and translatable along the axis by a drive coupled to the shuttle. When coupled to the front end of the **bicycle**, translation of the shuttle along the axis by the drive results in each of a rotation of the shuttle guide member about a pivot and a change in elevation of the front end of the **bicycle**.



53) Family number: 34486673 (US2008269025A) © PatBase

Title: INDOOR EXERCISE CYCLE WITH TILT FUNCTION

Priority: NO20050005233 20051108 NO20060000487 20060131 NO20060001853 20060426
NO20060003194 20060710 WO2006NO00398 20061107

Family:

Publication number	Publication date	Application number	Application date
CN101365516 A	20090211	CN200680050358	20061107
CN101365516 B	20140305	CN200680050358	20061107
EP1951385 A1	20080806	EP20060824328	20061107
JP2009514739 T2	20090409	JP20080539955T	20061107
NO20055233 A0	20051108	NO20050005233	20051108
US2008269025 AA	20081030	US20060092800	20061107
US7963889 BB	20110621	US20060092800	20061107
WO07055584 A1	20070518	WO2006NO00398	20061107

Probable Assignee: ZIAD BADARNEH

Assignee(s):(std): HANSEN BENEDICT J M ; KALIFEN AS ; ZIAD BADARNEH ; BADARNEH ZIAD ; ELLIS CAMPBELL

Assignee(s): HANSEN BENEDICT J

Inventor(s):(std): ZIAD BADARNEH ; CAMPBELL ELLIS ; ELLIS CAMPBELL ; HANSEN BENEDICT JAMES MARIUS ; HANSEN BENEDICT J M ; ELLIS CAMPBELL ; BADARNEH ZIAD

Inventor(s): HANSEN BENEDICT J

Agent(s): LANGFELDT JENS FREDRIK CONRADI ET AL; RODMAN RODMAN; RODMAN AND RODMAN

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class (IPC 8-9): A63B21/22 A63B22/00 A63B22/06 A63B22/08 B62H7/00 (Advanced/Invention); A63B21/00 A63B22/06 B62H7/00 (Core/Invention); A63B (Subclass/Invention)

CPC: A63B22/0605 A63B26/003 A63B21/22 A63B2022/0641 A63B22/0023 A63B21/4049

European class: A63B21/22 A63B22/00B4 A63B22/08 A63B26/00B K63B22/00B4 K63B22/06C K63B22/06C4L

US class: 482/57 482/57P 482/61

[Classification Explorer](#)

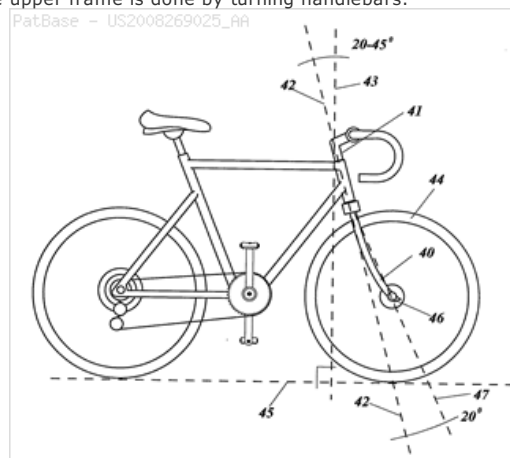
Cited documents: WO05046806 A2, WO03018391 A3, WO03018391 A2, US7717824 BB, US7682286 BB, US7481746 BB, US7326151 BB, US6648802 BB, US6551219 BA, US6547702 BA, US6135930 A, US6126577 A, US6120416 A, US5785631 A, US4957282 A, US3750479 A, US2010081548 AA, US2009170667 AA, US2009048076 AA, US2008269025 AA, US2007105694 AA, US2004077465 AA, US2002004439 AA, JP3058094 A2, JP2046871 A2, JP2001346903 A2, EP0947224 A2, EP0354785 A2, CN2125415 U, 82A1, 1990.09.18, ;CN,

Forward Citations: WO18085051, WO18027216, WO15079217, WO14084742, WO12007936, WO11135274, WO11002302, WO10110670, US9669257, US9580137, US9446277, US9440109, US9381395, US9302148, US9028368, US8894550, US8690735, US8480545, US8371992, US8092352, US7963889, US7927258, US2017136293, US2016375299, US2015290490, US2015238797, US2015080191, US2013072356,

US2012108399, US2012071301, US2011195820, US2011172059, US2011105282, US2011028276, US2009203441, US2009170667, US2009048076, US10569827, US10561877, US10537764, US10493349, US10471298, US10433612, US10426989, US10391361, US10279212, US10272317, US10226396, US10220259, US10188890, US10166434, US10080919, US10004940, TWI621468, TWI469809, KR101879435, JP6143248, JP6143247, JP2018121810, JP2018121809, ITFO20100001, EP3438951, EP3074098, EP2569556, EP2231285, EP2231285, EP2231285, EP2027892, CN108883334, CN106061562, CN106061562, CN103446707, CN103446707, CN102893063, CN101822892,

Abstract:

A cycle apparatus for physical exercise, rehabilitation of injuries and increased balance, the apparatus designed as a stationary exercise cycle. The apparatus consist of a first lower stable frame configured to be supported on a floor and a second upper frame rotary connected on axle fixed cantilever on first frame. The upper frame has an adjustable tilt movement relative the lower frame crosswise the **flywheel's** revolving motion. Stabilizing of the upper frame is done by turning handlebars.



54) Family number: 11073720 (US5792028A)

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Title: Running exercise machine
Priority: US19970911633 19970815
Family:

Publication number	Publication date	Application number	Application date
US5792028 A	19980811	US19970911633	19970815

Probable Assignee: JARVIE JOHN E
Assignee(s): JARVIE JOHN E
Inventor(s):(std): JARVIE JOHN E

International class A63B23/04 (Advanced/Invention);
(IPC 8-9): A63B23/035 (Advanced/Non-invention)

International class A63B22/00
(IPC 1-7):

CPC: A63B22/001 A63B22/0015 A63B22/0664 A63B69/0057 A63B2022/0051 A63B2022/0688 B62K3/005

European class: A63B22/00A6 A63B22/06E B62K3/00C K63B22/00B K63B22/00P2 K63B22/06E6 K63B69/00N4

US class: 482/51 482/52

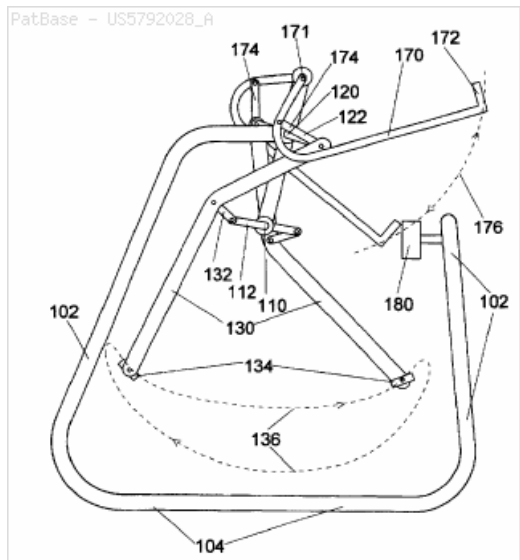
[Classification Explorer](#)

Cited documents: US567042 A, US5605521 A, US5601301 A, US5595553 A, US5577985 A, US5527246 A, US5299993 A, US5039088 A, US4940233 A, US4712790 A, US219439 A,

Forward Citations: WO9928001, WO18009403, USD742977, US9993680, US9968824, US9682279, US9630052, US9579537, US9364708, US9050491, US8409058, US8062187, US8043195, US7841968, US7833134, US7828698, US7785235, US7780577, US7758473, US7749137, US7744507, US7736278, US7708669, US7708668, US7645215, US7632219, US7530926, US7520839, US7494447, US7462134, US7344480, US7341542, US7316632, US7267637, US7244217, US7214168, US7201705, US7179201, US7172531, US7169089, US7169088, US7137927, US7025710, US6991587, US6908416, US6575877, US6551218, US6053847, US6036622, US5876308, US2017266487, US2017239517, US2017014676, US2010255958, US2010227739, US2010152001, US2009181828, US2009156370, US2009156369, US2008125291, US2008020902, US2008004163, US2007238583, US2007037667, US2006100066, US2006100065, US2006003868, US2005202939, US2005181912, US2005124467, US2005124466, US10493349, US10449416, US10441840, US10426989, US10350451, US10293211, US10279212, US10258821, US10252109, US10220250, US10188890, US10046197, TWI637767, JP5351392, JP2008018241, GB2347873, GB2347873, EP2383020, EP1878476,

Abstract:

An exercise machine is disclosed herein comprising: a frame; a lower crank mounted on the frame; a substantially identical upper crank mounted on the frame above the lower crank; a right moment arm pivotably connected to both upper and lower right crank arms; a left moment arm pivotably connected to both upper and lower left crank arms; and a pedal connected to the bottom end of each of the moment arms. Simultaneous rotation of the lower crank in a forward direction and the upper crank in a reverse direction generates forward orbital motion of said right pedal and forward orbital motion of said left pedal, thereby simulating the movements of a user's feet during running and/or walking. The disclosed exercise machine may also provide for arm movements appropriate for running and/or walking. This may be achieved by an exercise machine further comprising right and left upper reciprocating arms with handles that are pivotably connected to the frame above the upper crank and coupled to the upper crank by connecting rods, so that rotation of the upper crank causes reciprocating motion of the arms and handles. Alternatively, an exercise machine may further comprise handles connected to the top ends of the moment arms. The simultaneous rotation of the upper and lower cranks generates reverse orbital motion of the handles.



55) Family number: 41844724 (US2009011906A)

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Title: REBOUNding EXERCISER

Priority: CN200720157129U 20070706

Family:

Publication number	Publication date	Application number	Application date
■ CN201052379 Y	20080430	CN200720157129U	20070706
■ US2009011906 AA	20090108	US20080217322	20080705

Probable Assignee: PRODUCTS OF TOMORROW INC

Assignee(s):(std): LIDA HUO ; PRODUCTS OF TOMORROW INC

Assignee(s): HUO LIDA

Inventor(s):(std): WANGDE QIAN ; LIDA HUO ; FERNANDEZ JUAN ; RICHMOND DAVID J

Inventor(s): HUO LIDA ; QIAN WANGDE

Agent(s): RICHARD GEARHART ESQ

International class
(IPC 8-9): A63B22/04 A63B23/04 (Advanced/Invention);
A63B22/00 (Core/Invention)

CPC: A63B5/11 A63B5/16 A63B21/023 A63B21/055 A63B21/225 A63B22/0056 A63B22/0064 A63B23/03525
A63B23/03541 A63B23/0488 A63B69/0022 A63B69/18 A63B2209/00 A63B2210/50 A63B2225/093

European class: A63B21/02B A63B21/055 A63B22/00P10 A63B22/00P6 A63B23/035C2 A63B23/035C4S A63B23/04E2
A63B5/11 A63B5/16 A63B69/18 K63B209/00 K63B21/22F K63B210/50 K63B225/09H K63B69/00G

US class: 482/52 482/52P

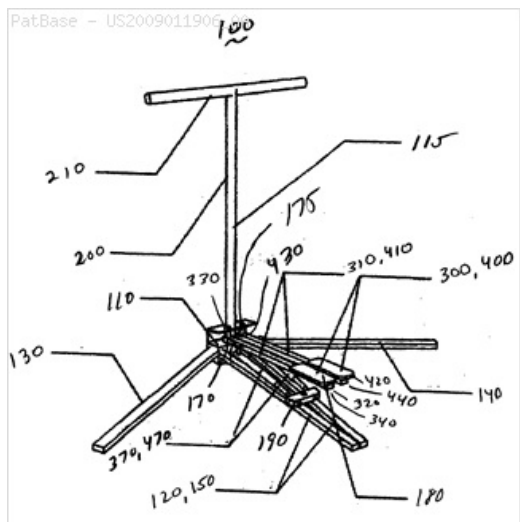
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Cited documents: US7303509 BB, US7094183 BB, US7033305 BA, US6582343 BB, US6231484 BA, US6217485 BA, US6053847 A, US6030320 A, US5803880 A, US5679102 A, US5496237 A, US5301441 A, US5299992 A, US5267923 A, US5230674 A, US5222927 A, US4900012 A, US4869496 A, US4563001 A, US4243218 A, US5267923 A, US5230674 A, US5222927 A, US4900012 A, US4869496 A, US4563001 A, US4243218 A,

Forward Citations: USD850553, USD786997, US9999818, US10046222, TWI527608, CN102553145, CN102553145,

Abstract:

The present invention is an exercise device, primarily for aerobic exercise. The invention is a hybrid between a toy called a pogo stick, a stair stepper, a trampoline and a ski simulator. The present invention combines the exercise a user receives from an exercise machine with the enjoyment a user receives from a toy. The user stands on pedals and grasps a handle, then either steps up and down against elastic resistance, or bounces up and down. The user may also swing from side to side or scissor his legs. Additionally, a pivot allows a combination of motions, such as scissoring while bouncing up and down. The amount of resistance may be controlled by adding or modifying elastic components.



56) Family number: 28262729 (US2002198083A)

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Title: Deep stride exercise machine

Priority: US19990131064P 19990426 US20000559167 20000426

Family:

	Publication number	Publication date	Application number	Application date
	US2002198083 AA	20021226	US20000559167	20000426
	US6551218 BB	20030422	US20000559167	20000426

Probable Assignee: UNISEN INC

Assignee(s):(std): UNISEN INC

Assignee(s): UNISEN INC DBA STAR TRAC ; CORE IND LLC ; GOH YONG MING ; KELMSCOTT COMMUNICATIONS LLC A DELAWARE LIABILITY ; KELMSCOTT COMMUNICATIONS LLC A DELAWARE LIABILITY CO DBA ORANGE COUNTY PRINTING LTD ; PNC BANK NATIONAL ASSOCIATION

Inventor(s):(std): GOH YONG MING ; GOH YONG

International class
(IPC 8-9): A63B23/04 (Advanced/Invention)

International class
(IPC 1-7): A63B22/00 A63B22/04 A63B22/06 A63B69/16

CPC: A63B22/0012 A63B22/0664 A63B2022/0038 A63B2022/0682

European class: A63B22/00A6S A63B22/06E K63B22/00C8 K63B22/06E4S

US class: 482/51 482/52 482/52S 482/57 482/57P

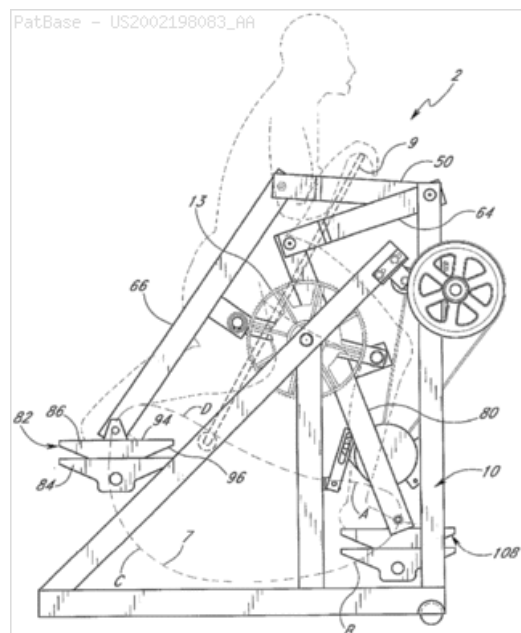
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Cited documents: US6183397 BA, US6019710 A, US5876308 A, US5876307 A, US5792029 A, US5792028 A, US5707321 A, US5577985 A, US5518473 A, US5499956 A, US5299993 A, US5279529 A, US5242343 A, US4989957 A, US4733858 A, US4709918 A, US4685666 A, US4679786 A, US3759511 A, US3316898 A,

Forward Citations: WO08102926, WO06014183, USRE42699, US9993680, US9604096, US9579537, US9527547, US9468795, US8668629, US8454478, US8162805, US8128535, US8062185, US8057363, US8043195, US8025609, US7935027, US7901330, US7828698, US7824313, US7811205, US7785235, US7780577, US7758473, US7744507, US7731635, US7708669, US7704192, US7686743, US7682293, US7621848, US7604573, US7568999, US7530926, US7520839, US7462134, US7448986, US7361122, US7341542, US7270626, US7244217, US7214168, US7201705, US7179201, US7172531, US7169089, US7169088, US2017144016, US2016046351, US2011263388, US2011143885, US2010267519, US2010227739, US2010152000, US2010041522, US2009181828, US2009156369, US2008287265, US2008261780, US2008214363, US2008214362, US2008020902, US2007238583, US2007202999, US2007179023, US2007129217, US2007123393, US2006234838, US2006183605, US2006040794, US2005181911, US2005164835, US2005124467, US2005124466, US2005026752, US2004224825, US2003092532, US10561894, US10543395, US10500473, US10493349, US10471299, US10449403, US10441844, US10433612, US10426989, US10376736, US10350451, US10343017, US10293211, US10279212, US10272317, US10258828, US10252109, US10188890, US10046197, EP2996780, DE112010002817,

Abstract:

A lower **body** exercise machine has a pair of laterally spaced apart foot members. The foot members are coupled to a frame which supports the exercise machine. First and second guide linkages are pivotally connected to the frame. First and second articulating linkages are pivotally connected to each corresponding guide linkages and to a pair of crank arms. The foot members are pivotally connected to the articulating linkages. The size, shape and connection between the various components and linkages is such that each foot member guides the foot of a user along a preferred anatomical deep stride path simulative of natural running motion.

**57) Family number: 12072762 (US5409435A)**

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Title: VARIABLE RESISTANCE EXERCISE DEVICE

Priority: US19930148066 19931103 US19940242306 19940513 WO1994US12660 19941102
US19950399200 19950306

Family:	Publication number	Publication date	Application number	Application date
	AU199511706 A1	19950523	AU19950011706	19941102
	US5409435 A	19950425	US19930148066	19931103
	US5762584 A	19980609	US19950399200	19950306
	US6027429 A	20000222	US19940242306	19940513
	WO9512434 A1	19950511	WO1994US12660	19941102
Probable Assignee:	ICON IP INC			
Assignee(s):(std):	NORDICTRACK INC			
Assignee(s):	ICON HEALTH AND FITNESS INC ; NORDIC ADVANTAGE INC ; GENERAL ELECTRIC CORP ; GENERAL ELECTRIC CAPITAL CORP ; ICON IP INC ; FIRST NATIONAL BANK OF BOSTON AS ADMINISTRATIVE AG ; ICON IP INC A DELAWARE CORP ; WILMINGTON TRUST FSB COLLATERAL AGENT AS ; GENERAL ELECTRIC CAPITAL AGENT AS CORP ; FREE MOTION FITNESS INC ; HF HOLDINGS INC ; ICON ALTRA LLC ; ICON DU CANADA INC ; ICON INT HOLDINGS INC ; UNIVERSAL TECHNICAL SERVICES ; JPMORGAN CHASE BANK NA ADMINISTRATIVE AGENT AS ; BACK BAY CAPITAL FUNDING LLC ; BANK OF AMERICA NA ; BANK OF AMERICA NA ADMINISTRATIVE AGENT AS ; BANKBOSTON NA ; BANKBOSTON NA (F K A FIRST NATIONAL BANK OF BOSTON) ; BANKBOSTON NA F K A FIRST NATIONAL BANK OF BOSTON ; DANIELS JOHN J ; FIRST NATIONAL BANK OF BOSTON ADMINISTRATIVE AGENT ; FIRST NATIONAL BANK OF BOSTON ADMINISTRATIVE AGENT AS			
Inventor(s):(std):	DANIELS JOHN J			
Inventor(s):	JOHN J DANIELS			
Designated states:	AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CZ DE DK ES FI FR GA GB GN GR HU IE IT JP KP KR KZ LK LU MC MG ML MN MR MW NE NL NO NZ PL PT RO RU SD SE SK SN TD TG UA VN			
International class (IPC 8-9):	A63B21/00 A63B21/005 A63B21/008 A63B21/28 A63B23/00 A63B24/00 F16D63/00 (Advanced/Invention); A63B21/00 A63B21/008 A63B24/00 (Advanced/Non-invention); A63B21/00 A63B21/005 A63B23/00 F16D63/00 (Core/Invention); A63B21/008 A63B24/00 (Core/Non-invention)			
International class (IPC 1-7):	A63B21/00 A63B21/06 F16F15/03			
CPC:	Y10S482/90 Y10S482/901 Y10S482/902 Y10S482/903 F16D57/002 A63B21/00069 A63B21/0056 A63B21/155 A63B21/157 A63B21/28 A63B23/00 A63B2220/34 A63B2220/51 A63B2225/102 A63B2230/06 A63B2230/062 A63B21/00845			
European class:	A63B21/005D A63B21/15F6C A63B21/15G A63B21/28 A63B23/00 F16D57/00B K63B21/008B1R K63B21/00F6 K63B220/34 K63B220/51 K63B225/10R K63B230/06 K63B230/06A			
US class:	482/111 482/5 482/53 482/58 482/6 482/73 482/75 482/900 482/901 482/902 482/903 482/92			

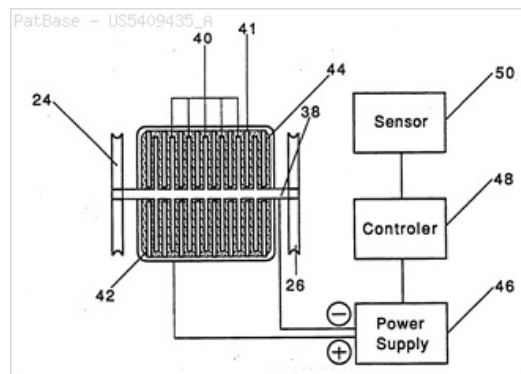
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Cited documents: US5286243 A, US5201772 A, US5167850 A, US5114391 A, US5015926 A, US4992190 A, US4986689 A, US4930770 A, US4927136 A, US4900013 A, US4790522 A, US4730829 A, US4726582 A, US4679786 A, US4569518 A, US4529196 A, US4389047 A, US4239092 A,

Forward Citations: WO9733648, WO9607836, WO9607836, WO19148261, WO17031585, WO14189652, WO14140422, WO10014129, WO06052954, WO06052954, WO06013432, WO04096501, WO04096501, WO03099388, WO02056973, WO02056973, WO0072923, USD768791, USD766382, USD757189, USD744050, USD728707, USD477040, US9968816, US9901772, US9841077, US9814930, US9814920, US9757611, US9731157, US9724563, US9717952, US9700761, US9687689, US9685827, US9675831, US9665046, US9623281, US9584056, US9539467, US9403048, US9339692, US9308410, US9308409, US9272186, US9259633, US9144709, US9028368, US8968155, US8917273, US8876668, US8858397, US8845497, US8784270, US8758201, US8690735, US8614529, US8523789, US8517899, US8485996, US8475338, US8212445, US8192332, US8142370, US8106563, US8079273, US8075453, US8056687, US8052584, US7922635, US7922621, US7896782, US7862483, US7806815, US7798946, US7775936, US7766793, US7762934, US7651442, US7648446, US7645212, US7628737, US7608028, US7608022, US7585254, US7585251, US7537552, US7462141, US7455621, US7429236, US7374519, US7294095, US7223213, US7220221, US7220220, US7201708, US7121980, US7121980, US7115080, US7108641, US7094184, US7083554, US7070545, US6960156, US6945916, US6846270, US6827822, US6811520, US6790163, US6691839, US6669600, US6612170, US6599223, US6579214, US6561955, US6551220, US6475122, US6368251, US6283859, US6186290, US6066077, US6065572, US6042516, US5825983, US5816372, US5755645, US5749807, US5711746, US5693004, US5618250, US5493127, US2018036572, US2017361145, US2017304680, US2017296876, US2017080289, US2017050069, US2017014661, US2016346598, US2016114211, US2016061300, US2016051847, US2015369326, US2015059257, US2014113779, US2014038777, US2013310230, US2013231226, US2012329615, US2012004074, US2011195819, US2011172058, US2011165997, US2011165996, US2011165995, US2011152039, US2011082018, US2011082015, US2011082006, US2011077128, US2010327603, US2010302250, US2010298104, US2010216600, US2010190615, US2010179035, US2010113223, US2010093493, US2010031803, US2010019593, US2009227428, US2009197739, US2009137367, US2009111658, US2009032353, US2008161168, US2008139370, US2008097269, US2008020912, US2007232463, US2007232461, US2007202992, US2007176035, US2007161468, US2007013655, US2007010383, US2006251638, US2006240957, US2006046905, US2006035768, US2006033392, US2005250626, US2005209052, US2005176560, US2005164853, US2005124471, US2005049121, US2004260191, US2004242388, US2004208943, US2004176226, US2004082444, US2004023762, US2004009856, US2003216227, US2003195089, US2003166434, US2003089596, US2003032528, US2002091043, US2002086779, US2002077230, US10569121, US10561894, US10561893, US10561877, US10543395, US10525306, US10500473, US10493349, US10471299, US10449416, US10441844, US10441840, US10433612, US10426989, US10398937, US10398933, US10391361, US10388183, US10376736, US10376732, US10369407, US10343017, US10328307, US10293211, US10279212, US10279210, US10272317, US10258828, US10252109, US10226396, US10220261, US10220259, US10220235, US10207148, US10207138, US10188890, US10159870, US10159869, US10094055, US10071275, US10065067, TW1478759, TW1354441, GB2385803, GB2385803, EP3222331, EP3222331, EP2018896, EP1827324, EP1827324, EP1631421, DE10319405, CN107921307, CN104587661,

Abstract:

A variable resistance exercise device provides a variable resisting force in response to a user applied force. The variable resistance exercise device includes at least one rotating force transmitting means for inputting a user applied force as a rotational force to be resisted, and at least one force transmission member for transmitting the user applied force. The user applied force is resisted by varying the viscosity of a viscosity variable fluid which surround plates rotated by the user applied force. Thus a braking force is applied to actively resist the user applied force. In accordance with the invention, a multi-configurable multi-programmable exercise device is provided which may be used in a variety of exercise modes to provide a resistive force to a user-applied force during a range of motion of a particular exercise. In a preferred embodiment of the present invention, a variable resistor resists a user-supplied force in one rotational direction only. A **gear** and clutch system translates a reciprocating user-supplied force, corresponding to a reciprocating range of motion, into the one rotational direction.



58) Family number: 11886767 (US5921894A)

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Title: COMPACT ELLIPTICAL EXERCISE APPARATUS
Priority: US19970955173 19971021 US19990229068 19990112
Family:

Publication number	Publication date	Application number	Application date
US5921894 A	19990713	US19970955173	19971021
US5993359 A	19991130	US19990229068	19990112

Probable Assignee: ESCHENBACH PAUL WILLIAM
Assignee(s): ESCHENBACH PAUL WILLIAM
Inventor(s):(std): ESCHENBACH PAUL WILLIAM
International class (IPC 8-9): A63B23/04 (Advanced/Invention); A63B23/035 (Advanced/Non-invention); A63B23/04 (Core/Invention); A63B23/035 (Core/Non-invention)

International class (IPC 1-7): A63B22/04 A63B69/16

CPC: A63B22/0017 A63B22/0664 A63B22/001 A63B2022/067

European class: A63B22/00A6 A63B22/06E K63B22/00B2 K63B22/06E2

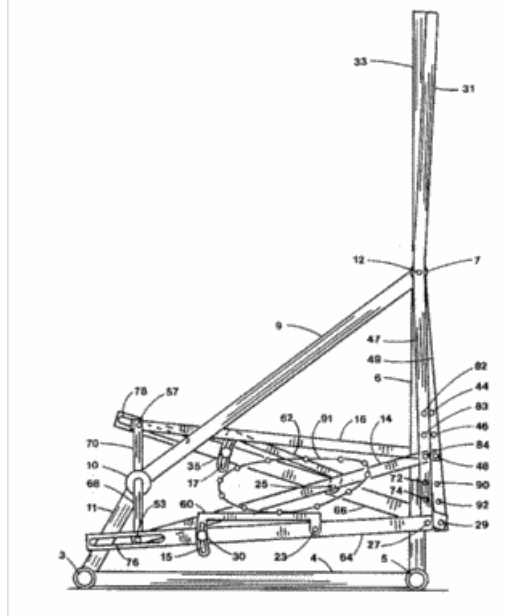
US class: 482/51 482/57 482/70

[Classification Explorer](#)

Cited documents: US5779599 A, US5779598 A, US5762588 A, US5759136 A, US5637058 A, US5611757 A, US5611756 A, US5595553 A, US5593372 A, US5593371 A, US5591107 A, US5577985 A, US5573481 A, US5573480 A, US5562574 A, US5549526 A, US5540637 A, US5529555 A, US5527246 A, US5518473 A, US5499956 A, US5433680 A, US5423729 A, US5383829 A, US5299993 A, US5242343 A, US5000444 A, US4986533 A, US4971316 A, US4940233 A, US4880225 A, US4786050 A, US4645200 A, US4643419 A, US4519603 A, US4477072 A, US3563541 A, US219439 A, DE2919494 A1,

Forward Citations: WO15100426, WO05067484, WO05067484, WO04108225, USRE42698, USD527060, USD489101, USD478365, US9937378, US9937377, US9937376, US9757609, US9604096, US9468795, US9457222, US9352187, US9308415, US9278250, US9272182, US9248338, US9108081, US8858403, US8734299, US8696524, US8454478, US8419596, US8235873, US8162805, US8128535, US8066294, US8062187, US8062185, US8057363, US8025609, US7909739, US7901330, US7824313, US7785235, US7758473, US7749137, US7736278, US7704192, US7632219, US7618351, US7611446, US7604573, US7568999, US7556591, US7544153, US7462134, US7455628, US7455626, US7455625, US7455624, US7448986, US7361122, US7344480, US7341542, US7316632, US7278955, US7270626, US7270625, US7267637, US7244217, US7214168, US7201705, US7179201, US7172531, US7169089, US7169088, US7137927, US7104929, US7097593, US7086993, US7060005, US7025710, US6949053, US6908416, US6726600, US6719666, US6689019, US6645125, US6575877, US6422976, US6361476, US6312362, US6248046, US6168552, US6135923, US6077198, US6077196, US2015202488, US2015087480, US2014274574, US2012190509, US2012035022, US2011143885, US2010301582, US2010267519, US2010255958, US2010152000, US2010041522, US2009291810, US2009209394, US2009176625, US2008287265, US2008261780, US2008261779, US2008261778, US2008261777, US2008207400, US2008125291, US2008020905, US2007265143, US2007259763, US2007202999, US2007129217, US2007123393, US2007087907, US2007087906, US2006234838, US2006199702, US2006183605, US2006100066, US2006100065, US2006040794, US2006035754, US2006003868, US2005202939, US2005148438, US2005107219, US2004266588, US2004266587, US2004248710, US2004248709, US2004248708, US2004248706, US2004248704, US2004224825, US2004172146, US2004157706, US2003092532, US10561894, US10543395, US10500473, US10493349, US10471299, US10441844, US10433612, US10426989, US10376736, US10369404, US10343017, US10293211, US10279212, US10272317, US10258828, US10252109, US10201727, US10188890, KR101498703, KR100831240, GB2429932, EP3086866, EP2996780, EP2488260, EP1768754, EP1768754, AU2004313464,

Abstract:
A standup compact exercise apparatus simulates walking and jogging with arm exercise. Foot pedals move with a back and forth movement following an elongate **curve** path that has a **curve** length that is longer than twice the crank length. The stride length of the foot pedals is adjustable to accommodate both long and short leg users. Foot pedals move with smooth elliptical motion resulting from a linkage mechanism having smooth orbital motion without the characteristic turnaround jerk associated with reciprocating member elliptical drives. Leg joint impact is controlled to be very low as to allow extended exercise without joint soreness. Arm exercise is coordinated with motion of the feet.

**59) Family number: 35576776** (US2007197345A)

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Title: MOTIVATIONAL DISPLAYS AND METHODS FOR EXERCISE MACHINE

Priority: US20060772625P 20060213 US20070704161 20070208

Family:

Publication number	Publication date	Application number	Application date
US2007197345 AA	20070823	US20070704161	20070208

Probable Assignee: UNISEN INC DBA STAR TRAC

Assignee(s):(std): MEEKS JEFFREY A ; WALLACE GREGORY A

Assignee(s): UNISEN INC DBA STAR TRAC ; UNISEN INC

Inventor(s):(std): MEEKS JEFFREY A ; WALLACE GREGORY A

Inventor(s): WALLACE GREGORY ALLEN

Agent(s): KNOBBE MARTENS OLSON AND BEAR LLP

International class (IPC 8-9): A63B22/04 A63B71/00 (Advanced/Invention); A63B22/00 A63B71/00 (Core/Invention)

CPC: A63B21/0053 A63B21/154 A63B22/0056 A63B24/00 A63B69/0022 A63B69/06 A63B69/18 A63B69/182 A63B2022/0038 A63B2071/0641 A63B2220/30 A63B2220/34 A63B2220/36

European class: A63B21/15F6 A63B22/00P6 A63B24/00

US class: 482/52 482/52S 482/8 482/8P

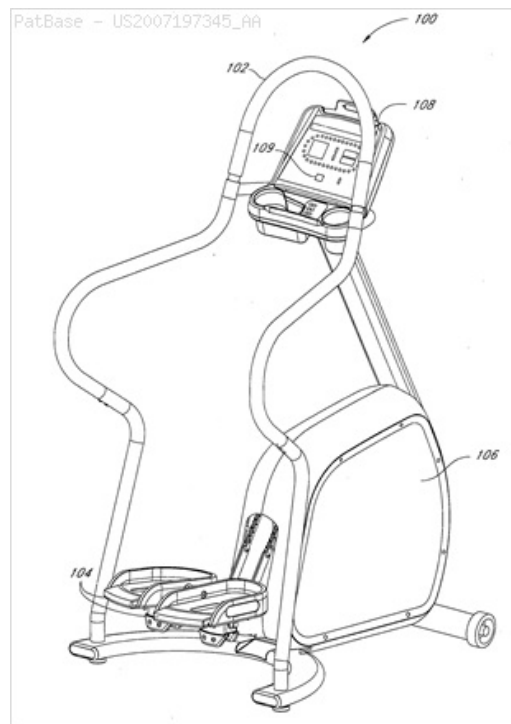
[Classification Explorer](#)

Cited documents: US7645212 BB, US7435203 BB, US7435202 BB, US7341542 BB, US7267637 BB, US7056265 BA, US6908416 BB, US6846272 BB, US6659916 BA, US6638198 BA, US6511402 BB, US6497638 BA, US6450922 BA, US6447424 BA, US6152856 A, US6050924 A, US6050920 A, US5810696 A, US5749807 A, US5738611 A, US5697869 A, US5643146 A, US5584700 A, US5547439 A, US5403252 A, US5374227 A, US5135447 A, US4881585 A, US2007149364 AA, US2007004563 AA, US2006172862 AA, US2006116247 AA, US2006046905 AA, US2006035755 AA, US2006003872 AA, US2005227824 AA, US2005209061 AA, US2005209056 AA, US2005209052 AA, US2005164837 AA, US2005049118 AA, US2005043145 AA, US2004259692 AA, US2004092367 AA, US2002032104 AA, US2002016235 AA,

Forward Citations: WO09111002, WO09111002, USD589097, USD567315, US9943718, US9861855, US9737746, US9724589, US9694240, US9345930, US9174085, US9028368, US8951168, US8944968, US8882640, US8825445, US8690735, US8533620, US8506457, US8021277, US8021276, US7874957, US7771324, US7594877, US2017340913, US2017128763, US2013079198, US2012238409, US2012220427, US2011197157, US2011098928, US2011065552, US2008119332, US2008015089, US2006189439, US2006135318, US10561894, US10561877, US10543395, US10537764, US10493349, US10486026, US10471299, US10441844, US10441840, US10433612, US10426998, US10426989, US10420983, US10391361, US10376736, US10322315, US10293211, US10279212, US10272317, US10258828, US10252109, US10226396, US10220259, US10212994, US10188890, US10137328, US10022590, ITRA20110005, CN102598087, CN102598087, CN102598086, CN102314557, CN102314557,

Abstract:

A stationary exercise machine includes a system for simulating a climb of a landmark or other selected geographic location or structure. The exercise machine includes an electronic control system that monitors pedal movement and that controls a display for depicting a progress in the simulated climb. For example, the control system may include a processor that determines the height of a selected landmark, determines the height of each selected step, monitors the number of steps in the simulated climb, and that outputs a signal for displaying the progress of the user's simulated climb. For instance, the display may include a silhouette of a block pyramid whose levels are filled in based on a percentage of the climb. In certain embodiments, the control system also adjusts a resistive load based on a current force of the user in pumping the pedals.



60) Family number: 2777782 (US4441705A)

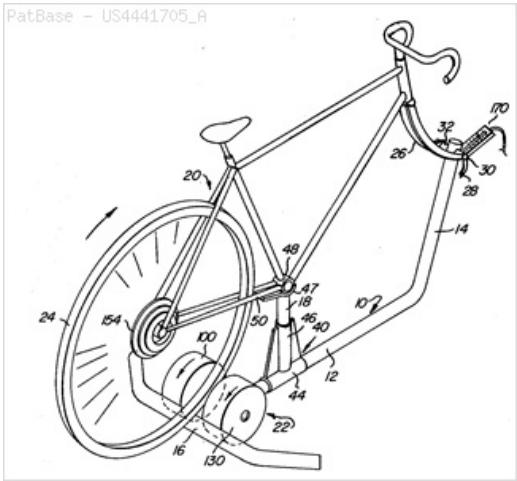
© PatBase

Title:	Exercising apparatus																												
Priority:	US19780933470 19780814		US19790017599 19790305		US19850782354 19851001																								
Family:	<table><thead><tr><th>Publication number</th><th>Publication date</th><th>Application number</th><th>Application date</th></tr></thead><tbody><tr><td> EP0238637 A1</td><td>19870930</td><td>EP19860906149</td><td>19860923</td></tr><tr><td> US4441705 A</td><td>19840410</td><td>US19780933470</td><td>19780814</td></tr><tr><td> US4789153 A</td><td>19881206</td><td>US19850782354</td><td>19851001</td></tr><tr><td> US5083772 A</td><td>19920128</td><td>US19790017599</td><td>19790305</td></tr><tr><td> WO8701953 A1</td><td>19870409</td><td>WO1986US01990</td><td>19860923</td></tr></tbody></table>					Publication number	Publication date	Application number	Application date	 EP0238637 A1	19870930	EP19860906149	19860923	 US4441705 A	19840410	US19780933470	19780814	 US4789153 A	19881206	US19850782354	19851001	 US5083772 A	19920128	US19790017599	19790305	 WO8701953 A1	19870409	WO1986US01990	19860923
	Publication number	Publication date	Application number	Application date																									
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	 US4789153 A	19881206	US19850782354	19851001																									
	 US5083772 A	19920128	US19790017599	19790305																									
 WO8701953 A1	19870409	WO1986US01990	19860923																										
Probable Assignee:	BROWN LAWRENCE G																												
Assignee(s):(std):	BROWN LAWRENCE G																												
Inventor(s):(std):	BROWN LAWRENCE G																												
Designated states:	AT BE CH DE FR GB IT JP KR LI LU NL SE																												
International class (IPC 8-9):	A63B21/008 A63B21/015 A63B21/22 A63B22/08 A63B24/00 A63B69/06 A63B69/16 (Advanced/Invention); A63B21/22 (Advanced/Non-invention); A63B21/00 (Core/Non-invention)																												
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US class:	272/72 272/73 482/111 482/59 482/61 482/64 482/65 482/73 482/8 482/909																												
Classification Explorer																													
Cited documents:	US642919 A, US589705 A, US4589656 A, US4537396 A, US4441705 A, US4396188 A, US3903613 A, US3767195 A, US351311 A, US3511097 A, US3432164 A, US3344891 A, US3283997 A, US3107915 A, US2805860 A, US2788211 A, US2140731 A, SE100722 C1, GB407263 A, GB211031 A, FR779363 A, DE517774 A,																												
Forward Citations:	WO8908478, WO8901807, WO8901806, WO8701953, WO13155558, WO09149596, WO04105889, WO0136055, USRE34479, USD825012, USD477040, US9999818, US9907992, US9889336, US9855480, US9802074, US9339686, US9314667, US9056217, US8608626, US8235874, US8147388, US7955227, US7862476, US7771325, US7731637, US7727125, US7648446, US7585251, US7364533, US7226393, US7217997, US7175570, US7172532, US6945917, US6827397, US6488611, US6033344, US5980464, US5916068, US5906581, US5800316, US5665018, US5649883, US5643143, US5618245, US5522781, US5480366, US5472392, US5468201, US5462504, US5461984, US5433681, US5382210, US5163886, US5152729, US5042795, US5031902, US5020792, US4976424, US4969642, US4958831, US4955600, US4941651, US4938475, US4932651, US4898379, US4880224, US4834363, US4826150, US4815730, US4789153, US4705267, US2018290015, US2018193713, US2016236055, US2015273266, US2014274580, US2014171272, US2014106936, US2013237380, US2013053223, US2012322621, US2012277071, US2012270194, US2011185803, US20111082015, US2010317493, US2010113223, US2007284881, US2007281835, US2007149364, US2006180916, US2006094569, US2006046905, US2006003872, US2004248702, US2004248701, US2003171191, US2002155929, US2002151414, US10518125, US10493349, US10449416, US10441840, US10433612, US10426989, US10391361, US10343013, US10293211, US10279212, US10272317, US10252109, US10226396, US10220259, US10188890, US10046222, US09999818, JP6309640, JP3932372, JP3932372, JP2016537157, JP2002062426, GB2535747, EP3009171, EP3009171, EP1364681, EP1364681, EP0323056, EP0323056, AU604996,																												

Abstract:

Exercising apparatus for simulating the characteristics of exercise during actual riding of a **bicycle** comprising a stationary frame for mounting components of a **bicycle** or the like including at least a frame, a seat, handle bars and a front wheel fork, a rear

wheel, crank arms and pedals, and a pedal operated drive system; a driven wheel for frictionally engaging the rear wheel for rotation by the rear wheel to simulate engagement with the ground during the actual riding of a **bicycle**; a fly wheel operatively connected to said driven wheel for energy storage during rotation of the rear wheel to simulate momentum during actual riding of a **bicycle**; and load applying resistance operatively connected to said driven wheel in the form of either a cage fan unit or a centrifugal control device for applying variable loads to said driven wheel to simulate variations in load encountered during actual riding of a **bicycle**.

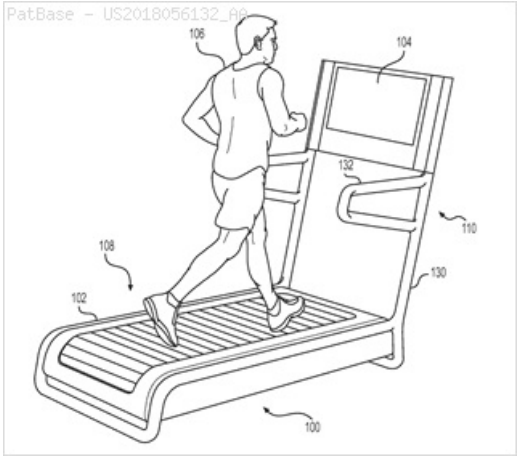


61) Family number: 68718809 (US2018056132A) © PatBase

Title:	EXERCISE SYSTEM AND METHOD			
Priority:	US20160380412P 20160827	US20170686875 20170825	WO2017US48650 20170825	
	US20180863057 20180105	US20180863368 20180105	US20180863596 20180105	
	US20180217548 20181212	US20190510619 20190712		
Family:	Publication number	Publication date	Application number	Application date
	CA3035238 AA	20190226	CA20173035238	20170825
	CN110114123 A	20190809	CN201780066713	20170825
	EP3503980 A1	20190703	EP20170847265	20170825
	TW201812684 A	20180401	TW20170129221	20170828
	TW201934168 A	20190901	TW20190100414	20190104
	US2018056132 AA	20180301	US20170686875	20170825
	US2018126248 AA	20180510	US20180863057	20180105
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	US2018140903 AA	20180524	US20180863596	20180105
	US2019111318 AA	20190418	US20180217548	20181212
	US2019336827 AA	20191107	US20190510619	20190712
	WO18044721 A1	20180308	WO2017US48650	20170825
	WO19143488 A1	20190725	WO2019US12321	20190104
Probable Assignee:	PELTON INTERACTIVE INC			
Assignee(s):(std):	PELTON INTERACTIVE INC			
Assignee(s):	POURE JASON ; COIRO MAUREEN ; CORTESE THOMAS ; FENG YU ; FOLEY JOHN ; INTONATO BUD ; JPMORGAN CHASE BANK NA ADMINISTRATIVE AGENT AS ; KUSHI HISAO ; MOSCHELLA ANTHONY			
Inventor(s):(std):	COIRO MAUREEN ; FENG YU ; FOLEY JOHN ; INTONATO BUD ; KUSHI HISAO ; CORTESE THOMAS ; POURE JASON ; MOSCHELLA ANTHONY ; INTONATO JOSEPH ; CONSIGLIO JOHN ; COIRO MAUREEN C ; WILLHITE ASHLEY ; EVANCHA BETINA ; DION BENOIT ; KRUSE MARK ; ALCORN NIGEL ; LEE JOOYOUNG			
Agent(s):	NELLIGAN OBRIEN PAYNE LLP; FINDLAY ALICE ROSEMARY; LEE LEWIS C ET AL; CIMINELLO DOMINIC P ET AL			
Designated states:	AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW			
International class (IPC 8-9):	A63B1/00 A63B21/00 A63B21/068 A63B22/00 A63B22/02 A63B22/08 A63B23/04 A63B23/12 A63B24/00 A63B3/00 A63B71/00 A63B71/06 G06Q50/10 H04L29/06 H04N21/2187 (Advanced/Invention)			
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US class:	1/1 482/7			
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Forward Citations: WO20033544, WO20033530, WO19183422, USD859543, US2017266531, US2017056726, US10569152, US10556169, US10556168, US10478666, US10471297, US10449416, TWI687252, CN109173178,

Abstract:
An exercise machine includes a processor, a first display, a deck, and a belt rotatable about the deck. The machine also includes a sensor operably connected to the processor and configured to detect a first performance parameter of a first user running on the belt of the exercise machine. The processor is configured to receive information indicative of a second performance parameter of a second user, the second performance parameter being detected at an additional exercise machine during display of the at least part of the exercise class on a display associated with the additional exercise machine. The processor is also configured to cause the second performance parameter to be displayed on the first display together with the first performance parameter.



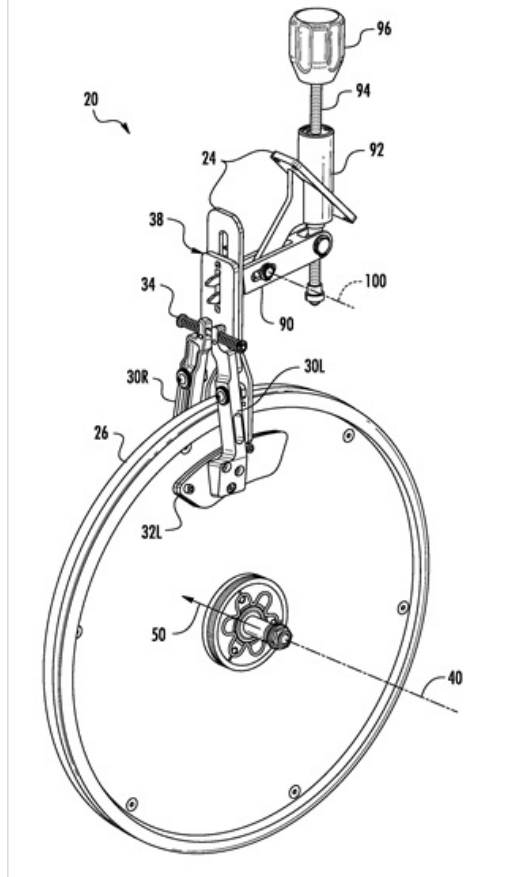
62) Family number: 65476814 (US2017106222A) © PatBase

Title: VARIABLE DISTANCE EDDY CURRENT BRAKING SYSTEM
Priority: US20150242776P 20151016 US20160290523 20161011
Family:

Publication number	Publication date	Application number	Application date
US2017106222 AA	20170420	US20160290523	20161011

Probable Assignee: PRECOR INC
Assignee(s):(std): PRECOR INC
Inventor(s):(std): MAYER BRENT CHRISTOPHER ; ANDREWS KEVIN C
International class (IPC 8-9): A63B21/005 A63B21/06 A63B22/06 A63B24/00 F16D63/00 (Advanced/Invention)
CPC: A63B21/0051 F16D63/002 A63B22/0605 A63B24/0087 F16D55/2245 F16D2121/14 F16D2121/20 F16D2121/28 F16D2129/065 A63B21/00069 A63B21/225
US class: 1/1 482/63
[Classification Explorer](#)
Forward Citations: WO19126225, US2017312580, US2016193070, US10569152, US10556169, US10556168, US10556095, US10391348, US10369416, US10272280, US10220260, US10137028,

Abstract:
An apparatus includes a **flywheel**, a first pivotable caliper, a first magnet supported by the first caliper opposite the **flywheel**, a second pivotable caliper and a second magnet supported by the second caliper opposite the **flywheel**. In one implementation, the apparatus further includes a first cam follower coupled to the first caliper, a second cam follower coupled to the second caliper and at least one cam member including a first cam surface against which the first cam follower moves and a second cam surface against which the second cam follower moves, wherein movement of the at least one cam member pivots the first caliper and the second caliper to move the first magnet and the second magnet relative to the **flywheel**. In another implementation, the apparatus further includes a strain gauge carried by the first caliper to output signals indicating braking torque.

**63) Family number: 11383814** (US5857941A)

© PatBase

Title: Exercise methods and apparatus**Priority:** US19970837984 19970415**Family:**

Publication number	Publication date	Application number	Application date
US5857941 A	19990112	US19970837984	19970415

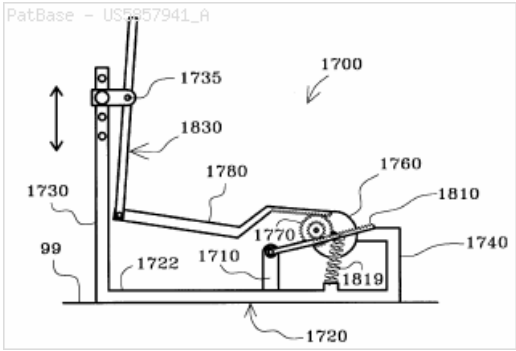
Probable Assignee: MARESH JOSEPH D**Assignee(s):** MARESH JOSEPH D ; STEARNS KENNETH W**Inventor(s):(std):** MARESH JOSEPH D ; STEARNS KENNETH W**International class (IPC 8-9):** A63B23/04 (Advanced/Invention); A63B23/035 (Advanced/Non-invention)**International class (IPC 1-7):** A63B22/04 A63B69/16**CPC:** A63B22/001 A63B22/0015 A63B22/0023 A63B22/0664 A63B2022/002 A63B2022/067**European class:** A63B22/00A6 A63B22/00B A63B22/00B4 A63B22/06E K63B22/00B2P K63B22/06E2**US class:** 482/51 482/52 482/70[Classification Explorer](#)**Cited documents:** US5637058 A, US5573481 A, US5573480 A, US5562574 A, US5549526 A, US5542893 A, US5540637 A, US5529555 A, US5529554 A, US4962925 A,

Forward Citations: WO04108225, WO0025694, USRE39904, US9352187, US9308415, US9272182, US8858403, US8734299, US8696524, US8147385, US8062187, US7909740, US7833133, US7811209, US7785235, US7775940, US7766797, US7758473, US7749137, US7740563, US7736279, US7736278, US7717828, US7674205, US7658698, US7632219, US7618350, US7517303, US7462134, US7448986, US7425188, US7361122, US7344480, US7341542, US7270626, US7267637, US7264576, US7255665, US7244217, US7214168, US7201705, US7179201, US7172531, US7169089, US7169088, US7169087, US7137927, US7097593, US7025710, US6855093, US6752744, US6749211, US6689019, US6609995, US6575877, US6482135, US6277055, US6238321, US6217486, US6210305, US6183398, US6171215, US6171215, US6165107, US6146314, US6123650, US6090014, US6045488, US6042512, US2012190509, US2011034303, US2010255958, US2010242246, US2009176626, US2009048073, US2008300114, US2008280731, US2008200314, US2008167163, US2008161164, US2008153674, US2008125291, US2007298936, US2007129218, US2007123394, US2006287161, US2006223679, US2006100066, US2006100065, US2006035755, US2006003868, US2005250621, US2005245358, US2005209059, US2005202939, US2005181911, US2005164835, US2005026752, US2004266587, US2004259692, US2004162191, US2004132583, US2002193214, US2002155927, US10561894, US10543395, US10500473, US10493349, US10471299, US10449403, US10441844, US10433612, US10426989, US10376736, US10343017, US10293211, US10279212, US10272317, US10258828, US10252109, US10201727, US10188890, EP2996780, EP1666102, EP1275419, EP1036577, EP1036577, EP1036576, EP1036576, CN106075814, CN106075814,

Abstract:

A crank is rotatably mounted on a frame, and a roller is rotatably mounted on the crank at a radially displaced location. A force receiving member and a discrete support member bear against the roller. The roller links rotation of the crank relative to the frame to up and down movement of both the force receiving member and the support member and to back and forth movement

of the force receiving member relative to the support member.



64) Family number: 32558825 (WO06004430A2)

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Title:

Priority:

Family:

Probable Assignee:

Assignee(s):(std):

Assignee(s):

Inventor(s):(std):

Inventor(s):

Designated states:

International class
IPC 8-9):

International class
IPC 1-7):

CPC:

European class:

Classification Explorer

Cited documents:

Forward Citations:

TRAINING APPARATUS

NO20040002851 20040706NO20040005357 20041207

Publication number	Publication date	Application number	Application date
NO20042851 A0	20040706	NO20040002851	20040706
NO20045357 A0	20041207	NO20040005357	20041207
WO06004430 A2	20060112	WO2005NO00252	20050704
WO06004430 A3	20060223	WO2005NO00252	20050704

FLEXIPED AS

BADARNEH ZIAD ; ELLIS CAMPBELL ; FLEXIPED AS ; HANSEN BENEDICT J M ; KALIFEN AS ; MOLLATT TORBJOERN

HANSEN BENEDICT J

HANSEN BENEDICT J M ; MOLLATT TORBJOERN ; MOLLATT TORBJORN ; HANSEN BENEDICT JAMES MARIUS ; BADARNEH ZIAD ; ELLIS CAMPBELL

HANSEN BENEDICT J

AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

A63B21/00 A63B22/06 A63B23/035 A63B23/04 (Advanced/Invention);
A63B21/00 A63B22/06 A63B23/035 A63B23/04 (Core/Invention);
A63B (Subclass/Invention)

A63B

A63B22/0605 A63B22/001 A63B21/225 A63B22/0015 A63B22/0023 A63B22/0046 A63B22/0664 A63B22/203 A63B222/002 A63B222/0623 A63B222/0688 A63B2230/062 A63B2230/065 A63B2230/75 A63B2230/067 A63B22/0017

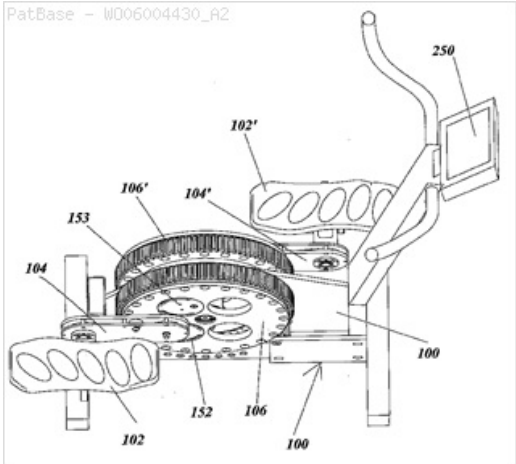
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[Classification Explorer](#)

US6334836 BA, US5419572 A, US4193324 A, EP0761528 A1, DE890907 A, DE3346139 A1,

WO14183818, WO13074243, WO13067999, WO06038815, US9427620, US9138615, RU2609392, EP2838623, EP2776135, DE102015103247, CN103930170, CN103930170,

Abstract:
An apparatus for training and physical exercise with means which provide for a plurality of different workout options simulating human physical movements, said apparatus having a crank device connectable to feet supports for a user in order to drive the crank device, the crank device includes a pair of crank wheels of which, has each a crank arm rotationally attached, a first gear forming a sun gear which said crank wheel is surrounded, said first gear being fixedly attached to a crank device frame, and a second gear being rotationally attached to an outer radius location on the crank wheel, said crank arm at one end fixedly attached to said second gear and at the other end carrying a foot support, said first and second gear having a transmission ratio of 2:1.



65) Family number: 73261842 (US2019070476A)

© PatBase

Title: MOVABLE SUPPORT FOR EXERCISE EQUIPMENT

Priority: US20170546748P 20170817 US20180637003P 20180301 US20180999259 20180816
US20180227624 20181220

Family:

Publication number	Publication date	Application number	Application date
US2019070476 AA	20190307	US20180999259	20180816
US2019118058 AA	20190425	US20180227624	20181220
US10434394 BB	20191008	US20180227624	20181220
WO19035990 A1	20190221	WO2018US00271	20180817

Probable Assignee: SARIS CYCLING GROUP INC

Assignee(s):(std): SARIS CYCLING GROUP INC

Inventor(s):(std): BASS BENJAMIN RAYMOND ; KOHL DUSTIN LEE ; KOHL DUSTIN ; BASS BENJAMIN

Agent(s): BOYLE FREDRICKSON SC; MCCONNELL ANDREW S

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class (IPC 8-9): A63B21/005 A63B21/22 A63B22/00 A63B22/06 A63B22/16 A63B24/00 A63B26/00 A63B69/16 (Advanced/Invention)

CPC: A63B22/0023 A63B22/0605 A63B22/16 A63B26/003 A63B69/16 A63B2022/0641 A63B2024/0093 A63B2069/165 A63B2210/50 A63B2225/09 A63B2225/50 A63B21/005 A63B21/0058 A63B21/225 A63B2069/163 A63B2069/164 A63B71/023 A63B2071/025 A63B2071/026 A63B2209/00 A63B2220/51 A63B2220/80 A63B21/00 A63B22/00 A63B23/00

US class: 1/1

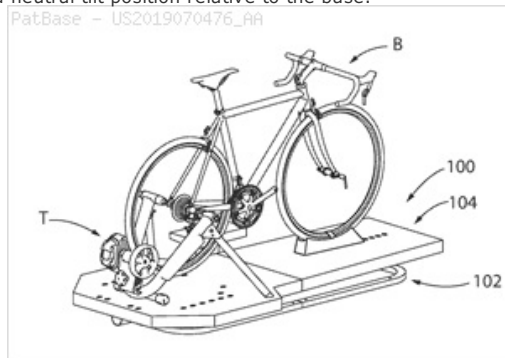
[Classification Explorer](#)

Cited documents: WO12146230 A1, US9707443 BB, US8439808 BB, US7766798 BB, US7604575 BB, US7438672 BA, US7326151 BB, US7081070 BA, US6322480 BA, US6126577 A, US5240417 A, US5050865 A, US5035418 A, US4958832 A, US4817939 A, US3659844 A, US2016287931 AA, US2016236036 AA, US2016158620 AA, US2013130798 AA, US2012071301 AA, US2011287901 AA, US2010288901 AA, US2010125029 AA, US2010062909 AA, US2009186746 AA, US2009075785 AA, US2008020908 AA, US2007142184 AA, US2006229163 AA, US2004053751 AA, US2002055422 AA, KR20120071425 A,

Forward Citations: US10384111, KR102018511,

Abstract:

An exercise arrangement includes a movable support that is movable in a fore-aft direction and simultaneously movable laterally, e.g. about a tilt axis. The support may be a platform movably mounted to a base. A roller and track arrangement may be provided between the platform and the base, to provide movement of the platform in the axial direction relative to the base as well as an axially neutral position of the platform relative to the base. The roller and track arrangement may be in the form of one or more **curved** roller and track engagement surfaces that extend in the axial direction and that provide a gravity bias of the platform toward the neutral position. The roller and track arrangement may provide tilting movement of the movable platform about the tilt axis. A tilt biasing arrangement biases the platform toward a neutral tilt position relative to the base.



66) Family number: 2168863 (US4616823A)

© PatBase

Title: EXERCISE BICYCLE WITH INCLINED SEATS FOR TWO PEOPLE

Priority: US19840640775 19840814 EP19850305771 19850814 US19860896057 19860813

Family:

Publication number	Publication date	Application number	Application date
AT70433 E	19920115	AT19850305771T	19850814
AU198546193 A1	19860220	AU19850046193	19850814
AU582327 B2	19890316	AU19850046193	19850814
DE3584922 D1	19920130	DE19853584922	19850814
EP0174747 A2	19860319	EP19850305771	19850814
EP0174747 A3	19870902	EP19850305771	19850814
EP0174747 B1	19911218	EP19850305771	19850814
US4616823 A	19861014	US19840640775	19840814
US4768777 A	19880906	US19860896057	19860813
ZA8506158 A	19870325	ZA19850006158	19850814

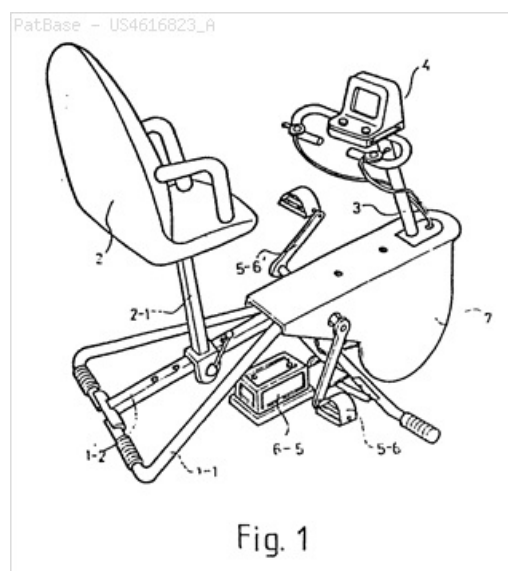
Probable Assignee: YANG TAI HER

Assignee(s):(std): TAI HER YANG ; YANG TAI HER

Assignee(s): YANG TAI HER SI HU TOWN DZAN HWA TW

Inventor(s):(std): TAI HER YANG ; YANG TAI HER
Inventor(s): YANG TAI HER SI HU TOWN DZAN HWA TW
Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD
Designated states: AT BE CH DE FR GB IT LI LU NL SE
International class (IPC 8-9): A61H1/00 A61H1/02 A61H23/02 A63B21/005 A63B21/015 A63B21/22 A63B22/08 A63B23/04 (Advanced/Invention); A61H23/02 A63B21/005 A63B21/015 A63B21/22 (Advanced/Non-invention); A61H1/00 A61H1/02 A63B22/06 A63B23/04 (Core/Invention); A61H23/02 A63B21/00 A63B21/005 A63B21/012 (Core/Non-invention)
International class (IPC 1-7): A61H1/00 A61H1/02 A63B21/24 A63B23/04 A63B69/16 B62K
CPC: A61H23/02 A63B21/00178 A63B21/0053 A63B21/0054 A63B21/0055 A63B21/015 A63B21/225 A63B22/0605
European class: A63B21/00P A63B22/08 K61H23/02 K63B21/005C K63B21/005C1C K63B21/005C1D K63B21/015 K63B21/22F
US class: 272/134 272/73 482/133 482/2 482/57 482/63 482/8 601/36
[Classification Explorer](#)
Cited documents: US629746 A, US4423863 A, US4358105 A, US4298893 A, US4291872 A, US4141630 A, US3991749 A, US3727913 A, US3727608 A, US3240947 A, US3210634 A, US2735422 A, US2474370 A, US1909002 A, US1525278 A, US1513251 A, FR2490097 A1, FR2365890 A1, DE2449440 A1,
Forward Citations: WO9717932, WO19070436, WO12107337, WO05079524, WO05079524, USD748210, USD709567, USD709566, USD682371, USD679765, USD677747, USD677746, USD677351, USD677349, USD507313, USD474252, USD473602, USD473274, USD473273, USD465818, USD460794, USD460133, US9925411, US9844715, US9833661, US9724589, US9694240, US9533186, US9403052, US8951168, US8950256, US8944968, US8506457, US8057364, US8021277, US7905817, US7771325, US7591765, US7569001, US7504737, US7488275, US7455627, US7413530, US7364533, US7253534, US7226393, US7175570, US7172532, US6955630, US6910992, US6905440, US6881178, US6793608, US6702722, US6641507, US6557679, US6468185, US6409635, US6229224, US6155958, US5951442, US5938570, US5928114, US5897459, US5860941, US5722916, US5591104, US5423728, US5360386, US5254067, US4941652, US4919416, US2015057130, US2014135996, US2013237385, US2013085038, US2011266812, US2011210563, US2010327603, US2010197461, US2010197460, US2009315336, US2009227429, US2009082177, US2009054207, US2008058170, US2007259756, US2007252453, US2007004564, US2006247095, US2006189439, US2005221962, US2005202938, US2005200221, US2005143226, US2004172093, US2004127334, US2004106502, US2004082438, US2004072657, US2003224911, US2003153436, US2002160887, US10589163, US10486015, US10478670, US10413797, US10335626, US10137328, KR100953178, GB2363736, EP2574377, EP2574377, EP0769311, CN108836728, CN108030658, CN108030658, CN1059952, CN104399224, CN102237777,

Abstract:
The present invention helps make the use of indoor sporting equipment fun and thereby promotes the use of such equipment and makes people more interested in exercising. Briefly, the present invention is an improved design for an exercise **bicycle** which has more than one function. The present invention promotes exercise and training, improves both active and passive coordination of leg muscle reaction, and aids in establishing relationships between people. The present invention includes a stationary frame attached to which is a first seat which is movable between at least an upright position and a reclined position. A pedal assembly is rotatably journaled to the frame, and a frictional fly wheel assembly is coupled to the pedal assembly and offers resistance to the rotation of the pedal assembly. An electro-mechanical assembly (e.g., a dynamotor, a generator or the like) is coupled to the pedal assembly to rotate the pedal assembly or to generate electrical power in response to manual rotation of the pedal assembly at the selection of a user. A manual operational reaction training device is provided to help the user train himself or herself to react. An auxiliary seat is provided on the same frame facing and opposing the first seat to permit another person to participate in the exercise.



67) Family number: 61538875 (US2016023049A)

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Title: POSITION SENSOR ON A TREADMILL
Priority: US20140029375P 20140725 US20150805197 20150721 WO2015US41521 20150722
Family:

Publication number	Publication date	Application number	Application date
■ CN106573162 A	20170419	CN201580039726	20150722
■ CN106573162 B	20190419	CN201580039726	20150722
■ TW201607584 A	20160301	TW20150124091	20150724
■ TWI566807 B	20170121	TW20150124091	20150724
■ US2016023049 AA	20160128	US20150805197	20150721

US9808672 BB	20171107	US20150805197	20150721
WO16014659 A1	20160128	WO2015US41521	20150722

Probable Assignee: ICON HEALTH AND FITNESS INC

Assignee(s):(std): ICON HEALTH AND FITNESS INC

Assignee(s): JPMORGAN CHASE BANK NA ADMINISTRATIVE AGENT AS

Inventor(s):(std): DALEBOUT WILLIAM T

Agent(s): HOLLAND AND HART LLP; CHANG II RICHARD K C

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class (IPC 8-9): A63B21/22 A63B22/00 A63B22/02 A63B22/06 A63B22/08 A63B24/00 A63B69/16 A63B71/06 (Advanced/Invention)

CPC: A63B24/0087 A63B22/0242 A63B69/16 A63B21/153 A63B2071/0081 A63B2220/13 A63B2220/801 A63B2230/04 A63B2230/70 A63B21/225 A63B22/0023 A63B24/0075 A63B71/0619 A63B2024/0093 A63B2069/165 A63B2220/10 A63B2220/30 A63B2220/64 A63B2220/80 A63B2220/833 A63B2225/50 A63B2225/54 A63B2230/00 A63B2230/01 A63B2230/062

US class: 482/7

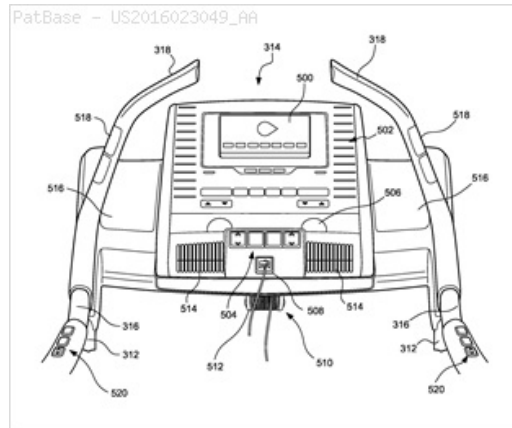
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Cited documents: US9540071 BB, US8968163 BA, US8333681 BB, US8007407 BB, US7628732 BA, US7618353 BB, US7608015 BB, US7220219 BB, US6733423 BA, US6146315 A, US6126575 A, US5743835 A, US5314391 A, US4925183 A, US2010222182 AA, US2010113222 AA, US2009258763 AA, US2009227424 AA, US2009170672 AA, US2002026130 AA, KR20020013649 A, CN201768304 U, CN103723238 A,

Forward Citations: US9707447, US2019022457, US2018230769, US2018099205, US2018056111, US2017274242, US2017144014, US2017136289, US10561894, US10561893, US10500473, US10493349, US10493320, US10471299, US10453324, US10449416, US10363451, US10328303, US10252141,

Abstract:

A treadmill system includes a deck, an endless tread belt covering at least a portion of the deck, a position sensor that senses a position of a user when the user is on the tread belt, and a control module that adjusts a speed of the tread belt in response to an output of the position sensor.



68) Family number: 411877 (DE2001447A1)

© PatBase

Title: UEBUNGSGERAET ZUM AUSFUEHREN VON RADFAHRBEWEGUNGEN Exercising device MOVES TO RUN FROM CYCLING (Machine translation)

Priority: IT19690020240 19690729

Family:	Publication number	Publication date	Application number	Application date
	DE2001447 A1	19710211	DE19702001447	19700106
	ES378322 A1	19720601	ES19700378322	19700407
	SE357676 B	19730709	SE19690018065	19691230

Probable Assignee: CARNIELLI

Assignee(s):(std): CARNIELLI ; CARNIELLI G ; CARNIELLI GUIDO

Assignee(s): CARNIELLI G IT

Inventor(s):(std): CARNIELLI GUIDO ; CARNIELLI G

Inventor(s): CARNIELLI G IT

International class (IPC 8-9): A63B22/08 (Advanced/Invention); A63B21/22 (Advanced/Non-invention); A63B22/06 (Core/Invention); A63B21/00 (Core/Non-invention)

International class (IPC 1-7): A63B69/16

CPC: A63B22/0605 A63B21/225

European class: A63B22/08 K63B21/22F

[Classification Explorer](#)

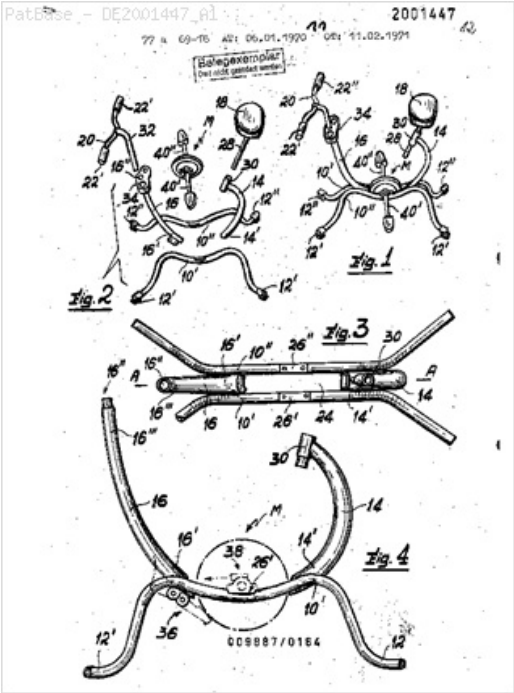
Forward Citations: US4270280,

Abstract:

Source: DE2001447A1 [DE] Patentansprueche 1 Uebungsgeraet zum Ausfaehren von Radfahrbewegungen mit einem Gestell, das mit einer Griffstange, einem Sattel und antriebsmaessig mit einem Schwungrad verbundenen Fahrradpedalen versehen ist, dadurch gekennzeichnet, dass das Schwungrad (56) drehbar auf der indel (50) gelagert ist, an der die Pedalen (40', 40'')

befestigt sind, und dass es ueber eine Getriebeeinrichtung (70, 72, 66) mit der spindel verbunden ist, wobei die Pedalen, die Spindel, das Schwungrad und die Getriebeeinrichtung einem einheitlich aufgebauten Mechanismus (M) bilden, der in einem Stuech und loesbar am Gestell angebracht ist 2Uebungsgeraet nach Anspruch 1, dadurch gekennzeichnet, dass die Getriebeeinrichtung aus einem Planetengetriebe besteht, das sich aus einem starr an einem ortsfesten, die Spindel (50) aufnehmenden Lager (52) befestigten inneren Zahnrad (70), einem am Schwungrad befestigten angetriebenen Zahnrad (66) und Planetenraedern (72), die drehfest auf der Spindel gelagert sind und sowohl mit dem ortsfesten als auch dem angetriebenen zahnrad Kaemmen, zusammensetzt 3Uebungsgeraet nach Ansproechen 1 und 2, dadurch gekennzeichnet, dass das Schwungrad in-einer seiner flanken eine Kreisfoermige Aushnehmung (58) aufweist, waehrend mit seiner anderen Flanke eine Nabe (60) einsteueckig ausgebildet ist, die a.

Machine translation: Claims 1 Uebungsgeraet to Ausfaehren of cycling movements with a rack with a handle bar, a saddle and is provided antriebsmaessig with a flywheel connected bicycle pedals, characterized in that the flywheel (56) is rotatably supported on the indel (50), at the the pedals (40 ', 40 ") are fixed, and that it is over a transmission device (70, 72, 66) with the spindle-associated, with the pedals, the spindle, the flywheel and the transmission device to a uniformly structured mechanism (M) form is in a Stuecher and releasably mounted on the frame 2Uebungsgeraet according to claim 1, wherein the transmission device comprises a planetary gear, which consists of a rigidly to a fixed, the spindle (50) receiving warehouse (52) attached to the inner gear (70), a flywheel attached to the driven gear (66) and planet wheels (72), which are mounted rotatably on the spindle, and both the stationary and the driven gear Grooming, 3Uebungsgeraet composed by Ansproechen 1 and 2, characterized in that the flywheel in one of its flanks, a circular Aushnehmung (58) has, while with his other flank is a hub (60) integrally formed with the a.



69) Family number: 4233893 (US4757988A)

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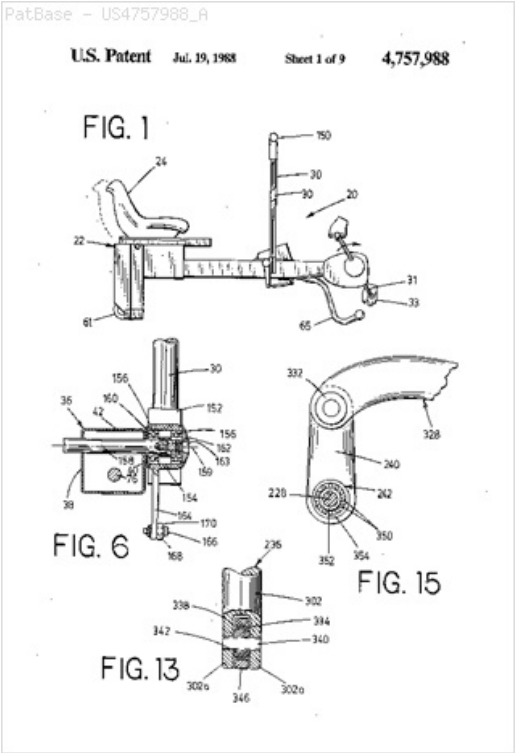
Title: CYCLE EXERCISER
Priority: US19870099507 19870921
Family:

Publication number	Publication date	Application number	Application date
DE3874661 D1	19921022	DE19883874661	19880620
EP0308587 A1	19890329	EP19880109789	19880620
EP0308587 B1	19920916	EP19880109789	19880620
JP1083273 A2	19890329	JP19880151363	19880621
JP64083273 A2	19890329	JP19880151363	19880621
NO882729 A	19890322	NO19880002729	19880621
NO882729 A0	19880621	NO19880002729	19880621
NO882729 L	19890322	NO19880002729	19880621
US4757988 A	19880719	US19870099507	19870921

Probable Assignee: SCHWINN CYCLING AND FITNESS INC
Assignee(s):(std): SCHWINN BICYCLE CO
Assignee(s): BANK OF AMERICA ILLINOIS ; CONTINENTAL BANK NA ; CONTINENTAL BANK NA AGENT AS ; HARRIS TRUST AND SAVINGS BANK ; MELLON FINANCIAL SERVICES A DE CORP CORP ; MELLON FINANCIAL SERVICES CORP ; SCHWINN BICYCLE AND FITNESS LTD ; SCHWINN CYCLING AND FITNESS INC ; SCHWINN BICYCLE COMPANY ; SCHWINN BICYCLE CO CHICAGO ILL US ; SCHWINN BICYCLE CO A OF ILLINOIS CORP ; SCHWINN BICYCLE AND FITNESS PARTNERSHIP LTD ; SCHWINN BICYCLE CO AN ILLINOIS CORP
Inventor(s):(std): SZYMSKI EUGENE J ; YUJIN JIEI SUJIMUSUKII
Inventor(s): SZYMSKI EUGENE J SKOKIE ILLINOIS 60077 US
Designated states: DE FR GB SE
International class (IPC 8-9): A63B21/22 A63B22/06 A63B22/12 A63B23/04 (Advanced/Invention); A63B21/00 A63B23/035 (Advanced/Non-invention); A63B21/00 A63B22/06 A63B23/04 (Core/Invention); A63B21/00 A63B23/035 (Core/Non-invention)
International class (IPC 1-7): A61H1/02 A63B21/00 A63B21/22 A63B23/00 A63B23/04 A63B69/00 A63B69/16
CPC: A63B21/157 A63B21/225 A63B22/001 A63B22/0605 A63B23/03575 A63B2022/0652

European class: A63B21/15G A63B23/04C K63B21/22F K63B23/035G
US class: 128/25R 272/73 482/59 482/62 601/36
[Classification Explorer](#)
Cited documents: US4712790 A, US4712789 A, US4705269 A, US4673177 A, US4657244 A, US4188030 A, US3966201 A, US3940128 A, US326247 A, US3112108 A, US2419998 A, GB2194456 A1,
Forward Citations: USD474252, USD473273, US9974995, US8562491, US7850577, US7815551, US7794365, US7789808, US7771325, US7727125, US7708251, US7691034, US7591765, US7569001, US7488275, US7413530, US7364533, US7226393, US7175570, US7172532, US7160230, US6932745, US6905322, US6843436, US6784559, US6688869, US6641507, US6606857, US6557679, US6557678, US6042518, US5992253, US5961424, US5795270, US5487713, US5316532, US5269736, US5178593, US5114391, US5092582, US5050864, US4880225, US4844451, US4824102, US2017014669, US2011028277, US2010273612, US2010029445, US2009318270, US2009075786, US2007215781, US2007021277, US2007004564, US2006199701, US2006094569, US2005221962, US2004082440, US2003224911, US10086227, JP6134046, JP3329857, GB2284562, GB2284562, EP1962973, EP1962973, EP0712324, EP0712324,

Abstract:
A cycle-type exerciser has a pedal shaft which drives an energy-absorbing wheel. A pair of oscillatable handlebar levers are connected by links to drive crank arms which are connected through one-way clutches to opposite ends of the pedal shaft. Oscillation of the drive crank arms by the handlebar levers rotates the pedal shaft to thereby drive the energy-absorbing wheel. A semi-recumbent embodiment has a seat and the pedal shaft at opposite ends, with the handlebar levers mounted therebetween and the energy-absorbing wheel below the seat. An upright embodiment has a saddle at one end, the handlebar levers and energy-absorbing wheel at the other end, with the pedal shaft therebetween. In the semi-recumbent and upright embodiments, the links are interconnected by an interlock lever constraining the handlebar levers to oscillation in opposite directions. The energy-absorbing wheel can be driven by the pedals only; by the handlebar levers only; or by both pedals and handlebar levers. A third embodiment eliminates the interlock lever and enables the handlebar levers to oscillate simultaneously in an optional "rowing" mode.



70) Family number: 57439932 (US2014287875A)				
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Title:	STATIONARY EXERCISE EQUIPMENT POWER GENERATOR			
Priority:	US20130848495 20130321 WO2014US31495 20140321			
Family:	Publication number	Publication date	Application number	Application date
	CA2907496 AA	20150915	CA20142907496	20140321
	EP2976137 A1	20160127	EP20140770339	20140321
	JP2016518172 T2	20160623	JP20160504386T	20140321
	US2014287875 AA	20140925	US20130848495	20130321
	US9283421 BB	20160315	US20130848495	20130321
	WO14153537 A1	20140925	WO2014US31495	20140321
Probable Assignee:	E GEN LLC			
Assignee(s):(std):	E GEN LLC ; EGEN LLC			
Assignee(s):	DUVAL LONDON			
Inventor(s):(std):	DUVAL LONDON			
Agent(s):	OYEN WIGGS GREEN AND MUTALA LLP; HOCKING ADRIAN NIALI; PATENT LAW AND VENTURE GROUP; GENE; SCOTT GENE			
Designated states:	AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW			
International class	A63B21/00 A63B21/005 A63B22/06 A63B22/08 A63B24/00 A63B26/00 A63B71/00 H02K7/02			
(IPC 8-9):	H02K7/18 (Advanced/Invention);			

A63B21/22 A63B22/02 H02J3/38 H02J7/14 (Advanced/Non-invention)

CPC: A63B21/0053 A63B21/00181 A63B21/0054 A63B21/0055 A63B21/0058 A63B21/225 A63B22/02 A63B22/0605 A63B22/0664 H02J3/382 H02J7/1407 H02J7/1415

US class: 1/1 482/2

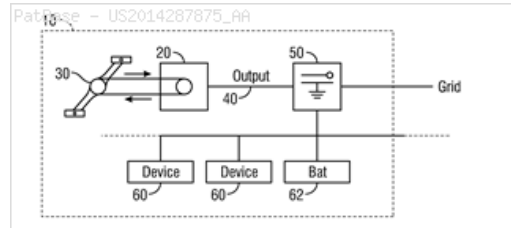
[Classification Explorer](#)

Cited documents: US7504737 BB, US7253534 BB, US7090620 BA, US6717280 BA, US6229224 BA, US2012238406 AA, US2012184408 AA, US2012010048 AA, US2011272944 AA, US2010090475 AA, US2009054207 AA, US2005023917 AA, US2002147079 AA, GB2069768 A1, CN201840829 U, CN201272473 Y, AU2011100757 AD,

Forward Citations: US9764178, US9457217, US2015375029, EP3202468, EP3202468,

Abstract:

An exercise apparatus is mechanically engaged with an electrical current producer so that exercise by a person using the apparatus produces output power which is used at the time of exercising or saved for later use. A motor provides additional drive force by rotating a rotor engaged with the apparatus, the rotor operating by magnetic attraction and repulsion depending on relative positions of permanent magnets on the rotor and electromagnets on a stator. The apparatus is light in **weight**, low cost to produce and highly durable.



71) Family number: 52833933 (DE102011108354A1)

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Title: PEDAL GRAVITATION ALTERNATOR FOR USE AS ANATOMICAL-TECHNICAL FUNCTIONAL UNIT FOR GENERATING 12 VOLT ELECTRICAL ENERGY FOR E.G. TV, HAS MECHANICAL UNIT ROTATING GEAR WHEEL AND TWO FLYWHEELS USING BODY WEIGHT OF PERSONS VORRICHTUNG ZUR UMWANDLUNG MENSCHLICHER KOERPERSCHWERKRAFT IN DREHENERGIE "

Priority: DE201110108354 20110722

Family:	Publication number	Publication date	Application number	Application date
	DE102011108354 A1	20130124	DE201110108354	20110722

Probable Assignee: SCHELOWSKY MICHAEL

Assignee(s):(std): SCHELOWSKY MICHAEL

Assignee(s): SCHELOWSKY

Inventor(s):(std): SCHELOWSKY MICHAEL

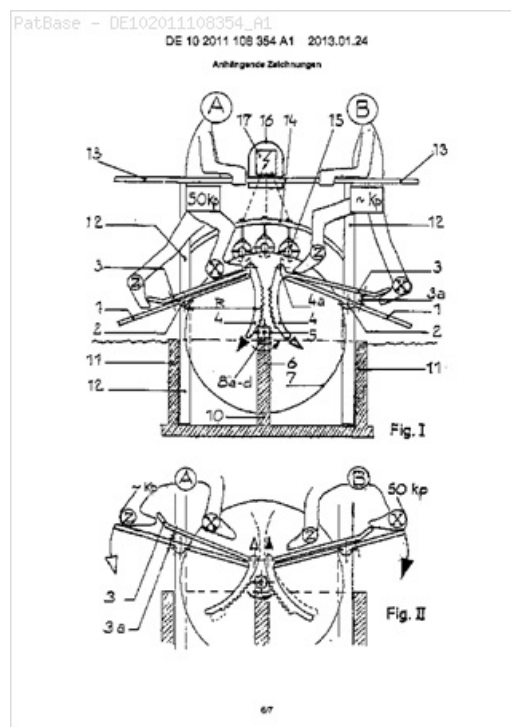
International class A63B21/005 H02K7/18 (Advanced/Invention)
(IPC 8-9):

CPC: H02K7/1861 A63B21/0053 A63B21/285 A63B22/16 A63B21/0054

[Classification Explorer](#)

Abstract:

The alternator has a mechanical unit formed of two variants to be operated by respective persons (A, B). Each variant has a rocker plate (1) with a rocker axle (2), and a toothed bracket (4) that is rotatable about a bracket joint (4a). The mechanical unit rotates a common **gear** wheel (5) and two **flywheels** (7) arranged at ends of the mechanical unit about a drive axle (6) using the **body weight** of the persons to convert gravitational force into rotational energy, so that the rotational energy is converted into 12 volt electrical power by a passenger car generator (15).



72) Family number: 4338940 (US4971316A)

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Title: DUAL ACTION EXERCISE CYCLE

Priority: US19880201129 19880602 US19880201130 19880602 US19880290438 19881227
US19880290454 19881227 US19900541202 19900625

Family:

Publication number	Publication date	Application number	Application date
US4971316 A	19901120	US19900541202	19900625
US5000444 A	19910319	US19880290454	19881227

Probable Assignee: ICON IP INC

Assignee(s):(std): PROFORM FITNESS PRODUCTS INC ; PROFORM FITNESS PROD INC

Assignee(s): PROFORM FITNESS PRODUCTS INC A CORP OF UTAH ; GENERAL ELECTRIC CAPITAL AGENT AS CORP ; FIRST NATIONAL BANK OF BOSTON ; GENERAL ELECTRIC CAPITAL CORP ; ICON HEALTH AND FITNESS INC ; ICON IP INC ; BACK BAY CAPITAL FUNDING LLC ; BANK OF AMERICA NA ; BANK OF AMERICA NA ADMINISTRATIVE AGENT AS ; CITICORP NORTH AMERICA INC ; CITICORP NORTH AMERICA INC A DE CORP

Inventor(s):(std): DALEBOUT WILLIAM T ; BINGHAM CURT G

International class (IPC 8-9): A63B23/04 (Advanced/Invention); A63B21/008 (Advanced/Non-invention); A63B23/04 (Core/Invention); A63B21/008 (Core/Non-invention)

International class (IPC 1-7): A63B21/00

CPC: A63B22/0605 A63B22/001 A63B21/0087 A63B21/0088 Y10T74/2165

European class: A63B23/04C K63B21/008C2 K63B21/008C4

US class: 272/130 272/73 482/59 482/62 74/594.2

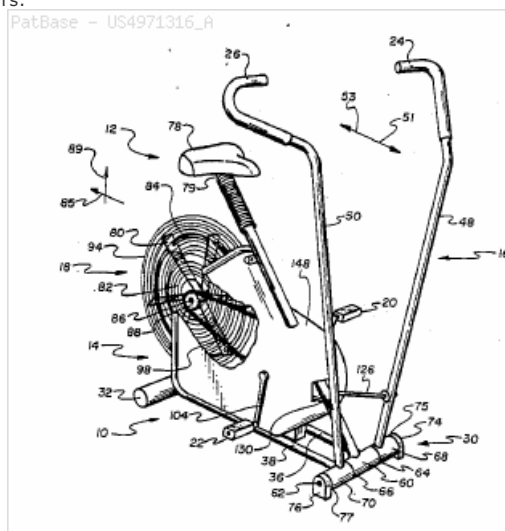
[Classification Explorer](#)

Cited documents: US4798379 A, US4746112 A, US4729559 A, US4712790 A, US4712789 A, US4657244 A, US4589656 A, US4537396 A, US4305578 A, DE517774 A,

Forward Citations: WO9400200, WO10014129, USD878500, USD870829, USD861809, USD858663, USD856445, USD767050, USD767049, USD700668, USD699796, USD699795, USD699305, USD637664, US9861855, US9174085, US7806815, US7771325, US7364533, US7226393, US7172532, US7112168, US7008359, US6960156, US5921894, US5595556, US5527245, US5505679, US5372556, US5282776, US5211613, US5203826, US5191809, US5149312, US2008300113, US2007281835, US2004248702, US2004248701, US2004018919, US2003216227, US2003195096, US2003171191, US2003125173, US2002155929, US2002151414, US2002077231, US10561894, US10543395, US10500473, US10493349, US10486026, US10471299, US10449416, US10441844, US10441840, US10433612, US10426989, US10388183, US10376736, US10343017, US10322315, US10293211, US10279212, US10272317, US10258828, US10252109, US10212994, US10188890, US10155132, US10022590, RU2589619, EP0976425, CN105854234,

Abstract:

An exercise cycle of the invention includes a frame, a seat, a pedal assembly, and movable handlebar assembly and an air resistance device mounted at the rear of the cycle. The frame has a rear support unit, a front support unit and an interconnecting member between them. A diagonal member is attached to the rear support unit and angles upward toward the front of the cycle. The seat is attached to the top of this diagonal member. The pivoting handlebars extend upward from the first support unit. An empty space is provided between the diagonal member and the handlebars.

**73) Family number: 27897950** (US6500098B)

© PatBase

Title: BICYCLE TRAINING APPARATUS

Priority: US20000557588 20000422

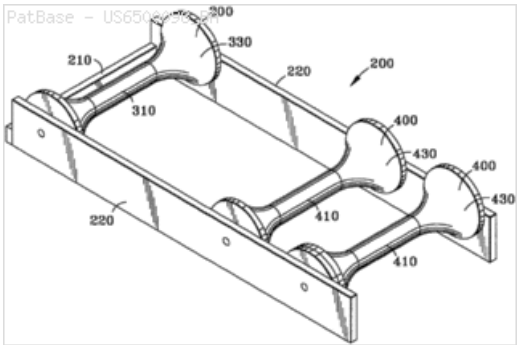
Family:

Publication number	Publication date	Application number	Application date
US6500098 BA	20021231	US20000557588	20000422

Probable Assignee: WERNER TODD R

Assignee(s): WERNER TODD R
Inventor(s):(std): WERNER TODD R
Inventor(s): TODD R WERNER
International class (IPC 8-9): A63B69/16 (Advanced/Invention); A63B21/22 (Advanced/Non-invention); A63B69/16 (Core/Invention); A63B21/00 (Core/Non-invention)
International class (IPC 1-7): A63B2/100 A63B21/00
CPC: A63B21/22 A63B69/16 A63B2069/167 A63B2069/168
European class: A63B69/16 K63B21/22 K63B69/16A12 K63B69/16A6
US class: 482/57 482/61
[Classification Explorer](#)
Cited documents: US5916068 A, US581835 A, US5662559 A, US463862 A, US3572758 A, US2534967 A,
Forward Citations: WO07053663, US9962590, US9895589, US9295894, US9050517, US7942790, US7520842, US7326151, US7316632, US2017189778, US2014066265, US2009264261, US2007138112, US2007099768, US2006217237, US2005209064, US10124226, CN102600575,

Abstract:
A **bicycle** roller training system of the type having three rollers for supporting a freestanding **bicycle** uses rollers of a novel design. The rollers comprise a cylindrical middle portion of a uniform first diameter, two end portions of a second diameter larger than the first diameter, and two transitional portions between the middle portion and the end portions. The length of the middle portion is greater than the tread width of a tire of a **bicycle** with which the apparatus is used. The transitional portions increase in diameter from the cylindrical middle portion toward the ends of the roller. The transitional portions preferably have a curvilinear profile, and the preferred profile of the transitional portions is a parabolic **curve**. Thus the transitional portions preferably comprise paraboloids of revolution. The rollers also have disk-shaped **weights** mounted at one or more ends for increased angular momentum. Axles of the rollers are rotatably mounted to a frame. One or more steps may be provided on the frame for convenience in mounting the **bicycle**.



74) Family number: 77412961 (US2020023232A)

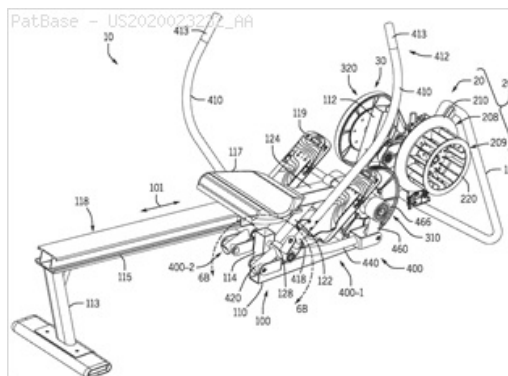
© PatBase

Title: ROWING MACHINE
Priority: US20180701391P 20180720 US20190517415 20190719
Family:

Publication number	Publication date	Application number	Application date
US2020023232 AA	20200123	US20190517415	20190719
WO20018955 A2	20200123	WO2019US42682	20190719
WO20018955 A3	20200305	WO2019US42682	20190719

Probable Assignee: NAUTILUS INC
Assignee(s):(std): NAUTILUS INC
Assignee(s): WELLS FARGO BANK NATIONAL ASSOCIATION
Inventor(s):(std): FRENCH EDANA ; TEDSEN KIRK ; HAMILTON BRYAN W
Agent(s): WETZEL ELEN ET AL
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW
International class (IPC 8-9): A63B21/00 A63B21/005 A63B21/008 A63B21/22 A63B22/00 (Advanced/Invention)
CPC: A63B22/0076 A63B2022/0084 A63B22/0087 A63B21/225 A63B21/0051 A63B21/0088 A63B21/157 A63B21/159 A63B22/001 A63B22/0023 A63B22/203 A63B22/0041 A63B2220/34
[Classification Explorer](#)
Cited documents: WO08137841 A1, US6682462 BA, US6527680 BA, US4705493 A, US2016287933 AA, US2006009334 AA, ITF120110188 A1, GB2380331 A1, FR2643821 A1, EP2545965 A2, DE29708060 U, CN106730595 A,

Abstract:
A rowing machine is disclosed. The rowing machine includes a frame including a base for contact with a support surface and a seat rail supported by the base. The rowing machine includes a seat configured to reciprocate back and forth along the seat rail. The rowing machine includes a rowing engine that includes at least one resistance mechanism rotatably coupled to the frame. The rowing machine includes at least one handle operatively connected to the at least one resistance mechanism, and a paddle linkage assembly operatively connecting the at least one handle to the at least one resistance mechanism such that rearward movement of the handle is resisted by the at least one resistance mechanism.



75) Family number: 76517965 (US2019351283A)

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Title: ROWING

Priority: US20180981834 20180516 US20190588385 20190930

Family:	Publication number	Publication date	Application number	Application date
	TW201946676 A	20191216	TW20190116720	20190515
	US2019351283 AA	20191121	US20180981834	20180516
	US2020078635 AA	20200312	US20190588385	20190930
	US10471297 BA	20191112	US20180981834	20180516
	WO19221933 A1	20191121	WO2019US30646	20190503

Probable Assignee: HYDROW INC

Assignee(s):(std): CREW BY TRUE ROWING INC ; HYDROW INC

Assignee(s): COOPER PERKINS INC

Inventor(s):(std): SMITH BRUCE ; PAUL CHRIS ; EVANS CHRISTOPHER ; PAWELKA GERHARD ; BURKE WILLIAM ; QUINTUS BOSZ HARALD ; RENNER KLAUS

Agent(s): FISH AND RICHARDSON PC; FEIGENBAUM DAVID ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class (IPC 8-9): A63B21/005 A63B22/00 A63B24/00 (Advanced/Invention)

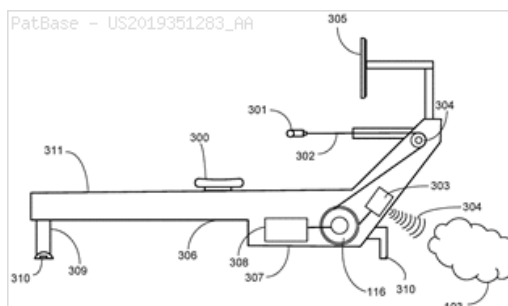
CPC: A63B22/0076 A63B21/0051 A63B21/0057 A63B22/0087 A63B24/0087 A63B2022/0079 A63B1/00

[Classification Explorer](#)

Cited documents: WOWO2017008775, WO17008775 A1, US9974995 BB, US9861855 BB, US9233276 BA, US9174085 BB, US7311640 BB, US6945917 BA, US6902513 BA, US5656001 A, US5466200 A, US4984986 A, US2018099178 AA, US2018056132 AA, US2017319906 AA, US2015360083 AA, US2010173749 AA, US2010144497 AA, EP0919259 A1,

Abstract:

Among other things, a rowing technology includes a first rowing machine having an electromagnetic brake providing a resistance to a rower of the machine in each rowing stroke of a series of rowing strokes of the rower. An electronic controller causes the resistance of the electromagnetic brake to vary over each rowing stroke in a profile that emulates resistance to which another rower in a shell on water or on a second rowing machine is subjected in each rowing stroke of a corresponding series of rowing strokes.



76) Family number: 54787974 (US2015045190A)

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Title: ECCENTRIC IDLER

Priority: US20120610971P 20120314 US20130385127 20130312 WO2013US30440 20130312

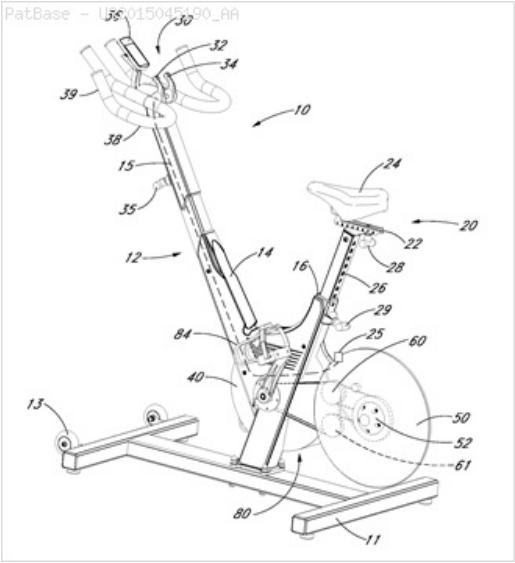
Family:	Publication number	Publication date	Application number	Application date
	US2015045190 AA	20150212	US20130385127	20130312
	WO13138303 A1	20130919	WO2013US30440	20130312

Probable Assignee: KEISER CORP

Assignee(s):(std): KEISER CORP ; KEISER DENNIS L

Inventor(s):(std): KEISER DENNIS L
Agent(s): CHRISTENSEN MICHAEL R
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW
International class (IPC 8-9): A63B22/06 A63B22/12 F16H7/02 F16H7/12 (Advanced/Invention)
CPC: A63B21/00196 A63B21/015 A63B21/15 A63B21/157 A63B21/225 A63B24/0087 A63B2071/0638 A63B2071/0658 A63B2220/20 A63B2220/34 A63B2225/50 A63B2230/06 A63B2230/75 F16H7/1281 A63B22/0605 A63B21/0051 F16H7/02
US class: 474/112 482/57
[Classification Explorer](#)
Cited documents: US7083549 BA, US6551219 BA, US6474193 BA, US6186918 BA, US6024367 A, US5324057 A, US2012172181 AA, US2011152040 AA, US2010234179 AA, US2009239693 AA, US2009236901 AA, US2009062090 AA, US2008096725 AA, US2006217222 AA, US2005227823 AA, US2004259694 AA, US2004053719 AA, US2003220164 AA, EP1473062 A2,
Forward Citations: US9671062, US9327162, US2018236294, US2018117383, US2016076694, US2015283423, US2015080190, US10561877, US10537764, US10384097, US10010746, CN107362496, CN107362496,

Abstract:
An eccentric idler is disclosed. One application of the eccentric idler is on a stationary exercise cycle. The cycle may include an eccentric driver or driven shaft rotating a belt or chain. The idler is coupled to the cycle and is configured to rotate eccentrically in contact with the belt or chain. The stationary exercise cycle of various embodiments is configured to generate reciprocating motion, thereby providing users with a vibratory exercise experience.



77) Family number: 49175981 (US2011165995A) © PatBase

Title: COMPUTER CONTROLLED EXERCISE EQUIPMENT APPARATUS AND METHOD OF USE THEREOF
Priority: US20080091240P 20080822 US20090545324 20090821 US20100387772P 20100929
US20110011021 20110121 US20110010909 20110121 US20110011092 20110121
US20110011332 20110121 US20110082184 20110407 US20120588327P 20120119
US20120591699P 20120127 US20120591712P 20120127 US20130737735 20130109
US20160005928 20160125

Family:	Publication number	Publication date	Application number	Application date
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	US2011165996 AA	20110707	US20110011021	20110121
	US2011165997 AA	20110707	US20110011092	20110121
	US2011172058 AA	20110714	US20110011332	20110121
	US2011195819 AA	20110811	US20110082184	20110407
	US2014194250 AA	20140710	US20130737735	20130109
	US2016136483 AA	20160519	US20160005928	20160125
	US9272186 BB	20160301	US20130737735	20130109
	US9586091 BB	20170307	US20160005928	20160125

Probable Assignee: STREAMLINE AUTOMATION LLC
Assignee(s):(std): DEACONU STELU ; PAULUS DAVID ; REICH ALTON ; SHAW JAMES
Assignee(s): STREAMLINE AUTOMATION LLC
Inventor(s):(std): DEACONU STELU ; PAULUS DAVID ; REICH ALTON ; SHAW JAMES
Agent(s): KEVIN
International class (IPC 8-9): A63B21/00 A63B21/005 A63B22/06 A63B23/035 A63B23/12 A63B24/00 A63B71/06 G06F19/00 (Advanced/Invention); A63B21/002 A63B21/078 A63B71/00 H04M1/725 (Advanced/Non-invention)
CPC: A63B21/00069 A63B2220/16 A63B2220/44 A63B22/0605 A61B5/222 A63B21/00058 A63B21/0023 A63B21/0058 A63B21/153 A63B22/0005 A63B22/0012 A63B23/03525 A63B23/12 A63B24/0062 A63B24/0087 A63B2022/0079 A63B2022/0652 A63B2024/0078 A63B2024/0093 A63B2220/36 A63B2225/50 A63B2230/06 A63B2230/30 A63B21/00076 A63B21/00181 A63B21/078 A63B21/4035 A63B21/4043 A63B23/1209 A63B24/0075 A63B24/0084 A63B71/0009 A63B71/0622 A63B2024/0096

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European class:

A63B21/005F A63B21/15F4 A63B22/00A6S A63B22/06C A63B23/035C2 A63B23/04C A63B23/12 A63B24/00G A63B24/00R K61B5/22B2 K63B21/002B K63B21/005F K63B21/00F K63B21/00F6 K63B22/00A2 K63B22/00R2 K63B22/06C K63B22/06C4R K63B220/16 K63B220/36 K63B220/44 K63B225/50 K63B230/06 K63B230/30 K63B24/00G K63B24/00H2 K63B24/00R4

US class:

1/1 482/2 482/5 482/5P

[Classification Explorer](#)

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Abstract:

The invention comprises a method and/or an apparatus using computer configured exercise equipment and an electric motor. A computer-controlled robotic resistance system is used for training, diagnosis and/or therapy. The resistance system comprises: a subject interface, software control, a controller, an electric servo assist/resist motor, an actuator, and/or a subject sensor. The system overcomes the limitations of the existing robotic rehabilitation, **weight** training, and cardiovascular training systems by providing a training and/or rehabilitation system that adapts a resistance or force applied to a user interactive element in response to the user's interaction with the training system, a physiological strength **curve**, and/or sensor feedback. For example, the system optionally provides for an automatic reconfiguration and/or adaptive load adjustment based upon real time measurement of a user's interaction with the system or sensor based observation by the exercise system as it is operated by the subject.

