

17 Documents

Publication numbers	Title	Current assignees
US4982952 A	Simulated climbing exercise device	WANG SHUI MU YUNG KANG HSIANG TAINAN
CA3030702 A1	Training device for simulating vertical climbing	MERCENARI URIBE FERNANDO HUMBERTO, ...
US4496147 A	Exercise stair device.	ARTHUR D LITTLE
US5403254 A	Foldable step climber exercise machine	PHYSIQ
US5222927 A	Collapsible stepper climber exerciser	CHANG LEE C
US5178592 A	Hydraulic cylinder and foot plate positioning device	YANG LI HSIANG
US4659075 A	Device for simulation of climbing	WILKINSON WILLIAM T
US5803880 A	Stepper/climber exerciser	ALLEN; TEMPLE W.
US5169361 A	Hydraulic cylinder assembly for climbing exercisers	HSU HSIEN LONG
KR101825309 B1	Vertical stepper exercise machine	CHANG BYONG TAEK, ...
US20040157707 A1	Exercise stepper	YANG LIEN CHUAN, ...
CH-710164 A2	Belt-type climbing apparatus	MUELLER PETER A, ...
US5199931 A	Exercise machine for simulating stair climbing	FITNESS MASTER
US5090690 A	Exercise mechanism	HUANG KELVIN
US5007631 A	Structure of climbing exerciser with a counter-weight freewheel mechanism	WANG LEAO
US5338271 A	Exerciser device for simulating mountain climbing and running	GREENMASTER INDUSTRIAL
US5139255 A	Exercise machine	PROQUEST KINETICS, ...

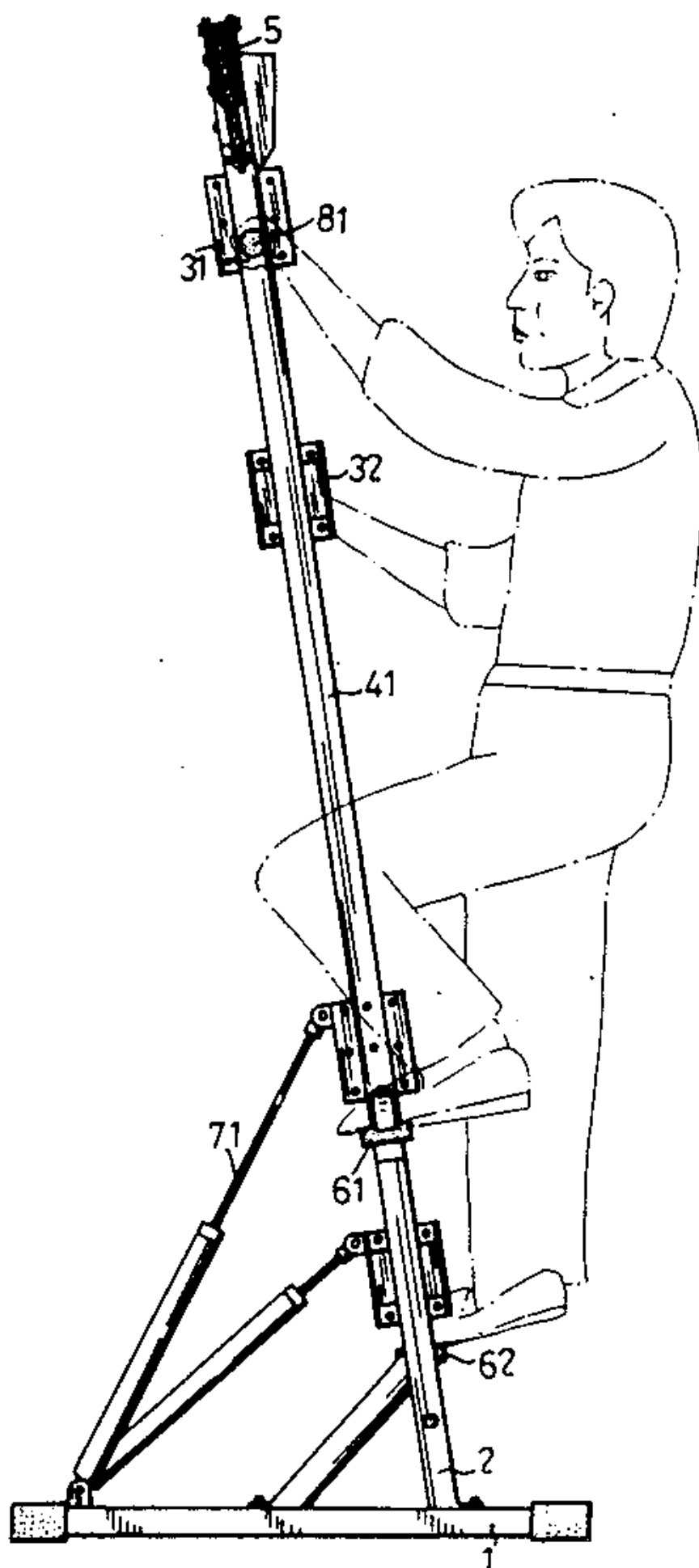
Family 1/17 - FAMPAT - ©Questel

Title

(US5000441)

Simulated climbing exercise device

Images



Publication data including kind & date

US4982952	A	1991-01-08	US4982952
DE9016769	U1	1991-02-28	DE9016769
US5000441	A	1991-03-19	US5000441

**Abstract**

(US5000441)

An exercise device includes a base, an elongated prop extending upward from the base and having an upper slide groove, a pair of slide pieces movably disposed on opposite sides of the elongated prop in the upper slide groove, a pair of handle pieces provided on the slide pieces, and a cable provided adjacent to the top end of the elongated prop to alternately move the slide pieces downward and upward along the upper slide groove. An inclined post connects the elongated prop to the base and supports the former in an upwardly inclining manner. A pair of elongated foot pedals are provided on opposite sides of the elongated prop on top of the base. Each of the foot pedals has a rear end hinged to the inclined post. A pair of vertical adjoining rods join each of the foot pedals to one of the slide pieces. A pair of hydraulic cylinders provide resistance to any movement of the foot pedals. Each of the hydraulic cylinders has a cylinder body hinged to one of the foot pedals and a piston rod pivoted on the inclined post adjacent to the elongated prop.

Inventors

WANG SHUI-MU

Latest standardized assignees - inventors removed

WANG SHUI MU YUNG KANG HSIANG TAINAN

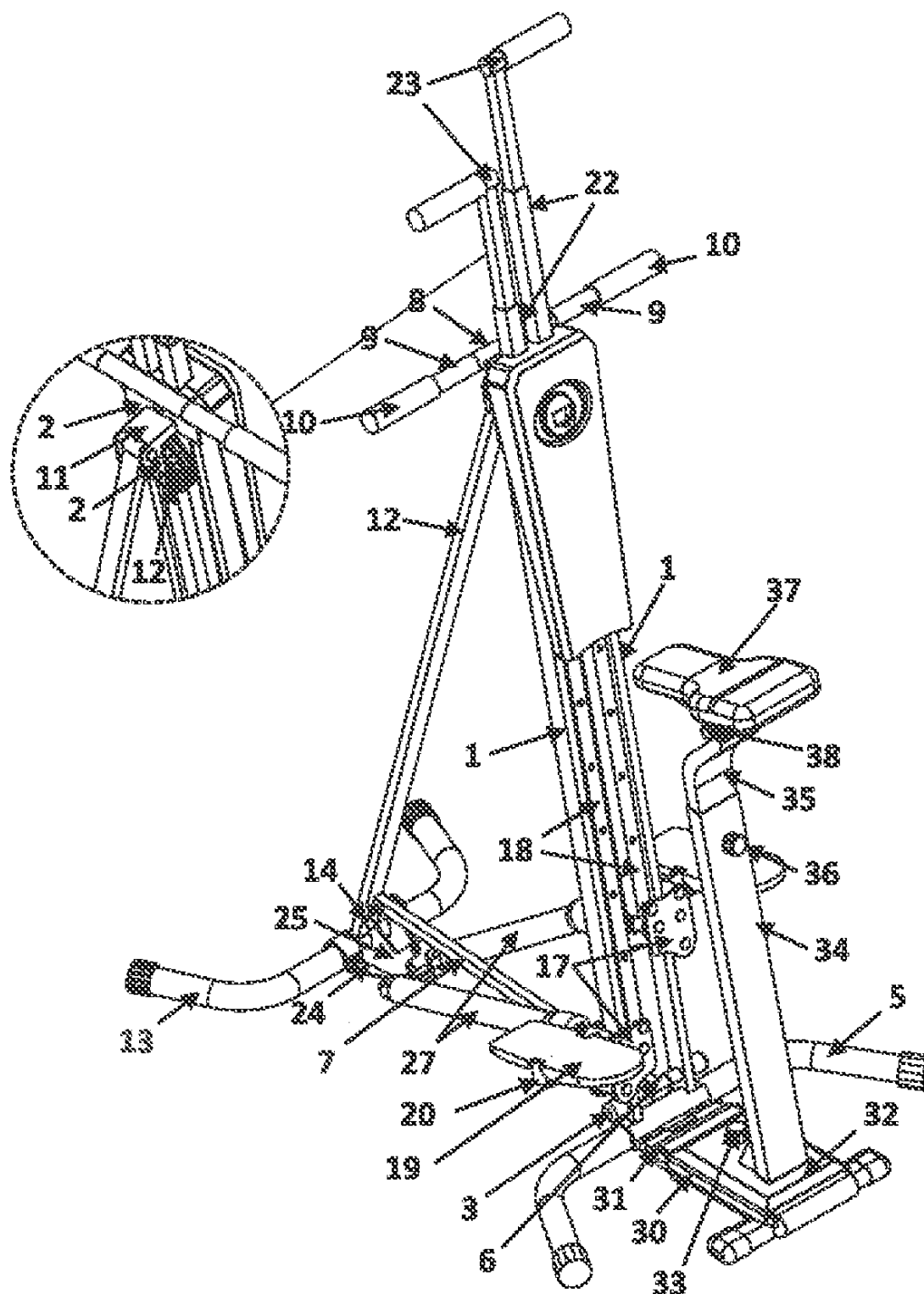
Family 2/17 - FAMPAT - ©Questel

Title

(EP3470121)

Training device for simulating vertical climbing

Images



Publication data including kind & date

CA3030702	A1	2017-12-14	CA3030702
WO2017/213488	A1	2017-12-14	WO2017213488
UY4650	U	2018-01-31	UY---4650U
CO2019000066	A2	2019-01-18	CO2019000066
AU2019200132	A1	2019-01-31	AU2019200132
KR10-2019-0027816	A	2019-03-15	KR20190027816
EP3470121	A1	2019-04-17	EP3470121
US20190160331	A1	2019-05-30	US20190160331



Abstract

(EP3470121)

A vertical climbing simulation equipment that has an intensity regulation system that allows the resistance of the routines carried out in it to be graduated, and that also has a mechanism that allows to vary the angle of inclination of its pedals in order to be coupled to the natural angle of the user ankles.

Inventors

MERCENARI URIBE FERNANDO HUMBERTO

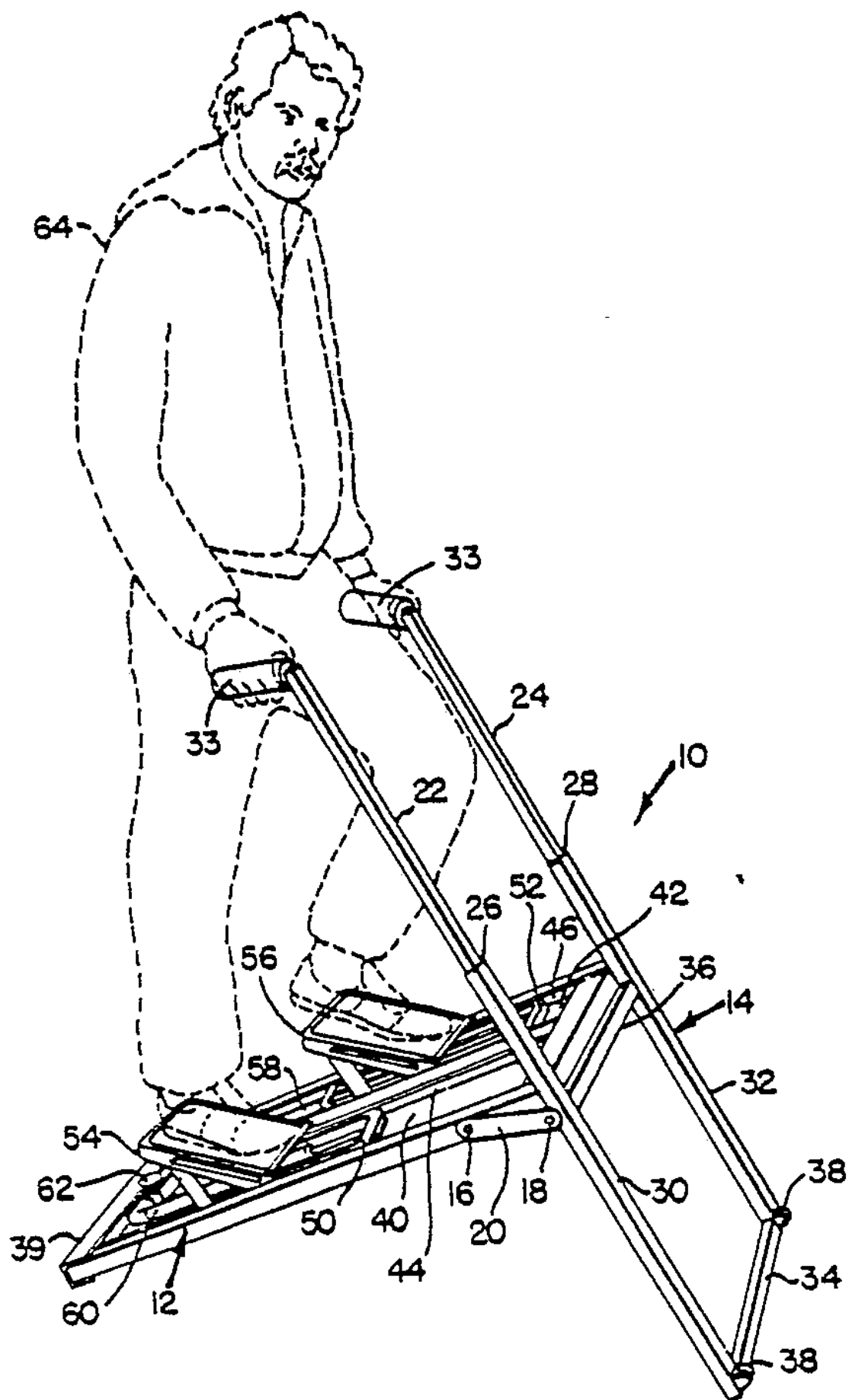
Family 3/17 - FAMPAT - ©Questel

Title

(EP-196295)

Exercise stair device.

Images



Publication data including kind & date

US4496147

A 1985-01-29

US4496147

WO8602008

A1 1986-04-10

WO8602008



[EP0196295](#) A1 1986-10-08 EP-196295

[EP0196295](#) A4 1987-09-02 EP-196295



Abstract

(EP-196295)

Apparatus (10) which simulates the exercise obtained while climbing stairs includes two hydraulically phased steps (54, 56) retained in adjacent inclined tracks (40, 42) in which the steps (54, 56) are supported in a hydraulically open-ended system (58, 60, 62), with the phasing of the steps (54, 56) being controlled by a pair of in-line hydraulic actuators (58, 60), one each associated with a step (54, 56), in which fluid forced from one actuator (58) with a downward movement of the associated step (54) is channeled through a variable restricted orifice (62) to the other actuator (60) to raise the other step (56). In one lightweight, compact embodiment, the device is collapsed down to a compact size through the use of steps (54, 56) which are foldable to the track (12), and through the use of a track (12) foldable to the frame (14). In its open position the lower portion of the frame (14) props up the tracks (12) at an appropriate climbing angle ($\theta(a)$), with upper portions (22, 24) of the frame (14) extending above the track (12) to serve as handles (33, 33) positioned above the center of travel of the steps (54, 56).

Inventors

DECLoux RICHARD J

LOEFFLER HERBERT H

MACCONKEY JAMES S

YONKERS E HUBBARD

Latest standardized assignees - inventors removed

ARTHUR D LITTLE

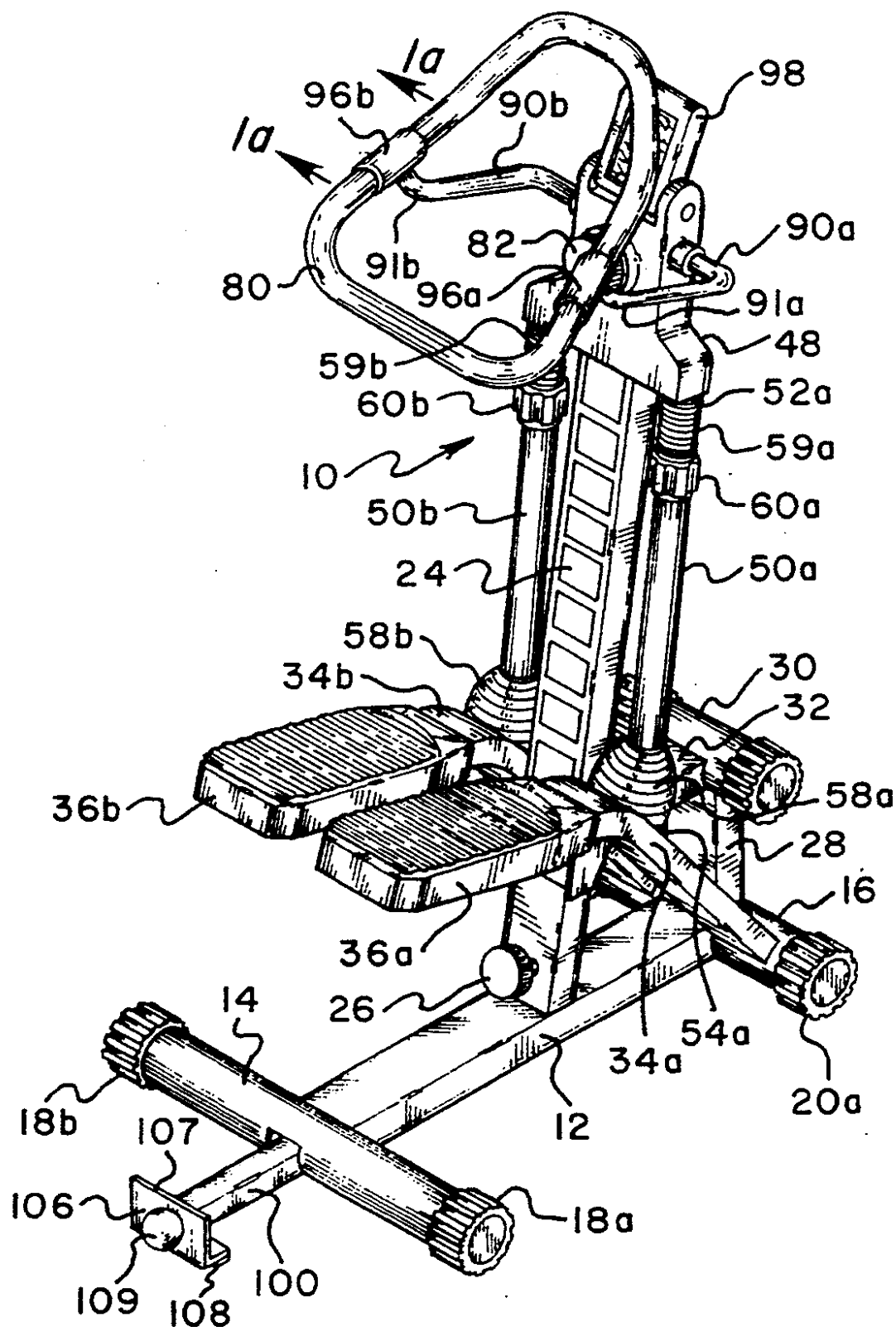
Family 4/17 - FAMPAT - ©Questel

Title

(US5403254)

Foldable step climber exercise machine

Images



Publication data including kind & date

US5403254

A 1995-04-04 US5403254



Abstract

(US5403254)

A foldable step climber exercise machine comprises a base frame having a balancing support telescopically mounted therein, a pair of stepping members pivotally secured to the base frame, a main strut attached to the base frame extending upwardly therefrom and handlebar secured atop the main strut. A different resistance structure is secured to each stepping member for providing resistance when a downward force is placed on the stepping members by the user. Pivots are provided between the main strut and the base frame to allow the step climber to be collapsed from an operating position to

a storage position.

Inventors

LUNDIN CHRISTOPHER B

STEVENS CLIVE G

Latest standardized assignees - inventors removed

PHYSIQ

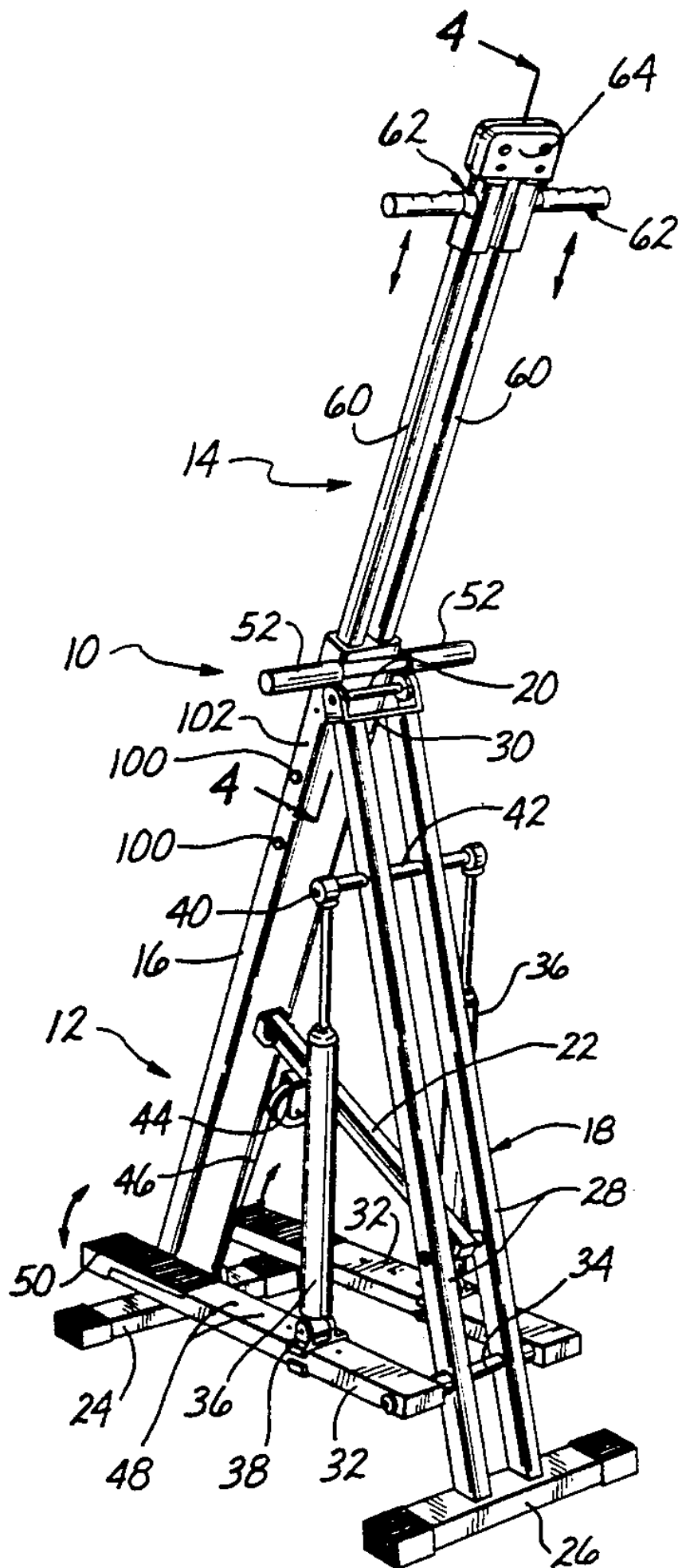
Family 5/17 - FAMPAT - ©Questel

Title

(US5222927)

Collapsible stepper climber exerciser

Images



Publication data including kind & date[US5222927](#)

A 1993-06-29 US5222927

**Abstract**

(US5222927)

A physical exercise machine is provided having a stepper exercise assembly and a climber exercise assembly which includes a pair of handles individually slidable on parallel tubular rails against the tension of spring elements contained within the rails. The rails are retractable into a tubular support member for collapsing the machine from an extended to a compact configuration.

Inventors

CHANG LEE C

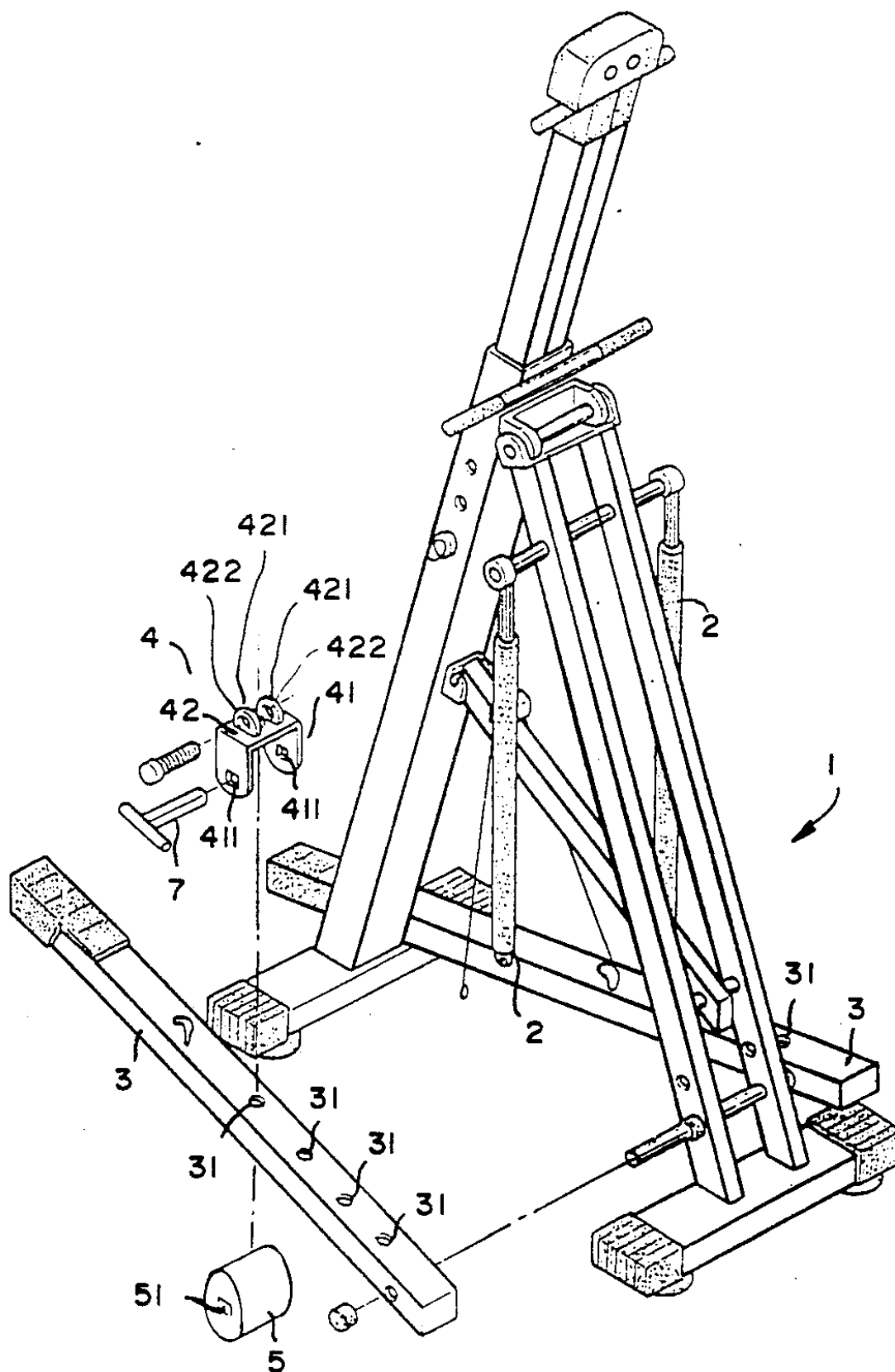
Family 6/17 - FAMPAT - ©Questel

Title

(US5178592)

Hydraulic cylinder and foot plate positioning device

Images



Publication data including kind & date

US5178592

A 1993-01-12 US5178592



Abstract

(US5178592)

A connecting device comprising a inverted U-shaped holder plate mounted on a foot plate, which has a stub tube at the bottom inserted in either of a row of longitudinally aligned holes on the foot plate and two eyed lugs at the top to which a hydraulic cylinder is pivoted, a cam inserted in between two opposite vertical side walls of the holder plate and disposed below the foot plate, and a T-shaped key inserted through two polygonal through holes on the two opposite vertical side

walls of the holder plate and a polygonal hole on the cam to connect the cam to the holder plate permitting the holder plate to be firmly retained to the foot plate, wherein rotating the T-shaped key in one direction causes the holder plate to be tightened to the foot plate; rotating the T-shaped key in the reverse direction causes the holder plate to be loosened from the foot plate.

Inventors

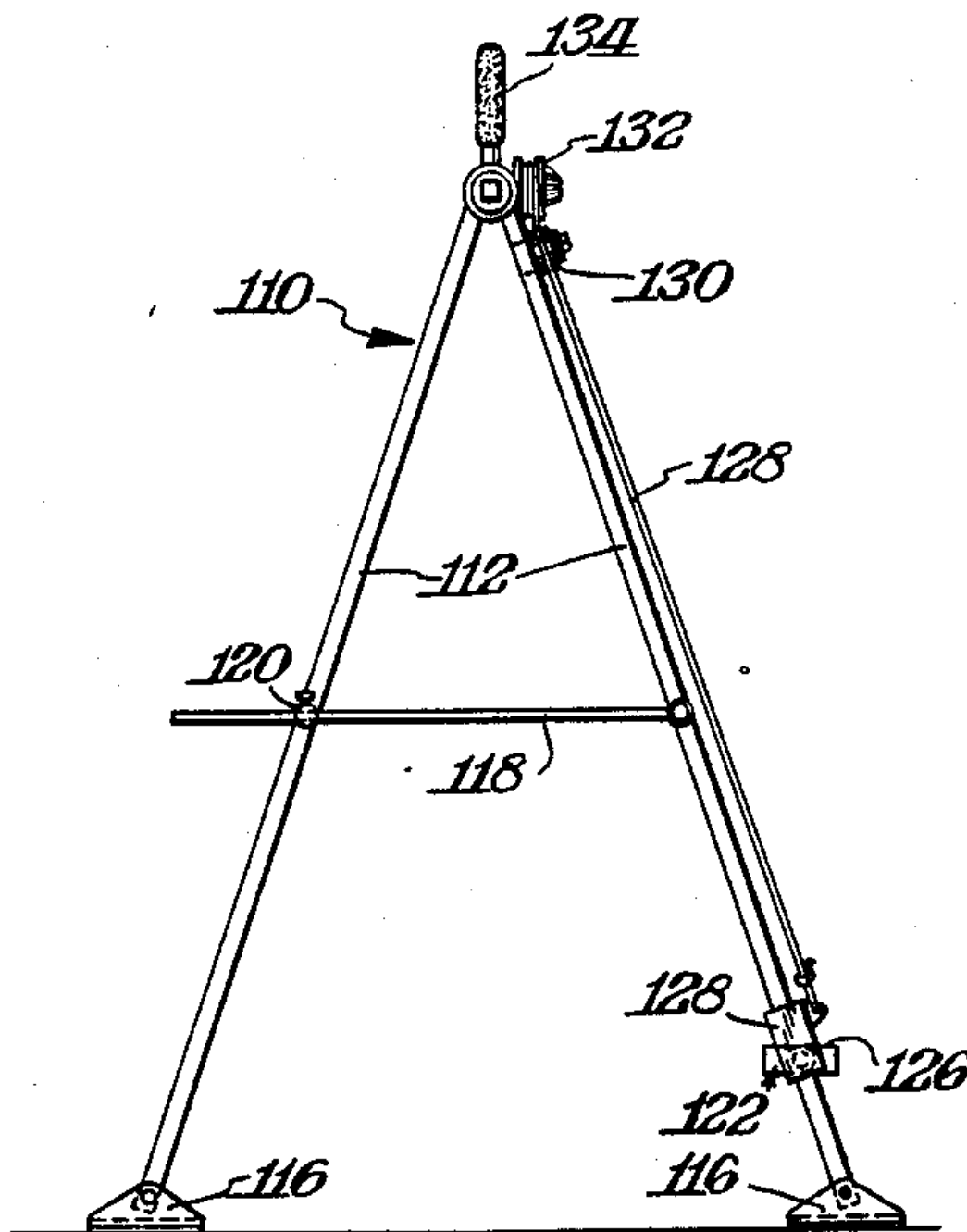
YANG LI-HSIANG

Family 7/17 - FAMPAT - ©Questel

Title

(US4659075)

Device for simulation of climbing

Images

Publication data including kind & date

US4659075

A 1987-04-21 US4659075



Abstract

(US4659075)

A device for the partial simulation of climbing includes a frame having a vertically adjustable step and an upstanding handle to permit the user to simulate climbing by stepping up and down the step. Continuous or full simulation of climbing is achieved by a device which has vertically movable steps so that the user may remain at one location while continuously going through the motions of stepping upward.

Inventors

WILKINSON WILLIAM T

Family 8/17 - FAMPAT - ©Questel

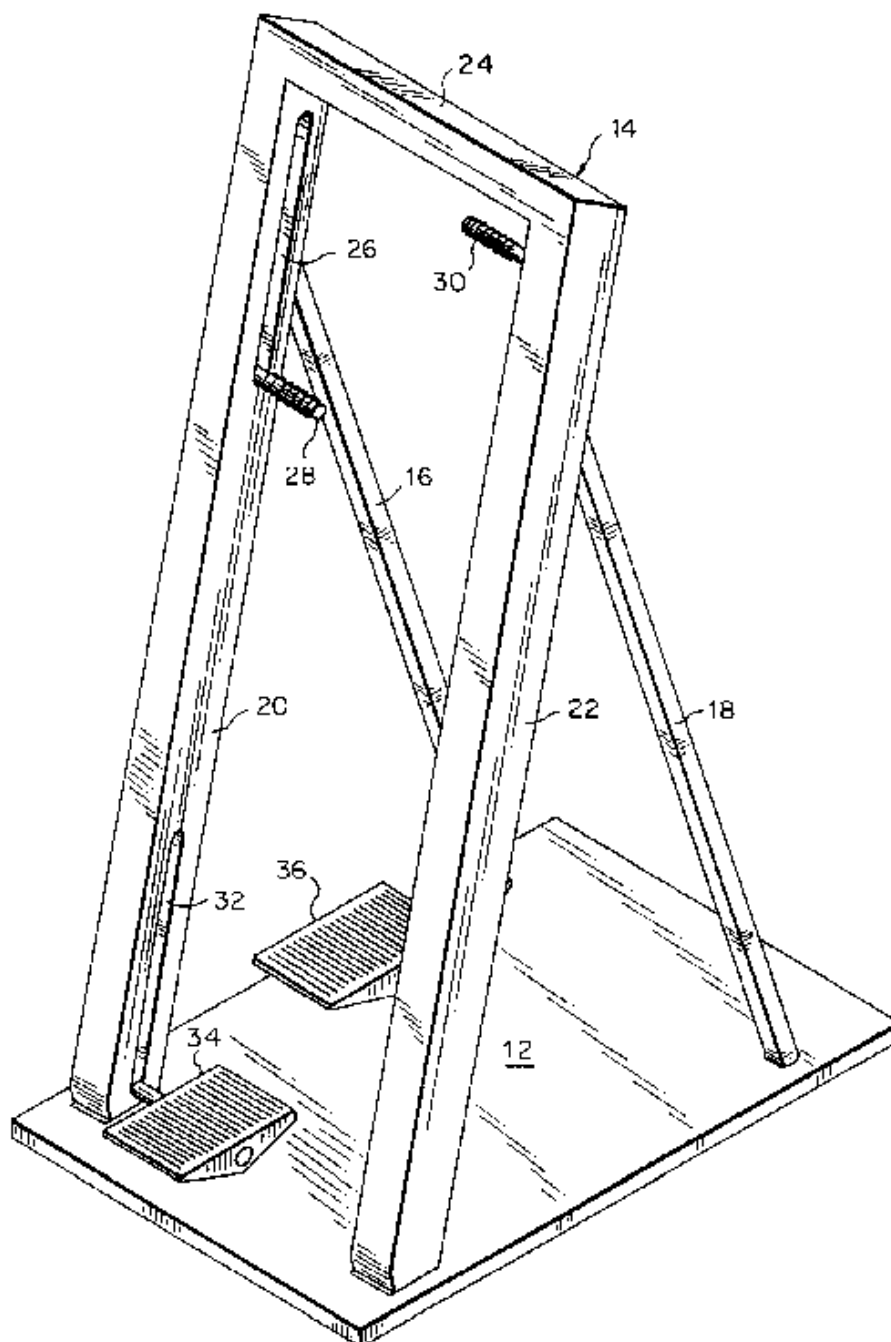
Title

(US5803880)

Stepper/climber exerciser

Images

FIG. 1

**Publication data including kind & date**

US5803880

A 1998-09-08 US5803880

**Abstract**

(US5803880)

A stepper/climber machine includes a frame supported on a base with the frame being comprised of first and second hollow columns connected to a hollow cross-beam. Within the first and second hollow columns, there are first and second rigid struts, respectively. Each of the rigid struts has a foot pedal and handgrip fixed thereto. The rigid struts are connected by a cable which is trained through the hollow cross-beam so that as one strut moves upwardly, the other strut moves downwardly, thereby raising one handgrip and pedal while allowing the other handgrip and pedal to lower. The first and second struts are connected to one another through a hydraulic circuit which includes a branched portion with legs having opposed one-way check valves in series with solenoid valves. A selector determines the lengths of the strokes by opening

and closing the solenoid valves alternately so that fluid can only flow in one direction through the hydraulic circuit. In this way, the person using the stepper/climber exercise machine must cycle the machine through complete strokes instead of being able to shorten the strokes as the exercise proceeds, allowing the person using the machine to optimize their workout. The hydraulic circuit also includes an adjustable valve which allows the user to increase or decrease the resistance to flow, and thus the resistance encountered during the exercise routine.

Inventors

ALLEN TEMPLE W

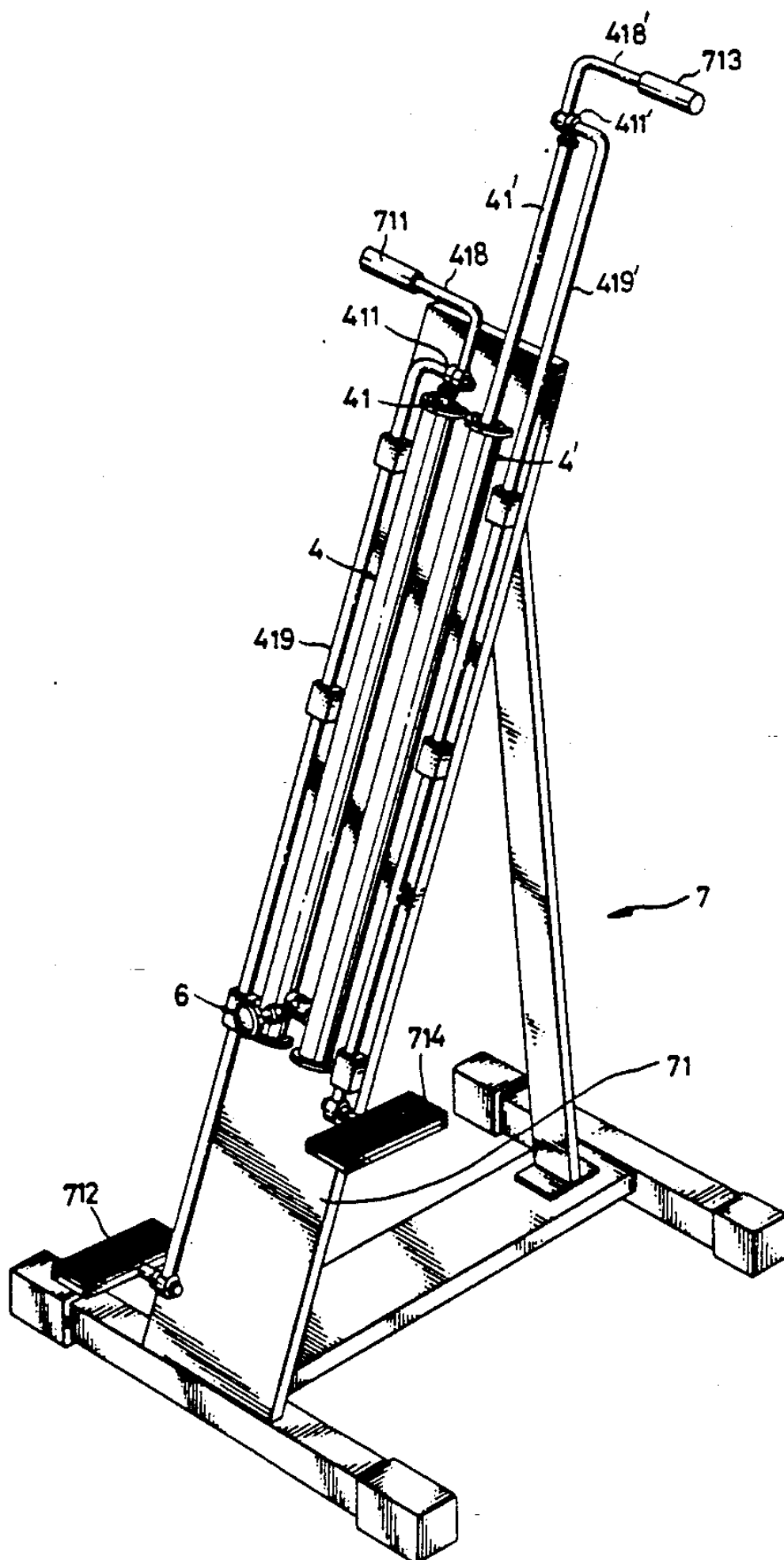
Family 9/17 - FAMPAT - ©Questel

Title

(US5169361)

Hydraulic cylinder assembly for climbing exercisers

Images



Publication data including kind & date

[US5169361](#) A 1992-12-08 US5169361

**Abstract**

(US5169361)

A hydraulic cylinder assembly comprising two hydraulic cylinders mounted on the frame of a climbing exerciser and connected by a control switch, said hydraulic cylinders each having an eye end piston rod inserted in an oil pipe, said eye end piston rod having a top end formed into an eye end respectively coupled with a L-shaped handlebar and a L-shaped pedal rod, and a bottom end formed into a screw rod fastened with a piston and locked by a locknut. By means of the aforementioned arrangement, the pedal and the handlebar of the same side are synchronously moved up and down.

Inventors

HSU HSIEN-LONG

Family 10/17 - FAMPAT - ©Questel

Title

(WO201874656)

Vertical stepper exercise machine

Images**Publication data including kind & date**

[KR101825309](#) B1 2018-02-02 KR101825309
[WO2018/074656](#) A1 2018-04-26 WO201874656

**Abstract**

(WO201874656)

The present invention relates to an exercise machine, called a vertical stepper, for performing total body exercise including leg exercise and arm exercise. According to the exercise machine of the present invention, a user can appropriately move both the upper body and the lower body in association with each other so as to build a well-proportioned body, or can freely exercise the upper body independently of stepper exercise for the lower body, so as to perform various motions.

Inventors

CHANG BYONG TAEK

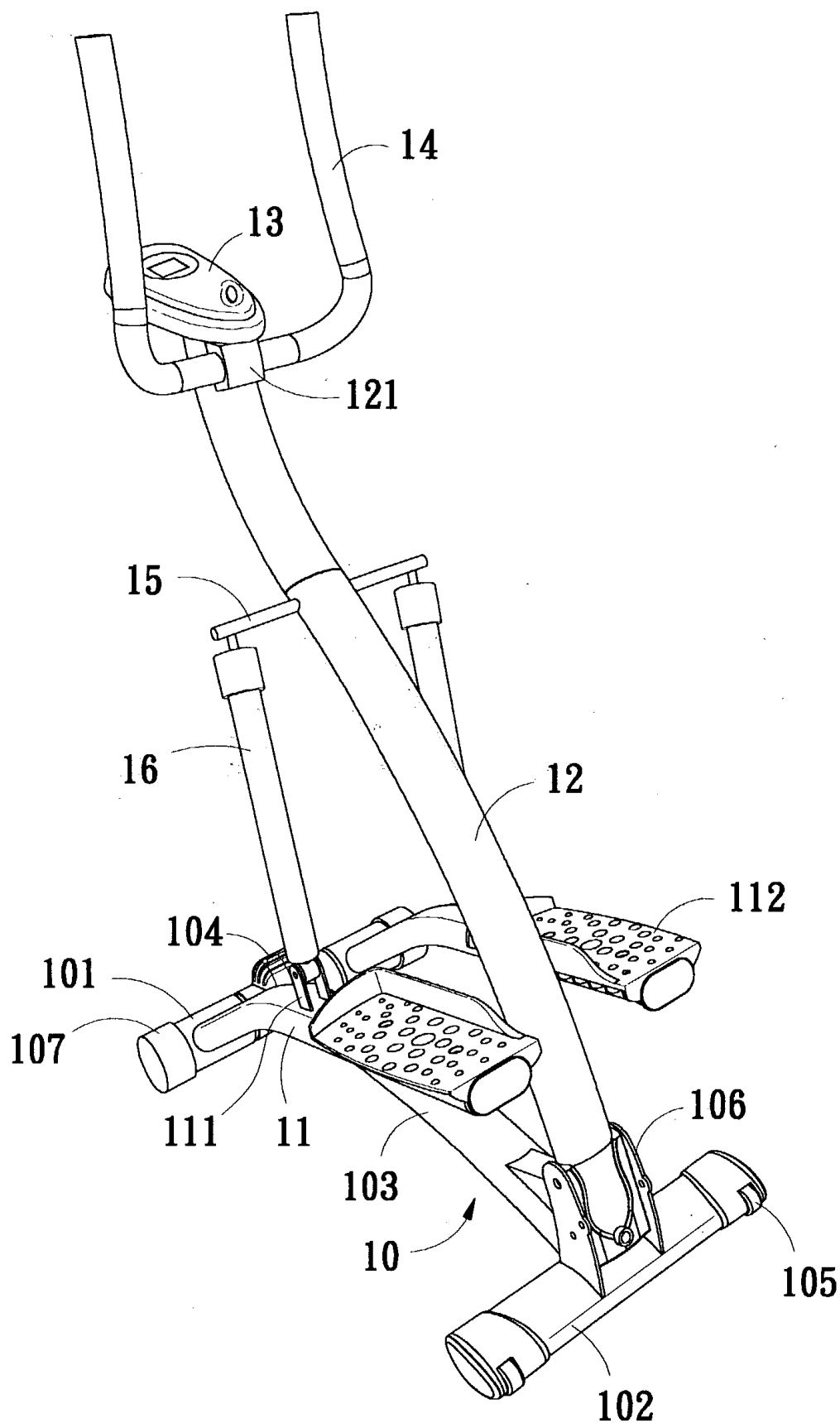
Family 11/17 - FAMPAT - ©Questel

Title

(US20040157707)

Exercise stepper

Images



Publication data including kind & date

US20040157707	A1	2004-08-12	US20040157707
FR2850876	A3	2004-08-13	FR2850876
FR2850876	B3	2005-01-21	FR2850876



Abstract

(US20040157707)

An exercise stepper has a bottom rack, two treadle bars, an inclined bar, a handle, a supporting rod and two oil pressure cylinders. Wherein the front ends of the two treadle bars are pivotally connected to two end spots of the front axle shaft. The treadle bars have on the front sections thereof connecting areas for connecting the two oil pressure cylinders; the rear ends of the treadle bars are extended rearwardly to form treadle pedals. The inclined bar is pivotally connected on the bottom end thereof with the rear end of the bottom rack, the front end thereof is extended frontwardly and upwardly, the upper end has a function display meter, a connecting area for the handle is provided on the upper end of the inclined bar being slip jointed with the handle. The supporting rod is horizontally extended through a neck portion of the inclined bar. The oil pressure cylinders are connected on the upper ends thereof to the supporting rod, and are connected on the lower ends thereof to the connecting areas for the oil pressure cylinders. Thereby, when a treadle pedal is trampled down, the other treadle pedal is relatively subjected to a force and is lifted, and vice versa, the exercise stepper thus is formed. The structure with the connecting areas for the oil pressure cylinders, for the handle and for the inclined bar etc. can have the components thereof collapsed onto the bottom rack.

Inventors

YANG LIEN-CHUAN

Family 12/17 - FAMPAT - ©Questel

Title

(WO201649786)

Belt-type climbing apparatus

Images**Publication data including kind & date**

CH710164	A2	2016-03-31	CH-710164
WO2016049786	A1	2016-04-07	WO201649786

**Abstract**

(WO201649786)

The invention relates to a belt-type climbing apparatus (1) comprising a continuous belt (2) and toothed belts (45) having replaceable rungs (8) or/and steps (36). An adjusting cylinder (9) allows an inclination (N) of the belt-type climbing apparatus (1) to be adjusted also beyond the vertical angle, and a brake (5a) makes it possible for a user to safely climb the rungs (8) in a controlled manner, optionally assisted by a camera (1) and a controller (12) that controls the braking effect; or the belt-type climbing apparatus comprises a driving motor (5), and the controller (12) actively controls the speed of the toothed belts (45); furthermore, software input (P), input means (11, 34, 49), a screen (13) and an unbalanced motor (26) make it possible to simulate climbing routes.

Inventors

MUELLER PETER A

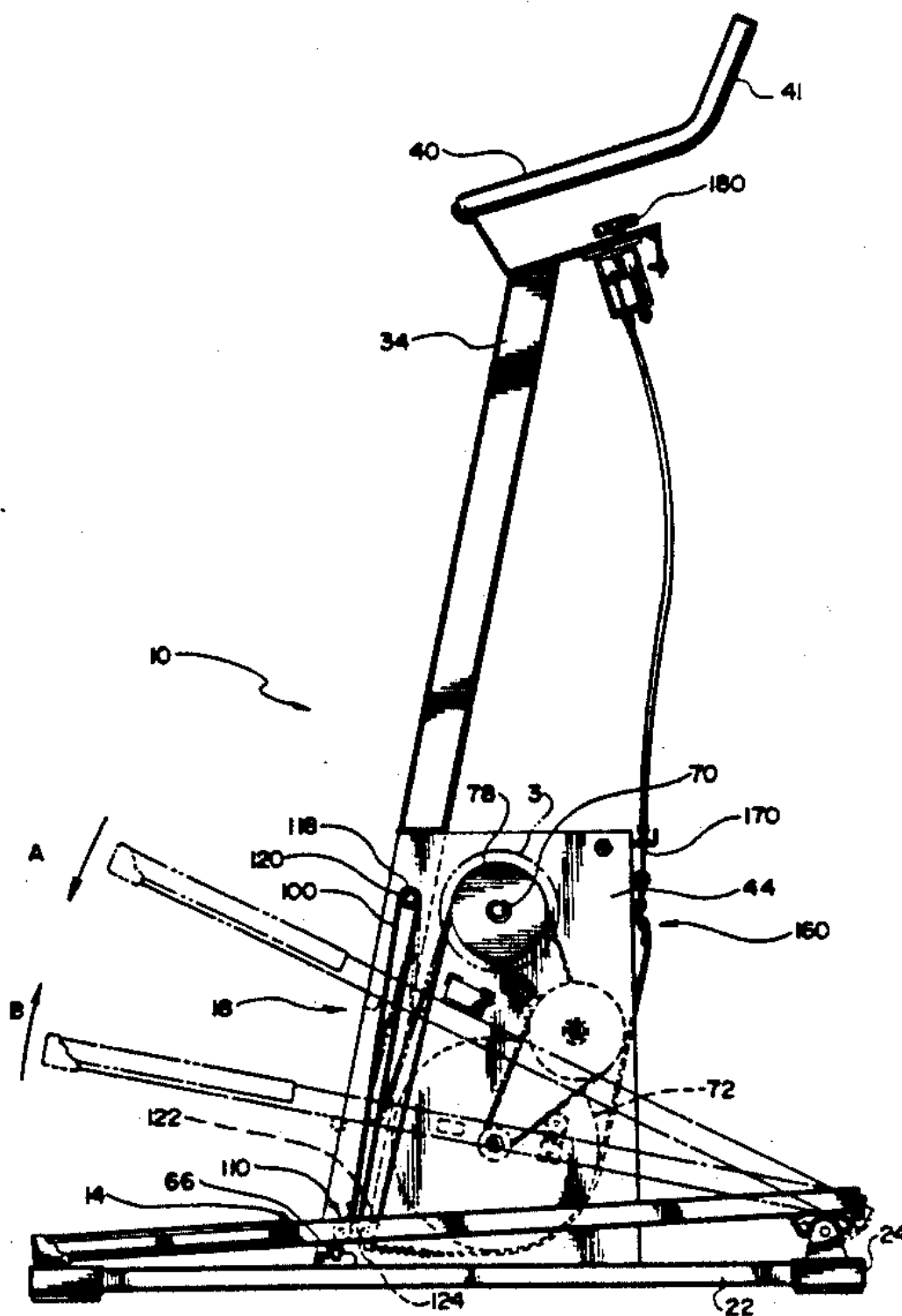
Family 13/17 - FAMPAT - ©Questel

Title

(US5199931)

Exercise machine for simulating stair climbing

Images



Publication data including kind & date

[US5199931](#)

A 1993-04-06 US5199931



Abstract

(US5199931)

The present invention is an improved exercise machine for simulating stair climbing, particularly adapted for in-home use. The device includes a generally upright frame with a base. Right and left foot pedals are pivotally mounted to the base on either side of the upstanding portion of the frame and a handlebar is provided adjacent the upper end of the frame. The foot pedals are linked to a mechanical resistance element, namely a flywheel. The linkage includes a strap connecting each pedal to a single drive shaft, in turn connected by a belt transmission to the flywheel. A resistance adjustment feature is included in the invention.

Inventors

EASLEY JAMES B

FRIEDEBACH A HANS

NESTANDE MARK R

THEISEN PAUL M

TITUS JOHN E

Latest standardized assignees - inventors removed

FITNESS MASTER

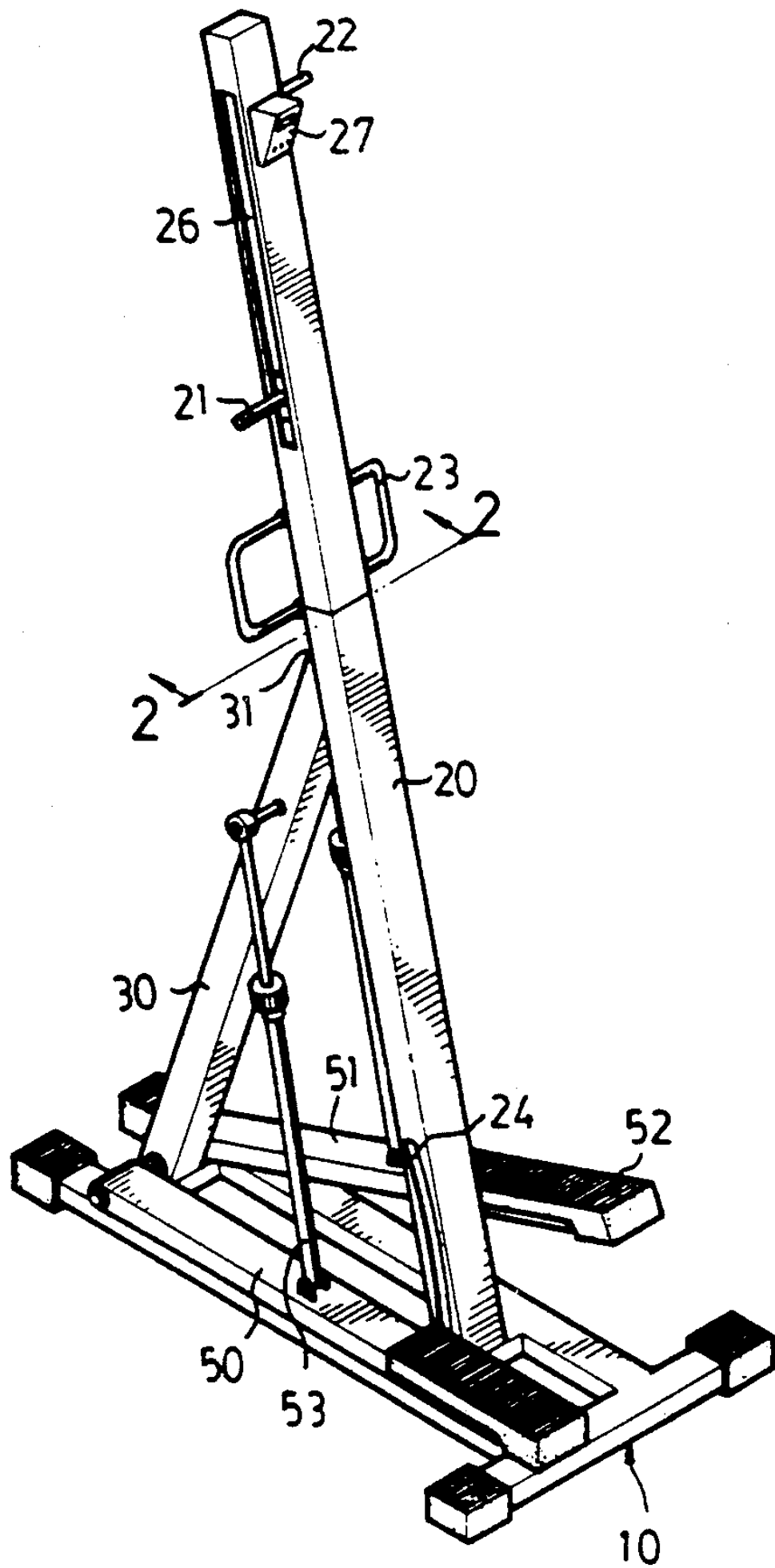
Family 14/17 - FAMPAT - ©Questel

Title

(US5090690)

Exercise mechanism

Images



Publication data including kind & date[US5090690](#)

A 1992-02-25 US5090690

**Abstract**

(US5090690)

An exerciser including a post extended upward from a base and having a pair of handles slidably disposed in the upper portion, a pair of pedals pivotally mounted at one end on the base, a pulley rotatably disposed in top of the post, two pulleys disposed in the post and each coupled to a pedal, second pedal, a cable having two ends fixed to the side walls of the post and extended over the pulleys and coupled to the handles so that the pedals and the handles are caused to move in concert.

Inventors

HUANG KELVIN

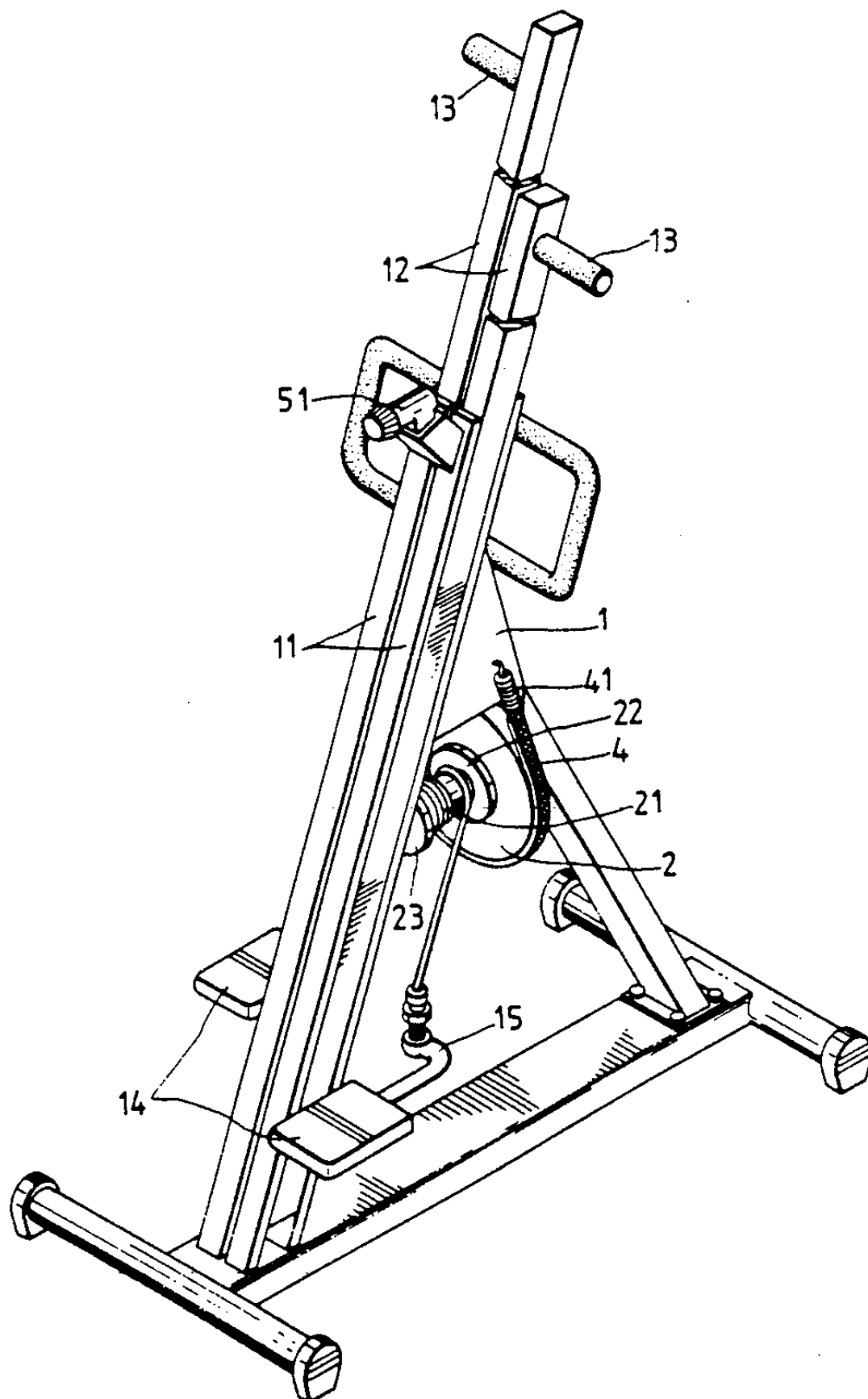
Family 15/17 - FAMPAT - ©Questel

Title

(US5007631)

Structure of climbing exerciser with a counter-weight freewheel mechanism

Images

**Publication data including kind & date**[US5007631](#)

A 1991-04-16 US5007631

**Abstract**

(US5007631)

Disclosed is a structure of climbing exerciser, which comprises a freewheel mounted on the frame body thereof and driven to alternatively rotate forward and backward by two driving cords which are connected between the freewheel and two

pedals which are mounted on the frame body for pedaling of feet. A retarding belt is mounted on the freewheel with one end secured to the frame body via a spring and with the opposite end connected to a tension regulating device through a steel rope so that the binding force of the retarding belt on the freewheel can be adjusted according to one's condition.

Inventors

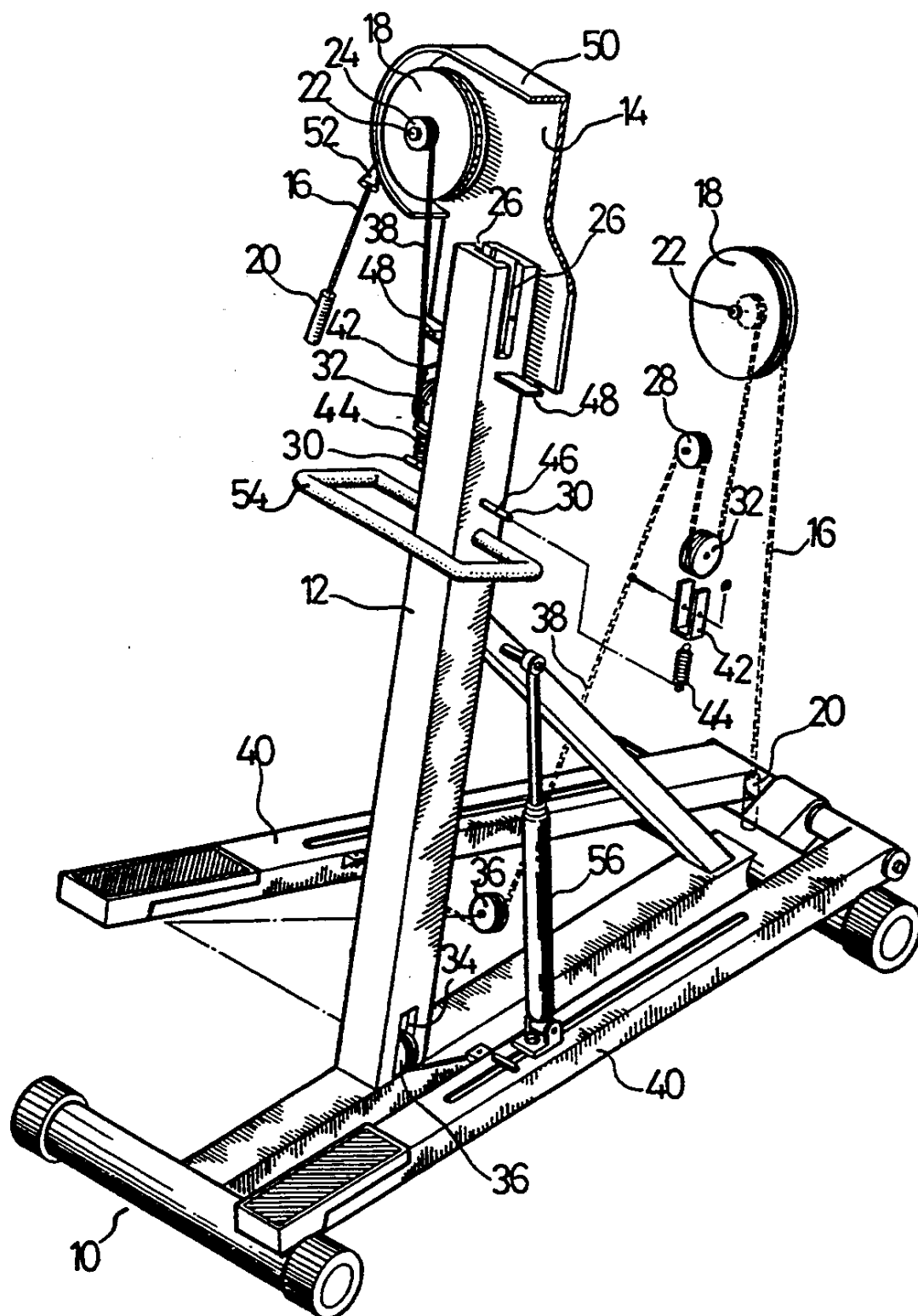
WANG LEAO

Family 16/17 - FAMPAT - ©Questel

Title

(US5338271)

Exerciser device for simulating mountain climbing and running

Images

Publication data including kind & date

[US5338271](#) A 1994-08-16 US5338271

**Abstract**

(US5338271)

The motions of mountain climbing and running are simulated by an exerciser having a pair of movable treadles which are connected to ropes that extend around plural pulleys and having free ends provided with handles which are gripped by the user and pulled during movement of the treadles to thereby exercise both the arms and legs. The treadles are connected to hydraulic cylinders which permit the treadles to be utilized independently of the ropes.

Inventors

WANG LEAO

Latest standardized assignees - inventors removed

GREENMASTER INDUSTRIAL

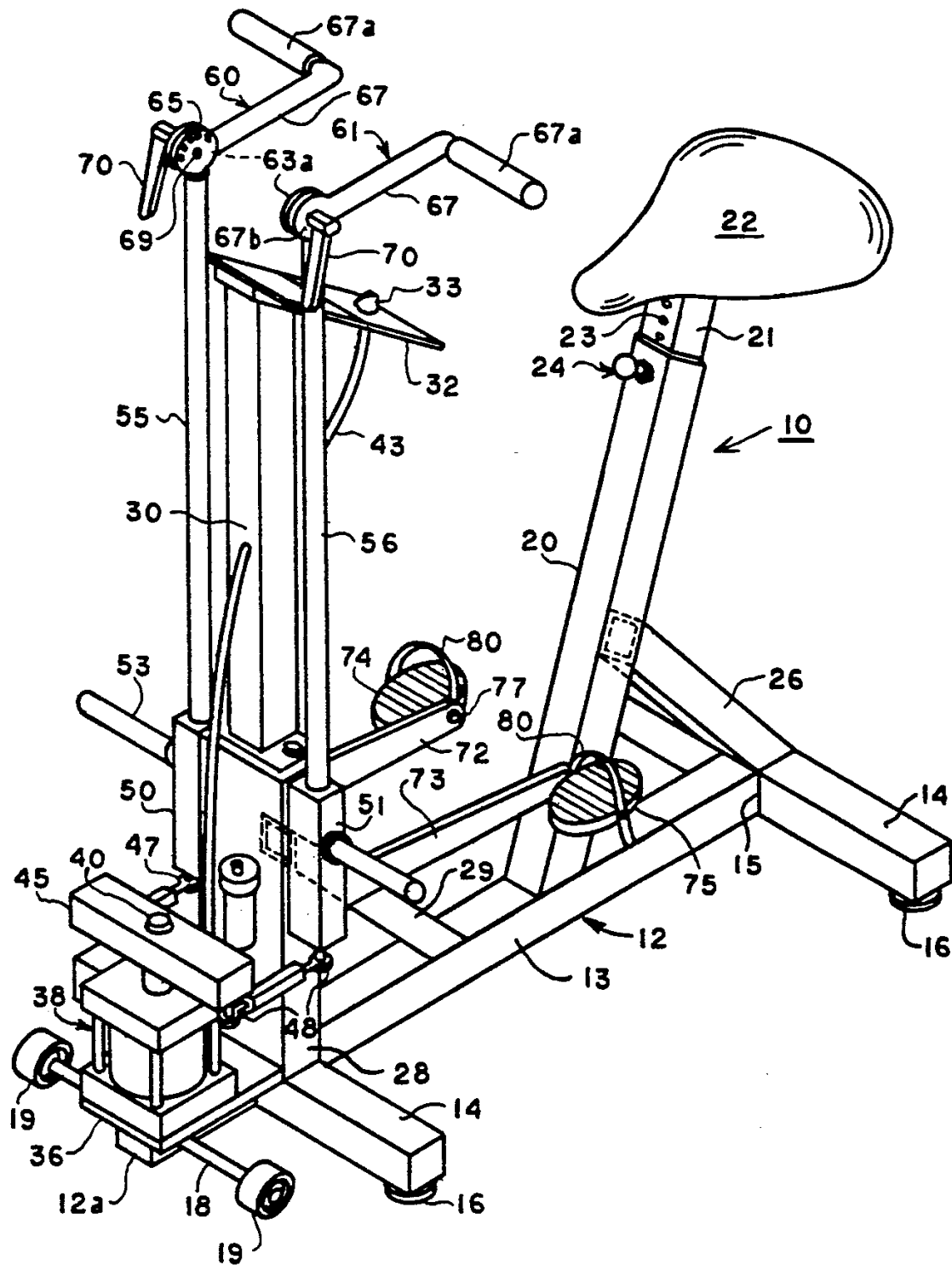
Family 17/17 - FAMPAT - ©Questel

Title

(US5139255)

Exercise machine

Images



Publication data including kind & date

[US5139255](#)

A 1992-08-18 US5139255



Abstract

(US5139255)

Exercise machines include a hydraulic torque resistance device having a rotor which is connected to a pair of vertically movable pedals. In one disclosed embodiment of the invention a vertically adjustable seat is provided in conjunction with a pair of handle bars respectively connected to the pedals in a manner such that downward movement of one of the pedals is accompanied by rearward movement of the associated handle bar. Simultaneously with the downward movement of one pedal the other pedal moves up and the other handle bar which is associated therewith the other pedal moves in the forward direction.

Inventors

SOLLAMI PHILLIP A

Latest standardized assignees - inventors removed

PROQUEST KINETICS

SOLLAMI