United States Patent

Schollmeyer

[15] **3,687,450**

[45] **Aug. 29, 1972**

[54] **SPRING TYPE RESISTANCE EXERCISING DEVICE**

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[22] Filed: **Aug. 21, 1970**

[21] Appl. No.: **65,888**

[52] **U.S. Cl.** .....**272/83 R,** 272/DIG. 4

[51] **Int. Cl.** ...**A63b 21/00,** A63b 21/02, A63b 21/16

[58] **Field of Search**.....272/83 R, 83 A, 82, 80, 79 R, 272/DIG. 4, DIG. 5, 57 R, 81

[56] **References Cited**

UNITED STATES PATENTS

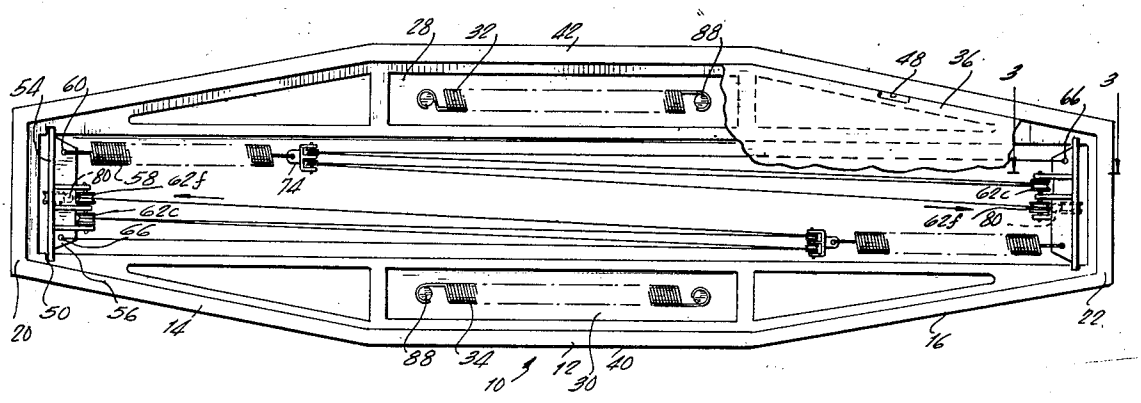
1,344,002	6/1920	Kibler	272/79 R
2,131,570	9/1938	Riley	272/83 A UX
1,738,987	12/1929	Dattilo	272/83 R
992,272	5/1911	Singer	272/83 R

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Assistant Examiner—William R. Browne
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[57] **ABSTRACT**

An exercising machine comprising a housing having a removable bottom which serves to hold removable pulley brackets in place. Share springs are stored in compartments provided in the housing. Lines are connected at the ends of the housing, reeved over pulleys that are connected to pulley blocks and springs, and then passed through holes in the platform on top of the housing. Hand grips are attached to the lines for grasping by the user so that during an exercising program the springs will offer resistance to a pulling force on the lines.

6 Claims, 4 Drawing Figures



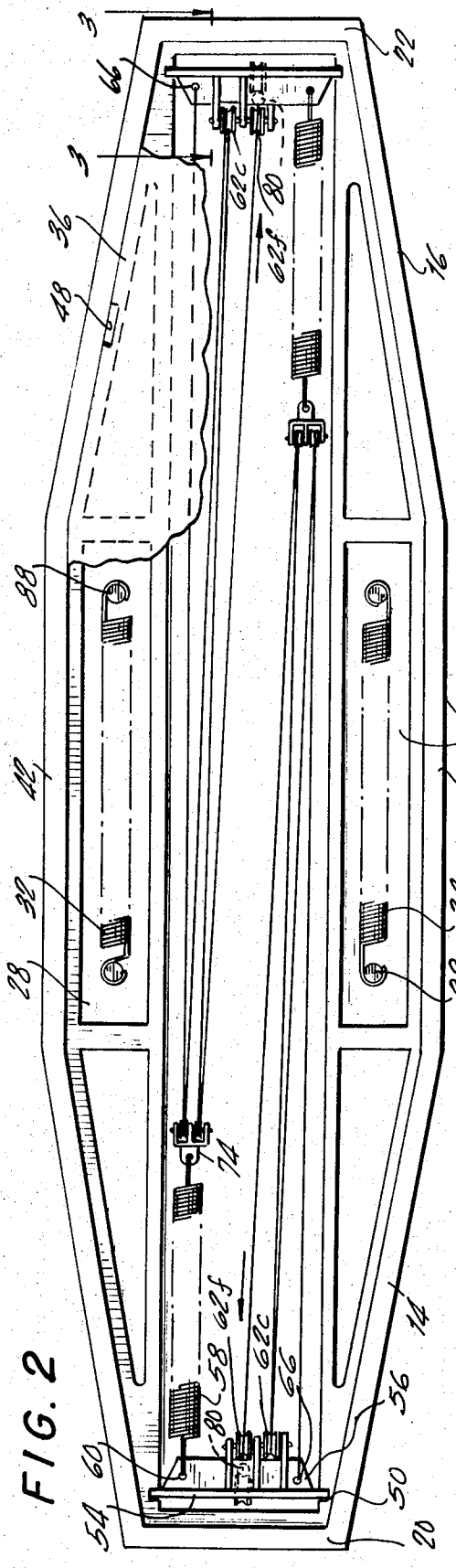


FIG. 2

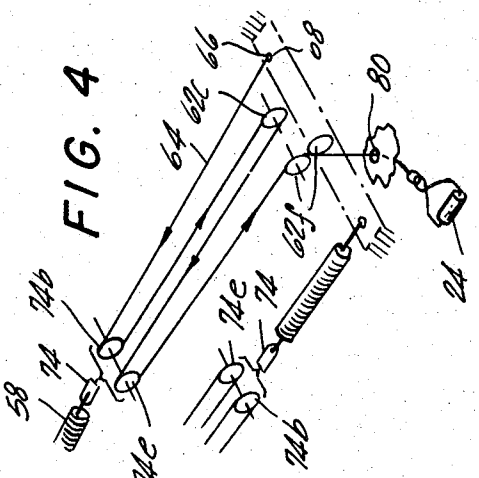


FIG. 4

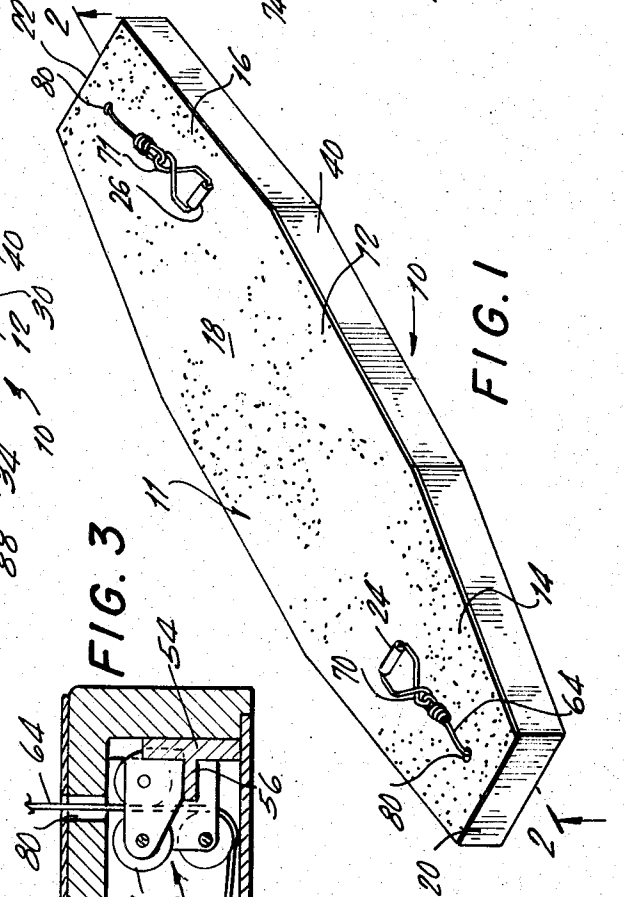


FIG. 1

FIG. 3

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SPRING TYPE RESISTANCE EXERCISING DEVICE

This invention relates generally to human exercise devices and more particularly to a machine for exercising the muscles of the human body, which device is particularly suited for use in virtually all positions, such as standing, sitting, kneeling, squating or lying down.

Today, with the great interest on the part of the public with respect to physical fitness, various systems have been developed so as to aid in the maintenance of physical health such as isometrics and the like.

It is a well known fact that performance of exercises is facilitated by the use of specifically designed equipment for such purposes. However, in the past such equipment has been expensive, required permanent installation, been bulky or virtually impossible to store within the confines of an apartment or small home and in addition such equipment required skill and supervision.

Therefore, it is an object of the present invention to provide an exercise device which can be used in the home and which device is portable, storable and requires no installation, which device can be used for developing the muscles of the user as well as improving and maintaining proper muscle tone for the user.

It is a further object of the invention to provide an exercise device which has spare springs that may be interchanged if the user so desires.

Further, it is an object of the invention to provide an exercise device where all parts are easily accessible and replaceable without the need for tools or mechanical assistance.

Still further, it is an object of the invention to provide a self-contained exercise machine which is light weight, and inexpensive to manufacture, while at the same time is of attractive appearance and can provide the user with all types of exercise capability in a single self-contained exercise device.

These, together with the various ancillary objects and features of the invention, which will become apparent as the following description proceeds, are attained by this exercise device, preferred embodiments of which exercising device are illustrated in the accompanying drawing, by way of example only, wherein:

FIG. 1 is a perspective view to show the clean one piece construction of the invention;

FIG. 2 is a plan view with parts broken away to reveal the interior. This view may also serve as an elevation of the device when used for rowing and other exercises in which the machine rests on edge;

FIG. 3 is a sectional detail view of an end of the housing and illustrating certain details of the pulley support bracket; and,

FIG. 4 is a partial perspective view schematically showing the pulley and spring arrangement used in the invention.

Similar reference characters refer to similar parts throughout the several views of the accompanying drawing and in the following specification in which the parts and their operation are more fully described.

The exercising machine **10** comprises a housing **11** having a rectangular control portion **12** and trapezoidal shaped end portions **14** and **16** having a continuous top flush deck platform **18** between the ends **20** and **22**. Hand grips **24** and **26** are positioned adjacent the ends **20** and **22** when retracted to their resting position.

As the center of the platform member **18** is of substantially greater width than ends **20** and **22** there is provided thereunder and at each side housing compartments **28** and **30**, not shown, suitable to store spare springs **32** and **34**, and of a depth equal to and flush with the bottom member **36** of housing thereby forming a solid base.

Either edge **40** and **42** of said housing **11** is of sufficient length to form a base for the machine when it is used for rowing and other exercises during which the operator sits on the floor pushing the feet against the platform **18**.

The platform member **18** has applied thereto an antislip material with an adhesive backing.

To gain access to the compartments **28** and end **30** there is provided the removable bottom **36** that is attached to housing **11** by matching grooves in the housing **11** and the bottom **36** and thereby snapping into position without any other anchoring device. Bottom **36** can be pried easily from housing **11** by inserting a large coin in grooves **48** provided in bottom **36**.

Within the housing **11** and inserted in the vertical grooves **50** near the ends is a pulley support bracket **52** including a plate **54** having a flange **56** to which are secured springs **58** by means of holes **60** in the flange **56** of bracket **52**. The bracket **52** also has mounted thereon the pulleys **62** about which the line **64** is entrained. The bracket **52** also contains a hole **66** to engage the knotted ends **68** of the line **64**. The opposite ends of the line **64** are secured to the stirrups **70** and **71** of the hand grips **24** and **26**. The bottom **36** is removed. The opposite ends of the springs **58** are secured to the two part pulley blocks **74**. The pulley support bracket, springs and pulley blocks as well as the line end at each end of the device are duplicated except that the arrangement of the parts are relatively at opposite sides of the housing **11**.

At each end of the housing **11** there is a hole **80** directly over the pulley **62** of the pulley support bracket **52** through which the line **64** may freely pass and due to the depth of the pulley **62** and the smooth rounded hole **80** in housing **11**, the line **64** may be pulled at a great angle to the perpendicular to the platform **18** without binding or jamming the line **64**.

The line **64** and the relationship of the pulleys **62** over which they run may be clarified by the following:

As shown best in FIG. **4**, each of the lines **64** passes under and over the pulley **74***b* of the pulley block **74** then passes about the pulley **62***c*, then under and over the pulley **74***e*, then between pulleys **62***f* and through the hole **80** to the stirrup **70**, attached to hand grip **24**. Thus, there is a four part "purchase" in stretching the springs **58**; four lines and double pulley blocks being used.

Springs **58** of various size and tension may be easily interchanged and in the compartments **28** and **30** there is shown a suitable manner of storing spare springs not in use by attaching the ends with the moulded posts **88** at both ends of the compartments **28** and **30**.

The housing **11** may be made out of any suitable material in any suitable manner. The pulley support bracket **52** is to be a metal die casing.

This device may be operated and applied in many ways both when lying with the bottom on the floor as shown in FIG. **1** or as on edge.

The extreme length of travel due to the use of a four-part line enables the operator to pull the hand grips **24** and **26** to a position where the arms are straight upward over the head when standing on the platform member **18**; a traverse of more than 7 feet. The numerous exercises need not be enumerated here as it is apparent that the various degrees of tension available are merely a matter of the use of changing the springs **58**.

A latitude of modification, substitution and change is intended in the foregoing disclosure, and in some instances, some features of the invention will be employed without a corresponding use of other features.

I claim:

1. An exercising machine comprising a housing having a removable bottom member and a platform member provided with holes therethrough, said housing having opposed ends and opposed pairs of vertically extending grooves therein adjacent said ends, pulley brackets including plates, said plates being removably received in said grooves, said bottom member supporting said bracket plates in said grooves, a spring secured to each of said bracket plates and each one of said springs being secured at each end of said housing, respectively, ropes a separate rope secured at one end thereof to each end of said housing and reeved over

and pulley block secured to said spring, the opposite end of said rope extending through one of said holes and being retractable by a user to tension said spring, and hand grips secured to the opposite end of said rope above said platform.

2. An exercising machine according to claim **1**, wherein said housing has storage compartments therein, and means for storing spare springs in said compartments.

3. An exercising machine according to claim **2**, wherein said platform has a flush deck positioned on top of said housing.

4. An exercising machine according to claim **3**, wherein said housing has an enlarged central portion running the length of said housing for receiving said springs, pulleys, and brackets, said compartments being located on opposite sides of said central portion.

5. An exercising machine according to claim **4**, wherein said housing has opposed trapezoidal shaped end portions.

6. An exercising machine according to claim **5**, wherein each of said grooves is provided in each of said end portions.

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