EXERCISE APPARATUS, RESISTANCE SELECTOR FOR EXERCISE APPARATUS AND RELATED METHODS

Inventor: Adam P. Hubbard, Colorado Springs, CO (US)

Correspondence Address:
TRASK BRITT
P.O. BOX 2550
SALT LAKE CITY, UT 84110 (US)

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ABSTRACT
Apparatuses having selective resistance, mechanisms and devices for selecting resistance on an exercise apparatus, and methods of operating exercise equipment are provided. In one embodiment, an exercise apparatus includes a frame and at least a first guide member coupled with a portion of the frame. A weight stack, including a plurality of weight plates, is associated with one or more guide members and a selector rod is disposed adjacent portions of each weight plate. A resistance selector includes a selector pin configured to be laterally displaced relative to the weight stack a limited distance between an engaged position and a disengaged position. In one embodiment, the selector pin may be biased towards the engaged position. One or more additional guide members may be laterally displaced and parallel to the guide members associated with the weight stack and slidably coupled with a body portion of the resistance selector.
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FIELD OF THE INVENTION

[0001] The present invention relates generally to exercise equipment and, more particularly, to exercise equipment having selectable resistance, components for effecting the selection of a desired amount of resistance and related methods.

BACKGROUND OF THE INVENTION

[0002] There are numerous types of apparatuses and devices configured to help individuals exercise and maintain a desired level of health and fitness, including apparatuses that are used for strength training. Many strength training apparatuses are configured to provide selective resistance so that a user of the apparatus may appropriately tailor his exercise regimen. For example, when the apparatus is used by multiple users, each individual using the apparatus may be at a different strength level and need to adjust the resistance according to their specific capabilities. Additionally, as an individual gets stronger, they often desire to increase the resistance provided by the apparatus so as to maintain or increase the intensity of their workout.

[0003] Additionally, many strength training apparatuses are configured to accommodate different types of exercises so that a user can target different muscle groups based on the selection of exercises they participate in. For example, a strength training apparatus may enable an individual to alternate between chest presses, curls, pull-downs, or a variety of other exercises while using the same basic resistance mechanism. In order to accommodate such a variety of exercises, the resistance mechanism is typically configured to provide selective resistance because most users do not perform, for example, chest presses, curls and pull downs using the same amount of resistance for each exercise.

[0004] A relatively popular type of apparatus used for strength training includes one which employs a plurality of stacked weight plates. Each weight plate conventionally weighs a specified denomination (e.g., 5 pounds or 10 pounds). Thus, for example, assuming that each weight plate is 10 pounds, selection of a single weight plate results in a resistance of 10 pounds, while selection of 4 weight plates results in a resistance of 40 pounds.

[0005] In these exercise devices, a cable is led through a pulley or series of pulleys and is attached to one or more of the weight plates. Conventionally, the free end of the cable is coupled to a handle for engagement by a user during exercise. The pulley and cable assembly is also coupled with a structure such as a selector rod associated with the weight stack that enables the user to define the level of desired resistance. The selector rod conventionally passes through a channel that is collectively defined by aligned apertures formed in each of the plurality of stacked weight plates. The selector rod also conventionally has a plurality of longitudinally spaced apertures extending transversely through the rod that are configured to align with corresponding channels or openings formed in each weight plate. A selector pin is placed through a selected weight plate and engages the corresponding aperture of the selector rod such that, when the selector rod is displaced by the attached cable and pulley system, the selector pin causes the engaged weight plate, as well as any weight plates disposed thereabove, to be displaced along with the selector rod. Thus, by inserting the selector pin in the aperture of a specific weight plate, the desired level of resistance is selected.

[0006] The use of selector pins with weight stacks of an exercise apparatus has been relatively efficient and effective in terms of enabling multiple users to use the same machine as well as enabling individual users to use a single machine for a variety of different exercises. In certain situations, however, the use of a selector pin or similar structure, such as described above, may pose a hazard to the user of the exercise apparatus. For example, sometimes a user of the apparatus may only partially engage the selector pin with the selector rod. In such instances, the selector pin may become disengaged during an exercise routine causing the weight plates to fall and essentially eliminating all resistance instantaneously. Such a situation may potentially result in injury to the user of the equipment, damage to the equipment itself, or both.

[0007] Additionally, strength training apparatuses using weight stacks and selector pin arrangements are popular in gyms and fitness centers where multiple types and multiple brands of such strength training apparatuses are used. Occasionally, the selector pins used in these various apparatuses get lost, essentially rendering the exercise equipment useless. When a selector pin for one piece of equipment is missing, a user may “borrow” a selector pin from another apparatus. However, not every apparatus utilizes a common selector pin. Thus, selector pins may vary in size, shape and strength from one apparatus to another. While, to a user of the exercise equipment, it may seem logical to “borrow” a selector pin from one apparatus for use with another, the use of a selector pin that is an improper size or shape, or which may be designed to withstand a lesser exertion of force than will be imposed on it when employed with a different apparatus, poses potential hazards including those indicated above.

[0008] Thus, it would be desirable to provide an exercise apparatus having a resistance selector mechanism that reduces or eliminates the ability of users to interchange components of one machine with another. It would also be desirable to provide components that reduce or eliminate the likelihood of interchanging components of one exercise apparatus with another in an undesirable manner. It would also be advantageous to provide a selector mechanism which helps to ensure that a selector pin is more fully engaged with the desired components prior to a user operating the associated exercise apparatus.

BRIEF SUMMARY OF THE INVENTION

[0009] The present invention provides exercise apparatuses having selective resistance, mechanisms and devices for selecting resistance on an exercise apparatus, and methods to operating exercise equipment.

[0010] In accordance with one embodiment of the present invention and exercise apparatus is provided. The exercise apparatus includes a frame and at least a first guide member coupled with a portion of the frame. A weight stack, including a plurality of weight plates, is associated with the at least a first guide member. A selector rod is disposed adjacent portions of each weight plate. A resistance selector includes a selector pin configured to be laterally displaced relative to the weight stack a limited distance between an engaged position and a disengaged position.

[0011] In accordance with another embodiment of the present invention, another exercise apparatus is provided. The apparatus includes a frame and a first pair of guide members...
coupled with the frame. A weight stack including a plurality of weight plates is slidably coupled with the first pair of guide members. A selector rod is configured for selective coupling with one or more of the plurality of weight plates. At least one pulley is coupled with the frame and at least one cable engages at least a portion of the at least one pulley while also being coupled with the selector rod. A handle is also coupled with the at least one cable. A second pair of guide members laterally spaced from the first pair of guide members. A resistance selector includes a body portion slidably coupled with the second pair of guide members, a selector pin and a biasing member. The selector pin is slidably coupled with the body portion and limited to displacement between an engaged position, wherein the selector pin extends through an opening formed in the selector rod, and a disengaged position, wherein the selector pin is retracted from the selector rod and any weight plate of the plurality. The biasing member is located and configured to bias the selector pin toward the engagement position.

In accordance with yet another embodiment of the present invention, a resistance selector for selectively engaging a desired component of an exercise apparatus is provided. The resistance selector includes a body portion configured for slidably coupling with at least one guide member of the exercise apparatus. A selector pin is slidably coupled with the body portion and configured for limited displacement between and engaged position, wherein the selector pin extends through the body portion and a free end of the selector pin projects beyond a surface of the body portion, and a disengaged position, wherein the free end of the selector pin is substantially retracted within the body portion. A biasing member is located and configured to bias the selector pin toward the engaged position.

In accordance with yet another aspect of the present invention, a method is provided for operating an exercise apparatus. The method includes disposin a resistance selector adjacent a weight stack of the exercise apparatus, the weight stack including a plurality of weight plates associated with at least a first guide member. The resistance selector is disposed along a path defined by at least a second guide member associated with the resistance selector. A first weight plate of the plurality is engaged with a selector pin of the resistance selector and the at least one weight plate and the resistance selector are concurrently displaced.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

The foregoing and other advantages of the invention will become apparent upon reading the following detailed description and upon reference to the drawings in which:

FIG. 1 is a side elevational view of an exercise apparatus according to one embodiment of the present invention;
FIG. 2 is a perspective view of a weight stack and resistance selector according to an embodiment of the present invention;
FIGS. 3A and 3B are cross-sectional views of a portion of a resistance selector in accordance with various embodiments of the present invention;
FIG. 4 is a perspective view of a resistance selector in accordance with another embodiment of the present invention wherein the selector is in an engaged state;
FIG. 5 is a perspective view of the resistance selector shown in FIG. 3 with the selector in a disengaged state; and
FIG. 6 is a perspective view of a resistance selector in accordance with another embodiment of the present invention.

Detailed Description of the Invention

Referring to FIG. 1, an exercise apparatus 100 is shown which includes a frame 102 having a base 104 configured to support the apparatus 100 on an underlying surface. A cable and pulley system 106 is coupled with the frame and includes a cable coupled to a selector rod 110. The selector rod 110 is configured to be selectively coupled with one or more components of a resistance mechanism, such as a weight stack 112, as shall be discussed in further detail hereinbelow. The weight stack 112 may include a plurality of individual weight members, such as plates 114, having a desired mass. For example, in one embodiment, each of the plates 114 may weigh approximately 10 pounds (lbs.). In another embodiment, each of the plates 114 may weigh approximately 5 lbs. In another embodiment, some of the plates 114 may be one weight (e.g., 5 lbs.) while others have a different weight (e.g., 10 lbs.).

In the embodiment shown, the cable and pulley system 106 includes a first cable 116 having a handle 118 attached to one end thereof. The first cable 116 extends through a first pulley 120A and is coupled with a fixed structure 122 associated with the frame 102. The first pulley 120A is coupled with a linear bearing structure 124 positioned on a guide member 126 that is coupled to the frame 102. A second cable 126B has a first end that is coupled with the linear bearing structure 124, extends through additional pulleys 120B and 120C, and has a second end coupled with the selector rod 110. In the embodiment depicted in FIG. 1, the selector rod 110 is disposed within a channel formed by the alignment of individual apertures of each weight plate 114.

The weight plates 114 are each slidably coupled with one or more guide members 130, such as guide rods, that are coupled with the frame 104. A resistance selector mechanism 132 is configured for selective engagement with one or more weight plates 114 of the weight stack 112 as well as with the selector rod 110 as shall be discussed further hereinbelow.

In one embodiment, the resistance selector 132 is coupled to one or more guide members 134, such as guide rods. The guide members 134 may be coupled with the frame 102 and laterally displaced relative to the guide members 130 associated with the weight stack 112. As will be apparent upon further reading of the operation of the resistance selector 132, when the resistance selector 132 is engaged with one or more weight plates 114 of the weight stack 112 and with the selector rod 110, the resistance selector 132 will be displaced along the path defined by its guide members 134 coincidently with the displacement of any engaged weight plates 114 along the path defined by their associated guide members 130. However, when the resistance selector 132 is disengaged from the selector rod 110 and any weight plates 114, the resistance selector is free to move along the path defined by its guide members 134 independent of any movement of the various weight plates 114 in the weight stack 112.

It is noted that, in the various example embodiments, two guide members 130 are shown and described as being associated with the weight stack 112. However, a single guide member 130, or a plurality of guide members 130 greater than two, may be associated with the weight stack 112 in other embodiments of the present invention.
while two guide members 134 are shown and described as being associated with the resistance selector 132 in the example embodiments, a single guide member 134, or a plurality of guide members 134 greater than two, may be used in association with the resistance selector 132.

[0025] During use of the apparatus 100, a user pulls on the handle 118 to actuate the cable and pulley system 106. When the handle 118 is displaced sufficiently downwardly or laterally away from the frame 104 (or both downwardly and laterally away from the frame 104), the first cable 118 causes the linear bearing structure 124 to be downwardly displaced along its associated guide member 126. This in turn causes the second cable 128 to be displaced causing any weight plates 114 of the weight stack 112 that are engaged by the resistance selector 132 to be displaced upwardly along their associated guide members 130. Since the resistance selector 132 is engaged with one or more weight plates 114 and the selector rod 110, it too is displaced along its associated guide members 134 in a manner corresponding with the displaced weight plates 114.

[0026] It is noted that the apparatus 100 described with respect to FIG. 1 is merely an example and that the present invention may be used in conjunction with a variety of configurations, regardless of the number of pulleys and cables or the specific arrangement of the various components. As such, and as will be appreciated by those of skill in the art, the apparatus 100 described with respect to FIG. 1 should not be considered limiting to the practice of the presently disclosed invention.

[0027] Referring to FIG. 2, a perspective view of a resistance selector 132, or a resistance selection mechanism, is shown in relationship to a weight stack 112. As previously noted, the weight stack 112 may include a plurality of discrete plates 114 that are slidably coupled to guide members 130. For example, two guide members 130 may each extend through corresponding openings in the weight plates 114. In this manner, the guide members 130 act as linear bearings for the displacement of the weight plates 114.

[0028] The resistance selector 132 may include a body portion 140 (referred to herein simply as a body for convenience) that is slidably coupled with associated guide members 134. The guide members 134 associated with the resistance selector 132 and the guide members associated with the weight plates 114 are laterally spaced from one another and extend substantially parallel with respect to each other. A selector pin 142 or other structure is slidably coupled to the body 140 of the resistance selector 132. A handle 144 may be coupled to an end of the selector pin 142 for ease of manipulation and operation by a user of the exercise apparatus 100. The selector pin 142 is configured to be displaced relative to the body 140 and the weight stack 112 in a direction that is generally transverse to the orientation of the selector rod 110.

[0029] When in an engaged position, the selector pin 142 extends through a channel 146 formed in a selected weight plate 114 and into a corresponding opening 148 formed in the selector rod 110. By engaging the channel 146 of a weight plate 114 and a corresponding opening 148 of the selector rod, the selector pin 142 becomes, in effect, a bearing member such that the weight of the selected weight plate 114, and the weight of all weight plates in the weight stack that are above the selected weight plate 114, bear on the selector pin 142 as the selector rod 110 is displaced upward during operation of the exercise apparatus 100.

[0030] When the selector pin 142 is disengaged from the selector rod 110 and any of the weight plates 114, the body 140 of the resistance selector 132 may be displaced along the guide members 134 relative to the weight stack 112 so that the selector pin 142 may be inserted into and engage a different selected weight plate 114 and effect a change in the amount of weight being coupled to and displaced by the selector rod 110.

[0031] In one embodiment, the selector pin 142 may be limited in its displacement relative to the body 140. In other words, a retaining device or structure may allow the selector pin 142 to be displaced far enough to disengage from any of the weight plates 114, but not far enough such that it disengages or is removed from the body 140. For example, referring briefly to FIG. 3A, a cross-sectional view is shown of a portion of the selector pin 142 as it interacts with an opening of the body 140. A shoulder portion 148 may be formed in the selector pin 142 that exhibits an increased cross-sectional area as compared to an opening 150 in the body through which the selector pin 142 extends. When the selector pin 142 is in a disengaged position, such as when it is displaced away from the weight stack 112 (FIGS. 1 and 2), the shoulder portion 148 abuts the body portion 140 surrounding the opening 150 and limits or prevents further displacement of the selector pin 142 in that direction.

[0032] Referring briefly to FIG. 3B, in another embodiment, a biasing member may be coupled to the selector pin 142 to bias the selector pin 142 into engagement with a weight plate 114 and the selector rod 110. For example, a spring 152 or other biasing member may be disposed between or otherwise coupled to a portion of the selector pin 142 and a portion of the body 140. In the embodiment described with respect to FIG. 3B, the spring 152 becomes compressed when the selector pin 142 is disengaged such that the selector pin 142 is biased back towards its engagement position.

[0033] By restraining the displacement of the selector pin 142 relative to the body 140, the selector pin 142 will be retained by the body 140 and will not be removed from the exercise apparatus. Retaining the selector pin 142 with the body 140 of the resistance selector 132 will prevent the inappropriate use of the selector pin 142 with another, potentially incompatible exercise apparatus. Similarly, such a configuration with prevent the selector pin 142 from becoming lost. Use of a biasing member, such as the spring 152, will also help ensure more complete engagement of the selector pin 142 with the selected weight plate 114 and the selector rod 110. As previously discussed, failure of the selector pin 132 to fully engage the selector rod 110 may result in damage to the apparatus 100, injury to the user, or both.

[0034] Referring now briefly to FIGS. 4 and 5, perspective views of a resistance selector 132 are shown with a single weight plate 114 in both an engaged state (FIG. 4) and a disengaged state (FIG. 5). It is noted that FIG. 4 depicts a selector rod 110 in dashed lines extending through an opening or aperture 154 of the weight plate 114 for purposes of context and clarity. The resistance selector 132 includes similar components as has been discussed hereinabove, but shows that such components may be varied or modified if desired. For example, the body 140 may be configured to exhibit a different geometry than is shown in FIG. 2. Likewise, the handle 144 may be configured, for example, as an elongated handle having certain ergonomic qualities if desired. Additionally, while the embodiment shown in FIG. 2 included a retaining device, a biasing device, or both, which were largely internal
to the body 140 of the resistance selector 132, FIGS. 4 and 5 show in that such features may be incorporated while being external to the body 140 if so desired. For example, a biasing member, shown as a spring 152 may extend between a portion of the body 140 and a portion of the handle 144.

[0035] As seen in FIG. 4, when the selector pin 142 is engaged, it extends through a channel 146 of the weight plate 114 and also through an opening 148 formed in the selector rod 110. As has previously been described, with the selector pin 142 engaged, displacement of the selector rod 110 by the cable and pulley system 106 (FIG. 1) results in corresponding displacement of the weight plate 114 that has been engaged by the selector pin 142, along with any weight plates 114 positioned about the engaged weight plate 114, as well as corresponding displacement of the resistance selector 132.

[0036] As seen in FIG. 5, when the handle 144 is displaced away from the body 140, the selector pin 142 becomes disengaged from the selector rod 110 (not shown in FIG. 5) and the weight plate 114 such that the free end of the selector pin 142 is substantially withdrawn in the body 140 of the resistance selector 132. Thus, the resistance selector 132 is now free to be displaced along its associated guide members 134 independent of any of the weight plates 114 such that it may be selectively positioned relative to the weight stack 112 (FIGS. 1 and 2) and selectively engaged with a desired weight plate 114 of the weight stack 112. As previously noted, in the embodiment described with respect to FIGS. 4 and 5, a spring 152 is positioned between the body 140 and the handle 144. In such a configuration, the spring 152 becomes elongated and in tension when the selector pin 142 is disengaged causing the selector pin to become biased toward engagement with a weight plate 114 and selector rod 110.

[0037] It is noted that, while not specifically depicted in the drawings, a lock or other retainer mechanism may be employed such that, even though the selector pin 142 may be biased towards engagement with a weight plate 114 and the selector rod 110, the selector pin 142 may be locked temporarily in the disengaged state to prevent potential inadvertent engagement with an undesired weight plate 114 when resistance selector 142 being displaced relative to the weight stack 112 along its guide members 134.

[0038] Referring briefly now to FIG. 6, another embodiment of the present invention is shown wherein the resistance selector 132 is coupled with guide members 134 that, while having portions 160 spaced from and parallel to guide members 130 associated with the weight stack 112, the guide members 134 are not directly coupled to the frame 104 (FIG. 1) of the exercise apparatus 100. Rather, the guide members 134 include portions 162 that are coupled to a top-most plate 114 of the weight stack 112, or to some other structure that rests atop the weight stack 112. Such an embodiment, the guide members 134 will also become displaced with the selected weight plates 114 and the resistance selector 142 during operation of the exercise apparatus 100.

[0039] In yet another embodiment, while not expressly shown, it is noted that the body portion 140 of a resistance selector 132, or some other component thereof, may be configured for coupling with additional resistance members, in addition to coupling with the weight plates 114. For example, free weights of a denomination less than that of the weight plates 114 may be individually coupled with a component of the resistance selector 132 (e.g., the body 140) to “fine tune” the resistance provided by the exercise apparatus 100. Thus, in one example, if the weight plates 114 each exhibited a weight of 5 lbs, individual free weights of, for example, 1 lb may be coupled with the body 140 of the resistance selector 132 such that a total resistance may be selected that is not divisible by 5 without a remainder (e.g., a total resistance of 17 lbs or 32 lbs).

[0040] While the invention may be susceptible to various modifications and alternative forms, specific embodiments have been shown by way of example in the drawings and have been described in detail herein. However, it should be understood that the invention is not intended to be limited to the particular forms disclosed. Rather, the invention includes all modifications, equivalents, and alternatives falling within the spirit and scope of the invention as defined by the following appended claims.

What is claimed is:

1. An exercise apparatus comprising:
   a frame;
   at least a first guide member coupled with a portion of the frame;
   a weight stack including a plurality of weight plates associated with the at least a first guide member;
   a selector rod disposed adjacent portions of each weight plate;
   a resistance selector including a selector pin configured to be laterally displaced relative to the weight stack a limited distance between an engaged position and a disengaged position.

2. The exercise apparatus of claim 1, further comprising at least a second guide member having at least a portion laterally spaced from the at least a first guide member, wherein the resistance selector includes a body portion associated with the at least a second guide member, and wherein the selector pin is slidably coupled with the body portion.

3. The exercise apparatus of claim 2, wherein the selector pin extends through at least one opening in the selector rod when in the engaged position and wherein the selector pin is retracted from the selector rod and the weight stack when in the disengaged position.

4. The exercise apparatus of claim 3, wherein the at least a first guide member includes two guide members laterally spaced from one another and extending parallel to one another.

5. The exercise apparatus of claim 4, wherein the two guide members extend through apertures formed in each of the plurality of weight plates.

6. The exercise apparatus of claim 3, wherein the at least a second guide member includes two laterally spaced guide members extending parallel to one another.

7. The exercise apparatus of claim 6, wherein the body portion of the resistance selector is slidably coupled with the two laterally spaced guide members.

8. The exercise apparatus of claim 2, wherein, when the selector pin is in an engaged position, the resistance selector and at least one weight plate of the weight stack are configured to be concurrently displaced along a path defined by the at least a second guide member and a path defined by the at least a second guide member, respectively.

9. The exercise apparatus of claim 8, wherein, when the selector pin is in a disengaged position, the resistance selector is configured to be displaced along the path defined by the at least a second guide member independent of movement by any weight plate of the weight stack.
10. The exercise apparatus of claim 1, further comprising a biasing member configured and positioned to bias the selector pin towards an engaged position.

11. The exercise apparatus of claim 1, further comprising; at least one pulley coupled with the frame; at least one cable engaging at least a portion of the at least one pulley and being coupled with the selector rod; and a handle coupled with the at least one cable.

12. The exercise apparatus of claim 1, wherein the at least a second guide member is coupled with a portion of the frame.

13. An exercise apparatus comprising:
   a frame;
   a first pair of guide members coupled with the frame;
   a weight stack including a plurality of weight plates slidably coupled with the first pair of guide members;
   a selector rod configured for selective coupling with one or more of the plurality of weight plates;
   at least one pulley coupled with the frame;
   at least one cable engaging at least a portion of the at least one pulley and being coupled with the selector rod;
   a handle coupled with the at least one cable;
   a second pair of guide members laterally spaced from the first pair of guide members; and
   a resistance selector comprising:
     a body portion slidably coupled with the second pair of guide members,
     a selector pin slidably coupled with the body portion and limited to displacement between an engaged position, wherein the selector pin extends through an opening formed in the selector rod, and a disengaged position, wherein the selector pin is retracted from the selector rod and any weight plate of the plurality; and
     a biasing member located and configured to bias the selector pin toward the engagement position.

14. A resistance selector for selectively engaging a desired component of an exercise apparatus, comprising:
   a body portion configured for slidably coupling with at least one guide member of the exercise apparatus;
   a selector pin slidably coupled with the body portion and configured for limited displacement between an engaged position, wherein the selector pin extends through the body portion and a free end of the selector pin projects beyond a surface of the body portion, and a disengaged position, wherein the free end of the selector pin is substantially retracted within the body portion; and
   a biasing member located and configured to bias the selector pin toward the engaged position.

15. The resistance selector of claim 14, further comprising a handle coupled to an end of the selector pin opposite the free end of the selector pin.

16. The resistance selector of claim 15, wherein the biasing member includes a spring.

17. The resistance selector of claim 16, wherein the spring is in a compressed state when the selector pin is in the disengaged position.

18. The resistance selector of claim 16, wherein the spring is in a tensile state when the selector pin is in the disengaged position.

19. The resistance selector of claim 14, wherein the body portion is configured to be slidably coupled with a pair of laterally spaced guide members.

20. A method of operating an exercise apparatus, the method comprising:
   disposing a resistance selector adjacent a weight stack of the exercise apparatus, the weight stack including a plurality of weight plates associated with at least one first guide member;
   displacing the resistance selector along a path defined by at least a second guide member associated with the resistance selector;
   engaging a first weight plate of the plurality with a selector pin of the resistance selector; and
   concurrently displacing the at least one weight plate and the resistance selector.

21. The method according to claim 20, further comprising disengaging the selector pin from the first weight plate, further displacing the resistance selector along the path defined by the at least a second guide member, and engaging a second weight plate of the plurality with the selector pin.

22. The method according to claim 21, further comprising slidably coupling the selector pin with a body portion of the resistance selector and slidably coupling the body portion with the at least a second guide member.

23. The method according to claim 21, further comprising biasing the selector pin towards engagement with at least one weight plate of the plurality.

24. The method according to claim 23, wherein biasing the selector pin towards engagement with at least one weight plate of the plurality further includes positioning a spring between the body portion and a portion of a handle coupled with the selector pin.

25. The method according to claim 21, further comprising limiting the distance the selector pin may be displaced between engaging the first weight plate and disengaging the first weight plate.

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