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(54) **SPOTTING BAR FOR WEIGHT LIFTING AND METHOD OF USE**

(71) Applicant: **PowerLifting Ultra Support Systems, LLC, dba PLUS Systems**, Eugene, OR (US)

(72) Inventor: **Jeff Henseler**, Eugene, OR (US)

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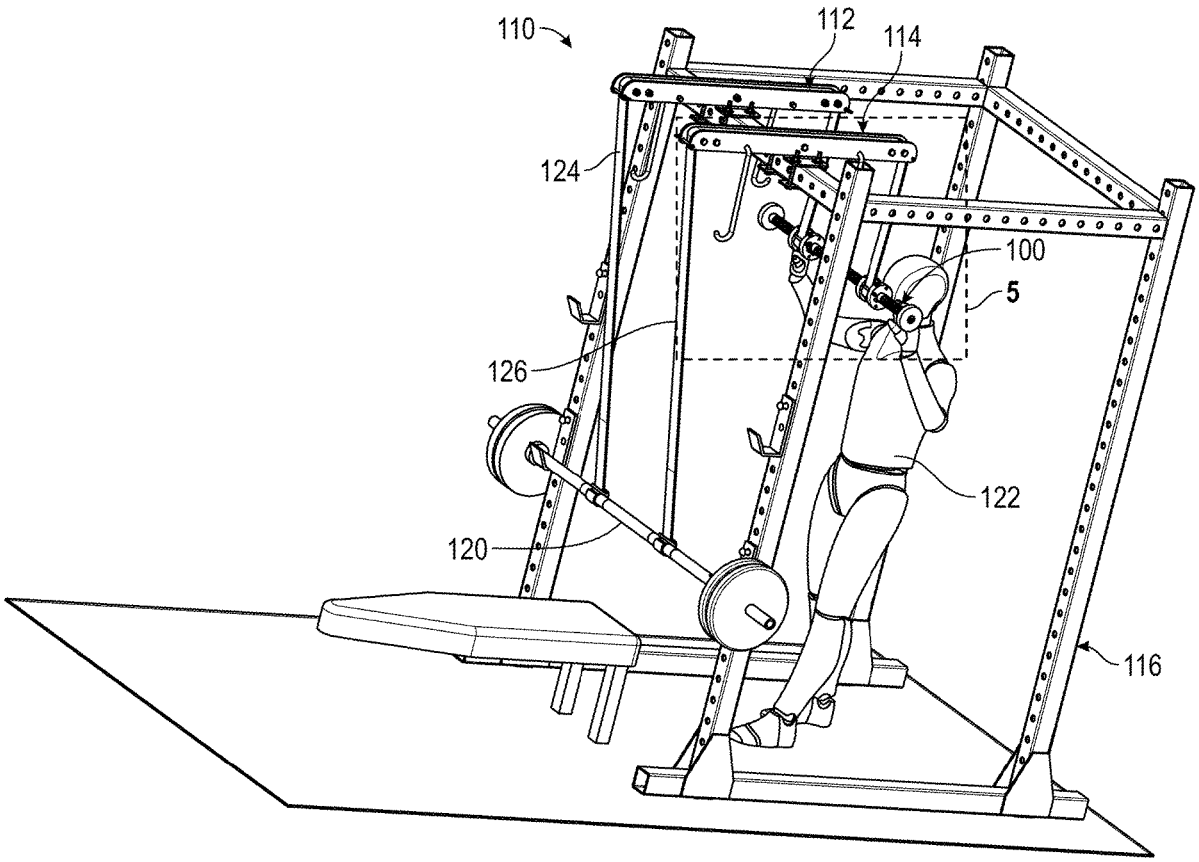
(57) **ABSTRACT**

A variable height adjusting spotting bar for a spotting system for spotting lifting of weights engaged to a barbell, the spotting system including one or more flexible members coupled to the barbell, comprising one or more bar sections configured to be gripped by a spotter; one or more flexible member take-up spools configured to roll up or roll down along the one or more flexible members to set the variable height adjusting spotting bar to an optimal height for the spotter to provide the best ergonomic force to assist a lifter of the barbell.



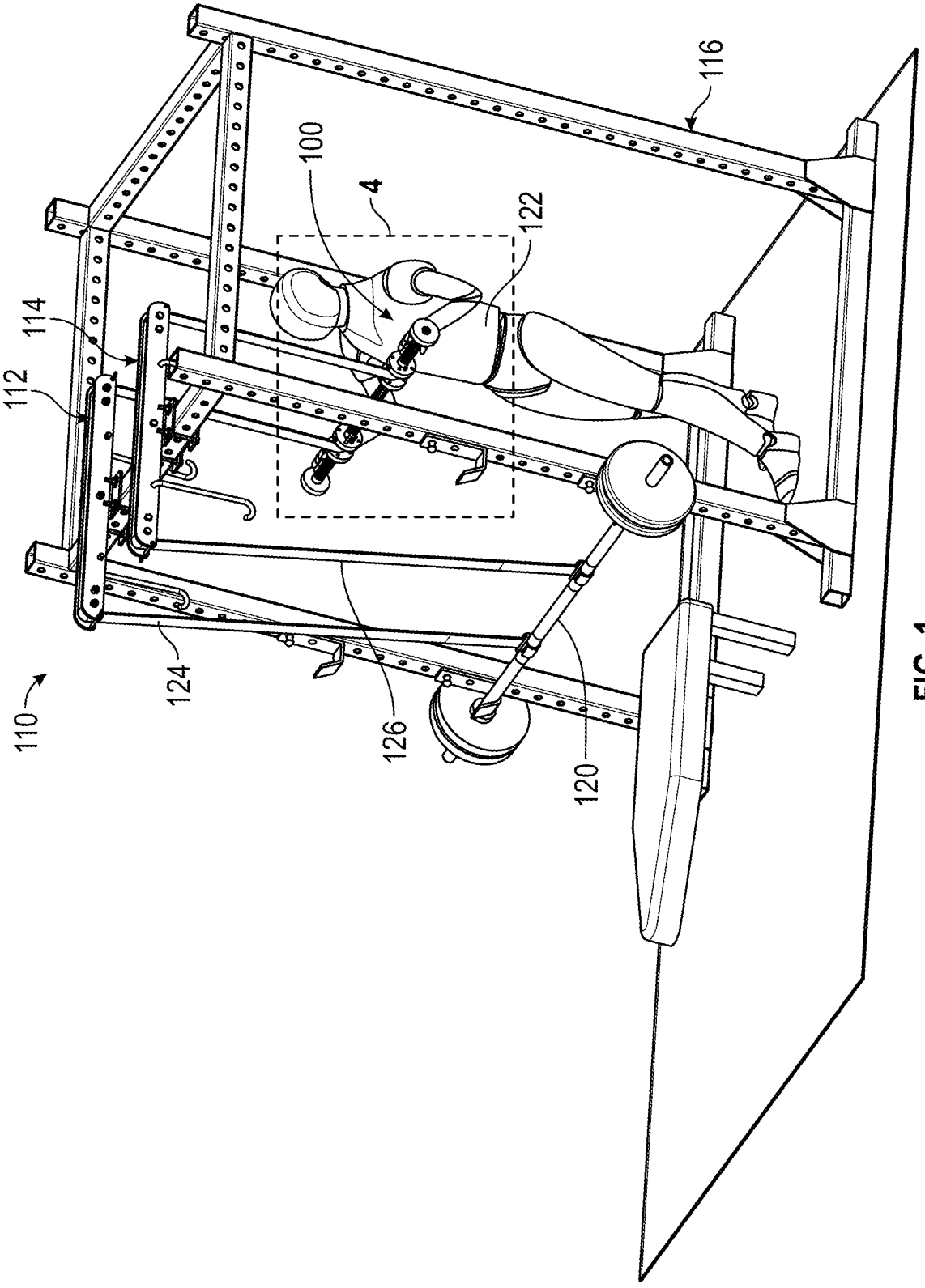


FIG. 1

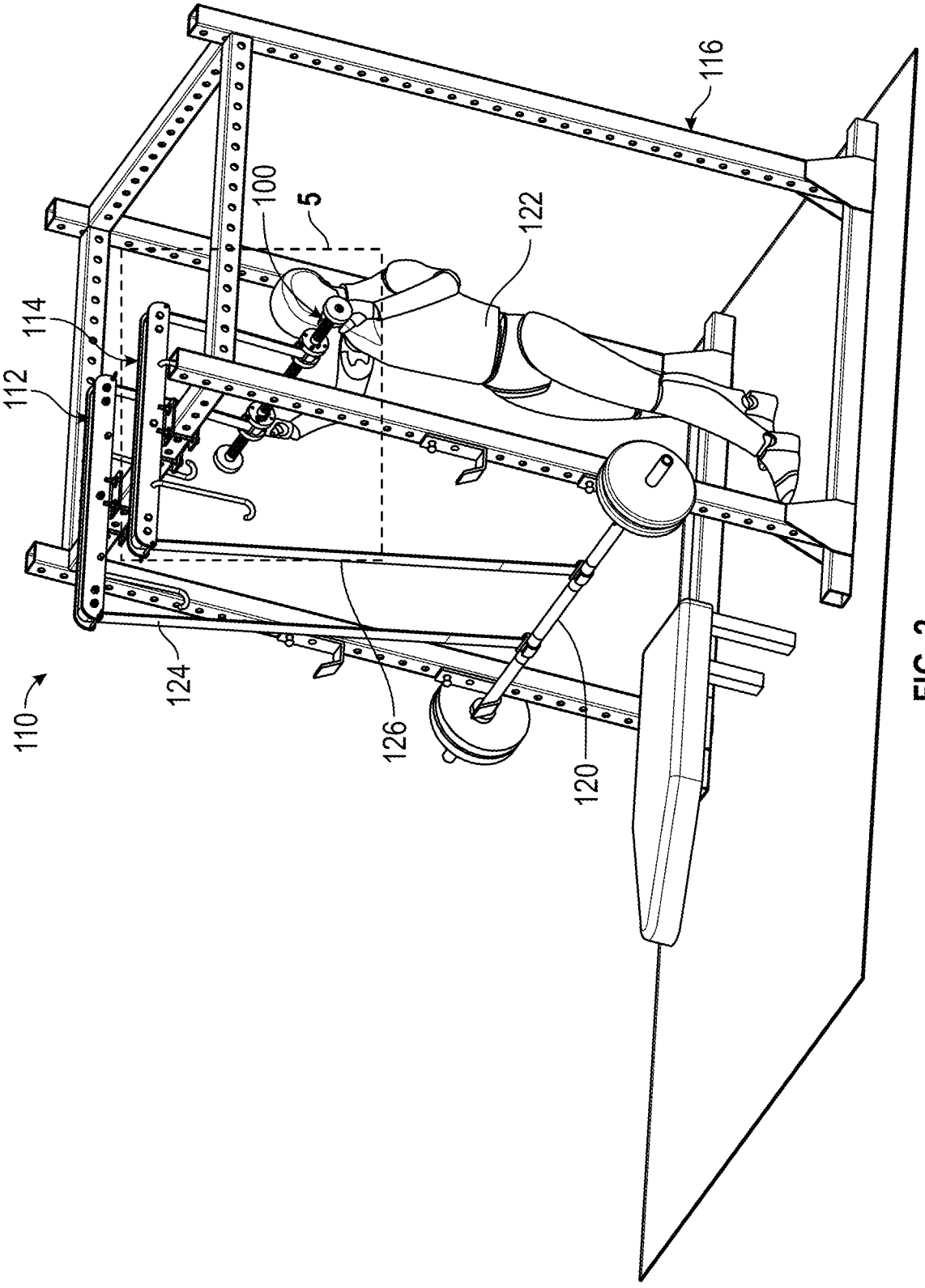
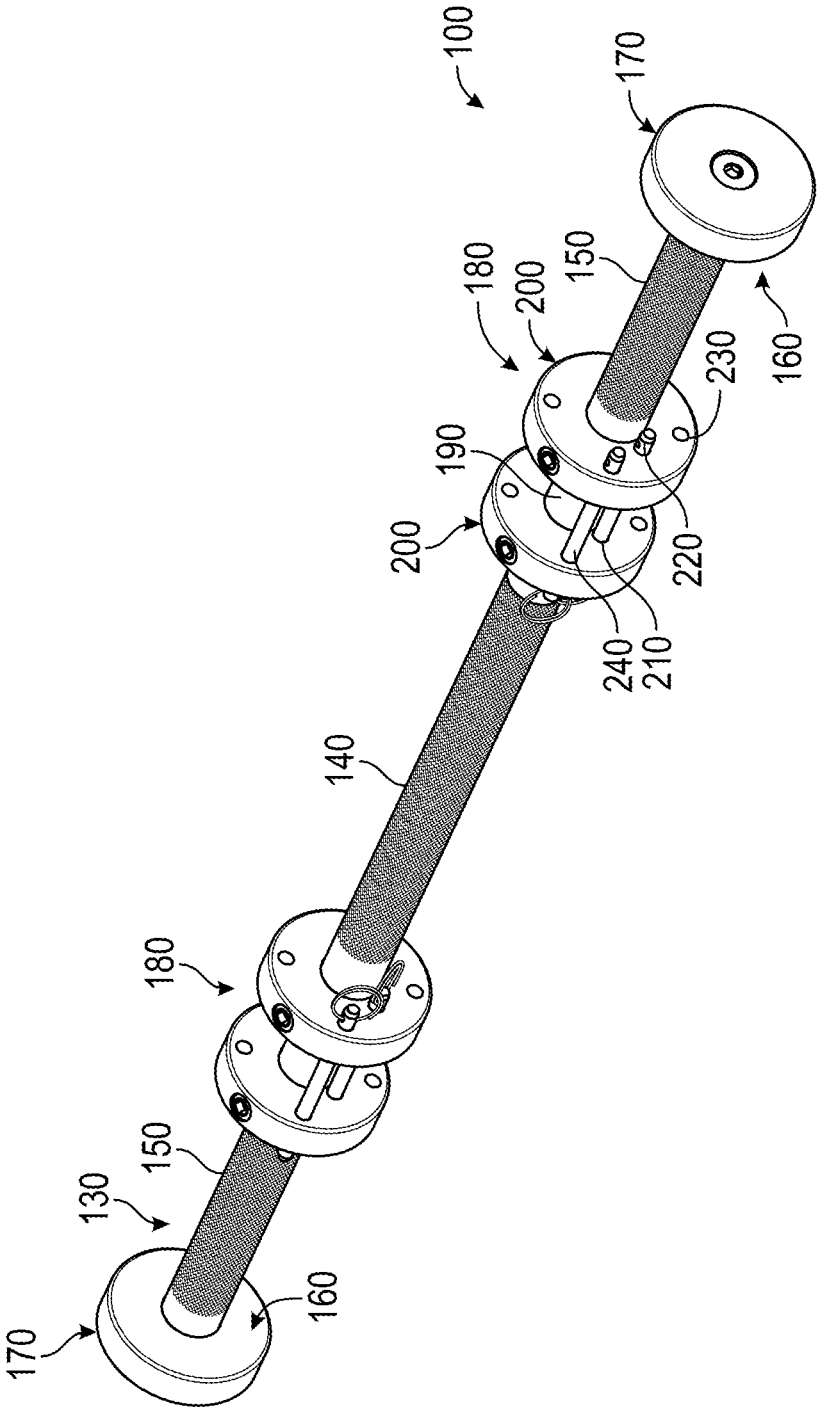


FIG. 2


100
170
180
200
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160
230
190
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220
240
210
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130
160
170

FIG. 3

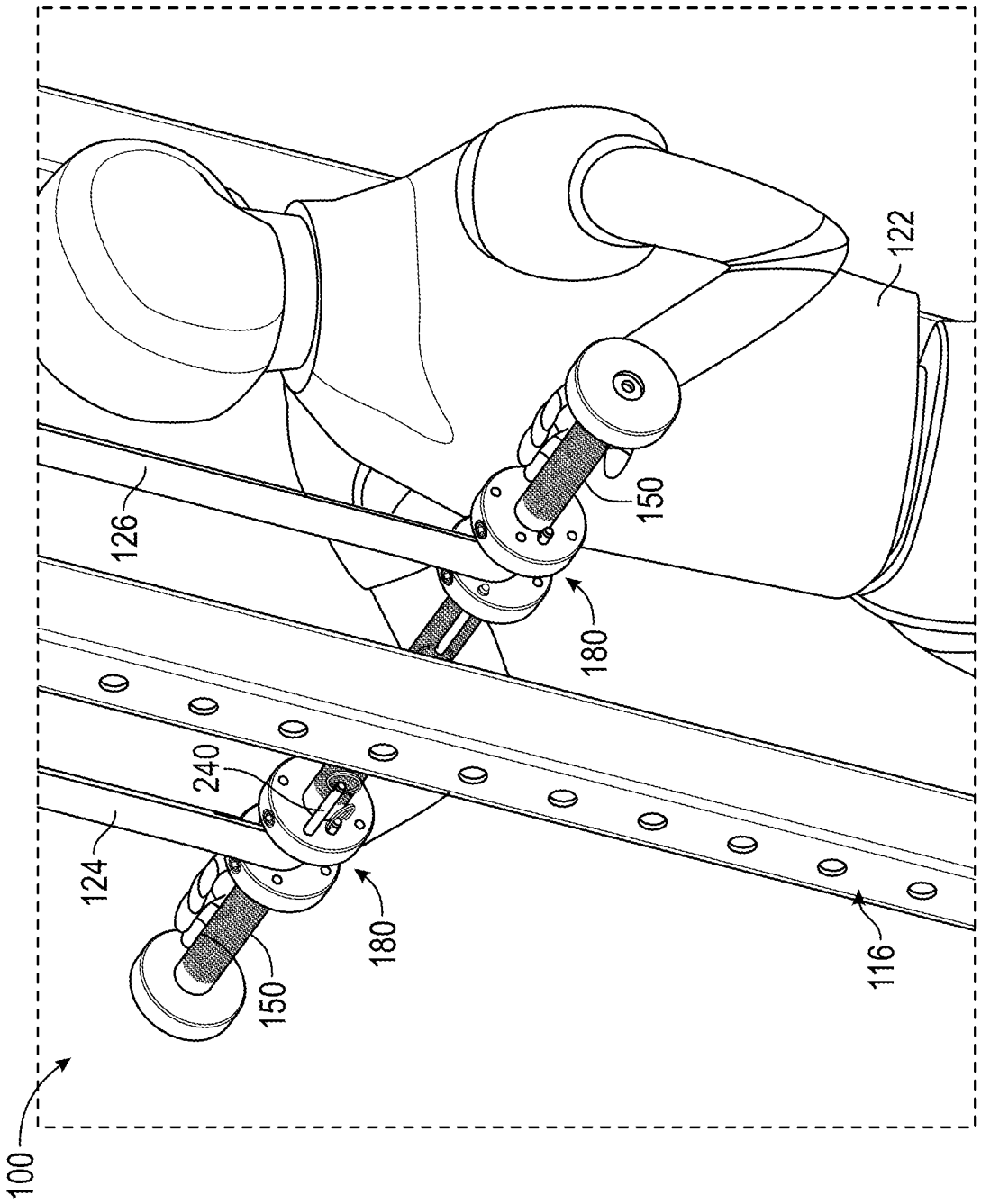

FIG. 4

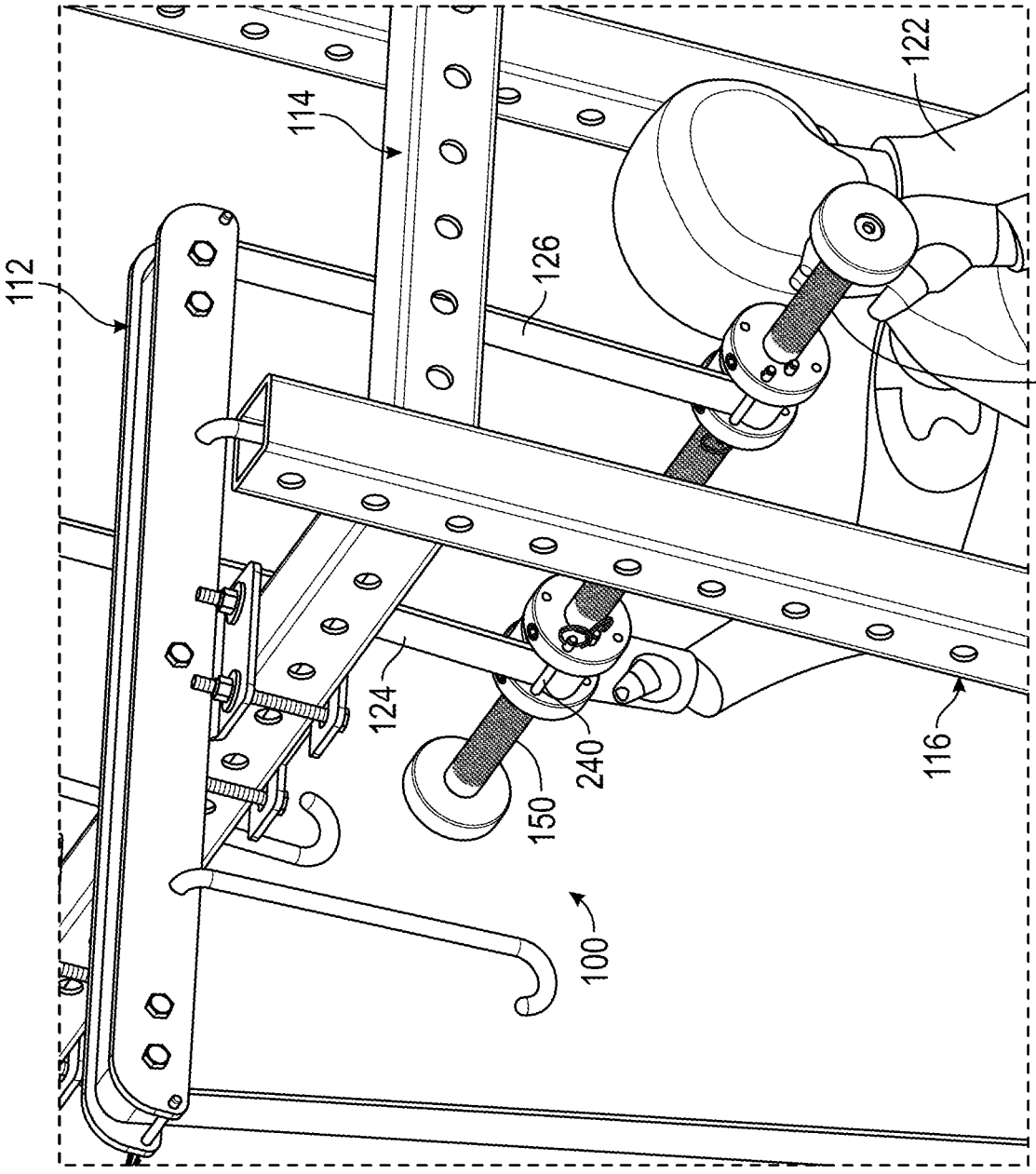

FIG. 5

SPOTTING BAR FOR WEIGHT LIFTING AND METHOD OF USE

BACKGROUND OF THE INVENTION

1. Field of the Invention

[0001] The invention herein disclosed relates generally to weight lifting. More particularly, it relates to a spotting bars of spotting systems configured for engagement to power lifting rack stations.

2. Prior Art

Background of the Invention:

[0002] Weightlifting conventionally refers to activities wherein people exercising lift weights. Such weightlifting often is accomplished through the lifting of dumbbells or barbells.

[0003] For both sport and exercise, people lift various kinds of weights for a variety of different reasons. Such for example may include competition to determine which competitor can lift the most weight for the promotion of health and fitness. For non-competition, people will lift weights to develop physical strength and to enhance posture as well as bone density. Power lifting is a form of weight lifting which is a strength sport that consists of three attempts at maximal weight on three types of lifts. Such includes squatting, bench pressing and the deadlift.

[0004] As with any sport, athletes will endeavor between competitions to train using barbells and free weights as well as weight and exercise machines. Conventionally, rack stations are widely employed by people who use barbells during exercise and practice sessions with weights. Such rack stations conventionally will include a frame which will have two side sections and a central frame section which overhangs the area where a user will lift weights thereunder. For example, and in no way limiting, a bench press will include a bench positioned between the sidewalls of the frame forming the rack and underneath the central frame section. The user laying upon the bench will lift a barbell over their upper body multiple times.

[0005] A second person will normally act as a spotter and stand adjacent the person lifting the barbell. They must be ready to help lift the barbell along with the person using it, in case the lifting person cannot continue, or in many cases, to aid the person lifting the barbell during exercise.

[0006] The person acting as a spotter in most cases must have sufficient strength to lift the barbell from the person lifting should the person lifting not be able to continue to lift the barbell. In many cases this limits the available persons to act as a spotter to those with strength to lift the barbell themselves. Further, in most instances, the person lifting weights is limited to the accompanying of a spotter during exercises where they are lying down on a bench since it would be physically awkward if not impossible to aid a standing weightlifter during overhead lifts of a barbell.

[0007] With respect to the above, before explaining at least one preferred embodiment of the spotting bar of a spotting system for weight and power lifting herein, it is to be understood that the disclosure is not limited in its application to the details of employment and to the arrangement of the components or the steps set forth in the following description or illustrated in the drawings. The various components and construction of the disclosed spotting bar of, for example, a rack-engageable system for spotting of weight and power lifting and the methods and steps of employment thereof are capable of other embodiments and of being practiced and carried out in various ways. All such variations will be obvious to those skilled in the art once the information herein is reviewed and, thus, are considered within the scope of this disclosure and which are considered within the scope of this application.

[0008] Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting. As such, those skilled in the art will appreciate that the conception upon which this disclosure is based may readily be utilized as a basis for other spotting bars and/or rack-engageable weight spotting systems. It is important, therefore, that the embodiments, objects, and claims herein, be regarded as including such equivalent construction, operation and methodology, insofar as they do not depart from the spirit and scope of the present disclosure.

SUMMARY OF THE INVENTION

[0009] An aspect of the disclosure involves a variable height adjusting spotting bar for a spotting system for spotting lifting of weights engaged to a barbell, the spotting system including one or more flexible members coupled to the barbell comprising one or more bar sections configured to be gripped by a spotter; one or more flexible member take-up spools configured to roll up or roll down along the one or more flexible members to set the variable height adjusting spotting bar to an optimal height for the spotter to provide the best ergonomic force to assist a lifter of the barbell.

[0010] One or more implementations of the aspect of the disclosure described immediately above includes one or more of the following: the one or more flexible member take-up spools include a locking mechanism configured to lock in the optimal height of the variable height adjusting spotting bar; the locking mechanism includes an adjustment pin removably insertable with respect to the one or more flexible member take-up spools to lock in an amount of the one or more flexible members spooled within the one or more flexible member take-up spools; the one or more flexible member take-up spools include one or more sets of adjustment pin holes that the adjustment pin is removably insertable within to lock in an amount of the one or more flexible members spooled within the one or more flexible member take-up spools; the one or more flexible member take-up spools include a plurality of sets of adjustment pin holes that the adjustment pin is removably insertable within to fine tune a lock in amount of the one or more flexible members spooled within the one or more flexible member take-up spools; the one or more flexible member take-up spools include an anchor mechanism configured to secure an end of the one or more flexible members to the one or more flexible member take-up spools; the one or more flexible member take-up spools include a spool bar section configured to allow the one or more flexible members to roll up thereon or roll down therefrom and a pair of spool collars configured constrain the one or more flexible members therebetween; the one or more flexible member take-up spools include a pair of flexible member take-up spools; the one or more bar sections configured to be gripped by a spotter include one or more inside grip sections and one or more outside grip sections; and/or the one or more bar

sections configured to be gripped by a spotter include an inside grip section and a pair of outside grip sections.

[0011] Another aspect of the invention involves a method of using a variable height adjusting spotting bar for a spotting system for spotting lifting of weights engaged to a barbell, the spotting system including one or more flexible members coupled to the barbell comprising one or more bar sections configured to be gripped by a spotter, and one or more flexible member take-up spools configured to roll up or roll down along the one or more flexible members to set the variable height adjusting spotting bar to an optimal height for the spotter to provide the best ergonomic force to assist a lifter of the barbell, the method comprising receiving a spotter's grip at the one or more bar sections to roll the variable height adjusting spotting bar up or down; rolling the variable height adjusting spotting bar up or down to the optimal height by rolling up or rolling down the one or more flexible member take-up spools along the one or more flexible members to the optimal height.

[0012] One or more implementations of the aspect of the disclosure described immediately above includes one or more of the following: the one or more flexible member take-up spools include a locking mechanism configured to lock in the optimal height of the variable height adjusting spotting bar, and the method further comprising locking in the optimal height of the variable height adjusting spotting bar with the locking mechanism; the locking mechanism includes an adjustment pin removably insertable with respect to the one or more flexible member take-up spools to lock in an amount of the one or more flexible members spooled within the one or more flexible member take-up spools, and locking includes locking in the optimal height of the variable height adjusting spotting bar with the adjustment pin, preventing the one or more flexible members from unspooling; the one or more flexible member take-up spools include one or more sets of adjustment pin holes that the adjustment pin is removably insertable within to lock in an amount of the one or more flexible members spooled within the one or more flexible member take-up spools, and locking includes locking in the optimal height of the variable height adjusting spotting bar with the adjustment pin in the one or more sets of adjustment pin holes, preventing the one or more flexible members from unspooling; the one or more flexible member take-up spools include a plurality of sets of adjustment pin holes that the adjustment pin is removably insertable within to fine tune a lock in amount of the one or more flexible members spooled within the one or more flexible member take-up spools, and locking includes fine tune locking in the optimal height of the variable height adjusting spotting bar with the adjustment pin in one of the plurality of sets of adjustment pin holes, preventing the one or more flexible members from unspooling; the one or more flexible member take-up spools include an anchor mechanism configured to secure an end of the one or more flexible members to the one or more flexible member take-up spools, and the method further comprising securing the end of the one or more flexible members to the one or more flexible member take-up spools with the anchor mechanism; and/or the one or more flexible member take-up spools include a spool bar section configured to allow the one or more flexible members to roll up thereon or roll down therefrom and a pair of spool collars configured constrain the one or more flexible members therebetween, and the method further comprising rolling up the spool bar section on or rolling the spool bar section from the one or more flexible members while constraining the one or more flexible members between and with the pair of spool collars.

BRIEF DESCRIPTION OF DRAWING FIGURES

[0013] The accompanying drawings, which are incorporated herein and form a part of the specification, illustrate some, but not the only or exclusive examples of embodiments and/or features of the disclosed spotting bar for a rack-engageable spotting system herein. It is intended that the embodiments and figures disclosed herein are to be considered illustrative of the invention herein, rather than limiting in any fashion.

[0014] FIG. **1** shows a perspective view of an exemplary weight rack-engageable spotting system and a spotting bar used therewith and with the flexible members of a spotting system rolled slightly up on the spotting bar.

[0015] FIG. **2** shows a perspective view similar to FIG. **1**, but shows the flexible members of a spotting system rolled further up on the spotting bar compared to FIG. **1**.

[0016] FIG. **3** is a perspective view of the spotting bar of FIGS. **1-2**.

[0017] FIG. **4** is an enlarged perspective view of area **4** of FIG. **1** with the flexible members of a spotting system shown rolled slightly up on the spotting bar.

[0018] FIG. **5** is an enlarged perspective view of area **5** of FIG. **2** with the flexible members of a spotting system shown rolled further up on the spotting bar compared to FIG. **1**.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS OF THE INVENTION

[0019] With reference to FIGS. **1-5**, a variable height adjusting spotting bar ("spotting bar") **100** for use with a weight rack-engageable spotting system **110** will be described after first generally describing the rack-engageable spotting system **110**. In alternative embodiments, the spotting bar **100** may be used with or as a part of other types of spotting systems other than the weight rack-engageable spotting system **110**.

[0020] The weight rack-engageable spotting system **110** includes a first support arm **112** and a second support arm **114** both of which are configured for engagement to a central portion of an overhanging member of a conventional weight machine rack **116**. The spotting system **100** enables a user when lifting a barbell **120** to be aided by a spotter **122** during exercise. One or more flexible members/straps such as a first flexible member/strap **124** and a second flexible member/strap **126** are both removably engaged at respective first ends, to the barbell **120**. The respective second ends of each of the first flexible member **124** and second flexible member **126**, are engaged to the spotting bar **100**. During lifting of the barbell **120** by the user, the spotter **122** can aid the user by imparting downward force upon the spotting bar **100**. Downward pressure exerted on the spotting bar **100** is communicated by the first flexible member **124** and second flexible member **126** as upward force to the barbell **120**. In this fashion, the spotter **122** can exert more or less downward pressure as necessary to aid the lifting of the barbell **120** by a user.

[0021] The variable height adjusting spotting bar **100** will now be described in more detail. The spotting bar **100** includes one or more bar sections **130** such as, but not

limited to, inside grip bar section **140** and outside grip bar sections **150** with knurling, allowing the spotter **122** to take either an inside grip or outside grip depending on what is most comfortable. In alternative embodiments, the spotting bar **100** may have one or more inside grip bar sections **140**. Opposite ends **160** of the spotting bar **100** may include end collars **170**. One or more (e.g., two) take-up spools **180** are disposed between the opposite ends **160**. The take-up spool (s) **180** include spool bar section **190**, spool collars **200**, anchor pin holes **210** that accommodate removable anchor pin **220**, and one or more sets of adjustment pin holes (e.g., four sets) **230** that accommodate removable adjustment pin **240**.

[0022] With reference to FIGS. **4** and **5**, the variable height adjusting spotting bar **100** will now be described in use. The flexible members/straps **124**, **126** attach to the spotting bar **100** using the anchor pins **220**, which are also closest to the spool bar sections **190**. Ends of the straps **124**, **126** may include sewn ends that the anchor pins **220** are threaded through and the anchor pins **220** are locked in place in the anchor pin holes **210**. Thus, the anchor pins **220**/anchor pin holes **210** form an anchor mechanism to secure an end of the straps **124**, **136** to the take-up spool(s) **180**. This prevents the straps **124**, **126** from slipping off any time. Depending on the lift and/or height of the spotter **122**, once attached, the spotting bar **100** is adjusted in height using the strap take-up spools **180**. The spotter **122** can roll up or down the spotting bar **100** along the straps **124**, **126** and set in the adjustments pins **240** to fine tune and lock in the optimal height of the spotting bar **100** for the best ergonomic force to assist the lifter. The spool bar section **190** allows the straps **124**, **126** to roll up thereon or roll down therefrom, and the pair of spool collars **200** constrain the straps **124**, **126** therebetween. When the height of the spotting bar **100** is set, the adjustment pins **240** are locked into the closest set of adjustment pin holes **230** so that when the spotting bar **100** is released, the straps **124**, **126** will rest against the adjust pin adjustment pins **240**, locking the height of the spotting bar **100** and locking in an amount of the straps **124**, **126** spooled within the take-up spool(s) **180**. Thus, the adjustment pins **240**/ adjustment pin holes **230** form a locking mechanism to lock in and finally tune the optimal height of the variable height adjusting spotting bar **100**. Adjusting the height of the spotting bar **100** is necessary depending on the height of the spotter **122** and/or the type of lift the lifter is doing. FIGS. **4** and **5** show the spotting bar **100** at two different heights and the strap take-up spool(s) **180** at two different angles. The removable adjustment pin **240** has four different adjustment pin holes **230** it can be inserted into, allowing the spotter **122** to fine tune the height of the spotting bar **100** by a few inches with each adjustment pin hole **230**. In alternative embodiments, other numbers of adjustment pin holes **230** (e.g., 1, 2, 3, 5) may be used. The strap take-up spools **180** are capable of taking up or letting out up to 36" of strap, which accommodates a variety of different spotter heights.

[0023] While all of the fundamental characteristics and features of the disclosed spotting bar **100** herein have been shown and described herein, with reference to particular embodiments thereof, a latitude of modifications, various changes and substitutions are intended in the foregoing disclosure and it will be apparent that in some instances, some features of the spotting bar **100** may be employed without a corresponding use of other features thereof, without departing from the scope of the invention as set forth. It should d also be understood that various substitutions, modifications, and variations may be made by those skilled in the art upon their review of this specification, without departing from the spirit or scope of the device and system herein. Consequently, all such modifications and variations and substitutions are included within the scope of the invention as defined by the following claim(s).

What is claimed is:

1. A variable height adjusting spotting bar for a spotting system for spotting lifting of weights engaged to a barbell, the spotting system including one or more flexible members coupled to the barbell, comprising:

one or more bar sections configured to be gripped by a spotter;

one or more flexible member take-up spools configured to roll up or roll down along the one or more flexible members to set the variable height adjusting spotting bar to an optimal height for the spotter to provide the best ergonomic force to assist a lifter of the barbell.

2. The variable height adjusting spotting bar of claim **1**, wherein the one or more flexible member take-up spools include a locking mechanism configured to lock in the optimal height of the variable height adjusting spotting bar.

3. The variable height adjusting spotting bar of claim **2**, wherein the locking mechanism includes an adjustment pin removably insertable with respect to the one or more flexible member take-up spools to lock in an amount of the one or more flexible members spooled within the one or more flexible member take-up spools.

4. The variable height adjusting spotting bar of claim **3**, wherein the one or more flexible member take-up spools include one or more sets of adjustment pin holes that the adjustment pin is removably insertable within to lock in an amount of the one or more flexible members spooled within the one or more flexible member take-up spools.

5. The variable height adjusting spotting bar of claim **4**, wherein the one or more flexible member take-up spools include a plurality of sets of adjustment pin holes that the adjustment pin is removably insertable within to fine tune a lock in amount of the one or more flexible members spooled within the one or more flexible member take-up spools.

6. The variable height adjusting spotting bar of claim **1**, wherein the one or more flexible member take-up spools include an anchor mechanism configured to secure an end of the one or more flexible members to the one or more flexible member take-up spools.

7. The variable height adjusting spotting bar of claim **1**, wherein the one or more flexible member take-up spools include a spool bar section configured to allow the one or more flexible members to roll up thereon or roll down therefrom and a pair of spool collars configured constrain the one or more flexible members therebetween.

8. The variable height adjusting spotting bar of claim **1**, wherein the one or more flexible member take-up spools include a pair of flexible member take-up spools.

9. The variable height adjusting spotting bar of claim **1**, wherein the one or more bar sections configured to be gripped by a spotter include one or more inside grip sections and one or more outside grip sections.

10. The variable height adjusting spotting bar of claim **9**, wherein the one or more bar sections configured to be gripped by a spotter include an inside grip section and a pair of outside grip sections.

11. A method of using the variable height adjusting spotting bar of claim **1**, comprising:

receiving a spotter's grip at the one or more bar sections to roll the variable height adjusting spotting bar up or down;

rolling the variable height adjusting spotting bar up or down to the optimal height by rolling up or rolling down the one or more flexible member take-up spools along the one or more flexible members to the optimal height.

12. The method of claim **11**, wherein the one or more flexible member take-up spools include a locking mechanism configured to lock in the optimal height of the variable height adjusting spotting bar, and the method further comprising locking in the optimal height of the variable height adjusting spotting bar with the locking mechanism.

13. The method of claim **12**, wherein the locking mechanism includes an adjustment pin removably insertable with respect to the one or more flexible member take-up spools to lock in an amount of the one or more flexible members spooled within the one or more flexible member take-up spools, and locking includes locking in the optimal height of the variable height adjusting spotting bar with the adjustment pin, preventing the one or more flexible members from unspooling.

14. The method of claim **13**, wherein the one or more flexible member take-up spools include one or more sets of adjustment pin holes that the adjustment pin is removably insertable within to lock in an amount of the one or more flexible members spooled within the one or more flexible member take-up spools, and locking includes locking in the optimal height of the variable height adjusting spotting bar with the adjustment pin in the one or more sets of adjustment pin holes, preventing the one or more flexible members from unspooling.

15. The method of claim **14**, wherein the one or more flexible member take-up spools include a plurality of sets of adjustment pin holes that the adjustment pin is removably insertable within to fine tune a lock in amount of the one or more flexible members spooled within the one or more flexible member take-up spools, and locking includes fine tune locking in the optimal height of the variable height adjusting spotting bar with the adjustment pin in one of the plurality of sets of adjustment pin holes, preventing the one or more flexible members from unspooling.

16. The method of claim **11**, wherein the one or more flexible member take-up spools include an anchor mechanism configured to secure an end of the one or more flexible members to the one or more flexible member take-up spools, and the method further comprising securing the end of the one or more flexible members to the one or more flexible member take-up spools with the anchor mechanism.

17. The method of claim **11**, wherein the one or more flexible member take-up spools include a spool bar section configured to allow the one or more flexible members to roll up thereon or roll down therefrom and a pair of spool collars configured constrain the one or more flexible members therebetween, and the method further comprising rolling up the spool bar section on or rolling the spool bar section from the one or more flexible members while constraining the one or more flexible members between and with the pair of spool collars.

* * * * *