United States Patent

Perrine

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[54] LIFTING YOKE

[72] Inventor: **Walter E. Perrine,** 7216 W. Pierson, Phoenix, Ariz. 85033

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[52] **U.S. Cl.** ..... **224/5 P,** 272/84

[51] **Int. Cl.** **A45f 5/00**

[58] **Field of Search** ..... 224/25 A, 5 P, 5 R, 5 BC; 272/80, 81, 84

[56] **References Cited**

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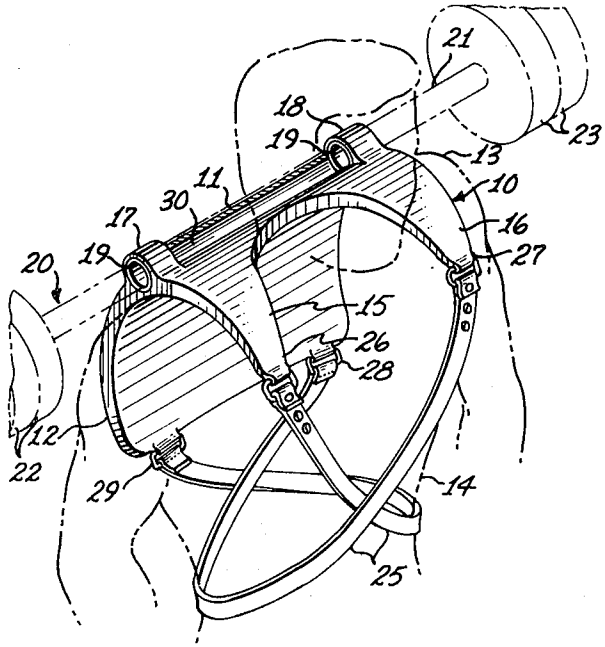
Primary Examiner—Philip Arnold

Attorney—Warren F. B. Lindsley

[57] **ABSTRACT**

A weight lifting yoke for shoulder use wherein the weight is distributed over the shoulders of the wearer and off center of the end of the spinal column.

4 Claims, 6 Drawing Figures



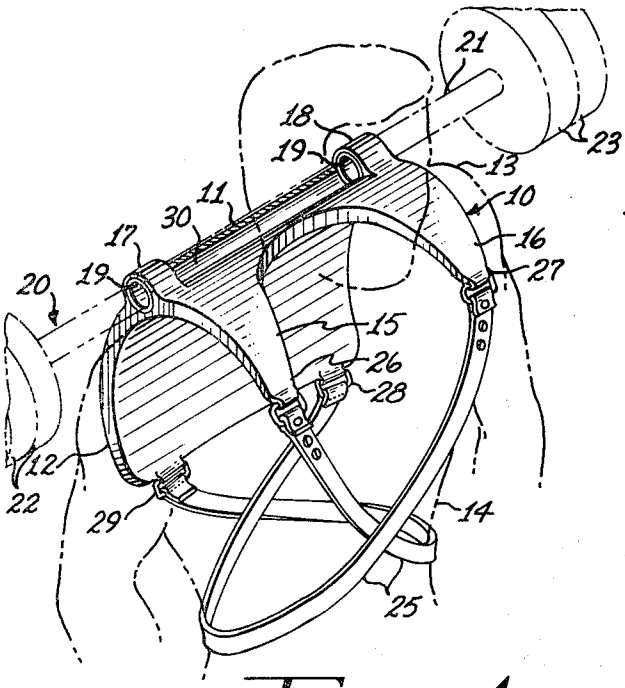


Fig-1

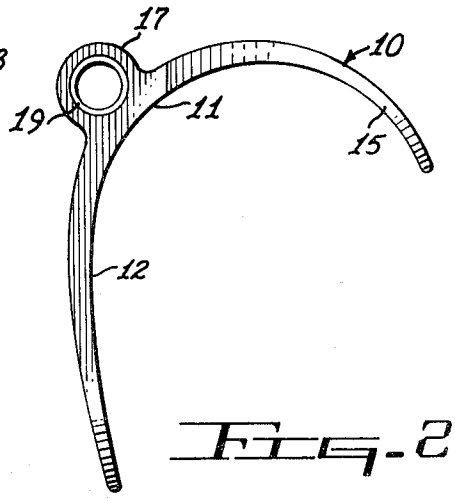


Fig-2

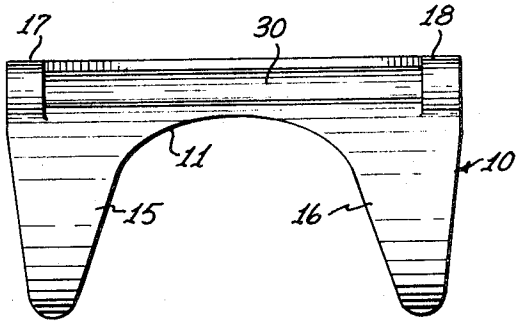


Fig-3

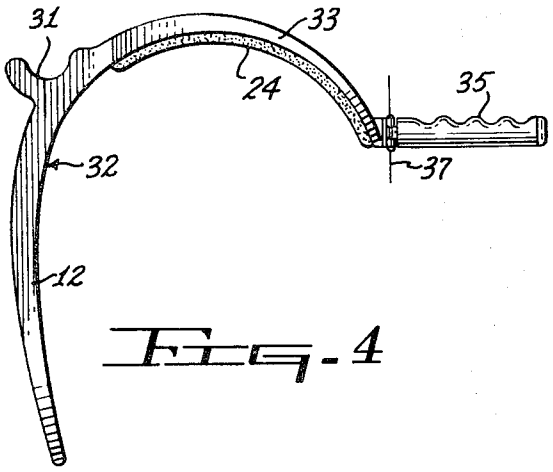


Fig-4

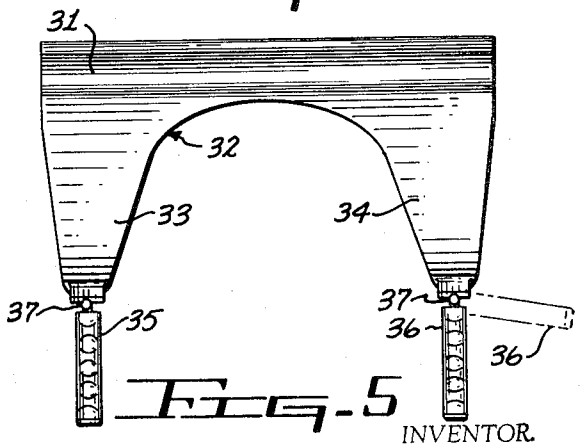


Fig-5

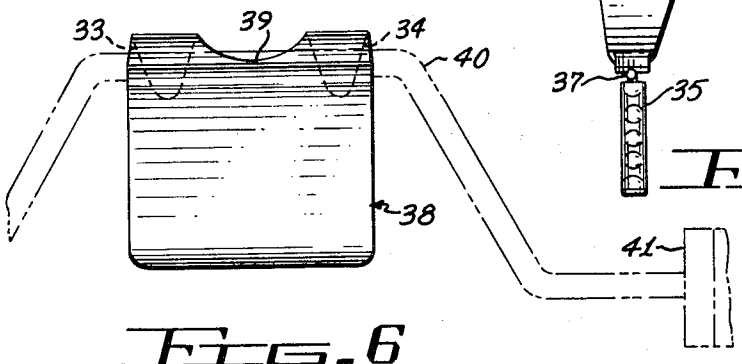


Fig-6

INVENTOR.
WALTER E. PERRINE
BY Warren F.B. Lindsay
ATTORNEY

LIFTING YOKE

BACKGROUND OF THE INVENTION shoulders

This invention relates to weight lifting devices and more particularly to a weight lifting yoke to be worn on the shoulders during walking or exercising.

1. Field Of The Invention

This invention is directed to a weight lifting yoke which distributes the weight lifted on the shoulders of the wearer along the back avoiding the usual pressures on the top of the spinal column. The invention further permits freedom of the arms during walking or leg exercising and provides convenient hand holds for balancing purposes, if so desired.

2. Description Of The Prior Art

Heretofore, weight lifting bars have been supported on the shoulders on or near the upper end of the spinal column of the lifter resulting in pain and extreme inconvenience.

Other types of weight lifting devices have been developed particularly of the type worn on the shoulders during exercising which have supported the weights on either side of the body below the armpits and outside of the body configuration. These latter devices although supporting the weight on the shoulders shifted the position of the weight from the shoulder area to below the arm pits. This is contrary to the style and requirements of weight lifting and thus unacceptable in weight lifting contests.

SUMMARY OF THE INVENTION

In accordance with the invention claimed an improved weight lifting yoke is provided which is worn on he shoulders during walking and exercising use and positions the weights shoulder high with distribution of the weight off the end of the spinal column and along the back of the user.

It is, therefore, one object of this invention to provide an improved weight lifting yoke.

Another object of this invention is to provide an improved yoke for supporting weight lifting bars which distributes the weight on the shoulders and along the back off of the end of the spinal column.

A further object of this invention is to provide an improved weight lifting yoke which provides pivotally mounted hand holding attachments for convenience of the user.

A still further object of this invention is to provide a yoke for carrying hiker packs.

A still further object of this invention is to provide a yoke for easily receiving and attaching to a weight lifting bar while on the back of a user.

Further objects and advantages of the invention will become apparent as the following description proceeds and the features of novelty which characterize this invention will be pointed out with particularity in the claims annexed to and forming part of this specification.

BRIEF DESCRIPTION OF THE DRAWING

The present invention may be more readily described by reference to the accompanying drawing in which:

FIG. 1 is a perspective view of a weight lifting apparatus of the present invention positioned on the shoulders of a user;

FIG. 2 is an enlarged end view of the yoke shown in FIG. 1;

FIG. 3 is a top view of the yoke shown in FIG. 1;

FIG. 4 is an enlarged end view of a modification of the structure shown in FIGS. 1 – 3;

FIG. 5 is a top view of the structure shown in FIG. 4; and

FIG. 6 is a front view of a further modification of the structure shown in FIGS. 1 – 5 wherein a contoured weight supporting rod is shown with the yoke disclosed.

DESCRIPTION OF PREFERRED EMBODIMENT

Referring more particularly to the drawing by characters of reference, FIG. 1 – 3 disclose a weight supporting or lifting device **10** comprising a shoulder contoured form fitting yoke **11**. Yoke **11** consists of a back supporting member **12** supported on the shoulders **13** of a wearer **14** by a pair of contoured arms **15** and **16** which extend from the top of back member **12** over the shoulders **13** of the wearer **14** downwardly over his chest **15** a predetermined distance. Near the crest of the arcuate configuration of the yoke formed by member **12** and arms **15** and **16** are positioned a pair of flanges **17** and **18** each of which are provided with an opening extending substantially horizontally when yoke **11** is on the back of a wearer. Each opening may be lined by a metallic bushing **19**. As shown in FIGS. **1** and **2** flanges **17** and **18** may be formed integral with body member **12** and arm members **15** and **16**.

As noted from FIGS. **1** and **2** flanges **17** and **18** are positioned below the crest of the shoulders of the wearer a predetermined distance down the wearer's back. This is intended to position the weight lifted at a position away frOm the top of the spinal column of the user to avoid pain from the pressure of the weight on this sensitive spot of the human body. It should be recognized from FIG. **1** that the yoke fits around the neck of the wearer but weights will be positioned over and bear on the muscle parts of the shoulder.

FIG. **1** illustrates in dot-dash lines a bar weight **20** of the type used in weight lifting and is positioned through flanges **17** and **18** for bending exercise purposes. The bar weight **20** comprises a shaft **21** adapted to hold selectively a plurality of ordinary weights **22** and **23** which have open casters for receiving the shaft and may be provided with hubs or collars (not shown) having removable set screws or the like for fastening the weights to the shaft. With this arrangement weights may be changed or added to the shaft in the usual manner.

Arms **15** and **16** constitute the sole means for supporting the apparatus from the shoulders of the wearer and may be padded as shown at **24** in FIG. **4** for more comfort.

It is intended to make the apparatus in a few different sizes and slightly different shapes contemplating that young people of small size would be using the device for hiking and exercising purposes as well as older hikers and experienced, professional weightlifters having large shoulders and chest configurations.

The pads shown at **24** in FIG. **4** may be formed from foam plastic material, foam rubber, or other suitable packing material to protect the body from irritation or damage and to reduce considerably any discomfort. The pads may be detachably mounted so that they can be replaced if soiled or damaged.

As shown in FIG. **1** straps **25** may be added to the yoke for aiding in keeping the yoke well centered on the shoulders. Although the straps are not needed for normal weight lifting functions they may be beneficial for hikers. The end of straps **25** are pivotally attached one to each of the ends **26** and **27** of arms **15** and **16** and over lapping on the chest of the wearer and across the back to pivotal connections at points **28** and **29** on the lower periphery of shoulder member **12**.

The top periphery of the back member **12** may be formed with an open groove **30** extending between flanges **17** and **18** and in axial alignment therewith for serving as a cradle for shaft **21** of the bar weight **20**.

FIG. **4** is a modification of the structure shown in FIGS. **1** – **3** wherein the closed flanges **17** and **18** of FIG. **1** – **3** are replaced with an open flange **31** extending across the full width of a yoke **32**. The open flange makes it possible for the wearer to back up under a supported rod and lift the rod and its weights without previously inserting the rods through the closed flanges as in FIGS. **1** – **3**. Although it is stated that the open flange extends across the width of yoke **32** it should be recognized that the flanges may extend across only a portion of the yoke, for example, across only the ends of the yoke in the positions occupied by flanges **17** and **18** in FIGS. **1** – **3**.

Although the configuration of arms **33** and **34** of yoke **32** shown in FIGS. **4** and **5** are of the same geometrical configuration as shown in FIGS. **1** – **3** the terminal ends of the arms are adapted to have pivotally mounted thereon handles **35** and **36**. Each handle is pivotally mounted about a vertical axis **37** so

that they can extend outwardly of the arms in any one of a number of positions or lie flat against the chest of the wearer of the yoke.

FIG. **6** is a further modification of the yokes shown in FIGS. **1 – 5** wherein a yoke **38** is provided with a groove **39** across the top of the yoke as shown in FIGS. **4** and **5** for receiving a weight lifting bar **40** which is bent to position the weights **41** below the shoulders of the weight lifter but maintaining the point of support of the weights across the shoulders in the manner of the structure shown in FIGS. **1 – 5**.

It should be recognized that the yokes shown in the drawings may be made of various materials and still fall within the scope of this invention. Reinforced plastic such as fiber glass has resulted in strong yoke structures.

Although but a few embodiments of the present invention have been illustrated and described it will be apparent to those skilled in the art that various changes and modifications may be made therein without departing from the spirit of the invention or from the scope of the appended claims.

What is claimed is:

1. A yoke for mounting on the shoulders of a human for lifting and carrying a weight, said yoke comprising:

a rigid contoured solid body member for extending downwardly from the shoulders of the wearer toward the small of the back,

a pair of rigid contoured shoulder supporting arm members, each one extending from a different end of the upper periphery of said body member for positioning on opposite sides of the wearer on respective shoulders,

means provided on the upper periphery of said body member and extending substantially horizontally there across when said yoke is mounted on a wearer for receiving and holding a weight,

said means comprising a groove opening upwardly to receive a weight lifting rod, and

closed flanges provided on each end of said groove and defining an opening extending horizontally therethrough and axially aligned with said groove for receiving and supporting said weight lifting rod.

2. The yoke set forth in claim **1** wherein said openings of said flanges are each provided with a bushing.

3. The yoke set forth in claim **1** in further combination with a pair of straps each one pivotally mounted to a different end of said shoulder supporting members and extending to and pivotally connected with the lower peripheral edge of said body member.

4. The yoke set forth in claim **1** in further combination with a pair of hand supports each one pivotally mounted about a substantially vertical axis to a different free end of said shoulder supporting arm members.

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