# United States Patent [19]

**Rhodes et al.**

[11] **3,743,284**

[45] **July 3, 1973**


[54] **ARM WRESTLING DEVICE**


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[73] Assignee: **said Rhodes, by said Freeman**



[22] Filed: **Feb. 22, 1971**

[21] Appl. No.: **117,235**

[52] **U.S. Cl.** ..... **273/1 R,** 272/79 R

[51] **Int. Cl.** ..... **A63f 9/00,** A63b 67/00

[58] **Field of Search** ..... 273/1 R; 272/67, 272/68, 79, 81, 82, 83



[56] **References Cited**

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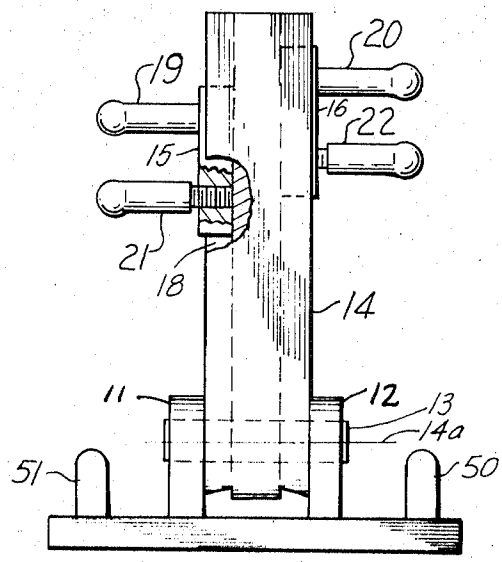
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*Assistant Examiner*—Paul Shapiro
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[57] **ABSTRACT**

A device for use in the athletic contest of arm wrestling which reduces or eliminates the advantage to a participant who has the longer length of arm between elbow and wrist, and prevents either contestant from taking advantage of the other by cocking his wrist. The device includes a pivoted lever with handles to be grasped and, in different embodiments variously includes; a plurality of stackable elbow rest blocks to adjust the elevation of the elbow; a sliding block to which the handle is attached, the sliding blocks being mounted to the pivoted lever on each side thereof, or a plurality of holes on each side of the lever into which the handles may be fitted, to allow adjustment of the spacing between the handles and the pivot; and a second handle on the lever to restrain the wrist from cocking.


**5 Claims, 8 Drawing Figures**



Patented July 3, 1973 3,743,284

2 Sheets-Sheet 1

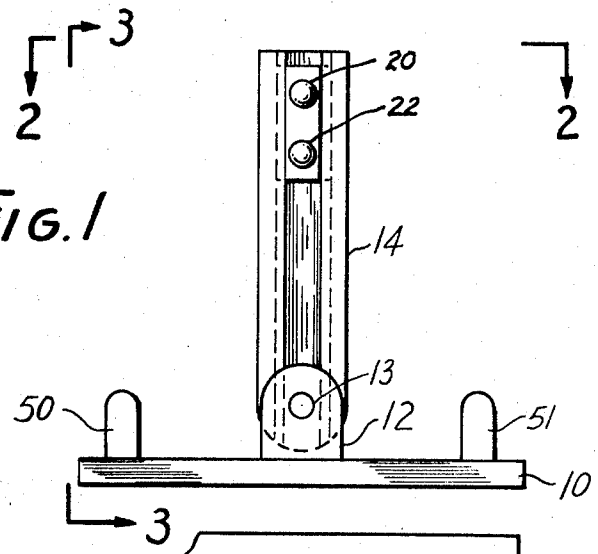



FIG. 1

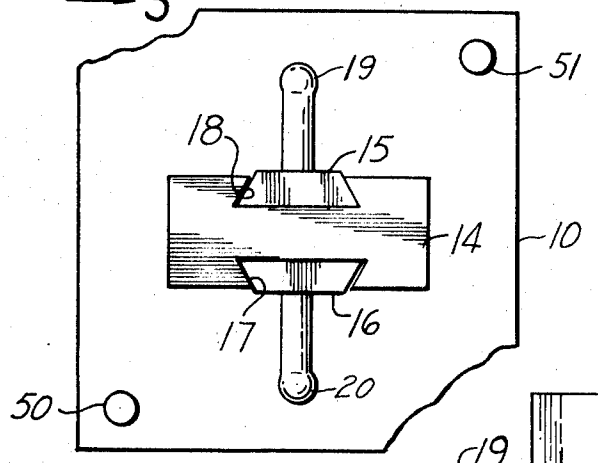
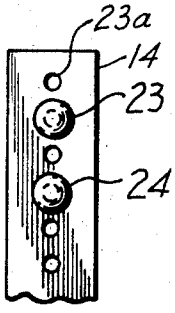



FIG. 2

FIG. 4



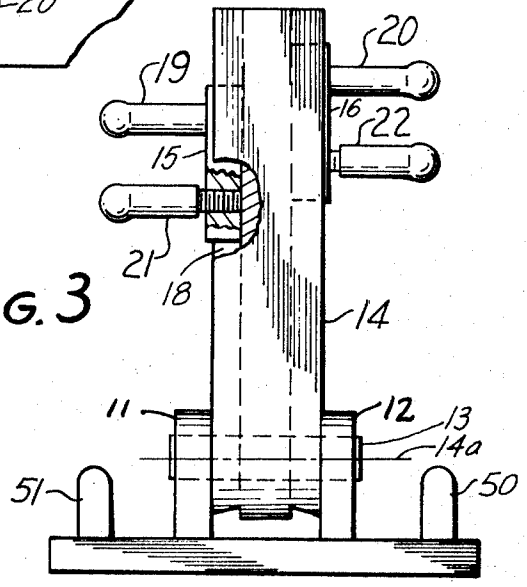




FIG. 3

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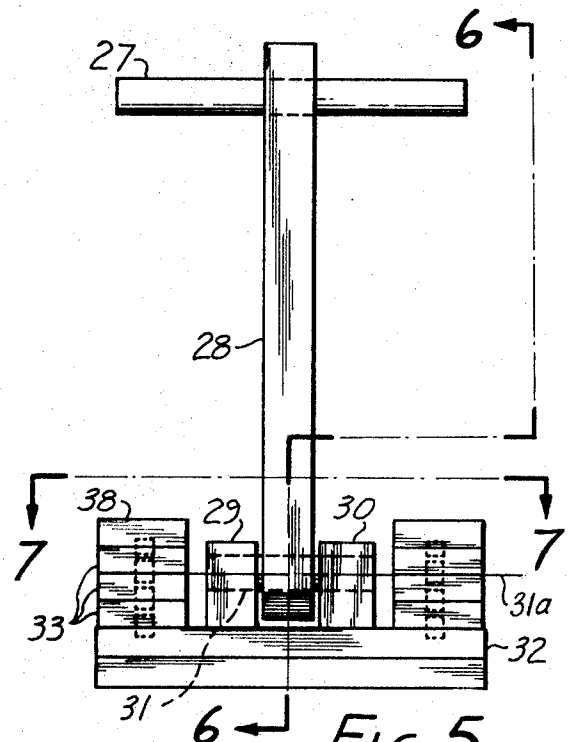



FIG. 5

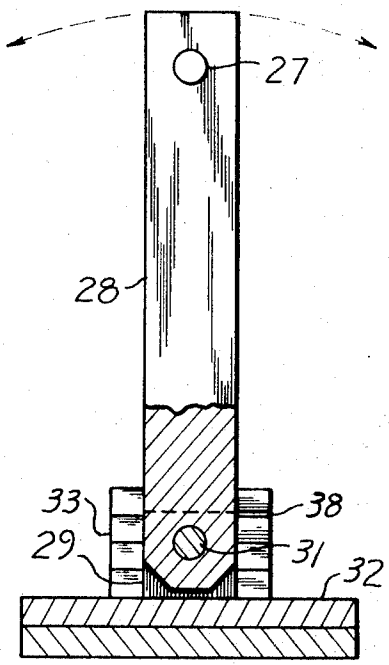



FIG. 6

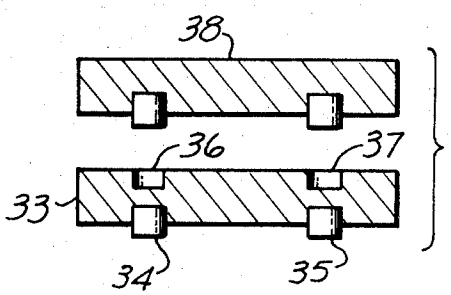



FIG. 8

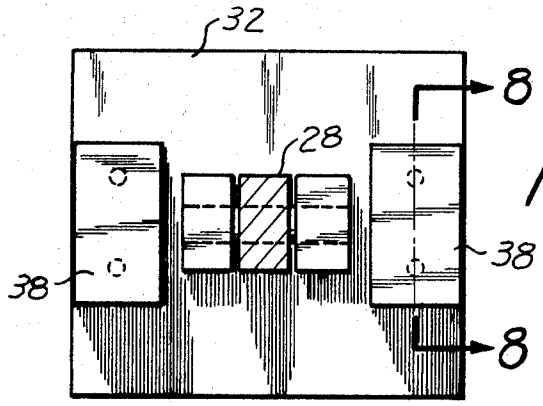



FIG. 7

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# ARM WRESTLING DEVICE

This invention relates to a device for equalizing the advantages of two contestants in an arm wrestling contest.

Arm wrestling is an ancient sport derived from prehistoric times which is still popular in many cultures as a recreational contest. Its purpose is to determine the physical superiority among individuals. The ordinary arm wrestling contest has two individuals place their elbows on a planar surface while sitting facing each other clasping hands palm to palm, with the elbows of their arms on a co-planar or axis with elbows and hands in line. Assuming this position, the contestants exert their maximum force, and the winner is determined by the individual who is capable of forcing his opponent's forearm over to a horizontal position so that the back of his opponent's hand touches the planar surface.

One object of this invention is to provide mechanical means for eliminating the effects of differences in the length of the forearms, thereby to provide a more equal evaluation of the muscular strength of the opponents.

Another object of this invention is to provide a device which will eliminate the effects of the length of the hand from the palm to the wrist, thereby more nearly to standardize the evaluation of the physical strength of the opponents.

Still another object of the invention is to prevent the cocking of the wrist out of the axis of the forearm which would give a substantial advantage to an opponent that is generally barred in the contest.

An optional object of the invention is to provide means to standardize the relative positions of the contestants.

This invention is accomplished by providing a base, a journal pivoting a lever member to the base, a pair of opposed handles on said lever member, and means for causing the elbow to be rested on the base or on an extension thereof when the hand grips the respective handle.

According to a preferred but optional feature of the invention, the spacing of the handles from the journals is independently adjustable. According to still another preferred but optional feature of the invention, means is provided for supporting the elbow upon an extension of the base so that the hands of each of the contestants reach handles which are equally spaced from the pivot point of the lever member.

According to still another preferred but option feature of the invention, two handles are placed on each side of the lever member, one of them to be grasped by the fingers and the other to bear against the wrist to keep it in line.

Yet another optional feature of the invention resides in means, such as a grip or edge, which must be held by the other hand, thereby to standardize the posture of the contestants.

The above and other features of this invention will be fully understood from the following detailed description and the accompanying drawings in which:

FIG. 1 is a side elevation of the presently preferred embodiment of the invention;

FIG. 2 is a plan view of FIG. 1 taken at line 2—2 thereof;

FIG. 3 is a side elevation of FIG. 1 taken at line 3—3 thereof;

FIG. 4 is a fragmentary embodiment of a portion of an alternate embodiment of the invention;



FIG. 5 is a side elevation of still another embodiment of the invention;

FIG. 6 is a side view, partly in cutaway cross-section, taken at line 6—6 thereof;

FIG. 7 is a top view of FIG. 5 taken at line 7—7 thereof; and

FIG. 8 is a cross-section taken at line 8—8 of FIG. 7.

The presently preferred embodiment of the invention is shown in FIG. 1. Base 10 has fixed to it two journals 11, 12. A pivot pin 13 is rotatably mounted in journals 11 and 12 and supports the lever member 14, so that the lever member can rotate about the axis 14*a* of journals 11 and 12.

Sliding blocks 15 and 16 are engaged in dovetail channels 17, 18 on the lever member. These channels extend toward and away from axis 14*a*.

Handles 19 and 20 (sometimes called "first handles") are mounted to sliding blocks 15 and 16. Clamp handles 21 and 22 (sometimes called "second handles") are threadedly engaged in the sliding blocks 15 and 16 so that these handles may be turned, and their ends project through the sliding blocks 15 and 16 to lock them at an adjusted position in the dovetail channels 18 relative to the axis 14*a*. The resulting arrangement is that of two handles projecting from each side of the lever at respectively adjusted distances from the pivot.

In use, the apparatus of FIG. 1 is adjusted so that each contestant moves handles 19 and 20 for gripping with the palm of the hand while the elbow is in contact with the platform 10. The blocks are locked in position by turning handles 21 and 22 to exert their clamping action. The function of the pair of second handles 21 and 22 is also to react against the wrists of the contestants so that their cupped hands are held in line with the forearm to prevent cocking of the wrist which would give either contestant an unfair advantage because it can be demonstrated that such cocking of the wrist can produce more applied pressure.

Although this embodiment does not remove the variable due to the length of the forearm, it does accomplish several advantages, such as removing the advantage of cocking of the wrist, and providing for a reduced friction pivot to apply forces and to isolate the effects of shoulder movements and body attitude. It does remarkably improve the performance of the individuals as compared to a direct hand-to-hand grasp, because without the lever, it is necessary for the party with the longer arm to adjust his arm at a different angle relative to the base. Therefore, even though the length from the pivot is different in each case, a substantial improvement in standardization is attained.

FIG. 4 illustrates another embodiment of the invention which, instead of providing the handles in sliding blocks, provides a pair of handles on each side of the lever member in a series of cylindrical holes 16 into which handles 23 and 24 for each side may be inserted. This provides for adjustment of length for contestants in exactly the same manner as in FIGS. 1-3, but in a simplified device. FIG. 5 illustrates still another embodiment of the invention where a single handle 27 protrudes from both sides of the lever member 28. The lever member 28 is pivotally mounted to journals 29 and 30 by pivot pin 31. The journals 29 and 30 are fixed to a base 32.

A series of elevating blocks (sometimes called "height adjustment means" or "elbow height adjust-

ment means") are located on the base **32** by dowel pins **34** and **35**, as typical examples. Each of the blocks **33** is equipped with dowel pins, and each intermediate block has a set of co-registering dowel holes **36** and **37** to receive the dowel pins **34** and **35** of the block which nests on top of it. The top block **38** merely has two dowel pins **34** and **35** in the lower surface with a smooth surface on top upon which the elbow is rested. In preparing the embodiment of FIG. **5** for a contest, blocks are removed or added to each pile on each side of the lever member to provide for the difference in length of the forearms of the contestants, so that as each grasps the handle his elbow rests upon the top of the stack of blocks as an extension of the base.

As an additional feature, a second handle, such as shown in FIG. **1**, could be added below the handle to prevent the cocking of the wrist of the contestants.

In this device, again the forearm length is adjusted, and each contestant is able to align himself properly with the device and with his elbow resting upon a surface and his hand grasping a handle located at a specified distance from the pivot.

FIGS. **1** and **3** also serve to illustrate an optional feature of the invention. Contestants are expected to remain seated, or at least not to raise up as they exert their arm force. However, they often do move around. In FIGS. **1** and **3** there are shown hand grips **50** and **51** to the left of the pivot on the respective sides of the device. If each contestant is required to hold his own grip with his left hand, and rest his left forearm on the base, then his posture will be defined, and the contest will be still more standardized.

Instead of a peg for a hand grip, a hold could be cut in the base, or any other means, so long as there is a relatively immovable object to be grasped.

It is clear that the base need not be a movable plate (although it could be). Instead, base **10** could be a table top fitted with legs, if a piece of equipment, rather than an accessory, were desired.

This invention is not to be limited by the embodiments shown in the drawings and described in the description, which are given by way of example and not of limitation, but only in accordance with the scope of the appended claims.

We claim:

**1.** An athletic contest apparatus for two contestants which comprises: a base; a journal fixed to said base with an axis of rotation; a pivot pin in said journal; a lever mounted to said pivot pin for rotation around said axis; a pair of handles, mounted one on each side of said lever member and spaced from the axis of rotation, said handles being parallel to the axis of the journal; and individual elbow height adjustment means mounted to the base upon which the elbow of each respective contestant may be rested while his hand grasps the handle, said height adjustment means comprising a plurality of blocks to form a stack adapted to be adjustable in height by adding to or subtracting from the number of blocks in the stack, upon the top of which the elbow is to be rested.

**2.** An athletic contest apparatus for two contestants which comprises: a base; a journal fixed to said base, with an axis of rotation; a pivot pin in said journal; a lever mounted to said pivot pin for rotation around said axis; a pair of first handles, mounted one on each side of said lever member and spaced from the axis of rotation, said first handles being parallel to the axis of the journal; means for individually adjusting the distance between each of said first handles and said pivot pin along said lever means; and a pair of second handles, one of each of said second handles being provided on each side of the lever, axially spaced from the respective first handle for restraining the wrist of the contestant.

**3.** An athletic contest apparatus for two contestants which comprises: a base; a journal fixed to said base, with an axis of rotation; a pivot pin in said journal; a lever mounted to said pivot pin for rotation around said axis; a pair of handles, mounted one on each side of said lever member and spaced from the axis of rotation, said handles being parallel to the axis of the journal; hand grip means on said base to be grasped by the other hand of both contestants; and a second handle on each side of the lever, axially spaced from the respective first handle for restraining the wrist of the contestant.

**4.** An athletic contest apparatus for two contestants which comprises: a base; a journal fixed to said base, with an axis of rotation; a pivot pin in said journal; a lever mounted to said pivot pin for rotation around said axis; a pair of first handles, mounted one to each side of said lever member and spaced from the axis of rotation, said first handles being parallel to the axis of the journal; means for individually adjusting the distance between each of said first handles and said pivot pin along said lever, said means including a channel on each side of the lever and a pair of blocks adapted to be slid in a respective channel, each said block carrying a respective handle; and a pair of second handles, one of each of said second handles being provided on each side of the lever, axially spaced from the respective first handle for restraining the wrist of the contestant.

**5.** Apparatus according to claim **4** in which at least one of said handles is adapted to be tightened against the lever member so as to set the spacing thereof from the journal.

* * * * *

# UNITED STATES PATENT OFFICE

# CERTIFICATE OF CORRECTION

PATENT NO. : 3,743,284

DATED : July 3, 1973

INVENTOR(S) : ROBERT V. RHODES & CHARLES D. FREEMAN

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

[56] References Cited "Ogartechea" should read --Ugartechea--
Col. 1, line 12, cancel "or"
Col. 1, line 48, "option" should read --optional--
Col. 2, line 4, "thereof" should read --Fig. 5--
Col. 2, line 7, "a" should read --an exploded--
Col. 2, line 12, after "axis" insert --of rotation--
Col. 2, line 31, "platform" should read --base--
Col. 2, line 44 "reduced friction" should read --reduced-friction--
Col. 2, line 56, "16" should read --23a--
Col. 2, line 64, between "31" and the period insert --which defines an axis of rotation 31a--
Col. 3, line 10, "pile" should read --stack--
Col. 3, line 16, after "handle" insert --27--
Col. 3, line 22, after "pivot." insert new paragraph: --In all embodiments, the first handles (i.e., those which are gripped by the fingers) extend parallel to this axis of rotation, and, where provided, the second handles are mounted to the lever member between their respective first handle and the pivot pin. Blocks 15 and 16, and holes 23a, provide means for individually adjusting the distance between the first handles and the pivot pin.--
Col. 3, line 33, "hold" should read --hole--
Col, 3, line 49, after "lever" insert --member--
(Cl. 1, line 4)
Col. 4, line 11, after "lever" insert --member--
(Cl. 2, line 4)
Col. 4, line 17, "means" should read --member--
(Cl. 2, line 10)
Col. 4, line 19, between "lever" and the comma insert --member--
(Cl. 2, line 12)
Col. 4, line 19, "axially spaced from" should read --between--
(Cl. 2, line 12)

# UNITED STATES PATENT OFFICE

# CERTIFICATE OF CORRECTION

PATENT NO. : 3,743,284
DATED : July 3, 1973
INVENTOR(S) : ROBERT V. RHODES & CHARLES D. FREEMAN

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

| | |
|---|---|
| Col. 4, line 20, (Cl. 2, line 13) | after "handle" insert --and the pivot pin-- |
| Col. 4, line 25, (cl. 3, line 4) | after "lever" insert --member-- |
| Col. 4, line 26, (Cl. 3, line 5) | before"handles" insert --first-- |
| Col. 4, line 28, (Cl. 3, line 7) | before "handles" insert --first-- |
| Col. 4, line 31, (Cl. 3, line 10) | between "lever" and the comma insert --member-- |
| Col. 4, line 31, (Cl. 3, line 10) | "axially spaced from" should read --between-- |
| Col. 4, line 32, (Cl. 3, line 11) | after "handle" insert --and the pivot pin-- |
| Col. 4, line 36, (Cl. 4, line 4) | after "lever" insert --member-- |
| Col. 4, line 42, (Cl. 4, line 10) | between "lever" and the comma insert -- member-- |
| Col. 4, line 43, (Cl. 4, line 11) | after "lever" insert --member-- |
| Col. 4, line 45, (Cl. 4, line 13) | before "handle" insert --first-- |
| Col. 4, line 47, (Cl. 4, line 15) | after "lever" insert --member-- |
| Col. 4, line 47, (Cl. 4, line 15) | "axially spaced from" should read --between-- |
| Col. 4, line 48, (cl. 4, line 16) | after "handle" insert --and the pivot pin-- |

Signed and Sealed this

*tenth* Day of *February 1976*

[SEAL]

*Attest:*

**RUTH C. MASON**
*Attesting Officer*

**C. MARSHALL DANN**
*Commissioner of Patents and Trademarks*