Feb. 7, 1950 K. A. JOHNSON 2,496,795

TETHERBALL GAME APPARATUS

Filed Dec. 9, 1944

Fig. 1.

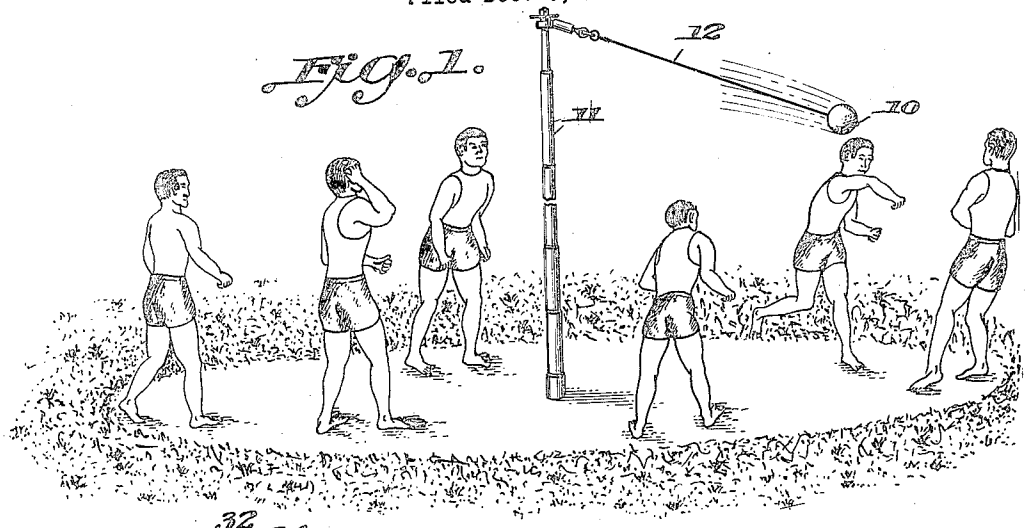
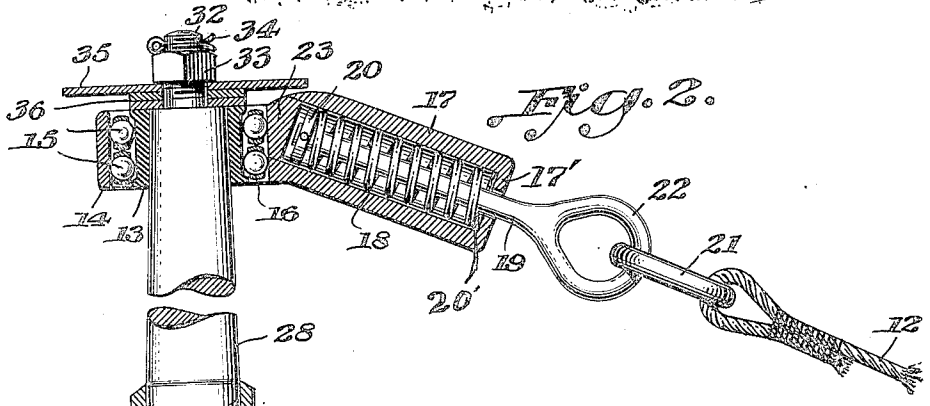


Fig. 2.



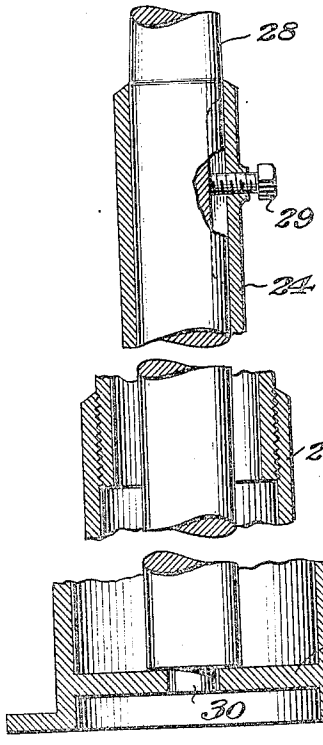
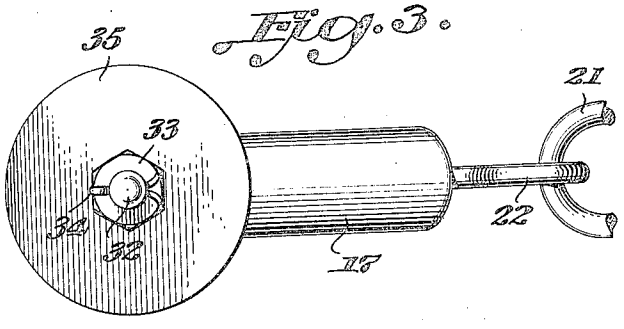


Fig. 3.



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TETHERBALL GAME APPARATUS

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3 Claims. (Cl. 273—95)

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My invention relates to game apparatus, and it is an object of the same to provide an apparatus whereby it becomes possible to play certain new or improved games for which no suitable apparatus is known at the present time.

Another object of my invention is to provide means for mounting the essential elements of the game apparatus in positions suited for permitting their use in games.

Referring to the drawings, which are made a part of this application and in which similar reference characters indicate similar parts:

Fig. 1 is a perspective view illustrating my invention in use for the playing of one kind of game to which it is suited.

Fig. 2, an enlarged elevation, partly in section, illustrating certain details and one manner of mounting the game apparatus,

Fig. 3, a top plan of the device.

Referring to the drawings, reference character 10 indicates a ball that may be five or six inches in diameter and which is of sufficient weight so that it can be struck with the fist and caused to revolve about a pole 11, to which it is secured by means of a long line 12 which may be a rope or cable or the like, with substantial momentum i. e., enough to make a revolution through an arc of 360° or more if hit a sound blow with the fist of a man or well-grown boy. Particular dimensions form no part of my invention, but generally some such proportions as indicated in Fig. 1 will be found satisfactory, the ball hanging down near the ground when not in use and having a diameter of about six inches and the pole being about ten feet in height above the ground.

For supporting the ball and its line on the pole in such manner as to provide the utmost freedom of revolution about the pole I provide a suitable support at the top of the pole for a ball bearing comprising an inner race 13, an outer race 14 and interposed rollers, here shown as consisting of two series of balls 15, 15 held in place by a suitable spacer 16 or by a pair of spacers as may be preferred. For most purposes a single row of balls is preferred, since the lighter the rotary parts at the top of the pole the better, and in such cases the races will be constructed accordingly.

A hollow arm 17 is formed on or attached to one side of the outer race 14, this arm extending at an angle of about 65° to the vertical, or at such an angle as will correspond approximately to the angle that will be assumed by the line if it carries a ball of approximately the size and weight

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of a volley ball, when the ball is struck vigorously by the fist of a player. The ball is formed to receive a coil spring 18 and a rod 19 that permit a cushioned in and out movement of the ball when in flight. A washer or collar 20 fixed to the rod 19 in any suitable manner serves to support the rod in place in the spring and a felt washer 20' charged with lubricant facilitates the easy and noiseless movements of the rod through the orifice at the end of arm 17 said washer lying against an inwardly turned flange 17' at the outer lower end of the downwardly sloping arm. A ring 21 engages in an eye 22 at the outer end of the rod, the cord 12 being secured to the ring in any preferred manner.

As one way to affix the arm 17 to the outer ball race with freedom to place the rod and spring in the hollow of the arm, there is shown a plug 23 for closing the end of the arm, the arm 17 being welded or otherwise attached to the outer race or being made integral therewith. It will be evident that the spring 18 is well protected against the action of rain due to the fact that the upper end of the spring chamber is closed by plug 23 and further sealed by its attachment to outer race 14, while the lower end is closed by the inturned flange 17' and the washer 20'. In effect this washer has a multiple function of reducing friction between the rod and the flange, excluding dampness and dust and scraping off water from the rod as the rod is retracted by the spring. These features are important in a device that is adapted and, in fact, actually intended, to remain out-of-doors in all weathers and to be exposed to wet, heat and cold, as well as to rough usage, e. g., when used at recreation centers for the men in the armed forces.

The pole may comprise a pipe having a series of sections 24, 25, 26, etc., of which the smallest section is at the top and each is threaded in turn to another which is of larger diameter, the lowermost having an annular flange 27 adapted to hold the pole against tipping movement, as by being buried in the ground, embedded in concrete, etc. The increasing size of the successive sections gives the desired strength to the pole to prevent breaking or bending. A length of a solid shafting 28 is inserted in the uppermost pipe section and has at one side a slot for engagement by a set screw 29 to hold the shaft against revolution. The shafting may extend to the bottom of the column, as shown, and the reduced end 30 may extend into a hole in a cross web 31, or all of the lower part of the shafting may be omitted, leaving only a short shaft ex-

tending slightly below the lower end of the slot for the setscrew **29**.

The ball bearing and its attached arm, etc., are held on the upper end of the shaft by providing a reduced threaded end on the shaft at **32** upon which a nut **33** is threaded and held against removal by a cotter **34**, the bearing being protected against dirt and weather to a large extent by means of a large covering washer **35** which is spaced from the ball races and the arm **17** by smaller washers **36** resting on the upper shoulder of the shaft **28**.

One manner of use of the apparatus is shown in Fig. 1, where a number of boys or girls or men arrange themselves in a circle about the pole, locating themselves usually at such a distance from the pole that the ball in flight, as there illustrated, will just nicely clear their faces. They may choose sides or play without that, and the play may begin by one boy striking the ball with his fist to cause it to revolve about the pole, at the same time calling out the name of another, who is supposed to strike the ball in the same direction so as to keep it in motion (or in the contrary direction, if preferred), simultaneously calling the name of the next one who is to hit the ball and so to keep it in motion. One who fails to hit the ball loses his turn and is out of the game, and this goes on until only one remains, who is of course the winner of that game or set. Many variations are possible, and many have been made by those who have used the apparatus.

Because most players strike the ball a sort of glancing blow, thereby causing it to rotate on its axis at the same time that it revolves about the pole (i. e. giving it "English") it is very desirable to provide a swivel in the connections between the ball and the pole, otherwise the line soon is twisted so much that it breaks. It is also essential that a yielding support be provided, to prevent early breakage of the ball supporting line regardless of its character and anti-kinking connections are essential to a long life of the parts. Freedom in the connections to permit the line to hang down freely is also essential, and, of course, the utmost freedom of revolution about the pole. For these reasons the spring, the swivel and the ring are all regarded as practically indispensable if the device is to stand up for any length of time, though each of these devices, as well as other features of the invention, may take many other forms besides those illustrated and described, or may be omitted temporarily or in emergency.

I am familiar with the game called "Tether Ball" whether played with a tennis ball in a small bag of netting or played with a larger ball where the line winds about the pole; also with various methods for supporting punching bags for exercise with provisions for rotation and yieldability; with apparatus combining a target and a suspended ball; and with apparatus wherein a small ball is suspended for revolution about a pole, being suspended in position to be struck with a tennis racket; and I do not claim these things. Except for the punching bags these devices are intended for light exercise, and the balls, etc., are so light and small that no special precautions are needed to prevent breakage or rapid wear, whereas in the case of my device the weight of the ball is such that other games can be played which provide heavy exercise and require special constructions to insure a reasonably long life for the ball and other components of the device.

It will be obvious to those skilled in the art that the apparatus of my invention can be modified in various ways, all without departing from the spirit of the invention; therefore, I do not limit myself to what is shown in the drawings and described in the specification, but only as indicated in the appended claims.

Having thus fully described my invention, what I claim is:

1. A tether ball game apparatus comprising an upright pole, an anti-friction bearing having an inner cylindrical race sleeve fixed to the pole, an outer cylindrical race sleeve concentric with the inner sleeve, anti-friction elements between the sleeves, a downwardly inclined hollow arm projecting from the outer sleeve, said hollow arm consisting of a substantially closed casing, a downwardly inclined rod extending lengthwise of the hollow arm, a ball, a line connecting the ball to the outer end of the rod and a coil spring in the hollow arm, said spring encircling said rod and being connected at opposite ends to the rod and arm to resist endwise movement of the rod under the action of centrifugal force on the ball, the downward inclination of the arm and rod serving to drain rain away from the spring.

2. A device as in claim 1, wherein the hollow arm has an inwardly turned flange at its lower end.

3. A device as in claim 1, wherein the hollow arm has an inwardly turned flange at its lower end, and a lubricating washer between the end of the spring and said flange whereby the outer end of the spring is supported and the spring is protected against the action of rain.

KENNETH A. JOHNSON.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
403,867	Williams	May 21, 1889
737,505	Shryock	Aug. 25, 1903
773,167	Spink	Oct. 25, 1904
793,002	Martin	June 20, 1905
799,270	Roland	Sept. 12, 1905
903,679	Courtney	Nov. 10, 1908
940,143	Foltz	Nov. 16, 1909
979,598	Thimm	Dec. 27, 1910
1,422,972	Henry	July 18, 1922
1,528,739	Boyce	Mar. 3, 1925
1,551,181	Tulley	Aug. 25, 1925
1,608,849	Gilmour	Nov. 30, 1926
1,732,971	Kappeler	Oct. 22, 1929
2,243,620	Fernandez	May 27, 1941

FOREIGN PATENTS

Number	Country	Date
768,703	France	May 28, 1934
413,354	Great Britain	July 16, 1934