

[54] **TETHERED BALL APPARATUS**
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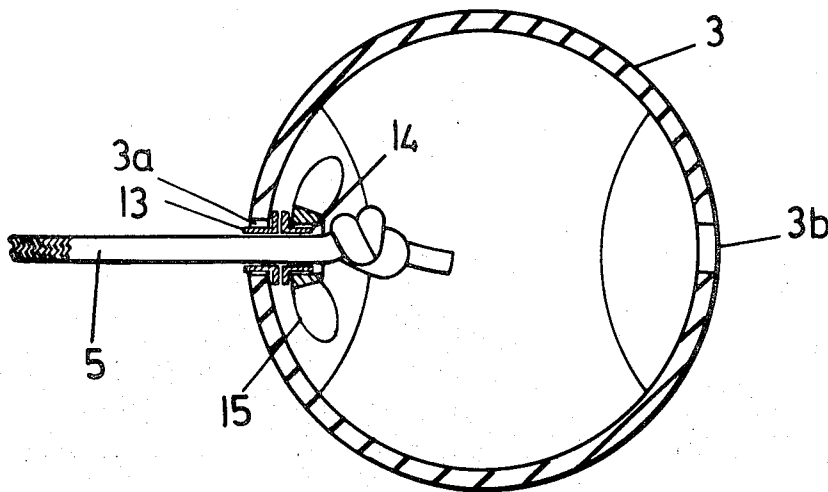
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[57] **ABSTRACT**

The apparatus of the invention comprises a tube which can be inserted into the ground and carries a co-axial bolt. A nut is threaded on to the bolt. Attached to the nut is one end of a cord which is connected to a ball. The apparatus is used by striking the ball with a bat or the like until the nut has been rotated in one direction sufficiently for it to have travelled to one end of the bolt.

2 Claims, 4 Drawing Figures



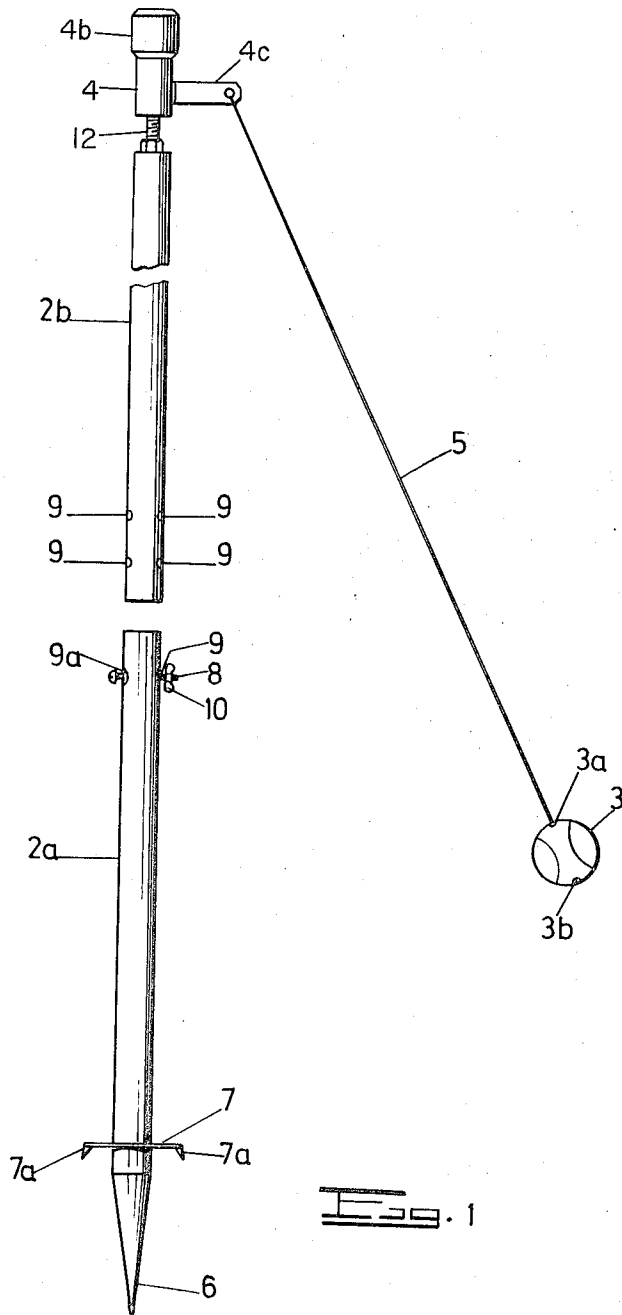


Fig. 1

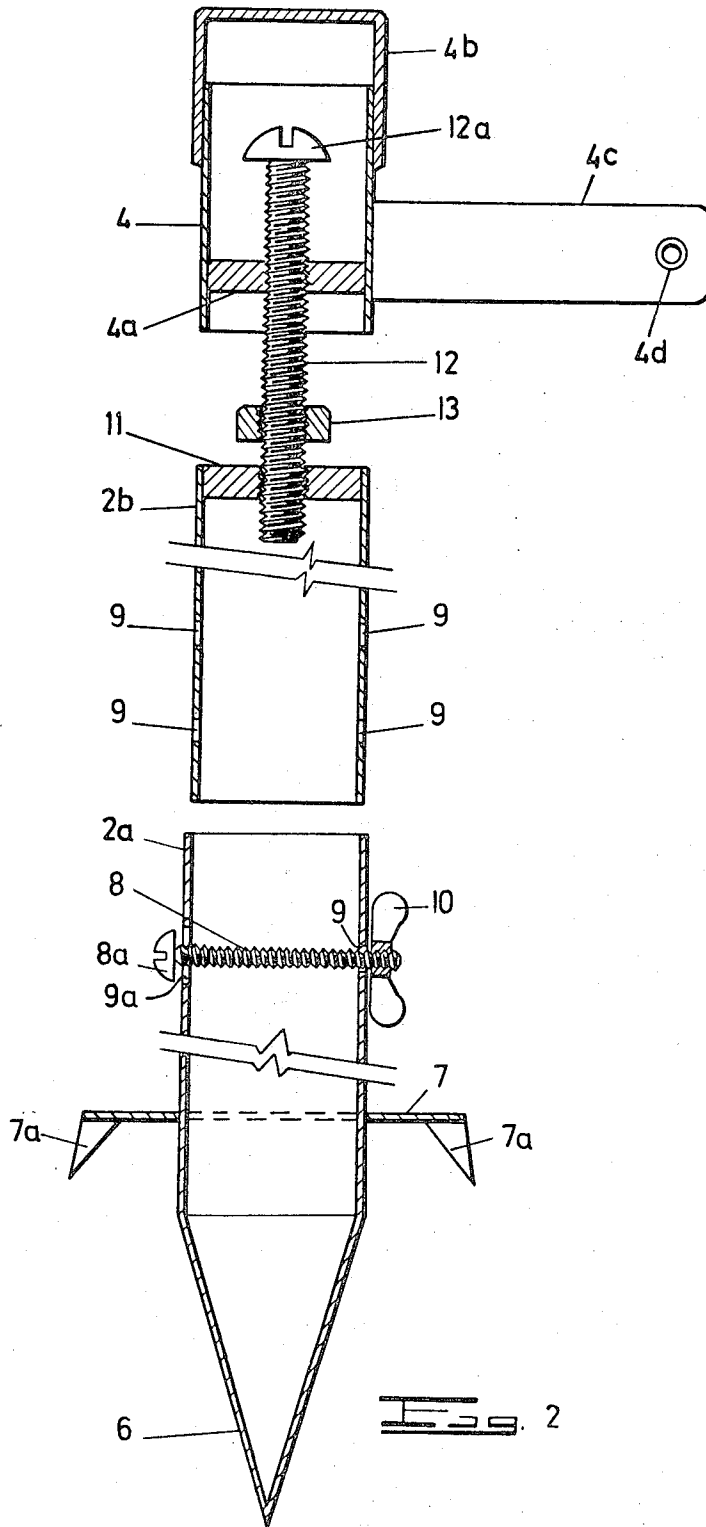


Fig. 2

SHEET 3 OF 3

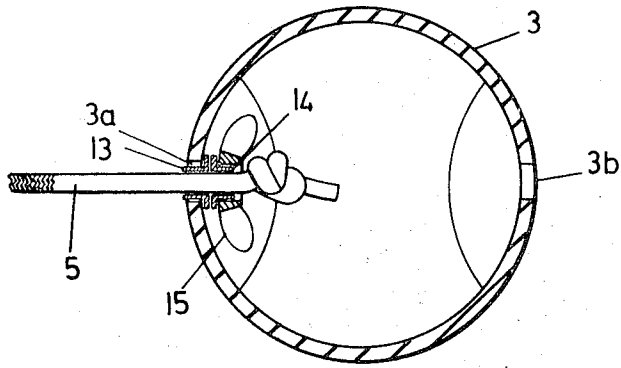


Fig. 3

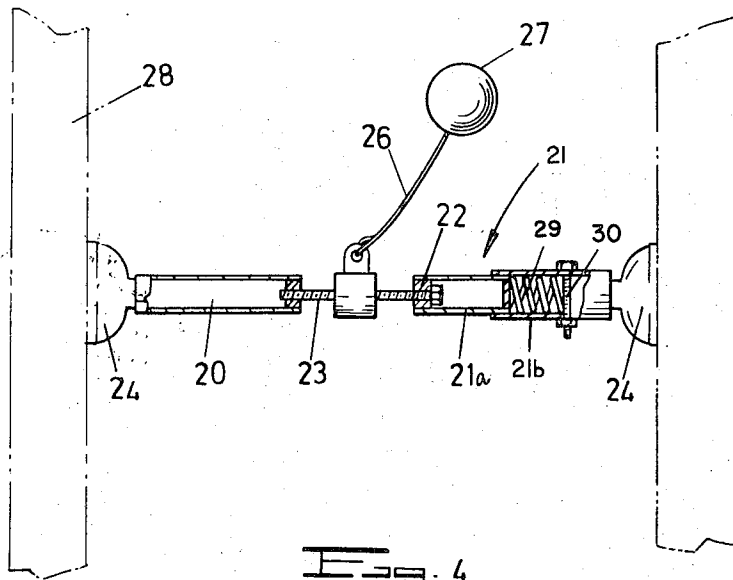


Fig. 4

TETHERED BALL APPARATUS

This invention relates to amusement devices and in particular to a device of the kind including a captive impact element which may be struck with the hand or by a bat, racket or like implement.

This invention provides apparatus for playing a game comprising a tube at one end of which a co-axial bolt is attached and extending therebeyond, a nut threadedly mounted for movement on the said bolt, an impact element, and flexible means connected at one end to said impact element and its other end to the nut.

The impact element is preferably a hollow ball such as a tennis ball or the like.

The tube is normally provided with a means whereby it may be firmly mounted on the ground. Such means is preferably comprised by a pointed end which can be forced into the ground.

Alternatively the apparatus may further comprise a second tube attached to the free end of the bolt and means at the ends of the tubes to abut against closely spaced members such as the uprights of a door frame. In this arrangement there will normally be provided means for forcing the tubes apart so that the apparatus may be firmly jammed against these uprights.

The nut is desirably secured to the inside of a hollow tube by welding or similar means.

The flexible means may comprise a string, cord, twine or the like and preferably a nylon cord. The flexible means may be connected directly to the nut but preferably it is connected to one end of the lug which is attached to a tube which encloses the nut. One end of the lug may be welded on to the tube on its outer surface and the other end of the lug has a hole to which the flexible means is secured. A flanged ferrule is conveniently inserted into the hole in the lug to protect the cord where it is secured to the lug. The other end of the cord is preferably connected to an elongated member such as a wing nut which is pushed through the first of two holes in the ball. A flanged ferrule fits the bore of the wing nut and a second flanged ferrule protects the cord at the second hole in the ball. The flanges of the two ferrules bear one upon the other. The ferrules are preferably made of plastic or similar material having a low co-efficient of friction so that they can easily bear on each other.

The tube may be formed in two telescoping parts if it is desired that the distance of the bolt above the pointed end be varied.

The tube preferably has a flange above the point to limit the amount it is inserted into the ground. The flange preferably has two points to secure the tube in the ground and to prevent undue movement of the tube in the ground. The two tubes are preferably held together by a pin which may conveniently be in the form of a bolt pushed through a pair of holes in each. One of the holes in the outer tube may be large enough to allow the head of the bolt to pass through it and to butt against the registering hole in the inner tube.

Two holes are preferably formed in the ball by means of a hollow cylindrical drill at the opposite ends of the ball, the second hole being formed through the first hole substantially in alignment with the first hole into the wall of the ball against which a wooden or other similar base is placed. This ensures a clearly punched second hole. One end of the cord is inserted through both holes in the ball. A wing nut is secured to the end

of the nylon cord which is nearest to the first hole and is forced into the ball through the first hole. The wing nut retains one end of the cord at the second hole inside the ball.

Two embodiments of the invention will now be described by way of example with reference to the accompanying diagrammatic drawings in which

FIG. 1 is an outside view of a device of the invention,

FIG. 2 is an enlarged detail of the device shown partially in section,

FIG. 3 is a section through the ball forming part of a device of the invention, and

FIG. 4 is a view similar to FIG. 2 of a modified device of the invention.

Referring now to the drawings, an amusement device FIG. 1 comprises a tube 2, an impact element 3 in the form of a hollow ball 3, a rotating cap member 4 and a cord 5 connecting the cap member 4 to the ball 3.

The tube 2 is in two parts 2a and 2b. The lower part 2a is pointed at its lower end 6 so that it can penetrate the ground and has a foot-plate 7 near this end to limit such penetration. Spikes 7a are formed on the foot-plate to grip the ground into which the pointed end 6 is forced. The upper part 2b is hollow and is telescopically received within the lower part 2a. A bolt 8 passes through aligned holes 9 in the two parts respectively to hold them in the desired relative position. The head 8a of bolt 8 passes through hole 9a and butts against the inner tube 2b to force the two tubes 7 together. The other end of the bolt 8 is secured by means of a wing nut 10. A nut 11 is welded into the upper end of the upper part 2b and has a bolt 12 received therein. A lock nut 13 fixes the position of the bolt 12 in the nut 11.

The rotating cap member 4 has an internal nut 4a which is in threaded engagement with the bolt 12. A head 12a is provided at the upper end of the bolt 11 to prevent the nut 4a riding off of the end of the bolt. The cap member also has a plastic closure 4b and a radially projecting lug 4c. One end of the cord 5 is tied to the lug 4c by being passed through a hole therein. A plastic ferrule 4d lines the hole to protect the cord.

The other end of the cord passes through a hole 3a in the ball. This end of the cord is knotted. The cord 5 passes through a pair of facing flanged plastic ferrules 13 and 14. One ferrule 13 passes through a wing nut 15 forming a holding member while the other ferrule 14 lines the ball opening 3a. These flanged ferrules in the ball allow the ball to swivel thereby preventing the cord from twisting.

The hole 3a is formed by first punching a hole 3b at the opposite part of ball. The cord 5 passes through both holes and then receives the wing nut and ferrules. The wing nut is inclined and the wing nut and ferrules are drawn through the hole 3b. The first hole 3b in the ball may be ruptured by the insertion of the locking device without causing damage to the hole 3a retaining the locking device.

A game is played by mounting the tubes 2a and 2b in a vertical position and striking the ball 3 by bats, rackets or other devices. One player strikes the ball so that it moves in a clockwise direction and the other so that the ball moves in an anticlockwise direction. As the ball rotates in this manner, the cap member 4 rotates and the nut 4a moves axially along the bolt 12. Should one player fail to strike the ball when it approaches him the nut 4a will complete a revolution and will move axially.

When the nut has moved axially to one end of the bolt, and stops the player whose action caused the nut to move in this direction is deemed to be the winner of the game.

The game begins when the internal nut 4a is midway along the bolt 12 and ends as mentioned above when it contacts the head 12a or the lock nut 13.

By arranging that the bolt projects to a greater or lesser amount from the nut at the top of the upper part 2b the length of the game can be increased or decreased as desired.

In a modification, the tube 20 is made considerably shorter than the tube 2b. A second tube 21 has a nut 22 welded therein to receive the bolt 23. The tube 21 is a telescopic tube comprising two parts 21a and 21b, the former being slidable within the latter. A spring 29 is contained within the tube part 21b and acts between a bolt 30 passing through the tube part 21b and the inner end of the tube part 21a. This spring tends to urge the two tube parts apart so that the tube 21 takes up its maximum length. The two tubes 20 and 21 have suction cups 24 or the like at their free ends. The bolt 23 passes through the nut 25. The cord 26 is much shorter than that used in the first embodiment and the ball 27 and the bats used are also smaller and lighter. In particular the ball may be a solid ball.

The modified apparatus is used by inserting the bolt 23 into the nut 22 of the second tube 21 and screwing this up so that the combined length of the two tubes is at a minimum. The tubes are then inserted between the uprights 28 of a door frame and unscrewed so that the combined lengths of the tube increases to such an extent that the suction cups 24 are forced against the uprights so that the tube is firmly held between the up-

rights in a horizontal position. Alternatively the tubes may be forced apart by spring means and/or the suction means may be on bolts and screwed inwardly or outwardly to decrease or increase the length of the tubes. The game is then played by striking the ball so that it moves in an arc about a horizontal axis. For the rest the game is identical to that described above.

Many modifications can be made to the apparatus without it falling outside the scope of the invention which is determined solely by the following claims.

I claim:

1. Apparatus for playing a game comprising a tube; a coaxial bolt attached to one end of the tube and extending therebeyond; a pair of stop means on said bolt; a nut threadedly mounted on the said bolt and axially movable therealong on rotation thereof, such movement being limited by the said stop means; a hollow ball; a first hollow plastic ferrule passing through the wall of the hollow ball; a hollow holding member in the ball; a second ferrule in the holding member and a flexible cord having one end connected to the nut and the other end entering the ball through the first plastic ferrule and passing through the second ferrule and the holding member within the ball; the first and second ferrule serving to protect the cord when passing through the ball and the holding member respectively.

2. Apparatus as claimed in claim 1 in which the ball has two aligned holes punched through its walls, the first being used to insert the holding member and the cord passing through the second hole to be attached to the holding member within the ball.

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