June 29, 1965 J. V. VISCONTI 3,191,880

BALL RETRIEVER

Filed April 15, 1963

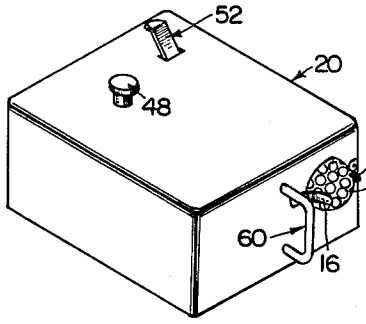


FIG. 1

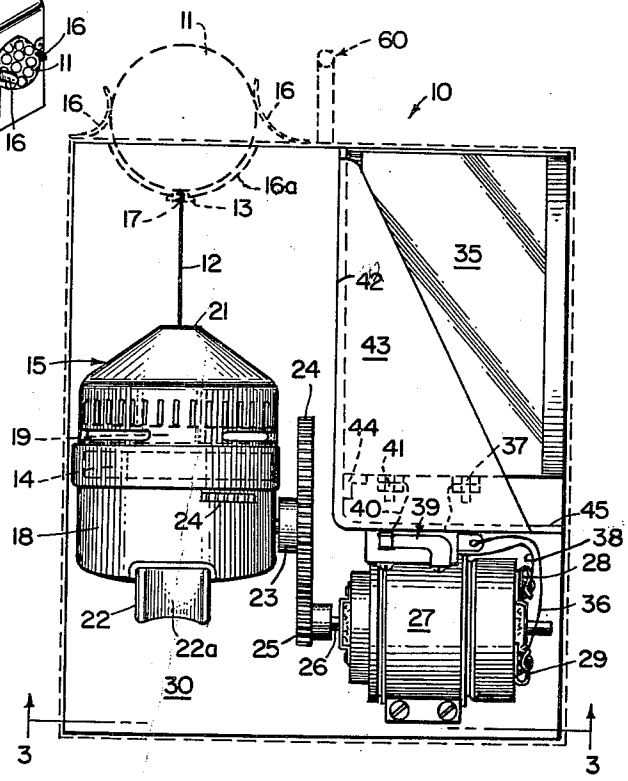
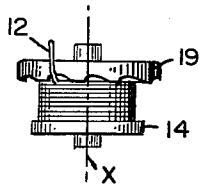


FIG. 2

FIG. 2a



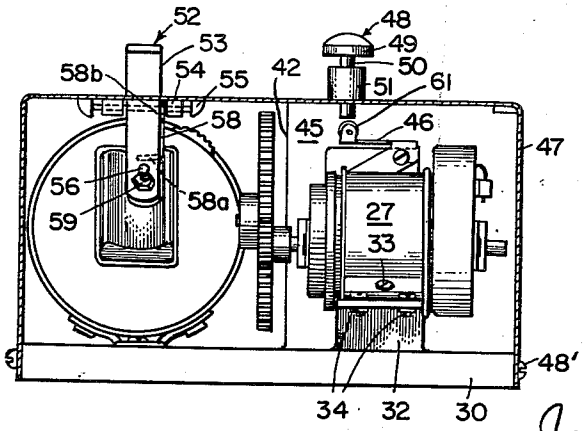


FIG. 3

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United States Patent Office 3,191,880 Patented June 29, 1965

3,191,880

BALL RETRIEVER

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Filed Apr. 15, 1963, Ser. No. 272,993
2 Claims. (Cl. 242—54)

The present invention relates to a ball retriever device and more particularly to a golf ball retriever which is highly compact, lightweight and extremely efficient in operation.

Many ball retrieving devices are known. For the most part these devices are restricted to professional and commercial uses because of their large size, complexity and/or expense. In one particular prior art ball retrieving device, a golf ball is tethered to a windup reel. A sportsman may drive the ball thus unreeling the tethered line. The ball is retrieved by actuation of a windup device which must be rotated into a windup position. This particular device does not appear to have met widespread public acceptance probably because of its relatively complex mechanisms and relatively high cost. It has also been a problem to provide for minimized drag on the ball in ball retriever devices of this type.

It is an important object of this invention to provide a portable, lightweight, relatively inexpensive ball retrieving device suitable for widespread usage by amateur as well as professional sportsmen.

It is another object of this invention to provide a device in accordance with the preceding object which minimizes drag on the ball when it is propelled and substantially simulates ordinary free flight of the ball.

It is still another object of this invention to provide a device in accordance with the preceding objects which comprises a minimized number of mechanical elements thus minimizing the possibility of mechanical breakdown and permitting ease of operation.

According to the invention the ball retriever comprises an electrical power source, an electric motor and a winding and storage spinning reel operatively engaged with the motor. A golf ball has a line attached to it with a portion of the line passing through a housing and wound about the reel. Preferably, the lines passes through the housing at a point which is axially aligned with a central axis of the reel. Thus the line is wound or unwound with the line in substantial alignment with an axis of the reel. In a preferred embodiment of the invention, clips are provided for releasably engaging the golf ball closely adjacent the device and a handle is provided to facilitate ease of carrying the device from one location to another. Preferably the mechanical parts of the ball retriever device are standard components which are readily available on the market.

Other features, objects and advantages of the invention will be better understood and appreciated from the following detailed description of one embodiment thereof selected for purposes of illustration and shown in the accompanying drawing, in which:

FIG. 1 is a top perspective view showing a preferred embodiment of an assembled golf ball retriever of this invention;

FIG. 2 is a top plan view thereof with the cover removed;

FIG. 2*a* is a top view of a bobbin and spinning head of a reel shown in FIG. 2; and,

FIG. 3 is a cross-sectional view taken through line 3—3 of FIG. 2.

With reference now to the drawing, the golf ball retriever of this invention is shown at **10**. A conventional golf ball **11** is firmly attached to one end of a thin, nylon or other fishing type line **12** by a swivel clip **13**. An

intermediate portion of the line **12** passes through a circular opening **17** in a casing **20** of the device. A second end of the line **12** is attached to a bobbin **14** of a conventional fishing rod reel **15**.

Preferably a Zebco 202 fishing rod spinning reel manufactured by Zebco Co., Tulsa, Oklahoma, is employed as shown in FIG. 2. However, it should be understood that other conventional drag-free storage and winding reels may be used. The line **12** passes through a central aperture **21** of the reel casing **18** and is wound about the bobbin **14**. Preferably openings **17**, **21** and the axis X of bobbin **14** are in axial alignment. Preferably these openings define a line substantially perpendicular to the windings of the line **12** on the bobbin **14**. Winding of the line **12** is accomplished by rotation of a spinner head **19**. Axle or windup arm **23** is rotated to wind the line **12** on the bobbin **14**. This rotation is normally accomplished by a hand crank when the fishing reel is used for fishing purposes, however, in this device mechanical means are provided as will be described. Clockwise rotation of the axle **23**, in addition to winding the line **12**, locks the reel so that the line **12** cannot be unwound from the bobbin **14**. This locking is accomplished in a known manner by conventional means within the reel not shown. A brake button **22** extends outwardly of the rear end of the reel **15**. The brake button **22** may be depressed by pressure exerted on face **22***a* of the button thereby releasing the locking action of the reel and allowing the line **12** to be unwound from the bobbin. A conventional clutch (not shown) is provided in the reel **15** and has a disc clutch button **24** allowing the reel to be set for desired degrees of tension on the line **12** when it is unwound. Preferably the clutch button **24** completely disengages the clutch, allowing the line to be unwound from the bobbin as freely as possible with a minimized amount of drag.

A small electric motor **27** is mounted in a stationary position on a rectangular base **30** of the casing **20**. Mounting brackets **31** and **32** are attached to the motor and to each other by screws **33** and **34**, respectively.

In the preferred embodiment, the electric motor is a Pitman Boat-Master Motors, Inc. motor, having a rating of 3–6 volts D.C. and 2.4 amps., maximum. A shaft **26** of the motor is preferably normal to a vertical plane passing through the axis of the bobbin **14**. The motor **27** is linked to the axle **23** of the fishing reel **15** by means of two gears **24** and **25**. Gear **25** is preferably a small gear mounted directly on shaft **26** and acts as a drive gear to drive the large gear **24** which is firmly attached to the axle **23**. In the preferred embodiment, gear **25** has a radius of approximately ¼" and gear **24** has a radius of approximately ¾". These gears allow maximized power for winding of the line **12** and retrieving of the ball although using the relatively low power motor **27**. It should be understood that varying gear arrangements may be employed as well as varying sized motors. However, the specific arrangement shown is particularly desirable due to its simplicity, use of conventional parts, as well as, its low power supply requirements.

Poles of the motor **27** are electrically connected to a battery **35** by insulated wire **36** attached to motor contact **29** at one end and contact **37** of the battery at a second end. In addition, wire **38** interconnects contact **28** of the motor with a contact of a switch **39** while wire **40** interconnects a second contact of the switch **39** with battery pole **41**.

The battery **35** is preferably a standard D.-C. six volt dry cell battery which is nested in the casing **20** by means of an upstanding wall **42**, FIG. 3, and overhanging triangular portion **43**. A forward stop comprising a right angle member **44**, FIG. 2, is attached to wall **42**.

The switch 39 may be of any conventional microswitch such as a microswitch catolog No. ISX1–T manufactured by Micro-Switch Division of Minneapolis-Honeywell Regulator Co. A forward wall 45 extending at a right angle to wall 42 provides a mounting for the switch 39 with a resilient spring blade arm 46 of the switch, FIG. 3, standing slightly above the switch body and adapted to make contact between battery pole 41 and motor contact 28 when the arm 46 is depressed as by pressure applied to a switch button 61 in a downward direction as shown in FIG. 3.

The casing 20 for the device is best shown in FIGS. 1 and 3 and comprises a five sided cover 47 which fits over the flat rectangular base 30 and is attached to sides of the base 30 by screws 48'. The cover 47 carries two operating units for actuating release or winding of the bobbin 14. Each of these units is positioned on the cover 47 and aligned in preselected positions with respect to the switch 39 and brake button 22 when the cover is assembled on the base 30.

Unit 48 is a spring loaded push button located directly above button 61 of the switch 39. The push button 48 comprises a head 49 mounted on a shaft 50 which extends into the casing. A conventional spring return (not shown) is mounted within a ferrule 51 which is soldered or otherwise joined to the cover 47. The head 49 may be depressed by the foot or golf club to actuate the motor 27. Upon release of pressure spring loaded push button 49 is returned to its position as shown in FIG. 3.

The second actuating unit is shown at 52 in FIG. 3. Unit 52 has a curved metal strip 53 pivotally mounted on a pivot pin 54 which is in turn mounted in suitable brackets 55, depending from the cover 47. A spring 58 has an end 58*a* tensioned upwardly as viewed in FIG. 3 by means of a coil end 58*b* mounted on and surrounding the pivot pin 54. A stud 56 extends on either side of the bar 53 and is stationarily mounted in a hole in the bar 53 by lock nuts 59 positioned on either side of the bar. The lower end of stud 56 (not shown) is adapted to contact the face 22*a* of the brake button 22 when the lever arm 53 is depressed by the shoe of the player, or by a golf club.

Preferably spring clips 16 are provided and are resiliently yieldable to hold the golf ball partially within the casing 20 by urging the ball against a recess 16*a* adjacent the circular opening 17 with a spring like action. The spring clips 16 are preferably spring blade members which are welded or bolted to the casing. This feature enables convenient carrying of the ball retriever 10 as a single unit. A carrying handle 60 is provided and is preferably soldered or bolted to the cover 47 as shown in FIGS. 1 and 2.

Preferably the entire device is relatively compact and in the preferred embodiment the outer dimensions of the casing comprise rectangular shape having dimensions of 7" by 6" by 4". Preferably the overall weight of the device is less than ten pounds.

The operation of the device is extremely simple. The unit 10 is placed with the base 22 resting on the ground. Lever 53 is then depressed releasing the brake button 22 and allowing the user to grip the ball and remove it from the spring clips 16. The ball may then be placed a convenient distance from the housing and driven. The bobbin 14 does not add any appreciable drag to the line 12 since the brake button is depressed. Preferably the ball is driven in a direction substantially axially of the

bobbin 14 to further decrease possible drag caused by bending of the line about the casing orifice. To retrieve the ball, unit 48 is activated by depressing the head 49. This in turn actuates switch 39 connecting the battery to the motor, and the motor shaft 26 is rotated whereby axle 23 is actuated through the gears 25 and 24 to rewind the line 12 and bring the ball back to its starting position.

While there have been described specific embodiments of the invention it should be understood that other modifications are possible. For example, the specific spinning reel used may vary as may the specific electrical and power supply. In alternative embodiments of the invention the bobbin 14 may rotate about axis 14 or be fixed about this axis allowing the line to be played off from the bobbin without necessity of rotating the bobbin. Certain conventional actuating buttons may be used in place of elements 48 and 52 if desired. Plastic or wood may be used for the casing instead of the metallic casing elements shown. However, the specific arrangement of parts is particularly desirable and does decrease the complexity of this device. Therefore this invention is to be limited only by the spirit and scope of the appended claims.

What is claimed is:

1. A portable, compact, self contained golf ball retrieving apparatus comprising:

an enclosing housing containing a golf ball located outside of said housing,

a line affixed to said ball at a first end of said line with an intermediate portion of said line passing into said housing, at an opening defined by said housing and wound upon a winding and storage bobbin,

said bobbin being mounted about a central axis in said housing,

said bobbin central axis being fixed in position with respect to said housing and aligned with said housing opening,

a windup arm associated with said bobbin,

an electric motor linked to said windup arm by a power increasing meshed set of gears,

an electric power source contained within said housing for activating said motor,

means passing through said housing and operable from the outside thereof by the foot of a user for allowing substantially drag-free unwinding of said line from said bobbin,

second means passing through said housing and operable from the outside thereof by said foot of said user for electrically connecting said motor to said power source whereby said line may be automatically wound on said bobbin.

2. An apparatus in accordance with claim **1** wherein said housing is provided with a recess adapted to contain a portion of said golf ball when said line is wound on said bobbin, resilient means mounted on said housing for urging said ball into said recess and a carrying handle mounted on said housing whereby said apparatus may be easily carried by hand.

References Cited by the Examiner

UNITED STATES PATENTS

2,714,009	7/55	Noland	242—54 X
3,105,651	10/63	Hull	242—84.2

MERVIN STEIN, *Primary Examiner.*