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(54) **RETRACTIBLE GOLF BALL RETRIEVER**

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(57) **ABSTRACT**

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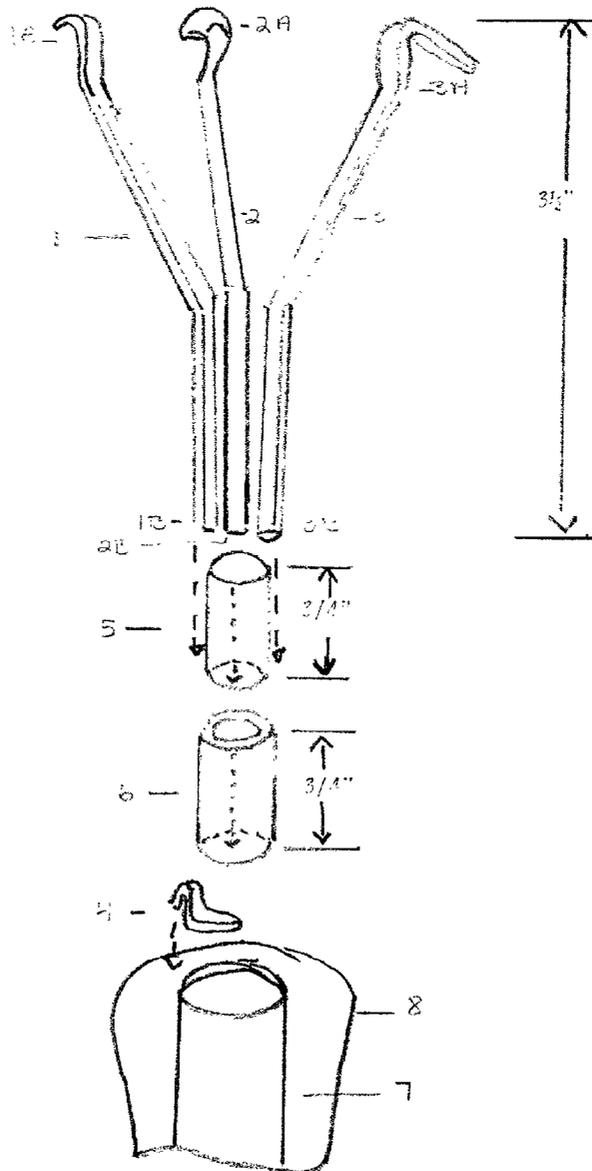
A golf ball retriever is adapted to be placed in the butt end of a golf club by way of inserting a three pronged device into the shaft of the golf club. The retriever includes the three-pronged device, which is placed equidistantly and concentrically in copper tubing, and anchored with a cylindrical dowel. The three-pronged device is permanently affixed within the shaft by way of a retaining clip, which likewise maintains the relative position of the prongs within the shaft of the golf club. The prongs are easily reinserted and retained in the shaft of the golf club when not in use. Use of the three-pronged device enables a ball to be lifted from the putting green or cup.

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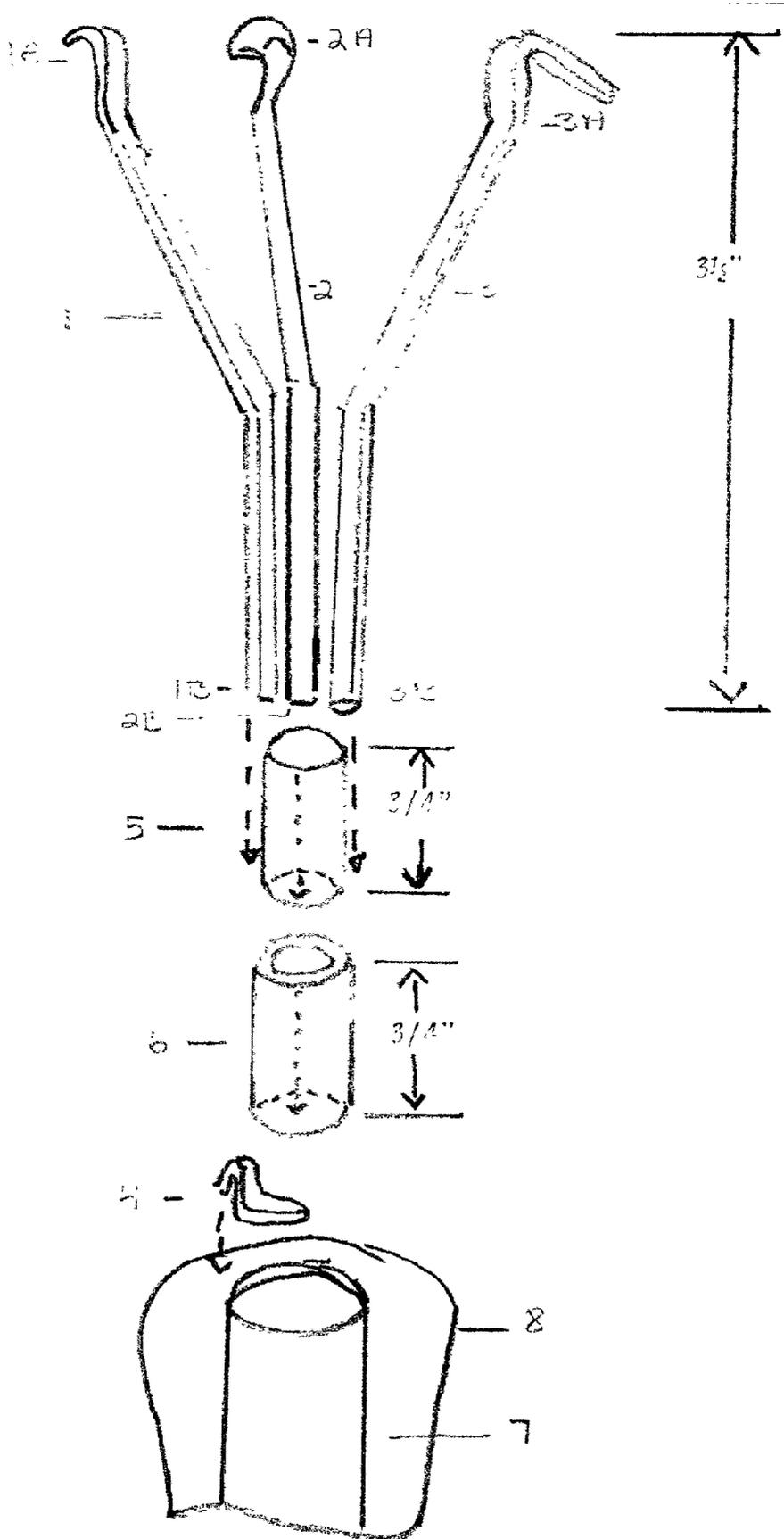
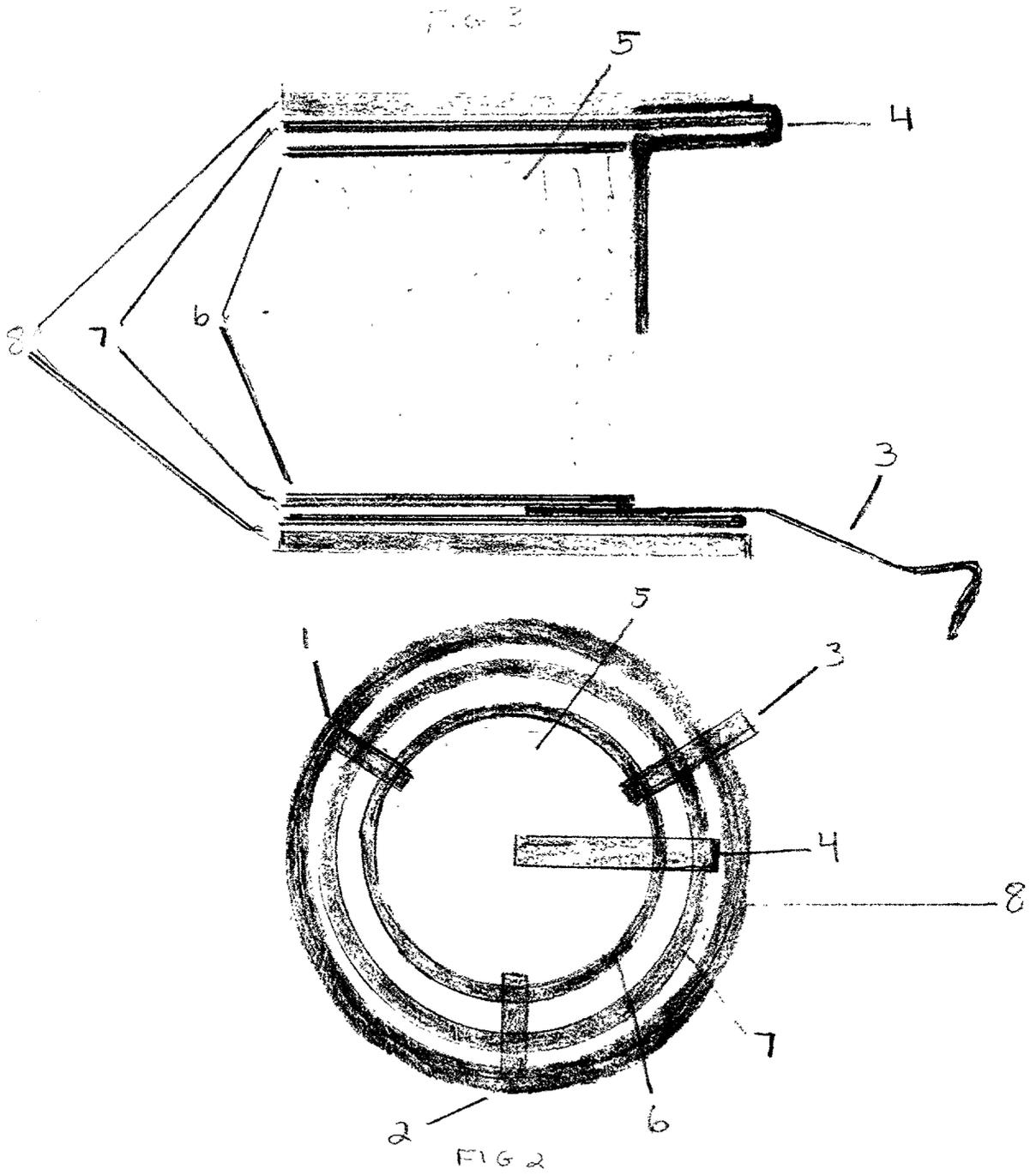
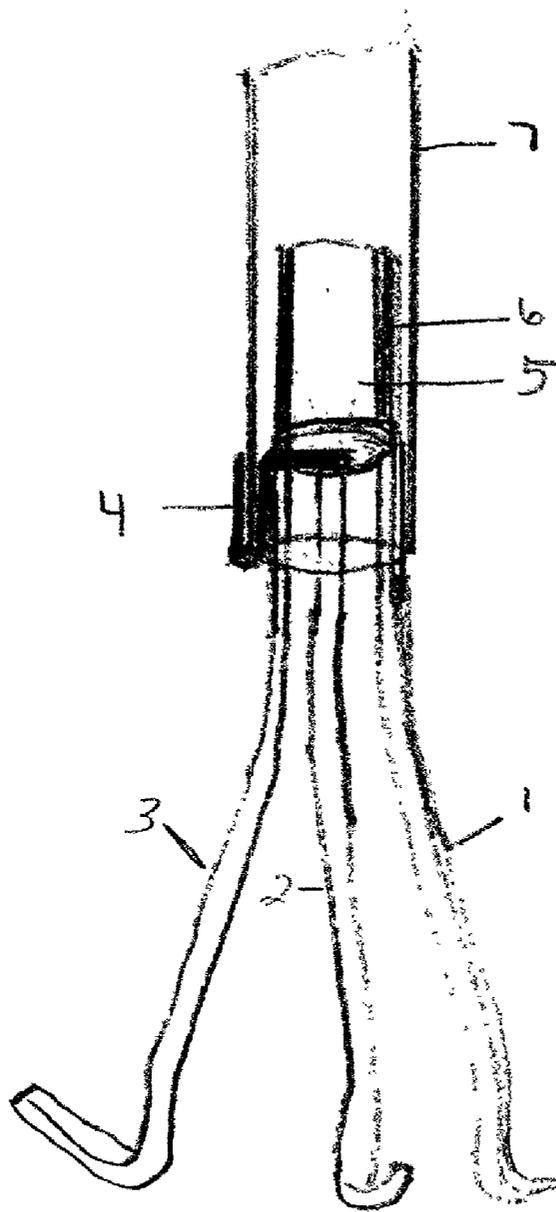


FIG. 1.





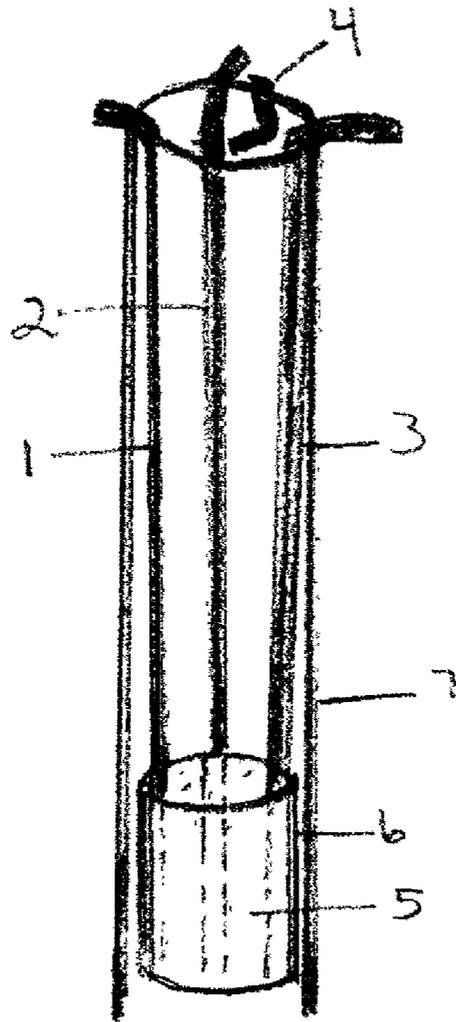


FIG. 1

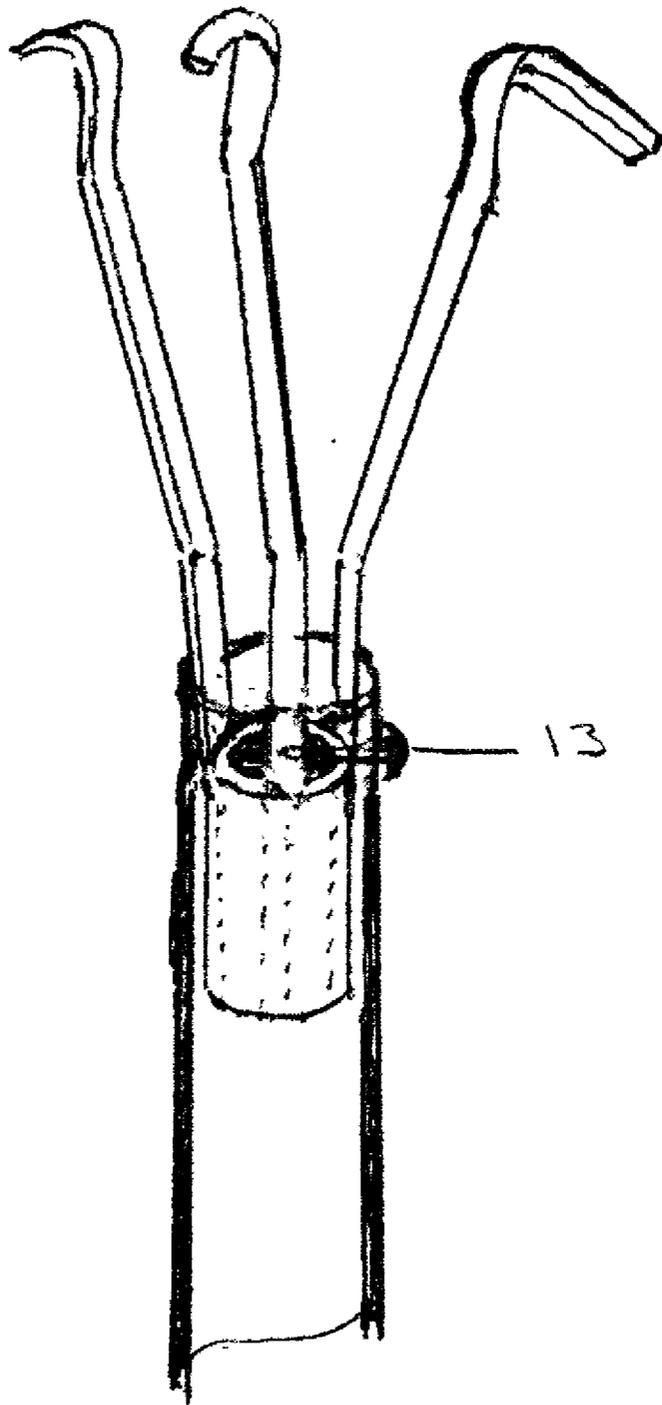
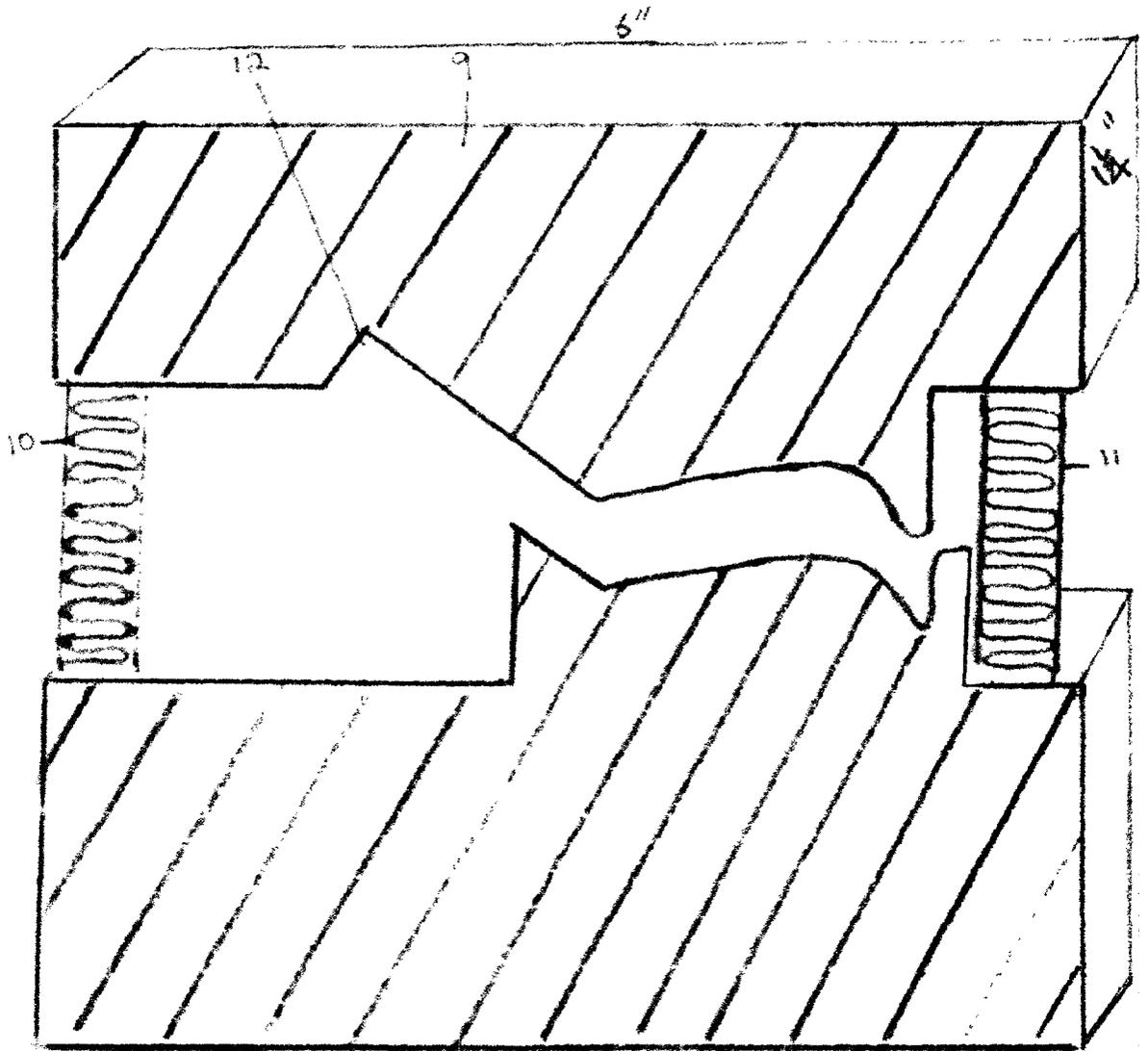


FIG 7



**RETRACTIBLE GOLF BALL RETRIEVER****BACKGROUND**

**[0001]** 1. Field of Invention

**[0002]** This invention relates to golf ball retrievers, specifically to retrievers that are used to lift golf balls from the ground or the putting green cup.

**[0003]** 2. Description of Prior Art

**[0004]** Golf is an increasingly popular sport that allows players of all ages and infirmities to engage in a competitive and leisure activity. The art of hitting the golf ball culminates in depositing the ball in a putting green hole. At various times during this activity, it is necessary to pick up the ball from the ground surface or the putting green cup.

**[0005]** Several devices have been created to assist golfers in retrieving their golf balls. Some of these devices are tools that are maintained apart from the golfer's sporting equipment. Other devices are attached or integrated with the exterior of a golf club. Whereas the former may result in the tool being lost or misplaced, the latter can be costly or impede the smooth execution of a golf swing. The golf ball retrieval apparatus referenced in this patent application avoids these problems by retracting into the golf club shaft so as to be virtually imperceptible when not in use.

**[0006]** A data bank search of U.S. Pat. Nos. since 1971 for golf ball retrievers resulted in 23 patents (2 design and 21 utility) being issued. Despite these numerous designs, what is available to the general public to assist golfers in retrieving their golf balls is limited. The most typical device consists of a rubber suction cup apparatus, which is placed on the end of the shaft of a golf club. Once placed, the device is not removed. Not only is this unsightly, but the suction cup works poorly and is subject to damage as it is unprotected from trauma and the elements. This method of retrieval is similar to U.S. Pat. No. 5,299,846 (1994) to Rush, which is a cylindrical shaped module that fits over the shaft of the preexisting grip on the golf club. The open top traps the golf ball. In U.S. Pat. No. 5,460,366 (1998) to Pugh, a pair of spaced arms resembling claws are secured to the butt end of a golf club. Both devices appear unduly cumbersome.

**[0007]** Several accessory golf ball retrievers have been proposed—for example, in G.B. patent 5,190,288 (1993) to Rogers et al, the device is attached temporarily to the end of the golf club, otherwise resting in the breast pocket or at the bottom of the golf bag. Because this accessory device must be attached to the golf club each time it is used, it is fairly inconvenient. A detachable golf ball retriever in U.S. Pat. No. 4,687,204 (1987) to Lempio, et al, uses a scooper and wire to be temporarily attached to the shaft of a golf club. Another retriever which temporarily attaches to a golf club handle, G.B. patent 5,899,280 (1998) to Rogers, uses flexible panels that receive a ball when forced open. A spring loaded golf ball and tee holding device in U.S. Pat. No. 5,759,117 (1998) to Erickson et al., is a long handled device that likewise adds to the paraphernalia carried in a golf bag.

**[0008]** Design changes to the golf club head provide a mechanism for retrieving golf balls in U.S. Pat. No. 5,628,696 (1979) to Frye et al.; U.S. Pat. No. 5,692,968 (1997) to Shine et al.; U.S. Pat. No. 5,509,658 (1996) to Youngblood;

U.S. Pat. No. 5,485,999 (1996) to Hull et al.; U.S. Pat. No. 5,294,122 (1994) to Longo; U.S. Pat. No. 5,368,302 (1994) to Thomas; U.S. Pat. No. 4,962,927 (1990) to Colucci; U.S. Pat. No. 4,976,436 (1990) to Serizawa; U.S. Pat. No. 4,580,784 (1986) to Brill; U.S. Pat. No. 4,486,019 (1984) to Sievers; U.S. Pat. No. 4,361,329 (1982) to Brock; U.S. Pat. No. 3,841,639 (1974) to Werner; and, U.S. Pat. No. 3,632,112 (1972) to Jacobs. Because the golf ball retriever is integral to the golf club putter, the golfer has to purchase this new putter, and the retriever cannot be placed on any other golf club. This is costly, and prevents the golfer from using his preferred putter. Additionally many of these golf club putter heads do not easily fit into the cup, limiting their use to ground balls only.

**[0009]** Several patents introduce devices that attach to the external shaft of the golf club. U.S. Pat. No. 4,515,402 (1985) to Sedan, U.S. Pat. No. 3,997,169 ( ) to Bergstrom, and U.S. Pat. No. 3,749,407 (1973) to Prochnow utilize molded plastic to attach the retriever to the shaft of the golf club. When being used to retrieve golf balls, the golf club cannot be used to play the game of golf, thereby requiring manipulation both before and after the retriever is placed in use.

**[0010]** Golf ball retrievers suffer from a number of disadvantages. Oftentimes, in an effort to provide duality of purposes, such as placing a tee or ball marker in addition to retrieving the golf ball, the apparatus cannot become a built in component of the golf club. The ability to pick up the ball from the cup is prevented by the size of the retrieving apparatus. This becomes evident when reviewing U.S. Pat. No. (1992) to Randall, which includes a resilient member, that of necessity, cannot reside within the handle of a golf club.

**SUMMARY**

**[0011]** In accordance with the present invention a golf ball retriever enables lifting a golf ball from a cup or ground surface by way of a three-pronged device that resides in the handle of the golf club.

**OBJECTS AND ADVANTAGES**

**[0012]** The novel approach to the golf ball retrieval apparatus referenced in this patent application allows it to be retracted into the shaft of the golf club handle. This is accomplished by the placement of three resilient prongs that are readily available, but hidden, until needed by the golfer. Additional objects and advantages are:

- [0013]** a) can be purchased as an accessory device to be placed in the handle of any golf club
- [0014]** b) does not require the purchase of a separate golf club
- [0015]** c) is easily placed in the handle of any golf club by a young or older golfer
- [0016]** d) does not affect the grip or the swing of the golfer
- [0017]** e) once integrated into the golf club will not get lost or misplaced
- [0018]** f) once integrated into the golf club, is virtually hidden from sight

[0019] g) when put in use, easily retrieves the ball from any surface, including putting greens, roughs, sand traps, shallow water hazards and cups.

[0020] h) is calculated to enter the putting green cup easily, so as to immediately engage the golf ball, thereby allowing the ball to be removed on the first try

[0021] i) the resilient prongs are likewise flexible enough to allow easy removal of the ball from the device

[0022] j) the position of the bent prongs prevent scratching of the ball

[0023] k) the retracting apparatus is manually operated, and easily replaces the device into the golf club handle

[0024] Further objects and advantages are to provide a golf ball retriever which can be used easily and conveniently to retrieve a golf ball from a cup or ground surface, which is hidden from view when not in use, which is simple to use and inexpensive to manufacture, which can be placed in any club, by any individual, and will not be lost once placed in the golf club. Still further objects and advantages will become apparent from a consideration of the ensuing description and drawings.

#### DRAWING FIGURES

[0025] In the drawings, closely related figures have the same numbers.

[0026] FIG. 1 shows the un-assembled golf ball retriever, with related specifications for each component.

[0027] FIG. 2 shows a top view of the device, with special attention to the placement of the spring steel prong and retainer clip.

[0028] FIG. 3 shows a side view cross section that further delineates the placement of the retainer clip and a steel spring prong.

[0029] FIG. 4 shows the assembled device with the prongs pulled out, in anticipation of retrieving the golf ball

[0030] FIG. 5 shows the assembled device retracted into the golf club

[0031] FIG. 6 shows the manufacturing press used to bend the spring steel into the shape

#### REFERENCE NUMERALS IN DRAWINGS

[0032]

1	3 1/2 inch steel strip (0.030 inch thick and 0.135 inch wide) 1A external prong 1B internal end
2	3 1/2 inch steel strip (0.030 inch thick and 0.135 inch wide) 2A external prong 2B internal end
3	4 inch steel strip (0.030 inch thick and 0.135 inch wide) 3A external prong 3B internal end
4	1 1/2 inch retainer clip (0.030 inch thick and 0.135 inch wide)
5	3/4 inch hardwood dowel, (O.D. 3/8 inch)

-continued

6	3/4 inch copper tubing, (O.D. 1/2 inch, LD. 7/16 inch)
7	golf club shaft
8	golf club rubber grip
9	manufacturing die
10	left tension spring on die
11	right tension spring on die
12	insertion point for steel strip internal end
13	bolt

#### DESCRIPTION—FIGS. 1, 4, 5—PREFERRED EMBODIMENT

[0033] A preferred embodiment of the golf ball retriever of the present invention is illustrated in FIG. 1 (front view, un-assembled), FIG. 4 (front view, assembled), and FIG. 5 (front view assemble, retracted). The retriever is comprised of three spring steel strips 1A, 1B, 1C, two measuring 3 3/4 inches long 1A, 1B, and one measuring 4 inches long. Each strip is 0.030 inches thick and 0.135 inches wide. One prong 1C is longer than the other two so that when it is positioned in the shaft 8 of the golf club handle, it overlaps the tip of the shaft by 1/8 inch. This keeps the device from going down into the shaft, and allows the retriever to be pulled up out of the shaft. Spring steel is the preferred embodiment, as it retains its shape in and out of the shaft, and is strong enough to hold the ball, once captured. However, any resilient material that maintains these same properties would be acceptable.

[0034] A special die shown in FIG. 6 is placed in a press to bend each prong into its desired form. One end of a spring steel strip is placed at insertion point 12. The pressure exerted by the press alters the bending moment of the steel spring. This permanently sets the desired form of each prong. Tension springs 10, 11 allow the die to return to its resting position, ready to receive the next spring steel strip.

[0035] The spring steel projections are secured in place by sandwiching the straight ends of the spring steel strips 1D, 1E, 1F between a 3/4 inch long hardwood dowel 3 which is then placed inside a 3/4 inch long copper tube 4. The placement of the steel strips within the copper tube, shown in FIGS. 2/5, is accomplished with a press. The 3/8-inch outside diameter of the hardwood dowel closely approximates the 7/16-inch inside diameter of the copper tubing. This allows the steel strip ends 1D, 1E, 1F to be held firmly in place by the wooden dowel against the copper tubing. The copper tubing is rigid enough to hold the steel strip ends in a fixed position. The prongs are pulled out and retracted into the shaft as a unit because they are secured by the dowel. The wooden dowel is the preferred embodiment as, in time, the steel strip ends become imbedded in the wood and are better secured during movement. However, any structural material that maintains these same properties would be acceptable.

[0036] When the prongs are pulled outward, the copper tubing slides in the shaft of the handle 8. The dowel section remains in the shaft due to a retainer clip 2. The retainer clip is positioned on the rim of the shaft just inside of the rubber putter grip 9. The retainer clip sits above the dowel/copper tubing section FIGS. 3/5. Once the retainer clip is placed, the device becomes a permanent part of the golf club shaft. In the preferred embodiment, the retainer clip is made of spring

steel. This allows a secure and permanent attachment to the rim of the shaft. However, any structural material that maintains these same properties would be acceptable.

[0037] The copper tubing snugly remains at the tip of the club shaft **8** while the ball is being retrieved. The pressure exerted downward, over the ball, causes the spring steel to phalange outward, preventing the prongs from retreating back into the shaft. Reinsertion is accomplished by gently pushing the prongs back into place. FIGS. **4/5** This gentle pressure allows the spring steel to close and revert back into the shaft of the golf club.

[0038] **FIG. 7**—Additional Embodiments

[0039] Additional embodiments are shown in **FIG. 7**. Instead of using a retainer clip **4** to secure the device, a stainless steel bolt can be placed above the dowel. A hole must be drilled in the shaft of the putter  $\frac{1}{8}$ -inch from the edge of the shaft to accommodate this bolt. The bolt measures  $\frac{5}{64}$  inch in diameter and is  $\frac{3}{8}$  inch long.

[0040] **FIG. 8**—Alternative Embodiments

[0041] There are various possibilities with regard to the materials used in this device. For instance, the prongs can be dipped with a plastic coating if desired. The dip can be dyed with pigment, if desired. It would also be possible for a golf club manufacturer to place this device in their product before it leaves the factory. If this device were included in the customer's desired golf club, the manufacturer would benefit from an improved product, at very little increased cost of production.

[0042] Advantages

[0043] From the description above, a number of advantages of my golf ball retriever become evident:

[0044] (a) the retractable golf ball retriever is hidden from view and does not interfere with the action of the golf club

[0045] (b) the golf ball retriever is readily available to the golfer, as it resides in the handle of the golf club being used

[0046] (c) minimal tools and manual dexterity are required to place the device in the shaft of the golf club

[0047] (d) the stainless steel prongs are resilient, strong, non-corrosive, and flexible

[0048] (e) the components of the device are sturdy, limiting the need for replacement

[0049] (f) the cost of production is minimal, as there are only 4 components to the device

[0050] (g) A single device can be made, using a manual press, or the device can be mass produced

[0051] Operation-FIGS. **4, 5**

[0052] The manner used to operate the golf ball retriever begins with holding the club grip **8** with one hand and pulling on the prong **3A**, which is protruding from the rim of the golf club shaft **7**. This causes the retriever to partially slide out of the shaft of the golf club, and introduces all three prongs **1, 2, 3** for use. The retainer clip **2** prevents the retriever from totally exiting the shaft. The device is then

inverted over the ball. **FIG. 4** By pushing down on the shaft and head of the club, and exerting a downward pressure over the ball, the spring steel will phalange outward, and captures the ball. Its resiliency will embrace the ball, so that the ball can be lifted into the hand of the golfer. The resiliency of the spring steel will also allow for easy removal of the ball from the device. The ball simply needs to be pulled out from the prongs.

[0053] Once the ball has been retrieved, the assembly is easily reinserted into the shaft. This is accomplished by gently pushing the prongs down and into the shaft. The resiliency of the spring steel presses against the inner diameter of the shaft, thereby holding the prongs within the shaft. **FIG. 5** There, they will remain hidden until put in use again by the golfer. When pushed back into the shaft, only one prong of the apparatus extends from the shaft by  $\frac{1}{8}$  of an inch, thereby not interfering with the golfer's grasp or swing.

[0054] Conclusions, Ramifications and Scope

[0055] Accordingly, the reader will see that the golf ball retriever will lift a golf ball from a cup or ground surface by way of a three-pronged device that resides in the handle of the golf club. The golf ball retriever prevents back strain by eliminating the need for bending to pick up the golf ball. When a golfer retrieves his ball after a putt, for instance, he must reach below ground level into the cup. Of necessity, he will put all his weight on one foot and use the putter for balance. Not only does this depress the grass around the hole, but also this puts the golfer at risk for losing his balance. Using the golf ball retriever allows the golfer to distribute his weight on both feet while the ball is obtained. Golfers with arthritis, the aged or the disabled golfer will especially benefit from this invention. Furthermore, the golf ball retriever has the additional advantages in that

[0056] a) it can be obtained as an accessory item to golfing equipment that can be placed in any golf club, old or newly purchased

[0057] b) once placed in the shaft of a golf club, it becomes a permanent device that cannot be lost

[0058] c) it has the novel feature of being retractable into the shaft of the golf club, thereby making it virtually imperceptible when not in use

[0059] Although the description above contains many specificities, these should not be construed as limiting the scope of the invention, but merely providing illustrations of some of the presently preferred embodiments of this invention. For example, the golf ball retriever may potentially be made smaller, may be made from different materials, may be molded as a singular unit rather than integrated pieces, and may otherwise be designed using various colors or design elements that mimic the same or similar function as intended by this invention.

[0060] Thus the scope of the invention should be determined by the appended claims and their legal equivalents, rather than by the examples given.

I claim

1. Apparatus for retrieving a golf ball from a playing surface of the type comprising an elongated angled prong, each of three prongs arranged about a cylindrical axis for attachment to a cylindrical tube lying substantially in a

common plane arcuately curved toward each other, said tube means for inserting said prongs into an elongated hollow shaft with a handle end and an opposite end, wherein said insertion allows said prongs to retreat into said shaft or, in the alternative, exit said shaft, so as to receive and cradle a golf ball therein said prongs.

2. The retriever of claim 1 wherein said prongs are composed of a resilient material.

3. The retriever of claim 1 wherein said prongs are contained in said cylindrical tube.

4. The retriever of claim 1 wherein said cylindrical tube adapted to slidably move inside of said shaft.

5. The retriever of claim 1 wherein said prongs adapted to extend outwardly from said shaft at a predetermined angle relative to said elongated shaft.

6. The retriever of claim 1 wherein said prongs present an interior concave potential space on the inside surface of said prongs.

7. The retriever of claim 1 wherein said potential space is able to receive and retain a golf ball when said ball is aligned with said prongs on a horizontal axis and a downward pressure is applied to said prongs.

8. The retriever of claim 1 wherein said ball is removed from said prongs with minimal manual dexterity.

9. The retriever of claim 1 wherein said prongs shall retreat into said shaft and rest therein.

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