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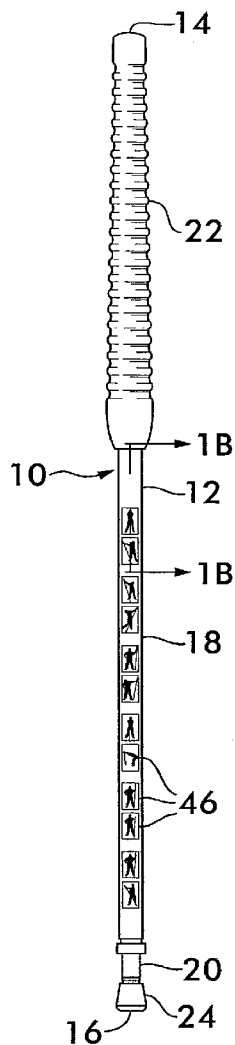
(57) **ABSTRACT**

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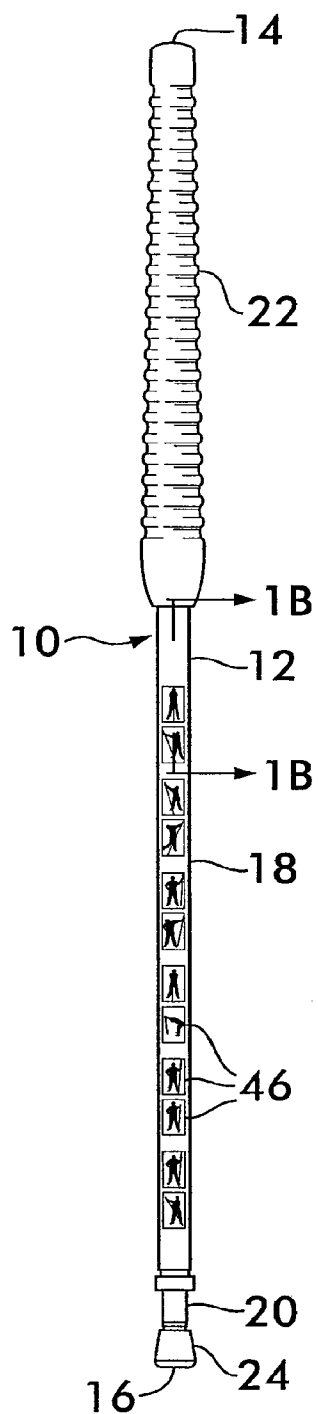
### Related U.S. Application Data

(63) Continuation of application No. 11/627,927, filed on Jan. 26, 2007, now Pat. No. 7,578,747, which is a continuation-in-part of application No. 09/968,423, filed on Oct. 1, 2001, now abandoned.

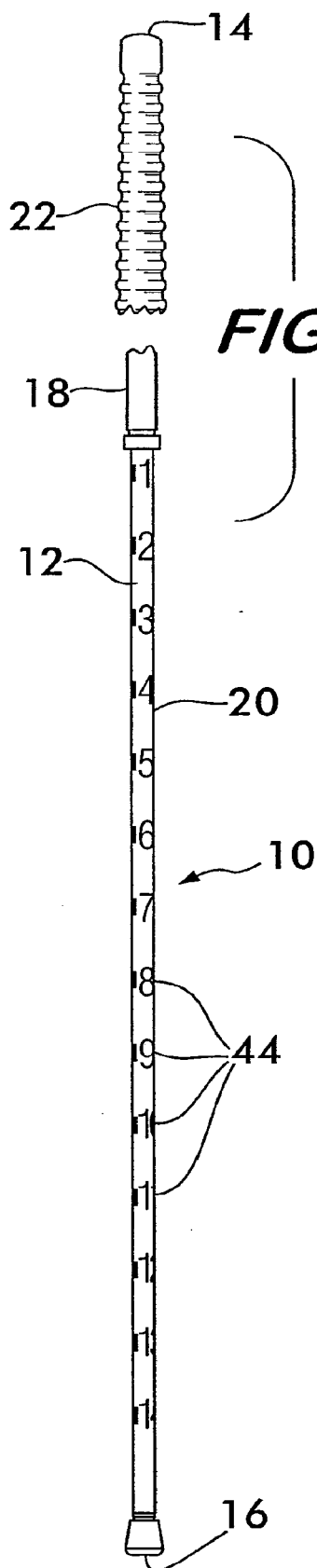
A device and method for stretching muscles and increasing flexibility. A rod like device is used with various exercises and body motions to stretch and increase flexibility. The rod has a handle of which at least a portion is flexible so as to be capable of being bent relative to the remainder of the device during use. This flexibility in the handle helps to relieve the stress on the hands and wrists of the user.



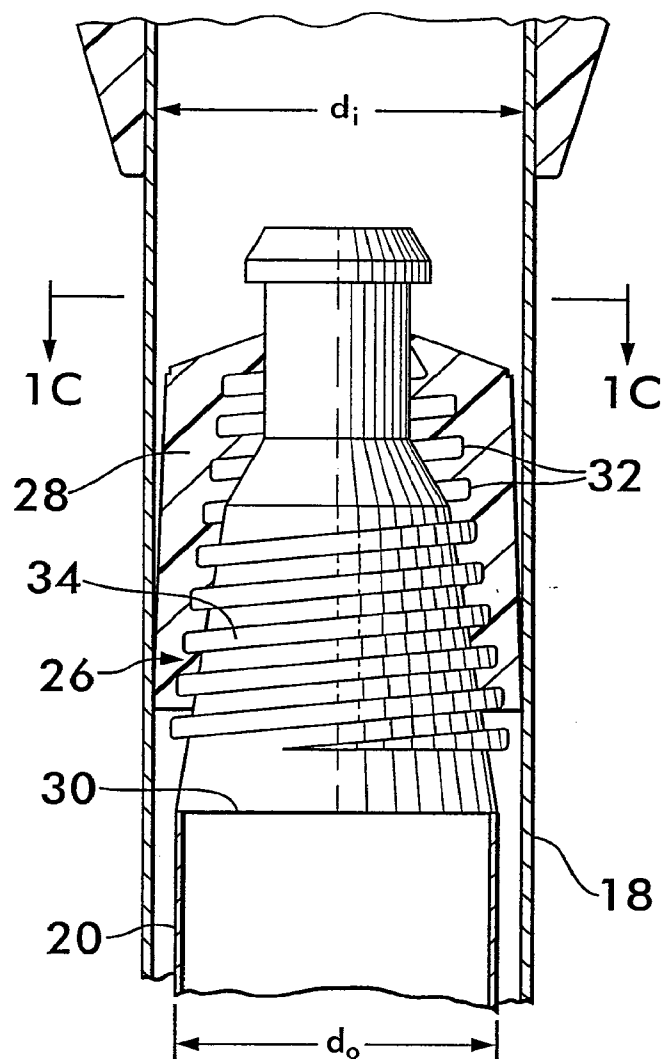
**FIG. 1**



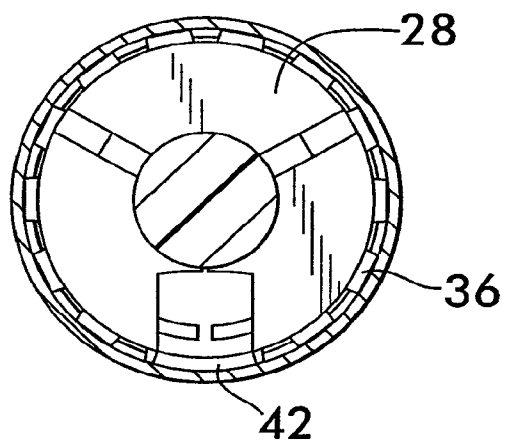
**FIG. 1A**



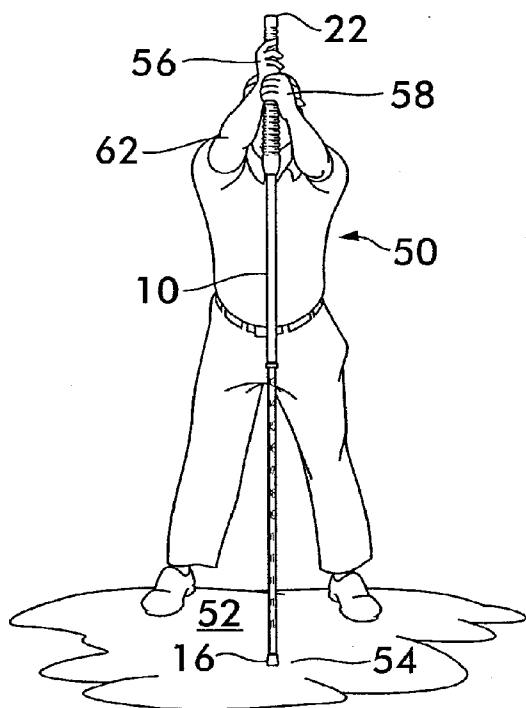
**FIG. 1B**



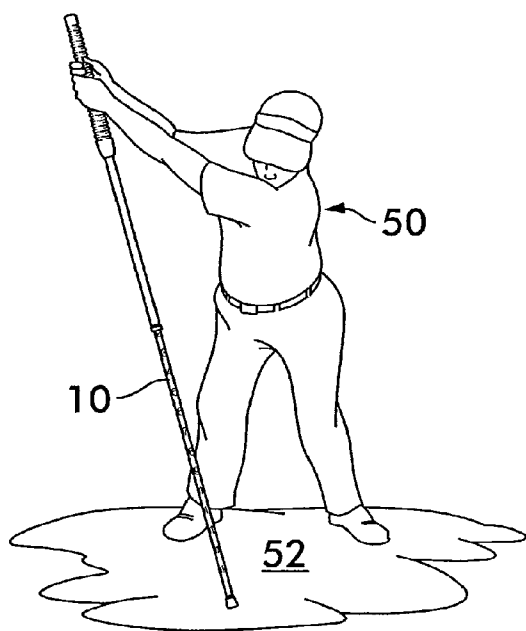
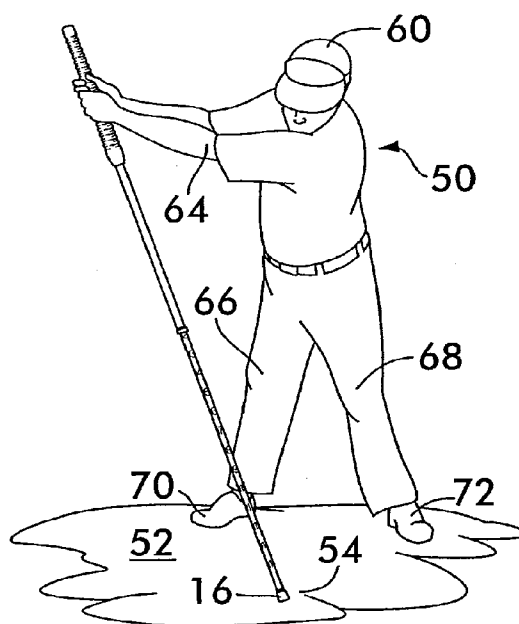
**FIG 1C**



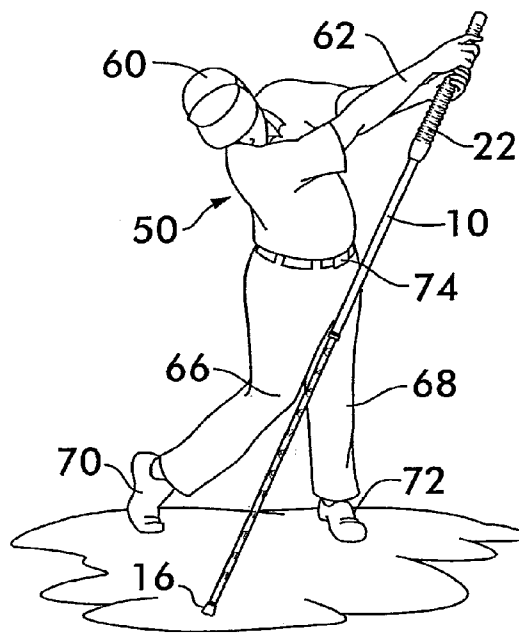
**FIG. 2**



**FIG. 2A**

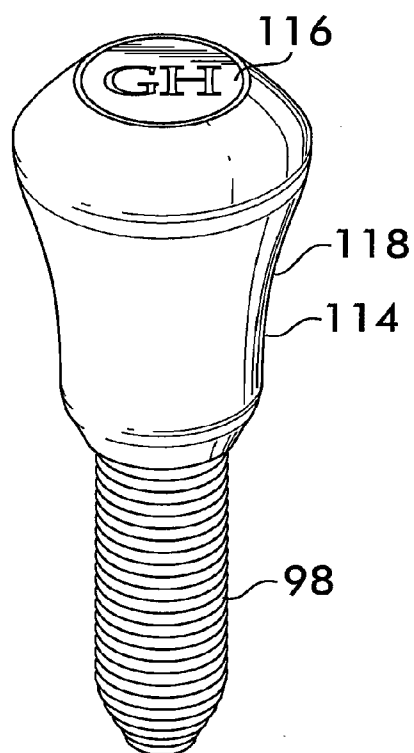


**FIG. 2B**

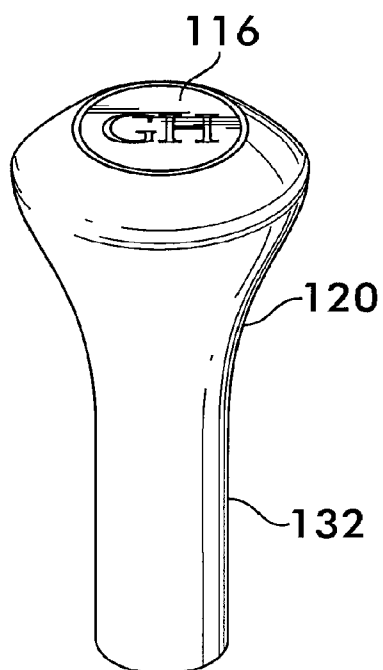
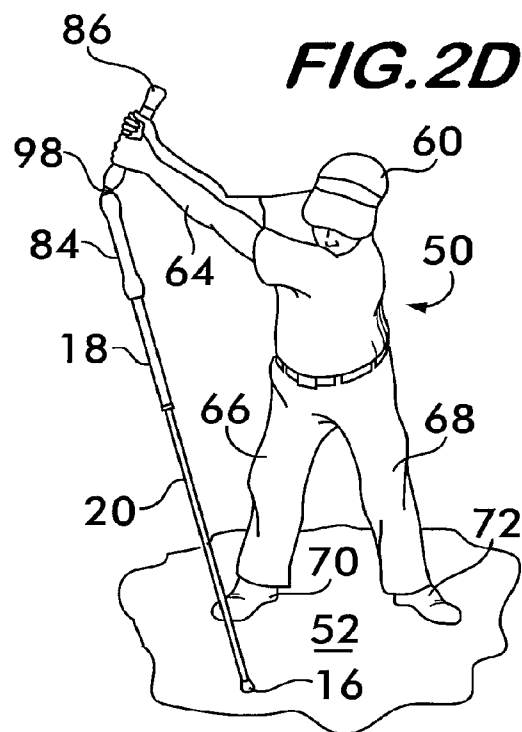


**FIG. 2C**

**FIG. 8**

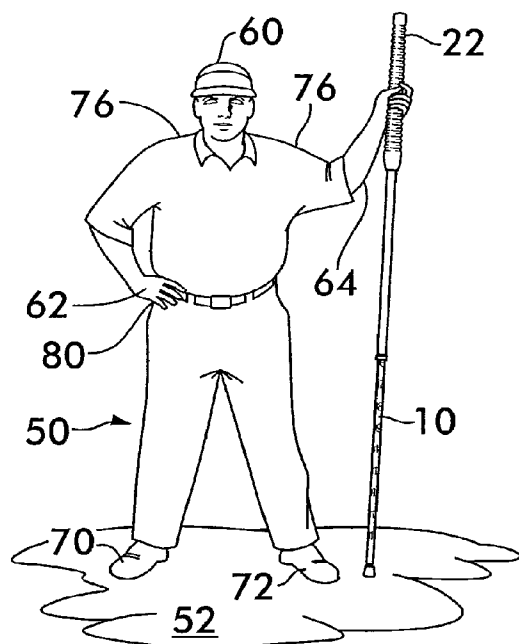


**FIG. 2D**

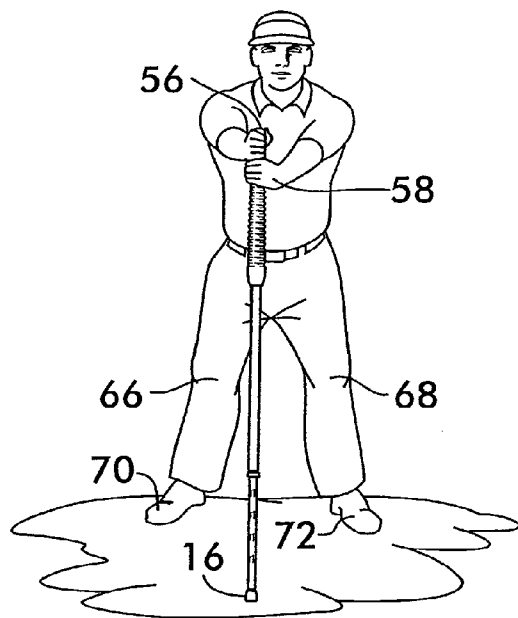
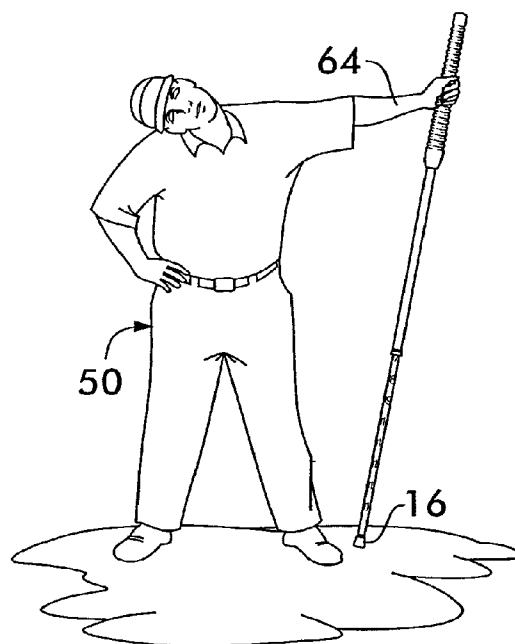


**FIG. 9**

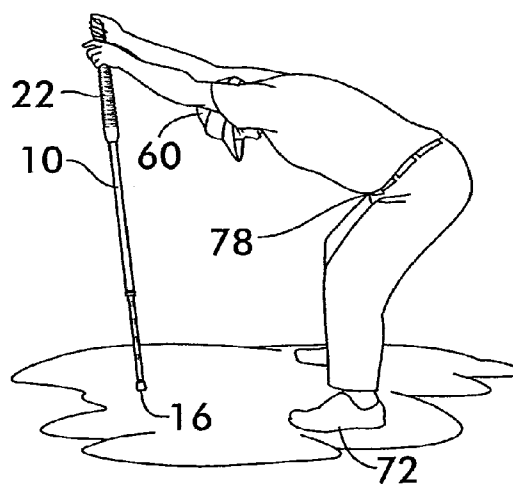
**FIG.3**



**FIG.3A**

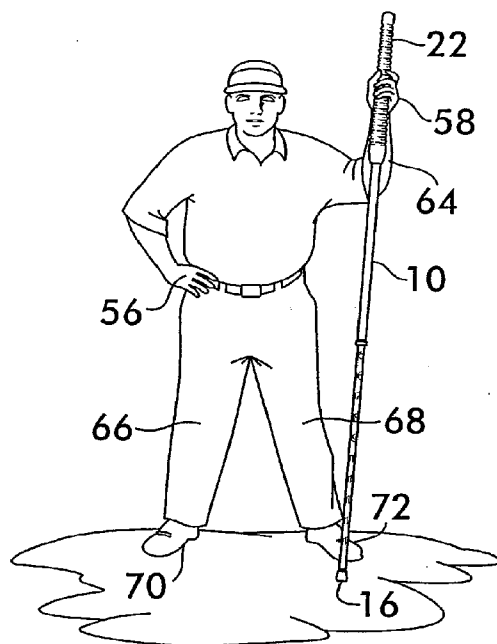


**FIG.4**

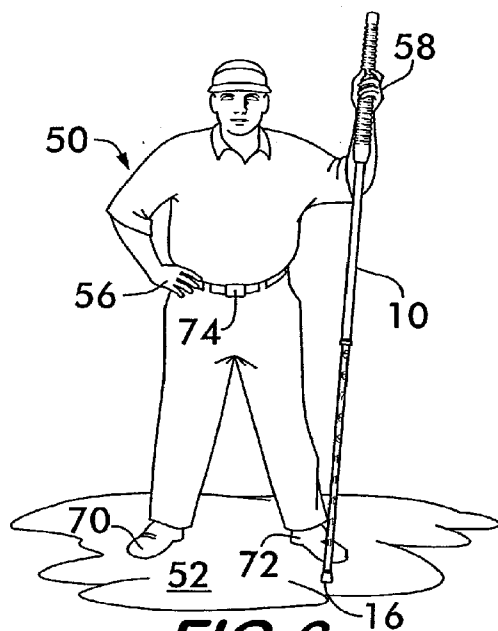
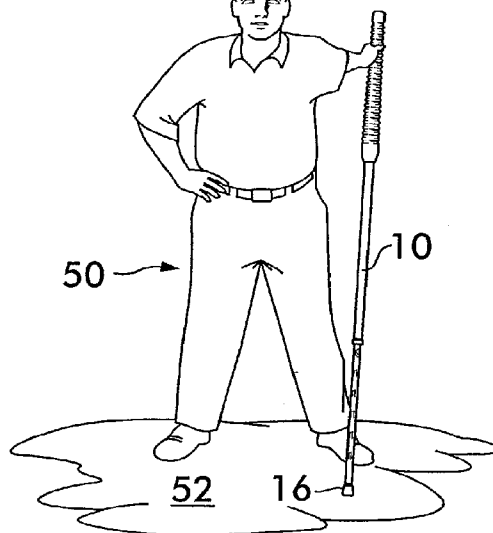


**FIG.4A**

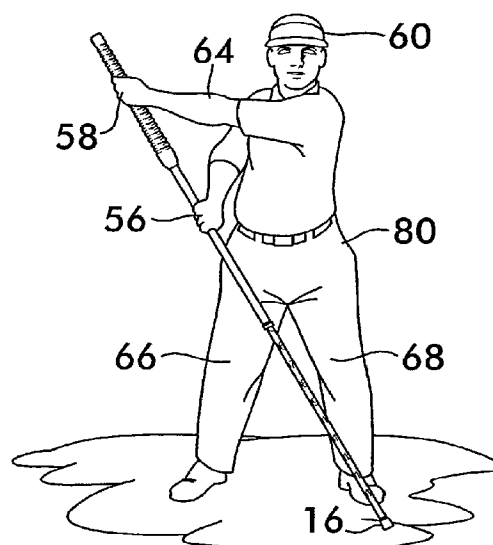
**FIG. 5**



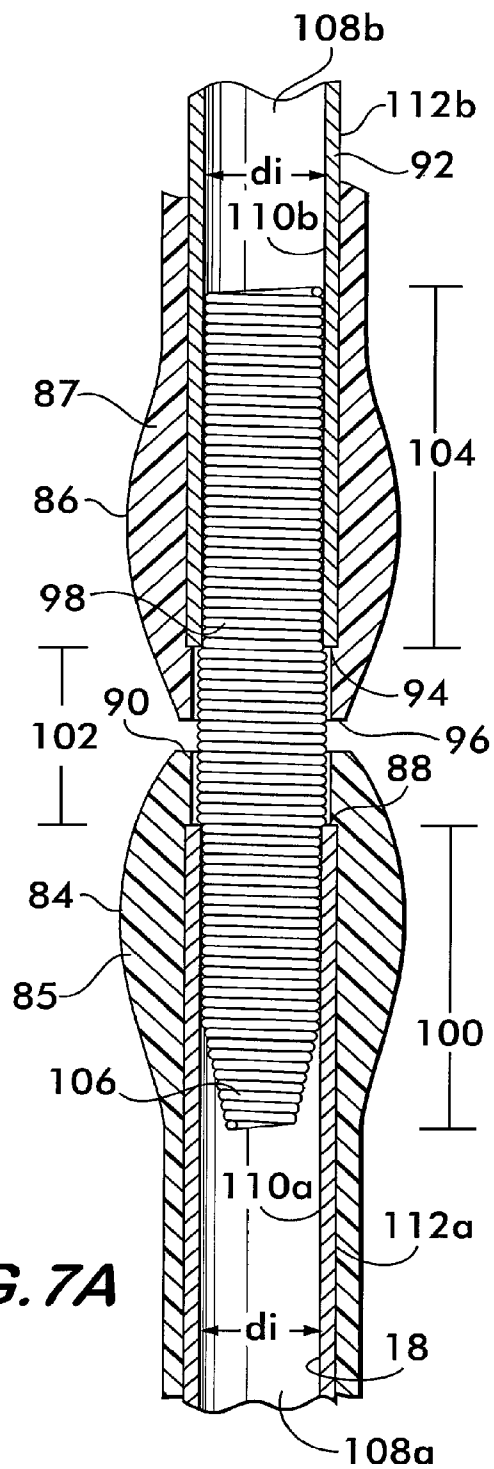
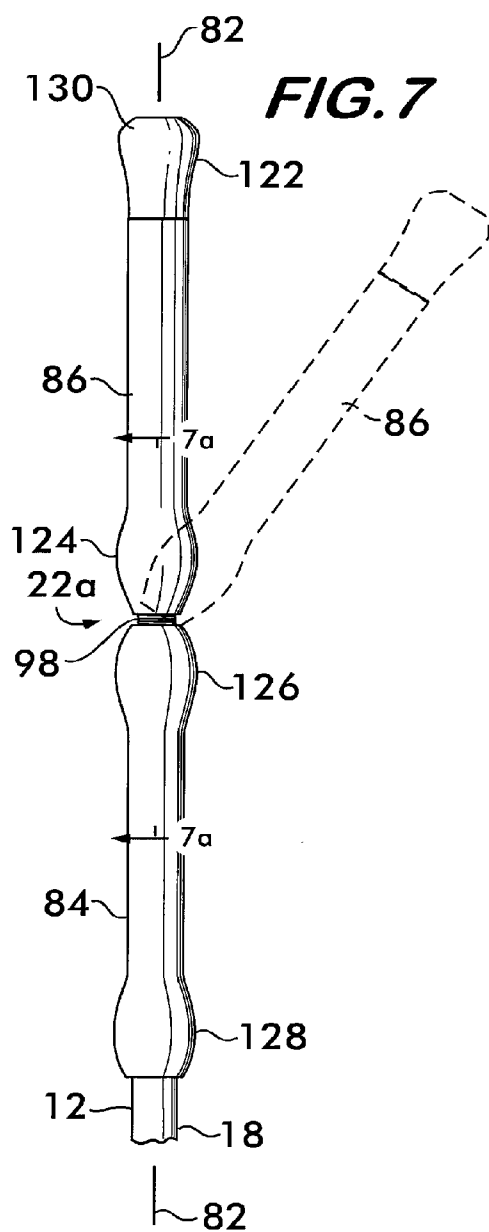
**FIG. 5A**



**FIG. 6**



**FIG. 6A**





## EXERCISE AND STRETCHING POLE WITH FLEXIBLE HANDLE

### CROSS REFERENCE TO RELATED APPLICATIONS

**[0001]** This application is a continuation-in-part of U.S. application Ser. No. 09/968,423 filed Oct. 1, 2001 which claims the benefit to U.S. Provisional Application No. 60/236,658 filed Sep. 29, 2000 and U.S. Provisional Application No. 60/271,522 filed Feb. 26, 2001, all of which are hereby incorporated by reference herein. The present application also claims the benefit to U.S. Provisional Application No. 60/762,555 filed Jan. 26, 2006 which is hereby incorporated by reference herein.

### FIELD OF THE INVENTION

**[0002]** The present invention relates to exercise and stretching equipment and methods of using the same. More particularly, the invention relates to a pole or rod like device and its use for stretching.

### BACKGROUND OF THE INVENTION

**[0003]** The benefits of stretching and strengthening muscles, particularly in sports, are well known. In baseball, for example, batters routinely swing a bat with added weight while on deck awaiting their turn at bat. Pitchers stretch and warm up by throwing many balls prior to facing the batters. Runners and swimmers likewise warm up with various stretching exercises before competing, as do football and basketball players.

**[0004]** Players in golf also benefit from stretching and warming up before play. In addition to a player's strength, flexibility may also affect his or her ability to drive a golf ball far. One theory is that the bigger the shoulder turns during the swing motion, the farther the player can drive the ball. Another theory holds that the longest hitters do not necessarily have the biggest shoulder turns, but rather have the widest gap, called the X-Factor, between the turning of the hips and shoulders at the top of the swing. Under this theory, the wider the gap, the farther the player can hit the ball.

**[0005]** A more recent theory holds that the X-Factor is not as important as the X-Factor Stretch - the gap between the hips and shoulders as the club starts down toward the ball. See P. Cheetham, P. Martin, R. Mottram, B. St. Laurent, *Second Prize: The X-Factor Stretch*, Golf Magazine, March 2001, at 98. At the beginning of the downswing, the hips start rotating before the shoulders finish turning back. Furthermore, the hips rotate faster than the shoulders, increasing the hip-shoulder separation during the early part of the downswing. Increasing this gap is believed to increase the club head speed and add power to the swing for hitting the ball farther.

**[0006]** There is currently known in the prior art a wide variety of training devices for improving a player's swing. Such devices typically improve the swing by teaching the proper swing mechanics. Such devices, however, do not adequately address a player's flexibility and range of motion, particularly in view of the above theories. Thus, significant improvements to a player's swing, and in particular the ability to drive a golf ball far, are believed possible with better means for improving a player's flexibility and range of motion. Improvements in other sports as well are believed possible with better means for improving a player's flexibility and range of motion. Moreover, in any sport, stretching and

increased flexibility are believed to improve performance and lessen the likelihood of injury.

### SUMMARY

**[0007]** The present invention provides a novel device for stretching muscles and increasing flexibility, and novel methods for using the device. In one form the invention provides for an exercise and stretching device which can be held in one location against the ground by a user for performing exercise and stretching motions. The device has an elongated rod having an upper end and a lower end. A handle is positioned on the rod at the upper end and at least a portion of the handle is bendable relative to the remainder of the device. The bendable portion of the handle is configured to be gripped by the user. A foot is positioned at a lower end of the device for contacting the ground when the device is held against the ground.

### BRIEF DESCRIPTION OF THE DRAWINGS

**[0008]** The foregoing summary, as well as the following detailed description will be better understood when read in conjunction with the figures attached hereto. For the purpose of illustrating the invention, there is shown in the drawings several embodiments. It is understood, however, that this invention is not limited to the precise arrangement and instrumentalities shown.

**[0009]** Referring now to the drawings in which numbers indicate corresponding elements throughout the several views:

**[0010]** FIG. 1 is a front view of an embodiment of a stretching device in accordance with the present invention shown in a nonextended position;

**[0011]** FIG. 1A is a front view of the device of FIG. 1 shown in an extended position;

**[0012]** FIG. 1B is a sectional view taken along line 1B-1B of FIG. 1 and showing a lock mechanism;

**[0013]** FIG. 1C is a sectional view taken along line 1C-1C of FIG. 1B;

**[0014]** FIGS. 2, 2A, 2B, 2C and 2D are a series of illustrations showing the device of FIG. 1 being used for a full swing stretch, FIG. 2D being an alternative position of what is illustrated in FIG. 2A;

**[0015]** FIG. 2D is an illustration showing an embodiment of the device having a flexible handle being used for a full swing stretch;

**[0016]** FIGS. 3, and 3A are a series of illustrations showing the device of FIG. 1 being used for a neck stretch;

**[0017]** FIGS. 4, and 4A are a series of illustrations showing the device of FIG. 1 being used for a back stretch;

**[0018]** FIGS. 5 and 5A are a series of illustrations showing the device of FIG. 1 being used for an arm stretch;

**[0019]** FIGS. 6 and 6A are a series of illustrations showing the device of FIG. 1 being used for an across chest stretch;

**[0020]** FIG. 7 is a front view of another embodiment of a stretching device in accordance with the present invention which is similar to the device shown in FIG. 1 but which has a flexible handle;

**[0021]** FIG. 7A is a cross sectional view of the handle portion of the device of FIG. 7 taken along line 7A-7A;

**[0022]** FIG. 8 is a perspective view of a cap for replacing the flexible handle shown in FIG. 7; and

[0023] FIG. 9 is a perspective view of an alternative cap for replacing the flexible handle shown in FIG. 7.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0024] Several embodiments of the invention will now be described in more detail. While the embodiments described are ideal for stretching exercises to improve a golf player's swing and his or her ability to drive a golf ball to greater distances, the invention also may be used in relation to other activities and sports.

[0025] Referring to FIG. 1, a stretching device 10 of the present invention includes an extendable elongated rod 12 having an upper end 14 and a lower end 16. The rod 12 includes a first hollow cylindrical section 18 having an inner diameter  $d_i$  (FIG. 1 B) and a second cylindrical section 20 disposed axially within the first section 18 and having an outer diameter  $d_o$  smaller than the inner diameter  $d_i$  of the first section 18 to permit telescopic displacement of the second section 20 within the first section 18. The first and second sections 18, 20 of the rod 12 are preferably made of steel for strength, although any suitable material such as aluminum and plastics may be used.

[0026] The rod 12 is preferably extendable from a closed or non-extended longitudinal length of 44" as shown in FIG. 1 to a fully extended longitudinal length of at least 6' 6" to be useable by most people. The outside diameter of the first section 18 is about 1 inch, the outer diameter of the second section 20 is about  $\frac{7}{8}$  inch. Smaller or larger rods 12 can be used, as well as sections of different cross sectional shapes and diameters.

[0027] Fixed at the upper end of the rod 12 is a hand grip 22. The grip 22 is preferably between about 18" and 22" in length and made of a foam rubber or other material that can be gripped readily by the user. The grip may have finger indentations or a rib like design as shown to improve the gripping. The grip can also be tapered from the top (smaller thickness or diameter) to the bottom of the grip (larger thickness or diameter) as shown to help the user maintain the grip of the device 10 while applying downward pressure on the device 10. Any alternative grip may be used.

[0028] Fixed to the rod 12 at the bottom end 16 of the rod 12 (on the second section 20), is a foot member 24 for contacting the ground when the device 10 is in use. The foot member 24 is formed preferably as a rubber cylindrical knob which resists slipping against the ground. Other suitable types of foot materials and configurations that resist slipping can be used, such as elastomeric, plastic and other such materials which allow the device to be used on grass and/or on hard surfaces. Elastomeric materials that will not damage an indoor floor surface may be desirable for use indoors.

[0029] The first and second sections 18, 20 of the rod 12 can be selectively locked together to fix the position of the two sections relative to one another at the desired longitudinal length of rod 12, it being appreciated that the two rod sections 18, 20 can be locked together at any length between the non-extended length and the fully extended length of the rod 12, i.e., there being multiple possible lengths at which the rod 12 can be locked. A lock 26 for fixing together the two sections 18, 20 can take on any suitable form. One type of locking mechanism 26 is illustrated in FIGS. 1B and 1C. This is similar to the type of lock mechanisms used in common extension poles for paint rollers sold in hardware stores. With such lock mechanisms, rotation of one of the sections 18, 20

of the rod 12 relative to the other locks the two sections 18, 20 to fix the length of the rod. Rotation of the sections in the opposite direction loosens or unlocks the sections 18, 20 so that the length can be adjusted again (the term "releasably lockable" as may be used herein meaning that the lock can be locked and unlocked). The lock 26 includes a cylindrical collet 28 attached to a top end 30 of the second section 20 of the rod 12. The collet 28 has threads 32 to threadingly engage and rotate about a tapered threaded screw like member 34 fixed to the top end 30 of the second section 20. Ribs 36 on the collet 28 engage the inside wall of the first section 18 to help prevent the collet 28 from rotating with the rotation of the second section 20, and a stop member 38 prevents the collet 28 from detaching from the second section 20. It is seen that rotation of the second section 20 and the threaded member 34 therewith relative to the collet 28, depending on the direction of the rotation, can pull the collet 28 downward over the tapered threaded member 34 thereby spreading the collet 28 to make a friction lock with the inside wall 40 of the first section 18, or push the collet 28 upward to loosen the friction lock. A slotted opening 42 in the collet 28 allows the diameter of the collet 28 to be increased or decreased with rotation of the collet 28 relative to the tapered threaded member 34.

[0030] With reference to FIGS. 1 and 1A, located on the outer surface of the second section 20 of the rod 12 are indicia 44 for aiding the user in extending the device 10 to the desired length. The indicia 44 can be calibrated to indicate the length of the rod 12 in various extended positions (such as units of inches or centimeters), or act simply as a reference point to aid the user in extending the rod to the desired length (relative length). The outer surface of the lower section 20 may also be made capable of retaining markings, such as ink, to allow the user to make his or her own markings thereon such as reference markings. Located on the outer surface of the first section 18 of the rod 12 are instructions for use. Here, the instructions include pictures 46 illustrating particular uses of the rod 12. Written instructions may also be included.

[0031] The present device 10 as illustrated and described herein is believed to be in compliance with USGA Rule 14-3 and thus can be stored in a golf bag for carrying onto a golf course.

[0032] Having described a preferred embodiment of the stretching device 10, methods of improving a golfer player's swing using such a device will now be described. These methods, however, are believed useful for other sports as well, and for all around physical conditioning.

#### Full Swing Stretch

[0033] With reference to FIGS. 2, 2A, 2B, and 2C, a full swing stretch is now described for a right-handed player 50. With particular reference to FIG. 2, the golfer 50 assumes the position to address the ball, typically standing up straight with feet shoulder width apart and knees slightly flexed. The arms are extended fully straight out in front, back straight, the distance between the inside of the feet set apart approximately the width of the shoulders. With the device 10 in hand and preferably already extended to the desired length, the player 50 places the lower end 16 of the device 10 on the ground 52 in front of him or her. Preferably, at least for the initial use of the device 10, the lower end 16 is placed on the ground 52 in the approximate area 54 where a golf ball would be teed up. The device 10 is gripped with both hands (right-hand 56 and left-hand 58) along the grip 22 in a manner similar to that of gripping a golf club (as if the golf club were

being held vertically with the head of the club at the top, i.e., right-hand **56** on top of left-hand **58** with thumbs on the top of the hands). The device **10** is gripped at a height preferably 1" to 2" above the player's head **60**.

[0034] With reference to FIG. 2A, the back swing is then begun in a manner similar to the swinging of a golf club. While maintaining the grip of the device **10** and the position of the lower end **16** on the ground **52**, the golfer **50** rotates the upper body to the right, moving the hands to the full back swing position. The left arm **64** should remain fully extended through this motion, the right knee **66** kept inside the right foot **70**, and the head **60** kept centered. This position can be held if desired, e.g., for about thirty (30) seconds to fully stretch the muscles.

[0035] To increase coil and turn, the player **50**, while holding the back swing position, draws the lower end **16** of the pole close to his/her right foot **70** progressively. This position can also be held, e.g., thirty (30) seconds.

[0036] As another option, to maximize stretching, the player, while maintaining the back swing position, can drop to a sitting position slowly. See FIG. 2B. The player **50** should feel additional back stretching. This position can be held, e.g., thirty (30) seconds.

[0037] To complete the full swing stretch, the player can swing from the full back swing position as shown in FIG. 2A to the finished down swing position as shown in FIG. 2C. The player **50** begins the down swing and continues to the finished position in a manner similar to the swinging of a golf club driver. The body is turned to the left, moving the right knee **66** toward the left knee **68**, winding up in a completed swing position—the belt buckle **74** facing the target, right foot **70** up on toes, back straight, standing tall, right arm **62** kept straight, and with head **60** facing the target (where the user would want to drive the golf ball). The finished position can be held for a full stretch, e.g., thirty (30) seconds.

[0038] The device **10** can be moved back and forth between the full back swing and finished positions as many times as desired to stretch the muscles. The above movements can be modified as desired. For example, one could concentrate on the back swing, moving back and forth between the center position of FIG. 2 and the full back swing of FIG. 2A. Likewise, the position on the ground of the lower end **16** of the device **10** can be moved as described above to concentrate on certain muscles. A left-handed player would reverse the movements discussed above.

[0039] The device **10** can be used to improve golf swings for various clubs. For example, the swing related to a five iron, which is a shorter club than a driver, requires a different stance than that of a driver. Accordingly, the golfer, assuming the proper stance for the 5 iron, can set the device **10** on the ground in a position where the ball would be teed up, and grip the device **10** at a position 1 to 2 inches above the head. Because the head position for a 5 iron swing is lower than that of a driver swing, the device **10** can be extended to a smaller length than would be desirable for the driver swing.

[0040] A major benefit of the full swing stretch is the ability to increase the club head speed and thus the driving distance of the golf ball by improving the golfer's flexibility and swing arc. For example, the golfer can urge his or herself into the upper most top back swing position possible in an effort to stretch the muscles and increase the top of the back swing.

[0041] The full swing stretch as described above may be modified for use relating to other sports. For example, to improve a baseball swing, it may be beneficial to use the pole

**10** in a similar manner as described above but with the lower end **16** positioned on the ground closer to the feet of the user.

#### Neck Stretch

[0042] With reference to FIGS. 3 and 3A, a method of using the device **10** for stretching the neck and upper arm muscles is now described. With the device **10** fully extended, the player or user **50** stands up straight with feet **70**, **72** shoulder width apart. The device **10** is placed on the side of the left foot **72** in line with the shoulder **76**. The right arm **62** is placed on the hip **80** and the pole device **10** gripped at shoulder height with the left arm **64**. The left arm **64** is then straightened and the head **60** tilted to the right (see FIG. 3A). This position may be held to maximize the stretch, e.g., thirty (30) seconds. The above method can be reversed to stretch the other side. This stretch is also believed to help increase club head speed, and thus driving distance, by stretching and increasing the flexibility of key muscles.

#### Back Stretch

[0043] With reference to FIGS. 4 and 4A, a method of stretching back muscles, which is also believed to help increase club head speed, is described. The device **10** is preferably lowered to chest height and the hands **56**, **58** placed on top. The player **50** stands up straight with feet **70**, **72** wider than shoulders and knees **66**, **68** slightly flexed. The device **10** is held at arm's length away with the end **16** on the ground. Arms are held away (see FIG. 4).

[0044] The player then bends from the waist **78** and places his/her head **60** between its arms. Next, while maintaining the grip on the device **10**, the player moves slowly to a sitting position (see FIG. 4A). This final position can be held, e.g., for thirty (30) seconds to maximize the stretch.

#### Arm Stretch

[0045] With reference to FIGS. 5 and 5A, a method of stretching arm and shoulder muscles, also believed to help increase club head speed, is described. With the device **10** fully extended a suitable length, the player **50** stands up straight with feet **70**, **72** shoulder width apart and knees **66**, **68** slightly flexed (see FIG. 5).

[0046] The device **10** is placed in the left-hand **58** about two (2) inches in front of the left foot **72**, the right-hand **56** placed on the hip **80**. The player **50** then rotates the left arm **64** behind him or her as far as possible as seen in FIG. 5A. Shoulders should be kept square, chest forced out, and shoulders pulled back. This final position can be held, e.g., thirty (30) seconds to maximize the stretch. This can be repeated with the opposite arm.

#### Across Chest Stretch

[0047] A method of stretching various muscles in the shoulders and between the shoulders and back is now described with reference to FIGS. 6 and 6A. With the pole device **10** fully extended, the player **50** assumes a position standing straight up with feet **70**, **72** shoulder width apart and knees **66**, **68** flexed. The pole device **10** is placed in the left-hand **58** two (2) inches in front of the left foot **72**, and the right-hand **56** placed on the hip **80** (see FIG. 6).

[0048] Next the left arm **64** is extended straight and swung across the body as shown in FIG. 6A. The right-hand **56** is then placed palm down on the pole **10** waste high. With hips **80** kept square, the user **50** pulls back on the device **10** with

the right-hand **56** and flexes the knees **66**, **68** slightly. This final position can be held, e.g., thirty (30) seconds to maximize the stretch. This method can be reversed for the other side.

#### Flexible Handle Embodiment

**[0049]** With reference to FIGS. 7 and 7A, another preferred embodiment of the present invention is now described. For this embodiment, a device **10a** has a flexible hand grip or handle **22a** fixed at the upper end of the rod **12** as shown. The rod **12** is preferably extendable and can be formed of first and second hollow cylindrical sections **18** and **20** in the same manner as that described above with reference to the device **10** of FIG. 1, with like reference numbers indicating similar elements, and thus only the top portion of the device **10a** is shown in FIG. 7. At least a portion of the handle **22a** can be bent or flexed during use to follow the natural movements of the hand and/or wrist during the particular exercises, thereby relieving stress on the user's hand and wrist. The rod **12** has a longitudinal axis **82** which, in the present embodiment where the rod sections **18**, **20** are formed as a straight longitudinal rod **12** as shown in FIG. 1, runs through the center axis of the rod **12**.

**[0050]** The handle **22a** of this embodiment is flexible in that at least a portion of the handle **22a** is bendable away from the longitudinal axis **82** of the rod **12** as illustrated in FIG. 7. The handle **22a** is preferably formed as two sections, a first or lower section **84** and a second or upper section **86** which, in this embodiment, is the portion of the handle **22a** that is bendable (the dotted lines show a bent position of the upper handle section **86**). Each of the two handle sections **84** and **86** are configured to be gripped by a user.

**[0051]** With further reference to FIG. 7A, it is seen that the lower handle section **84** has a cylindrical lower foam grip **85** fixed to the first rod section **18** such that an upper end **88** of the first rod section **18** ends short of an upper end **90** of the lower foam grip **85** by a preferred distance of about  $\frac{1}{2}$  inch although this distance can be shorter or longer as necessary or desired including a preferred distance of up to about one inch. The upper section of the rod section **18** supports the foam section **85** much as it supports the entire handle **22** in the device **10** of FIG. 1. The lower foam grip **85** is configured to be grippable by a user for carrying out exercises using the lower handle section **84**.

**[0052]** The upper handle section **86** has a upper foam grip section **87** fixed to a cylindrical handle support member **92** which is preferably formed of the same hollow cylindrical material as the rod section **18**, although shorter in length. As seen in FIG. 7A, a lower end **94** of the handle support member **92** ends short of the lower end **96** of the upper foam grip section **87** a preferred distance of about  $\frac{1}{2}$  inch although this distance can be shorter or longer as necessary or desired including a preferred distance of up to about one inch. The upper foam grip **87** is configured to be grippable by a user for carrying out exercises using the upper handle section **86**.

**[0053]** In the illustrated embodiment, the flexible handle feature is provided by a spring **98** that flexibly attaches together the first and second handle sections **84** and **86**, allowing the upper handle section **86** to be bendable relative to the lower section **84** away from the longitudinal axis **82** so as to be capable of moving in any direction 360 degrees around the longitudinal axis **82**; the spring **96** thereby acting as a polyaxial joint. The spring also urges the upper handle section **86** back to its original axially aligned position. In the pre-

ferred embodiment, the spring **98** is formed by a coiled spring, with a preferred distance of about three spring coils separating the upper end **90** from the lower end **96** of the respective foam grip members **85** and **87**.

**[0054]** In a preferred embodiment, the upper handle section **86** is removably attached to the lower handle section **84** so that the upper handle section **86** can be removed from a remainder of the device **10a** if and when desired such as to shorten the length of the device **10a** to fit within a golf bag (45 inches in length) or where the flexible portion of the handle is not needed for carrying out particular exercises (e.g., the lower handle section **84** will be used). One preferred means of providing a removably attachable upper handle section **86** is now described with reference to FIGS. 7 and 7A.

**[0055]** The coiled longitudinal spring **98** of the illustrated embodiment has a first or lower section **100**, a second or central section **102**, and a third or upper section **104**; the lower section **100** includes a tapered end **106** to help guide the spring **98** into the rod section **18** as further described below. In the illustrated embodiment, the first spring section **100** is about  $2\frac{3}{4}$  inches in length (including the tapered section **106**); the second central section **102** is about 2 inches in length, and the third section **104** is about 2 inches in length; other suitable lengths and configurations being acceptable.

**[0056]** The rod section **18** and the handle support member **92**, both preferably formed of similar hollow cylindrical material, have respective hollow interiors **108a** and **108b** defined by respective interior walls **110a** and **110b** with an inner diameter **di** (see FIG. 1B), and respective exterior walls **112a** and **112b**.

**[0057]** The outer diameter of the first and third spring sections **100** and **104** is sized to fit within the interiors **108a** and **108b** of the rod section **18** and handle support member **92**, preferably a snug fit requiring that the two sections **100** and **104** be twisted into the respective interiors **108a** and **108b** with the spring coils acting as threads. The spring section **104** is permanently attached to the handle support member **92** within the interior **108b**. A deformation of the handle support member **92**, such as a crimp in the walls **112b** can permanently attach the handle support member **92** to spring section **104**. The lower spring section **100** can be removably attached to the upper rod section **18** by inserting the lower spring section **100** into the hollow interior **108a** such that the interior wall **110** engages the spring **98** and, being sized to fit tightly therein, cannot move further into the hollow interior of the rod section **18**. The spring **98** is then rotated in a direction such that the lower spring section **100**, frictionally held by the interior walls of the rod **18**, gets smaller in diameter, allowing the spring section **100** to be pushed further into the rod **18**. Continued rotation of the spring **98** allows the spring section **100** to be fully inserted within the interior of the rod **18**. It is seen that the middle section **102** of the spring **98** has a diameter sufficiently larger than the diameter of the lower spring section **100** such that the larger diameter acts as a stop to prevent further ingress of the spring **98** into the hollow section of the rod **18**. It is seen that when the handle is bent as seen in FIG. 7, the middle spring section **102**, which is not fixed to the upper or lower handle sections **84**, **86**, is the portion of the spring **98** that bends; this includes a portion of the middle spring section **102** that is exposed between the upper and lower handle sections **84** and **86**, as well as the portions of the middle spring section **102** between the upper end **90** of the handle section **84** and the upper end **88** of the rod **18**, and the section between the lower end **96** of the handle section **86** and

the lower end 94 of the handle support 92. The upper handle section 86 can be removed from the lower handle section 84 by rotating the upper handle 86 in the same direction as when attaching the upper handle section 86 while at the same time pulling the upper handle section 86 out from the lower handle section 84. It is seen that the rotation lessens the diameter of the spring to allow removal thereof.

[0058] A preferred method of making the device 10a as illustrated in FIG. 7 is now described. A rod 12 having first and second cylindrical hollow rod sections 18 and 20 as described above is provided. A top section of the rod 18 is cut off to form the handle support member 92. Any additional length is also removed as needed to form the desired extended length of the device 10a.

[0059] Next the lower foam grip section 85 is slid over the upper end 88 onto the rod section 18 to a position well below the end 88 of the rod section 18. The spring section 102 is then twisted (rotated) into the interior 108a of the rod section 18 until the larger diameter center spring section 104 contacts the rod end 88 to prevent any further ingress. The third spring section 106 is then twisted into the interior 108b of the handle support member 92 (by turning the handle support member 92 into the spring 98) until the center spring section 104 again stops any further insertion movement. The outer wall 112b of handle support member 92 is then crimped to fixidly attach the spring 98 thereto.

[0060] Next, an adhesive, such as Liquid Nails®, is applied to the outer wall 112b of the support member 92, and then the upper foam section 87 is slid downward over the handle support member 92 until the lower end 96 of the upper foam section 87 is at the desired position. The foam grip section 87 is twisted one full turn to ensure that the adhesive is spread sufficiently around the support member 92. Likewise, adhesive is applied to the rod 18 outer wall 112a and then the lower foam grip section 85 is slid back up until the upper end 90 of the foam grip 85 is at the desired position, the foam grip section 85 being twisted one full turn to spread the adhesive.

[0061] The flexible portion of the handle, here upper handle section 86, is detachable so that the stretching poll 10a can be used with or without it, depending on the exercise. Detaching the handle section 86 also makes the overall length of the device 10a short enough to fit into a golf travel bag. Caps can be inserted into the top opening of the lower handle section 84 after the upper handle section 86 is removed to maintain the aesthetic look of the device 10a as well as to prevent moisture and other undesirable matter from getting into the interior space of the rod section 18.

[0062] With reference to FIGS. 7 and 7A, a preferred handle shape is now described. Here, the handle 22a has first and second sections 84 and 86 which are similar in shape. The upper foam section 87 has an upper bulbous section 122 and a lower bulbous section 124. As seen, the lower bulbous section 124 has a tapered section on the upper part of the bulb 124 that increases in diameter moving downwards. This helps the user to maintain its grip on the handle 22a and prevent slippage. Similarly, the lower foam handle section 85 has an upper bulbous section 126 and a lower bulbous section 128. The lower bulbous section 128 as a tapered section on the upper part of the bulbous section that increases in diameter moving downwards to help prevent slippage when the user uses the lower handle section 84 for exercises. The top 130 of the upper handle section 86 is substantially flat and can have a medallion (see, e.g., FIG. 8) installed thereon as desired. Another preferable handle shape is that shown in FIG. 1, but

with the handle 22 cut into two sections, the lower section forming part of the lower handle section 84, the upper section forming part of the upper handle section 86.

[0063] With reference to FIG. 8, a cap 114 has a spring 98 similar to the spring used with the upper handle section 86 for insertion into the hollow internal area 108a of the rod 18. A cylindrical handle support (not shown), similar to the handle support 92 discussed above with reference to the upper handle section 86, can be provided for use in connecting the spring 98 to the foam grip section 118. Here the spring 98 works identically to that discussed above, i.e., it is removably attached to the top of the rod 18 by rotating the spring 98 so as to shorten the diameter of the spring. Once the spring 98 is fully inserted, rotation of the 114 is stopped so that the spring returns to its normal diameter, thereby frictionally attaching the cap 114 to the rod 18. A personalized medallion 116 can be provided on the top of the cap 114 to show the name of the golf club, initials of the user, or whatever is desired. Another cap embodiment is shown in FIG. 9. This cap 120 is made of all foam and has a thinner neck area 132 that can be easily pushed into the opening at the top of the rod 18 when the upper handle section 86 has been removed. The cap 120 can also include a medallion 116 as shown.

[0064] The flexibility of the handle 22a allows the user's hand to bend in a natural way during use of the device, thereby relieving stress and pressure on the hand and wrist as shown in FIG. 2D, which illustrates the flexible handle embodiment being used to carry out the full swing stretch. This is similar to the exercise described above with reference to FIGS. 2-2C except that as the rod 10 (10a) is moved to the backswing position, the user can bend his or her wrists as shown in FIG. 2D (instead of FIG. 2A) before completing the exercise as shown in FIGS. 2B and 2C. Thus, the flexible handle allows for the wrists to hinge naturally while still achieving the fully turned position and maintaining a light grip pressure. It is important that a golfer's hands at the top of his or her backswing be as relaxed as possible. This constitutes an improvement for the full swing stretch as compared with a device having a non-flexible handle.

[0065] While particular embodiments of the invention are described herein, it is not intended to limit the invention to such disclosure and changes and modifications may be incorporated and embodied within the scope of the appended claims.

[0066] Other embodiments, while not shown, are contemplated. For example, the two sections 18, 20 may have a spring between the two to allow the device to be compressible. As another example, regarding the device 10a of FIG. 7, the handle 22a may be formed of just a single handle section that is connected to the upper section of the rod 18 via the spring.

I claim:

1. A device useable for exercise and stretching, said device comprising:

- a longitudinal rod having a longitudinal axis and having an upper end and a lower end configured for contacting the ground so as to resist slippage;
- a handle positioned at said upper end of said rod, wherein at least a portion of said handle is bendable away from said longitudinal axis of said rod and is grippable by a user.

2. The device of claim 1 wherein said handle comprises a first section and a second section, said second section being

attached to said first handle section and comprises said portion that is bendable away from said longitudinal axis of said rod.

3. The device of claim 1 wherein said handle comprises a first section and a second section pivotally attached to said first handle section so as to allow polyaxial movement of said second handle section away from said longitudinal axis of said rod for bending away from said longitudinal axis.

4. The device of claim 3 wherein said handle comprises at least one tapered section that increases in thickness in a direction from an upper end of said handle to a lower end of said handle.

5. The device of claim 1 wherein said rod includes first and second rod sections that are displaceable relative to one another to change the length of said device, said first and second rod sections being releasably lockable relative to one another to fix said rod at a desired length.

6. The device of claim 3 further comprising a spring attaching said first and second handle sections together to allow said polyaxial movement and which urges said second handle section towards a position in alignment with said longitudinal axis.

7. An exercise and stretching device which can be held in one location against the ground by a user for performing exercise and stretching motions, comprising:

an elongated rod having an upper end and a lower end, said rod having a first rod section and a second rod section moveable relative to said first rod section to adjust a length of said rod;

a handle positioned on said rod at said upper end, at least a portion of said handle being bendable relative to the remainder of said device and which is configured to be gripped by the user; and

a foot disposed at a lower end of said device for contacting the ground when said device is held against the ground, said foot being configured to resist slipping so as to be maintained in the one location against the ground during the exercise or stretching motion when the handle is gripped by the user and said foot is in contact with the ground.

8. The device of claim 7 wherein said handle comprises a first section and a second section pivotally attached to said first handle section so as to allow pivotal movement of said second handle section relative to said first handle section.

9. The device of claim 8 further comprising a spring attaching said first and second handle sections together to allow said pivotal movement and which urges said second handle section towards an original position of said second handle section relative to said first handle section.

10. The device of claim 7 further comprising a lock operable to fix the length of said rod at a desired length;

11. The device of claim 7 wherein said portion of said handle is attached to the remainder of said device so as to be capable of moving in any direction 360 degrees around a longitudinal axis extending through said remainder.

12. The device of claim 7 wherein said portion of said handle is removable from a remainder of said device so as to be capable of being detached from said device.

13. The device of claim 8 wherein said spring has a first section having a diameter sized to engagingly fit within one of said rod sections, and a second section having a second diameter larger than said first diameter and which is sufficiently large to prevent said second spring section from fitting within said rod section so as to fix the length of said spring that is insertable and to said rod.

14. The device of claim 13 wherein said spring has a third section having a third diameter smaller than said second diameter and which attaches to said second handle section.

15. The device of claim 9 wherein said handle is tapered, at least over a portion of said handle, increasing in thickness in a direction away from said upper end of said handle toward a lower end.

16. The device of claim 7 wherein said foot comprises an elastomeric member attached to the lower end of said rod for contacting the ground when said device is held against the ground.

17. The device of claim 8 wherein both first and second handle sections are configured to be gripped by the user.

18. A method for improving a golf swing using the exercise device of claim 7, said method comprising a user of the device doing the following:

(a) placing said lower end of said rod on the ground in front of the user;

(b) gripping said bendable portion of said handle with both hands;

(c) assuming the approximate position for addressing the ball;

(e) moving the user's arms to the back-swing position while maintaining said grip and keeping said lower end of said rod on the ground; and

(f) bending their user's wrist so as to bend said bendable portion of said handle relative to a remainder of said exercise device.

19. The method of claim 17 further comprising:

(f) moving the user's arms to the finish-swing position while keeping said lower end of said rod member on the ground.

20. The method of claim 19 wherein step (f) is carried out after step (e).

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