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**Lin**

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(54) **GOLF POSITION AND PARALLEL INDICATING DEVICE FOR THE TOP OF BACKSWING**

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(\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

\* cited by examiner

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(51) **Int. Cl.<sup>7</sup>** ..... **A63B 69/36**

(52) **U.S. Cl.** ..... **473/220; 473/221; 473/224**

(58) **Field of Search** ..... **473/220, 221, 473/223, 224, 219, 222, 226, 233, 234**

(56) **References Cited**

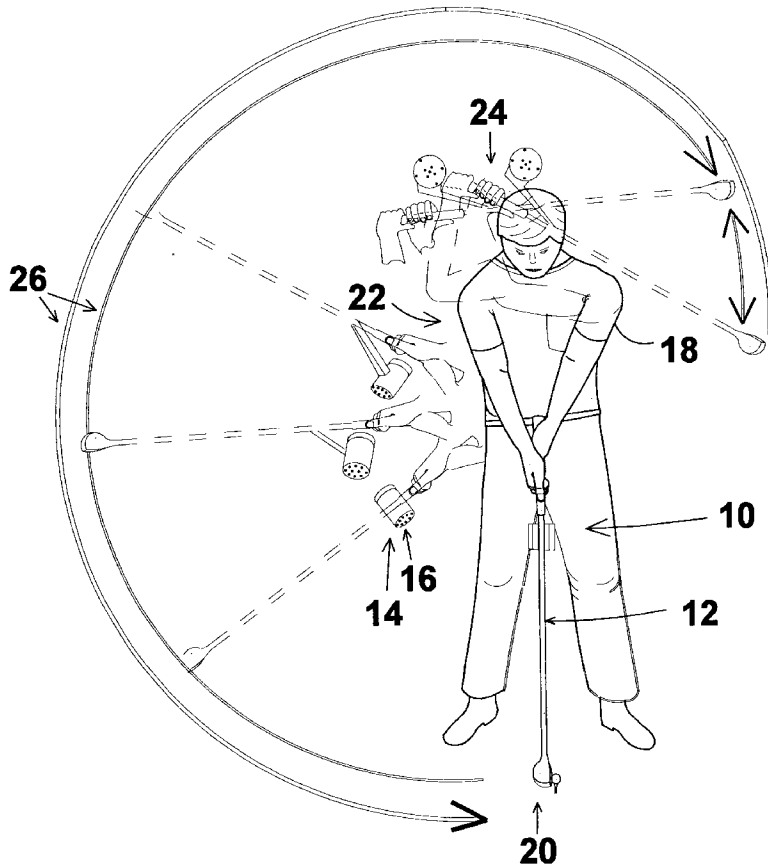
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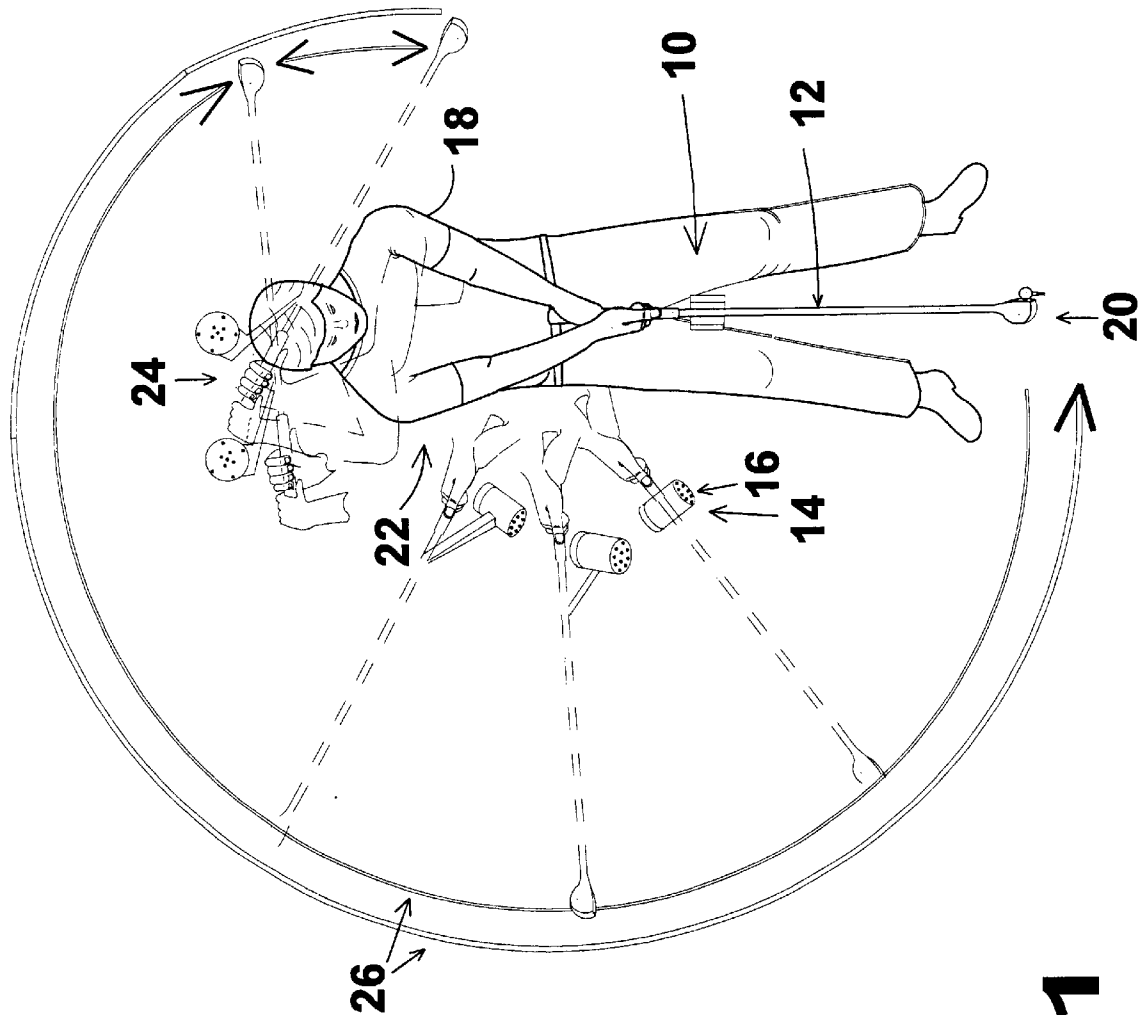
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(57) **ABSTRACT**

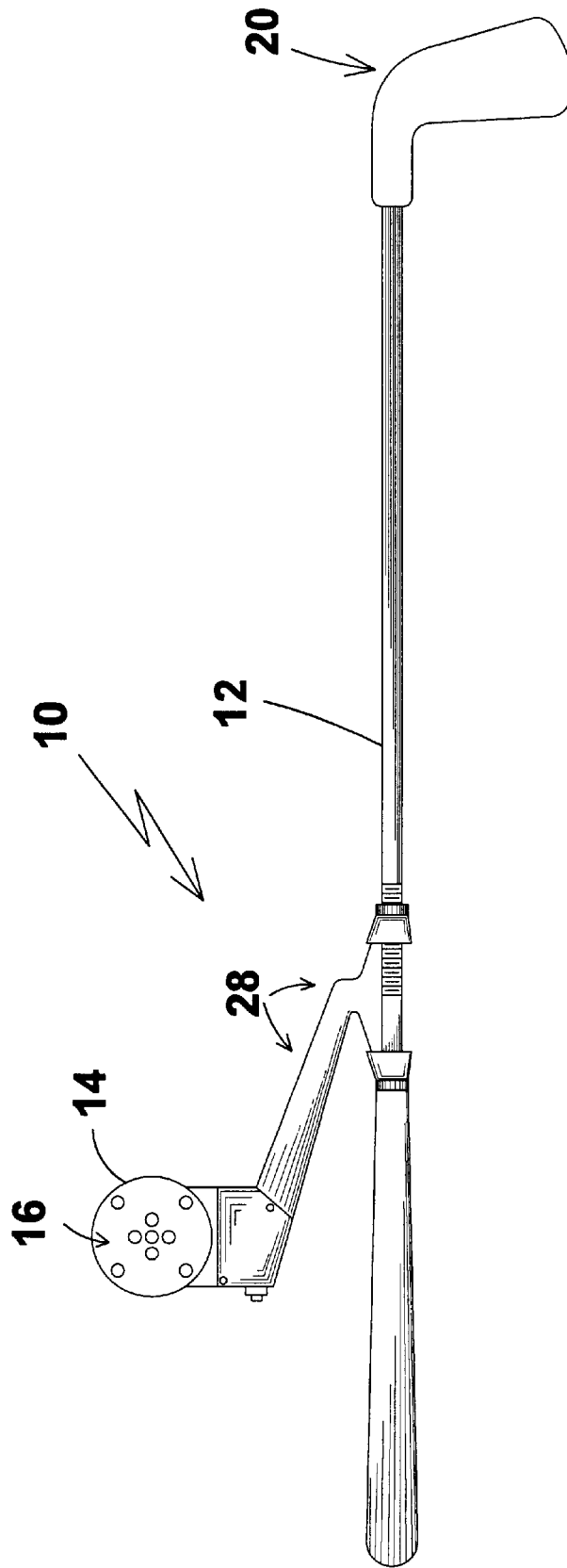
The present invention **10** discloses a golf club **12** having a canister-like housing **46** attached thereto. The housing **46** contains a group of mercury switches **58, 59** mounted internally on a pair of rotatable platforms **46** between two discs **60** which discs are connected to a rotational dial member **48** having a scale of degrees **52** displayed thereon. The rotational dial member **48** functions with a number of fixedly connected elements in concert with the mercury switches **58, 59** to selectively actuate a plurality of LED's **16** which LED's indicate the physical relationship of the golf club **12** with a fixed object, e.g., the ground, so that the golfer **18** can practice his/her golf swing.

**13 Claims, 12 Drawing Sheets**

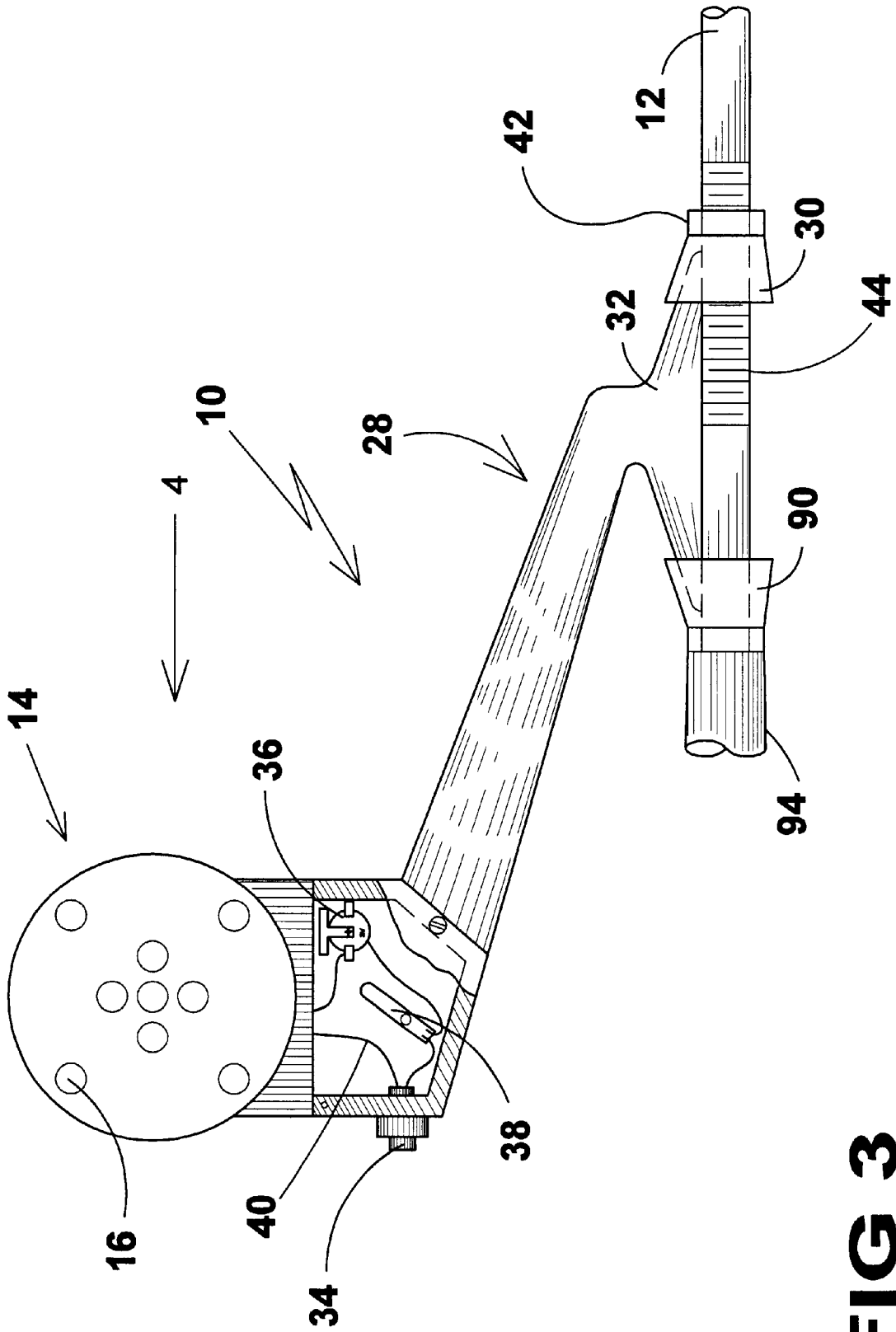




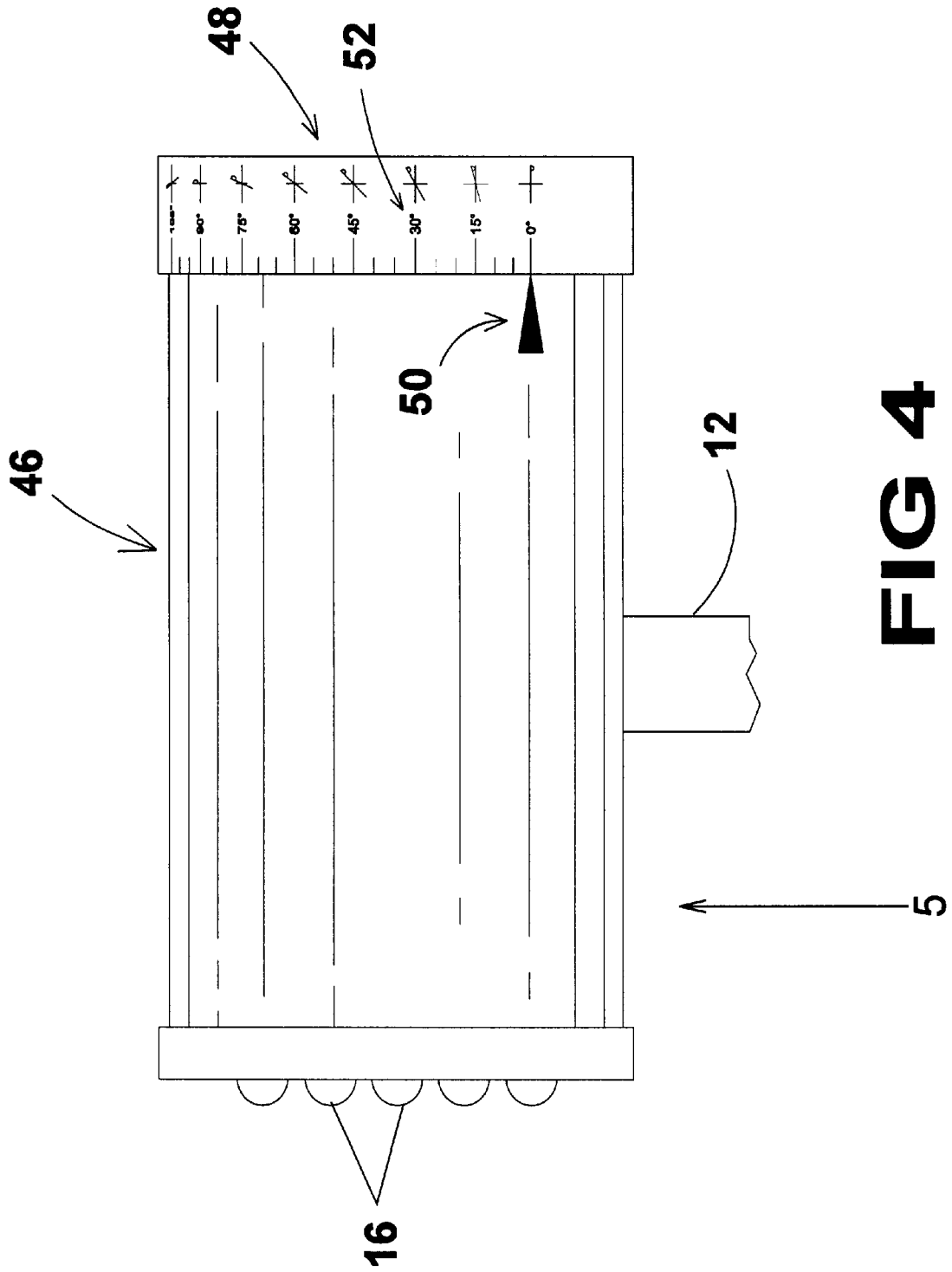
**FIG 1**

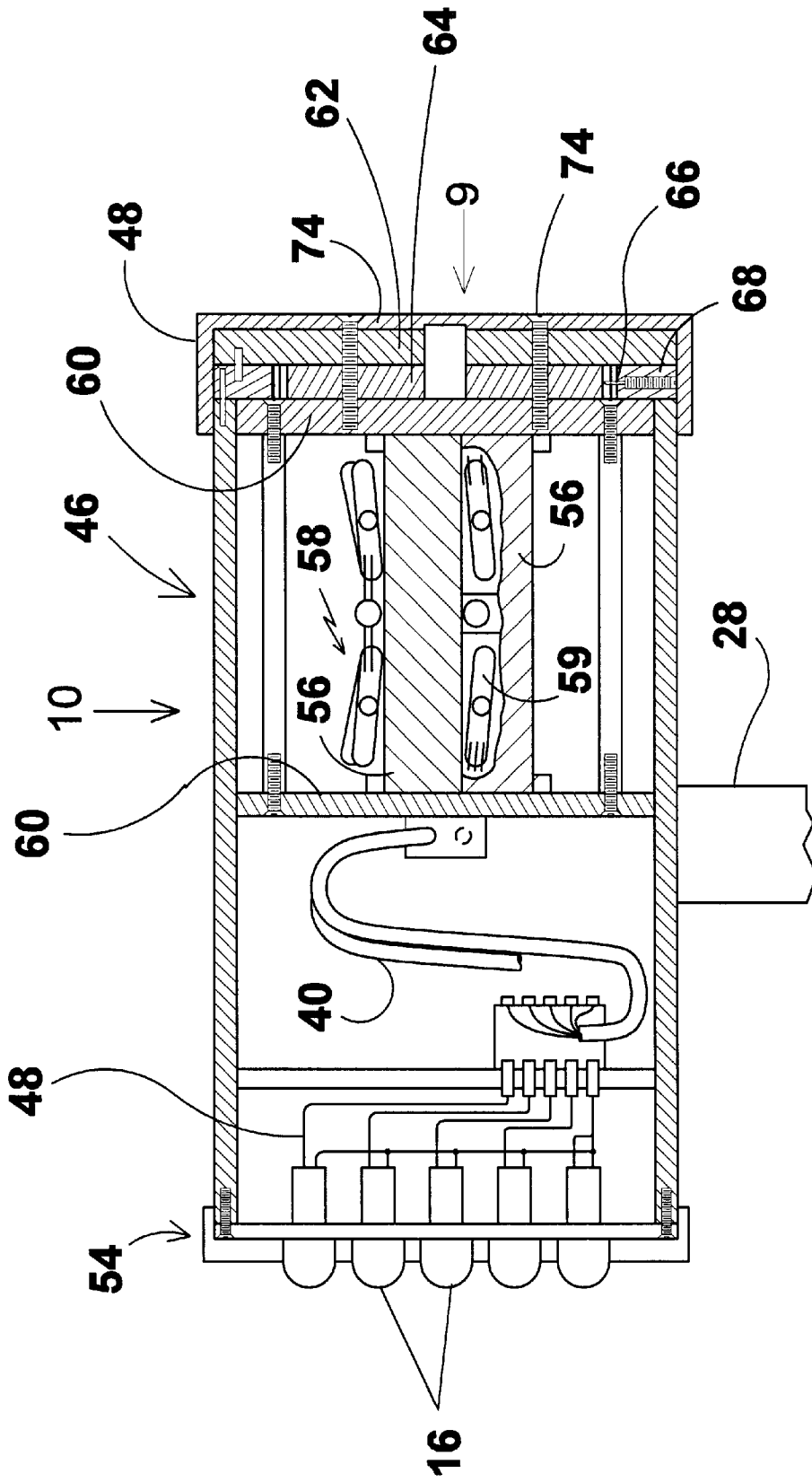


**FIG 2**

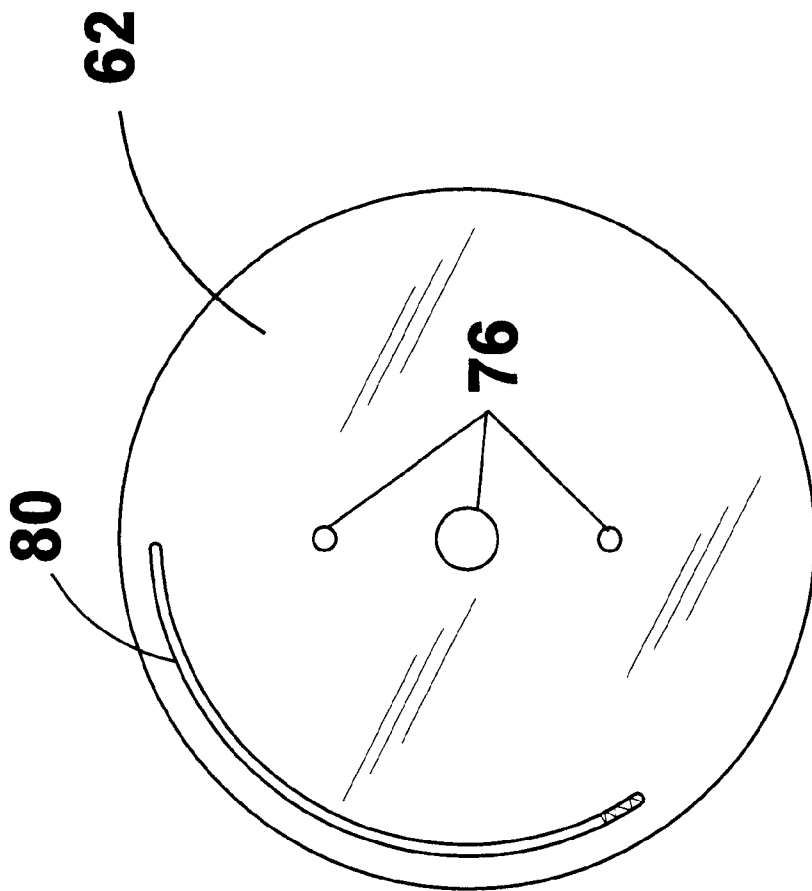


**FIG 3**

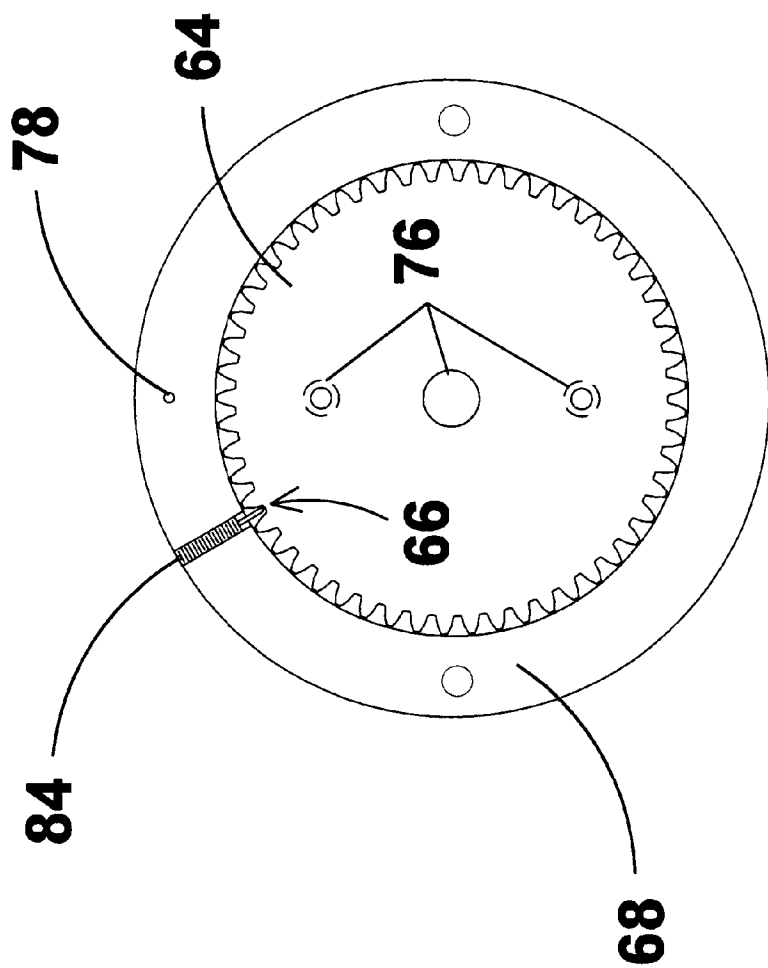




**FIG 5**

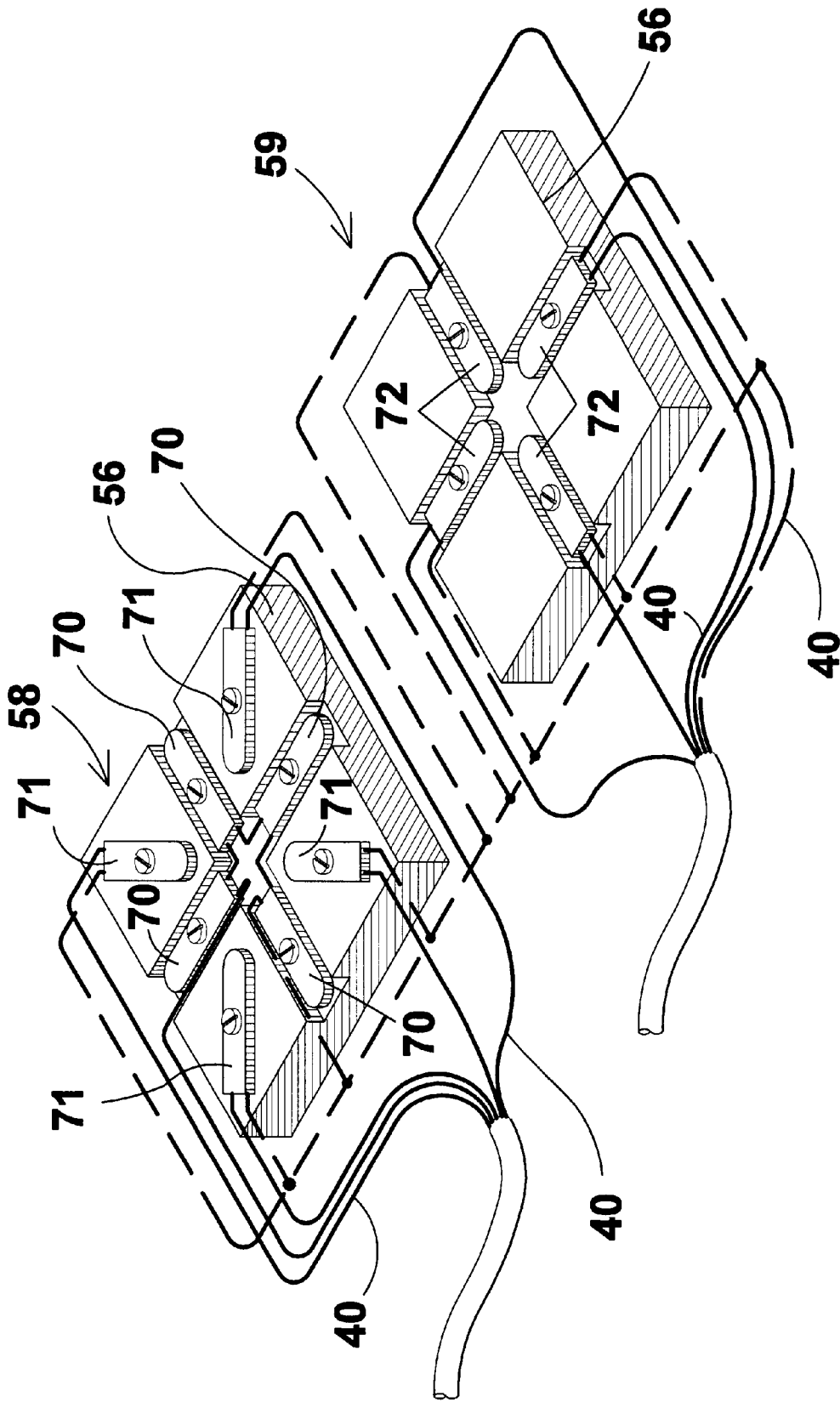


**FIG 6**

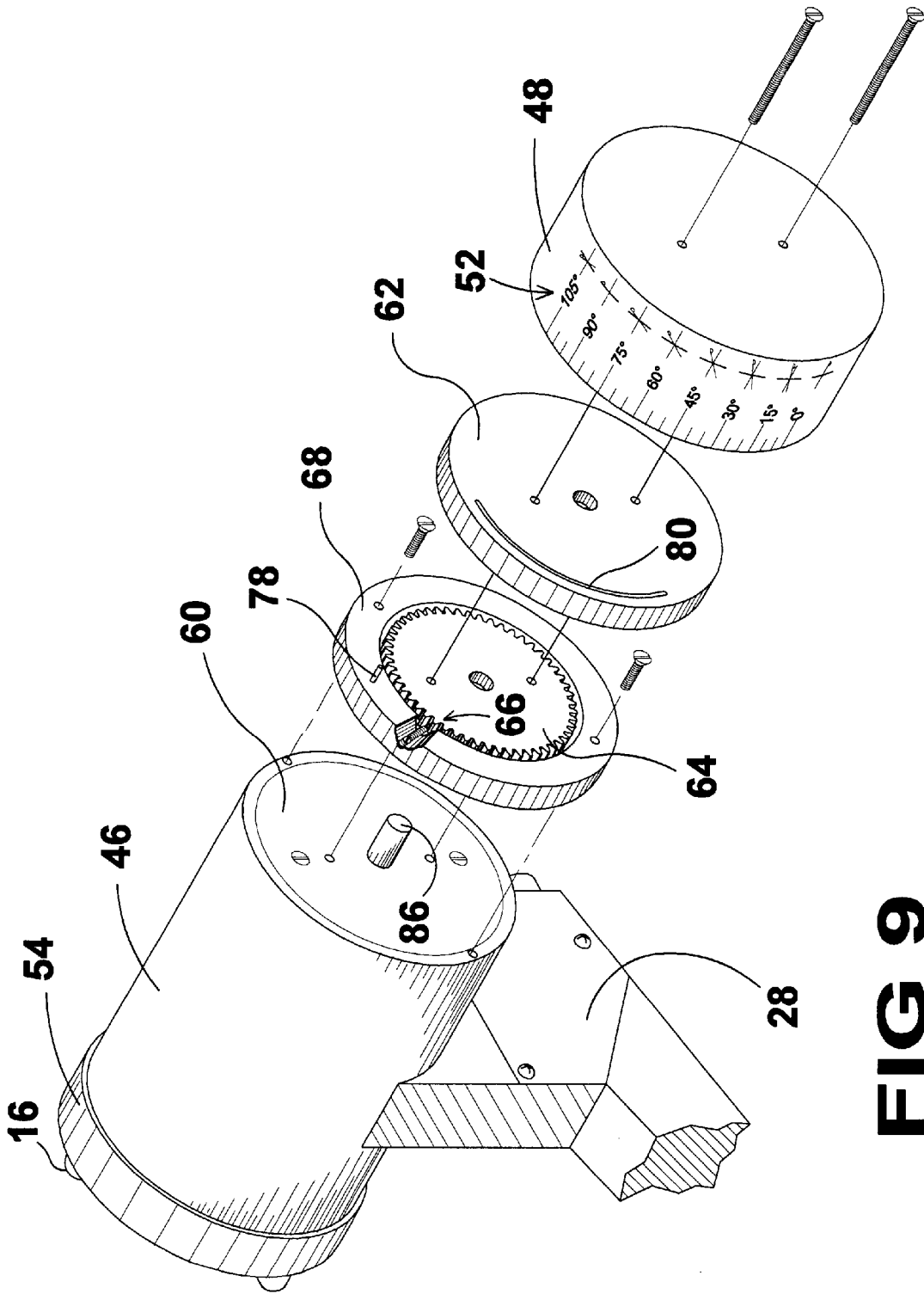


**FIG 7**

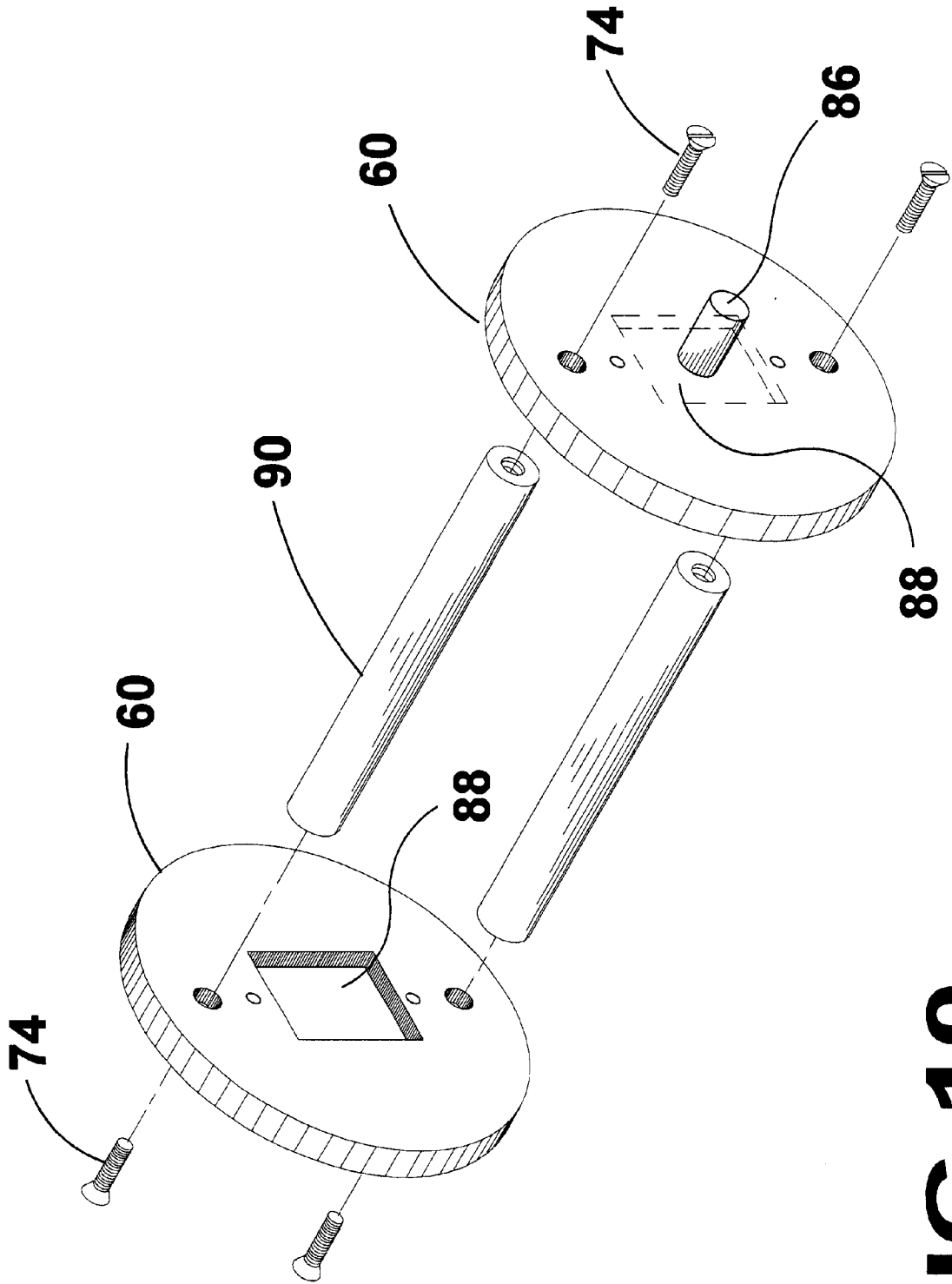




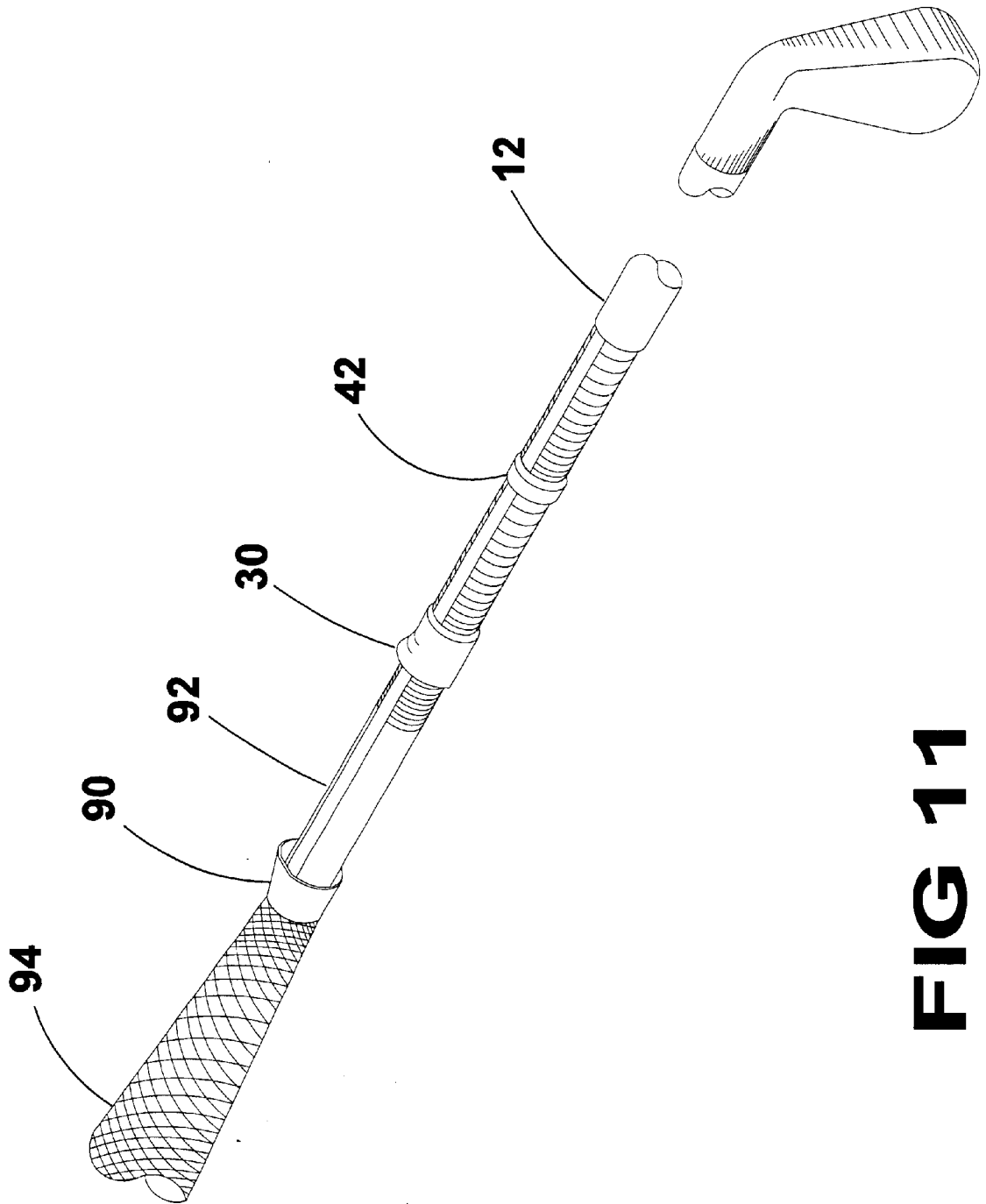
**FIG 8**



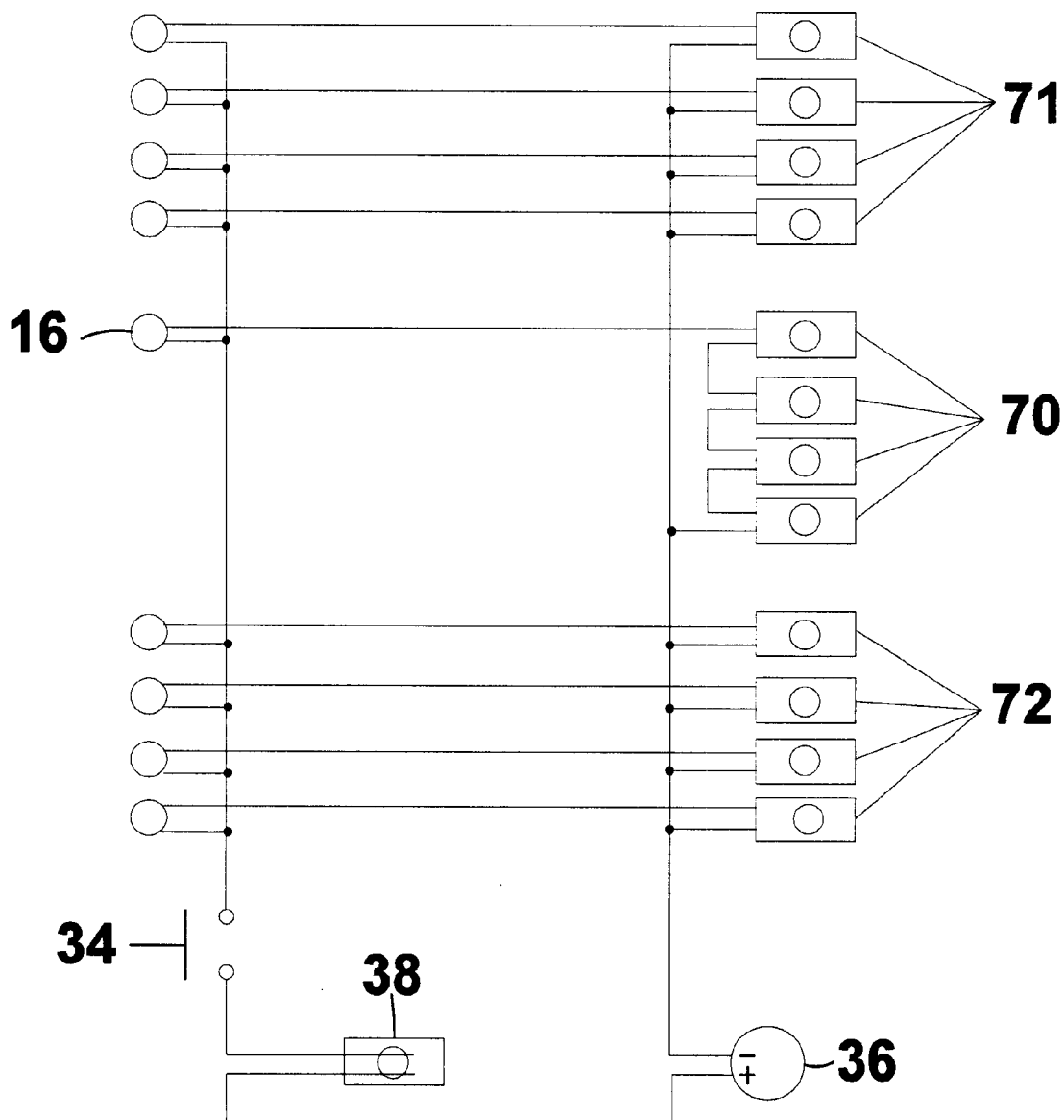
**FIG 9**



**FIG 10**



**FIG 11**



**FIG 12**

## GOLF POSITION AND PARALLEL INDICATING DEVICE FOR THE TOP OF BACKSWING

### BACKGROUND OF THE INVENTION

#### 1. Field of the Invention

The present invention relates generally to golfing accessories and, more specifically, to a visual indicator device which mounts onto a golf club to aid the golfer in determining and developing a consistent backswing.

The canister-like housing has a rotatable drum dial member having a scale of degrees of arc marked on the exterior periphery to permit the user to pre-select the desired rotation of angle of the golf club shaft in relationship to the ground. This allows the golfer to pre-select the desired rotation of the club head while the shaft is parallel to the ground. When the golfer completes his backswing they can look over their shoulder to see if the appropriate LED's are lit and if not, adjust their swing accordingly. Through repetitious practice they will learn when the golf club has reached the desired rotation of the club head while parallel to the ground.

The canister-like housing member has an array of LED's on the proximal canister-like housing end and the rotatable drum dial member on the distal housing end. The rotatable drum dial member is comprised of a number of fixedly connected elements which function in concert having the LED's on the proximal end providing the visual indication of the performance of the golfer.

The rotatable drum dial member is fixedly connected to two platforms of mercury switches retained between two discs forming a spool-like support element for the first mercury switch holder and the second mercury switch holder. Also, fixedly connected to the rotatable drum dial member is a rotational limiting element and a spur gear element which communicates with a pawl-like member extending from the spool retaining member to maintain the positioning of the rotatable drum dial member and its elements. The first switch holder is comprised of two sets of four switches. The first set is connected in series radiating on an equal slope from the holder center equidistant from each other. The first switch set is connected to a single LED. The second set are individually connected to a mating LED and radiate on an equal slope from the holder center equidistant from each other and interdisposed between the switches of the first set.

The second switch holder is comprised of four switches that are individually connected to a mating LED and radiate on an equal slope from the holder center equidistant from each other. Two switches being parallel to the club shaft and two switches being perpendicular to the club shaft.

#### 2. Description of the Prior Art

There are other golf club devices designed for improving the swing of a golfer. Typical of these is U.S. Pat. No. 3,758,117 issued to Harrison on Sep. 11, 1973.

Another patent was issued to Richards on Apr. 26, 1983 as U.S. Pat. No. 4,381,111. Yet another U.S. Pat. No. 4,526,374 was issued to Ban on Jul. 2, 1985 and still yet another was issued on Jan. 27, 1998 to Richards as U.S. Pat. No. 5,711,717. Another patent was issued to Thomas on Feb. 2, 1999 as U.S. Pat. No. 5,865,685.

U.S. Pat. No. 3,758,117

Inventor: John G. Harrison

Issued: Sep. 11, 1973

The inertia attachment includes an arm on which is a weight adjustable longitudinally of the arm and a clamp

adapted to attach the arm to the shaft of a golf club which requires follow-through when swung; the weight has tail fins and is shaped to be directional in the direction into which the shaft is swung and is registerable with the head of the golf club or the like; the arm is pivoted on the clamp so as to be adjustable from an out of the way position parallel with the shaft toward and above the club head. In one embodiment, the weight may include a rotatable propeller mounted in a recess between the tail fins. In another embodiment, the weight is shiftable along a shaft and compresses a spring as the weight moves rearwardly. The weight includes a passage through which the arm extends, and the weight may be secured in various positions along the length of the arm by the provision of a spring clip located in the passage. The spring clip is adapted to selectively engage grooves provided along the length of the arm.

U.S. Pat. No. 4,381,111

Inventor: Ralph H. A. Richards

Issued: Apr. 26, 1983

A golf swing simulator comprises a handle pivotally connected about an axis to an arm, which in turn is pivotally connected about an axis to a mounting. The mounting includes two parts which are adjustable to vary the angle of the axis to the horizontal. The connection between the handle and the arm is via a crank, pivot axis and means for adjusting the angle of the axis relative to the axis. This latter angular adjustment is centered about the point of intersection (X) of the pivot axis with the longitudinal axis of the handle.

U.S. Pat. No. 4,526,374

Inventor: Thomas E. Ban

Issued: Jul. 2, 1985

A golf practicing device is described as being a golf ball which is tethered to a casting-type fishing reel which is attached to a portable bracket which, in turn, is detachably mounted adjacent the handgrip on the shaft of a golf club, such as a chipping iron or putter. A pair of eyelets is provided on the bracket opposite and, in line, with the fishing reel to guide the line from the reel as it pays out from the reel upon stroking or hitting the ball with the club head. Thus, after putting or hitting the ball, the player only need rewind the reel to return the ball for another practice shot.

U.S. Pat. No. 5,711,717

Inventor: Jan. 27, 1998

Issued: Ralph Henry Arthur Richards

Apparatus for guiding a simulated golf swing consists of a golf club handle fixed at one end of a mechanical linkage whose other end can be fixed to a wall. The handle is fixed, so as to be rotatable about its own axis, to a crank of the linkage. The crank is connected in turn to an elongated arm pivoted at the fixing location so as to guide a swing in a basic arc. A central pivot of the crank permits the user's wrists to flex during the swing.

U.S. Pat. No. 5,865,685

Inventor: Joseph G. Thomas

Issued: Feb. 2, 1999

A golf swing improvement device that includes two adjustable wrist encircling members, a golf club gripping

member capable of fitting on any golf club, and a stretchable, flexible linear portion having two end areas. One of the end areas is attached to one of the wrist encircling members and the other end area is attached to the other wrist-encircling member. A central area of the linear portion is firmly held by the golf club gripping member so that the length of linear portion extending between each wrist encircling member and the golf club gripping member may be separately adjusted in length.

While these golf club devices designed for improving the swing of a golfer may be suitable for the purposes for which they were designed, they would not be as suitable for the purposes of the present invention, as hereinafter described.

### SUMMARY OF THE PRESENT INVENTION

The present invention discloses a golf club having a cylinder-like housing attached thereto. The housing contains a group of mercury switches mounted internally on a pair of rotatable platforms between two discs which discs are connected to a rotational dial member having a scale of degrees displayed thereon. The rotational dial member functions with a number of fixedly connected elements in concert with the mercury switches to selectively actuate a plurality of LED's which LED's indicate the physical relationship of the golf club with a fixed object, e.g., the ground, so that the golfer can practice his/her golf swing.

A primary object of the present invention is to provide a visual indicator which can be attached to a golf club.

Another object of the present invention is to provide a visual indicator which can be easily viewed by the golfer while the club is at the top of the backswing.

Yet another object of the present invention is to provide a visual indicator for determining if the club shaft is parallel to the ground at the top of the backswing.

Still yet another object of the present invention is to provide a visual indicator which can be viewed at the top of the backswing indicating in what direction the club head has deviated from a predetermined angle.

Yet another object of the present invention is to provide a visual indicator having means for selecting desired degrees of rotation of the club head which can be verified by an LED display at the top of the backswing.

Additional objects of the present invention will appear as the description proceeds.

The present invention overcomes the shortcomings of the prior art by providing a visual indicator device which mounts onto a golf club to aid the golfer in determining and developing a consistent backswing.

The canister-like housing has a rotatable drum dial member having a scale of degrees of arc marked on the exterior periphery to permit the user to pre-select the desired rotation of angle of the golf club shaft in relationship to the ground. This allows the golfer to pre-select the desired rotation of the club head while the shaft is parallel to the ground. When the golfer completes his backswing they can look over their shoulder to see if the appropriate LED's are lit and if not, adjust their swing accordingly. Through repetitious practice they will learn when the golf club has reached the desired rotation of the club head while parallel to the ground.

The foregoing and other objects and advantages will appear from the description to follow. In the description reference is made to the accompanying drawings, which form a part hereof, and in which is shown by way of illustration specific embodiments in which the invention may be practiced. These embodiments will be described in

sufficient detail to enable those skilled in the art to practice the invention, and it is to be understood that other embodiments may be utilized and that structural changes may be made without departing from the scope of the invention. In the accompanying drawings, like reference characters designate the same or similar parts throughout the several views.

The following detailed description is, therefore, not to be taken in a limiting sense, and the scope of the present invention is best defined by the appended claims.

### BRIEF DESCRIPTION OF THE DRAWINGS

In order that the invention may be more fully understood, it will now be described, by way of example, with reference to the accompanying drawings in which:

FIG. 1 is an illustrative view of the present invention in use. Shown is a golf club having the swing indicator device attached thereto. The visual indicator device having a plurality of LED's can indicate to the golfer if the desired position of the golf club shaft and rotation of the golf club head has been achieved by looking over the shoulder while the club is at the top of the backswing.

FIG. 2 is a perspective view of the present invention attached to a golf club. Shown is a visual indicator device having means for attaching said device to a golf club. Also shown are a plurality of LED's which are triggered by a plurality of internal mercury switches to provide the golfer with a real time reference as to the relative position of the golf club shaft and golf club head which can be view by the golfer while the club is at the top of the backswing.

FIG. 3 is an exploded partial cutaway view of the present invention mounted onto a golf club. Shown are slidably movable mounting members which clamp onto the base of the visual indicator. Also shown is a power switch connected to a power source having a mercury switch which will conserve power by only completing the circuit when the golf club is at or near the top of the backswing. Also shown are a plurality of LED's which will provide the golfer with an accurate visual indicator as to the position of the golf club shaft relative to being parallel to the ground. An the golf club head relative to the desired angle of rotation of the club head as previously set by the golfer using the rotational drum dial member.

FIG. 4 is an enlarged view of the canister-like housing of the present invention. Shown is a rotatable drum dial member whereby the golfer can selected the desired rotation of the club head. Also shown are a plurality of LED's which will light based on the position of the golf club shaft at the top of the backswing and the rotation of the golf club head at the top of the backswing which will be displayed by the mercury switched completing circuits which will cause certain LED's to light.

FIG. 5 is a cutaway view of the canister-like housing of the present invention. Shown is the canister-like housing has a rotatable drum dial member having a scale of degrees of arc marked on the exterior periphery, as shown in FIG. 4, to permit the user to pre-select the desired rotation of angle of the golf club shaft in relationship to the ground. The canister-like housing member has an array of LED's on the external surface at one end of the canister-like housing end and the rotatable drum dial member on the distal housing end. The rotatable drum dial member is comprised of a number of fixedly connected elements which function in concert having the LED's providing the visual indication of the position of the golf club.

The rotatable drum dial member is fixedly connected to two platforms of mercury switches retained between two

discs forming a spool-like support element for the first mercury switch holder and the second mercury switch holder. Also, fixedly connected to the rotatable drum dial member is a rotational limiting element and a spur gear element which communicates with a pawl-like member extending from the spool retaining member to maintain the positioning of the rotatable drum dial member and its elements. The first switch holder is comprised of two sets of four switches. The first set is connected in series radiating on an equal slope from the holder center equidistant from each other. The first switch set is connected to a single LED. The second set are individually connected to a mating LED and radiate on an equal slope from the holder center equidistant from each other and interdispersed between the switches of the first set.

The second switch holder is comprised of four switches that are individually connected to a mating LED and radiate on an equal slope from the holder center equidistant from each other. Two switches being parallel to the club shaft and two switches being perpendicular to the club shaft.

FIG. 6 is a front view of the rotational limiting element which is fixedly connected to the rotatable drum dial member.

FIG. 7 is a front view of a spool retaining member having a stud like projection which communicates with the arc cavity of the rotational limiting element to limit the degrees of rotation of the rotatable drum dial member. Also shown is a spur gear which is fixedly connected to the rotatable drum dial member which communicates with a pawl-like member extending from the spool-retaining member to maintain the positioning of the rotatable drum dial member and its elements.

FIG. 8 is a perspective view of the mercury switch holders which are contained with the canister-like housing of the present invention. The first switch holder is comprised of two sets of four switches. The first set is connected in series radiating on an equal slope from the holder center equidistant from each other. The first switch set is connected to a single LED. The second set are individually connected to a mating LED and radiate on an equal slope from the holder center equidistant from each other and interdispersed between the switches of the first set.

The second switch holder is comprised of four switches that are individually connected to a mating LED and radiate on an equal slope from the holder center equidistant from each other. Two switches being parallel to the club shaft and two switches being perpendicular to the club shaft.

FIG. 9 is a partial exploded view of the rotational drum dial member. Shown fixedly connected to the rotatable drum dial member is a rotational limiting element having an arched cavity providing limited movement for the stub of the spool-retaining member. Also shown is a spur gear element which communicates with a pawl-like member extending from the spool-retaining member to maintain the positioning of the rotatable drum dial member and its elements.

FIG. 10 is an exploded view of the two discs forming a spool-like support element for the first mercury switch holder and the second mercury switch holder.

FIG. 11 is a perspective view of the golf club of the present invention. Shown are slidable movable clamps for attaching the visual indicator to the golf club shaft.

FIG. 12 is an illustrative wiring diagram showing the mercury switches and related LED's. Shown are switches individually connected to a mating LED. Also shown are four switches connected in series to a single LED. Another four switches are individually connected to a mating LED.

## LIST OF REFERENCE NUMERALS

With regard to reference numerals used, the following numbering is used throughout the drawings.

10	present invention
12	golf club shaft
14	indicating light device
16	LED
18	golfer
20	club head
22	shoulder
24	top of back swing
26	direction arrows
28	means for attaching
30	clamp
32	base
34	on/off switch
36	power source
38	mercury switch
40	electrical wire
42	collar
44	threads
46	housing
48	dial member
50	indicator arrow
52	scale of degrees
54	LED end of housing
56	platform
58	first mercury switch holder
59	second mercury switch holder
60	disc
62	rotational limiting element
64	spur gear
66	pawl
68	retaining element
70	first set four switches
71	second set four switches
72	set of four switches
74	fasteners
76	apertures
78	stud
80	cavity
84	spring plunger
86	shaft
88	switch apertures
90	fixed clamp
92	base seat
94	grip

## DESCRIPTION OF THE PREFERRED EMBODIMENT(S)

In order that the invention may be more fully understood, it will now be described by way of example, with reference to the accompanying drawings in which FIGS. 1 through 12 illustrate the present invention being a device for improving a golf swing.

Turning to FIG. 1, shown therein is an illustrative view of the present invention 10 in use. Shown is a golf club 12 having the swing indicator device 14 attached thereto. The visual indicator device 14 having a plurality of LED's 16 can indicate to the golfer 18 if the desired position of the golf club shaft 12 and rotation of the golf club head 20 has been achieved by looking over the shoulder 22 while the club is at or near the top 24 of the backswing as shown by direction arrows 26.

Turning to FIG. 2, shown therein is a perspective view of the present invention 10 attached to a golf club 12. Shown



is a visual indicator device **14** having means **28** for attaching the device to a golf club. Also shown are a plurality of LED's **16** which are triggered by a plurality of internal mercury switches (not shown) to provide the golfer with a real time reference as to the relative position of the golf club shaft **12** and golf club head **20** which can be viewed by the golfer while the club is at the top of the backswing.

Turning to FIG. **3**, shown therein is an exploded partial cutaway view of the present invention **10** mounted onto a golf club **12**. Shown is a slidably movable mounting clamp member **30** which clamp uses a threaded **44** locking collar **42** for securement onto the base **32** of the visual indicator **14** and fixed clamp **90**. Also shown is a power on/off switch **34** connected by appropriate electrical circuit connections **40**, e.g., wire, to a power source **36** having an on/off mercury switch **38** which will conserve power by only completing the circuit **40** when the golf club **12** is at or near the top of the backswing. Also shown are a plurality of LED's **16** which will provide the golfer with an accurate visual indicator as to the position of the golf club shaft **12** relative to being parallel to the ground and the golf club head relative to the desired angle of rotation of the club head as previously set by the golfer using the rotational drum dial member.

Turning to FIG. **4**, shown therein is an enlarged view of the canister-like housing **46** of the present invention. Shown is a rotatable drum dial member **48** whereby the golfer can select from the scale of degrees **52** the desired rotation of the club head using indicator arrow **50**. Also shown are a plurality of LED's **16** which will light based on the position of the golf club shaft **12** at the top of the backswing and the rotation of the golf club head at the top of the backswing which will be displayed by the mercury switches which completes the circuit which will cause certain LED's **16** to light.

Turning to FIG. **5**, shown therein is a cutaway view of the canister-like housing **46** of the present invention. Shown is the canister-like housing **46** and attachment means **28** having a rotatable drum dial member **48** having a scale of degrees of arc marked on the exterior periphery, as shown in FIG. **4**, to permit the user to pre-select the desired rotation of angle of the golf club shaft in relationship to the ground. The canister-like housing member **46** has an array of LED's **16** on the external surface at one end of the canister-like housing end **54** and the rotatable drum dial member **48** on the distal housing end. The rotatable drum dial member **48** is comprised of a number of fixedly connected elements **56**, **60**, **62**, **64**, **66**, **68** which function in concert allowing the LED's **16** to provide the visual indication of the position of the golf club.

The rotatable drum dial member **48** is fixedly connected to two platforms **56** having mounted thereon a first **58** and a second **59** mercury switch holder (also see switches **70**, **71**, **72** on FIG. **8**) retained between two discs **60** forming a spool-like support element for the first mercury switch holder **58** and the second mercury switch holder **59**. Also, fixedly connected with fasteners **74** to the rotatable drum dial member **48** is a rotational limiting element **62** and a spur gear element **64** which communicates with a pawl-like member **66** extending from the spool retaining member **68** to maintain the positioning of the rotatable drum dial member **48** and its elements. Electrical wiring **40** is also shown.

Turning to FIG. **6**, shown therein is a front view of the rotational limiting element **62** which is fixedly connected

with fastener means **74** (See FIG. **5**) through aperture **76** to the rotatable drum dial member **48**. Cavity **80** is also shown along with a central aperture **76** for receiving the center shaft.

Turning to FIG. **7**, shown therein is a front view of a spool retaining member **68** having a stud like projection **78** which communicates with the arc cavity **80** of the rotational limiting element **62** to limit the degrees of rotation of the rotatable drum dial member **48**. Also shown is a spur gear **64** which is fixedly connected through apertures **76** to the rotatable drum dial member which gear communicates with a pawl-like member **66** extending inwardly from the spool retaining member **68** to maintain the positioning of the rotatable drum dial member and its elements along with the spring plunger holder or spool retaining member **68** and the spring plunger **84**.

Turning to FIG. **8**, shown therein is a perspective view of the platforms **56** of mercury switch holders **58**, **59** which are contained within the canister-like housing of the present invention. The first switch holder **58** is comprised of two sets **70**, **71** of four switches. The first set **70** is connected in series radiating on an equal slope from the holder center equidistant from each other. The first switch set is connected to a single LED. The second set **71** are individually connected to a mating LED and radiate on an equal slope from the holder center equidistant from each other and interdisposed between the switches **70** of the first set.

The second switch holder **59** is comprised of four switches **72** that are individually connected to a mating LED's and radiate on an equal slope from the holder center equidistant from each other. Two switches being parallel to the club shaft and two switches being perpendicular to the club shaft. Electrical connectors **40** are shown in all cases. Switches **70**, **71** and **72** are designed to provide a means for sensing the physical relationship between the golf club **12** and the ground, to thereby actuate the LED indicators so that the user can improve his swing.

Turning to FIG. **9**, shown therein is a partial exploded view of the rotational drum dial member **48**. Shown fixedly connected to the rotatable drum dial member **48** is a rotational limiting element **62** having an arched cavity **80** providing limited movement for the stud **78** of the spool retaining member **68**. Also shown is a spur gear element **64** which communicates with a pawl-like member **66** extending from the spool retaining member **68** to maintain the positioning of the rotatable drum dial member **48** and its elements along with fasteners **74** and shaft **86**. Other elements previously disclosed are also shown.

Turning to FIG. **10**, shown therein is an exploded view of the two discs **60** forming a spool-like support element for the first mercury switch holder **58** (not shown) and the second mercury switch holder **59** (not shown) which are held in square-shaped apertures **88**. Also shown are threaded stand-offs **90**, fasteners **74** and shaft **86**.

Turning to FIG. **11**, shown therein is a perspective view of the golf club **12** of the present invention. Shown is a slidably movable clamp **30** for attaching the visual indicator to the golf club shaft **12**. Collar **42**, the fixed clamp **90**, a base seat **92**, and grip **94** are also shown.

Turning to FIG. **12**, shown therein is an illustrative wiring diagram showing the mercury switches **38**, **70**, **71**, **72** and related LED's **16**. Shown are switches **72** individually connected to a mating LED. Also shown are four switches **70** connected in series to a single LED. Another four switches **71** are individually connected to a mating LED. Other elements previously disclosed are also shown.

What is claimed to be new and desired to be protected by letters patent is set forth in the appended claims:

1. An apparatus for a golf swing training device, comprising:

- a) a golf club having a shaft;
- b) a housing for containing parts of the apparatus, said housing having a first and a second end;
- c) means for removably fixedly attaching said housing to said golf club, said housing being stationary with respect to said shaft once said training device is installed for use;
- d) means comprising a visual indicator mounted on said first end of said housing;
- e) a rotational dial member having a visual graduated scale in degrees mounted on said second end of said housing;
- f) means for sensing the angular relationship of said golf club with the ground, said means for sensing mounted internal said housing;
- g) means for connecting said means for sensing to said rotational dial member whereby the means for sensing is adjustable, an outside wall of said housing having a pointer aligned with said scale so that rotation of said dial member permits said indicator to select an angle on said dial member representing the angular relationship of said golf club with the ground;
- h) a source of power for said visual indicator, said source of power having a control switch;
- i) means for electrically connecting said visual indicator, said source of power, and said means for sensing, whereby the angular adjustment of said dial member selects the intended angular relationship of said golf club to the ground and the user can relate his swing to the ground as shown by the visual indicator; and
- j) said means for connecting said means for sensing to said rotational dial member further comprising a pair of discs mounted internal of said housing, said pair of discs being spaced apart and joined together by multiple stand-off members, said pair of discs and said multiple stand-offs forming a means for supporting said means for sensing whereby said means for sensing are secured to said means for supporting said means for sensing.

2. The apparatus of claim 1, wherein said housing has the shape of a cylinder.

3. The apparatus of claim 1, said means for removably fixedly attaching said housing to said golf club further comprises said housing having a base thereon.

4. The apparatus of claim 3, said means for fixedly attaching further comprising a base seat on said golf club shaft, said base seat having a movable clamp on a first end, said base seat having a fixed clamp on a second end, said movable and said fixed clamps for receiving said base of said housing.

5. The apparatus of claim 4, said base seat further comprises threads, said base seat further comprising a threaded locking collar for mating to said threads on said base seat whereby said movable clamp is secured to said base of said housing.

6. The apparatus of claim 1, said means for a visual indicator further comprising multiple light emitting diodes.

7. The apparatus of claim 1, said means for sensing further comprising multiple mercury switches.

8. The apparatus of claim 7, said switches further comprising a first set of switches connected in series, said first set of switches connected to a single light emitting diode.

9. The apparatus of claim 8, said switches further comprising a second set of switches individually connected to a mating light emitting diode.

10. The apparatus of claim 9, wherein a portion of said second set of switches are disposed parallel to said golf club shaft.

11. The apparatus of claim 9, wherein a portion of said second set of switches are disposed perpendicular to said golf club shaft.

12. The apparatus of claim 1 having a rotational limiting element, said rotational limiting element being fixedly attached internal to said rotational dial member, said rotational limiting being fixedly attached to one of said pair of discs mounted internal of said housing whereby rotation of said means for sensing is adjustable.

13. The apparatus of claim 12 having a spur gear with teeth mounted internal of a retaining element, said retaining element mounted between said rotational limiting element and one of said pair of discs, said retaining element having an adjustable pawl extending inwardly toward its central axis, said teeth of said spur gear communicating with said pawl, said spur gear being thereby rotationally fixably movably positioned by said pawl.

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