United States Patent [19]

Tredway

[11] **3,863,933**

[45] **Feb. 4, 1975**

[54] **GAME CLUB SWING TRAINING DEVICE**

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[22] Filed: **June 11, 1973**

[21] Appl. No.: **368,814**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 263,980, June 19, 1972, abandoned, which is a continuation-in-part of Ser. No. 153,772, June 16, 1971, abandoned.

[52] **U.S. Cl.** ..... **273/186 A**, 273/186 C, 240/6.42, 273/193 R

[51] **Int. Cl.** **A63b 69/36**

[58] **Field of Search** 273/183, 186, 194, 193; 240/6.42, 10.6; 46/228

[56] **References Cited**

UNITED STATES PATENTS

2,478,325	8/1949	Russell	240/6.42
3,070,373	12/1962	Mathews et al.	273/194 R X
3,421,765	1/1969	Scott	273/183 D
3,680,870	8/1972	Burnett	273/194 B
3,707,291	12/1972	Tredway	273/183 B

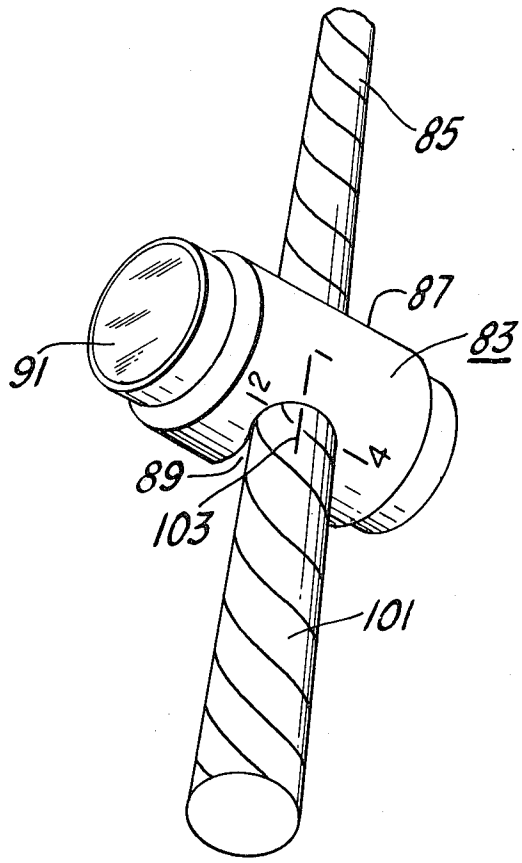
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Attorney, Agent, or Firm—Sherman H. Barber

[57] **ABSTRACT**

A light device is adjustably mounted to a golf club and indicia on the light are alignable with an index on the club whereby, when so aligned in various positions, the rays from the light trace paths on adjacent structure indicative of the type of golf swing a pupil makes as he swings the club.

7 Claims, 17 Drawing Figures



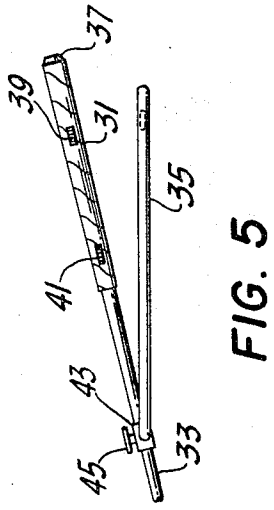


FIG. 5

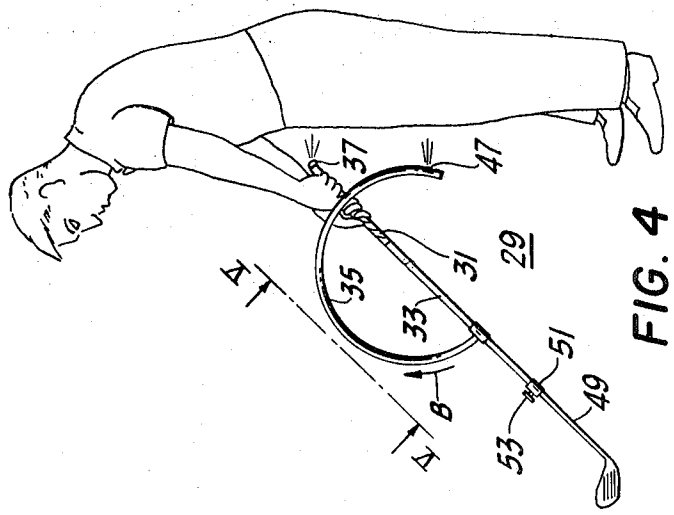


FIG. 4

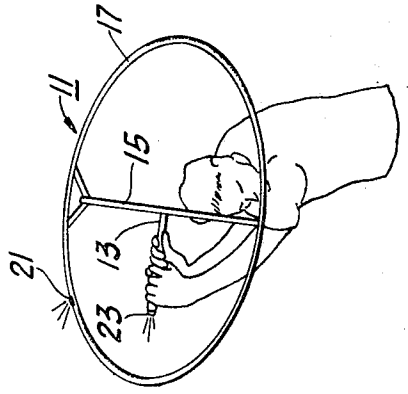


FIG. 3

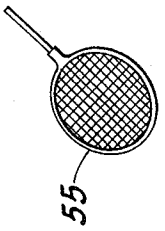


FIG. 6

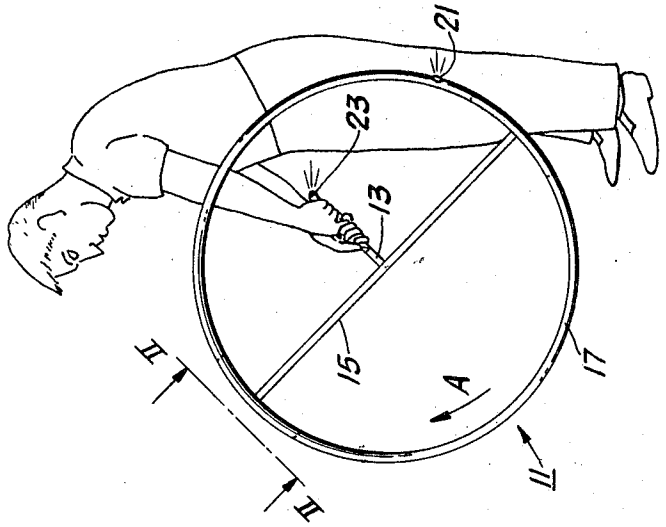


FIG. 1

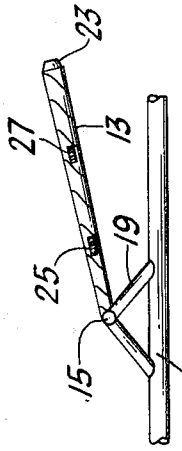


FIG. 2

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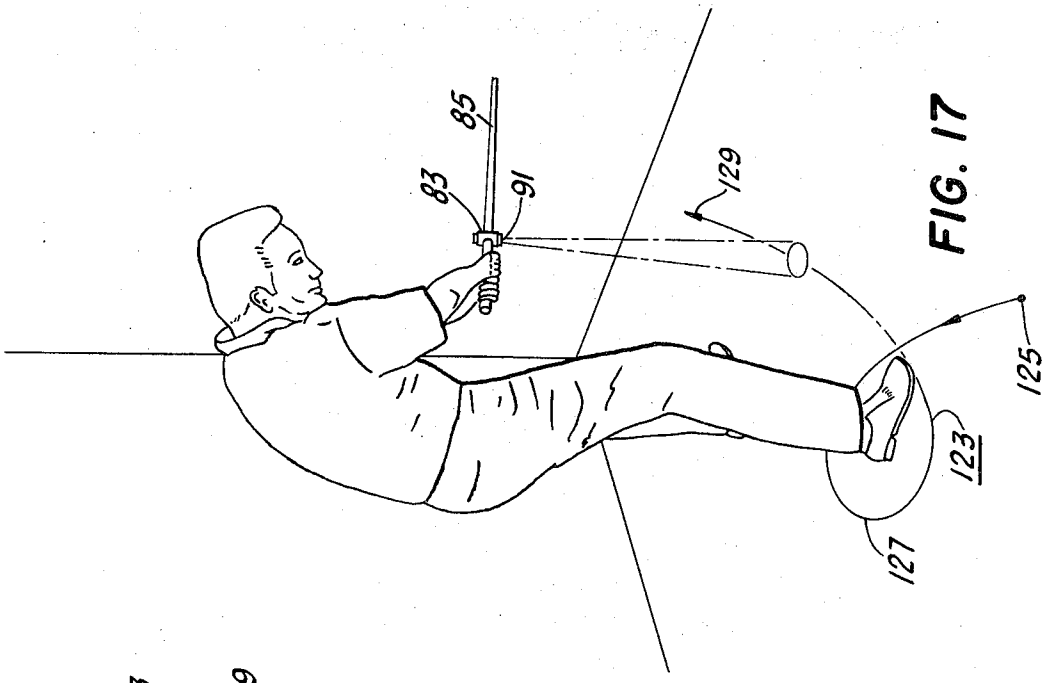


FIG. 17

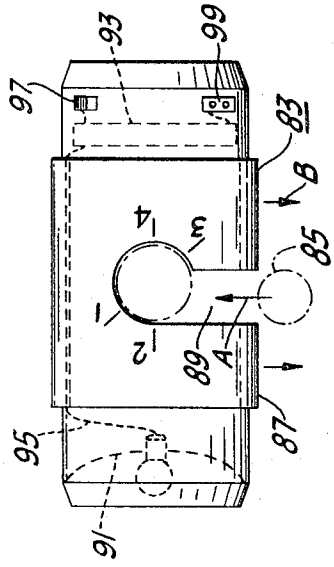


FIG. 12

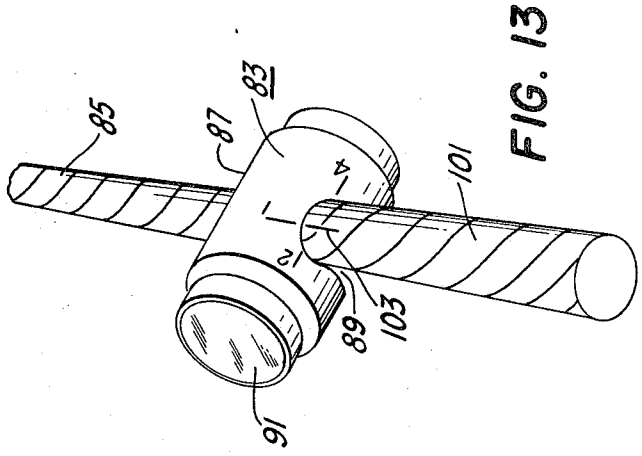


FIG. 13

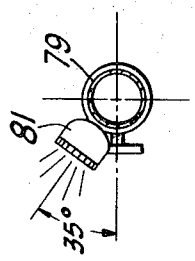


FIG. 11



FIG. 9

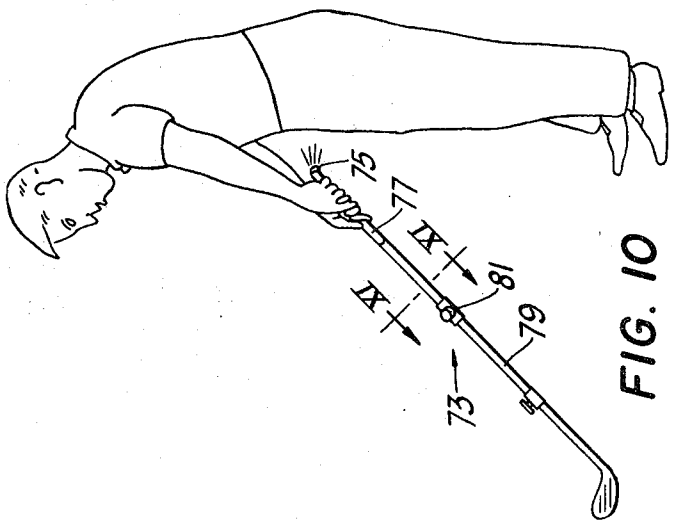


FIG. 10

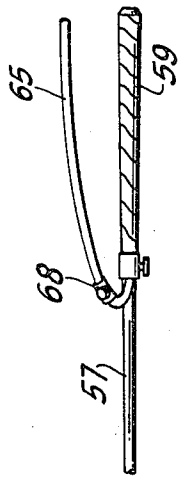


FIG. 8

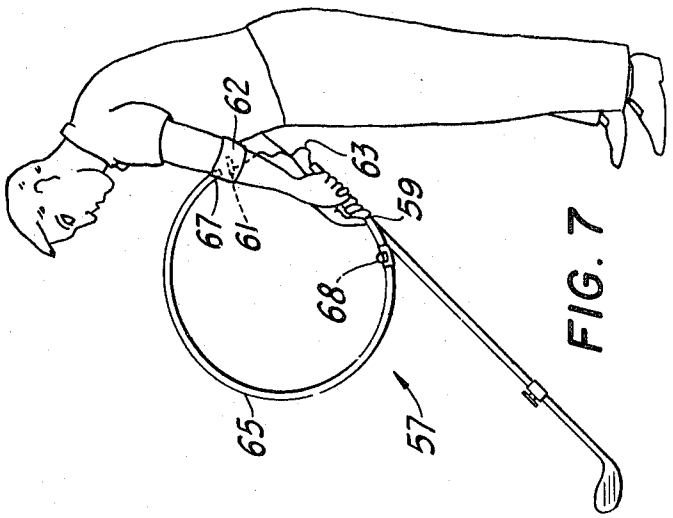


FIG. 7

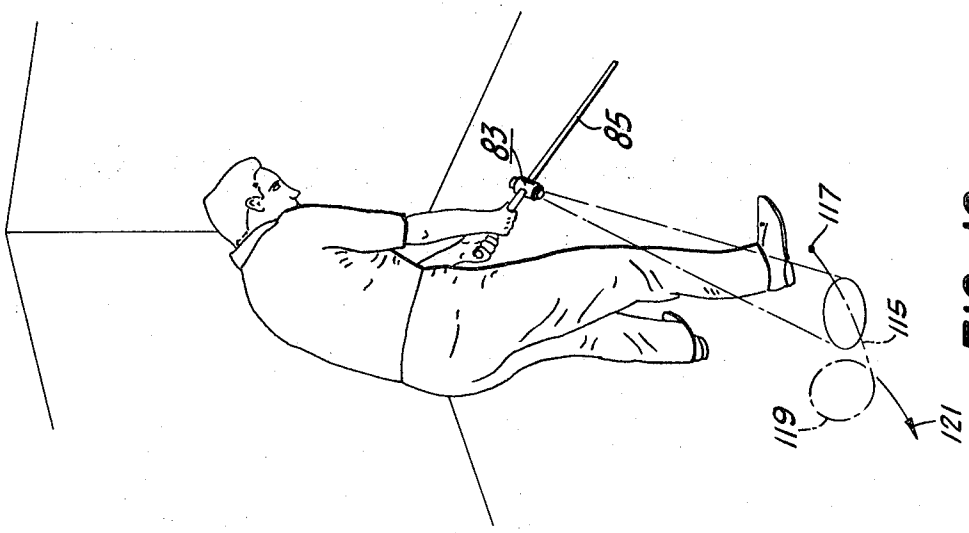


FIG. 16

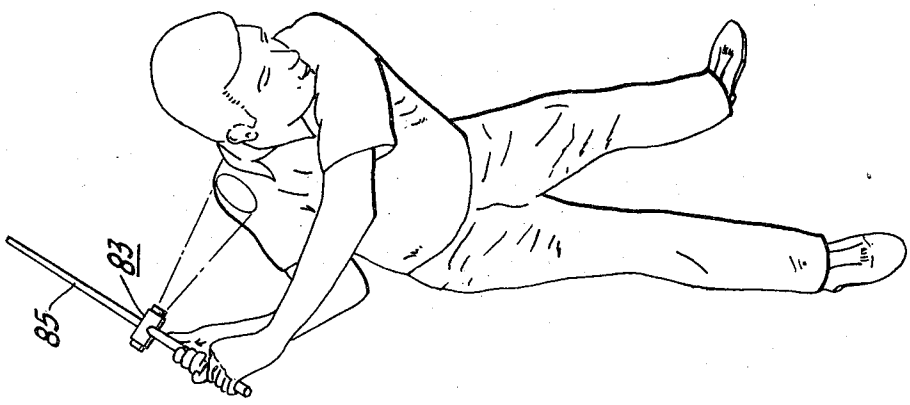


FIG. 15

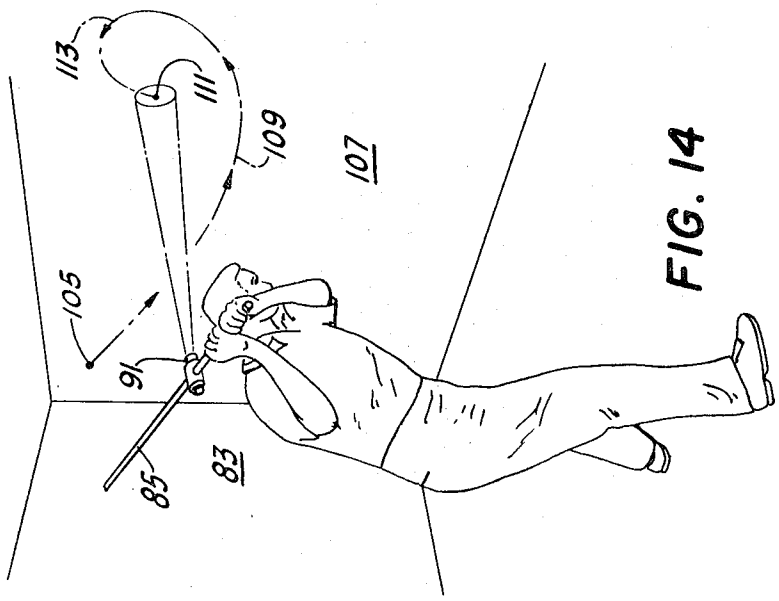


FIG. 14

GAME CLUB SWING TRAINING DEVICE

CROSS REFERENCE TO RELATED APPLICATIONS

This application is a continuation-in-part of application Ser. No. 263,980 filed June 19, 1972, now abandoned, which is a continuation-in-part of application Ser. No. 153,772 filed June 16, 1971, now abandoned.

BACKGROUND OF THE INVENTION

This invention relates to apparatus for teaching both young and old golf pupils as well as golfers how to swing a golf club correctly. When properly swung and after much repetition, correct muscle activity will gradually develop into lasting muscle memory that stays with a golfer for a long while.

In most cases golf pupils unfortunately practice bad habits when they try to bring the golf club down through on the same path the club traveled on the backswing. This is a physical impossibility. Whereas, in truth, the golfer and pupil should take the club back along one path during the backswing, and down through the ball-striking position along an entirely different path.

A golf pupil can observe and try to copy the swing of his favorite golf professional, whose book on Golf is usually well illustrated with photographs. But, soon the golf pupil comes to the realization that he cannot swing his clubs like his favorite professional, and so the pupil becomes discouraged. He then adds another book to his library of golf books and he is no better off than when he first read the golf book.

The prior art is replete with devices that are designed to teach a golf pupil how to achieve that elusive "perfect swing," but, so far as is known, no prior art reference has been found to be completely satisfactory.

The intentional alignment of the face of the golf club to the ball has long been the main obstacle to a good golf swing. It should be realized that the face of the club head is square to the line of intended flight of the ball for only a split second of time during the perfect swing. Yet, most golfers and golf pupils try to keep the face of the club square to the flight path at all times. Such intentional effort takes away from the player and from the pupil the fluidity of swing and body movement that is needed to properly strike a golf ball.

The present invention, however, instills in the mind of the pupil and the golfer a "mind's eye view" of the correct golf swing, and it takes away from the pupil and the golfer, when my invention is manipulated correctly, the natural inclination to "steer" the club head along a certain, but incorrect path towards the ball.

I have found that once a golf pupil and golfer learns how to make a proper backswing, he instinctively makes a proper downswing. Using the apparatus and practicing the method of my invention achieves this objective.

SUMMARY OF THE INVENTION

A golf training apparatus in accordance with one embodiment of my invention comprises an arcuate structure that is provided with a gripping portion for holding it as though it were a golf club. A light is attached to the gripping portion which traces a path on structure adjacent the golfer or pupil.

In a modification of my invention, there is a second light attached to the arcuate structure which may be actuated by the golfer or pupil and which traces another path on such adjacent structure.

In yet another modification of my invention, a light on the simulated golf club lights when contact by an arcuate structure on the club is made with a source of electrical power and when the pupil or golfer holds the simulated golf club in the proper position at the top of the backswing.

In yet a further modification of my invention, a light device is removably positionable on the club shaft and is adjustable to direct rays of light in a selected direction for specific training purposes.

For a further understanding of my invention and for features and advantages thereof, reference may be made to the following description and drawings which illustrate embodiments of apparatus in accordance with my invention that are suitable for carrying into practice the method of my invention.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. **1** is a schematic view of a golf club-like training apparatus in accordance with my invention, being held in one operative position;

FIG. **2** is a view along line II—II of FIG. **1**;

FIG. **3** is a schematic view of the apparatus of FIG. **1** being held by a golf pupil in another operative position;

FIG. **4** is a schematic view of a modified golf training apparatus in accordance with my invention as held in one operative position by a golf pupil;

FIG. **5** is a view along line V—V of FIG. **4**;

FIG. **6** is a schematic view of a part of the golf training apparatus in accordance with my invention;

FIG. **7** is a schematic view of another golf training apparatus in accordance with my invention as held by a golf pupil at the address position;

FIG. **8** is a plan view of only the gripping portion of the apparatus of FIG. **7**;

FIG. **9** is a view of a portion of the apparatus of FIG. **7**;

FIG. **10** is a view of another golf training apparatus in accordance with my invention as held by a golf pupil at the address position;

FIG. **11** is a view along line XI—XI of FIG. **10**;

FIG. **12** is a schematic view of a light device in accordance with my invention;

FIG. **13** is a schematic view of the light device of FIG. **12** as installed on a golf club or like device; and

FIGS. **14–17** show the light of FIG. **12** in use and in various positions on a golf club or like device as held by a golf pupil.

DETAILED DESCRIPTION

Referring to FIG. **1**, a golf training apparatus **11** in accordance with my invention is shown held by a golf pupil at the address position; the pupil holding the apparatus **11** by gripping a portion **13** as a simulated golf club. The gripping portion is connected to a cross member **15** that is end-connected to a hoop-like structure **17** by means of tubular connectors **19**, or in any other suitable manner.

As may be seen from FIGS. **1** and **2**, the hoop-like structure **17** and the gripping portion **13** are each provided with a light designated respectively **21**, **23**, and the light **23** is so installed in the free end portion of the gripping portion **13** that it directs rays of light along the

axis oriented at an angle of about 45° from the axis of the gripping portion **13**. The light **21** is so installed in the hoop-like structure **17** that its rays are substantially parallel to the rays emitted by light **23**.

The gripping portion **13** is provided with two switches **25, 27** (FIG. 2) which can be and usually are actuated by the thumbs of the golf pupil when his hands are on the gripping portion correctly.

The lights **21, 23** may be of any suitable form and the source of power for such lights may be installed in the gripping portion **13** or in the structure **11**, as desired. The switches **25, 27** are connected to respective lights **21, 23**. In some applications only one switch may be used to control both lights, or only one light may be used.

FIG. 3 illustrates the golf training apparatus **11** in another operative position, at the top of the backswing. The golf pupil has moved the training apparatus **11** from the address position of FIG. 1 to the top of the backswing in accordance with the method of my invention.

A modification of my golf training apparatus is shown in FIG. 4 which comprises a gripping portion **31** and a shaft extension **33** connected axially thereto as well as an arcuate structure **35**. The gripping portion **31** is shown in FIG. 5 and it will be noted that it is substantially the same as the gripping portion **13** of FIG. 1. The gripping portion **31** has an end light **37** that is so oriented that its rays of light shine along an axis that is disposed at an angle of about 45° from the axis of the gripping portion. The gripping portion **31** is provided also with two switches **39, 41** which can be and usually are actuated by the thumbs of the golf pupil when he holds the gripping portion **31** in the proper manner.

The arcuate tubular structure **35** is adapted to be clamped onto the shaft extension **33** by means of the sleeve **43** and the thumb screw **45**, but those skilled in the art will appreciate that any other structure that is suitable may be used, if desired.

The arcuate tubular structure **35** is provided with a light **47** that is located about where shown, so that its rays of light are directed along an axis that is substantially parallel to the rays of light emitted by the light **37**. As mentioned previously, the lights **37, 47** are conventional and are operated by switches **39, 41** respectively. A suitable source of electric power for the lights may be installed in the gripping portion **31**, or in any other part of the apparatus **29**, as may be more convenient.

FIG. 4 also illustrates one form of other attachment **49** that is secured to the shaft extension **33** by a second sleeve **51** at one end as shown, using a thumb screw **53**. Of course, the attachment **49** may be secured in any other suitable manner, if preferred. The attachment **49** is a simulated golf club head like that found on an iron golf club. It may also be a wood club head.

Another form of attachment, such as a racket-like device **55** of FIG. 6, may be attached to the shaft extension **33** in place of the attachment **49**.

FIG. 7 issustrates schematically another golf training apparatus **57**, as it is held by a golf pupil in the address position; the pupil holding the apparatus **57** by the gripping portion **59** thereof. The golf pupil would have received some previous instructions about holding the club device **57** and how to address the ball in a proper manner. The golf pupil wears an electrified contact **61** on his left arm (a left handed pupil would wear the contact on his right arm, of course) that is located at or just slightly above the elbow. The contact **61** is held in place by an elastic band **62**, or in any other suitable manner, and a small wire **63** leads from the contact piece **61** to the gripping portion **59** in which there is a source of electric power, such as a battery (not shown).

The apparatus **57** is fitted with an arcuate member **65** that is or may be of metal or plastic or other suitable material. If it is made of plastic, it should include an electric wire that connects to a metal contact piece **67** at the free end and that connects to the source of power in the gripping portion **59**. If the arcuate member **65** is metal, it should be connected to the source of power in a known way.

FIG. 8 shows schematically a plan view of the golf training device **57** of FIG. 7.

The free end portion of a modified arcuate member **69** in which there is a microswitch **71** is shown in FIG. 9. The microswitch **71** is connected electrically to the source of power in the gripping portion **59**, and is actuated upon contact with the arm, especially the left arm, of the golf pupil in the manner described hereinafter.

Another golf training apparatus **73** of my invention is shown schematically in FIG. 10 as it is held by a golf pupil in the address position. The apparatus **73** is provided with a light **75** at the end of the gripping portion **77** which is like the light **37** shown in FIG. 4. Along the shaft portion **79** there is a light **81** which is oriented at an angle of about 35° from a plane passing through the shaft portion, as shown in FIG. 11.

FIG. 12 illustrates schematically another light **83** which is adapted to be installed on a golf club shaft **85** or the like. The light **83** includes a short length of tubing **87** that may be of metal or plastic and in the body portion there is a cut or kerf **89** having the shape shown in FIG. 12. At the left hand end as viewed in FIG. 12, there is suitably mounted thereto a light **91**. At the right hand end, opposite the light **91**, there is a source of electric power, comprising one or more batteries **93**. In a preferred embodiment, the batteries are of the rechargeable type. Wires **95** connect the light **91** to the source of power through an on-off switch **97**. A connection **99** for recharging the batteries **93** is also mounted to the body end portion as shown in FIG. 12.

On the tubular body portion there are four indicia, marked with the numerals **1, 2, 3, 4**, and on the grip portion **101** of the club **85** there is an index mark **103**; such mark being parallel to the axis of the club shaft **85**. The indicia **2, 4** are parallel to the longitudinal axis of the tubular body portion **87**, and the indicia **1, 3** are disposed along a line at an angle of about 40° from the axis of the indicia **2, 4**.

A golf pupil may, during a training program under the guidance of a teaching professional, or alone at a practice area, use any one or several embodiments of my invention shown and described herein. In using the golf training apparatus shown in FIGS. 1 or 4, the golf pupil assumes the address position about which he has received instruction previously. Then, the golf pupil simulates rotation of the arcuate structure **17** or **35** in the direction of the arrows A and B respectively turning the device about the left wrist as a pivot (a left handed person would simulate rotation about his right wrist). The arcuate structure is then rotated in its respective plane until the wrists are fully cocked. Then the golf pupil turns his shoulders in a substantially level plane, brings his arms back in a swinging motion along the backswing, and turns his hips clockwise until the arcu-

ate structure is in the position shown in FIG. 3. The hands and arms are at the top of the backswing and the body is coiled to deliver full power on the downswing. The golf pupil turns his hips counterclockwise and brings his arms and the training device down as though he were striking a golf ball.

With the attachments 49 and 55 added to the apparatus of FIG. 4, an advanced golf pupil experiences more nearly the sensation of swinging a golf club correctly. Yet, the advanced pupil does not strike a golf ball with the apparatus of FIG. 4.

The sensation that a golf pupil should experience when he makes the downswing is best understood when the attachment of FIG. 6 is used. The golf pupil should consider that he is hitting or is about to hit a ball with a racket-like device, such as is used in playing badminton.

In using the apparatus of FIG. 7, the golf pupil, wearing the arm band as shown, assumes a correct address position holding the apparatus as shown. Then, he simulates rotation of the arcuate structure 65 in the same way as he rotates the arcuate structures 17 and 35, as described with respect to FIGS. 1 and 4 respectively. At the address position, the metal end 67 or metal arcuate member 65 does not make contact with the electrified contact 61, but when the pupil moves the golf training apparatus 57 correctly to the proper position at the top of the backswing, the end 67 does contact the piece 61. This completes an electrical circuit and the light 68 lights.

If the light 68 does not light at the top of the backswing the golf pupil knows that he is not holding the apparatus in the proper position. He should then assume the address position and repeat the backswing, but this time he should correct any fault so that contact will be made and the light lights.

Naturally, golf pupils are not alike physically, even as some are men and some are women, so each pupil must locate the arm band in the proper place for him or her under the guidance of an experienced teacher or professional. But, once the arm band is set in the proper position, the gold pupil should practice until he can bring the apparatus to the top of the backswing every time and make contact with the electrified piece and light the light. The backswing may then be said to be "grooved."

The apparatus of FIGS. 10 and 11 are used to show a more advanced golf pupil whether or not he is moving the apparatus 73, which is more nearly like a golf club, in the proper manner, both on the backswing and on the downswing.

When using the apparatus 73, the lights 75, 81 are turned on. The golf pupil assumes the address position and, facing a wall or other vertical surface not too far away, and moves the apparatus along the backswing to the top position. If he moves the apparatus correctly, the light 81 will follow a predicted trace or path marked on the wall or vertical surface. If the light does not follow the trace or path, the golf pupil must start over again and practice until he moves the apparatus correctly so that the light follows the trace or path. Another person or an instructor can follow the light path for him as he swings the apparatus.

Likewise, when the golf pupil moves the apparatus 73 in a proper manner on the downswing, the light 75 will follow a preselected path or trace on the ground or floor around the pupil's right foot. The aforementioned person or instructor standing nearby can follow the light path advantageously and advise the golf pupil if correction is necessary.

The apparatus of FIG. 12 is used in four different positions for training purposes. The device 83 is installed on a golf club or club-like device by inserting the small diameter portion of the shaft in the kerf 89, in the direction of the arrow A; moving the device in the direction of the arrows B until the device is held in position near the grip where the diameter of the shaft is large enough to fill the rounded portion of the kerf as shown. In such position, the indicia 1, 2, 3, 4 can be aligned in succession or randomly with the index mark 103. The device 83 is positioned on the club in FIG. 13 so that the indicia 1 is aligned with the index mark 103.

When a golf pupil or more experienced golfer, who wished to improve his swing, stands at the address position, and when he grips the club 85 properly with the indicia No. 1 at the index mark 103, the light 91 will project rays of light at an initial spot 105 on adjacent wall or vertical structure 107. If the golf pupil moves the club 85 properly on the backswing, the light rays will trace a prescribed path 109, and the light rays at the top of the backswing will project at terminal point 111; the rays making a loop 113 just before they reach terminal point 111.

Thus, a golf instructor or other person can observe the path traced by the light rays and advise the person that he has or has not: (1) gripped the club properly; (2) addressed the ball properly; (3) made a proper backswing; (4) reached a proper position at the top of the backswing.

Now, let us assume that the instructor or other person wishes to look more closely at one particular phase of the swing; say the position of the club at the top of the backswing. To do this, the golf pupil orients the device 83 so that indicia No. 2 is opposite the index mark 103. The person then makes the backswing. If made properly and if the club is held at the proper position at the top of the backswing, the light rays will fall on the right shoulder of the pupil, as suggested in FIG. 15. Thus, the correct position of the club at the top of the backswing can be recognized easily. Of course, if the rays of light do not fall on the pupil's shoulder, the pupil is informed and he can make changes in his swing to correct his fault.

Assume now that the instructor wishes to watch closely the start of the backswing. The golf pupil then adjusts the device so that the indicia No. 3 is aligned with the index mark. Then the golf pupil assumes the address position and commences the backswing. If the backswing is started properly, the light rays will trace a path 115 on the floor behind the right foot of the pupil, as shown in FIG. 16; the rays starting at an initial point 117, making a loop 119, and trailing off in the direction of arrow 121.

While the foregoing describes how the device 83 may be used effectively to look more closely at the several phases of a golf backswing, the device may be used also very effectively to look closely at the downswing; especially in the hitting zone.

FIG. 17 shows a path 123 traced by the light rays of the device 83 when the indicia No. 4 is aligned with the index mark and as the golf pupil moves the club down and through the hitting area. If the downswing is properly done, at about the mid-point of the downswing, the light rays will start from initial point 125 of path 123,

make a loop **127** around the pupil's right foot and then follow path **123** in the direction of the arrow **129.** If such path **123** is followed, the golf pupil knows that his downswing is correct, but, likewise, if the path **123** is not followed, the pupil knows that he must make changes to correct his downswing.

From the foregoing description of the several embodiments of my invention, those skilled in the art will recognize many important features and advantages among which the following are particularly significant:

That the apparatus and the method of use quickly instills in a golf pupil and in a golfer as well a "mind's eye" view of the correct golf swing. All mental control over the downswing is removed so that there is no attempt to "steer" the club head toward the golf ball;

That the golf pupil and the golfer alike obtain a proper picture of the correct swing which otherwise is only an optical illusion that he cannot ever attain from following or aping pictures in a book;

That in swinging my apparatus in accordance with the method described herein, a cocking of the wrists and a turning of the shoulders and hips in the proper manner takes place instinctively;

and

That when the golf pupil and golfer manipulate my teaching apparatus so that one or more of the lights shine at a preselected location or along preselected paths, the golf pupil and golfer know that my apparatus has been used correctly. They then know that they have swung the club or like device correctly and if repeated many times that their swing is "grooved."

Although the invention has been described herein with a certain degree of particularity, it is understood that the present disclosure has been made only as an example and that the scope of the invention is defined by what is hereinafter claimed.

What is claimed is:

1. Apparatus for use in a club swing training program comprising:

a club shaft;

a light having indicia thereon;

means for adjustably mounting said light to said shaft;

an index on said shaft; and

means for aligning selected ones of said indicia with said index whereby, when said shaft is swung properly during said training program, said light emits rays along preselected paths which may be viewed to permit a close study of the phases of a club swing.

2. The invention of claim **1** wherein:

a. one of said indicia is so arranged that when aligned with said index mark light rays from said light trace a preselected path on a support on which said person stands as said person swings said shaft.

3. The invention of claim **1** wherein:

a. one of said indicia is so arranged that when it is aligned with said index rays of light from said light fall on the shoulder of said person when said person holds said shaft in the proper position at the top of the backswing.

4. The invention of claim **1** wherein:

a. one of said indicia is so arranged that when it is aligned with said index rays of light from said light trace a preselected path on a vertical surface adjacent said person while swinging said shaft as a golf club during the backswing.

5. The invention of claim **1** wherein:

a. one of said indicia is so arranged that when it is aligned with said index rays of light from said light trace a preselected path on said support including a loop around one foot of said person when the shaft is swung as a golf club on the backswing.

6. The invention of claim **1** wherein:

a. one of said indicia is so arranged that when it is aligned with said index rays of light from said light trace a preselected path on said support including a loop on said support when said shaft is swung as a golf club on the downswing.

7. A device for use in a club swing training program comprising:

a shaft;

a body portion carrying a light and having therein a kerf that merges with a shaft-accommodating passageway so arranged that when said body portion is mounted to said shaft said light emits rays that are in a plane that is perpendicular to the axis of said shaft when held as a golf club at the address position;

a mark on said shaft; and

indicia on said body portion that are selectively alignable with said mark so that when said shaft is swung properly during said training program said rays fall along preselected paths which may be viewed to permit a close study of the phases of a club swing.

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