Nov. 21, 1961 M. E. HEARD 3,009,704

GOLF TRAINING DEVICE

Filed Jan. 21, 1960

FIG.2.

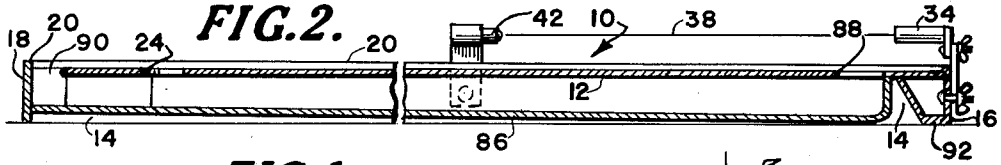


FIG.1.

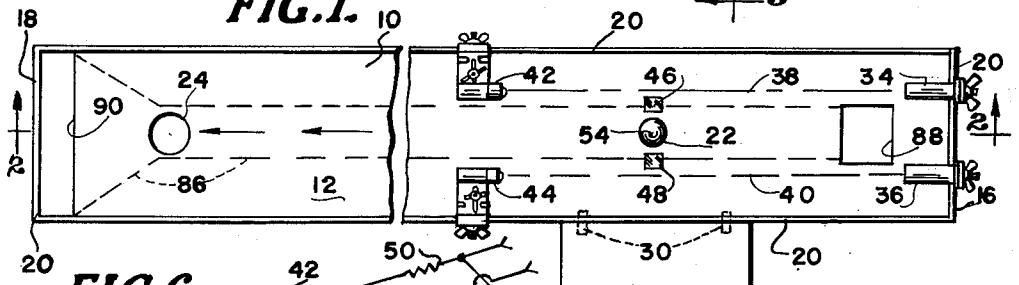


FIG.6.

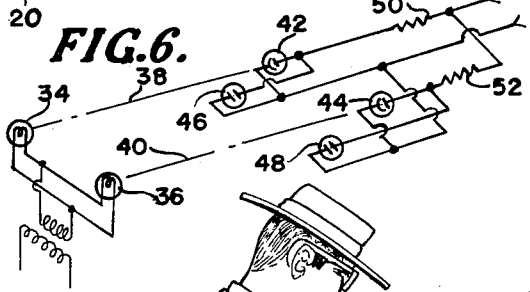


FIG.3.

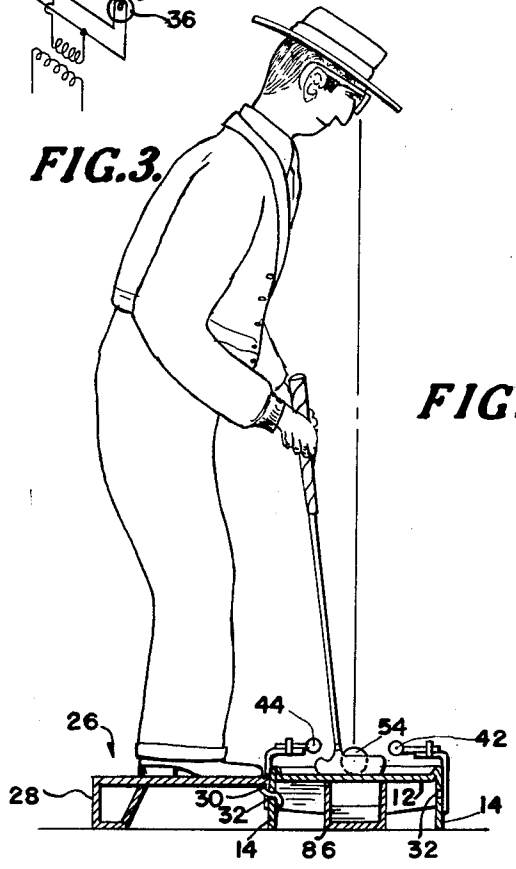


FIG.4.

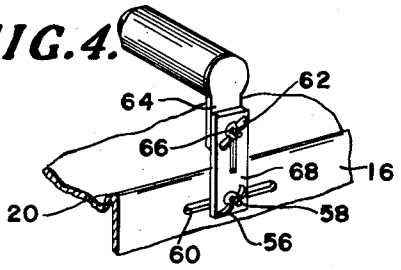
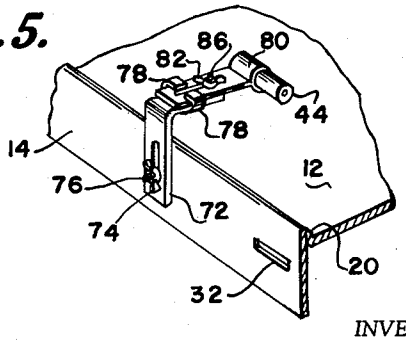


FIG.5.



INVENTOR

MAURICE E. HEARD

BY Cushman, Darby & Cushman

ATTORNEYS

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GOLF TRAINING DEVICE

Maurice E. Heard, Lanett, Ala.
(West Point, Ga.)

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This invention pertains to golf training devices, and more particularly to a device particularly adapted to teach golfers the correct "stroke" in putting.

In the game of golf, the putter is generally conceded to be one of the most important—but also most difficult—clubs to master if low scores are to be achieved. This difficulty is due primarily to the putting stroke being unique and dissimilar from that employed during wood or iron shots, in that in proper putting the club head is moved axially of the ball during both back-swing and follow-through. It is a primary object of this invention to provide a device which will assist in teaching a golfer this correct putting stroke.

A further important object of the invention is to provide a device of the type described wherein the parts thereof are so arranged as to instill in a golfer the habit of keeping his eye upon the ball, which is also of the utmost importance for proper putting.

Another object is to provide a device of the type described which is of simple and economical construction, and which may be utilized with facility by either left or right-handed golfers, under conditions closely simulating those actually encountered on the putting green.

A related and more specific object is to provide in a device of the type described efficient ball return means of economical construction.

Other objects and advantages will be in part evident and in part pointed out hereinafter in the following description of a preferred embodiment of the invention. The description should be read in conjunction with the accompanying drawings forming a part of this specification, in which:

FIGURE 1 is a top plan view of a preferred embodiment of the device;

FIGURE 2 is a section taken on line 2—2 of FIGURE 1;

FIGURE 3 is a section taken on line 3—3 of FIGURE 1, and showing a golfer in putting stance addressing a ball upon the putting station of the device;

FIGURE 4 is an enlarged perspective view showing the adjustable mounting of one of the light sources seen in FIGURES 1 and 2;

FIGURE 5 is an enlarged perspective view showing the adjustable mounting of the light sensitive device seen at the bottom of FIGURE 1; and

FIGURE 6 is a wiring diagram of the control circuits.

Referring in more detail to the drawings, the device includes an elongated platform **10** having a top **12**, sides **14** and ends **16**, **18**. Platform **10** is preferably of integral construction, as shown, with sides **14** and ends **16**, **18** rising slightly above top **12** so as to define a peripheral lip **20** thereabout, and also extending downwardly therefrom so as to provide supporting members for the platform **10**. Centrally of the top **12** and near opposite ends thereof there is provided a putting station **22** and an aperture **24** defining a cup-target of regulation size. The upper surface of top **12** is carpeted or felted (not shown) so as to simulate as closely as possible the surface of a putting green.

A smaller platform **26**, upon which a golfer stands while utilizing the device, is disposed adjacent a side **14** of platform **10** in proximity to putting station **22**. As is best seen in FIGURE 3, platform **26** is supported along one edge by a downwardly extending side **28** and along its opposite edge is provided with a pair of projecting

tongues **30**. Both sides **14** of platform **10** are provided with a pair of spaced slots **32**, each pair of which are adapted to receive and support the tongues **30**. By locating platform **26** on the left side of platform **10**, as in FIGURE 3, right-handed golfers can be accommodated; and by moving platform **26** to the opposite side, the device can be utilized by left-handed golfers.

Mounted upon the end **16** of platform **10** are two lamps **34**, **36** which, when activated, direct mutually parallel light beams **38**, **40** parallel to and above top **12** on opposite sides of putting station **22**. A pair of photocells or other sensitive devices **42**, **44**, having resistances which are a direct function of the amount of light falling thereon, are mounted upon the platform in alignment with beams **38**, **40**, respectively. Mounted upon or recessed within the top **12**, in such a manner that they are flush with the carpeted or felted coverings (not shown) thereon, are a pair of neon signal lamps **46**, **48**. As is more fully discussed hereinafter, it is highly significant that the signal lamps are located in close proximity to putting station **22**, preferably on the opposite sides thereof.

Lamps **34**, **36**, photocells **42**, **44**, and neon lamps **46**, **48** are connected together in a suitable circuit with resistances **50**, **52**, as seen in FIGURE 6. The values of resistances **50**, **52** are selected so that when light from the lamps **34**, **36** falls on photocells **42**, **44**, the voltage across each neon signal lamp **46**, **48** is below the value required to light the same. Interruption of either light beam **38** or **40**, however, will cause the voltage across its associaated neon signal lamp to rise above the ignition voltage, thus causing the lamp to light momentarily while the beam is blocked.

In utilizing the device, a golfer stands upon the platform **26**, as shown in FIGURE 3, and strokes a ball **54** upon putting station **22** toward cup **24**. Parallel beams **38**, **40** define a zone of optimum movement of the putter head during such a putting stroke. Thus if the stroke is correct, i.e., axial of the ball during both back-swing and follow-through, the putter head is moved parallel to and between light beams **38**, **40**. If, however, the stroke is incorrect either during back-swing or follow-through, the putter head or shaft will interrupt either or both light beams **38**, **40**. Interruption of either beam will actuate its associated signal lamp momentarily to give the golfer an indication that the stroke was improper.

Since signal lamps **46**, **48** are located adjacent putting station **22** and are but momentarily illuminated during an improper swing, a golfer properly using the device is forced to keep his eyes in the vicinity of the ball **54**, in order to detect whether his putting stroke is proper. Continued use of the device will make this habitual so that when putting under actual conditions the golfer will automatically tend to keep his head down and his eyes upon the ball.

The lamps **34**, **36** and light sensitive devices **42**, **44** are adjustably mounted upon platform **10** so that the height and width of the zone defined by beams **38**, **40** may be varied to accommodate club heads of different sizes. Referring to FIGURE 4, it will be seen that the position of a lamp **34** or **36** may be adjusted horizontally by loosening nut **56** and sliding bolt **58** lengthwise in the slot **60** provided in the end **16** of platform **10**. Similarly, vertical adjustment of the lamp may be achieved by loosening nut **62** and sliding member **64** and bolt **66** relative to member **68**.

It will be apparent that photocells **42**, **44** might be mounted upon end **18** of platform **10**, in a manner similar to the mounting of lamps **34**, **36**. It is greatly preferred, however, to mount photocells **42**, **44** intermediate the length of platform **10**, as shown, where they will not distract a golfer observing cup **24** while "lining up" his

putt. Referring to FIGURE 5, the preferred mount for each photocell includes an L-shaped member **72**, the slotted vertical leg of which is secured to side **14** by means of nut **74** and bolt **76**. The horizontal leg of member **72** projects inwardly of the device **10** and is provided with arms **78**. A slotted member **80** is closely received between the arms **78** and is also held in engagement with member **72** by nut **82** and bolt **86**. The photocell is secured by any suitable means to the inner end of member **80**. By loosening nut **74** and sliding member **72** relative to side **14**, the position of the photocell may be adjusted vertically. Similarly, the horizontal position of the photocell may be changed by loosening nut **82** and sliding member **80** relative to member **72**.

Welded or otherwise mounted centrally of the platform **10** beneath surface **12** is an inclined chute **86**, the lowest end of which terminates beneath an opening **88** adjacent end **16** of the device. Since cup **24** communicates directly with chute **86**, a ball entering the cup will roll down the chute and return to opening **88** for reuse. The upper end of chute **86** is outwardly flared and in communication with a trough **90** which extends across the entire width of platform **10** at end **18** thereof. It will be apparent that any balls hit excessively hard and passing over or around cup **24** will drop within trough **90** and also be returned via chute **86** to the opening **88** for reuse. The raised peripheral lip **20** extending about platform **10** prohibits any balls from escaping from top **12** other than through cup **24** or trough **90**.

As discussed heretofore, that part of platform **10** adjacent end **16** supports one side of platform **26** through tongues **30** and slots **32**. Since the weight of a golfer upon platform **26** may be substantial, it is desirable to impart additional strength and rigidity to that part of platform **10** bearing a portion of this load. Such added strength is economically achieved in the instant invention by making the maximum height of chute **86** substantially the same as the height of sides **14** (see FIGURES 1 and 3), and by providing end **16** with a flange **92** which abuts the under surface of top **12**. Thus the weight of a golfer upon platform **26** is supported not only by sides **28**, **14** and end **16**, but also by flange **92** and a portion of chute **86**.

It will thus be seen that the instant invention successfully achieves the objects and advantages heretofore noted. Since various modifications of the invention will be apparent to those skilled in the art, it will be realized that the foregoing description is illustrative only, and the scope of the invention is to be limited only in accordance with the following claims.

What is claimed is:

1. A golf training device comprising an elongated putting surface, said surface having a putting station thereon and a target spaced from said putting station; a pair of light sources mounted above said surface and directing a pair of light beams substantially parallel thereto, said beams extending substantially parallel to each other on opposite sides of said putting station and defining a zone of optimum movement of a putter head stroking a golf ball upon said putting station toward said target; light sensitive means longitudinally spaced along said surface from said light sources and in alignment with said beams; visual signal means adjacent said putting station; and circuit means interconnecting said light sensitive means and said signal means for causing said signal means to momentarily register when either of said beams is interrupted by a putter head during a putting stroke.

2. A device as in claim 1 wherein said signal means comprises a pair of signal lamps adjacent the putting station and in substantially the same plane as said surface, interruption of one of said beams actuating one of the lamps and interruption of the other of said beams actuating the other of said lamps.

3. A device as in claim 1 wherein said light sources and devices are adjustably mounted so that the height and width of said zone are variable to accommodate putter heads of different sizes.

4. A golf training device comprising a platform having a peripheral rim extending above a putting surface; said surface having a putting station thereon and target means spaced from the station; a pair of spaced light sources mounted upon said platform and directing light beams above and substantially parallel to said surface on opposite sides of the putting station, said beams defining a zone of optimum movement of a putter head stroking a golf ball upon said putting station toward said target means; at least two light sensitive devices mounted upon said platform longitudinally spaced along said surface from the light sources and in alignment with the beams; a pair of signal lamps adjacent the putting station and in substantially the same plane as said surface; circuit means interconnecting said devices and said lamps whereby interruption of one of said beams momentarily actuates one of the lamps and interruption of the other of said beams momentarily actuates the other of said lamps; and means for returning a ball from said target means to a point adjacent the putting station.

5. A device as in claim 4 wherein said target means comprises a first aperture defining a cup-target, and including a second aperture on that side of the cup-target distant from the putting station, and wherein said ball return means includes an inclined chute communicating with said apertures and extending to a point adjacent the putting station.

6. A device as in claim 5 wherein said light sources and devices are adjustably mounted upon said platform so that the height and width of said zone are variable to accommodate club heads of different sizes.

7. A golf training device comprising a first platform having a peripheral rim extending above a putting surface; said surface having a putting station thereon and first and second apertures spaced from the station, the first aperture defining a cup-target and the second aperture being on that side of the cup distant from the putting station; a second platform adapted to support a golfer mounted adjacent the first platform and in proximity to the putting station; a pair of spaced light sources mounted upon said first platform on that side of said putting station distant from said apertures and directing light beams above and substantially parallel to said surface on opposite sides of the putting station, said beams defining a zone of optimum movement of a putter head stroking a golf ball upon said putting station toward said cup-target; at least two light sensitive devices mounted upon said first platform intermediate said putting station and said apertures and in alignment with the beams; said light sources and devices being adjustably mounted upon said first platform so that the height and width of said zone are variable to accommodate putter heads of different sizes; a pair of signal lamps adjacent the putting station and in substantially the same plane as said surface; circuit means interconnecting said devices and said lamps whereby interruption of one of said beams momentarily actuates one of the lamps and interruption of the other of said beams momentarily actuates the other of said lamps; and inclined chute means beneath the surface and communicating with said apertures, said chute extending to a lowest point adjacent the putting station so as to return thereto balls deposited within the apertures.

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