United States Patent [19]

Bertucci

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[54] **GOLF PRACTICE MACHINE**

[76] Inventor: **Dominick Bertucci,** 153 Wilderness Rd., Saint James, N.Y. 11780

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[52] **U.S. Cl.** ..... **273/185 D,** 273/167 J, 273/195 R

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

[58] **Field of Search** 273/176, 184, 185, 200, 273/186, 197

[56] **References Cited**

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Primary Examiner—George J. Marlo

Attorney, Agent, or Firm—Richard L. Miller

[57] **ABSTRACT**

An apparatus for use by a golf player in practicing golf club strokes in a confined area, and which visually indicates the driving force in terms of distances, so that the apparatus can be used as a game; the device including a hollow platform having a slot through which a vertical shaft protrudes upwardly and having a golf-ball shaped knob on its upper exposed end for being struck by a golf club which, when struck, causes the vertical shaft to pivot forwardly about a horizontal, transverse shaft which at the same time is forwardly slided in supporting slots against the action of a return spring, the horizontal shaft having a plate attached thereto with electric contacts thereupon which during travel progressively engage with corresponding stationary sets of contacts so to progressively close different circuits each having a different indicator lamp designating a particular driving distance.

3 Claims, 10 Drawing Figures

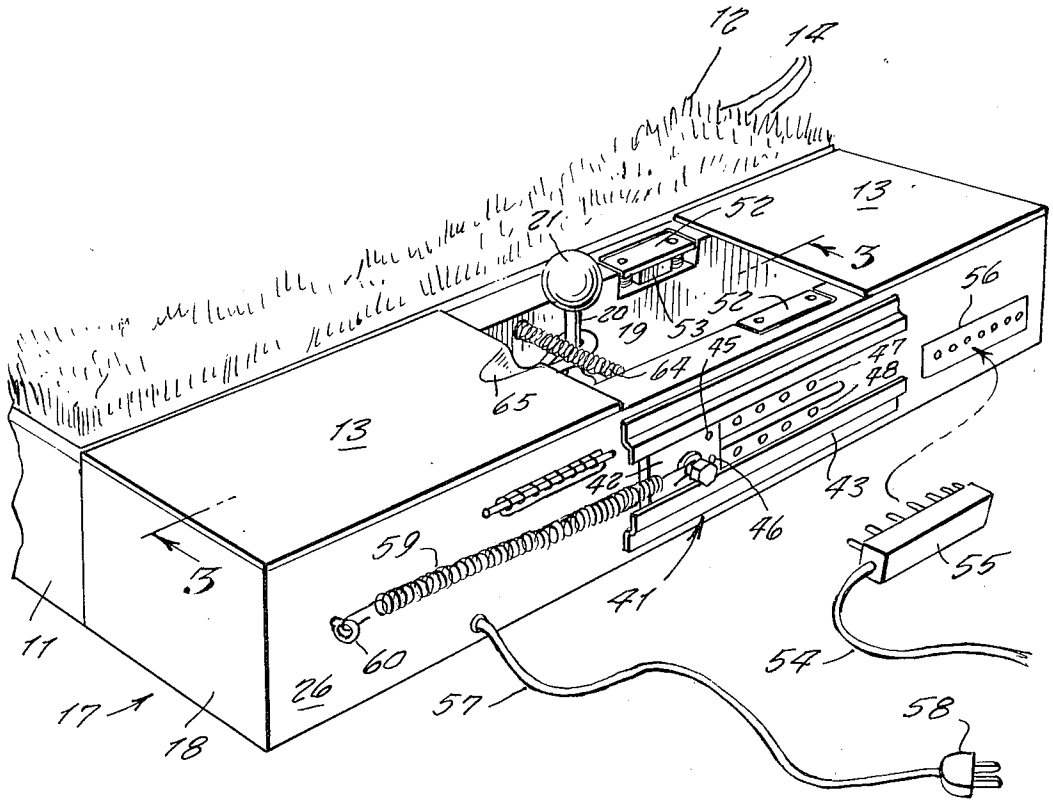


Fig. 1

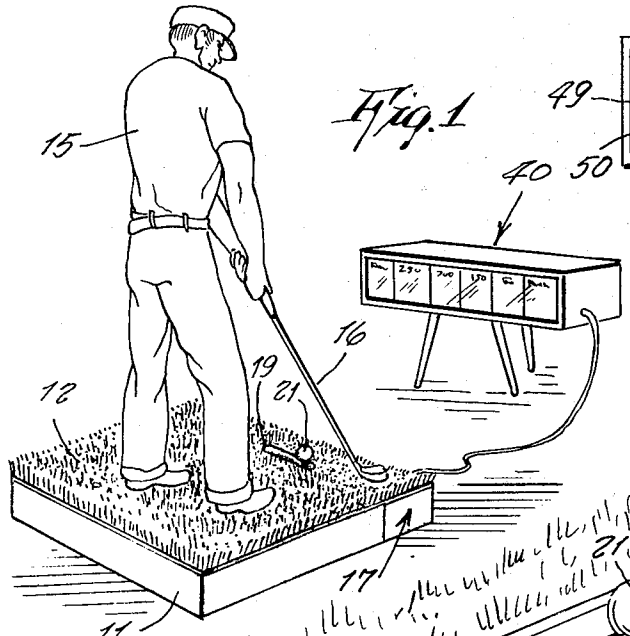


Fig. 7

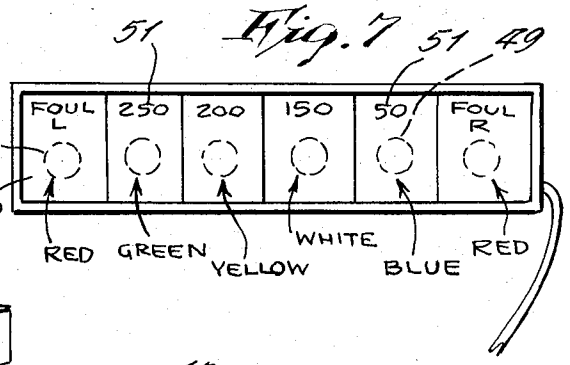


Fig. 2

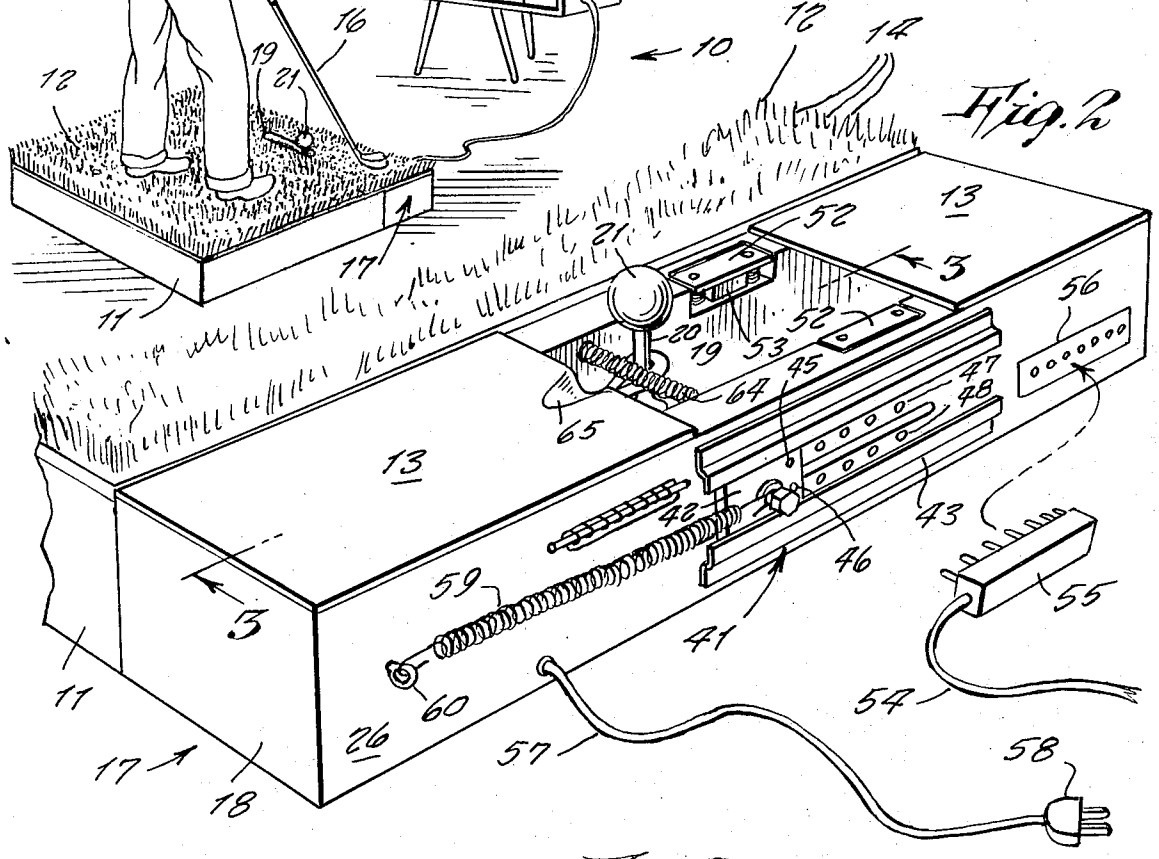


Fig. 8

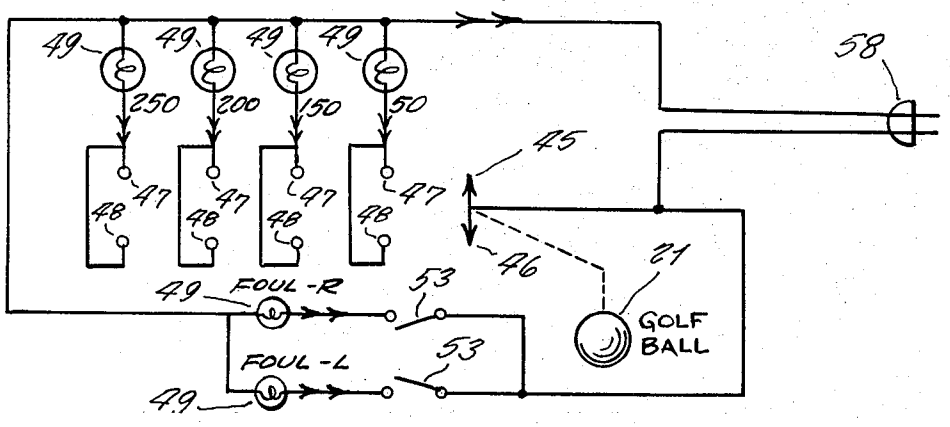


Fig. 3

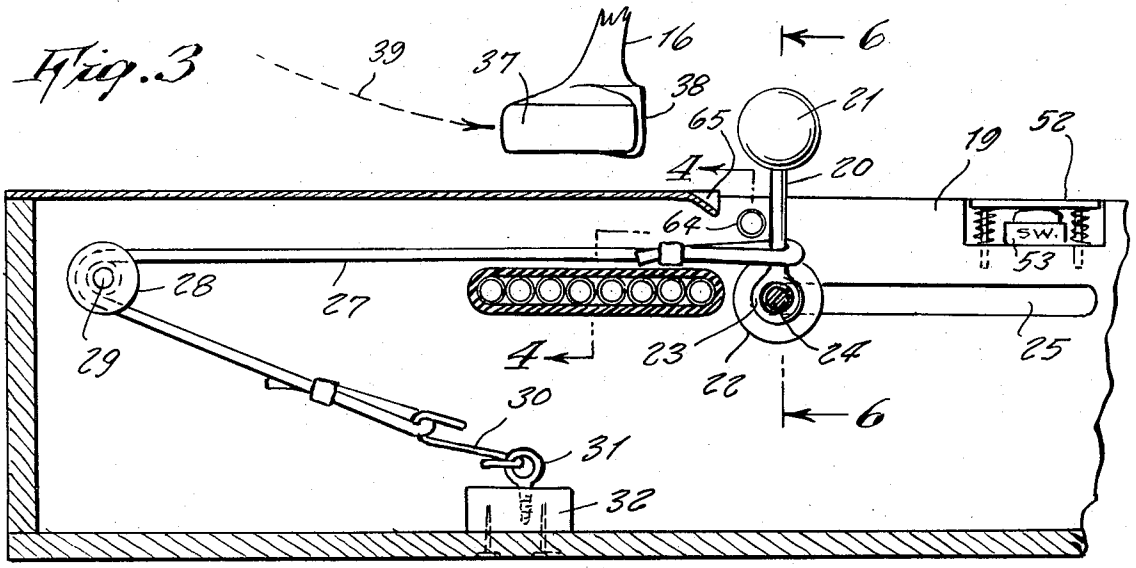


Fig. 4

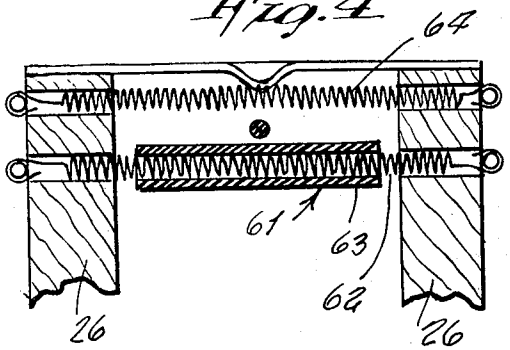


Fig. 5

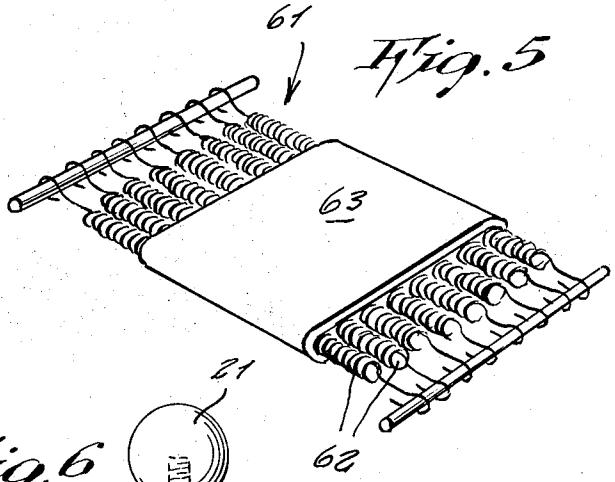


Fig. 6

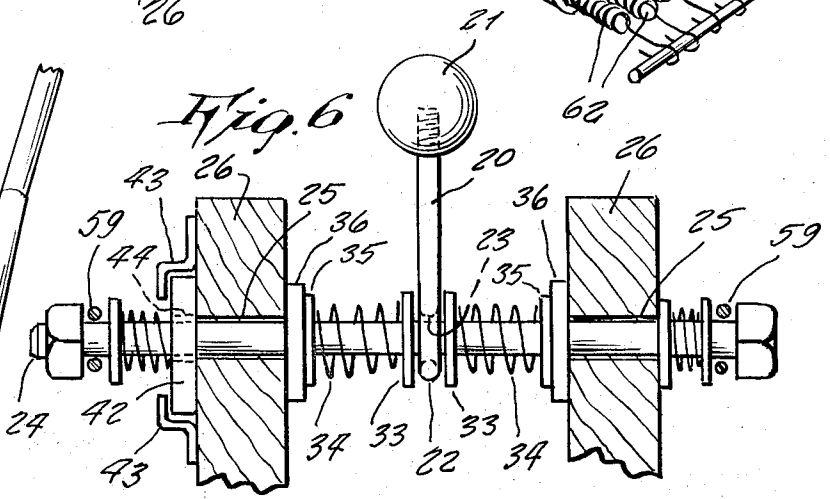
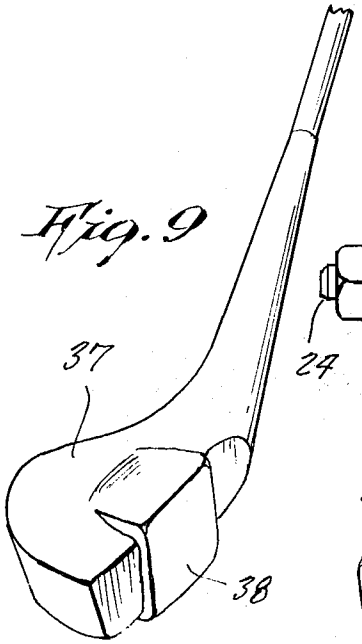


Fig. 9



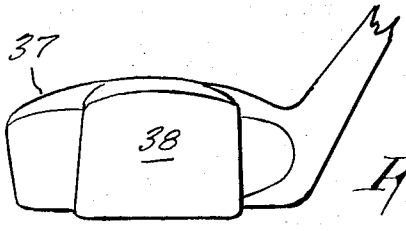


Fig. 10

GOLF PRACTICE MACHINE

This invention relates generally to golf playing apparatus which is a new apparatus used for golf practicing for new players young or old, to acquire the feel of a golf club so as to learn the proper swing, to hit the golf ball the right way and to build up strength for correct form in the swing.

A principle object of the present invention is to provide an apparatus for allowing a golf player to practice his driving strokes within a confined area such as indoors, and which visually informs the player of the quality of his stroke.

Another object is to provide an apparatus which can be used either as a practice device for individual players, or which can be used as a game for a player alone or competitively between several players.

Still another object is to provide an apparatus which is readily portable, and which when not in use, requires a minimum storage space.

Other objects are to provide a golf playing apparatus which is simple in design, inexpensive to manufacture, rugged in construction, easy to use and efficient in operation.

Further objects of the invention will appear as the description proceeds.

To the accomplishment of the above and related objects, this invention may be embodied in the form illustrated in the accompanying drawings, attention being called to the fact, however, that the drawings are illustrative only, and that changes may be made in the specific construction illustrated and described within the scope of the appended claims.

FIG. 1 is a perspective view of the invention shown in use.

FIG. 2 is a perspective view of the operative unit thereof.

FIG. 3 is a cross sectional view taken on line 3—3 of FIG. 2.

FIG. 4 is a cross sectional view taken on line 4—4 of FIG. 3.

FIG. 5 is a perspective view of a spring shock absorbing mechanism.

FIG. 6 is a cross sectional view on line 6—6 of FIG. 3.

FIG. 7 is a front view of a scoring unit of the invention.

FIG. 8 is an electric circuit of the invention.

FIG. 9 is a perspective view of a club head used with the present invention.

FIG. 10 is a front elevation view thereof.

Referring now to the drawing in detail the reference numeral 10 represents a golf practice driving range according to the present invention wherein there is a base 11 made of any suitable structure such as wood, and which has a mat 12 secured upon its top wall 13, the mat having green colored fibers 14 so to resemble grass, and upon which a player 15 can stand while swinging golf club 16.

The base 11 includes an operative unit 17 contained in hollow housing 18. A slot 19 on an upper side of housing 18, allows horizontal travel of a shaft 20 protruding upwardly through the slot, the upper end of the shaft having a golf-ball shaped ball member 21 rigidly secured thereupon and which is intended to be struck by the golf club 16.

The lower end of shaft 20 is formed into a loop 22 having central opening 23 through which a cross shaft 24 extends; the shaft being supported near each end in horizontal slots 25 of side walls 26 of the housing 18.

The loop 22 is positioned along the cross shaft 24 so that the shaft 20 is located midway between side walls 26. Opening 23 is oversized respective to the diameter of cross shaft 24 so the ball 21 can be pivoted into any direction. In order to normally maintain the shaft 20 vertically upright. One end of an elastic cord 27 is connected around shaft 20, and the other end of cord 27 is passed around rotatable pulley 28 supported on cross shaft 29, and the terminal end of cord 27 is attached to hook 30 secured to eye screw 31 anchored in stationary block 32 inside the housing. To prevent the shaft 20 to droop sidewardly, the loop 22 is positioned between washers 33, that are normally urged toward the loop by compression coil springs 34 fitted around cross shaft 24. The other ends of springs 34 bear against metal washer 35 positioned adjacent rubber washer 36 placed against inner side of the side wall 26. Thus the ball 21 is in position for being struck by the head 37 of the golf club 16, as shown in FIG. 3.

The golf club head 37 includes a forwardly projecting pad 38 for engaging the ball 21.

When the club head 37 is moved in direction shown by arrow 39, in FIG. 3, the struck ball causes the shaft 20 to pivot forwardly about the cross-shaft but the force of the club blow also causes the cross shaft to slide in a forwardly direction along slots 25, against the force of return elastic cord 27. The amount of the force by the club blow is visually indicated at a separate scoring unit 40 for being seen by the player, as is accomplished by an electro mechanical structure 41.

The structure 41 includes a plate 42 of insulation material slidable in tracks 43 secured to one of the side walls 26. The plate 42 is attached to the cross shaft by means of the cross shaft passing through a transverse opening 44 in the plate. A pair of electric contacts 45 and 46 are mounted on the plate 42, the contacts being electrically engagable with rows of contacts 47 and 48 respectively that are stationarily mounted on the housing sidewall.

Each pair of contacts 47 and 48 are in series circuit with one of the lamps 49 located inside the scoring unit 40. A transluscent window 50 is in front of each lamp 49, each window being of a different color and each window having scoring numbers 51 imprinted thereupon, as shown in FIG. 7.

Additionaly, the scoring device indicates a "left foul" and "right foul" in case the ball 21 is struck toward either side instead of being struck straight ahead. This is accomplished by the ball 21 striking either of the switch plates 52 located upon each side wall 26, thus momentarily closing a switch 53 placed under the plate 52, and thus closing an electric circuit to a specific one of the lamps on the scoring unit which indicates a "foul."

When the unit is placed in front of the player as shown in FIG. 1, the player sees which color of light momentarily goes on so to know his score. The scoring unit 40 is connected electrically to the operating unit 17 by extension cord 54 and plug block 55 engaging socket block 56. An extension cord 57 with plug 58 is attachable to an electric supply.

After a play, the cord 27 returns the shaft 20 into upright position. The cross shaft 24 and plates 42 are returned back to starting position by a tension spring 59 on each side of the housing 18, each spring at one end

being attached to the cross shaft and the spring other end being attached to eye screw **60** anchored in the housing.

A shock absorbing mechanism **61** is provided so to absorb the force of the ball **21** as the ball pivots around the cross shaft **24** when struck by the club. Mechanism **61** comprises a set of transverse tension coils springs **62** wrapped inside a rubber sleeve **63**; the spring ends being secured to the side wall **26.**

Another transverse tension coil spring **64,** secured at its ends to sidewalls **26,** serves to stop the pivotal return travel of the shaft **20.** A dimple **65** on the top wall is provided to receive the ball **21** when the return motion is stopped.

Thus a golf playing apparatus is provided.

While certain novel features of this invention have been shown and described and are pointed out in the annexed claims, it will be understood that various omissions, substitutions and changes in the forms and details of the device illustrated and in its operation can be made by those skilled in the art without departing from the spirit of the invention.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a golf Practice Driving Range the combination

of a base upon which a golf player can stand, an operative unit in said base, including a housing having a slot on its top side, an upstanding shaft protruding upwardly through said slot, a ball secured on an upper end of said shaft for being struck by a golf club held by said player and means for indicating a quality of a driving force by said player to said ball, said means comprising a scoring unit separately located from said base, and an electric circuit including switch means in said operative unit activated by movement of said ball, and lamp indicating means in said scoring unit, said ball shaft being pivotable about a cross shaft slidable in slots of sidewalls of a housing of said operative units, said cross shaft carrying electrical contacts engagable with sets of stationary contacts of said housing, said contacts sets being in circuit with different ones of a set of differently identified lamps of said scoring units.

2. The combination as set forth in claim **1** wherein spring return means are connected to said shaft and cross shaft.

3. The combination as set forth in claim **2** wherein switch means on said side walls are in circuit with "left foul" and "right foul" indicating means.

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