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EDWARD L. BARNETT, OF NEW YORK, N. Y.

GOLF APPARATUS.

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To all whom it may concern:

Be it known that I, EDWARD L. BARNETT, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Golf Apparatus, of which the following is a full, clear and exact description.

The present invention relates to new and useful improvements in golf apparatus and it pertains more particularly to means for practicing and playing the game of golf indoors.

It is one of the primary objects of the present invention to provide means whereby the various strokes of the game of golf may be practiced indoors in such a manner that the stroke may be played the same with the apparatus as would be played in the open upon a full-sized golf course or links, as well as a miniature apparatus to be played as a parlor game with all parts of the apparatus on a greatly reduced scale.

A further object of the invention is to so construct the apparatus that all the values of any given shot on a regular golf course will be closely approximated and these values can be translated in terms of yards.

It is a still further object of the invention to so construct the apparatus that in addition to the use thereof for determining the value of the various strokes, the same may be employed by two or more competing persons for playing the game of golf in a manner similar to that in which the game is played in the open upon a golf course or links.

An additional object is to construct an indoor or miniature golf course where all the values of any given shot on a regular golf course may be secured including what are commonly known as pulls or slices.

With the above and other objects in view, reference is had to the accompanying drawings, in which—

Figure 1 is a horizontal plan sectional view of an apparatus constructed in accordance with the present invention.

Figure 2 is a vertical sectional view thereof taken on the line 2—2 of Figure 1.

In constructing indoor golf courses, it has been difficult heretofore to simulate or approximate actual conditions of a regular course. In the present invention, means have been presented which permits a player to act substantially as if he were on a regular

course and cause the ball to also act accordingly so that substantially true values will be produced. In forming a structure to produce this result, retarding deflecting surfaces have been provided and arranged in such a manner that the retardation of the ball is in proportion to the power used so that the ball will fall on a prepared bed of sand at a point proportionate to where it would fall on a regular golf course. In addition, the structure is such that the strokes known as "pulls" or "slices" are given their proper proportionate values so that the player can readily see the results which he would secure on a regular course.

Referring to the drawings by numerals, 5 designates a tee for supporting a golf ball, said golf ball being illustrated in dotted lines and designated by the reference character 6 in Figure 2. Upon opposite sides of the tee 5, are arranged mats 7 or the like upon which the player stands, said mats being so positioned with respect to the tee 5 that a player standing upon either of said mats is in proper striking position with respect to the ball 6 carried by the tee 5.

Slightly in advance of the tee 5 and the mat 7, is a deflector 9 as more clearly shown in Figure 2, which under certain circumstances, co-acts with the deflector 10 shown directly above the same in Figure 2. The deflector 10 is supported by suitable standards 11 and remains in the same position at all times. The deflector 9, however, is mounted on a suitable framework including uprights 11' which carry casters 12 whereby the deflector 9 and the framework supporting the same may be moved out of the way whenever desired. Both of the deflectors 9 and 10 are of comparatively thin material and may be made from metal, wood or any desired material. The deflectors are made in this manner in order to retard the ball by absorbing some of the power thereof and in this way cause the shot to approximate a shot on the regular golf course.

Arranged at a position beyond the deflector 10 upon the floor of the building or room in which the device is set up, is a field 8. This field 8 comprises a bed, such for example, as sand, and is marked off by means of tape, strings or the like 13, into a plurality of squares 14, all of which are of the same dimensions. Extending in a line with the tee 5, is a central aisle 15 of squares and it will be noted that there are

the same number of squares on each side of said central aisle 15. At the rear end of this field 8 there is a vertical wall 16 and connected to the side edges of said wall 16 are side walls 17 of canvas, netting or similar material. As shown, these side walls extend in the direction of the tee 5 to a point beyond the deflector and are secured to vertical standards 18 or the like. It will be noted that the side walls 17 are so positioned as to define the side edges of the field 8 but this construction may be altered so that said side walls will be spaced with respect to the side edges of the field 8 without departing from the spirit of the invention.

Secured to the rear wall 16 near the lower edge thereof is a pulley 19 and between the tee 5 and the deflector 9 there is a second pulley 20. Passing around these pulleys 19 and 20 is an endless cord 21 and mounted in said endless cord 21 is a ball marker 22, the purpose of which will be hereinafter described.

It will be noted that one of the squares in the central aisle 15 is segregated from the others by means of a particular marking in order that this square may be particularly identified for a purpose to be hereinafter set forth. This square is designated in Figure 1 by the reference character 23 and said square is positioned a little beyond the half-way point between that end of the field nearest the tee and the rear wall 16.

At the top of Figure 1, which would be in actual practice the left-hand side of the apparatus, there are two columns of figures 24 and 25. The column of figures 25 is adapted to designate yards and increases from left to right five yards for each square from 105 to 180. The column 24 is adapted to designate yards, and it will be noted that said column increases from right to left from 190 to 280 or more, at the rate of ten yards per square.

At the lower side of Figure 1, which in practice would be the right-hand side of the apparatus and beginning with the sixth square from the rear wall 16, is a column of figures 26 adapted to designate yards, the figures of the column increasing five yards for each square reading from right to left in Figure 1.

The operation of the device as a practice apparatus is as follows:

Assuming that the student desires to practice with a club known as a "driver," the ball is positioned on the tee 5 and the student or contestant takes his position upon either of the mats 7. The ball is then struck with the club and is projected forwardly as designated by the dot-and-dash lines in Figure 2. In its forward travel the ball strikes the deflector 9, is diverted towards the upper deflector 10 and from thence against the back wall 16 and falls into one of the squares

of the field 8. Assuming now that the shot was a perfect one as regards direction, the ball would settle in one of the squares of the central aisle 15. After the ball had settled, the student or contestant would determine the distance of the shot by reading the larger number opposite the central square in which the ball is at rest at the left-hand side of the playing field and in the column designated by the reference character 24. For example, if the ball were to fall to rest in the square designated by the reference character X, it would indicate that a straight drive of 230 yards had been made. The particular curve of the deflector 9 co-acts with the ball as the same strikes the deflector to cause the ball to act in the same manner as it would act on a regular golf course, namely, it would take the same course. In order to accomplish this result, the deflector 9 is made on a parabolic curve with the point occupied by the ball 6 when resting on the tee 5 as the focus. By reason of this construction and the yielding action of the deflector 9, the ball is retarded when it hits the deflector and is also caused to move in a straight line or curved to the side according to the particular stroke made.

Assuming now that the student desires to practice shots with middle-distance clubs, the deflector 9 would be removed and the shots would be played directly against the rear wall 16 and would rebound into one of the squares of said field and, as heretofore described, if the shot were a perfect one as regards direction, the ball would settle in one of the squares of the central aisle and its distance of travel would be determined in the same manner as heretofore described, except that the distance would be read by the figures in the column designated 26.

In using the short-distance clubs, such for example, as the "mashie" or "niblick," the deflector 9 is again placed in the position shown in Figure 2 and the ball played over the deflector 9, which serves as a hazard over which the ball must be elevated. When making these strokes, the square heretofore mentioned and designated by the reference numeral 23, would be the objective point to which the ball would be projected. The position of the square in which the ball comes to rest is then compared with the position of the square designated 23 and the accuracy of the shot is thereby determined.

Having described how the apparatus is employed for the practice of golf, the method of operation whereby the game of golf is played by two or more persons, is as follows:

The distance of the various holes constituting eighteen holes of play may be arbitrarily decided before the persons start to

play the game, or if desired, any particular course with which the players are familiar or upon which they have data concerning the distances of each of its holes may be played by using this apparatus, in the following manner:

Assuming for example that the first hole to be played is one of four hundred yards, the first contestants would place the ball 6 upon the tee 5 and drive against the deflector 9, endeavoring to get the greatest distance and the most nearly accurate direction since a hole of four hundred yards on a regular golf course could not ordinarily be made in one stroke. After the stroke has been made and the ball has come to rest, the position of the ball is noted and the contestant making the stroke is given credit for the distance, providing the ball comes to rest in the central aisle 15. If the ball comes to rest in the designated square 23, it would indicate that the drive was perfect in direction and that it was a distance of two hundred and fifty yards. If, however, the ball was to drop in the square either side of this designated square 23, that is above or below in Figure 1, a penalty of five yards would be deducted from the two hundred and fifty yards, said five yards being a penalty for the deviation from direction of a perfect shot. This same principle is carried out through all of the squares and if the ball comes to rest two squares removed from the central aisle, a penalty of ten yards is imposed and so on, imposing a penalty of five yards for each square removed from the central aisle. Each of the contestants makes his shot and is credited with the distance according to the position in the field 8 in which the ball comes to rest.

Assuming now that each contestant has equalled two hundred and fifty yards with his first shot, there would be remaining one hundred and fifty yards in a four hundred yard hole and this one hundred and fifty yards would have to be made up in succeeding shots. The second shot is played exactly as the first and the values determined in the same manner. If, on the second shot, the player fell in the block indicating one hundred and fifty yards in the aisle 15, his play would be perfect. However, usually the ball goes too far or falls short of this distance and also usually the ball falls either to the right or left of the aisle 15. After the proper penalty has been imposed as above described, he is permitted to take a third shot. In taking the third shot, if the indicated distance is between fifty yards and one hundred yards from the proper block, the deflector 9 is removed and the ball is played directly against the rear wall 16. If the third shot does not advance the ball within one hun-

dred yards to fifty yards of the putting green, additional shots are made in the same manner as the third shot. When the ball is played to within twenty-five yards to forty-five yards of the hole, the shots are made by playing over the deflector and pitching directly into the field 8.

It is to be understood that associated with the device is a putting green on which the final strokes are played in order that each player may "hole out." This putting green is not shown in the drawings since its construction forms no part of the present invention and may be of any type. After any stroke when the ball comes to rest within twenty yards, or in other words, four squares from the correct square in which the ball was intended to drop, the ball is transferred to the putting green in order that the player may "hole out." The position of the ball upon the putting green is determined by playing the ball one foot from the hole of the putting green for each yard the ball is distant from the proper square in the field 8.

In making each of the short strokes, the endless cord 21, together with its ball marker 22, is operated in order that the square which is the objective of the shot is marked by moving the endless cord until the marker 22 thereof is positioned within such square. By the particular curvature of the deflector 9 and the association of the same with the other parts of the apparatus, proper values may be given to the strokes known as "slice" and "pull" and in this way the apparatus will, to a large extent, approximate a full size golf course.

From the foregoing it is apparent that the apparatus disclosed in this application may be employed by two or more persons in playing a game of golf, as well as for a practice apparatus, and that the apparatus provides means whereby the game of golf may be played in a relatively restricted area in the same manner as it is played on outdoor courses, with approximately true values obtained.

What I claim is:

1. In a golf apparatus, a field divided into spaces having predetermined values into which a ball is adapted to be projected, means for retarding the flight of said ball, said means comprising oppositely facing deflecting and retarding plates with which the ball contacts in its flight to said field.

2. In a golf apparatus, a field divided into a plurality of separate areas, each of which has a predetermined value and into which a missile is adapted to be projected, and a plurality of retarding deflector plates arranged in the path of said projected missile, said plates being positioned to function before the ball enters the field.

3. In a golf game apparatus, a field into

which a golf ball is adapted to be manually projected, and a plurality of retarding deflectors interposed in the line of flight of said golf ball, one of said deflectors being movable with respect to the other whereby it may be moved out of the line of flight of the golf ball.

4. In an indoor golf apparatus, a tee from which a golf ball is adapted to be manually projected, a field divided into a plurality of separate areas of predetermined values, a rear wall from which the golf ball is adapted to rebound when projected, and a plurality of retarding deflectors interposed between the tee and said rear wall.

5. In an indoor golf apparatus, a tee from which a golf ball is adapted to be manually projected, a field divided into a plurality of separate areas of predetermined values, a rear wall from which the golf ball is adapted to rebound when projected, and a plurality of deflectors inter-

posed between the tee and said rear wall, one of said deflectors being removable from the path of travel of the projected golf ball whereby the ball may be projected against said rear wall by a direct shot.

6. In an indoor golf course, a field, a rear wall arranged at one end of the field, a retarding deflector arranged at the other end of the field, said retarding deflector being formed with a curved face, a tee positioned in front of said curved face so that a ball projected from the tee toward the deflector will strike said curved face and be deflected upwardly, a second deflector arranged above the first mentioned deflector for changing the direction of the fly of the ball so that it will strike against said rear wall, and means on said field for indicating the value of the shot when the ball comes to rest on said field.

EDWARD L. BARNETT.