July 8, 1941. L. M. BALES 2,248,053

GOLF PRACTICE DEVICE

Filed Oct. 7, 1940

Fig. 1.

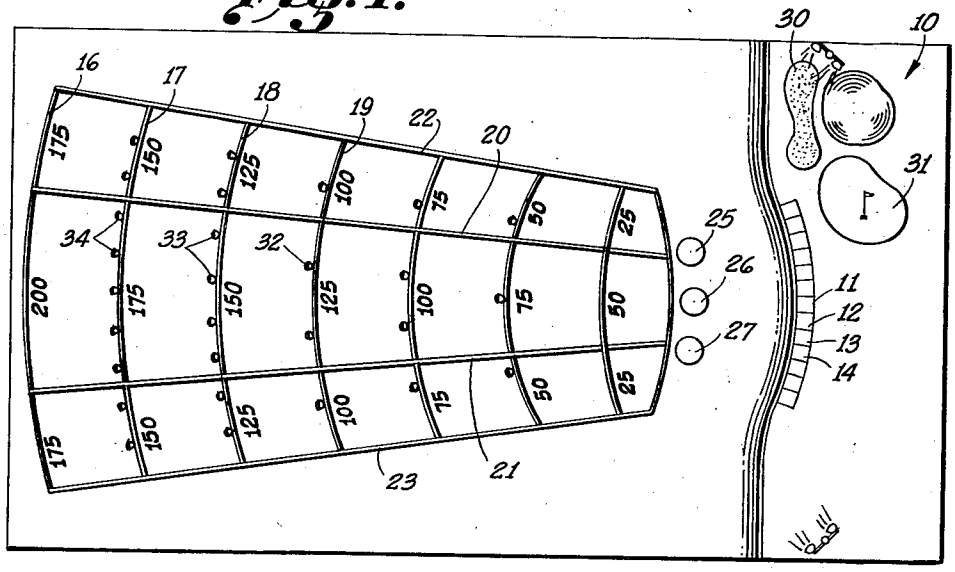


Fig. 2.

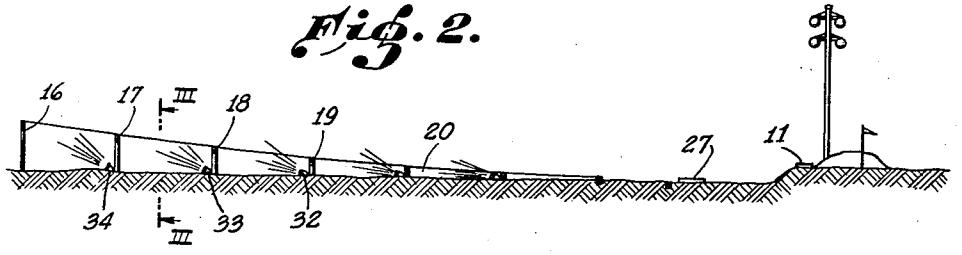


Fig. 4.

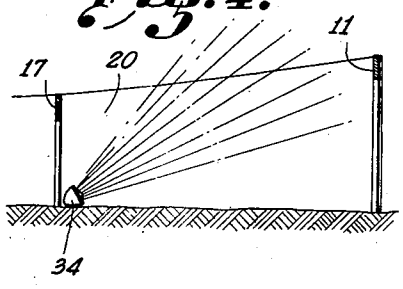
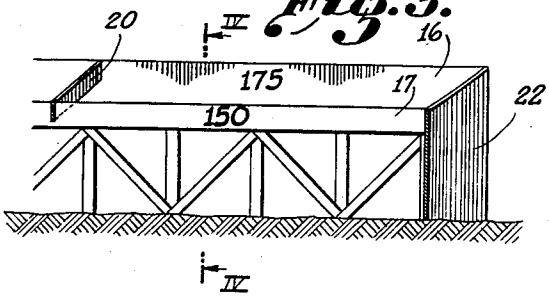


Fig. 3.



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GOLF PRACTICE DEVICE

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4 Claims. (Cl. 273—35)

The present invention pertains to a device adapted for use in teaching the coordination, accuracy, power and change of pace which is necessary in playing golf. Generally stated, the invention pertains to an arrangement of fairways, roughs, playing tees, targets and light sources whereby a profesisonal or instructor may observe, criticize and instruct a player under conditions simulating actual course, conditions and situations without the loss of time and extensive areas incidental to the use of an actual golf course. The lighting arrangement hereinabove referred to is designed to produce progressively increasing illumination over the playing field with increasing distance from the tee stands, whereby the visibility of the ball is maintained substantially constant throughout the length of the playing field.

The instruction of players in the game of golf is ordinarily a time-consuming procedure. Driving ranges have been established in many cities where a player may drive large numbers of balls for the purpose of exercise and practice but such driving ranges have been found to be detrimental to the player in that in most instances a prolonged driving session places the player under considerable strain, which is not representative of the game and does not require the use of different clubs, so that a player does not become familiar with the change of pace which is a necessary element of the game. Moreover, driving ranges ordinarily do not penalize the player for shots which have been hooked or sliced, nor does a player attempt to place his shots but instead drives with all his might for the longest possible distance. In actual play, however, precise distances need be attained in order to be able to play a course in par and this again requires accuracy in placement.

The present invention is directed toward means whereby the training, instruction and education of a player may proceed expeditiously under the supervision of a competent instructor within a limited area and with proper emphasis upon proper placement of the ball, change of pace, coordination, all of which are characteristic of the game. The educational device of this invention imposes penalties for misjudgment and inaccuracies whereby a complete and interesting competitive game may be provided for a number of players simultaneously and which permits the instructor to properly evaluate the student in such terms as mechanical ability, mental ability or reasoning processes preliminary to the actual physical action of playing a shot, positive psychology and subconscious routine or adherence to correct form and method. Furthermore, by providing lighting means which illuminate the full disc of the receding ball with respect to the player's line of vision, the apparatus may be effectively employed at night without the ordinarily necessary rapid eye muscle and lens accommodation which renders very unsatisfactory the use of ordinary driving ranges at night.

Briefly stated, the apparatus of the present invention comprises an instruction field having a plurality of tee stands and a playing field extending from the tee stands. The playing field is provided with elevated spaced transverse barriers, the elevation of the tops of at least some of said barriers progressively increasing with distance of barriers from the tee stands. The playing field is furthermore divided into a fairway and a rough on either side of the fairway. Target greens are provided between the transverse barriers and the tee stands and light sources are arranged adjacent the transverse barriers and away from the stands, such light sources being of a number and size to produce progressively increasing illumination of an object over the playing field with increasing distance from the tee stands. The barriers are progressively elevated, areas on either side of the fairway having a lower valuation in yardage than those in the fairway so that improper placement of the balls in the roughs automatically imposes a penalty and permits a more accurate evalution of the players' ability. The targets placed between the tee stands and the nearest transverse barrier permit the player to use the allotted clubs and the instructor to supervise their use without having the player and instructor move away from the instruction tee stand. A sand trap and a putting green may adjoin the tee stand for the purpose of permitting instruction in explosion shots or the like.

An object of the present invention, therefore, is to provide an educational device whereby players may be instructed in golf in a rapid, economical, facile and expeditious manner.

A further object is to provide an instruction field which may be used at night without loss in efficiency.

A still further object is to provide means for teaching and playing golf in which the varied conditions which are met on an actual course can be duplicated within a limited area.

These and other objects of the invention will become apparent to those skilled in the art from certain illustrative forms of the invention. In

order to facilitate understanding, reference will be had to the appended drawing, in which:

Fig. 1 is a plan view of the device.

Fig. 2 is a vertical longitudinal section thereof.

Fig. 3 is an enlarged transverse section taken along the plane III—III of Fig. 2.

Fig. 4 is a longitudinal section taken along the plane IV—IV of Fig. 3.

The educational device of this invention preferably comprises an end portion, generally indicated at **10**, provided with a plurality of instruction tee stands **11**, **12**, **13**, **14**, etc. Extending in front of the tee stands is a playing field provided with a plurality of transversely extending spaced elevated barriers, generally indicated at **16**, **17**, **18**, **19**, etc. The average elevation of the playing field may be lower than the elevation of the tee stands **11** to **14**, although not necessarily so. The playing field is furthermore divided into a fairway and adjacent roughs. The fairway may be delineated by means of markers or barriers **20** and **21** extending longitudinally of the playing field, these markers or barriers **20** and **21** preferably, but not necessarily, diverging one from the other as they recede from the tee stands. A rough may exist on either side of the fairway, each rough being defined by a marker approximately parallel to the adjacent fairway marker and spaced therefrom. As shown in the drawing, markers or barriers **22** and **23** may define the roughs; for example, the area between barriers **20** and **22** constitutes a rough whereas the area between **20** and **21** limits the fairway.

Between the transverse barrier or marker closest to the tee stands **11** to **14** but at a distance of say 25 to 50 yards, one or more targets or target screens are provided. Such target screens are indicated at **25**, **26** and **27**.

Irrespective of the contour of the playing field, the markers or barriers **16**, **17**, **18** and **19** are so arranged that their upper portions are preferably at progressively higher elevations as their distance increases from the tee stands, so that a part of each marker or barrier may be seen from the tees **11** to **14**. This progressively increasing height of the barriers is best illustrated in Fig. 2.

The area to each side of the barriers **22** and **23** may be deemed out of bounds. Each of the transverse barriers **16**, **17**, **18**, **19**, etc., is suitably marked with a legend indicating the distance from the tee stand. For example, the transverse barrier **18** may carry the numeral 100, indicating that a ball falling into the space immediately in front of this transverse barrier may be valued as having an effective distance of 100 yards. The numeral and evaluation 100 only applies to the area between the transverse barrier **18** and the fairway markers **20** and **21**, the barrier **18** carrying the numeral 75 on either side of the fairway thereby placing a valuation of only 75 yards on a ball falling immediately in front of said barrier but between the fairway markers and the rough markers **22** and **23**. A player attempting to drive 100 yards is therefore penalized 25 yards in the event his ball does not land in the fairway but instead lands in the rough immediately in front of barrier **18**. This arrangement imposes upon the player a degree of accuracy which would be necessary in actual play.

Adjacent the tee stands **11** to **14** may be a sand trap **30** and a putting green **31** so that an instructor, by simply moving from a tee stand to the trap, may demonstrate and instruct a player in methods of removing a ball from a hazard such as a trap, or in putting.

In order to permit the apparatus to be employed at night, sources of illumination are placed adjacent the transverse barriers or markers such as the barriers **18**, **19**, etc., these light sources being preferably placed on that side of the barrier which is removed from the tee stands. Light sources are indicated in Fig. 1 at **32**, **33**, **34**. These light sources are preferably directed obliquely upwardly and away from the tee stands **11** to **14**. These light sources are of a number and size adapted to produce progressively increasing illumination on an object over the playing field with increasing distance from the tee stands. For example, the light sources **33** are stronger than the light sources **32**. The light sources **34** may be of the same power (individually) as the light sources **33** but their number has been increased (as is evident in Fig. 1) so as to produce a higher concentration of light. In this manner, substantially the entire disc of a receding ball driven from the tee stands is illuminated by the light sources and the intensity of the illumination in foot candles increases as the ball recedes from the student or player thereby permitting the student or player to clearly see his driven ball throughout its flight and more accurately determine the precise barrier beyond which the ball disappears. Moreover, in the event instruction is being given to a large number of players at the same time, each player may keep track of his ball without confusion due to the progressively greater light concentration on the receding ball and the resultant greater definition at longer distances.

The transverse markers or barriers **16**, **17**, **18**, **19**, etc., may be of solid construction or may comprise a lattice work surmounted by an opaque upper portion as shown in Fig. 3. Suitable protection must be given to the light sources **33**, **34**, and the like. In view of the numerous modifications which may be indulged in in constructing the transverse barriers, coming within the skill of construction engineers, it is not necessary to go into details in the precise construction of such markers. Attention may be called to the fact, however, that the longitudinally extending markers or barriers such as **20**, **21**, **22** and **23**, may comprise canvas or board strips connecting the upper portions of the transverse barriers.

In addition to the sources of illumination hereinbefore referred to, to which the numerals **32**, **33** and **34** have been applied, additional sources of illumination may be positioned in back of the tee stands **11** to **14** and to the sides thereof so as to illuminate the targets **25**, **26**, **27**, as well as the sand trap **30** and putting green **31**.

The device described hereinabove may be employed in teaching players most effectively by permitting the pupil to go through a complete round of play on the apparatus of this invention under the direct observation of an instructor or professional. By employing a little imagination, the pupil may be caused to play nine holes of any given course, such as, for example, St. Andrews, Pine Valley, Oakmont or the like. The length of the various holes on these courses, as well as par for these holes is well known. For example, the first hole of the course may be 375 yards, par 4. The pupil may be given three balls for this hole. On his first drive the pupil will attempt to obtain as lengthy a distance as possible, and in the event his ball falls between the

transverse barriers 16 and 17 and in the fairway delineated by the longitudinal barriers 20 and 21, he will be credited with 200 yards. The player now knows that he has 175 yards to make on his second ball in order to reach the imaginary green. On his second shot the player is therefore forced to attempt to place his ball between the barriers 17 and 18 in order to gain this distance. Accuracy of placement is thus imposed upon the pupil, and in the event of a hook or slice which carries him into the rough, as for example, into the spaces between 20 and 17 or 22 and 18, he would be only credited with 150 yards, leaving the player 25 yards short of the imaginary green. In the event that the ball on the second shot falls in an out of bounds area (outside of barriers 22 and 23) the player may be penalized one stroke. He is also penalized a stroke whenever he fails to make the precise distance required on the drive and wood shots in reaching the imaginary green.

After playing the allotted fairway balls on any given hole, the player may either move to a putting green 31 for the purpose of sinking a putt, or in the event he was but slightly short of the total distance required on his fairway balls, he may be caused to play a chip shot by using a lofted club for the purpose of placing the ball upon one of the targets 25, 26, and 27. In placing this lofted club shot, the pupil is required to place the ball within the target on the carry. If fails in this attempt, two strokes may be added to those previously incurred, since failure of an approach shot of this sort ordinarily in actual play would involve two shots on the green.

In other words, by permitting the pupil to play a complete round of play on an imaginary course of predetermined length and of predetermined par value, the pupil is subjected to the same change of pace to which he would be subjected on the actual course. It is not necessary to employ the putting green 31 in the course of such play provided the pupil regulates his drives accurately and properly places his last ball upon one of the targets. Whether or not a putt shall follow the lofted shot may depend entirely upon the instructor. Some instructors prefer to give putting lessons independently, although in many instances, it is desirable to have the player perform at least one putt on each hole played on the device.

The pupil may be provided not only with the distance of each hole but with a diagram illustrating the course which he is presumably playing, and in the event the second fairway ball falls short or is hooked or sliced, and it appears from the diagram of the actual course that in actual play such a ball would have landed in a sand trap, the instructor may take the pupil to the sand trap 30 and cause the pupil to explode the ball out of the trap, thereby again subjecting the pupil to instruction in overcoming a condition in which he would normally find himself on an actual course by reason of an inaptitude on the fairway.

The turfed mound immediately in back of sand trap 30 may be used by the instructor in teaching the pupil to handle a ball on a downhill or an uphill lie.

It is to be remembered that in actual play the player will employ driver, brassie, long iron, medium iron, short iron, pitch shots, etc. The facility with which a player handles all of these clubs is important in determining where a player is most prone to make mistakes and in which department of play he requires correction. It will be seen that the device of this invention permits the instructor or professional to observe the pupil under all conditions which a player would encounter in an actual course of play without the necessity of spending a great deal of time in walking between shots and without consuming a great deal of time ordinarily lost in waiting on players already ahead. Moreover, a course of instruction on the device of this invention does not subject the pupil to the strain of an intensive one-hole lesson in only one type of shot and renders the instruction period not only more interesting but, at the same time, more conducive to the development of correct golf habits. It permits the player to develop the ability of correctly selecting clubs. It permits the pupil to develop self-reliance and confidence; it subjects the pupil to a visualization of conditions encountered upon an actual course and a more thorough understanding of the game.

By observing his pupil's actual performance on the golf course (as permitted in the device of this invention), the instructor can acquire personal and intimate knowledge of his pupil's current playing errors and deficiencies and may then direct his attention to a correction of these errors in a much more intelligent manner. All-around playing ability is thus much more quickly developed.

It will be evident to those skilled in the art that golf instruction is greatly facilitated by the device of this invention, and by reason of the novel lighting arrangement instruction may be carried out at night as well as in the day time, and all conditions found on an actual course can be encountered at all times. The penalties imposed on the player by reason of balls falling out of bounds or failure to cause a ball to land on a target, etc., may be changed, and the examples herein given are not to be considered as limitations but simply as suggestions. It is also to be noted that the device is adapted to competitive play whereby three or four pupils may play a complete round on the device in much the same way that they would play an actual course, the device thereby furnishing facilities for competitive play and practice under conditions substantially identical to those which would be encountered on an actual course.

All changes, modifications and adaptations of the invention embraced by the appended claims are included within the scope of this invention.

I claim:

1. In a golf instruction field, the combination of: a plurality of tee stands; a playing field extending from said tee stands; elevated spaced transverse barriers on said playing field, the elevation of the tops of at least some of said transverse barriers progressively increasing with distance of barriers from the tee stands; a fairway defined on said playing field by a pair of spaced markers extending longitudinally of said field; a rough on either side of said fairway, each rough being defined by a marker approximately parallel to the adjacent fairway marker and spaced therefrom; light sources adjacent said transverse barriers on sides removed from the tee stands, the number and size of light sources adjacent barriers further removed from the tee stands being greater than the number and size of light sources adjacent barriers closer to the tee stands, said light sources being directed obliquely upward and away from said tee stands to pro-

duce progressively increasing illumination of an object over the playing field with increasing distance from the tee stands, whereby power and accuracy of the balls played from the tee stands may be readily evaluated.

2. In a golf instruction field, the combination of: a plurality of tee stands; a playing field extending from said tee stands; elevated spaced transverse barriers on said playing field, the elevation of the tops of at least some of said transverse barriers progressively increasing with distance of barriers from the tee stands; a fairway defined on said playing field by a pair of spaced markers extending longitudinally of said field, said markers diverging as they recede from the tee stands; a rough on either side of said fairway, each rough being defined by a marker approximately parallel to the adjacent fairway marker and spaced therefrom; target greens on said playing field between said transverse barriers and the tee stands; a plurality of light sources adjacent said transverse barriers on sides removed from the tee stands, the number and size of light sources adjacent barriers further removed from the tee stands being greater than the number and size of light sources adjacent barriers closer to the tee stands, said light sources being directed obliquely upward and away from said tee stands to produce progressively increasing illumination of an object over the playing field with increasing distance from the tee stands, whereby power and accuracy of balls played from the tee stands may be readily evaluated.

3. In a golf instruction field, the combination of: a plurality of tee stands; a playing field extending from such tee stands; elevated spaced transverse barriers on said playing field, the elevation of the tops of at least some of said transverse barriers progressively increasing with distance of barriers from the tee stands; and light sources adjacent said transverse barriers on sides removed from the tee stands, the number and size of light sources adjacent barriers further removed from the tee stands being greater than the number and size of light sources adjacent barriers closer to the tee stands, said light sources being directed obliquely upward and away from the tee stand to produce progressively increasing illumination of an object over the playing field with increasing distance from the tee stands.

4. In a golf instruction field, the combination of: a plurality of tee stands; a playing field extending from such tee stands; elevated spaced transverse barriers on said playing field, the elevation of the tops of at least some of said transverse barriers progressively increasing with distance from the tee stands; a fairway defined on said playing field by a pair of spaced markers extending longitudinally of said field, said markers diverging as they recede from the tee stands; a rough on either side of said fairway; light sources adjacent said transverse barriers on sides removed from the tee stands, the number and size of light sources adjacent barriers further removed from the tee stands being greater than the number and size of light sources adjacent barriers closer to the tee stands, said light sources being directed obliquely upward and away from said tee stands to produce progressively increasing illumination of an object over the playing field with increasing distance from the tee stands, whereby power and accuracy of balls played from the tee stands may be readily evaluated; a sand trap and a turfed mound adjacent said tee stands, whereby instruction facilities are provided for simulating all conditions encountered in actual play upon an actual course.

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