

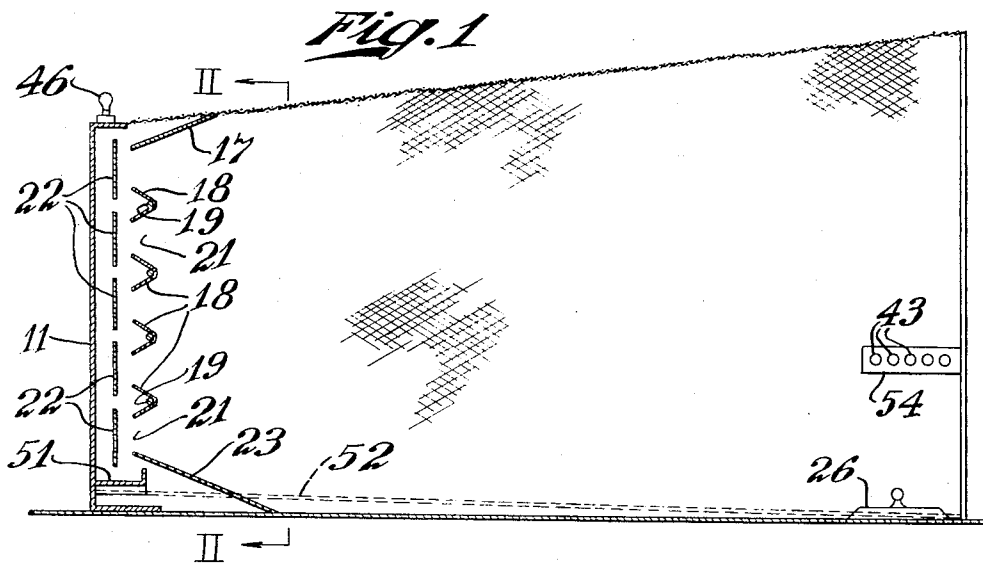
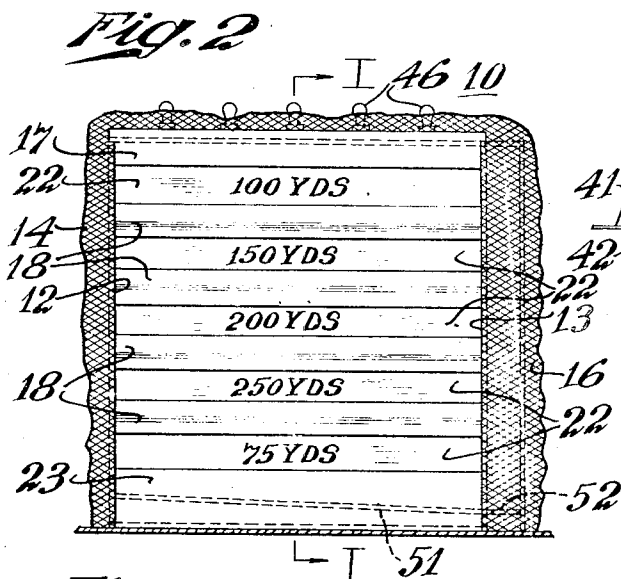
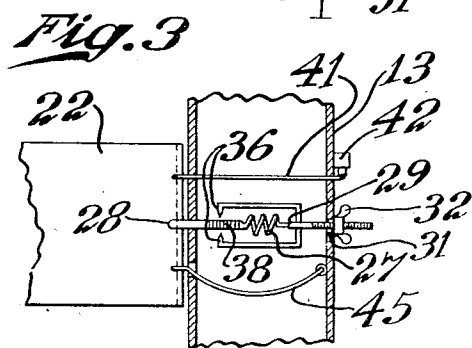
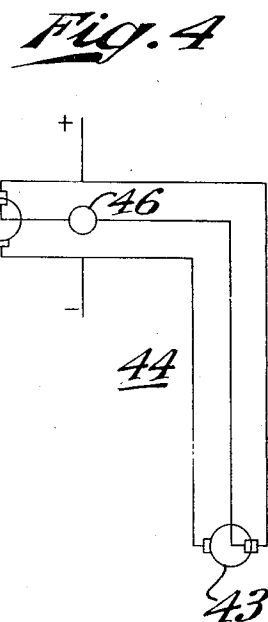
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GOLF PRACTICE GAME

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UNITED STATES PATENT OFFICE.

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GOLF PRACTICE GAME.

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My invention relates to game apparatus, more particularly to a game employing a projected ball, and has for its object the provision of apparatus of the character designated which shall include a target and means responsive to a predetermined force of the projected ball for indicating when the target is struck.

A more particular object of my invention is to provide a target for golf practice which shall be so arranged that various portions thereof, each in the line of flight of a ball when fairly struck and which would have traveled a certain minimum distance had it not met such portion of the target, and to provide means responsive to the impact force of a ball so projected or driven, to indicate the portion of the target struck.

A still further object of my invention is to provide a game apparatus employing a projected ball and wherein the player shall have visually indicated to him the line of trajectory of the ball when projected with a predetermined minimum force.

Golf game practice apparatus, as heretofore known to me, has usually comprised a simple net into which the ball is driven. Apparatus has been proposed where the net is divided into various pockets which catch the driven ball, the various pockets having different assigned values, thus rendering the practice set a means for competition between players. In some of the practice apparatus which has been proposed, means have been added for indicating when a ball has entered a particular pocket in the net or target. As is well known, the trajectory a ball may take from a golf tee when driven at a target only a few feet away is not dependent upon the force or accuracy with which the ball is struck. A ball which has been "topped" or which has otherwise been faultily struck and which, in a golf game on open fairways, might only travel a few yards, might have a trajectory on leaving the tee corresponding to that of a ball fairly hit and capable of relatively long flight.

In accordance with my invention, I have provided a golf practice game embodying the usual target and divided into zones at different elevations in the line of flight of a golf ball when fairly struck and which would have traveled a fairly uniform distance when so struck had it not met with the target. As-

sociated with each of these zones is an indicating means which operates in response to the impact of the projected ball. If the ball is improperly struck, or struck with insufficient force to travel a minimum distance determined by its line of flight when fairly struck, the indicating means does not operate. In addition, I provide means for regulating the amount of force required to operate the indicating means and thereby adapt the practice set for use with clubs ordinarily used for various distances. For example a given zone may have one value for wood clubs and another value for iron clubs. By the use of my improved apparatus, therefore, a player may better judge as to the improvement of his skill in practice.

Apparatus embodying features of my invention is illustrated in the accompanying drawings, forming a part of this application, wherein

Fig. 1 is a sectional view taken along the line I—I of Fig. 2 and showing a longitudinal section through the apparatus;

Fig. 2 is a sectional view taken along the line II—II of Fig. 1 and showing the target in elevation;

Fig. 3 is a detail view showing the means for operating the indicating devices of my apparatus, and;

Fig. 4 is a diagrammatic view showing an electric circuit which may be employed with my improved apparatus.

Referring to the drawing for a better understanding of my invention, I show a target indicated generally at 10 and supported by frame work embodying back and side supports 11, 12 and 13. The target is flanked by netting as at 14 and 16 and the upper portion of the target is preferably provided with an upwardly extending protecting netting 17. Extending across the target, at the front thereof, are a plurality of strips of canvas 18 each folded to a V-shape, as shown, and supported at the vertex of the V by a transversely extending rope 19.

The strips 18 are spaced to provide a plurality of forwardly flaring openings 21 at different heights of the target and behind each of these openings is placed a yieldable member 22 which may be made of strips of canvas or netting and which extends entirely across the target. The vertices of the V-shaped strips 18 are directed forwardly of

the target so that the sides form guide means to deflect a ball against one of the yieldable members 22 if it be driven so that it would not squarely strike one of said yieldable members. The upper protecting net 17 co-operates with the upper side of the upper strip 18 to deflect balls against the upper yieldable member 22, while a lower deflector 23 is arranged at the bottom of the target to cooperate with the lower strip 18 to direct balls against the lower yieldable member 22.

A tee 26 is provided a suitable distance from the target and balls are driven from this tee toward the target. Each of the yieldable members 22 which receives the impact of the driven ball is supported at one of its ends by a spring 27 connected at 28 to the yieldable member and at 29 to a screw, which latter extends through a hole 31 provided in the outer frame work 13. The other end of the yieldable members may be rigidly connected to the side frame work 12. The tension of the screw 27 may be adjusted by means of a thumb nut 32 so that the force required to deflect the spring 27 may be set to any desired minimum. Secured to the screw 31 are inwardly turned pointers 36 which cooperate with a scale 38 secured to the inner end of the spring 27 to show the loading of the spring and by means of which each individual yielding member may be regulated for practice with different clubs, or according to the average momentum of a projected ball at the various elevations of the members 22 when the same club is used.

Secured to each of the yieldable members 22 is a cord 41 for operating a switch 42 which, in conjunction with a switch 43, serves to control a well known three wire lighting circuit 44. In order to prevent damage to the switch 42 by too great elongation of the spring 27, a piece of heavy cord or other non-elastic material 45 connects the yieldable member 22 to the side frame member 13 and thus limits the elongation of the spring 27 when the member 22 is struck. Included in each of the circuits 44 is a light 46 which is lit or extinguished when the circuit is completed through it from either end. The switch 42, as has already been stated, is located for operation by a yieldable member 22 while the switch 43 is located on a switch board 54 convenient to the player. It is understood that a circuit such as described is associated with each of the yieldable members 22. Thus, when a ball strikes a yieldable member 22 with sufficient force to overcome the tension of its associated spring 27 and operate the switch 42, the associated light 46 is lit or extinguished as the case may be, and remains so until extinguished or lit by the appropriate switch 43.

Extending across the lower portion of the target is an inclined trough 51 into which a ball falls after striking any one of the yieldable members 22 and down which the ball rolls into a second inclined trough 52 which extends forwardly to the tee from which the ball is driven.

From the foregoing description, the operation of apparatus made in accordance with my invention will be apparent. The various yieldable members 22 are accorded different values such, for example, as those indicated in Fig. 2 as 100 yards, 150 yards, etc.; such values corresponding to the distance a ball would travel when fairly struck and having a trajectory intersecting the target at the points indicated. The values shown in the drawing are only by way of example and may be varied according to the desire of the player or according to the club used. The springs 27 are adjusted so as to impose a predetermined resistance to movement of each of the members 22 so that a ball striking any one of said members must do so with a predetermined force requisite to operating the switch 42 associated with the yieldable member 22 which is struck. It will be seen, with this device, that a ball which is not fairly struck will not have sufficient force to operate one of the lights. Furthermore if a ball is fairly struck, the indicating means will show its line of flight and the indication remain visible until the appropriate switch 43 is operated. This overcomes the temptation to "look up" in practice and is greatly conducive to improving the skill of the player.

While in the foregoing description I have set forth my invention as particularly adapted to golf practice, it will be apparent that it may be adapted for use with other games of skill wherein a ball is projected toward a target. Furthermore, while I have shown my invention in but one form, it will be obvious to those skilled in the art that it is not so limited, but is susceptible of various changes and modifications, without departing from the spirit thereof, and I desire, therefore that only such limitations shall be placed thereupon as are imposed by the prior art or as are specifically set forth in the appended claims.

What I claim is:

1. In a golf practice game, target supporting means, V-shaped strips extending across the target and attached at each end to the supporting means to define openings at various heights and to provide means for deflecting a projected golf ball through the openings, a member arranged to the rear of each opening, yieldable means for connecting the member to one side of the supporting means, an electric circuit including visual indicating means associated with each of the members, and means operated by the impact of a pro-

jected ball against a member for opening and closing the circuit.

2. In a golf practice game, target supporting means, V-shaped strips extending across the target and attached at each end to the supporting means to define openings at various heights and to provide means for deflecting a projected golf ball through the openings, a member arranged to the rear of each opening and rigidly secured to one side of the supporting means, yieldable means for connecting the member to the other side of the supporting means, an electric circuit including visual indicating means associated with each of the members, and means operated by the impact of a projected ball against a member for opening and closing the circuit.

3. In a golf practice game, target supporting means, V-shaped strips extending across the target and attached at each end to the supporting means to define openings at various heights and to provide means for deflecting a projected golf ball through the openings, a member disposed to the rear of each opening and rigidly secured to one side of the supporting means, yieldable means for connecting the member to the other side of the supporting means, an electric circuit including visual indicating means associated with each of the rearwardly disposed members, means operated by the impact of a projected ball against a member for opening and closing the circuit, a tee from which a ball may be driven against the target, and other circuit closing and opening means disposed adjacent the tee.

4. A golf practice game as set forth in claim 3 in which means are provided to adjust the yieldable means connecting the rear

members and the supporting means to vary the force required to open and close the circuit.

5. A golf practice game embodying a pair of vertically disposed side frame members, a plurality of strips of yieldable material extending horizontally across from one frame member to the other and folded rearwardly to provide forwardly flaring openings at various heights, a reinforcing and supporting member in the forwardly projecting portion of each of the strips and secured to the side frame members, a strip of yieldable material disposed to the rear of each of the openings and rigidly secured at one end to one of the side frame members, a spring connecting the other end to the other side frame member, means for adjusting the tension of the spring, a tee from which a ball is driven toward the openings, a three wire electric circuit associated with each of the rearwardly disposed strips of material, a light operated by each circuit, a switch in each circuit and operated by impact of a golf ball against its associated rearwardly disposed strip of material when said ball has sufficient momentum to overcome the tension of the spring, and a second manually operable switch in each of the circuits disposed adjacent the tee.

6. A golf practice game as set forth in claim 5, in combination with an inclined trough extending beneath the rearwardly disposed strips of material into which a ball striking the material drops, and a second inclined trough extending forwardly to the tee to return the driven ball.

In testimony whereof I, ALBERT R. KAUFMANN, affix my signature.

ALBERT R. KAUFMANN.