S. J. SANFORD.

GOLF APPARATUS.

APPLICATION FILED AUG. 29, 1917.

1,309,105.

Patented July 8, 1919.

2 SHEETS—SHEET 1.

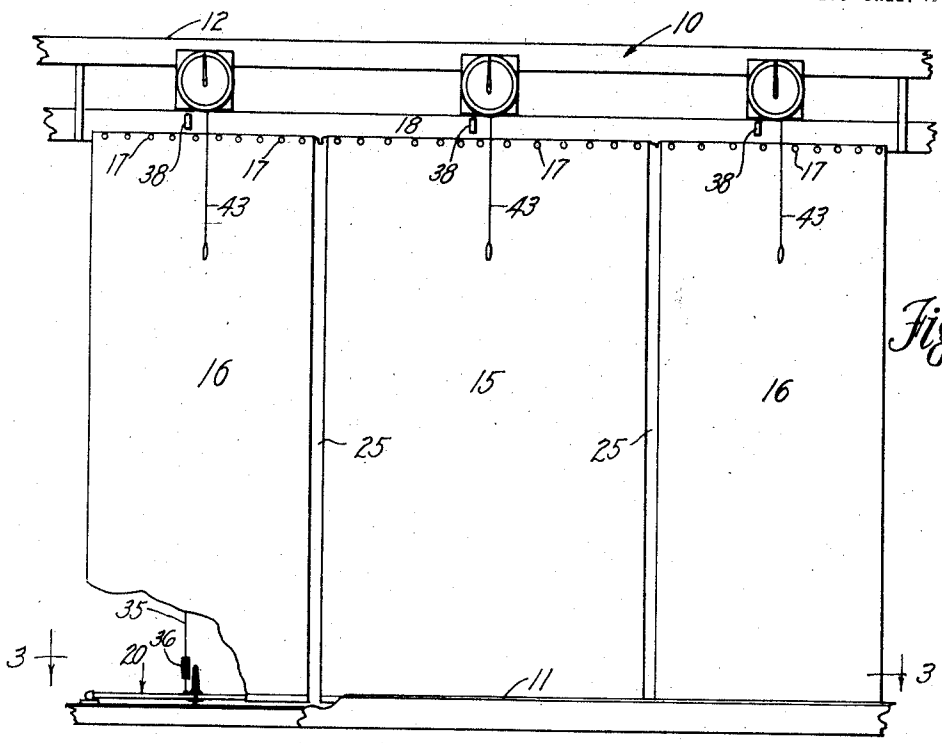


Fig. 1.

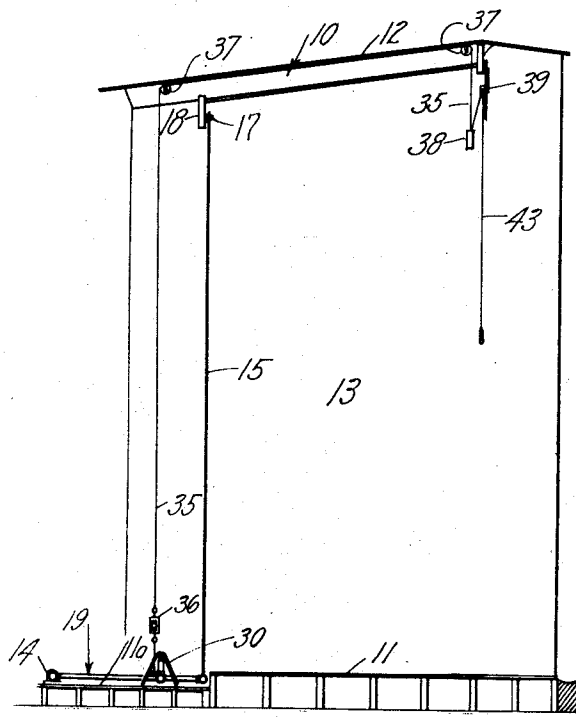


Fig. 2

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2 SHEETS—SHEET 2.

Fig. 3.

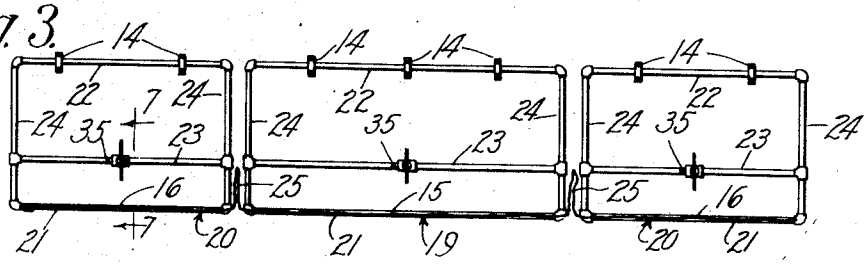


Fig. 4.

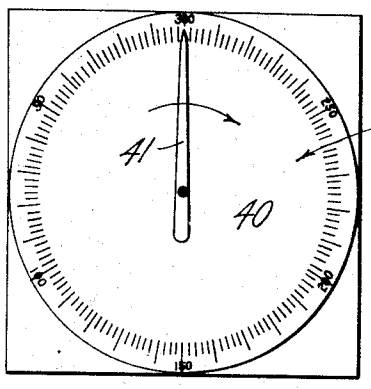


Fig. 5.

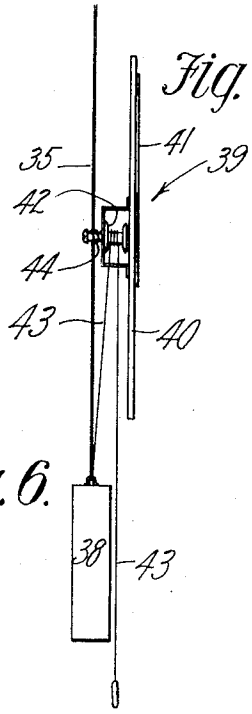


Fig. 6.

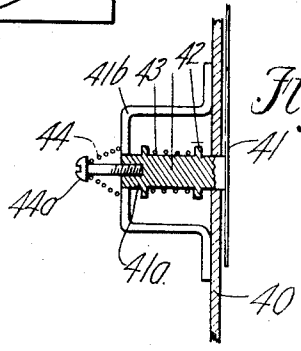
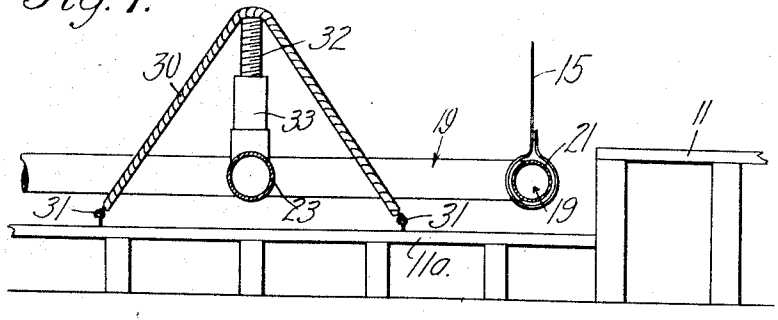


Fig. 7.



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UNITED STATES PATENT OFFICE.

SYDNEY J. SANFORD, OF LOS ANGELES, CALIFORNIA.

GOLF APPARATUS.

1,309,105. Specification of Letters Patent. Patented July 8, 1919.

Application filed August 29, 1917. Serial No. 188,744.

To all whom it may concern:

Be it known that I, SYDNEY J. SANFORD, a citizen of Canada, residing at Los Angeles, in the county of Los Angeles, State of California, have invented new and useful Improvements in Golf Apparatus, of which the following is a specification.

This invention relates to golf apparatus and relates particularly to apparatus for playing golf in a restricted space. And it is an object of this invention to provide a simple and inexpensive apparatus which may be readily set up in any convenient location and by the use of which a golfer may play the game of golf in a restricted area, or entirely indoors, if so desired.

Preferably my apparatus should be erected in close proximity to a plot of grass sufficiently large to be used as a putting green and should be roofed over to protect it from the weather; but any other location or situation may be used, as will hereinafter appear.

My apparatus comprises in its essentials a flexible curtain or sheet in a vertical position and stretched to a suitable tightness by some yielding or resilient means. The ball is driven against the sheet and the impact displaces the sheet. A registering apparatus registers in accordance with the amount of displacement of the sheet, and, for golf, this registering indicates the number of yards which the ball would have traveled if it had not been stopped by the sheet—if it had been played on the open field of a regular golf course. Furthermore, I vertically divide the sheet into three parts. The central part is of proper width to represent the fair way, and the outside parts represent the rough. Each part has its independent register; so that the length of flight may be known whether the ball has been driven into the rough or in the fair way. The full nature of my invention will be best understood from the following detailed description of a specific and preferred form of apparatus; reference being had for this purpose to the accompanying drawings in which Figure 1 is a front elevation of my improved apparatus; Fig. 2 is a vertical cross section of the same; Fig. 3 is a section taken as indicated by line 3—3 on Fig. 1; Fig. 4 is a detail view showing the face of the registering dial; Fig. 5 is a side elevation of the registering mechanism, Fig. 6 is an enlarged detail section of the registering mechanism; and Fig. 7 is an enlarged detail section taken as indicated by line 7—7 on Fig. 3.

In the drawings the numeral 10 designates any frame work or structure in which my device may be suitably housed. This housing may preferably include a floor 11, a roof 12 and side walls 13. The side walls are desirable for catching any wild shot. The sheets 15 and 16 are mounted at the back part of the structure. The upper edges of these sheets may be permanently rigidly attached at 17 to a beam 18; and the lower edges of these sheets are attached to the forward edges of individual frames 19 and 20, preferably by having a hem taken in the lower edges of the sheets and the forward member 21 of the frame passing through this hem. The frames 19 and 20 are preferably made of pipe and pipe fittings and comprise the forward members 21 and the rear members 22 and the intermediate parallel members 23 and the side members 24. The frames are pivoted on the rear members 22 by means of pivot straps 14; or any other suitable means may be used.

Between each of the sheet portions 15 and 16 there is a loose loop 25. The sheets 15 and 16 act independently of each other; and these loops allow such independent action and at the same time catch any ball which might otherwise pass between the portions 15 and 16.

Each frame 19 and 20 is provided with a resilient means for holding it down and thus holding the sheet taut preferably; comprising a spring 30 secured at both ends at 31 to the floor 11^a, the spring being brought up over the upper end of a screw-threaded adjusting rod 32 which is screw-threaded into a sleeve 33 set into the middle of the member 23 of the frame. The spring 30 is preferably relatively stiff, and the tension may be adjusted by adjusting the rod 32.

From each one of the frames, 19 and 20, there extends upwardly a connecting wire or cord 35. This connecting wire or cord 35 has a turn buckle 36 in it so that its length can be somewhat adjusted to compensate for the contraction or expansion of the sheets due to weather changes. The connecting wires or cords 35 extend over pulleys 37 upwardly and forwardly and then extend out and carry each a weight 38 on the lower end. This weight 38 is only of sufficient size to keep the cord 35 tight and to cause the oper-

ation of the mechanism 39. The registering mechanism is shown in detail in Figs. 4 and 5. A dial 40 is provided; and this dial is graduated, for the game of golf, to read in yards. A pointer hand 41 travels over the dial; a spool 42 is connected with the pointer hand 41, and a small cord 43 connects with the weight 38 and winds around the spool 42 and then hangs down to a position convenient to be grasped by the player.

The hand 41 is mounted upon a short shaft 41^a mounted in bearings in the dial 40 and in a bearing frame 41^b which may be secured to the back of the dial plate. The spool 42 is mounted on or a part of the shaft 41^a. A screw 44^a in the end of shaft 41^a holds a coiled spring 44 against bearing frame 41^b and thus provides sufficient friction to hold the pointer 41 in any position to which it may be moved by the cord 43.

In playing the game on this apparatus, the usual golf ball and clubs are used. The ball is first teed at a distance of perhaps twenty feet or so from the curtain or sheet. The ball is then driven against the sheet and it will force the sheet back by an amount depending upon the force of the drive. The rearward displacement of the curtain causes an upward movement of the frame 19 or 20 against the action of the spring 30. The upward movement of the frame allows the connecting cord 35 to move and allows the weight 38 to drop. When the weight 38 moves downwardly it pulls upon cord 43 and moves the dial hand 41 to indicate the number of yards which the ball would have traveled had it not been intercepted by the sheet. The dial hand 41 will remain at this position to which it has been moved, due to the action of spring 44, although the weight 38 is immediately moved upwardly by the action of the spring 30. After the player has read the distance on the dial he then pulls down on the hanging part of the cord 43 and moves the dial hand 41 back to its zero position. If the ball is driven against the central sheet portion 15 it will, of course, register upon the corresponding dial. If it is driven against either of the side portions 16, it will register upon the corresponding dial; and if it is driven into either of the division pockets 25 it will register upon two dials simultaneously. In this last case the indications of the two dials are to be added together.

I find that by proper adjustment of the spring 30 I can make the mechanism 39 register very accurately the distance which the ball would have flown. At a standard distance from the sheet a ball which rises properly to make the longest flight will strike about the center of the sheet, and will therefore make a correspondingly large indication on the dial. A ball driven with the same amount of force but striking the lower edge of the sheet will of course not make so large an indication upon the dial, just in proportion as it would not have made a long flight upon an actual golf course. In order to protect the lower edge of the sheet against being hit by the ball, I make the floor 11^a below the floor 11 so that the frames 19 and 20 stand normally below the floor 11.

With my apparatus I can take the plan of any given golf course and can play through that golf course; because upon each stroke I known how far the ball would have gone, and its direction, so that I can locate upon the plan the exact point at which the ball will then supposedly lie; and I then know the distance and direction in which the ball should be next driven.

My apparatus may be used for games other than golf. For instance, it may be used for baseball pitchers' practice. In this case, there need be only a single sheet of smaller size; and the dial may be divided to read in pounds impact rather than in the distance in yards.

Having described a preferred form of my invention, I claim:

1. A game apparatus, embodying an upright flexible sheet, yielding means to hold the sheet taut, and registry means connected with the sheet and adapted to register in accordance with the displacement of the sheet by a missile striking it.

2. A game apparatus, embodying an upright flexible sheet, resilient means to hold the sheet taut, and registry means connecting with the sheet and adapted to register in accordance with the displacement of the sheet by a missile striking it.

3. A game apparatus, embodying an upright flexible sheet anchored at one edge, a movable frame to which the opposite edge of the sheet is attached, spring means acting on said frame to hold the sheet taut, and registry means connected with the frame and adapted to register in accordance with movement of the frame caused by displacement of the sheet.

4. A game apparatus, embodying an upright flexible sheet permanently anchored at its upper edge, a vertically movable frame to which the lower edge of the sheet is attached, spring means holding the frame down and holding the sheet taut, and means to register the movement of the frame.

5. A game apparatus, embodying an upright flexible sheet permanently anchored at its upper edge, a vertically movable frame to which the lower edge of the sheet is attached, spring means holding the frame down and holding the sheet taut, and means to register the movement of the frame, embodying a graduated dial and a hand movable over the dial, the hand being connected to said frame.

6. A game apparatus, embodying a frame,

an upright flexible sheet permanently attached to the frame at its upper edge, a vertically movable pivoted frame connected to the lower edge of the sheet, an adjustable spring holding said pivoted frame down and holding the sheet taut, a register means located in front of the upper part of the sheet embodying a dial and a hand movable thereover, and an adjustable connecting cord between the pivoted frame and the hand.

7. A game apparatus, embodying an upright flexible sheet vertically divided into three portions, independent means for holding each of said portions taut, and a registry means for each portion adapted to register the displacement of said portion by a missile striking it.

8. A game apparatus, embodying an upright flexible sheet vertically divided into three portions by loose loops of the sheet, a resilient means for each of the portions to hold it taut, and a registry means for each of said portions adapted to register the amount of displacement of the portion by a missile.

9. A game apparatus, embodying a frame, an upright flexible sheet permanently attached to the frame at its upper edge, a vertically movable pivoted frame connected to the lower edge of the sheet, an adjustable spring holding said pivoted frame down and holding the sheet taut, a register means located in front of the upper part of the sheet embodying a dial and a hand movable thereover, and an adjustable connecting cord between the pivoted frame and the hand, and friction means on the dial hand to hold it in whatever position it is placed.

In witness that I claim the foregoing I have hereunto subscribed my name this 20th day of August 1917.

SYDNEY J. SANFORD.

Witness:

JAMES T. BARKELEW.