P. C. SULLIVAN.

GOLF PRACTICING MEANS.

APPLICATION FILED JAN. 12, 1920.

1,383,876. Patented July 5, 1921.

Fig. 1.

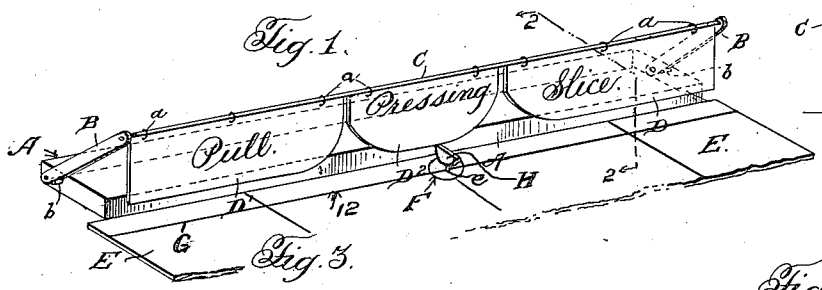


Fig. 2.

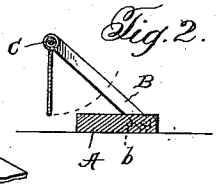


Fig. 3.

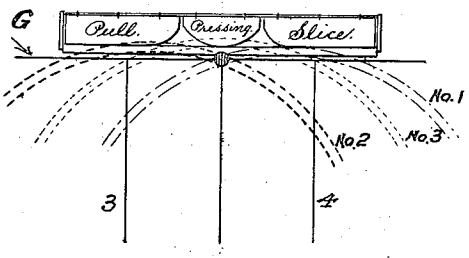


Fig. 4.

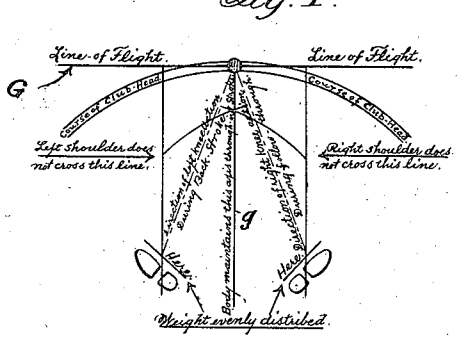


Fig. 5.

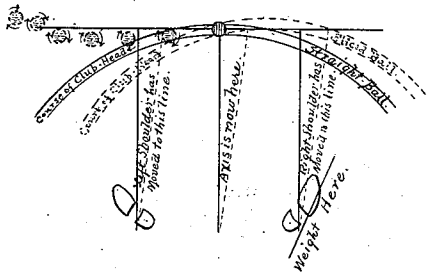


Fig. 6.

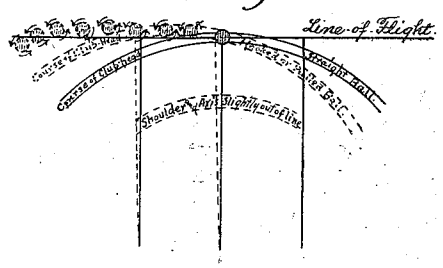
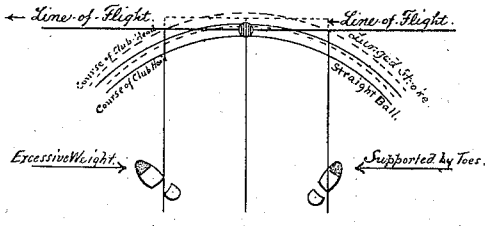


Fig. 7.



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UNITED STATES PATENT OFFICE.

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GOLF-PRACTICING MEANS.

1,383,876. Specification of Letters Patent. Patented July 5, 1921.

Application filed January 12, 1920. Serial No. 350,890.

To all whom it may concern:

Be it known that I, PAUL C. SULLIVAN, a citizen of the United States, residing at Fairmont, in the county of Marion and State of West Virginia, have invented certain new and useful Improvements in Golf-Practicing Means, of which the following is a specification.

My invention relates to game apparatus and particularly a new and useful device for practicing golf and perfecting the player's game therein, and the invention consists, essentially, of a simple device which may be used in-doors or on the field and which will serve as a guide and visual indicator in learning and practicing the game of golf, said device being so constructed and arranged as to instantly make known to the player whether or not the correct stroke has been made, or whether there was a defect in the stroke, and if so, the character of the stroke or defect; for instance, whether the ball would have been a "sliced", "pressed", "topped" or "hooked" ball.

My invention further consists of the parts and combinations of parts constituting the novel golf-practicing means which I will hereinafter describe and point out in the appended claims.

In the accompanying drawings forming part of this specification and in which similar reference characters indicate like parts in the several views;

Figure 1 is a perspective view of a golf-practicing device showing an embodiment of my invention.

Fig. 2 is a cross-sectional view of the same on the line 2—2 of Fig. 1.

Fig. 3 illustrates diagrammatically the course of the club head when driving a perfectly straight ball, and when driving a "sliced" ball, a "hooked" or "pulled" ball, and when making the "lunged" or "pressed" stroke.

Figs. 4, 5, 6 and 7 illustrate diagrammatically the course taken by the club-head when making the several individual strokes, before mentioned and which I will hereinafter more fully describe.

Referring specifically to Figs. 1 and 2, wherein I show in detail one embodiment of device which forms the essential part of my invention, A represents a base member which may be composed of wood, metal or composition; in fact this base may be made of any material selected for the purpose, and said base may have any suitable or desired dimensions; say three feet long and five inches wide. At the ends of this base member and which base will have the necessary weight to maintain the device in place, are suitable arms, B, whose lower ends are pivoted to the ends of the base near one corner thereof, the upper ends of the arms being formed to support a rigid wire or rod, C, from which are suspended a series of freely swinging renewable and interchangeable plates or shutters, D, D′, D^2, composed of any appropriate material and detachably arranged lengthwise on said wire or rod end to end and provided with rings *a* or equivalent pivoting means substantially as shown in Fig. 1. The rod or wire may be notched or formed with depressions for positioning the rings, which latter may be of the well known split-ring variety. The lower corners of the shutters are also preferably rounded and the two end shutters D, D′, are of about equal length while the middle shutter, D^2 is somewhat shorter than the end shutters.

In the illustrated embodiment of my invention, the end arms or supports, B, when in operative position stand at an angle of about 45° to the horizontal base and said arms serve to hold the plates or shutters in a vertical position slightly in front of the base and with their lower edges out of contact with the floor or ground whereby when either of the shutters is struck by the passing head of the golf club, when the player is making his stroke, it will freely yield without damage to itself or the club head and its vibration will give visual indication of the character of the stroke; the particular plate or shutter struck by the club-head indicates to the eye of the player the course the ball would have taken had the same play been made on a golf-field in a regular game. The before described arrangement is such that the parts may be collapsed or folded substantially upon themselves when the device is not in use, thus enabling it to be packed into a small space; when used, the parts are placed in the position shown in Fig. 1, the end arms being sustained in their inclined positions by suitable lugs or stop-pins, *b*, on the base member, or by equivalent means.

That my invention may be more fully understood and its benefits to the golf player or student better appreciated, I will now re-

fer to the several diagrams I have illustrated in the drawings.

In Fig. 1, I show the device positioned relative to a mat E or sheet of paper, fabric, or other flexible material and which should have such inherent properties that it will lie flat upon a floor, ground or other surface, or separate floor fastenings may be used if desired, the length of this mat being preferably equal to or slightly greater than that of the base A. A circle or dot F is painted or otherwise marked upon the mat midway of its length near the edge adjacent the base A, and preferably about under the lower edges of the shutters. This circle or dot is approximately the diameter of and intended to represent a golf ball, and is preferably located in front of the center of the middle shutter two and one-half inches therefrom. A straight line G extends the length of the mat and runs parallel with the front of the shutters and through the center of the aforesaid circle or dot F. A paper segment H, white or colored, having a length or diameter of a golf ball and a width approximately one half of the same, is placed over the painted circle F at right angles to the line G, and is retained in position by means of a pin *e*, which projects from the curved side of the segment and is inserted into the mat at the exact center of the circle F.

Assuming that the practice device and the mat have been positioned substantially as indicated in the diagram, Fig. 3, heretofore described, it will be apparent that if the correct stroke is made, the club-head will follow a course which will enable it to pass the suspended shutters and truly hit the ball without striking either of said shutters. The ball will, under such conditions be supposed to take a course which will occur when making a perfectly straight strike. If, however, there has been a tendency to make a "slice shot", the course of the club-head will follow the curved line "No. 1" which brings the head into contact with the end swinging plate or shutter, D, first approached from the direction the club is moving, and said plate or shutter will at once yield and by its vibration will indicate to the player the character of the imperfect stroke; such indication will, of course, afford the means of rectifying the error on the player's next practice stroke since it will make plain to him that he must so alter the axis of his body that the right and left shoulders should not cross the lines 3—4 indicated in the diagram. When the proper axis of the body has been determined and the stroke made, the club-head will take the course illustrated in the diagram, Fig. 4, and without touching the shutters and will pass directly over the dot, mark or projection illustrative of a properly placed ball. In such case, the ball is supposed to be squarely struck so that it will be driven in a straight line parallel with the front edge of the mat.

Referring again to Fig. 3; if the position of the player is such that the axis of his body is to the left of the central line on the mat and the stroke is made, the head of the club will follow the course of the curved line, "No. 2," with the result that the club-head comes into the path of the left-hand suspended plate or shutter, D′, or the one which is toward the end of the stroke and the contact of the head with said shutter will cause it to vibrate or move inwardly and which movement is apparent to the eye of the player and indicates to him that his position is not true and must be altered to prevent a recurrence of the "hook" or "pull" which had been given the ball on the previous stroke. Again, if the stroke is made and the club-head takes the course shown by the curved lines "No. 3," the central plate or shutter (assuming that three shutters are used in the device) is struck by the passing club-head, such movement indicates that a "lunge" or "pressed" stroke has been made and which stroke is usually the result of too much effort expended, or pressing for distance with the consequent "heeled-shot" or "topped ball." Thus in each of the described instances, a particular suspended plate or shutter is employed to give visual indication of the character of the stroke made and this teaches the player how to alter the position of his body to rectify the error in the former stroke, and to attain by practice that perfection of position and stroke that will lead to successful and skilled golf-playing.

In Fig. 4 I illustrate diagrammatically the position the player should assume to secure a straight line of flight of the ball, the said diagram being intended to show the weight of the player as evenly distributed; the central line *g* of this diagram shows the axis which should be maintained through the stroke and the lines at the right and left of the said central line indicate boundaries beyond which the shoulders of the player should not encroach. The feet of the player are shown across the side lines at the proper angle, and dotted lines converging at the dot, mark or ball indicate the direction of the left-knee action during the back-stroke, and the direction of the right-knee action during the "follow through." This diagram is intended to show the accurate position and the procedure of driving a perfectly straight ball.

The diagram of Fig. 5 shows by dotted lines, the course of the club-head when the axis of the player is to the right of the central line. Here we have the reasons for the "sliced" ball, as it will be apparent that the dotted lines indicate a body-sway, and that the ball is struck as the club-head crosses the

line of flight. Accordingly, a spinning motion is imparted to the ball and said ball takes the course indicated by the dotted lines, rather than the straight course of Fig. 4.

Fig. 6 shows that the shoulders and axis of the player are slight out of line, and when the stroke is made under such conditions, the course of the club-head will follow the dotted position, the head will cross the line of flight at the ball and impart a spin to the ball, opposite to that shown in Fig. 5, and result in the so-called "hooked" or "pulled" ball. The "lunged" or "pressed" stroke is shown in the diagram, Fig. 7. Here the excessive weight of the player is supported by the toes.

In use, the aforesaid practicing means is placed upon the ground or floor and the mat fitted up to the base, the white painted dot with the sticker paper, F, is placed directly in front of the center of the middle shutter. The club head of the golf player should pass directly along the circumference of a circle the center of which is the player; the ball to be correctly played should be struck while the club handle is pointing exactly at right angles with the line of the shutters. If the club-head travels too wide, that is, if the swing of the club is beyond the circumference of the correct circle, at the beginning of the swing, and the club head comes in contact with the ball, (that is, passes over the white dot and the paper sticker) as it reaches the point in the true circle, it is readily seen that the club head is traveling at the time of contact with the ball more or less in the direction of the player, instead of at right angles as it should do and the result is the stroke is delivered with a "pull' across the true circumference instead of directly in line with it and a whirling motion is imparted to the ball from left to right. As soon as the usual roughened surface of the ball catches the air, this whirling motion turns the ball in a wide curve to the right and produces what is termed the "slice" ball. The club-head traveling as it does beyond the true circle at the beginning of the stroke, in producing this ball, is bound to and does strike the first shutter on my device, it being impossible to make a stroke using this device, that would produce a sliced ball without hitting this shutter. Conversely a "hooked" ball stroke is made when the stroke is short in starting; the club-head travels within the circumference of the circle and comes in contact with the ball at the point where it strikes the true circle and passes across and out of the circle. In this event the head is traveling away from the player and gives the ball a spin from right to left. This stroke produces a ball with a long curve to the left and is called a "hook." It is readily seen that in this stroke the left end shutter is bound to be struck and the swing of the shutter indicates the defect in the stroke.

In case the club-head strikes the middle shutter it indicates a "lunge" or "pressed" ball stroke, as the circumference of the circle described by the club-head is parallel to but beyond the true circumference of the circle which should be followed. If the club-head does not hit the shutters, but passes over the white dot without striking the sticker paper it would indicate a "topped ball" stroke. A clean correct stroke is indicated when the club-head passes through, striking the sticker paper without touching the mat or the shutters. A golf player who learns to practice with this device and can reach the point in practice where he can swing through, striking the sticker paper without touching the shutter or the mat, will be able to hit a ball easily without "slicing," "topping" or "hooking" as his club-head follows the true circumference of the circle and gives the ball the straight blow which causes it to turn or spin backward, or from bottom to top, which spin gives the ball the jump which means distance, long bounds when it strikes the ground and straight flight in the direction desired.

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

1. Golf practicing means wherein is employed a support and a series of alined stroke indicating elements yieldably mounted thereon.

2. Golf practicing means wherein is employ a base member and a series of longitudinally-alined stroke indicating elements freely mounted thereon.

3. Golf practicing means wherein is employed a base, and a series of longitudinally-alined plates or shutters freely suspended thereon adapted to receive the impact of a club-head in the course of an imperfect stroke and to impart visual indication of such stroke.

4. Golf practicing means wherein is employed a supporting means and a plurality of individual freely suspended elements arranged longitudinally upon a common axis on said supporting means.

5. Golf practicing means wherein is employed a collapsible support, a rod extending longitudinally thereof, and a plurality of independent shutters freely suspended on said rods in a common plane.

6. Golf practicing means wherein is employed a support, a suspension element extending longitudinally thereof, and a plurality of independent shutters freely mounted on said suspension element and each adapted to receive and visually indicate the impact of a club-head in the course of a certain imperfect stroke.

7. Golf practicing means wherein is em-

ployed a base, pivoted arms at the end thereof, a rod extending longitudinally of said base and sustained in the outer ends of the arms, and a plurality of longitudinally alined shutters freely suspended upon said rod so as to have independent vibratory movement.

8. Golf practicing means wherein is employed a base, pivoted arms at the ends thereof, a rod extending longitudinally of said base and sustained in the outer ends of the arms, a plurality of longitudinally-alined shutters freely suspended upon said rod so as to have independent vibratory movement, said rod having a nicked surface, and suspending rings between the upper edges of the shutters and said rod and engaging said surface.

9. Golf practicing means wherein is employed a floor or ground support, a series of longitudinally-alined stroke indicating elements freely pendent from the support, and a mat or strip adapted to be arranged proximate to said elements having indicia representative of a positioned golf ball.

10. Golf practicing means wherein is employed a floor or ground support having a suspension member and central and alined side elements thereon, and a separate mat to be positioned proximate the suspended elements having a line thereon indicating the straight line of flight of a substantially perfectly struck ball, said mat having a designated point in said line representing a positioned golf ball.

11. Golf practicing means wherein is employed a floor or ground mat having a line thereon indicating the straight line of flight of a perfectly driven ball, and a reserved point on said line of substantially the diameter of and representing a teed golf ball.

In testimony whereof I affix my signature.

PAUL C. SULLIVAN.

Witnesses:
J. M. HARTLEY,
E. F. HARTLEY.