Oct. 27, 1925. 1,558,767

F. S. SMITH

GOLF APPARATUS

Filed April 19, 1923

Fig. 1.

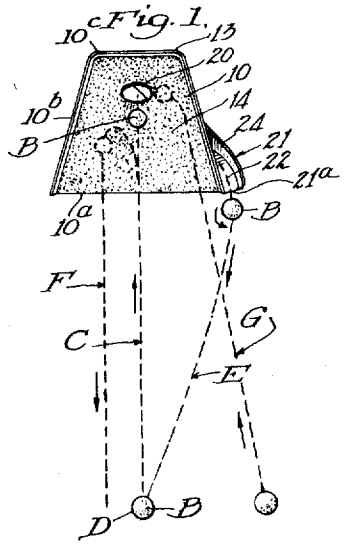


Fig. 2.

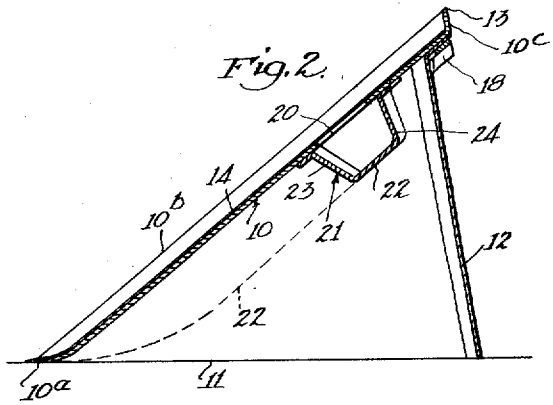


Fig. 4.

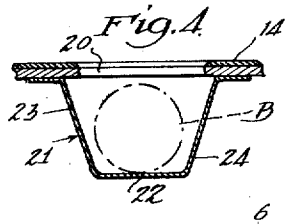


Fig. 3.

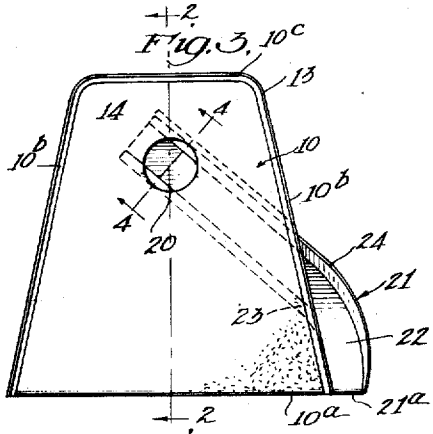


Fig. 5.

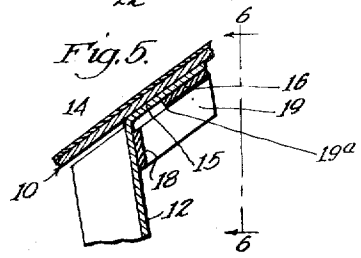


Fig. 7.

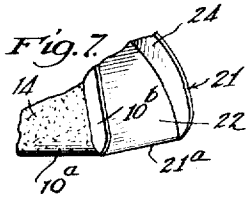


Fig. 6.

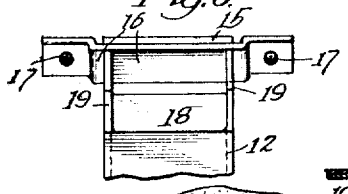


Fig. 9.

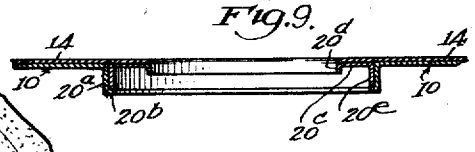
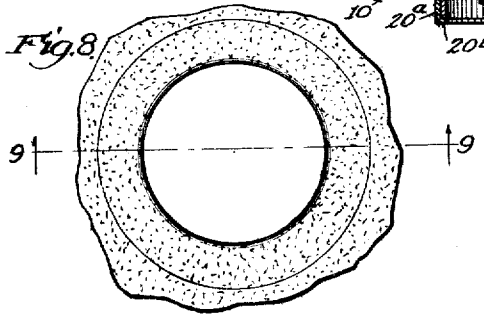


Fig. 8.



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UNITED STATES PATENT OFFICE.

FRANK S. SMITH, OF LOS ANGELES, CALIFORNIA.

GOLF APPARATUS.

Application filed April 19, 1923. Serial No. 633,075.

To all whom it may concern:

Be it known that I, FRANK S. SMITH, a citizen of the United States, and a resident of Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Golf Apparatus, of which the following is a full, clear, and exact disclosure.

In the present invention I have provided a device for playing a new game, and for the practice of golf putting. It has been designed primarily for the purpose of providing a useful substitute for a golf putting green, to be used indoors or otherwise for practicing putting in the absence of a putting green; while at the same time providing the means of engaging in an interesting and entertaining form of amusement; and is a continuation in part of my application for patent filed January 11, 1922, Serial No. 528,438.

This new game which may be played with my device, together with regulation golf balls and putting irons, consists of a contest between any number of players to determine which can drive the ball into the hole an agreed number of times in the fewest number of strokes; and it has all the desirable features of being interesting, attractive and competitive, while at the same time providing a means for golf putting practice.

I have combined in this device certain novel features whereby results and benefits substantially the same as those derived from actual golf putting practice on a putting green are obtained; and which will be conducive to revealing accurately the effect of a shot, and improving the player's skill at putting, the same as would be obtained under normal conditions upon a putting green, but with less time and effort.

I have further provided an arrangement whereby the ball, after a practice shot is made, is returned to, or in the direction of, the player so that the ball may be recovered without the necessity of the player moving from his position to retrieve it; but permitting him to alter his position for the next shot, correcting it if the last shot was unsuccessful, due to an incorrect stance or grip; thereby giving him every opportunity to closely observe the effect of slight differences of position, or stance and grip, thus reaping the greatest possible benefit to be derived from such practice.

It is of equal or even greater importance that the ball return to within reach of the player after it has been successfully played into the hole, as the player may then retain his demonstratedly correct postion, or stance and grip, and play from that position an indefinite number of shots or strokes, from which he will form the habit of unconsciously assuming and playing from this correct position or stance. The fact that my device returns the ball to or in the direction of the player, and within reasonable limits easily within his reach, makes this form of putting practice of the greatest possible benefit and value, as the player may after each unsuccessful shot alter, adjust and correct his faulty position or stance as suggested by the action of the ball on my device, or he may retain his correct stance as indicated when the ball has been successfully played into the hole.

As the ball always returns to the player or within his easy reach, whether the ball enters the hole or not, if he is not more than seven feet from the hole—and most putting practice should be had within this distance—it is easily possible for a player to make twelve or fifteen putts or plays per minute, and in three minutes he may make as many putts or plays as he would ordinarly make in playing a full round of eighteen holes on a regulation golf course.

In games of skill, such as golf putting, practice is said to be nine-tenths, and my device affords, and its use suggests and invites practice of the most agreeable and helpful character.

In structure the device may be made collapsible so as to be folded and packed into a compact form for transportation or storage.

The improved features of my invention will be more fully set forth in the following specification, reference being made therein to the acompanying drawings forming a part thereof, in which:

Figure 1 is a perspective front view illustrating diagrammatically how the apparatus is used;

Fig. 2 is an enlarged vertical longitudinal sectional view through the center of the apparatus, taken as indicated by the line 2—2 of Fig. 3, and showing it set up for use;

Fig. 3 is a further enlarged top plan view of the device;

Fig. 4 is a fragmentary sectional view, taken as indicated by the line 4—4 of Fig. 3;

Fig. 5 is an enlarged fragmentary sectional view similar to that shown in Fig. 2, showing the method of attaching the supporting leg;

Fig. 6 is a fragmentary rear elevation of the portion shown in Fig. 5, being taken as indicated by the line 6—6 of that figure;

Fig. 7 is an enlarged fragmentary front elevation illustrating the discharge end of the return chute and its relation to the table;

Fig. 8 is an enlarged fragmentary plan view illustrating the means I employ to vary the size of the hole in the table; and

Fig. 9 is a transverse vertical section taken through the hole, as indicated by the line 9—9 of Fig. 8.

The arrangement I have shown in the aforementioned drawings, and that which I will describe hereinafter as my preferred specific embodiment, comprises a plane surface member 10, for convenience of description hereinafter called the "table", designed to be supported upon a floor or other surface—designated by the numeral 11—in a relatively inclined position by a supporting leg 12, or other suitable means. The whole device may be constructed of a light, thin wood, heavy cardboard, light metal, or any material suitable for providing the necessary rigidity and lightness for easy transportation.

The table 10 consists of a single flat board, sheet of metal or other material, preferably slightly tapered towards its upper edge 13; the top face or playing surface of which will preferably be covered with a soft, slightly abrasive material 14, such as felt or the like. As I will more fully hereinafter explain, in connection with the use of my device, providing such a soft frictional surface upon the playing face of the table 10, adds greatly and materially to the effective use of the apparatus, as its frictional engagement with a spinning ball has substantially the same effect in determining its direction that the soft surface of a putting green would have. And, the action of this frictional engagement with the ball, in influencing its course over the playing face, while not so resistant as the surfaces commonly found upon putting greens, has substantially the same or a like effect due to the inclination of the table. In other words, this surface frictional engagement with the ball, superinduced by the inclination of the table, will cause the ball to be deflected, as it rides upon the playing face, in a direction opposite to that in which it is spinning, thereby accurately indicating whether the stroke was a cut or a slice. I wish it to be understood, however, that, while I desire to use such a frictional surface on the playing face which will, in combination with a certain inclination of the table, produce results similar to those obtained on the putting green, I do not desire to be limited to the particular class of material described, but desire to be free to use any other means which will produce the same results.

The degree of inclination of the table 10, relative to the floor or surface 11, may be altered to suit circumstances, but ordinarily it will be substantially 40° for best results. It is supported by the leg 12 with its wider edge 10^a resting upon the surface 11; being provided along its longitudinal edges with upturned flanges 10^b and along its upper transverse edge with a similar flange 10^c, to prevent the ball from rolling off except across the lower edge 10^a. The edge 10^a is curved slightly upward, relative to the playing face of the table 10, to provide, as far as possible, an unbroken juncture between the surface 11 and the playing surface of the table. The material 14, which for convenience of description will be called felt, extends over the curved edge 10^a, and the juncture of the playing face with the floor may be made more perfect by extending the felt out over or beyond the edge 10^a.

Curving the lower edge 10^a of the table 10 to form a tangential juncture with the surface 11 is of considerable importance in my apparatus, as this enables the ball to roll from the surface 11 to the playing face of the table 10 with the least possible impetus and the least possible interference with its spinning motion. This is clear when it is understood that the aforementioned frictional engagement between the ball and the playing face, as it rides upon it, indicates accurately whether the ball was struck squarely when given its impetus; and in case the playing face made an abrupt or angular juncture with the surface 11, the ball would be thrown or bounced upwardly on the playing face so that a great proportion of its desired rolling contact thereon would be lost, resulting in inaccurately indicating the course which the ball would ordinarily take under like circumstances upon a putting green.

The leg 12 may be formed of a single piece of material, such as a sheet metal, and may be either hingedly connected to the back of the table 10, to permit its being folded up for packing the device, or may be made removable, as illustrated in the drawings. As therein shown, the leg 12 is stamped from a single piece of sheet metal in the form of a channel, for rigidity, having an outturned angular flange 15 projecting outwardly from its web at its upper end, which flange is adapted to be inserted beneath a metal strap 16 secured to the back of the table as by means of rivets 17. The flange 15 is inserted between the strap 16 and the back face of the table 10 and removably retained there, as illustrated in Fig. 5. A member

18 is secured to the back of the leg 12, its ends being turned up to form outwardly extending flanges 19, the upper edges 19[a] of which are spaced slightly from the flange 15, so they will engage the outer face of the strap 16 when the leg 12 is secured in position, as illustrated in Figs. 5 and 6.

Situated preferably in alinement with the longitudinal center of the table 10, and preferably above its transverse center, or adjacent its upper edge 13 is an aperture 20, preferably circular and of a diameter conformative to the regulation cup commonly used on golf putting greens. In order to conduce to more accurate putting, and also in view of the fact that it will always be used under the most favorable circumstances, the aperture 20 may be made even smaller than the diameter of a regulation cup, and for the accomplishment of this purpose I have provided the arrangement illustrated in Figs. 8 and 9. As there shown I provide a small downwardly depending annular flange 20[a] on the bottom edge of which is a small inturned annular flange 20[b], these preferably being stamped integral with the table 10, and of such size that they will not be engaged by the ball B as it passes over the edge of the hole 20.

A flat disc 20[c] having a concentric opening 20[d] is provided to fit in the aperture 20; and this is provided with an outer annular down-turned flange 20[e] which is adapted to rest upon the shoulder formed by the inturned flange 20[b] of the table. Any number of the rings 20[c] may be provided to fit into the aperture 20, and these may be provided with various sized concentric apertures 20[d], to vary the size of the opening through which the ball is to be played to suit it to the individual requirements of the player. Instead of providing a number of the rings 20[c] that fit into the aperture 20, having various sized apertures 20[d], a number of concentric rings, such as 20[c], may be provided and each formed with complementary flanges so that they may be supported concentrically within each other, and the size of the central aperture varied by inserting or removing any number of the rings. With this construction the main aperture 20 may be made much larger than the regulation golf cup, to provide an adequate opening for beginners to play with, and this opening may then be brought down to regulation, or even smaller diameter as the beginner becomes more proficient; or it may be varied or adjusted to suit the requirements of professionals.

Slight variations in the diameter of the aperture 20 make a great deal of difference in the accuracy required to drive the ball into it, and consequently requires greater skill. For instance, if the aperture 20 is three inches in diameter its area will be 7.07 square inches, while the diametral area of the ball is 1.90, leaving an area of 5.17 square inches around the ball as it passes through it. If the diameter of the aperture 20 is then increased to three and three-fourths inches, the hole will then have an area of 11.08 square inches, and the ball being 1.90 leaving an area of 9.18 surrounding the ball, or 80% greater than that of the three inch hole. This arrangement for varying the size of the aperture 20 is of great importance in my apparatus, as a beginner may start with a larger aperture and, as he becomes more proficient, reducing it in size until he has developed skill and accuracy to the point of being able to put the ball in the smallest size hole, which adds greatly to its effectiveness.

A return chute 21 is secured to the under face of the table 10, with its upper end directly beneath and in communication with the hole 20, and preferably extending slightly beyond it, while its opposite or discharge end is terminated to rest upon or near the surface 11. While the chute 21 will preferably be of the cross sectional configuration illustrated in Fig. 4, very slightly wider and deeper than the diameter of a regulation golf ball, it may be of such other cross sectional configuration as will produce the desired results. The chute is secured to the table to extend at an angle with its longitudinal center and preferably in a straight line from the hole 20 to one side of the table from whence it curves to a point outside one of the longitudinal edges and on line with the edge 10[a], as clearly shown in Fig. 3. The chute 21 not only is curved to bring its discharge end adjacent one of the lower corners of the table, but its bottom 22 curves upwardly toward the playing face of the table, as indicated by dotted lines in Fig. 2 to also tangentially meet the surface 11. The side 23 of the chute 21 terminates in its juncture with the bottom face of the table 10, and along its longitudinal edge while the side 24 continues in a curved portion outside this edge of the table tapering towards its discharge edge on line with the edge 10[a]. The chute 21 will preferably be rigidly secured to the back face of the table 10, such as by soldering or spot welding; and as it is not of any great depth it will not interfere with the device being compactly boxed for shipment or storage.

The discharge edge 21[a] of the bottom of the chute 21, where it terminates on line with the edge 10[a] of the table, is turned up at a slight angle outwardly from the longitudinal edge of the table, which will, as hereinafter explained, conduce to imparting such a spinning motion to the ball (shown at B in Fig. 1) as it leaves the chute that it will be returned substantially to the position of the player by its course being

deflected by frictional engagement with the surface 11.

If desired, the chute 21 may be made removable from the table, or it may be made of a material and in a manner to be collapsible or flattened out against the rear face of the table, providing more convenient form for shipment and storage.

In the use of my apparatus it is set up on a floor or other surface, as illustrated in Figs. 1 and 2, the playing face being supported at an angle with the floor surface by the leg 12. The player stands off any desired distance, and ordinarily within a zone defined by lines projected in the planes of the flanges 10^b. I have found that a distance of six to seven feet from the apparatus to be the best from which to play the ball, and my device has been constructed to return the ball to a player standing this distance from the device, although, of course, its construction may be altered without change of principle to return the ball B to a player standing at a greater or less distance.

The player then takes the desired position or stance and with a putter or other means drives the ball B with the hole 20 as his objective, as designated by the dotted lines C in Fig. 1, the same as in the case of an actual game of golf when the player is putting for the hole upon a putting green. The ball B will travel on this trajectory and roll upon the inclined playing face of the table 10, and if it has been given the proper impetus and the correct direction, by the square impact of the club therewith, it will drop into the hole 20, and be returned to the player at substantially the point D along the dotted line E, in Fig. 1. If the ball has not been given the proper direction by striking it squarely with the club, or if it has not been given the proper velocity, it will roll upon the inclined playing face, and stop short of the hole 20, or roll to one side or around it, and back down the incline towards the player as indicated by the dotted line F in Fig. 1. If the ball misses the hole 20, the velocity acquired by its rolling back down the inclined playing face will, under ordinary circumstances, return the ball to the player so that he will not be required to move from his position to retrieve it and play it again.

In case the ball is given a spinning motion by reason of the player not striking it squarely with the face of the club, it will roll onto the inclined playing face and, as hereinbefore described, the frictional engagement between the ball and the covering 14, will tend to alter its direction to one side or the other of the hole 20, depending upon the direction of spinning motion imparted to it when given its initial impetus, thereby indicating the stroke to be a cut or a slice. In either event the ball will, after losing its velocity, roll back down the incline and be returned to the player. If given too great an impetus the ball will leap over the hole 20 the same as would occur on a putting green; or if it strikes the hole tangentially it will rim it as is commonly the case in golf putting.

In case the ball is properly driven it will drop into the hole 20 and thence into the chute 21, and due to the inclination of the latter it will acquire sufficient velocity in rolling therethrough to be returned to the player. As the ball rolls down the chute 21 it acquires this velocity, and in being deflected by the curvature at the lower end of the chute it will engage the outer side 24 which will impart to it a spinning motion, as indicated by the arrow in Fig. 1, which, together with its velocity and frictional engagement with the surface 11, will ordinarily cause it to take the curved course indicated by the dotted line E which will bring it to substantially the position D. Also, in leaving the discharge end of the chute 21, the slight upward angular position of the chute bottom 21^a will tend to deflect the ball outwardly in a course to cross the center line C of the table. This upward inclination of the edge 21^a, together with the side 24 of the chute frictionally engaging the ball, tends to very accurately return the ball to the player; although, under ordinary circumstances, its frictional engagement with the chute side 24 will accomplish this result.

The lower edge 10^a of the table being curved, the ball will roll onto it from the surface 11 practically without interruption and enable it to roll in contact with the playing surface throughout its length, permitting the frictional surface to have its telling effect by deflecting the course of the ball if it is spinning. I have found that without this lower curved edge of the table accurate results cannot be obtained; and that under ordinary conditions and with shots of ordinary velocity, the ball will roll in contact with the playing face from the time that it passes over the edge 10^a until it goes into the hole 20 or is returned to its edge.

Not only does the inclination of the table 10 provide a means for returning the ball B to the player, either in case of its entering the hole 20 or missing it, but being thus inclined it will require a substantial stroke or impetus to make the ball travel up this surface, thereby presenting conditions and difficulties very similar to those encountered upon a golf putting green, and requiring the same character of stroke or hit; that is, the resistance afforded approximates that ordinarily afforded by the grass and rolling surface of the outdoor putting green.

Also, this inclined surface enables the player to practice curved or side hill shots, as indicated by the dotted line G in Fig. 1. That is, the ball is played up onto the table, and so struck when given its initial impulse by the club, as to give it a spinning motion, which, when the ball is in frictional engagement with the playing face, will cause it to take a curved course and roll sidewise into the hole 20.

In the above specification, when referring to the ball, I have used the terms rolling and spinning; the term rolling indicating the usual motion of the ball about an axis substantially parallel to the surface over which it is passing, and the term spinning indicating rotary motion about an axis substantially perpendicular to the surface on which it is rolling; the latter being commonly referred to as "english" or "cut".

While I have shown and described the present specific embodiment of my invention, it is nevertheless to be understood that I reserve the right to make such changes and modifications in structure as will properly come within the scope of the appended claims.

What is claimed is:

1. In a device of the class described, the combination of a plane adapted to be supported in an inclined position with one edge upon the floor, the floor engaging edge being curved, an aperture in said plane to receive a ball, and means to return the ball in the direction of the player after passing through said aperture.

2. In a device of the class described, the combination of a plane adapted to be supported in an inclined position with one edge upon the floor, the floor engaging edge being curved to form a tangential juncture therewith, an aperture in said plane to receive the ball, and means on the under side of said plane to return the ball in the direction of the player after passing through said aperture.

3. In a device of the class described, the combination of a plane adapted to be supported in an inclined position with one edge upon the floor, flanges on the side and upper edges of said plane, the lower floor engaging edge being curved to form a tangential puncture therewith, an aperture in the middle of said plane, a frictional surface on said plane, and means on the under side of said plane communicating with said aperture to return the ball in the direction of the player after passing through said aperture.

4. In a device of the class described, the combination of a plane adapted to be supported in an inclined position with one edge upon the floor, flanges on the side and upper edges of said plane, an aperture in said plane to receive a ball positioned on its longitudinal center and adjacent its top edge, and means on the under side of said plane communicating with said aperture to return the ball in the direction of the player after passing through said aperture.

5. In a device of the class described, the combination of a plane adapted to be supported in an inclined position with one edge upon the floor, a frictional surface on said plane, flanges on the side and upper edges of said plane, an aperture in said plane to receive a ball positioned on its longitudinal center and adjacent its top edge, and means on the under side of said plane communicating with said aperture to return the ball in the direction of the player after passing through said aperture.

6. In a device of the class described, the combination of a plane adapted to be supported in an inclined position with one edge upon the floor, a frictional surface on said plane, flanges on the side and upper edges of said plane, the lower floor engaging edge being curved to make a tangential juncture therewith, an aperture in said plane to receive a ball positioned on its longitudinal center and adjacent its top edge, and means on the under side of said plane communicating with said aperture to return the ball in the direction of the player after passing through said aperture.

7. In a device of the class described, the combination of a plane adapted to be supported in an inclined position with one edge upon the floor, an aperture in said plane to receive a ball, and means to return the ball in the direction of the player after it has passed through said aperture, said means comprising a chute at the under side of said plane communicating at one end with said aperture and having its discharge end adjacent a lower corner of the plane.

8. In a device of the class described, the combination of a plane adapted to be supported in an inclined position with one edge upon the floor, a frictional surface on said plane, the lower floor engaging edge being curved to make a tangential juncture therewith, an aperture in said plane to receive a ball, and means to return the ball in the direction of the player after it has passed through said aperture, said means comprising a chute at the under side of said plane communicating at one end with said aperture and having its discharge end adjacent a lower corner of the plane.

9. In a device of the class described, the combination of a plane adapted to be supported in an inclined position with one edge upon the floor, an aperture in said plane to receive a ball, and means to return the ball in the direction of the player after it has passed through said aperture, said means comprising a chute on the under side of said plane communicating, at one end with said aperture, its opposite end being curved to its

point of discharge adjacent a lower corner of the plane.

10. In a device of the class described, the combination of a plane adapted to be supported in an inclined position with one edge upon the floor, an aperture in said plane to receive a ball, and means to return the ball in the direction of the player after it has passed through said aperture, said means comprising an inclined chute on the under side of said plane communicating at one end with said aperture, its opposite end being curved to its point of discharge adjacent a lower corner of the plane and outside its edge, the bottom of said chute being inclined upwardly towards its outer edge at its discharge end.

11. In a device of the class described, the combination of a plane adapted to be supported in an inclined position with one edge upon the floor, upturned flanges along the side and upper edges of said plane, a frictional surface on said plane, the lower floor engaging edge of the plane being curved to make a tangential juncture therewith, an aperture in said plane to receive a ball, said aperture being positioned on the longitudinal center of the plane and adjacent its upper edge, and means to return the ball to the player after it has passed through said aperture, said means comprising a chute secured to the under side of the plane to be inclined therewith, one end of said chute communicating with said aperture and its opposite end being curved to its discharge end adjacent a lower corner and outside its edge, the discharge edge of the bottom of said chute being co-planar with the said curved edge and inclined upwardly towards its outer edge.

12. In a device of the class described, the combination of a plane adapted to be supported in an inclined position with one edge upon the floor, said floor engaging edge being curved to form a tangential juncture therewith and an aperture in said surface to review a ball.

13. In a device of the class described, the combination of an inclined plane supported with one edge upon the floor, an aperture in said plane to receive a ball, and an inclined ball return chute underneath said plane having one end communicating with said aperture, its opposite end being conterminous with said floor engaging edge and outside its longitudinal edge, said chute being curved to direct the returning ball outwardly in front of said floor engaging edge.

14. In a device of the class described, the combination of a plane adapted to be supported in an inclined position with one edge upon the floor, the floor engaging edge being curved, an aperture in said plane to receive a ball, means to vary the size of the aperture, and means to return the ball in the direction of the player after passing through said aperture.

15. In a device of the class described, the combination of a plane adapted to be supported in an inclined position with one edge upon the floor, the floor engaging edge being curved to form a tangential juncture therewith, a frictional surface on said plane, an aperture in said plane to receive a ball, means to vary the size of the aperture, and means on the under side of said plane to return the ball in the direction of the player after passing through said aperture.

16. In a device of the class described, the combination of a plane adapted to be supported in an inclined position with one edge upon the floor, a frictional surface on said plane, the lower floor engaging edge being curved to make a tangential juncture therewith, an aperture in said plane to receive a ball, means to vary the size of the aperture, and means to return the ball in the direction of the player after it has passed through said aperture, said means comprising a chute at the under side of said plane communicating at one end with said aperture and having its discharge end adjacent a lower corner of the plane.

17. In a device of the class described, the combination of a plane adapted to be supported in an inclined position with one edge upon the floor, said floor engaging edge being curved to form a tangential juncture therewith, an aperture in said surface to receive a ball, and means to vary the size of the aperture, said means comprising a disc, having a central aperture therein, removably mounted within said aperture.

18. In a device of the class described, the combination of an inclined plane supported with one edge upon the floor, an aperture in said plane to receive a ball, an inclined return chute on the under side of said plane communicating at one end with said aperture, the discharge end of said chute being curved around one side of said plane to direct the ball outwardly in front thereof and its bottom being curved to make a tangential juncture with the floor.

19. In a device of the class described, the combination of an inclined plane supported with one edge upon the floor, the floor engaging edge being curved to make a tangential juncture therewith, an aperture located centrally of said plane to receive a ball, an inclined ball return chute underneath said plane communicating at one end with said aperture and having its discharge end conterminous with said floor engaging edge, said discharge end being curved around one side of said plane to direct the ball outwardly in front thereof and also curved to make a tangential juncture with the floor.

20. In a device of the class described, the combination of an inclined plane supported with one edge upon the floor, the floor engaging edge being curved to make a tangential juncture therewith, an aperture in said plane to receive a ball, an inclined ball return chute on the under side of said plane communicating at one end with said aperture and having its discharge end conterminous with said floor engaging edge, said discharge end having an outer side curved around one side of said plane and its bottom being curved to make a tangential juncture with the floor.

In witness that I claim the foregoing I have hereunto subscribed my name this 21st day of March, 1923.

FRANK S. SMITH.

20. In a device of the class described, the combination of an inclined plane supported with one edge upon the floor, the floor engaging edge being curved to make a tangential juncture therewith, an aperture in said plane to receive a ball, an inclined ball return chute on the under side of said plane communicating at one end with said aperture and having its discharge end conterminous with said floor engaging edge, said discharge end having an outer side curved around one side of said plane and its bottom being curved to make a tangential juncture with the floor.

In witness that I claim the foregoing I have hereunto subscribed my name this 21st day of March, 1923.

FRANK S. SMITH.

CERTIFICATE OF CORRECTION.

Patent No. 1,558,767. Granted October 27, 1925, to

FRANK S. SMITH.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 5, line 43, claim 2, for the article "the" first occurrence read "a"; same page, lines 52 and 53, claim 3, for the word "puncture" read "juncture"; page 6, lines 34 and 35, claim 11, for the misspelled word "oppsite" read "opposite", and line 47, claim 12, for "review" read "receive"; and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 25th day of March, A. D. 1930.

M. J. Moore,
Acting Commissioner of Patents.

(Seal)

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